

545					550						555				560
Glu	Lys	Val	Ser	Glu	Asp	Asp	Met	Asp	Gln	Asp	Phe	Leu	His	Leu	Phe
				565					570					575	
Lys	Ile	Val	Ala	Gly	Glu	Gly	Lys	Glu	Ile	Gly	Val	Tyr	Glu	Leu	Gln
			580					585					590		
Arg	Leu	Leu	Asn	Arg	Met	Ala	Ile	Lys	Phe	Lys	Ser	Phe	Lys	Thr	Lys
		595					600					605			
Gly	Phe	Gly	Leu	Asp	Ala	Cys	Arg	Cys	Met	Ile	Asn	Leu	Met	Asp	Lys
	610					615					620				
Asp	Gly	Ser	Gly	Lys	Leu	Gly	Leu	Leu	Glu	Phe	Lys	Ile	Leu	Trp	Lys
625					630					635					640
Lys	Leu	Lys	Lys	Trp	Met	Asp	Ile	Phe	Arg	Glu	Cys	Asp	Gln	Asp	His
				645					650					655	
Ser	Gly	Thr	Leu	Asn	Ser	Tyr	Glu	Met	Arg	Leu	Val	Ile	Glu	Lys	Ala
			660					665					670		
Gly	Ile	Lys	Leu	Asn	Asn	Lys	Val	Met	Gln	Val	Leu	Val	Ala	Arg	Tyr
		675					680					685			
Ala	Asp	Asp	Asp	Leu	Ile	Ile	Asp	Phe	Asp	Ser	Phe	Ile	Ser	Cys	Phe
	690					695					700				
Leu	Arg	Leu	Lys	Thr	Met	Phe	Thr	Phe	Phe	Leu	Thr	Met	Asp	Pro	Lys
705					710					715					720
Asn	Thr	Gly	His	Ile	Cys	Leu	Ser	Leu	Glu	Gln	Trp	Leu	Gln	Met	Thr
				725					730					735	
Met	Trp	Gly													

<210> 11133
 <211> 40
 <212> PRT
 <213> Homo sapiens
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<221> source
<223> /note="Payload ID: 2198; "

<220>
<221> source
<223> /note="Gene Symbol: CAPN11; "

<220>
<221> source
<223> /note="Gene Name: calpain 11; "

<220>
<221> source
<223> /note="ENSP ID: ENSP00000431963"

<400> 11133
Met Leu Tyr Ser Pro Gly Pro Gln Glu Ser Ser Thr Pro Ser Val Leu
1          5          10          15

Gly Ala Ala Arg Val Glu Ala Ala Trp Ser Asp Cys Thr Val Gln Gly
          20          25          30

His Gly Val Val Cys Leu Ile Val
          35          40

<210> 11134
<211> 182
<212> PRT
<213> Homo sapiens

<220>
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<220>
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<220>
<221> source
<223> /note="Gene Name: calpain 11; "

<220>
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<223> /note="ENSP ID: ENSP00000432420"

<400> 11134
Met Leu Tyr Ser Pro Gly Pro Ser Leu Pro Glu Ser Ala Glu Ser Leu
1          5          10          15

Asp Gly Ser Gln Glu Asp Lys Pro Arg Gly Ser Cys Ala Glu Thr Arg
          20          25          30

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Ser Cys Ser Val Thr Gln Thr Gly Val Pro Ser His Leu Ile Ala Ala
35 40 45

Ser Asn Cys His Ser Leu Glu Leu Gln Gly Ser Glu Pro Thr Phe Thr
50 55 60

Asp Thr Gly Met Val Ala His Ile Asn Asn Ser Arg Leu Lys Ala Lys
65 70 75 80

Gly Val Gly Gln His Asp Asn Ala Gln Asn Phe Gly Asn Gln Ser Phe
85 90 95

Glu Glu Leu Arg Ala Ala Cys Leu Arg Lys Gly Glu Leu Phe Glu Asp
100 105 110

Pro Leu Phe Pro Ala Glu Pro Ser Ser Leu Gly Phe Lys Asp Leu Gly
115 120 125

Pro Asn Ser Lys Asn Val Gln Asn Ile Ser Trp Gln Arg Pro Lys Asp
130 135 140

Ile Ile Asn Asn Pro Leu Phe Ile Met Asp Gly Ile Ser Pro Thr Asp
145 150 155 160

Ile Cys Gln Gly Ile Leu Gly Asp Cys Trp Leu Leu Ala Ala Ile Gly
165 170 175

Ser Leu Thr Thr Cys Pro
180

<210> 11135

<211> 719

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2199; "

<220>

<221> source

<223> /note="Gene Symbol: CAPN12; "

<220>

<221> source

<223> /note="Gene Name: calpain 12; "

25003

<220>
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<223> /note="Uniprot ID: Q6ZSI9; "

<220>
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<223> /note="ENSP ID: ENSP00000331636"

<400> 11135
Met Ala Ser Ser Ser Gly Arg Val Thr Ile Gln Leu Val Asp Glu Glu
1 5 10 15

Ala Gly Val Gly Ala Gly Arg Leu Gln Leu Phe Arg Gly Gln Ser Tyr
20 25 30

Glu Ala Ile Arg Ala Ala Cys Leu Asp Ser Gly Ile Leu Phe Arg Asp
35 40 45

Pro Tyr Phe Pro Ala Gly Pro Asp Ala Leu Gly Tyr Asp Gln Leu Gly
50 55 60

Pro Asp Ser Glu Lys Ala Lys Gly Val Lys Trp Met Arg Pro His Glu
65 70 75 80

Phe Cys Ala Glu Pro Lys Phe Ile Cys Glu Asp Met Ser Arg Thr Asp
85 90 95

Val Cys Gln Gly Ser Leu Gly Asn Cys Trp Phe Leu Ala Ala Ala Ala
100 105 110

Ser Leu Thr Leu Tyr Pro Arg Leu Leu Arg Arg Val Val Pro Pro Gly
115 120 125

Gln Asp Phe Gln His Gly Tyr Ala Gly Val Phe His Phe Gln Leu Trp
130 135 140

Gln Phe Gly Arg Trp Met Asp Val Val Val Asp Asp Arg Leu Pro Val
145 150 155 160

Arg Glu Gly Lys Leu Met Phe Val Arg Ser Glu Gln Arg Asn Glu Phe
165 170 175

Trp Ala Pro Leu Leu Glu Lys Ala Tyr Ala Lys Leu His Gly Ser Tyr
180 185 190

Glu	Val	Met	Arg	Gly	Gly	His	Met	Asn	Glu	Ala	Phe	Val	Asp	Phe	Thr			
		195					200					205						
Gly	Gly	Val	Gly	Glu	Val	Leu	Tyr	Leu	Arg	Gln	Asn	Ser	Met	Gly	Leu			
	210					215					220							
Phe	Ser	Ala	Leu	Arg	His	Ala	Leu	Ala	Lys	Glu	Ser	Leu	Val	Gly	Ala			
225					230					235					240			
Thr	Ala	Leu	Ser	Asp	Arg	Gly	Glu	Tyr	Arg	Thr	Glu	Glu	Gly	Leu	Val			
				245					250					255				
Lys	Gly	His	Ala	Tyr	Ser	Ile	Thr	Gly	Thr	His	Lys	Val	Phe	Leu	Gly			
			260					265					270					
Phe	Thr	Lys	Val	Arg	Leu	Leu	Arg	Leu	Arg	Asn	Pro	Trp	Gly	Cys	Val			
		275					280					285						
Glu	Trp	Thr	Gly	Ala	Trp	Ser	Asp	Ser	Cys	Pro	Arg	Trp	Asp	Thr	Leu			
	290					295					300							
Pro	Thr	Glu	Cys	Arg	Asp	Ala	Leu	Leu	Val	Lys	Lys	Glu	Asp	Gly	Glu			
305					310					315					320			
Phe	Trp	Met	Glu	Leu	Arg	Asp	Phe	Leu	Leu	His	Phe	Asp	Thr	Val	Gln			
				325					330					335				
Ile	Cys	Ser	Leu	Ser	Pro	Glu	Val	Leu	Gly	Pro	Ser	Pro	Glu	Gly	Gly			
			340					345					350					
Gly	Trp	His	Val	His	Thr	Phe	Gln	Gly	Arg	Trp	Val	Arg	Gly	Phe	Asn			
		355					360					365						
Ser	Gly	Gly	Ser	Gln	Pro	Asn	Ala	Glu	Thr	Phe	Trp	Thr	Asn	Pro	Gln			
	370					375					380							
Phe	Arg	Leu	Thr	Leu	Leu	Glu	Pro	Asp	Glu	Glu	Asp	Asp	Glu	Asp	Glu			
385					390					395					400			
Glu	Gly	Pro	Trp	Gly	Gly	Trp	Gly	Ala	Ala	Gly	Ala	Arg	Gly	Pro	Ala			
				405					410					415				

Arg Gly Gly Arg Thr Pro Lys Cys Thr Val Leu Leu Ser Leu Ile Gln
 420 425 430

Arg Asn Arg Arg Arg Leu Arg Ala Lys Gly Leu Thr Tyr Leu Thr Val
 435 440 445

Gly Phe His Val Phe Gln Ile Pro Glu Glu Leu Leu Gly Leu Trp Asp
 450 455 460

Ser Pro Arg Ser His Ala Leu Leu Pro Arg Leu Leu Arg Ala Asp Arg
 465 470 475 480

Ser Pro Leu Ser Ala Arg Arg Asp Val Thr Arg Arg Cys Cys Leu Arg
 485 490 495

Pro Gly His Tyr Leu Val Val Pro Ser Thr Ala His Ala Gly Asp Glu
 500 505 510

Ala Asp Phe Thr Leu Arg Val Phe Ser Glu Arg Arg His Thr Ala Val
 515 520 525

Glu Ile Asp Asp Val Ile Ser Ala Asp Leu Gln Ser Leu Gln Gly Pro
 530 535 540

Tyr Leu Pro Leu Glu Leu Gly Leu Glu Gln Leu Phe Gln Glu Leu Ala
 545 550 555 560

Gly Glu Glu Glu Glu Leu Asn Ala Ser Gln Leu Gln Ala Leu Leu Ser
 565 570 575

Ile Ala Leu Glu Pro Ala Arg Ala His Thr Ser Thr Pro Arg Glu Ile
 580 585 590

Gly Leu Arg Thr Cys Glu Gln Leu Leu Gln Cys Phe Gly His Gly Gln
 595 600 605

Ser Leu Ala Leu His His Phe Gln Gln Leu Trp Gly Tyr Leu Leu Glu
 610 615 620

Trp Gln Ala Ile Phe Asn Lys Phe Asp Glu Asp Thr Ser Gly Thr Met
 625 630 635 640

Asn Ser Tyr Glu Leu Arg Leu Ala Leu Asn Ala Ala Gly Phe His Leu

645

650

655

Asn Asn Gln Leu Thr Gln Thr Leu Thr Ser Arg Tyr Arg Asp Ser Arg
660 665 670

Leu Arg Val Asp Phe Glu Arg Phe Val Ser Cys Val Ala His Leu Thr
675 680 685

Cys Ile Phe Cys His Cys Ser Gln His Leu Asp Gly Gly Glu Gly Val
690 695 700

Ile Cys Leu Thr His Arg Gln Trp Met Glu Val Ala Thr Phe Ser
705 710 715

<210> 11136

<211> 36

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2199; "

<220>

<221> source

<223> /note="Gene Symbol: CAPN12; "

<220>

<221> source

<223> /note="Gene Name: calpain 12; "

<220>

<221> source

<223> /note="ENSP ID: ENSP00000469217"

<220>

<221> MOD_RES

<222> (1)..(1)

<223> Any amino acid

<400> 11136

Xaa Leu Gly Leu Glu Gln Leu Phe Gln Glu Leu Ala Gly Glu Glu Glu
1 5 10 15

Glu Leu Asn Ala Ser Gln Leu Gln Ala Leu Leu Ser Ile Ala Leu Glu
20 25 30

Pro Gly His Ile
35

25007

<210> 11137
<211> 179
<212> PRT
<213> Homo sapiens

<220>
<221> source
<223> /note="Payload ID: 2199; "

<220>
<221> source
<223> /note="Gene Symbol: CAPN12; "

<220>
<221> source
<223> /note="Gene Name: calpain 12; "

<220>
<221> source
<223> /note="ENSP ID: ENSP00000470233"

<400> 11137
Met Ala Ser Ser Ser Gly Arg Val Thr Ile Gln Leu Val Asp Glu Glu
1 5 10 15

Ala Gly Val Gly Ala Gly Arg Leu Gln Leu Phe Arg Gly Gln Ser Tyr
20 25 30

Glu Ala Ile Arg Ala Ala Cys Leu Asp Ser Gly Ile Leu Phe Arg Asp
35 40 45

Pro Tyr Phe Pro Ala Gly Pro Asp Ala Leu Gly Tyr Asp Gln Leu Gly
50 55 60

Pro Asp Ser Glu Lys Ala Lys Gly Val Lys Trp Met Arg Pro His Glu
65 70 75 80

Phe Cys Ala Glu Pro Lys Phe Ile Cys Glu Asp Met Ser Arg Thr Asp
85 90 95

Val Cys Gln Gly Ser Leu Ala Ala Ala Ser Leu Thr Leu Tyr Pro Arg
100 105 110

Leu Leu Arg Arg Val Val Pro Pro Gly Gln Asp Phe Gln His Gly Tyr
115 120 125

Ala Gly Val Phe His Phe Gln Leu Trp Gln Phe Gly Arg Trp Met Asp

130 135 140

Val Val Val Asp Asp Arg Leu Pro Val Arg Glu Gly Lys Leu Met Phe
 145 150 155 160

Val Arg Ser Glu Gln Arg Asn Glu Phe Trp Ala Pro Leu Leu Glu Lys
 165 170 175

Ala Tyr Ala

<210> 11138
 <211> 105
 <212> PRT
 <213> Homo sapiens

<220>
 <221> source
 <223> /note="Payload ID: 2199; "

<220>
 <221> source
 <223> /note="Gene Symbol: CAPN12; "

<220>
 <221> source
 <223> /note="Gene Name: calpain 12; "

<220>
 <221> source
 <223> /note="ENSP ID: ENSP00000470760"

<400> 11138
 Gly Leu Glu Gln Leu Phe Gln Glu Leu Ala Gly Glu Ala Ile Phe Asn
 1 5 10 15

Lys Phe Asp Glu Asp Thr Ser Gly Thr Met Asn Ser Tyr Glu Leu Arg
 20 25 30

Leu Ala Leu Asn Ala Ala Gly Phe His Leu Asn Asn Gln Leu Thr Gln
 35 40 45

Thr Leu Thr Ser Arg Tyr Arg Asp Ser Arg Leu Arg Val Asp Phe Glu
 50 55 60

Arg Phe Val Ser Cys Val Ala His Leu Thr Cys Ile Phe Cys His Cys
 65 70 75 80

Ser Gln His Leu Asp Gly Gly Glu Gly Val Ile Cys Leu Thr His Arg
85 90 95

Gln Trp Met Glu Val Ala Thr Phe Ser
100 105

<210> 11139

<211> 104

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2199; "

<220>

<221> source

<223> /note="Gene Symbol: CAPN12; "

<220>

<221> source

<223> /note="Gene Name: calpain 12; "

<220>

<221> source

<223> /note="ENSP ID: ENSP00000471007"

<220>

<221> MOD_RES

<222> (1)..(1)

<223> Any amino acid

<400> 11139

Xaa Leu Pro Leu Glu Leu Gly Leu Glu Gln Leu Phe Gln Glu Leu Ala
1 5 10 15

Gly Glu Glu Glu Glu Leu Asn Ala Ser Gln Leu Gln Ala Leu Leu Ser
20 25 30

Ile Ala Leu Glu Pro Gly Phe His Leu Asn Asn Gln Leu Thr Gln Thr
35 40 45

Leu Thr Ser Arg Tyr Arg Asp Ser Arg Leu Arg Val Asp Phe Glu Arg
50 55 60

Phe Val Ser Cys Val Ala His Leu Thr Cys Ile Phe Cys His Cys Ser
65 70 75 80

Gln His Leu Asp Gly Gly Glu Gly Val Ile Cys Leu Thr His Arg Gln

25010

85

90

95

Trp Met Glu Val Ala Thr Phe Ser
100

<210> 11140

<211> 93

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2199; "

<220>

<221> source

<223> /note="Gene Symbol: CAPN12; "

<220>

<221> source

<223> /note="Gene Name: calpain 12; "

<220>

<221> source

<223> /note="ENSP ID: ENSP00000471510"

<400> 11140

Met Ala Ser Ser Ser Gly Arg Val Thr Ile Gln Leu Val Asp Glu Glu
1 5 10 15

Ala Gly Val Gly Ala Gly Arg Leu Gln Leu Phe Arg Gly Gln Ser Tyr
20 25 30

Glu Ala Ile Arg Ala Ala Cys Leu Asp Ser Gly Ile Leu Phe Arg Asp
35 40 45

Pro Tyr Phe Pro Ala Gly Pro Asp Ala Leu Gly Tyr Asp Gln Leu Gly
50 55 60

Pro Asp Ser Glu Lys Ala Lys Gly Val Lys Trp Met Arg Pro His Ala
65 70 75 80

Glu Ala Trp Asn Pro Pro Pro Pro Thr Gly Val Leu Cys
85 90

<210> 11141

<211> 570

<212> PRT

<213> Homo sapiens

25011

<220>
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<223> /note="Payload ID: 2199; "

<220>
<221> source
<223> /note="Gene Symbol: CAPN12; "

<220>
<221> source
<223> /note="Gene Name: calpain 12; "

<220>
<221> source
<223> /note="ENSP ID: ENSP00000473156"

<400> 11141
Met Asp Val Val Val Asp Asp Arg Leu Pro Val Arg Glu Gly Lys Leu
1 5 10 15

Met Phe Val Arg Ser Glu Gln Arg Asn Glu Phe Trp Ala Pro Leu Leu
20 25 30

Glu Lys Ala Tyr Ala Lys Leu His Gly Ser Tyr Glu Val Met Arg Gly
35 40 45

Gly His Met Asn Glu Ala Phe Val Asp Phe Thr Gly Gly Val Gly Glu
50 55 60

Val Leu Tyr Leu Arg Gln Asn Ser Met Gly Leu Phe Ser Ala Leu Arg
65 70 75 80

His Ala Leu Ala Lys Glu Ser Leu Val Gly Ala Thr Ala Leu Ser Asp
85 90 95

Arg Gly Glu Tyr Arg Thr Glu Glu Gly Leu Val Lys Gly His Ala Tyr
100 105 110

Ser Ile Thr Gly Thr His Lys Val Phe Leu Gly Phe Thr Lys Val Arg
115 120 125

Leu Leu Arg Leu Arg Asn Pro Trp Gly Cys Val Glu Trp Thr Gly Ala
130 135 140

Trp Ser Asp Ser Cys Pro Arg Trp Asp Thr Leu Pro Thr Glu Cys Arg
145 150 155 160

Asp	Ala	Leu	Leu	Val	Lys	Lys	Glu	Asp	Gly	Glu	Phe	Trp	Met	Glu	Leu	165	170	175
Arg	Asp	Phe	Leu	Leu	His	Phe	Asp	Thr	Val	Gln	Ile	Cys	Ser	Leu	Ser	180	185	190
Pro	Glu	Val	Leu	Gly	Pro	Ser	Pro	Glu	Gly	Gly	Gly	Trp	His	Val	His	195	200	205
Thr	Phe	Gln	Gly	Arg	Trp	Val	Arg	Gly	Phe	Asn	Ser	Gly	Gly	Ser	Gln	210	215	220
Pro	Asn	Ala	Glu	Thr	Phe	Trp	Thr	Asn	Pro	Gln	Phe	Arg	Leu	Thr	Leu	225	230	235
Leu	Glu	Pro	Asp	Glu	Glu	Asp	Asp	Glu	Asp	Glu	Glu	Gly	Pro	Trp	Gly	245	250	255
Gly	Trp	Gly	Ala	Ala	Gly	Ala	Arg	Gly	Pro	Ala	Arg	Gly	Gly	Arg	Thr	260	265	270
Pro	Lys	Cys	Thr	Val	Leu	Leu	Ser	Leu	Ile	Gln	Arg	Asn	Arg	Arg	Arg	275	280	285
Leu	Arg	Ala	Lys	Gly	Leu	Thr	Tyr	Leu	Thr	Val	Gly	Phe	His	Val	Phe	290	295	300
Gln	Ile	Pro	Glu	Glu	Leu	Leu	Gly	Leu	Trp	Asp	Ser	Pro	Arg	Ser	His	305	310	315
Ala	Leu	Leu	Pro	Arg	Leu	Leu	Arg	Ala	Asp	Arg	Ser	Pro	Leu	Ser	Ala	325	330	335
Arg	Arg	Asp	Val	Thr	Arg	Arg	Cys	Cys	Leu	Arg	Pro	Gly	His	Tyr	Leu	340	345	350
Val	Val	Pro	Ser	Thr	Ala	His	Ala	Gly	Asp	Glu	Ala	Asp	Phe	Thr	Leu	355	360	365
Arg	Val	Phe	Ser	Glu	Arg	Arg	His	Thr	Ala	Val	Glu	Ile	Asp	Asp	Val	370	375	380

Ile Ser Ala Asp Leu Gln Ser Leu Gln Gly Pro Tyr Leu Pro Leu Glu
385 390 395 400

Leu Gly Leu Glu Gln Leu Phe Gln Glu Leu Ala Gly Glu Glu Glu Glu
405 410 415

Leu Asn Ala Ser Gln Leu Gln Ala Leu Leu Ser Ile Ala Leu Glu Pro
420 425 430

Ala Arg Ala His Thr Ser Thr Pro Arg Glu Ile Gly Leu Arg Thr Cys
435 440 445

Glu Gln Leu Leu Gln Cys Phe Gly His Gly Gln Ser Leu Ala Leu His
450 455 460

His Phe Gln Gln Leu Trp Gly Tyr Leu Leu Glu Trp Gln Ala Ile Phe
465 470 475 480

Asn Lys Phe Asp Glu Asp Thr Ser Gly Thr Met Asn Ser Tyr Glu Leu
485 490 495

Arg Leu Ala Leu Asn Ala Ala Gly Phe His Leu Asn Asn Gln Leu Thr
500 505 510

Gln Thr Leu Thr Ser Arg Tyr Arg Asp Ser Arg Leu Arg Val Asp Phe
515 520 525

Glu Arg Phe Val Ser Cys Val Ala His Leu Thr Cys Ile Phe Cys His
530 535 540

Cys Ser Gln His Leu Asp Gly Gly Glu Gly Val Ile Cys Leu Thr His
545 550 555 560

Arg Gln Trp Met Glu Val Ala Thr Phe Ser
565 570

<210> 11142

<211> 719

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2199; "

<220>
 <221> source
 <223> /note="Gene Symbol: CAPN12; "

<220>
 <221> source
 <223> /note="Gene Name: Calpain 12; "

<220>
 <221> source
 <223> /note="ENSP ID: ENSP00000488980"

<400> 11142

Met Ala Ser Ser Ser Gly Arg Val Thr Ile Gln Leu Val Asp Glu Glu
 1 5 10 15

Ala Gly Val Gly Ala Gly Arg Leu Gln Leu Phe Arg Gly Gln Ser Tyr
 20 25 30

Glu Ala Ile Arg Ala Ala Cys Leu Asp Ser Gly Ile Leu Phe Arg Asp
 35 40 45

Pro Tyr Phe Pro Ala Gly Pro Asp Ala Leu Gly Tyr Asp Gln Leu Gly
 50 55 60

Pro Asp Ser Glu Lys Ala Lys Gly Val Lys Trp Met Arg Pro His Glu
 65 70 75 80

Phe Cys Ala Glu Pro Lys Phe Ile Cys Glu Asp Met Ser Arg Thr Asp
 85 90 95

Val Cys Gln Gly Ser Leu Gly Asn Cys Trp Phe Leu Ala Ala Ala Ala
 100 105 110

Ser Leu Thr Leu Tyr Pro Arg Leu Leu Arg Arg Val Val Pro Pro Gly
 115 120 125

Gln Asp Phe Gln His Gly Tyr Ala Gly Val Phe His Phe Gln Leu Trp
 130 135 140

Gln Phe Gly Arg Trp Met Asp Val Val Val Asp Asp Arg Leu Pro Val
 145 150 155 160

Arg Glu Gly Lys Leu Met Phe Val Arg Ser Glu Gln Arg Asn Glu Phe
 165 170 175

Trp	Ala	Pro	Leu	Leu	Glu	Lys	Ala	Tyr	Ala	Lys	Leu	His	Gly	Ser	Tyr		
			180					185					190				
Glu	Val	Met	Arg	Gly	Gly	His	Met	Asn	Glu	Ala	Phe	Val	Asp	Phe	Thr		
		195					200					205					
Gly	Gly	Val	Gly	Glu	Val	Leu	Tyr	Leu	Arg	Gln	Asn	Ser	Met	Gly	Leu		
	210					215					220						
Phe	Ser	Ala	Leu	Arg	His	Ala	Leu	Ala	Lys	Glu	Ser	Leu	Val	Gly	Ala		
225					230					235					240		
Thr	Ala	Leu	Ser	Asp	Arg	Gly	Glu	Tyr	Arg	Thr	Glu	Glu	Gly	Leu	Val		
				245					250					255			
Lys	Gly	His	Ala	Tyr	Ser	Ile	Thr	Gly	Thr	His	Lys	Val	Phe	Leu	Gly		
			260					265					270				
Phe	Thr	Lys	Val	Arg	Leu	Leu	Arg	Leu	Arg	Asn	Pro	Trp	Gly	Cys	Val		
		275					280					285					
Glu	Trp	Thr	Gly	Ala	Trp	Ser	Asp	Ser	Cys	Pro	Arg	Trp	Asp	Thr	Leu		
	290					295					300						
Pro	Thr	Glu	Cys	Arg	Asp	Ala	Leu	Leu	Val	Lys	Lys	Glu	Asp	Gly	Glu		
305					310					315					320		
Phe	Trp	Met	Glu	Leu	Arg	Asp	Phe	Leu	Leu	His	Phe	Asp	Thr	Val	Gln		
				325					330					335			
Ile	Cys	Ser	Leu	Ser	Pro	Glu	Val	Leu	Gly	Pro	Ser	Pro	Glu	Gly	Gly		
			340					345					350				
Gly	Trp	His	Val	His	Thr	Phe	Gln	Gly	Arg	Trp	Val	Arg	Gly	Phe	Asn		
		355					360					365					
Ser	Gly	Gly	Ser	Gln	Pro	Asn	Ala	Glu	Thr	Phe	Trp	Thr	Asn	Pro	Gln		
	370					375					380						
Phe	Arg	Leu	Thr	Leu	Leu	Glu	Pro	Asp	Glu	Glu	Asp	Asp	Glu	Asp	Glu		
385					390					395					400		
Glu	Gly	Pro	Trp	Gly	Gly	Trp	Gly	Ala	Ala	Gly	Ala	Arg	Gly	Pro	Ala		

				405					410					415			
Arg	Gly	Gly	Arg	Thr	Pro	Lys	Cys	Thr	Val	Leu	Leu	Ser	Leu	Ile	Gln		
			420					425					430				
Arg	Asn	Arg	Arg	Arg	Leu	Arg	Ala	Lys	Gly	Leu	Thr	Tyr	Leu	Thr	Val		
		435					440					445					
Gly	Phe	His	Val	Phe	Gln	Ile	Pro	Glu	Glu	Leu	Leu	Gly	Leu	Trp	Asp		
	450					455					460						
Ser	Pro	Arg	Ser	His	Ala	Leu	Leu	Pro	Arg	Leu	Leu	Arg	Ala	Asp	Arg		
465					470					475					480		
Ser	Pro	Leu	Ser	Ala	Arg	Arg	Asp	Val	Thr	Arg	Arg	Cys	Cys	Leu	Arg		
				485					490					495			
Pro	Gly	His	Tyr	Leu	Val	Val	Pro	Ser	Thr	Ala	His	Ala	Gly	Asp	Glu		
			500					505					510				
Ala	Asp	Phe	Thr	Leu	Arg	Val	Phe	Ser	Glu	Arg	Arg	His	Thr	Ala	Val		
		515					520					525					
Glu	Ile	Asp	Asp	Val	Ile	Ser	Ala	Asp	Leu	Gln	Ser	Leu	Gln	Gly	Pro		
	530					535					540						
Tyr	Leu	Pro	Leu	Glu	Leu	Gly	Leu	Glu	Gln	Leu	Phe	Gln	Glu	Leu	Ala		
545					550					555					560		
Gly	Glu	Glu	Glu	Glu	Leu	Asn	Ala	Ser	Gln	Leu	Gln	Ala	Leu	Leu	Ser		
				565					570					575			
Ile	Ala	Leu	Glu	Pro	Ala	Arg	Ala	His	Thr	Ser	Thr	Pro	Arg	Glu	Ile		
			580					585					590				
Gly	Leu	Arg	Thr	Cys	Glu	Gln	Leu	Leu	Gln	Cys	Phe	Gly	His	Gly	Gln		
		595					600					605					
Ser	Leu	Ala	Leu	His	His	Phe	Gln	Gln	Leu	Trp	Gly	Tyr	Leu	Leu	Glu		
	610					615					620						
Trp	Gln	Ala	Ile	Phe	Asn	Lys	Phe	Asp	Glu	Asp	Thr	Ser	Gly	Thr	Met		
625					630					635					640		

Asn Ser Tyr Glu Leu Arg Leu Ala Leu Asn Ala Ala Gly Phe His Leu
645 650 655

Asn Asn Gln Leu Thr Gln Thr Leu Thr Ser Arg Tyr Arg Asp Ser Arg
660 665 670

Leu Arg Val Asp Phe Glu Arg Phe Val Ser Cys Val Ala His Leu Thr
675 680 685

Cys Ile Phe Cys His Cys Ser Gln His Leu Asp Gly Gly Glu Gly Val
690 695 700

Ile Cys Leu Thr His Arg Gln Trp Met Glu Val Ala Thr Phe Ser
705 710 715

<210> 11143

<211> 669

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2200; "

<220>

<221> source

<223> /note="Gene Symbol: CAPN13; "

<220>

<221> source

<223> /note="Gene Name: calpain 13; "

<220>

<221> source

<223> /note="Uniprot ID: Q6MZZ7; "

<220>

<221> source

<223> /note="ENSP ID: ENSP00000295055"

<400> 11143

Met Ala Tyr Tyr Gln Glu Pro Ser Val Glu Thr Ser Ile Ile Lys Phe
1 5 10 15

Lys Asp Gln Asp Phe Thr Thr Leu Arg Asp His Cys Leu Ser Met Gly
20 25 30

Arg Thr Phe Lys Asp Glu Thr Phe Pro Ala Ala Asp Ser Ser Ile Gly

35					40					45					
Gln	Lys	Leu	Leu	Gln	Glu	Lys	Arg	Leu	Ser	Asn	Val	Ile	Trp	Lys	Arg
	50					55					60				
Pro	Gln	Asp	Leu	Pro	Gly	Gly	Pro	Pro	His	Phe	Ile	Leu	Asp	Asp	Ile
65					70					75					80
Ser	Arg	Phe	Asp	Ile	Gln	Gln	Gly	Gly	Ala	Ala	Asp	Cys	Trp	Phe	Leu
				85					90					95	
Ala	Ala	Leu	Gly	Ser	Leu	Thr	Gln	Asn	Pro	Gln	Tyr	Arg	Gln	Lys	Ile
			100					105					110		
Leu	Met	Val	Gln	Ser	Phe	Ser	His	Gln	Tyr	Ala	Gly	Ile	Phe	Arg	Phe
		115					120					125			
Arg	Phe	Trp	Gln	Cys	Gly	Gln	Trp	Val	Glu	Val	Val	Ile	Asp	Asp	Arg
	130					135					140				
Leu	Pro	Val	Gln	Gly	Asp	Lys	Cys	Leu	Phe	Val	Arg	Pro	Arg	His	Gln
145					150					155					160
Asn	Gln	Glu	Phe	Trp	Pro	Cys	Leu	Leu	Glu	Lys	Ala	Tyr	Ala	Lys	Leu
				165					170					175	
Leu	Gly	Ser	Tyr	Ser	Asp	Leu	His	Tyr	Gly	Phe	Leu	Glu	Asp	Ala	Leu
			180					185					190		
Val	Asp	Leu	Thr	Gly	Gly	Val	Ile	Thr	Asn	Ile	His	Leu	His	Ser	Ser
		195					200					205			
Pro	Val	Asp	Leu	Val	Lys	Ala	Val	Lys	Thr	Ala	Thr	Lys	Ala	Gly	Ser
	210					215					220				
Leu	Ile	Thr	Cys	Ala	Thr	Pro	Ser	Gly	Pro	Thr	Asp	Thr	Ala	Gln	Ala
225					230					235					240
Met	Glu	Asn	Gly	Leu	Val	Ser	Leu	His	Ala	Tyr	Thr	Val	Thr	Gly	Ala
				245					250					255	
Glu	Gln	Ile	Gln	Tyr	Arg	Arg	Gly	Trp	Glu	Glu	Ile	Ile	Ser	Leu	Trp
			260					265					270		

Asn	Pro	Trp	Gly	Trp	Gly	Glu	Ala	Glu	Trp	Arg	Gly	Arg	Trp	Ser	Asp	
		275					280					285				
Gly	Ser	Gln	Glu	Trp	Glu	Glu	Thr	Cys	Asp	Pro	Arg	Lys	Ser	Gln	Leu	
	290					295					300					
His	Lys	Lys	Arg	Glu	Asp	Gly	Glu	Phe	Trp	Met	Ser	Cys	Gln	Asp	Phe	
305					310					315					320	
Gln	Gln	Lys	Phe	Ile	Ala	Met	Phe	Ile	Cys	Ser	Glu	Ile	Pro	Ile	Thr	
				325					330					335		
Leu	Asp	His	Gly	Asn	Thr	Leu	His	Glu	Gly	Trp	Ser	Gln	Ile	Met	Phe	
			340					345					350			
Arg	Lys	Gln	Val	Ile	Leu	Gly	Asn	Thr	Ala	Gly	Gly	Pro	Arg	Asn	Asp	
		355					360					365				
Ala	Gln	Phe	Asn	Phe	Ser	Val	Gln	Glu	Pro	Met	Glu	Gly	Thr	Asn	Val	
	370					375					380					
Val	Val	Cys	Val	Thr	Val	Ala	Val	Thr	Pro	Ser	Asn	Leu	Lys	Ala	Glu	
385					390					395					400	
Asp	Ala	Lys	Phe	Pro	Leu	Asp	Phe	Gln	Val	Ile	Leu	Ala	Gly	Ser	Gln	
				405					410					415		
Arg	Phe	Arg	Glu	Lys	Phe	Pro	Pro	Val	Phe	Phe	Ser	Ser	Phe	Arg	Asn	
			420					425					430			
Thr	Val	Gln	Ser	Ser	Asn	Asn	Lys	Phe	Arg	Arg	Asn	Phe	Thr	Met	Thr	
		435					440					445				
Tyr	His	Leu	Ser	Pro	Gly	Asn	Tyr	Val	Val	Val	Ala	Gln	Thr	Arg	Arg	
	450					455					460					
Lys	Ser	Ala	Glu	Phe	Leu	Leu	Arg	Ile	Phe	Leu	Lys	Met	Pro	Asp	Ser	
465					470					475					480	
Asp	Arg	His	Leu	Ser	Ser	His	Phe	Asn	Leu	Arg	Met	Lys	Gly	Ser	Pro	
				485					490					495		

Ser Glu His Gly Ser Gln Gln Ser Ile Phe Asn Arg Tyr Ala Gln Gln
500 505 510

Arg Leu Asp Ile Asp Ala Thr Gln Leu Gln Gly Leu Leu Asn Gln Glu
515 520 525

Leu Leu Thr Gly Pro Pro Gly Asp Met Phe Ser Leu Asp Glu Cys Arg
530 535 540

Ser Leu Val Ala Leu Met Glu Leu Lys Val Asn Gly Arg Leu Asp Gln
545 550 555 560

Glu Glu Phe Ala Arg Leu Trp Lys Arg Leu Val His Tyr Gln His Val
565 570 575

Phe Gln Lys Val Gln Thr Ser Pro Gly Val Leu Leu Ser Ser Asp Leu
580 585 590

Trp Lys Ala Ile Glu Asn Thr Asp Phe Leu Arg Gly Ile Phe Ile Ser
595 600 605

Arg Glu Leu Leu His Leu Val Thr Leu Arg Tyr Ser Asp Ser Val Gly
610 615 620

Arg Val Ser Phe Pro Ser Leu Val Cys Phe Leu Met Arg Leu Glu Ala
625 630 635 640

Met Ala Lys Thr Phe Arg Asn Leu Ser Lys Asp Gly Lys Gly Leu Tyr
645 650 655

Leu Thr Glu Met Glu Trp Met Ser Leu Val Met Tyr Asn
660 665

<210> 11144

<211> 125

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2200; "

<220>

<221> source

<223> /note="Gene Symbol: CAPN13; "

<220>
<221> source
<223> /note="Gene Name: calpain 13; "

<220>
<221> source
<223> /note="ENSP ID: ENSP00000403180"

<220>
<221> MOD_RES
<222> (1)..(1)
<223> Any amino acid

<400> 11144
Xaa Asn Asn Lys Phe Arg Arg Asn Phe Thr Met Thr Tyr His Leu Ser
1 5 10 15

Pro Gly Asn Tyr Val Val Val Ala Gln Thr Arg Arg Lys Ser Ala Glu
20 25 30

Phe Leu Leu Arg Ile Phe Leu Lys Met Pro Asp Ser Asp Arg His Leu
35 40 45

Ser Ser His Phe Asn Leu Arg Met Lys Gly Ser Pro Ser Glu His Gly
50 55 60

Ser Gln Gln Ser Ile Phe Asn Arg Tyr Ala Gln Gln Arg Leu Asp Ile
65 70 75 80

Asp Ala Thr Gln Leu Gln Gly Leu Leu Asn Gln Glu Leu Leu Thr Gly
85 90 95

Pro Pro Gly Asp Met Phe Ser Leu Asp Glu Cys Arg Ser Leu Val Ala
100 105 110

Leu Met Glu Val Ser Phe Ala Val Ile Pro Pro Met Leu
115 120 125

<210> 11145
<211> 423
<212> PRT
<213> Homo sapiens

<220>
<221> source
<223> /note="Payload ID: 2200; "

<220>
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 <223> /note="Gene Symbol: CAPN13; "

<220>
 <221> source
 <223> /note="Gene Name: calpain 13; "

<220>
 <221> source
 <223> /note="Uniprot ID: Q6MZZ7; "

<220>
 <221> source
 <223> /note="ENSP ID: ENSP00000416191"

<400> 11145
 Met Ala Tyr Tyr Gln Glu Pro Ser Val Glu Thr Ser Ile Ile Lys Phe
 1 5 10 15

Lys Asp Gln Asp Phe Thr Thr Leu Arg Asp His Cys Leu Ser Met Gly
 20 25 30

Arg Thr Phe Lys Asp Glu Thr Phe Pro Ala Ala Asp Ser Ser Ile Gly
 35 40 45

Gln Lys Leu Leu Gln Glu Lys Arg Leu Ser Asn Val Ile Trp Lys Arg
 50 55 60

Pro Gln Asp Leu Pro Gly Gly Pro Pro His Phe Ile Leu Asp Asp Ile
 65 70 75 80

Ser Arg Phe Asp Ile Gln Gln Gly Gly Ala Ala Asp Cys Trp Phe Leu
 85 90 95

Ala Ala Leu Gly Ser Leu Thr Gln Asn Pro Gln Tyr Arg Gln Lys Ile
 100 105 110

Leu Met Val Gln Ser Phe Ser His Gln Tyr Ala Gly Ile Phe Arg Phe
 115 120 125

Arg Phe Trp Gln Cys Gly Gln Trp Val Glu Val Val Ile Asp Asp Arg
 130 135 140

Leu Pro Val Gln Gly Asp Lys Cys Leu Phe Val Arg Pro Arg His Gln
 145 150 155 160

Asn	Gln	Glu	Phe	Trp	Pro	Cys	Leu	Leu	Glu	Lys	Ala	Tyr	Ala	Lys	Leu	165	170	175
Leu	Gly	Ser	Tyr	Ser	Asp	Leu	His	Tyr	Gly	Phe	Leu	Glu	Asp	Ala	Leu	180	185	190
Val	Asp	Leu	Thr	Gly	Gly	Val	Ile	Thr	Asn	Ile	His	Leu	His	Ser	Ser	195	200	205
Pro	Val	Asp	Leu	Val	Lys	Ala	Val	Lys	Thr	Ala	Thr	Lys	Ala	Gly	Ser	210	215	220
Leu	Ile	Thr	Cys	Ala	Thr	Pro	Ser	Gly	Pro	Thr	Asp	Thr	Ala	Gln	Ala	225	230	235
Met	Glu	Asn	Gly	Leu	Val	Ser	Leu	His	Ala	Tyr	Thr	Val	Thr	Gly	Ala	245	250	255
Glu	Gln	Ile	Gln	Tyr	Arg	Arg	Gly	Trp	Glu	Glu	Ile	Ile	Ser	Leu	Trp	260	265	270
Asn	Pro	Trp	Gly	Trp	Gly	Glu	Ala	Glu	Trp	Arg	Gly	Arg	Trp	Ser	Asp	275	280	285
Gly	Ser	Gln	Glu	Trp	Glu	Glu	Thr	Cys	Asp	Pro	Arg	Lys	Ser	Gln	Leu	290	295	300
His	Lys	Lys	Arg	Glu	Asp	Gly	Glu	Phe	Trp	Met	Ser	Cys	Gln	Asp	Phe	305	310	315
Gln	Gln	Lys	Phe	Ile	Ala	Met	Phe	Ile	Cys	Ser	Glu	Ile	Pro	Ile	Thr	325	330	335
Leu	Asp	His	Gly	Asn	Thr	Leu	His	Glu	Gly	Trp	Ser	Gln	Ile	Met	Phe	340	345	350
Arg	Lys	Gln	Val	Ile	Leu	Gly	Asn	Thr	Ala	Gly	Gly	Pro	Arg	Asn	Asp	355	360	365
Ala	Gln	Phe	Asn	Phe	Ser	Val	Gln	Glu	Pro	Met	Glu	Gly	Thr	Asn	Val	370	375	380
Val	Val	Cys	Val	Thr	Val	Ala	Val	Thr	Pro	Ser	Asn	Leu	Lys	Ala	Glu			

385 390 395 400
 Asp Ala Lys Phe Pro Leu Asp Phe Gln Val Ile Leu Ala Gly Ser Gln
 405 410 415

 Lys His Cys Pro Lys Leu Lys
 420

 <210> 11146
 <211> 102
 <212> PRT
 <213> Homo sapiens

 <220>
 <221> source
 <223> /note="Payload ID: 2200; "

 <220>
 <221> source
 <223> /note="Gene Symbol: CAPN13; "

 <220>
 <221> source
 <223> /note="Gene Name: calpain 13; "

 <220>
 <221> source
 <223> /note="ENSP ID: ENSP00000440723"

 <400> 11146
 Met Ala Tyr Tyr Gln Glu Pro Ser Val Glu Thr Ser Ile Ile Lys Phe
 1 5 10 15

 Lys Asp Gln Asp Phe Thr Thr Leu Arg Asp His Cys Leu Ser Met Gly
 20 25 30

 Arg Thr Phe Lys Asp Glu Thr Phe Pro Ala Ala Asp Ser Ser Ile Gly
 35 40 45

 Gln Lys Leu Leu Gln Glu Lys Arg Leu Ser Asn Val Ile Trp Lys Arg
 50 55 60

 Pro Gln Asp Leu Pro Gly Gly Pro Pro His Phe Ile Leu Asp Asp Ile
 65 70 75 80

 Ser Arg Phe Asp Ile Gln Gln Gly Gly Ala Val Leu Ala Met Trp Pro
 85 90 95

Val Gly Gly Ser Gly Asp
100

<210> 11147

<211> 143

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2201; "

<220>

<221> source

<223> /note="Gene Symbol: CAPN14; "

<220>

<221> source

<223> /note="Gene Name: calpain 14; "

<220>

<221> source

<223> /note="ENSP ID: ENSP00000381805"

<400> 11147

Met Ser Leu Trp Pro Pro Phe Arg Cys Arg Trp Lys Leu Ala Pro Arg
1 5 10 15

Tyr Ser Arg Arg Ala Ser Pro Gln Gln Pro Gln Gln Asp Phe Glu Ala
20 25 30

Leu Leu Ala Glu Cys Leu Arg Asn Gly Cys Leu Phe Glu Asp Thr Ser
35 40 45

Phe Pro Ala Thr Leu Ser Ser Ile Gly Ser Gly Ser Leu Leu Gln Lys
50 55 60

Leu Pro Pro Arg Leu Gln Trp Lys Arg Pro Pro Glu Leu His Ser Asn
65 70 75 80

Pro Gln Phe Tyr Phe Ala Lys Ala Lys Arg Leu Asp Leu Cys Gln Gly
85 90 95

Ile Val Gly Asp Cys Trp Phe Leu Ala Ala Leu Gln Ala Leu Ala Leu
100 105 110

His Gln Asp Ile Leu Ser Arg Val Val Pro Leu Asn Gln Ser Phe Thr
115 120 125

Glu Lys Tyr Ala Gly Ile Phe Arg Phe Trp Ala Leu Trp Phe Leu
130 135 140

<210> 11148
<211> 684
<212> PRT
<213> Homo sapiens

<220>
<221> source
<223> /note="Payload ID: 2201; "

<220>
<221> source
<223> /note="Gene Symbol: CAPN14; "

<220>
<221> source
<223> /note="Gene Name: calpain 14; "

<220>
<221> source
<223> /note="Uniprot ID: A8MX76; "

<220>
<221> source
<223> /note="ENSP ID: ENSP00000385247"

<400> 11148
Met Ser Leu Trp Pro Pro Phe Arg Cys Arg Trp Lys Leu Ala Pro Arg
1 5 10 15

Tyr Ser Arg Arg Ala Ser Pro Gln Gln Pro Gln Gln Asp Phe Glu Ala
20 25 30

Leu Leu Ala Glu Cys Leu Arg Asn Gly Cys Leu Phe Glu Asp Thr Ser
35 40 45

Phe Pro Ala Thr Leu Ser Ser Ile Gly Ser Gly Ser Leu Leu Gln Lys
50 55 60

Leu Pro Pro Arg Leu Gln Trp Lys Arg Pro Pro Glu Leu His Ser Asn
65 70 75 80

Pro Gln Phe Tyr Phe Ala Lys Ala Lys Arg Leu Asp Leu Cys Gln Gly
85 90 95

Ile Val Gly Asp Cys Trp Phe Leu Ala Ala Leu Gln Ala Leu Ala Leu
100 105 110

His	Gln	Asp	Ile	Leu	Ser	Arg	Val	Val	Pro	Leu	Asn	Gln	Ser	Phe	Thr		
		115					120					125					
Glu	Lys	Tyr	Ala	Gly	Ile	Phe	Arg	Phe	Trp	Phe	Trp	His	Tyr	Gly	Asn		
	130					135					140						
Trp	Val	Pro	Val	Val	Ile	Asp	Asp	Arg	Leu	Pro	Val	Asn	Glu	Ala	Gly		
145					150					155					160		
Gln	Leu	Val	Phe	Val	Ser	Ser	Thr	Tyr	Lys	Asn	Leu	Phe	Trp	Gly	Ala		
				165					170					175			
Leu	Leu	Glu	Lys	Ala	Tyr	Ala	Lys	Leu	Ser	Gly	Ser	Tyr	Glu	Asp	Leu		
			180					185					190				
Gln	Ser	Gly	Gln	Val	Ser	Glu	Ala	Leu	Val	Asp	Phe	Thr	Gly	Gly	Val		
		195					200					205					
Thr	Met	Thr	Ile	Asn	Leu	Ala	Glu	Ala	His	Gly	Asn	Leu	Trp	Asp	Ile		
	210					215					220						
Leu	Ile	Glu	Ala	Thr	Tyr	Asn	Arg	Thr	Leu	Ile	Gly	Cys	Gln	Thr	His		
225					230					235					240		
Ser	Gly	Glu	Lys	Ile	Leu	Glu	Asn	Gly	Leu	Val	Glu	Gly	His	Ala	Tyr		
				245					250					255			
Thr	Leu	Thr	Gly	Ile	Arg	Lys	Val	Thr	Cys	Lys	His	Arg	Pro	Glu	Tyr		
			260					265					270				
Leu	Val	Lys	Leu	Arg	Asn	Pro	Trp	Gly	Lys	Val	Glu	Trp	Lys	Gly	Asp		
		275					280					285					
Trp	Ser	Asp	Ser	Ser	Ser	Lys	Trp	Glu	Leu	Leu	Ser	Pro	Lys	Glu	Lys		
	290					295					300						
Ile	Leu	Leu	Leu	Arg	Lys	Asp	Asn	Asp	Gly	Glu	Phe	Trp	Met	Thr	Leu		
305					310					315					320		
Gln	Asp	Phe	Lys	Thr	His	Phe	Val	Leu	Leu	Val	Ile	Cys	Lys	Leu	Thr		
				325					330					335			

Pro	Gly	Leu	Leu	Ser	Gln	Glu	Ala	Ala	Gln	Lys	Trp	Thr	Tyr	Thr	Met
			340					345					350		
Arg	Glu	Gly	Arg	Trp	Glu	Lys	Arg	Ser	Thr	Ala	Gly	Gly	Gln	Arg	Gln
		355					360					365			
Leu	Leu	Gln	Asp	Thr	Phe	Trp	Lys	Asn	Pro	Gln	Phe	Leu	Leu	Ser	Val
	370					375					380				
Trp	Arg	Pro	Glu	Glu	Gly	Arg	Arg	Ser	Leu	Arg	Pro	Cys	Ser	Val	Leu
385					390					395					400
Val	Ser	Leu	Leu	Gln	Lys	Pro	Arg	His	Arg	Cys	Arg	Lys	Arg	Lys	Pro
				405					410					415	
Leu	Leu	Ala	Ile	Gly	Phe	Tyr	Leu	Tyr	Arg	Met	Asn	Lys	Tyr	His	Asp
			420					425					430		
Asp	Gln	Arg	Arg	Leu	Pro	Pro	Glu	Phe	Phe	Gln	Arg	Asn	Thr	Pro	Leu
		435					440					445			
Ser	Gln	Pro	Asp	Arg	Phe	Leu	Lys	Glu	Lys	Glu	Val	Ser	Gln	Glu	Leu
	450					455					460				
Cys	Leu	Glu	Pro	Gly	Thr	Tyr	Leu	Ile	Val	Pro	Cys	Ile	Leu	Glu	Ala
465					470					475					480
His	Gln	Lys	Ser	Glu	Phe	Val	Leu	Arg	Val	Phe	Ser	Arg	Lys	His	Ile
				485					490					495	
Phe	Tyr	Glu	Ile	Gly	Ser	Asn	Ser	Gly	Val	Val	Phe	Ser	Lys	Glu	Ile
			500					505					510		
Glu	Asp	Gln	Asn	Glu	Arg	Gln	Asp	Glu	Phe	Phe	Thr	Lys	Phe	Phe	Glu
		515					520					525			
Lys	His	Pro	Glu	Ile	Asn	Ala	Val	Gln	Leu	Gln	Asn	Leu	Leu	Asn	Gln
	530					535					540				
Met	Thr	Trp	Ser	Ser	Leu	Gly	Ser	Arg	Gln	Pro	Phe	Phe	Ser	Leu	Glu
545					550					555					560

Ala Cys Gln Gly Ile Leu Ala Leu Leu Asp Leu Asn Ala Ser Gly Thr
565 570 575

Met Ser Ile Gln Glu Phe Arg Asp Leu Trp Lys Gln Leu Lys Leu Ser
580 585 590

Gln Lys Val Phe His Lys Gln Asp Arg Gly Ser Gly Tyr Leu Asn Trp
595 600 605

Glu Gln Leu His Ala Ala Met Arg Glu Ala Gly Ile Met Leu Ser Asp
610 615 620

Asp Val Cys Gln Leu Met Leu Ile Arg Tyr Gly Gly Pro Arg Leu Gln
625 630 635 640

Met Asp Phe Val Ser Phe Ile His Leu Met Leu Arg Val Glu Asn Met
645 650 655

Glu Asp Val Phe Gln Asn Leu Thr Gln Asp Gly Lys Gly Ile Tyr Leu
660 665 670

Gln Lys Pro Glu Trp Met Met Met Ala Leu Tyr Ser
675 680

<210> 11149
<211> 1086
<212> PRT
<213> Homo sapiens

<220>
<221> source
<223> /note="Payload ID: 2202; "

<220>
<221> source
<223> /note="Gene Symbol: CAPN15; "

<220>
<221> source
<223> /note="Gene Name: calpain 15; "

<220>
<221> source
<223> /note="Uniprot ID: O75808; "

<220>
<221> source
<223> /note="ENSP ID: ENSP00000219611"

<400> 11149

Met Ala Thr Val Gly Glu Trp Ser Cys Val Arg Cys Thr Phe Leu Asn
1 5 10 15

Pro Ala Gly Gln Arg Gln Cys Ser Ile Cys Glu Ala Pro Arg His Lys
20 25 30

Pro Asp Leu Asn His Ile Leu Arg Leu Ser Val Glu Glu Gln Lys Trp
35 40 45

Pro Cys Ala Arg Cys Thr Phe Arg Asn Phe Leu Gly Lys Glu Ala Cys
50 55 60

Glu Val Cys Gly Phe Thr Pro Glu Pro Ala Pro Gly Ala Ala Phe Leu
65 70 75 80

Pro Val Leu Asn Gly Val Leu Pro Lys Pro Pro Ala Ile Leu Gly Glu
85 90 95

Pro Lys Gly Ser Cys Gln Glu Glu Ala Gly Pro Val Arg Thr Ala Gly
100 105 110

Leu Val Ala Thr Glu Pro Ala Arg Gly Gln Cys Glu Asp Lys Asp Glu
115 120 125

Glu Glu Lys Glu Glu Gln Glu Glu Glu Gly Ala Ala Glu Pro Arg
130 135 140

Gly Gly Trp Ala Cys Pro Arg Cys Thr Leu His Asn Thr Pro Val Ala
145 150 155 160

Ser Ser Cys Ser Val Cys Gly Gly Pro Arg Arg Leu Ser Leu Pro Arg
165 170 175

Ile Pro Pro Glu Ala Leu Val Val Pro Glu Val Val Ala Pro Ala Gly
180 185 190

Phe His Val Val Pro Ala Ala Pro Pro Pro Gly Leu Pro Gly Glu Gly
195 200 205

Ala Glu Ala Asn Pro Pro Ala Thr Ser Gln Gly Pro Ala Ala Glu Pro
210 215 220

Glu	Pro	Pro	Arg	Val	Pro	Pro	Phe	Ser	Pro	Phe	Ser	Ser	Thr	Leu	Gln
225					230					235					240

Asn	Asn	Pro	Val	Pro	Arg	Ser	Arg	Arg	Glu	Val	Pro	Pro	Gln	Leu	Gln
				245					250					255	

Pro	Pro	Val	Pro	Glu	Ala	Ala	Gln	Pro	Ser	Pro	Ser	Ala	Gly	Cys	Arg
			260					265					270		

Gly	Ala	Pro	Gln	Gly	Ser	Gly	Trp	Ala	Gly	Ala	Ser	Arg	Leu	Ala	Glu
		275					280					285			

Leu	Leu	Ser	Gly	Lys	Arg	Leu	Ser	Val	Leu	Glu	Glu	Glu	Ala	Thr	Glu
	290					295					300				

Gly	Gly	Thr	Ser	Arg	Val	Glu	Ala	Gly	Ser	Ser	Thr	Ser	Gly	Ser	Asp
305					310					315					320

Ile	Ile	Asp	Leu	Ala	Gly	Asp	Thr	Val	Arg	Tyr	Thr	Pro	Ala	Ser	Pro
				325					330					335	

Ser	Ser	Pro	Asp	Phe	Thr	Thr	Trp	Ser	Cys	Ala	Lys	Cys	Thr	Leu	Arg
			340					345					350		

Asn	Pro	Thr	Val	Ala	Pro	Arg	Cys	Ser	Ala	Cys	Gly	Cys	Ser	Lys	Leu
		355					360					365			

His	Gly	Phe	Gln	Glu	His	Gly	Glu	Pro	Pro	Thr	His	Cys	Pro	Asp	Cys
	370					375					380				

Gly	Ala	Asp	Lys	Pro	Ser	Pro	Cys	Gly	Arg	Ser	Cys	Gly	Arg	Val	Ser
385					390					395					400

Ser	Ala	Gln	Lys	Ala	Ala	Arg	Val	Leu	Pro	Glu	Arg	Pro	Gly	Gln	Trp
				405					410					415	

Ala	Cys	Pro	Ala	Cys	Thr	Leu	Leu	Asn	Ala	Leu	Arg	Ala	Lys	His	Cys
			420					425					430		

Ala	Ala	Cys	His	Thr	Pro	Gln	Leu	Leu	Val	Ala	Gln	Arg	Arg	Gly	Ala
		435					440					445			

Ala	Pro	Leu	Arg	Arg	Arg	Glu	Ser	Met	His	Val	Glu	Gln	Arg	Arg	Gln
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

450						455						460				
Thr	Asp	Glu	Gly	Glu	Ala	Lys	Ala	Leu	Trp	Glu	Asn	Ile	Val	Ala	Phe	
465					470					475					480	
Cys	Arg	Glu	Asn	Asn	Val	Ser	Phe	Val	Asp	Asp	Ser	Phe	Pro	Pro	Gly	
				485					490					495		
Pro	Glu	Ser	Val	Gly	Phe	Pro	Ala	Gly	Asp	Ser	Val	Gln	Gln	Arg	Val	
			500					505					510			
Arg	Gln	Trp	Leu	Arg	Pro	Gln	Glu	Ile	Asn	Cys	Ser	Val	Phe	Arg	Asp	
		515					520					525				
His	Arg	Ala	Thr	Trp	Ser	Val	Phe	His	Thr	Leu	Arg	Pro	Ser	Asp	Ile	
	530					535					540					
Leu	Gln	Gly	Leu	Leu	Gly	Asn	Cys	Trp	Phe	Leu	Ser	Ala	Leu	Ala	Val	
545					550					555					560	
Leu	Ala	Glu	Arg	Pro	Asp	Leu	Val	Glu	Arg	Val	Met	Val	Thr	Arg	Ser	
				565					570					575		
Leu	Cys	Ala	Glu	Gly	Ala	Tyr	Gln	Val	Arg	Leu	Cys	Lys	Asp	Gly	Thr	
			580					585					590			
Trp	Thr	Thr	Val	Leu	Val	Asp	Asp	Met	Leu	Pro	Cys	Asp	Glu	Ala	Gly	
		595					600					605				
Cys	Leu	Leu	Phe	Ser	Gln	Ala	Gln	Arg	Lys	Gln	Leu	Trp	Val	Ala	Leu	
	610					615					620					
Ile	Glu	Lys	Ala	Leu	Ala	Lys	Leu	His	Gly	Ser	Tyr	Phe	Ala	Leu	Gln	
625					630					635					640	
Ala	Gly	Arg	Ala	Ile	Glu	Gly	Leu	Ala	Thr	Leu	Thr	Gly	Ala	Pro	Cys	
				645					650					655		
Glu	Ser	Leu	Ala	Leu	Gln	Leu	Ser	Ser	Thr	Asn	Pro	Arg	Glu	Glu	Pro	
			660					665					670			
Val	Asp	Thr	Asp	Leu	Ile	Trp	Ala	Lys	Met	Leu	Ser	Ser	Lys	Glu	Ala	
		675					680					685				

Gly	Phe	Leu	Met	Gly	Ala	Ser	Cys	Gly	Gly	Gly	Asn	Met	Lys	Val	Asp	690	695	700
Asp	Ser	Ala	Tyr	Glu	Ser	Leu	Gly	Leu	Arg	Pro	Arg	His	Ala	Tyr	Ser	705	710	715
Ile	Leu	Asp	Val	Arg	Asp	Val	Gln	Gly	Thr	Arg	Leu	Leu	Arg	Leu	Arg	725	730	735
Asn	Pro	Trp	Gly	Arg	Phe	Ser	Trp	Asn	Gly	Ser	Trp	Ser	Asp	Glu	Trp	740	745	750
Pro	His	Trp	Pro	Gly	His	Leu	Arg	Gly	Glu	Leu	Met	Pro	His	Gly	Ser	755	760	765
Ser	Glu	Gly	Val	Phe	Trp	Met	Glu	Tyr	Gly	Asp	Phe	Val	Arg	Tyr	Phe	770	775	780
Asp	Ser	Val	Asp	Ile	Cys	Lys	Val	His	Ser	Asp	Trp	Gln	Glu	Ala	Arg	785	790	795
Val	Gln	Gly	Cys	Phe	Pro	Ser	Ser	Ala	Ser	Ala	Pro	Val	Gly	Val	Thr	805	810	815
Ala	Leu	Thr	Val	Leu	Glu	Arg	Ala	Ser	Leu	Glu	Phe	Ala	Leu	Phe	Gln	820	825	830
Glu	Gly	Ser	Arg	Arg	Ser	Asp	Ala	Val	Asp	Ser	His	Leu	Leu	Asp	Leu	835	840	845
Cys	Ile	Leu	Val	Phe	Arg	Ala	Thr	Phe	Gly	Ser	Gly	Gly	His	Leu	Ser	850	855	860
Leu	Gly	Arg	Leu	Leu	Ala	His	Ser	Lys	Arg	Ala	Val	Lys	Lys	Phe	Val	865	870	875
Ser	Cys	Asp	Val	Met	Leu	Glu	Pro	Gly	Glu	Tyr	Ala	Val	Val	Cys	Cys	885	890	895
Ala	Phe	Asn	His	Trp	Gly	Pro	Pro	Leu	Pro	Gly	Thr	Pro	Ala	Pro	Gln	900	905	910

Ala Ser Ser Pro Ser Ala Gly Val Pro Arg Ala Ser Pro Glu Pro Pro
915 920 925

Gly His Val Leu Ala Val Tyr Ser Ser Arg Leu Val Met Val Glu Pro
930 935 940

Val Glu Ala Gln Pro Thr Thr Leu Ala Asp Ala Ile Ile Leu Leu Thr
945 950 955 960

Glu Ser Arg Gly Glu Arg His Glu Gly Arg Glu Gly Met Thr Cys Tyr
965 970 975

Tyr Leu Thr His Gly Trp Ala Gly Leu Ile Val Val Val Glu Asn Arg
980 985 990

His Pro Lys Ala Tyr Leu His Val Gln Cys Asp Cys Thr Asp Ser
Phe
995 1000 1005

Asn Val Val Ser Thr Arg Gly Ser Leu Arg Thr Gln Asp Ser Val
1010 1015 1020

Pro Pro Leu His Arg Gln Val Leu Val Ile Leu Ser Gln Leu Glu
1025 1030 1035

Gly Asn Ala Gly Phe Ser Ile Thr His Arg Leu Ala His Arg Lys
1040 1045 1050

Ala Ala Gln Ala Phe Leu Ser Asp Trp Thr Ala Ser Lys Gly Thr
1055 1060 1065

His Ser Pro Pro Leu Thr Pro Glu Val Ala Gly Leu His Gly Pro
1070 1075 1080

Arg Pro Leu
1085

<210> 11150

<211> 184

<212> PRT

<213> Homo sapiens

<220>

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<223> /note="Payload ID: 2202; "

<220>

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<223> /note="Gene Symbol: CAPN15; "

<220>

<221> source

<223> /note="Gene Name: calpain 15; "

<220>

<221> source

<223> /note="ENSP ID: ENSP00000456017"

<400> 11150

Met Ala Thr Val Gly Glu Trp Ser Cys Val Arg Cys Thr Phe Leu Asn
1 5 10 15

Pro Ala Gly Gln Arg Gln Cys Ser Ile Cys Glu Ala Pro Arg His Lys
20 25 30

Pro Asp Leu Asn His Ile Leu Arg Leu Ser Val Glu Glu Gln Lys Trp
35 40 45

Pro Cys Ala Arg Cys Thr Phe Arg Asn Phe Leu Gly Lys Glu Ala Cys
50 55 60

Glu Val Cys Gly Phe Thr Pro Glu Pro Ala Pro Gly Ala Ala Phe Leu
65 70 75 80

Pro Val Leu Asn Gly Val Leu Pro Lys Pro Pro Ala Ile Leu Gly Glu
85 90 95

Pro Lys Gly Ser Cys Gln Glu Glu Ala Gly Pro Val Arg Thr Ala Gly
100 105 110

Leu Val Ala Thr Glu Pro Ala Arg Gly Gln Cys Glu Asp Lys Asp Glu
115 120 125

Glu Glu Lys Glu Glu Gln Glu Glu Glu Gly Ala Ala Glu Pro Arg
130 135 140

Gly Gly Trp Ala Cys Pro Arg Cys Thr Leu His Asn Thr Pro Val Ala
145 150 155 160

Ser Ser Cys Ser Val Cys Gly Gly Pro Arg Arg Leu Ser Leu Pro Arg
165 170 175

Ile Pro Pro Glu Ala Leu Val Val
180

<210> 11151
<211> 112
<212> PRT
<213> Homo sapiens

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<220>
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<223> /note="Gene Symbol: CAPN15; "

<220>
<221> source
<223> /note="Gene Name: calpain 15; "

<220>
<221> source
<223> /note="ENSP ID: ENSP00000457030"

<400> 11151
Met Cys Gln Val His Ala Gln Lys Pro His Ser Gly Pro Gln Val Leu
1 5 10 15

Gly Leu Arg Leu Leu Gln Thr Ala Arg Leu Pro Gly Ala Trp Arg Ala
20 25 30

Pro His Pro Leu Pro Arg Leu Trp Gly Arg Gln Ala Gln Pro Leu Arg
35 40 45

Gln Lys Leu Arg Thr Gly Val Leu Gly Pro Glu Gly Arg Pro Arg Pro
50 55 60

Ala Arg Ala Pro Gly Pro Val Gly Leu Pro Cys Leu Tyr Pro Ala Gln
65 70 75 80

Arg Thr Ala Gly Gln Ala Leu Arg Arg Leu Pro His Ala Ser Ala Pro
85 90 95

Gly Gly Pro Ala Ala Gly Gly Arg Ala Pro Glu Ala Gln Gly Glu His
100 105 110

<210> 11152

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<211> 71
<212> PRT
<213> Homo sapiens

<220>
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<220>
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<220>
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<220>
<221> MOD_RES
<222> (1)..(1)
<223> Any amino acid

<400> 11152
Xaa Gly Glu Arg His Glu Gly Arg Glu Gly Met Thr Cys Tyr Tyr Leu
1          5          10          15

Thr His Gly Trp Ala Gly Leu Ile Val Val Val Glu Asn Arg His Pro
          20          25          30

Lys Ala Tyr Leu His Val Gln Cys Asp Cys Thr Asp Ser Phe Asn Val
          35          40          45

Val Ser Thr Arg Gly Ser Leu Arg Thr Gln Asp Ser Val Pro Pro Leu
          50          55          60

His Ser Pro Val Pro Leu Pro
65          70

<210> 11153
<211> 700
<212> PRT
<213> Homo sapiens

<220>
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<220>

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<221> source
<223> /note="Gene Symbol: CAPN2; "

<220>
<221> source
<223> /note="Gene Name: calpain 2, (m/II) large
      subunit; "

<220>
<221> source
<223> /note="Uniprot ID:  P17655; "

<220>
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<223> /note="ENSP ID: ENSP00000295006"

<400> 11153
Met Ala Gly Ile Ala Ala Lys Leu Ala Lys Asp Arg Glu Ala Ala Glu
1          5          10          15

Gly Leu Gly Ser His Asp Arg Ala Ile Lys Tyr Leu Asn Gln Asp Tyr
20          25          30

Glu Ala Leu Arg Asn Glu Cys Leu Glu Ala Gly Thr Leu Phe Gln Asp
35          40          45

Pro Ser Phe Pro Ala Ile Pro Ser Ala Leu Gly Phe Lys Glu Leu Gly
50          55          60

Pro Tyr Ser Ser Lys Thr Arg Gly Ile Glu Trp Lys Arg Pro Thr Glu
65          70          75          80

Ile Cys Ala Asp Pro Gln Phe Ile Ile Gly Gly Ala Thr Arg Thr Asp
85          90          95

Ile Cys Gln Gly Ala Leu Gly Asp Cys Trp Leu Leu Ala Ala Ile Ala
100         105         110

Ser Leu Thr Leu Asn Glu Glu Ile Leu Ala Arg Val Val Pro Leu Asn
115         120         125

Gln Ser Phe Gln Glu Asn Tyr Ala Gly Ile Phe His Phe Gln Phe Trp
130         135         140

Gln Tyr Gly Glu Trp Val Glu Val Val Val Asp Asp Arg Leu Pro Thr
145         150         155         160

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Lys	Asp	Gly	Glu	Leu	Leu	Phe	Val	His	Ser	Ala	Glu	Gly	Ser	Glu	Phe		
				165					170					175			
Trp	Ser	Ala	Leu	Leu	Glu	Lys	Ala	Tyr	Ala	Lys	Ile	Asn	Gly	Cys	Tyr		
			180					185					190				
Glu	Ala	Leu	Ser	Gly	Gly	Ala	Thr	Thr	Glu	Gly	Phe	Glu	Asp	Phe	Thr		
		195					200					205					
Gly	Gly	Ile	Ala	Glu	Trp	Tyr	Glu	Leu	Lys	Lys	Pro	Pro	Pro	Asn	Leu		
	210					215					220						
Phe	Lys	Ile	Ile	Gln	Lys	Ala	Leu	Gln	Lys	Gly	Ser	Leu	Leu	Gly	Cys		
225					230					235					240		
Ser	Ile	Asp	Ile	Thr	Ser	Ala	Ala	Asp	Ser	Glu	Ala	Ile	Thr	Phe	Gln		
				245					250					255			
Lys	Leu	Val	Lys	Gly	His	Ala	Tyr	Ser	Val	Thr	Gly	Ala	Glu	Glu	Val		
			260					265					270				
Glu	Ser	Asn	Gly	Ser	Leu	Gln	Lys	Leu	Ile	Arg	Ile	Arg	Asn	Pro	Trp		
		275					280					285					
Gly	Glu	Val	Glu	Trp	Thr	Gly	Arg	Trp	Asn	Asp	Asn	Cys	Pro	Ser	Trp		
	290					295					300						
Asn	Thr	Ile	Asp	Pro	Glu	Glu	Arg	Glu	Arg	Leu	Thr	Arg	Arg	His	Glu		
305					310					315					320		
Asp	Gly	Glu	Phe	Trp	Met	Ser	Phe	Ser	Asp	Phe	Leu	Arg	His	Tyr	Ser		
				325					330					335			
Arg	Leu	Glu	Ile	Cys	Asn	Leu	Thr	Pro	Asp	Thr	Leu	Thr	Ser	Asp	Thr		
			340					345					350				
Tyr	Lys	Lys	Trp	Lys	Leu	Thr	Lys	Met	Asp	Gly	Asn	Trp	Arg	Arg	Gly		
		355					360					365					
Ser	Thr	Ala	Gly	Gly	Cys	Arg	Asn	Tyr	Pro	Asn	Thr	Phe	Trp	Met	Asn		
	370					375					380						
Pro	Gln	Tyr	Leu	Ile	Lys	Leu	Glu	Glu	Glu	Asp	Glu	Asp	Glu	Glu	Asp		

385					390						395					400
Gly	Glu	Ser	Gly	Cys	Thr	Phe	Leu	Val	Gly	Leu	Ile	Gln	Lys	His	Arg	
				405					410					415		
Arg	Arg	Gln	Arg	Lys	Met	Gly	Glu	Asp	Met	His	Thr	Ile	Gly	Phe	Gly	
			420					425					430			
Ile	Tyr	Glu	Val	Pro	Glu	Glu	Leu	Ser	Gly	Gln	Thr	Asn	Ile	His	Leu	
		435					440					445				
Ser	Lys	Asn	Phe	Phe	Leu	Thr	Asn	Arg	Ala	Arg	Glu	Arg	Ser	Asp	Thr	
	450					455					460					
Phe	Ile	Asn	Leu	Arg	Glu	Val	Leu	Asn	Arg	Phe	Lys	Leu	Pro	Pro	Gly	
465					470					475					480	
Glu	Tyr	Ile	Leu	Val	Pro	Ser	Thr	Phe	Glu	Pro	Asn	Lys	Asp	Gly	Asp	
				485					490					495		
Phe	Cys	Ile	Arg	Val	Phe	Ser	Glu	Lys	Lys	Ala	Asp	Tyr	Gln	Ala	Val	
			500					505					510			
Asp	Asp	Glu	Ile	Glu	Ala	Asn	Leu	Glu	Glu	Phe	Asp	Ile	Ser	Glu	Asp	
		515					520					525				
Asp	Ile	Asp	Asp	Gly	Phe	Arg	Arg	Leu	Phe	Ala	Gln	Leu	Ala	Gly	Glu	
	530					535					540					
Asp	Ala	Glu	Ile	Ser	Ala	Phe	Glu	Leu	Gln	Thr	Ile	Leu	Arg	Arg	Val	
545					550					555					560	
Leu	Ala	Lys	Arg	Gln	Asp	Ile	Lys	Ser	Asp	Gly	Phe	Ser	Ile	Glu	Thr	
				565					570					575		
Cys	Lys	Ile	Met	Val	Asp	Met	Leu	Asp	Ser	Asp	Gly	Ser	Gly	Lys	Leu	
			580					585					590			
Gly	Leu	Lys	Glu	Phe	Tyr	Ile	Leu	Trp	Thr	Lys	Ile	Gln	Lys	Tyr	Gln	
		595					600					605				
Lys	Ile	Tyr	Arg	Glu	Ile	Asp	Val	Asp	Arg	Ser	Gly	Thr	Met	Asn	Ser	
	610					615					620					

Tyr Glu Met Arg Lys Ala Leu Glu Glu Ala Gly Phe Lys Met Pro Cys
625 630 635 640

Gln Leu His Gln Val Ile Val Ala Arg Phe Ala Asp Asp Gln Leu Ile
645 650 655

Ile Asp Phe Asp Asn Phe Val Arg Cys Leu Val Arg Leu Glu Thr Leu
660 665 670

Phe Lys Ile Phe Lys Gln Leu Asp Pro Glu Asn Thr Gly Thr Ile Glu
675 680 685

Leu Asp Leu Ile Ser Trp Leu Cys Phe Ser Val Leu
690 695 700

<210> 11154
<211> 131
<212> PRT
<213> Homo sapiens

<220>
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<223> /note="Payload ID: 2203; "

<220>
<221> source
<223> /note="Gene Symbol: CAPN2; "

<220>
<221> source
<223> /note="Gene Name: calpain 2, (m/II) large
subunit; "

<220>
<221> source
<223> /note="ENSP ID: ENSP00000399949"

<400> 11154
Met Glu Ile Cys Ala Asp Pro Gln Phe Ile Ile Gly Gly Ala Thr Arg
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Thr Asp Ile Cys Gln Gly Ala Leu Gly Asp Cys Trp Leu Leu Ala Ala
20 25 30

Ile Ala Ser Leu Thr Leu Asn Glu Glu Ile Leu Ala Arg Val Val Pro
35 40 45

Leu Asn Gln Ser Phe Gln Glu Asn Tyr Ala Gly Ile Phe His Phe Gln
50 55 60

Phe Trp Gln Tyr Gly Glu Trp Val Glu Val Val Val Asp Asp Arg Leu
65 70 75 80

Pro Thr Lys Asp Gly Glu Leu Leu Phe Val His Ser Ala Glu Gly Ser
85 90 95

Glu Phe Trp Ser Ala Leu Leu Glu Lys Ala Tyr Ala Lys Ile Asn Gly
100 105 110

Cys Tyr Glu Ala Leu Ser Gly Gly Ala Thr Thr Glu Gly Phe Glu Asp
115 120 125

Phe Thr Gly
130

<210> 11155
<211> 622
<212> PRT
<213> Homo sapiens

<220>
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<220>
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subunit; "

<220>
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<223> /note="Uniprot ID: P17655; "

<220>
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<223> /note="ENSP ID: ENSP00000413158"

<400> 11155
Met Glu Ile Cys Ala Asp Pro Gln Phe Ile Ile Gly Gly Ala Thr Arg
1 5 10 15

Thr Asp Ile Cys Gln Gly Ala Leu Gly Asp Cys Trp Leu Leu Ala Ala
20 25 30

Ile	Ala	Ser	Leu	Thr	Leu	Asn	Glu	Glu	Ile	Leu	Ala	Arg	Val	Val	Pro			
		35					40					45						
Leu	Asn	Gln	Ser	Phe	Gln	Glu	Asn	Tyr	Ala	Gly	Ile	Phe	His	Phe	Gln			
	50					55					60							
Phe	Trp	Gln	Tyr	Gly	Glu	Trp	Val	Glu	Val	Val	Val	Asp	Asp	Arg	Leu			
65					70					75					80			
Pro	Thr	Lys	Asp	Gly	Glu	Leu	Leu	Phe	Val	His	Ser	Ala	Glu	Gly	Ser			
				85					90					95				
Glu	Phe	Trp	Ser	Ala	Leu	Leu	Glu	Lys	Ala	Tyr	Ala	Lys	Ile	Asn	Gly			
			100					105					110					
Cys	Tyr	Glu	Ala	Leu	Ser	Gly	Gly	Ala	Thr	Thr	Glu	Gly	Phe	Glu	Asp			
		115					120					125						
Phe	Thr	Gly	Gly	Ile	Ala	Glu	Trp	Tyr	Glu	Leu	Lys	Lys	Pro	Pro	Pro			
	130					135					140							
Asn	Leu	Phe	Lys	Ile	Ile	Gln	Lys	Ala	Leu	Gln	Lys	Gly	Ser	Leu	Leu			
145					150					155					160			
Gly	Cys	Ser	Ile	Asp	Ile	Thr	Ser	Ala	Ala	Asp	Ser	Glu	Ala	Ile	Thr			
				165					170					175				
Phe	Gln	Lys	Leu	Val	Lys	Gly	His	Ala	Tyr	Ser	Val	Thr	Gly	Ala	Glu			
			180					185					190					
Glu	Val	Glu	Ser	Asn	Gly	Ser	Leu	Gln	Lys	Leu	Ile	Arg	Ile	Arg	Asn			
		195					200					205						
Pro	Trp	Gly	Glu	Val	Glu	Trp	Thr	Gly	Arg	Trp	Asn	Asp	Asn	Cys	Pro			
	210					215					220							
Ser	Trp	Asn	Thr	Ile	Asp	Pro	Glu	Glu	Arg	Glu	Arg	Leu	Thr	Arg	Arg			
225					230					235					240			
His	Glu	Asp	Gly	Glu	Phe	Trp	Met	Ser	Phe	Ser	Asp	Phe	Leu	Arg	His			
				245					250					255				

Tyr	Ser	Arg	Leu	Glu	Ile	Cys	Asn	Leu	Thr	Pro	Asp	Thr	Leu	Thr	Ser			
			260					265					270					
Asp	Thr	Tyr	Lys	Lys	Trp	Lys	Leu	Thr	Lys	Met	Asp	Gly	Asn	Trp	Arg			
		275					280					285						
Arg	Gly	Ser	Thr	Ala	Gly	Gly	Cys	Arg	Asn	Tyr	Pro	Asn	Thr	Phe	Trp			
	290					295					300							
Met	Asn	Pro	Gln	Tyr	Leu	Ile	Lys	Leu	Glu	Glu	Glu	Asp	Glu	Asp	Glu			
305					310					315					320			
Glu	Asp	Gly	Glu	Ser	Gly	Cys	Thr	Phe	Leu	Val	Gly	Leu	Ile	Gln	Lys			
				325					330					335				
His	Arg	Arg	Arg	Gln	Arg	Lys	Met	Gly	Glu	Asp	Met	His	Thr	Ile	Gly			
			340					345					350					
Phe	Gly	Ile	Tyr	Glu	Val	Pro	Glu	Glu	Leu	Ser	Gly	Gln	Thr	Asn	Ile			
		355					360					365						
His	Leu	Ser	Lys	Asn	Phe	Phe	Leu	Thr	Asn	Arg	Ala	Arg	Glu	Arg	Ser			
	370					375					380							
Asp	Thr	Phe	Ile	Asn	Leu	Arg	Glu	Val	Leu	Asn	Arg	Phe	Lys	Leu	Pro			
385					390					395					400			
Pro	Gly	Glu	Tyr	Ile	Leu	Val	Pro	Ser	Thr	Phe	Glu	Pro	Asn	Lys	Asp			
				405					410					415				
Gly	Asp	Phe	Cys	Ile	Arg	Val	Phe	Ser	Glu	Lys	Lys	Ala	Asp	Tyr	Gln			
			420					425					430					
Ala	Val	Asp	Asp	Glu	Ile	Glu	Ala	Asn	Leu	Glu	Glu	Phe	Asp	Ile	Ser			
		435					440					445						
Glu	Asp	Asp	Ile	Asp	Asp	Gly	Phe	Arg	Arg	Leu	Phe	Ala	Gln	Leu	Ala			
	450					455					460							
Gly	Glu	Asp	Ala	Glu	Ile	Ser	Ala	Phe	Glu	Leu	Gln	Thr	Ile	Leu	Arg			
465					470					475					480			

Arg Val Leu Ala Lys Arg Gln Asp Ile Lys Ser Asp Gly Phe Ser Ile
 485 490 495

 Glu Thr Cys Lys Ile Met Val Asp Met Leu Asp Ser Asp Gly Ser Gly
 500 505 510

 Lys Leu Gly Leu Lys Glu Phe Tyr Ile Leu Trp Thr Lys Ile Gln Lys
 515 520 525

 Tyr Gln Lys Ile Tyr Arg Glu Ile Asp Val Asp Arg Ser Gly Thr Met
 530 535 540

 Asn Ser Tyr Glu Met Arg Lys Ala Leu Glu Glu Ala Gly Phe Lys Met
 545 550 555 560

 Pro Cys Gln Leu His Gln Val Ile Val Ala Arg Phe Ala Asp Asp Gln
 565 570 575

 Leu Ile Ile Asp Phe Asp Asn Phe Val Arg Cys Leu Val Arg Leu Glu
 580 585 590

 Thr Leu Phe Lys Ile Phe Lys Gln Leu Asp Pro Glu Asn Thr Gly Thr
 595 600 605

 Ile Glu Leu Asp Leu Ile Ser Trp Leu Cys Phe Ser Val Leu
 610 615 620

<210> 11156

<211> 729

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2204; "

<220>

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<223> /note="Gene Symbol: CAPN3; "

<220>

<221> source

<223> /note="Gene Name: calpain 3; "

<220>

<221> source

<223> /note="Uniprot ID: P20807; "

<220>
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<400> 11156

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1 5 10 15

Pro Arg Ser Pro Gly Pro Val Pro His Pro Ala Gln Ser Lys Ala Thr
20 25 30

Glu Ala Gly Gly Gly Asn Pro Ser Gly Ile Tyr Ser Ala Ile Ile Ser
35 40 45

Arg Asn Phe Pro Ile Ile Gly Val Lys Glu Lys Thr Phe Glu Gln Leu
50 55 60

His Lys Lys Cys Leu Glu Lys Lys Val Leu Tyr Val Asp Pro Glu Phe
65 70 75 80

Pro Pro Asp Glu Thr Ser Leu Phe Tyr Ser Gln Lys Phe Pro Ile Gln
85 90 95

Phe Val Trp Lys Arg Pro Pro Glu Ile Cys Glu Asn Pro Arg Phe Ile
100 105 110

Ile Asp Gly Ala Asn Arg Thr Asp Ile Cys Gln Gly Glu Leu Gly Asp
115 120 125

Cys Trp Phe Leu Ala Ala Ile Ala Cys Leu Thr Leu Asn Gln His Leu
130 135 140

Leu Phe Arg Val Ile Pro His Asp Gln Ser Phe Ile Glu Asn Tyr Ala
145 150 155 160

Gly Ile Phe His Phe Gln Phe Trp Arg Tyr Gly Glu Trp Val Asp Val
165 170 175

Val Ile Asp Asp Cys Leu Pro Thr Tyr Asn Asn Gln Leu Val Phe Thr
180 185 190

Lys Ser Asn His Arg Asn Glu Phe Trp Ser Ala Leu Leu Glu Lys Ala
195 200 205

Tyr	Ala	Lys	Leu	His	Gly	Ser	Tyr	Glu	Ala	Leu	Lys	Gly	Gly	Asn	Thr			
	210					215					220							
Thr	Glu	Ala	Met	Glu	Asp	Phe	Thr	Gly	Gly	Val	Ala	Glu	Phe	Phe	Glu			
225					230					235					240			
Ile	Arg	Asp	Ala	Pro	Ser	Asp	Met	Tyr	Lys	Ile	Met	Lys	Lys	Ala	Ile			
				245					250					255				
Glu	Arg	Gly	Ser	Leu	Met	Gly	Cys	Ser	Ile	Asp	Thr	Ile	Ile	Pro	Val			
			260					265					270					
Gln	Tyr	Glu	Thr	Arg	Met	Ala	Cys	Gly	Leu	Val	Arg	Gly	His	Ala	Tyr			
		275					280					285						
Ser	Val	Thr	Gly	Leu	Asp	Glu	Val	Pro	Phe	Lys	Gly	Glu	Lys	Val	Lys			
	290					295					300							
Leu	Val	Arg	Leu	Arg	Asn	Pro	Trp	Gly	Gln	Val	Glu	Trp	Asn	Gly	Ser			
305					310					315					320			
Trp	Ser	Asp	Arg	Trp	Lys	Asp	Trp	Ser	Phe	Val	Asp	Lys	Asp	Glu	Lys			
				325					330					335				
Ala	Arg	Leu	Gln	His	Gln	Val	Thr	Glu	Asp	Gly	Glu	Phe	Trp	Met	Ser			
			340					345					350					
Tyr	Glu	Asp	Phe	Ile	Tyr	His	Phe	Thr	Lys	Leu	Glu	Ile	Cys	Asn	Leu			
		355					360					365						
Thr	Ala	Asp	Ala	Leu	Gln	Ser	Asp	Lys	Leu	Gln	Thr	Trp	Thr	Val	Ser			
	370					375					380							
Val	Asn	Glu	Gly	Arg	Trp	Val	Arg	Gly	Cys	Ser	Ala	Gly	Gly	Cys	Arg			
385					390					395					400			
Asn	Phe	Pro	Asp	Thr	Phe	Trp	Thr	Asn	Pro	Gln	Tyr	Arg	Leu	Lys	Leu			
				405					410					415				
Leu	Glu	Glu	Asp	Asp	Asp	Pro	Asp	Asp	Ser	Glu	Val	Ile	Cys	Ser	Phe			
			420					425					430					
Leu	Val	Ala	Leu	Met	Gln	Lys	Asn	Arg	Arg	Lys	Asp	Arg	Lys	Leu	Gly			

435																
Ala	Ser	Leu	Phe	Thr	Ile	Gly	Phe	Ala	Ile	Tyr	Glu	Val	Pro	Lys	Glu	
450						455					460					
Met	His	Gly	Asn	Lys	Gln	His	Leu	Gln	Lys	Asp	Phe	Phe	Leu	Tyr	Asn	
465					470					475					480	
Ala	Ser	Lys	Ala	Arg	Ser	Lys	Thr	Tyr	Ile	Asn	Met	Arg	Glu	Val	Ser	
				485					490					495		
Gln	Arg	Phe	Arg	Leu	Pro	Pro	Ser	Glu	Tyr	Val	Ile	Val	Pro	Ser	Thr	
			500					505					510			
Tyr	Glu	Pro	His	Gln	Glu	Gly	Glu	Phe	Ile	Leu	Arg	Val	Phe	Ser	Glu	
		515					520					525				
Lys	Arg	Asn	Leu	Ser	Glu	Glu	Val	Glu	Asn	Thr	Ile	Ser	Val	Asp	Arg	
	530					535					540					
Pro	Val	Pro	Gln	Pro	Gly	Ser	Ser	Asp	Gln	Glu	Ser	Glu	Glu	Gln	Gln	
545					550					555					560	
Gln	Phe	Arg	Asn	Ile	Phe	Lys	Gln	Ile	Ala	Gly	Asp	Asp	Met	Glu	Ile	
				565					570					575		
Cys	Ala	Asp	Glu	Leu	Lys	Lys	Val	Leu	Asn	Thr	Val	Val	Asn	Lys	His	
			580					585					590			
Lys	Asp	Leu	Lys	Thr	His	Gly	Phe	Thr	Leu	Glu	Ser	Cys	Arg	Ser	Met	
		595					600					605				
Ile	Ala	Leu	Met	Asp	Thr	Asp	Gly	Ser	Gly	Lys	Leu	Asn	Leu	Gln	Glu	
	610					615					620					
Phe	His	His	Leu	Trp	Asn	Lys	Ile	Lys	Ala	Trp	Gln	Lys	Ile	Phe	Lys	
625					630					635					640	
His	Tyr	Asp	Thr	Asp	Gln	Ser	Gly	Thr	Ile	Asn	Ser	Tyr	Glu	Met	Arg	
				645					650					655		
Asn	Ala	Val	Asn	Asp	Ala	Gly	Phe	His	Leu	Asn	Asn	Gln	Leu	Tyr	Asp	
			660					665					670			

Ile Ile Thr Met Arg Tyr Ala Asp Lys His Met Asn Ile Asp Phe Asp
675 680 685

Ser Phe Ile Cys Cys Phe Val Arg Leu Glu Gly Met Phe Arg Ala Phe
690 695 700

His Ala Phe Asp Lys Asp Gly Asp Gly Ile Ile Lys Leu Asn Val Leu
705 710 715 720

Glu Trp Leu Gln Leu Thr Met Tyr Ala
725

<210> 11157
<211> 773
<212> PRT
<213> Homo sapiens

<220>
<221> source
<223> /note="Payload ID: 2204; "

<220>
<221> source
<223> /note="Gene Symbol: CAPN3; "

<220>
<221> source
<223> /note="Gene Name: calpain 3; "

<220>
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<223> /note="ENSP ID: ENSP00000326281"

<400> 11157
Met Pro Thr Val Ile Ser Ala Ser Val Ala Pro Arg Thr Ala Ala Glu
1 5 10 15

Pro Arg Ser Pro Gly Pro Val Pro His Pro Ala Gln Ser Lys Ala Thr
20 25 30

Glu Ala Gly Gly Gly Asn Pro Ser Gly Ile Tyr Ser Ala Ile Ile Ser
35 40 45

Arg Asn Phe Pro Ile Ile Gly Val Lys Glu Lys Thr Phe Glu Gln Leu
50 55 60

His Lys Lys Cys Leu Glu Lys Lys Val Leu Tyr Val Asp Pro Glu Phe
25050

65					70						75					80
Pro	Pro	Asp	Glu	Thr	Ser	Leu	Phe	Tyr	Ser	Gln	Lys	Phe	Pro	Ile	Gln	
				85					90					95		
Phe	Val	Trp	Lys	Arg	Pro	Pro	Glu	Ile	Cys	Glu	Asn	Pro	Arg	Phe	Ile	
			100					105					110			
Ile	Asp	Gly	Ala	Asn	Arg	Thr	Asp	Ile	Cys	Gln	Gly	Glu	Leu	Gly	Asp	
		115					120					125				
Cys	Trp	Phe	Leu	Ala	Ala	Ile	Ala	Cys	Leu	Thr	Leu	Asn	Gln	His	Leu	
	130					135					140					
Leu	Phe	Arg	Val	Ile	Pro	His	Asp	Gln	Ser	Phe	Ile	Glu	Asn	Tyr	Ala	
145					150					155					160	
Gly	Ile	Phe	His	Phe	Gln	Phe	Trp	Arg	Tyr	Gly	Glu	Trp	Val	Asp	Val	
				165					170					175		
Val	Ile	Asp	Asp	Cys	Leu	Pro	Thr	Tyr	Asn	Asn	Gln	Leu	Val	Phe	Thr	
			180					185					190			
Lys	Ser	Asn	His	Arg	Asn	Glu	Phe	Trp	Ser	Ala	Leu	Leu	Glu	Lys	Ala	
		195					200					205				
Tyr	Ala	Lys	Leu	His	Gly	Ser	Tyr	Glu	Ala	Leu	Lys	Gly	Gly	Asn	Thr	
	210					215					220					
Thr	Glu	Ala	Met	Glu	Asp	Phe	Thr	Gly	Gly	Val	Ala	Glu	Phe	Phe	Glu	
225					230					235					240	
Ile	Arg	Asp	Ala	Pro	Ser	Asp	Met	Tyr	Lys	Ile	Met	Lys	Lys	Ala	Ile	
				245					250					255		
Glu	Arg	Gly	Ser	Leu	Met	Gly	Cys	Ser	Ile	Asp	Thr	Ile	Ile	Pro	Val	
			260					265					270			
Gln	Tyr	Glu	Thr	Arg	Met	Ala	Cys	Gly	Leu	Val	Arg	Gly	His	Ala	Tyr	
	275						280					285				
Ser	Val	Thr	Gly	Leu	Asp	Glu	Val	Pro	Phe	Lys	Gly	Glu	Lys	Val	Lys	
	290					295					300					

Leu	Val	Arg	Leu	Arg	Asn	Pro	Trp	Gly	Gln	Val	Glu	Trp	Asn	Gly	Ser	305	310	315	320
Trp	Ser	Asp	Arg	Trp	Lys	Asp	Trp	Ser	Phe	Val	Asp	Lys	Asp	Glu	Lys	325	330	335	
Ala	Arg	Leu	Gln	His	Gln	Val	Thr	Glu	Asp	Gly	Glu	Phe	Trp	Met	Ser	340	345	350	
Tyr	Glu	Asp	Phe	Ile	Tyr	His	Phe	Thr	Lys	Leu	Glu	Ile	Cys	Asn	Leu	355	360	365	
Thr	Ala	Asp	Ala	Leu	Gln	Ser	Asp	Lys	Leu	Gln	Thr	Trp	Thr	Val	Ser	370	375	380	
Val	Asn	Glu	Gly	Arg	Trp	Val	Arg	Gly	Cys	Ser	Ala	Gly	Gly	Cys	Arg	385	390	395	400
Asn	Phe	Pro	Asp	Thr	Phe	Trp	Thr	Asn	Pro	Gln	Tyr	Arg	Leu	Lys	Leu	405	410	415	
Leu	Glu	Glu	Asp	Asp	Asp	Pro	Asp	Asp	Ser	Glu	Val	Ile	Cys	Ser	Phe	420	425	430	
Leu	Val	Ala	Leu	Met	Gln	Lys	Asn	Arg	Arg	Lys	Asp	Arg	Lys	Leu	Gly	435	440	445	
Ala	Ser	Leu	Phe	Thr	Ile	Gly	Phe	Ala	Ile	Tyr	Glu	Val	Pro	Lys	Glu	450	455	460	
Met	His	Gly	Asn	Lys	Gln	His	Leu	Gln	Lys	Asp	Phe	Phe	Leu	Tyr	Asn	465	470	475	480
Ala	Ser	Lys	Ala	Arg	Ser	Lys	Thr	Tyr	Ile	Asn	Met	Arg	Glu	Val	Ser	485	490	495	
Gln	Arg	Phe	Arg	Leu	Pro	Pro	Ser	Glu	Tyr	Val	Ile	Val	Pro	Ser	Thr	500	505	510	
Tyr	Glu	Pro	His	Gln	Glu	Gly	Glu	Phe	Ile	Leu	Arg	Val	Phe	Ser	Glu	515	520	525	

Lys Asp Gly Asp Gly Ile Ile Lys Leu Asn Val Leu Glu Trp Leu Gln
755 760 765

Leu Thr Met Tyr Ala
770

<210> 11158

<211> 156

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2204; "

<220>

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<223> /note="Gene Symbol: CAPN3; "

<220>

<221> source

<223> /note="Gene Name: calpain 3; "

<220>

<221> source

<223> /note="Uniprot ID: P20807; "

<220>

<221> source

<223> /note="ENSP ID: ENSP00000336840"

<400> 11158

Met Glu Ile Cys Ala Asp Glu Leu Lys Lys Val Leu Asn Thr Val Val
1 5 10 15

Asn Lys His Lys Asp Leu Lys Thr His Gly Phe Thr Leu Glu Ser Cys
20 25 30

Arg Ser Met Ile Ala Leu Met Asp Thr Asp Gly Ser Gly Lys Leu Asn
35 40 45

Leu Gln Glu Phe His His Leu Trp Asn Lys Ile Lys Ala Trp Gln Lys
50 55 60

Ile Phe Lys His Tyr Asp Thr Asp Gln Ser Gly Thr Ile Asn Ser Tyr
65 70 75 80

Glu Met Arg Asn Ala Val Asn Asp Ala Gly Phe His Leu Asn Asn Gln
85 90 95

Leu Tyr Asp Ile Ile Thr Met Arg Tyr Ala Asp Lys His Met Asn Ile
100 105 110

Asp Phe Asp Ser Phe Ile Cys Cys Phe Val Arg Leu Glu Gly Met Phe
115 120 125

Arg Ala Phe His Ala Phe Asp Lys Asp Gly Asp Gly Ile Ile Lys Leu
130 135 140

Asn Val Leu Glu Trp Leu Gln Leu Thr Met Tyr Ala
145 150 155

<210> 11159

<211> 156

<212> PRT

<213> Homo sapiens

<220>

<221> source

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<223> /note="Uniprot ID: P20807; "

<220>

<221> source

<223> /note="ENSP ID: ENSP00000348667"

<400> 11159

Met Glu Ile Cys Ala Asp Glu Leu Lys Lys Val Leu Asn Thr Val Val
1 5 10 15

Asn Lys His Lys Asp Leu Lys Thr His Gly Phe Thr Leu Glu Ser Cys
20 25 30

Arg Ser Met Ile Ala Leu Met Asp Thr Asp Gly Ser Gly Lys Leu Asn
35 40 45

Leu Gln Glu Phe His His Leu Trp Asn Lys Ile Lys Ala Trp Gln Lys
50 55 60

25055

Ile Phe Lys His Tyr Asp Thr Asp Gln Ser Gly Thr Ile Asn Ser Tyr
65 70 75 80

Glu Met Arg Asn Ala Val Asn Asp Ala Gly Phe His Leu Asn Asn Gln
85 90 95

Leu Tyr Asp Ile Ile Thr Met Arg Tyr Ala Asp Lys His Met Asn Ile
100 105 110

Asp Phe Asp Ser Phe Ile Cys Cys Phe Val Arg Leu Glu Gly Met Phe
115 120 125

Arg Ala Phe His Ala Phe Asp Lys Asp Gly Asp Gly Ile Ile Lys Leu
130 135 140

Asn Val Leu Glu Trp Leu Gln Leu Thr Met Tyr Ala
145 150 155

<210> 11160
<211> 815
<212> PRT
<213> Homo sapiens

<220>
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<220>
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<220>
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<400> 11160
Met Pro Thr Val Ile Ser Ala Ser Val Ala Pro Arg Thr Ala Ala Glu
1 5 10 15

Pro Arg Ser Pro Gly Pro Val Pro His Pro Ala Gln Ser Lys Ala Thr

20							25					30						
Glu	Ala	Gly	Gly	Gly	Asn	Pro	Ser	Gly	Ile	Tyr	Ser	Ala	Ile	Ile	Ser			
		35					40					45						
Arg	Asn	Phe	Pro	Ile	Ile	Gly	Val	Lys	Glu	Lys	Thr	Phe	Glu	Gln	Leu			
	50					55					60							
His	Lys	Lys	Cys	Leu	Glu	Lys	Lys	Val	Leu	Tyr	Val	Asp	Pro	Glu	Phe			
65					70					75					80			
Pro	Pro	Asp	Glu	Thr	Ser	Leu	Phe	Tyr	Ser	Gln	Lys	Phe	Pro	Ile	Gln			
				85					90					95				
Phe	Val	Trp	Lys	Arg	Pro	Pro	Glu	Ile	Cys	Glu	Asn	Pro	Arg	Phe	Ile			
			100					105					110					
Ile	Asp	Gly	Ala	Asn	Arg	Thr	Asp	Ile	Cys	Gln	Gly	Glu	Leu	Gly	Asp			
		115					120					125						
Cys	Trp	Phe	Leu	Ala	Ala	Ile	Ala	Cys	Leu	Thr	Leu	Asn	Gln	His	Leu			
	130					135					140							
Leu	Phe	Arg	Val	Ile	Pro	His	Asp	Gln	Ser	Phe	Ile	Glu	Asn	Tyr	Ala			
145					150					155					160			
Gly	Ile	Phe	His	Phe	Gln	Phe	Trp	Arg	Tyr	Gly	Glu	Trp	Val	Asp	Val			
				165					170					175				
Val	Ile	Asp	Asp	Cys	Leu	Pro	Thr	Tyr	Asn	Asn	Gln	Leu	Val	Phe	Thr			
			180					185					190					
Lys	Ser	Asn	His	Arg	Asn	Glu	Phe	Trp	Ser	Ala	Leu	Leu	Glu	Lys	Ala			
		195					200					205						
Tyr	Ala	Lys	Leu	His	Gly	Ser	Tyr	Glu	Ala	Leu	Lys	Gly	Gly	Asn	Thr			
	210					215					220							
Thr	Glu	Ala	Met	Glu	Asp	Phe	Thr	Gly	Gly	Val	Ala	Glu	Phe	Phe	Glu			
225					230					235					240			
Ile	Arg	Asp	Ala	Pro	Ser	Asp	Met	Tyr	Lys	Ile	Met	Lys	Lys	Ala	Ile			
				245					250					255				

Glu	Arg	Gly	Ser	Leu	Met	Gly	Cys	Ser	Ile	Asp	Asp	Gly	Thr	Asn	Met	
			260					265					270			
Thr	Tyr	Gly	Thr	Ser	Pro	Ser	Gly	Leu	Asn	Met	Gly	Glu	Leu	Ile	Ala	
		275					280					285				
Arg	Met	Val	Arg	Asn	Met	Asp	Asn	Ser	Leu	Leu	Gln	Asp	Ser	Asp	Leu	
	290					295					300					
Asp	Pro	Arg	Gly	Ser	Asp	Glu	Arg	Pro	Thr	Arg	Thr	Ile	Ile	Pro	Val	
305					310					315					320	
Gln	Tyr	Glu	Thr	Arg	Met	Ala	Cys	Gly	Leu	Val	Arg	Gly	His	Ala	Tyr	
				325					330					335		
Ser	Val	Thr	Gly	Leu	Asp	Glu	Val	Pro	Phe	Lys	Gly	Glu	Lys	Val	Lys	
			340					345					350			
Leu	Val	Arg	Leu	Arg	Asn	Pro	Trp	Gly	Gln	Val	Glu	Trp	Asn	Gly	Ser	
		355					360					365				
Trp	Ser	Asp	Arg	Trp	Lys	Asp	Trp	Ser	Phe	Val	Asp	Lys	Asp	Glu	Lys	
	370					375					380					
Ala	Arg	Leu	Gln	His	Gln	Val	Thr	Glu	Asp	Gly	Glu	Phe	Trp	Met	Ser	
385					390					395					400	
Tyr	Glu	Asp	Phe	Ile	Tyr	His	Phe	Thr	Lys	Leu	Glu	Ile	Cys	Asn	Leu	
				405					410					415		
Thr	Ala	Asp	Ala	Leu	Gln	Ser	Asp	Lys	Leu	Gln	Thr	Trp	Thr	Val	Ser	
			420					425					430			
Val	Asn	Glu	Gly	Arg	Trp	Val	Arg	Gly	Cys	Ser	Ala	Gly	Gly	Cys	Arg	
		435					440					445				
Asn	Phe	Pro	Asp	Thr	Phe	Trp	Thr	Asn	Pro	Gln	Tyr	Arg	Leu	Lys	Leu	
	450					455					460					
Leu	Glu	Glu	Asp	Asp	Asp	Pro	Asp	Asp	Ser	Glu	Val	Ile	Cys	Ser	Phe	
465					470					475					480	

Leu	Val	Ala	Leu	Met	Gln	Lys	Asn	Arg	Arg	Lys	Asp	Arg	Lys	Leu	Gly	485	490	495
Ala	Ser	Leu	Phe	Thr	Ile	Gly	Phe	Ala	Ile	Tyr	Glu	Val	Pro	Lys	Glu	500	505	510
Met	His	Gly	Asn	Lys	Gln	His	Leu	Gln	Lys	Asp	Phe	Phe	Leu	Tyr	Asn	515	520	525
Ala	Ser	Lys	Ala	Arg	Ser	Lys	Thr	Tyr	Ile	Asn	Met	Arg	Glu	Val	Ser	530	535	540
Gln	Arg	Phe	Arg	Leu	Pro	Pro	Ser	Glu	Tyr	Val	Ile	Val	Pro	Ser	Thr	545	550	555
Tyr	Glu	Pro	His	Gln	Glu	Gly	Glu	Phe	Ile	Leu	Arg	Val	Phe	Ser	Glu	565	570	575
Lys	Arg	Asn	Leu	Ser	Glu	Glu	Val	Glu	Asn	Thr	Ile	Ser	Val	Asp	Arg	580	585	590
Pro	Val	Pro	Ile	Ile	Phe	Val	Ser	Asp	Arg	Ala	Asn	Ser	Asn	Lys	Glu	595	600	605
Leu	Gly	Val	Asp	Gln	Glu	Ser	Glu	Glu	Gly	Lys	Gly	Lys	Thr	Ser	Pro	610	615	620
Asp	Lys	Gln	Lys	Gln	Ser	Pro	Gln	Pro	Gln	Pro	Gly	Ser	Ser	Asp	Gln	625	630	635
Glu	Ser	Glu	Glu	Gln	Gln	Gln	Phe	Arg	Asn	Ile	Phe	Lys	Gln	Ile	Ala	645	650	655
Gly	Asp	Asp	Met	Glu	Ile	Cys	Ala	Asp	Glu	Leu	Lys	Lys	Val	Leu	Asn	660	665	670
Thr	Val	Val	Asn	Lys	His	Lys	Asp	Leu	Lys	Thr	His	Gly	Phe	Thr	Leu	675	680	685
Glu	Ser	Cys	Arg	Ser	Met	Ile	Ala	Leu	Met	Asp	Thr	Asp	Gly	Ser	Gly	690	695	700

Lys Leu Asn Leu Gln Glu Phe His His Leu Trp Asn Lys Ile Lys Ala
705 710 715 720

Trp Gln Lys Ile Phe Lys His Tyr Asp Thr Asp Gln Ser Gly Thr Ile
725 730 735

Asn Ser Tyr Glu Met Arg Asn Ala Val Asn Asp Ala Gly Phe His Leu
740 745 750

Asn Asn Gln Leu Tyr Asp Ile Ile Thr Met Arg Tyr Ala Asp Lys His
755 760 765

Met Asn Ile Asp Phe Asp Ser Phe Ile Cys Cys Phe Val Arg Leu Glu
770 775 780

Gly Met Phe Arg Ala Phe His Ala Phe Asp Lys Asp Gly Asp Gly Ile
785 790 795 800

Ile Lys Leu Asn Val Leu Glu Trp Leu Gln Leu Thr Met Tyr Ala
805 810 815

<210> 11161
<211> 821
<212> PRT
<213> Homo sapiens

<220>
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<220>
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<400> 11161
Met Pro Thr Val Ile Ser Ala Ser Val Ala Pro Arg Thr Ala Ala Glu
1 5 10 15

25061

Ile Arg Asp Ala Pro Ser Asp Met Tyr Lys Ile Met Lys Lys Ala Ile
245 250 255

Glu Arg Gly Ser Leu Met Gly Cys Ser Ile Asp Asp Gly Thr Asn Met
260 265 270

Thr Tyr Gly Thr Ser Pro Ser Gly Leu Asn Met Gly Glu Leu Ile Ala
275 280 285

Arg Met Val Arg Asn Met Asp Asn Ser Leu Leu Gln Asp Ser Asp Leu
290 295 300

Asp Pro Arg Gly Ser Asp Glu Arg Pro Thr Arg Thr Ile Ile Pro Val
305 310 315 320

Gln Tyr Glu Thr Arg Met Ala Cys Gly Leu Val Arg Gly His Ala Tyr
325 330 335

Ser Val Thr Gly Leu Asp Glu Val Pro Phe Lys Gly Glu Lys Val Lys
340 345 350

Leu Val Arg Leu Arg Asn Pro Trp Gly Gln Val Glu Trp Asn Gly Ser
355 360 365

Trp Ser Asp Arg Trp Lys Asp Trp Ser Phe Val Asp Lys Asp Glu Lys
370 375 380

Ala Arg Leu Gln His Gln Val Thr Glu Asp Gly Glu Phe Trp Met Ser
385 390 395 400

Tyr Glu Asp Phe Ile Tyr His Phe Thr Lys Leu Glu Ile Cys Asn Leu
405 410 415

Thr Ala Asp Ala Leu Gln Ser Asp Lys Leu Gln Thr Trp Thr Val Ser
420 425 430

Val Asn Glu Gly Arg Trp Val Arg Gly Cys Ser Ala Gly Gly Cys Arg
435 440 445

Asn Phe Pro Asp Thr Phe Trp Thr Asn Pro Gln Tyr Arg Leu Lys Leu
450 455 460

Leu Glu Glu Asp Asp Asp Pro Asp Asp Ser Glu Val Ile Cys Ser Phe

465					470					475				480		
Leu	Val	Ala	Leu	Met	Gln	Lys	Asn	Arg	Arg	Lys	Asp	Arg	Lys	Leu	Gly	
				485					490					495		
Ala	Ser	Leu	Phe	Thr	Ile	Gly	Phe	Ala	Ile	Tyr	Glu	Val	Pro	Lys	Glu	
			500					505					510			
Met	His	Gly	Asn	Lys	Gln	His	Leu	Gln	Lys	Asp	Phe	Phe	Leu	Tyr	Asn	
		515					520					525				
Ala	Ser	Lys	Ala	Arg	Ser	Lys	Thr	Tyr	Ile	Asn	Met	Arg	Glu	Val	Ser	
	530					535					540					
Gln	Arg	Phe	Arg	Leu	Pro	Pro	Ser	Glu	Tyr	Val	Ile	Val	Pro	Ser	Thr	
545					550					555					560	
Tyr	Glu	Pro	His	Gln	Glu	Gly	Glu	Phe	Ile	Leu	Arg	Val	Phe	Ser	Glu	
				565					570					575		
Lys	Arg	Asn	Leu	Ser	Glu	Glu	Val	Glu	Asn	Thr	Ile	Ser	Val	Asp	Arg	
			580					585					590			
Pro	Val	Lys	Lys	Lys	Lys	Thr	Lys	Pro	Ile	Ile	Phe	Val	Ser	Asp	Arg	
		595					600					605				
Ala	Asn	Ser	Asn	Lys	Glu	Leu	Gly	Val	Asp	Gln	Glu	Ser	Glu	Glu	Gly	
	610					615					620					
Lys	Gly	Lys	Thr	Ser	Pro	Asp	Lys	Gln	Lys	Gln	Ser	Pro	Gln	Pro	Gln	
625					630					635					640	
Pro	Gly	Ser	Ser	Asp	Gln	Glu	Ser	Glu	Glu	Gln	Gln	Gln	Phe	Arg	Asn	
				645					650					655		
Ile	Phe	Lys	Gln	Ile	Ala	Gly	Asp	Asp	Met	Glu	Ile	Cys	Ala	Asp	Glu	
			660					665					670			
Leu	Lys	Lys	Val	Leu	Asn	Thr	Val	Val	Asn	Lys	His	Lys	Asp	Leu	Lys	
		675					680					685				
Thr	His	Gly	Phe	Thr	Leu	Glu	Ser	Cys	Arg	Ser	Met	Ile	Ala	Leu	Met	
	690					695					700					

Asp Thr Asp Gly Ser Gly Lys Leu Asn Leu Gln Glu Phe His His Leu
705 710 715 720

Trp Asn Lys Ile Lys Ala Trp Gln Lys Ile Phe Lys His Tyr Asp Thr
725 730 735

Asp Gln Ser Gly Thr Ile Asn Ser Tyr Glu Met Arg Asn Ala Val Asn
740 745 750

Asp Ala Gly Phe His Leu Asn Asn Gln Leu Tyr Asp Ile Ile Thr Met
755 760 765

Arg Tyr Ala Asp Lys His Met Asn Ile Asp Phe Asp Ser Phe Ile Cys
770 775 780

Cys Phe Val Arg Leu Glu Gly Met Phe Arg Ala Phe His Ala Phe Asp
785 790 795 800

Lys Asp Gly Asp Gly Ile Ile Lys Leu Asn Val Leu Glu Trp Leu Gln
805 810 815

Leu Thr Met Tyr Ala
820

<210> 11162
<211> 309
<212> PRT
<213> Homo sapiens

<220>
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<223> /note="Payload ID: 2204; "

<220>
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<223> /note="Gene Symbol: CAPN3; "

<220>
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<223> /note="Gene Name: calpain 3; "

<220>
<221> source
<223> /note="Uniprot ID: P20807; "

<220>
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<223> /note="ENSP ID: ENSP00000380384"

<400> 11162

Met His Gly Asn Lys Gln His Leu Gln Lys Asp Phe Phe Leu Tyr Asn
1 5 10 15

Ala Ser Lys Ala Arg Ser Lys Thr Tyr Ile Asn Met Arg Glu Val Ser
20 25 30

Gln Arg Phe Arg Leu Pro Pro Ser Glu Tyr Val Ile Val Pro Ser Thr
35 40 45

Tyr Glu Pro His Gln Glu Gly Glu Phe Ile Leu Arg Val Phe Ser Glu
50 55 60

Lys Arg Asn Leu Ser Glu Glu Val Glu Asn Thr Ile Ser Val Asp Arg
65 70 75 80

Pro Val Lys Lys Lys Lys Thr Lys Pro Ile Ile Phe Val Ser Asp Arg
85 90 95

Ala Asn Ser Asn Lys Glu Leu Gly Val Asp Gln Glu Ser Glu Glu Gly
100 105 110

Lys Gly Lys Thr Ser Pro Asp Lys Gln Lys Gln Ser Pro Gln Pro Gln
115 120 125

Pro Gly Ser Ser Asp Gln Glu Ser Glu Glu Gln Gln Phe Arg Asn
130 135 140

Ile Phe Lys Gln Ile Ala Gly Asp Asp Met Glu Ile Cys Ala Asp Glu
145 150 155 160

Leu Lys Lys Val Leu Asn Thr Val Val Asn Lys His Lys Asp Leu Lys
165 170 175

Thr His Gly Phe Thr Leu Glu Ser Cys Arg Ser Met Ile Ala Leu Met
180 185 190

Asp Thr Asp Gly Ser Gly Lys Leu Asn Leu Gln Glu Phe His His Leu
195 200 205

Trp Asn Lys Ile Lys Ala Trp Gln Lys Ile Phe Lys His Tyr Asp Thr
210 215 220

25065

Asp Gln Ser Gly Thr Ile Asn Ser Tyr Glu Met Arg Asn Ala Val Asn
225 230 235 240

Asp Ala Gly Phe His Leu Asn Asn Gln Leu Tyr Asp Ile Ile Thr Met
245 250 255

Arg Tyr Ala Asp Lys His Met Asn Ile Asp Phe Asp Ser Phe Ile Cys
260 265 270

Cys Phe Val Arg Leu Glu Gly Met Phe Arg Ala Phe His Ala Phe Asp
275 280 285

Lys Asp Gly Asp Gly Ile Ile Lys Leu Asn Val Leu Glu Trp Leu Gln
290 295 300

Leu Thr Met Tyr Ala
305

<210> 11163
<211> 156
<212> PRT
<213> Homo sapiens

<220>
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<220>
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<220>
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<220>
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<220>
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<223> /note="ENSP ID: ENSP00000380387"

<400> 11163
Met Glu Ile Cys Ala Asp Glu Leu Lys Lys Val Leu Asn Thr Val Val
1 5 10 15

Asn Lys His Lys Asp Leu Lys Thr His Gly Phe Thr Leu Glu Ser Cys

	20		25		30														
Arg	Ser	Met	Ile	Ala	Leu	Met	Asp	Thr	Asp	Gly	Ser	Gly	Lys	Leu	Asn				
		35					40					45							
Leu	Gln	Glu	Phe	His	His	Leu	Trp	Asn	Lys	Ile	Lys	Ala	Trp	Gln	Lys				
	50					55					60								
Ile	Phe	Lys	His	Tyr	Asp	Thr	Asp	Gln	Ser	Gly	Thr	Ile	Asn	Ser	Tyr				
65					70					75					80				
Glu	Met	Arg	Asn	Ala	Val	Asn	Asp	Ala	Gly	Phe	His	Leu	Asn	Asn	Gln				
				85					90					95					
Leu	Tyr	Asp	Ile	Ile	Thr	Met	Arg	Tyr	Ala	Asp	Lys	His	Met	Asn	Ile				
			100					105						110					
Asp	Phe	Asp	Ser	Phe	Ile	Cys	Cys	Phe	Val	Arg	Leu	Glu	Gly	Met	Phe				
		115					120					125							
Arg	Ala	Phe	His	Ala	Phe	Asp	Lys	Asp	Gly	Asp	Gly	Ile	Ile	Lys	Leu				
	130					135					140								
Asn	Val	Leu	Glu	Trp	Leu	Gln	Leu	Thr	Met	Tyr	Ala								
145					150					155									

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<210> 11164
<211> 255
<212> PRT
<213> Homo sapiens

<220>
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<220>
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<223> /note="Gene Symbol: CAPN3; "

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<223> /note="Gene Name: calpain 3; "

<220>
<221> source
<223> /note="ENSP ID: ENSP00000454379"

<400> 11164

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Met	His	Gly	Asn	Lys	Gln	His	Leu	Gln	Lys	Asp	Phe	Phe	Leu	Tyr	Asn		
1				5					10					15			
Ala	Ser	Lys	Ala	Arg	Ser	Lys	Thr	Tyr	Ile	Asn	Met	Arg	Glu	Val	Ser		
			20					25					30				
Gln	Arg	Phe	Arg	Leu	Pro	Pro	Ser	Glu	Tyr	Val	Ile	Val	Pro	Ser	Thr		
		35					40					45					
Tyr	Glu	Pro	His	Gln	Glu	Gly	Glu	Phe	Ile	Leu	Arg	Val	Phe	Ser	Glu		
	50					55					60						
Lys	Arg	Asn	Leu	Ser	Glu	Glu	Val	Glu	Asn	Thr	Ile	Ser	Val	Asp	Arg		
65					70					75					80		
Pro	Val	Pro	Gln	Pro	Gly	Ser	Ser	Asp	Gln	Glu	Ser	Glu	Glu	Gln	Gln		
				85					90					95			
Gln	Phe	Arg	Asn	Ile	Phe	Lys	Gln	Ile	Ala	Gly	Asp	Asp	Met	Glu	Ile		
			100					105					110				
Cys	Ala	Asp	Glu	Leu	Lys	Lys	Val	Leu	Asn	Thr	Val	Val	Asn	Lys	His		
		115					120					125					
Lys	Asp	Leu	Lys	Thr	His	Gly	Phe	Thr	Leu	Glu	Ser	Cys	Arg	Ser	Met		
	130					135					140						
Ile	Ala	Leu	Met	Asp	Thr	Asp	Gly	Ser	Gly	Lys	Leu	Asn	Leu	Gln	Glu		
145					150					155					160		
Phe	His	His	Leu	Trp	Asn	Lys	Ile	Lys	Ala	Trp	Gln	Lys	Ile	Phe	Lys		
				165					170					175			
His	Tyr	Asp	Thr	Asp	Gln	Ser	Gly	Thr	Ile	Asn	Ser	Tyr	Glu	Met	Arg		
			180					185					190				
Asn	Ala	Val	Asn	Asp	Ala	Gly	Phe	His	Leu	Asn	Asn	Gln	Leu	Tyr	Asp		
		195					200					205					
Ile	Ile	Thr	Met	Arg	Tyr	Ala	Asp	Lys	His	Met	Asn	Ile	Asp	Phe	Asp		
	210					215					220						
Ser	Phe	Ile	Cys	Cys	Phe	Val	Arg	Leu	Glu	Gly	Met	Phe	Arg	Ala	Phe		

225					230					235					240
His	Ala	Phe	Asp	Lys	Asp	Gly	Asp	Gly	Ile	Ile	Lys	Leu	Asn	Val	
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<210> 11165
<211> 67
<212> PRT
<213> Homo sapiens
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<220>  
<221> source  
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<220>
<221> source
<223> /note="Gene Symbol: CAPN3; "
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<220>
<221> source
<223> /note="Gene Name: calpain 3; "
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<220>
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<223> /note="ENSP ID: ENSP00000454937"
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<220>  
<221> MOD_RES  
<222> (1)..(1)  
<223> Any amino acid
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<400> 11165
Xaa Phe His Leu Asn Asn Gln Leu Tyr Asp Ile Ile Thr Met Arg Tyr
1 5 10 15

Ala Asp Lys His Met Asn Ile Asp Phe Asp Ser Phe Ile Cys Cys Phe
20 25 30

Val Arg Leu Glu Gly Met Phe Arg Ala Phe His Ala Phe Asp Lys Asp
35 40 45

Gly Asp Gly Ile Ile Lys Leu Asn Val Leu Glu Trp Leu Gln Leu Thr
50 55 60

Met Tyr Ala
65

$$\begin{array}{ll} \langle 210 \rangle & 11166 \\ \langle 211 \rangle & 156 \end{array}$$

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<212> PRT
<213> Homo sapiens

<220>
<221> source
<223> /note="Payload ID: 2204; "

<220>
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<223> /note="Gene Symbol: CAPN3; "

<220>
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<223> /note="Gene Name: calpain 3; "

<220>
<221> source
<223> /note="Uniprot ID: P20807; "

<220>
<221> source
<223> /note="ENSP ID: ENSP00000455254"

<400> 11166
Met Glu Ile Cys Ala Asp Glu Leu Lys Lys Val Leu Asn Thr Val Val
1          5          10          15

Asn Lys His Lys Asp Leu Lys Thr His Gly Phe Thr Leu Glu Ser Cys
          20          25          30

Arg Ser Met Ile Ala Leu Met Asp Thr Asp Gly Ser Gly Lys Leu Asn
          35          40          45

Leu Gln Glu Phe His His Leu Trp Asn Lys Ile Lys Ala Trp Gln Lys
          50          55          60

Ile Phe Lys His Tyr Asp Thr Asp Gln Ser Gly Thr Ile Asn Ser Tyr
65          70          75          80

Glu Met Arg Asn Ala Val Asn Asp Ala Gly Phe His Leu Asn Asn Gln
          85          90          95

Leu Tyr Asp Ile Ile Thr Met Arg Tyr Ala Asp Lys His Met Asn Ile
          100          105          110

Asp Phe Asp Ser Phe Ile Cys Cys Phe Val Arg Leu Glu Gly Met Phe
          115          120          125

Arg Ala Phe His Ala Phe Asp Lys Asp Gly Asp Gly Ile Ile Lys Leu

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130	135	140
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Asn Val Leu Glu Trp Leu Gln Leu Thr Met Tyr Ala
 145 150 155

<210> 11167
 <211> 93
 <212> PRT
 <213> Homo sapiens

<220>
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<220>
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<220>
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<220>
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 <223> /note="ENSP ID: ENSP00000456514"

<400> 11167
 Lys Ile Phe Lys His Tyr Asp Thr Asp Gln Ser Gly Thr Ile Asn Ser
 1 5 10 15

Tyr Glu Met Arg Asn Ala Val Asn Asp Ala Gly Phe His Leu Asn Asn
 20 25 30

Gln Leu Tyr Asp Ile Ile Thr Met Arg Tyr Ala Asp Lys His Met Asn
 35 40 45

Ile Asp Phe Asp Ser Phe Ile Cys Cys Phe Val Arg Leu Glu Gly Met
 50 55 60

Phe Arg Ala Phe His Ala Phe Asp Lys Asp Gly Asp Gly Ile Ile Lys
 65 70 75 80

Leu Asn Val Leu Glu Trp Leu Gln Leu Thr Met Tyr Ala
 85 90

<210> 11168
 <211> 191
 <212> PRT
 <213> Homo sapiens

<220>
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<223> /note="Payload ID: 2204; "

<220>
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<220>
<221> source
<223> /note="Gene Name: calpain 3; "

<220>
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<223> /note="ENSP ID: ENSP00000456575"

<400> 11168
Met Glu Ile Cys Ala Asp Glu Leu Lys Lys Val Leu Asn Thr Val Val
1 5 10 15

Asn Lys His Lys Asp Leu Lys Thr His Gly Phe Thr Leu Glu Ser Cys
20 25 30

Arg Ser Met Ile Ala Leu Met Asp Thr Asp Gly Ser Gly Lys Leu Asn
35 40 45

Leu Gln Glu Phe His His Leu Trp Asn Lys Ile Lys Ala Trp Gln Lys
50 55 60

Ile Phe Lys His Tyr Asp Thr Asp Gln Ser Gly Thr Ile Asn Ser Tyr
65 70 75 80

Glu Met Arg Asn Ala Val Asn Asp Ala Gly Phe His Leu Asn Asn Gln
85 90 95

Leu Tyr Asp Ile Ile Thr Met Arg Tyr Ala Asp Lys His Met Asn Ile
100 105 110

Asp Phe Asp Ser Phe Ile Cys Cys Phe Val Arg Leu Glu Gly Met Phe
115 120 125

Arg Ala Phe His Ala Phe Asp Lys Asp Gly Asp Gly Ile Ile Lys Leu
130 135 140

Asn Val Leu Glu Ala Val Cys Arg Ser Thr Cys Arg Trp His Ser Ala
145 150 155 160

Pro Pro Cys Ala Arg Ala Leu His His Leu His Ala Val Pro Pro Trp
165 170 175

Ala Arg Asn Gln Thr Ser Thr Gly Phe Tyr Cys Cys Gly Val Asn
180 185 190

<210> 11169

<211> 188

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2204; Gene Symbol: CAPN3; Gene Name:
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<220>

<221> MOD_RES

<222> (1)..(1)

<223> Any amino acid

<400> 11169

Xaa Gly Asn Lys Gln His Leu Gln Lys Asp Phe Phe Leu Tyr Asn Ala
1 5 10 15

Ser Lys Ala Arg Ser Lys Thr Tyr Ile Asn Met Arg Glu Val Ser Gln
20 25 30

Arg Phe Arg Leu Pro Pro Ser Glu Tyr Val Ile Val Pro Ser Thr Tyr
35 40 45

Glu Pro His Gln Glu Gly Glu Phe Ile Leu Arg Val Phe Ser Glu Lys
50 55 60

Arg Asn Leu Ser Glu Glu Val Glu Asn Thr Ile Ser Val Asp Arg Pro
65 70 75 80

Val Lys Lys Lys Lys Thr Lys Pro Ile Ile Phe Val Ser Asp Arg Ala
85 90 95

Asn Ser Asn Lys Glu Leu Gly Val Asp Gln Glu Ser Glu Glu Gly Lys
100 105 110

Gly Lys Thr Ser Pro Asp Lys Gln Lys Gln Ser Pro Gln Phe Ser Phe
115 120 125

Val Pro Pro Gln Pro Gln Pro Gly Ser Ser Asp Gln Glu Ser Glu Glu
130 135 140

Gln Gln Gln Phe Arg Asn Ile Phe Lys Gln Ile Ala Gly Asp Asp Met
145 150 155 160

Glu Ile Cys Ala Asp Glu Leu Lys Lys Val Leu Asn Thr Val Val Asn
165 170 175

Lys His Lys Asp Leu Lys Thr His Gly Phe Thr Leu
180 185

<210> 11170
<211> 110
<212> PRT
<213> Homo sapiens

<220>
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<223> /note="Payload ID: 2204"

<220>
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<223> /note="Gene Symbol: CAPN3"

<220>
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<223> /note="Gene Name:
calpain 3"

<220>
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<223> /note="ENSP ID: ENSP00000457759"

<400> 11170
Lys Lys Thr Lys Pro Ile Ile Phe Val Ser Asp Arg Ala Asn Ser Asn
1 5 10 15

Lys Glu Leu Gly Val Asp Gln Glu Ser Glu Glu Gly Lys Gly Lys Thr
20 25 30

Ser Pro Asp Lys Gln Lys Gln Ser Pro Gln Pro Gln Pro Gly Ser Ser
35 40 45

Asp Gln Glu Ser Glu Glu Gln Gln Gln Phe Arg Asn Ile Phe Lys Gln
50 55 60

Ile Ala Gly Asp Asp Met Glu Ile Cys Ala Asp Glu Leu Lys Lys Val

Leu Met Asp Thr Asp Gly Ser Gly Lys Leu Asn Leu Gln Glu Phe His
100 105 110

His Leu Trp Asn Lys Ile Lys Ala Trp Gln Lys Ile Phe Lys His Tyr
115 120 125

Asp Thr Asp Gln Ser Gly Thr Ile Asn Ser Tyr Glu Met Arg Asn Ala
130 135 140

Val Asn Asp Ala Gly Phe His Leu Asn Asn Gln Leu Tyr
145 150 155

<210> 11172
<211> 169
<212> PRT
<213> Homo sapiens

<220>
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<220>
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calpain 3"

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<220>
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<222> (1)..(1)
<223> Any amino acid

<400> 11172
Xaa Ser Pro Gln Pro Gln Pro Gly Ser Ser Asp Gln Glu Ser Glu Glu
1 5 10 15

Gln Gln Gln Phe Arg Asn Ile Phe Lys Gln Ile Ala Gly Asp Asp Met
20 25 30

Glu Ile Cys Ala Asp Glu Leu Lys Lys Val Leu Asn Thr Val Val Asn
35 40 45

Lys His Lys Asp Leu Lys Thr His Gly Phe Thr Leu Glu Ser Cys Arg
 50 55 60
 Ser Met Ile Ala Leu Met Asp Thr Asp Gly Ser Gly Lys Leu Asn Leu
 65 70 75 80
 Gln Glu Phe His His Leu Trp Asn Lys Ile Lys Ala Trp Gln Met Arg
 85 90 95
 Asn Ala Val Asn Asp Ala Gly Phe His Leu Asn Asn Gln Leu Tyr Asp
 100 105 110
 Ile Ile Thr Met Arg Tyr Ala Asp Lys His Met Asn Ile Asp Phe Asp
 115 120 125
 Ser Phe Ile Cys Cys Phe Val Arg Leu Glu Gly Met Phe Arg Ala Phe
 130 135 140
 His Ala Phe Asp Lys Asp Gly Asp Gly Ile Ile Lys Leu Asn Val Leu
 145 150 155 160
 Glu Trp Leu Gln Leu Thr Met Tyr Ala
 165

<210> 11173
 <211> 640
 <212> PRT
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<220>
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<220>
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<220>
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 <223> /note="Uniprot ID: O15484"

<220>
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<223> /note="ENSP ID: ENSP00000278559"

<400> 11173

Met Phe Ser Cys Val Lys Pro Tyr Glu Asp Gln Asn Tyr Ser Ala Leu
1 5 10 15

Arg Arg Asp Cys Arg Arg Arg Lys Val Leu Phe Glu Asp Pro Leu Phe
20 25 30

Pro Ala Thr Asp Asp Ser Leu Tyr Tyr Lys Gly Thr Pro Gly Pro Ala
35 40 45

Val Arg Trp Lys Arg Pro Lys Gly Ile Cys Glu Asp Pro Arg Leu Phe
50 55 60

Val Asp Gly Ile Ser Ser His Asp Leu His Gln Gly Gln Val Gly Asn
65 70 75 80

Cys Trp Phe Val Ala Ala Cys Ser Ser Leu Ala Ser Arg Glu Ser Leu
85 90 95

Trp Gln Lys Val Ile Pro Asp Trp Lys Glu Gln Glu Trp Asp Pro Glu
100 105 110

Lys Pro Asn Ala Tyr Ala Gly Ile Phe His Phe His Phe Trp Arg Phe
115 120 125

Gly Glu Trp Val Asp Val Val Ile Asp Asp Arg Leu Pro Thr Val Asn
130 135 140

Asn Gln Leu Ile Tyr Cys His Ser Asn Ser Arg Asn Glu Phe Trp Cys
145 150 155 160

Ala Leu Val Glu Lys Ala Tyr Ala Lys Leu Ala Gly Cys Tyr Gln Ala
165 170 175

Leu Asp Gly Gly Asn Thr Ala Asp Ala Leu Val Asp Phe Thr Gly Gly
180 185 190

Val Ser Glu Pro Ile Asp Leu Thr Glu Gly Asp Phe Ala Asn Asp Glu
195 200 205

Thr Lys Arg Asn Gln Leu Phe Glu Arg Met Leu Lys Val His Ser Arg
210 215 220

Gly Gly Leu Ile Ser Ala Ser Ile Lys Ala Val Thr Ala Ala Asp Met
225 230 235 240

Glu Ala Arg Leu Ala Cys Gly Leu Val Lys Gly His Ala Tyr Ala Val
245 250 255

Thr Asp Val Arg Lys Val Arg Leu Gly His Gly Leu Leu Ala Phe Phe
260 265 270

Lys Ser Glu Lys Leu Asp Met Ile Arg Leu Arg Asn Pro Trp Gly Glu
275 280 285

Arg Glu Trp Asn Gly Pro Trp Ser Asp Thr Ser Glu Glu Trp Gln Lys
290 295 300

Val Ser Lys Ser Glu Arg Glu Lys Met Gly Val Thr Val Gln Asp Asp
305 310 315 320

Gly Glu Phe Trp Met Thr Phe Glu Asp Val Cys Arg Tyr Phe Thr Asp
325 330 335

Ile Ile Lys Cys Arg Val Ile Asn Thr Ser His Leu Ser Ile His Lys
340 345 350

Thr Trp Glu Glu Ala Arg Leu His Gly Ala Trp Thr Leu His Glu Asp
355 360 365

Pro Arg Gln Asn Arg Gly Gly Gly Cys Ile Asn His Lys Asp Thr Phe
370 375 380

Phe Gln Asn Pro Gln Tyr Ile Phe Glu Val Lys Lys Pro Glu Asp Glu
385 390 395 400

Val Leu Ile Cys Ile Gln Gln Arg Pro Lys Arg Ser Thr Arg Arg Glu
405 410 415

Gly Lys Gly Glu Asn Leu Ala Ile Gly Phe Asp Ile Tyr Lys Val Glu
420 425 430

Glu Asn Arg Gln Tyr Arg Met His Ser Leu Gln His Lys Ala Ala Ser
435 440 445

Ser Ile Tyr Ile Asn Ser Arg Ser Val Phe Leu Arg Thr Asp Gln Pro
450 455 460

Glu Gly Arg Tyr Val Ile Ile Pro Thr Thr Phe Glu Pro Gly His Thr
465 470 475 480

Gly Glu Phe Leu Leu Arg Val Phe Thr Asp Val Pro Ser Asn Cys Arg
485 490 495

Glu Leu Arg Leu Asp Glu Pro Pro His Thr Cys Trp Ser Ser Leu Cys
500 505 510

Gly Tyr Pro Gln Leu Val Thr Gln Val His Val Leu Gly Ala Ala Gly
515 520 525

Leu Lys Asp Ser Pro Thr Gly Ala Asn Ser Tyr Val Ile Ile Lys Cys
530 535 540

Glu Gly Asp Lys Val Arg Ser Ala Val Gln Lys Gly Thr Ser Thr Pro
545 550 555 560

Glu Tyr Asn Val Lys Gly Ile Phe Tyr Arg Lys Lys Leu Ser Gln Pro
565 570 575

Ile Thr Val Gln Val Trp Asn His Arg Val Leu Lys Asp Glu Phe Leu
580 585 590

Gly Gln Val His Leu Lys Ala Asp Pro Asp Asn Leu Gln Ala Leu His
595 600 605

Thr Leu His Leu Arg Asp Arg Asn Ser Arg Gln Pro Ser Asn Leu Pro
610 615 620

Gly Thr Val Ala Val His Ile Leu Ser Ser Thr Ser Leu Met Ala Val
625 630 635 640

<210> 11174

<211> 680

<212> PRT

<213> Homo sapiens

<220>

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<220>
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<220>
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<223> /note="Gene Name:
calpain 5"

<220>
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<400> 11174

Met Phe Ser Cys Val Lys Pro Tyr Glu Asp Gln Asn Tyr Ser Ala Leu
1 5 10 15

Arg Arg Asp Cys Arg Arg Arg Lys Val Leu Phe Glu Asp Pro Leu Phe
20 25 30

Pro Ala Thr Asp Asp Ser Leu Tyr Tyr Lys Gly Thr Pro Gly Pro Ala
35 40 45

Val Arg Trp Lys Arg Pro Lys Tyr Ser Gly His Ser Leu Ala Pro His
50 55 60

Arg Pro Gly Trp Gly Asp Ala Arg Arg Met Glu Asn Val Pro Arg Pro
65 70 75 80

Gly Ser Ser Gly Cys Pro Ser Ser Ser Leu Arg Ala Arg Asp Leu Gly
85 90 95

Ile Cys Glu Asp Pro Arg Leu Phe Val Asp Gly Ile Ser Ser His Asp
100 105 110

Leu His Gln Gly Gln Val Gly Asn Cys Trp Phe Val Ala Ala Cys Ser
115 120 125

Ser Leu Ala Ser Arg Glu Ser Leu Trp Gln Lys Val Ile Pro Asp Trp
130 135 140

Lys Glu Gln Glu Trp Asp Pro Glu Lys Pro Asn Ala Tyr Ala Gly Ile
145 150 155 160

Phe His Phe His Phe Trp Arg Phe Gly Glu Trp Val Asp Val Val Ile
165 170 175

Asp	Asp	Arg	Leu	Pro	Thr	Val	Asn	Asn	Gln	Leu	Ile	Tyr	Cys	His	Ser	
			180					185					190			
Asn	Ser	Arg	Asn	Glu	Phe	Trp	Cys	Ala	Leu	Val	Glu	Lys	Ala	Tyr	Ala	
		195					200					205				
Lys	Leu	Ala	Gly	Cys	Tyr	Gln	Ala	Leu	Asp	Gly	Gly	Asn	Thr	Ala	Asp	
	210					215					220					
Ala	Leu	Val	Asp	Phe	Thr	Gly	Gly	Val	Ser	Glu	Pro	Ile	Asp	Leu	Thr	
225					230					235					240	
Glu	Gly	Asp	Phe	Ala	Asn	Asp	Glu	Thr	Lys	Arg	Asn	Gln	Leu	Phe	Glu	
			245						250					255		
Arg	Met	Leu	Lys	Val	His	Ser	Arg	Gly	Gly	Leu	Ile	Ser	Ala	Ser	Ile	
			260					265					270			
Lys	Ala	Val	Thr	Ala	Ala	Asp	Met	Glu	Ala	Arg	Leu	Ala	Cys	Gly	Leu	
		275					280					285				
Val	Lys	Gly	His	Ala	Tyr	Ala	Val	Thr	Asp	Val	Arg	Lys	Val	Arg	Leu	
	290					295					300					
Gly	His	Gly	Leu	Leu	Ala	Phe	Phe	Lys	Ser	Glu	Lys	Leu	Asp	Met	Ile	
305					310					315					320	
Arg	Leu	Arg	Asn	Pro	Trp	Gly	Glu	Arg	Glu	Trp	Asn	Gly	Pro	Trp	Ser	
			325						330					335		
Asp	Thr	Ser	Glu	Glu	Trp	Gln	Lys	Val	Ser	Lys	Ser	Glu	Arg	Glu	Lys	
			340					345					350			
Met	Gly	Val	Thr	Val	Gln	Asp	Asp	Gly	Glu	Phe	Trp	Met	Thr	Phe	Glu	
		355					360					365				
Asp	Val	Cys	Arg	Tyr	Phe	Thr	Asp	Ile	Ile	Lys	Cys	Arg	Val	Ile	Asn	
	370					375					380					
Thr	Ser	His	Leu	Ser	Ile	His	Lys	Thr	Trp	Glu	Glu	Ala	Arg	Leu	His	
385					390					395					400	

Gly	Ala	Trp	Thr	Leu	His	Glu	Asp	Pro	Arg	Gln	Asn	Arg	Gly	Gly	Gly		
				405					410					415			
Cys	Ile	Asn	His	Lys	Asp	Thr	Phe	Phe	Gln	Asn	Pro	Gln	Tyr	Ile	Phe		
			420					425					430				
Glu	Val	Lys	Lys	Pro	Glu	Asp	Glu	Val	Leu	Ile	Cys	Ile	Gln	Gln	Arg		
		435					440					445					
Pro	Lys	Arg	Ser	Thr	Arg	Arg	Glu	Gly	Lys	Gly	Glu	Asn	Leu	Ala	Ile		
	450					455					460						
Gly	Phe	Asp	Ile	Tyr	Lys	Val	Glu	Glu	Asn	Arg	Gln	Tyr	Arg	Met	His		
465					470				475						480		
Ser	Leu	Gln	His	Lys	Ala	Ala	Ser	Ser	Ile	Tyr	Ile	Asn	Ser	Arg	Ser		
				485					490					495			
Val	Phe	Leu	Arg	Thr	Asp	Gln	Pro	Glu	Gly	Arg	Tyr	Val	Ile	Ile	Pro		
			500					505					510				
Thr	Thr	Phe	Glu	Pro	Gly	His	Thr	Gly	Glu	Phe	Leu	Leu	Arg	Val	Phe		
		515					520					525					
Thr	Asp	Val	Pro	Ser	Asn	Cys	Arg	Glu	Leu	Arg	Leu	Asp	Glu	Pro	Pro		
	530					535					540						
His	Thr	Cys	Trp	Ser	Ser	Leu	Cys	Gly	Tyr	Pro	Gln	Leu	Val	Thr	Gln		
545					550					555					560		
Val	His	Val	Leu	Gly	Ala	Ala	Gly	Leu	Lys	Asp	Ser	Pro	Thr	Gly	Ala		
				565					570					575			
Asn	Ser	Tyr	Val	Ile	Ile	Lys	Cys	Glu	Gly	Asp	Lys	Val	Arg	Ser	Ala		
			580					585					590				
Val	Gln	Lys	Gly	Thr	Ser	Thr	Pro	Glu	Tyr	Asn	Val	Lys	Gly	Ile	Phe		
		595					600					605					
Tyr	Arg	Lys	Lys	Leu	Ser	Gln	Pro	Ile	Thr	Val	Gln	Val	Trp	Asn	His		
	610					615					620						

Arg Val Leu Lys Asp Glu Phe Leu Gly Gln Val His Leu Lys Ala Asp
625 630 635 640

Pro Asp Asn Leu Gln Ala Leu His Thr Leu His Leu Arg Asp Arg Asn
645 650 655

Ser Arg Gln Pro Ser Asn Leu Pro Gly Thr Val Ala Val His Ile Leu
660 665 670

Ser Ser Thr Ser Leu Met Ala Val
675 680

<210> 11175
<211> 640
<212> PRT
<213> Homo sapiens

<220>
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<223> /note="Payload ID: 2205"

<220>
<221> source
<223> /note="Gene Symbol: CAPN5"

<220>
<221> source
<223> /note="Gene Name:
calpain 5"

<220>
<221> source
<223> /note="Uniprot ID: O15484"

<220>
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<223> /note="ENSP ID: ENSP00000432332"

<400> 11175
Met Phe Ser Cys Val Lys Pro Tyr Glu Asp Gln Asn Tyr Ser Ala Leu
1 5 10 15

Arg Arg Asp Cys Arg Arg Arg Lys Val Leu Phe Glu Asp Pro Leu Phe
20 25 30

Pro Ala Thr Asp Asp Ser Leu Tyr Tyr Lys Gly Thr Pro Gly Pro Ala
35 40 45

Val Arg Trp Lys Arg Pro Lys Gly Ile Cys Glu Asp Pro Arg Leu Phe
50 55 60

Val	Asp	Gly	Ile	Ser	Ser	His	Asp	Leu	His	Gln	Gly	Gln	Val	Gly	Asn	
65					70					75					80	
Cys	Trp	Phe	Val	Ala	Ala	Cys	Ser	Ser	Leu	Ala	Ser	Arg	Glu	Ser	Leu	
				85					90					95		
Trp	Gln	Lys	Val	Ile	Pro	Asp	Trp	Lys	Glu	Gln	Glu	Trp	Asp	Pro	Glu	
			100					105					110			
Lys	Pro	Asn	Ala	Tyr	Ala	Gly	Ile	Phe	His	Phe	His	Phe	Trp	Arg	Phe	
		115					120					125				
Gly	Glu	Trp	Val	Asp	Val	Val	Ile	Asp	Asp	Arg	Leu	Pro	Thr	Val	Asn	
	130					135					140					
Asn	Gln	Leu	Ile	Tyr	Cys	His	Ser	Asn	Ser	Arg	Asn	Glu	Phe	Trp	Cys	
145					150					155					160	
Ala	Leu	Val	Glu	Lys	Ala	Tyr	Ala	Lys	Leu	Ala	Gly	Cys	Tyr	Gln	Ala	
				165					170					175		
Leu	Asp	Gly	Gly	Asn	Thr	Ala	Asp	Ala	Leu	Val	Asp	Phe	Thr	Gly	Gly	
			180					185					190			
Val	Ser	Glu	Pro	Ile	Asp	Leu	Thr	Glu	Gly	Asp	Phe	Ala	Asn	Asp	Glu	
		195					200					205				
Thr	Lys	Arg	Asn	Gln	Leu	Phe	Glu	Arg	Met	Leu	Lys	Val	His	Ser	Arg	
	210					215					220					
Gly	Gly	Leu	Ile	Ser	Ala	Ser	Ile	Lys	Ala	Val	Thr	Ala	Ala	Asp	Met	
225					230					235					240	
Glu	Ala	Arg	Leu	Ala	Cys	Gly	Leu	Val	Lys	Gly	His	Ala	Tyr	Ala	Val	
				245					250					255		
Thr	Asp	Val	Arg	Lys	Val	Arg	Leu	Gly	His	Gly	Leu	Leu	Ala	Phe	Phe	
			260					265					270			
Lys	Ser	Glu	Lys	Leu	Asp	Met	Ile	Arg	Leu	Arg	Asn	Pro	Trp	Gly	Glu	
		275					280					285				

Gly Tyr Pro Gln Leu Val Thr Gln Val His Val Leu Gly Ala Ala Gly
515 520 525

Leu Lys Asp Ser Pro Thr Gly Ala Asn Ser Tyr Val Ile Ile Lys Cys
530 535 540

Glu Gly Asp Lys Val Arg Ser Ala Val Gln Lys Gly Thr Ser Thr Pro
545 550 555 560

Glu Tyr Asn Val Lys Gly Ile Phe Tyr Arg Lys Lys Leu Ser Gln Pro
565 570 575

Ile Thr Val Gln Val Trp Asn His Arg Val Leu Lys Asp Glu Phe Leu
580 585 590

Gly Gln Val His Leu Lys Ala Asp Pro Asp Asn Leu Gln Ala Leu His
595 600 605

Thr Leu His Leu Arg Asp Arg Asn Ser Arg Gln Pro Ser Asn Leu Pro
610 615 620

Gly Thr Val Ala Val His Ile Leu Ser Ser Thr Ser Leu Met Ala Val
625 630 635 640

<210> 11176

<211> 97

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2205"

<220>

<221> source

<223> /note="Gene Symbol: CAPN5"

<220>

<221> source

<223> /note="Gene Name:
calpain 5"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000435894"

<400> 11176

Met Phe Ser Cys Val Lys Pro Tyr Glu Asp Gln Asn Tyr Ser Ala Leu
1 5 10 15

Arg Arg Asp Cys Arg Arg Arg Lys Val Leu Phe Glu Asp Pro Leu Phe
20 25 30

Pro Ala Thr Asp Asp Ser Leu Tyr Tyr Lys Gly Thr Pro Gly Pro Ala
35 40 45

Val Arg Trp Lys Arg Pro Lys Gly Ile Cys Glu Asp Pro Arg Leu Phe
50 55 60

Val Asp Gly Ile Ser Ser His Asp Leu His Gln Gly Gln Val Gly Asn
65 70 75 80

Cys Trp Phe Val Ala Ala Cys Ser Ser Leu Ala Ser Arg Glu Ser Leu
85 90 95

Trp

<210> 11177
<211> 52
<212> PRT
<213> Homo sapiens

<220>
<221> source
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<220>
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<220>
<221> source
<223> /note="Gene Name:
calpain 5"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000467244"

<400> 11177
Met Phe Ser Cys Val Lys Pro Tyr Glu Asp Gln Asn Tyr Ser Ala Leu
1 5 10 15

Arg Arg Asp Cys Arg Arg Arg Lys Val Leu Phe Glu Asp Pro Leu Phe
20 25 30

Pro Ala Thr Asp Asp Ser Leu Tyr Tyr Lys Gly Thr Pro Gly Pro Ala
35 40 45

Val Arg Cys Thr
50

<210> 11178
<211> 639
<212> PRT
<213> Homo sapiens

<220>
<221> source
<223> /note="Payload ID: 2205"

<220>
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<223> /note="Gene Symbol: CAPN5"

<220>
<221> source
<223> /note="Gene Name:
calpain 5"

<220>
<221> source
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<400> 11178
Met Phe Ser Cys Val Lys Pro Tyr Glu Asp Gln Asn Tyr Ser Ala Leu
1 5 10 15

Arg Arg Asp Cys Arg Arg Arg Lys Val Leu Phe Glu Asp Pro Leu Phe
20 25 30

Pro Ala Thr Asp Asp Ser Leu Tyr Tyr Lys Gly Thr Pro Gly Pro Ala
35 40 45

Val Arg Trp Lys Arg Pro Lys Gly Ile Cys Glu Asp Pro Arg Leu Phe
50 55 60

Val Asp Gly Ile Ser Ser His Asp Leu His Gln Gly Gln Val Gly Asn
65 70 75 80

Cys Trp Phe Val Ala Ala Cys Ser Ser Leu Ala Ser Arg Glu Ser Leu
85 90 95

Trp Gln Lys Val Ile Pro Asp Trp Lys Glu Gln Glu Trp Asp Pro Glu
100 105 110

Lys	Pro	Asn	Ala	Tyr	Ala	Gly	Ile	Phe	His	Phe	His	Phe	Trp	Arg	Phe		
		115					120					125					
Gly	Met	Val	Asp	Val	Val	Ile	Asp	Asp	Arg	Leu	Pro	Thr	Val	Asn	Asn		
	130					135					140						
Gln	Leu	Ile	Tyr	Cys	His	Ser	Asn	Ser	Arg	Asn	Glu	Phe	Trp	Cys	Ala		
145					150					155					160		
Leu	Val	Glu	Lys	Ala	Tyr	Ala	Lys	Leu	Ala	Gly	Cys	Tyr	Gln	Ala	Leu		
				165					170					175			
Asp	Gly	Gly	Asn	Thr	Ala	Asp	Ala	Leu	Val	Asp	Phe	Thr	Gly	Gly	Val		
			180					185					190				
Ser	Glu	Pro	Ile	Asp	Leu	Thr	Glu	Gly	Asp	Phe	Ala	Asn	Asp	Glu	Thr		
		195					200					205					
Lys	Arg	Asn	Gln	Leu	Phe	Glu	Arg	Met	Leu	Lys	Val	His	Ser	Arg	Gly		
	210					215					220						
Gly	Leu	Ile	Ser	Ala	Ser	Ile	Lys	Ala	Val	Thr	Ala	Ala	Asp	Met	Glu		
225					230					235					240		
Ala	Arg	Leu	Ala	Cys	Gly	Leu	Val	Lys	Gly	His	Ala	Tyr	Ala	Val	Thr		
				245					250					255			
Asp	Val	Arg	Lys	Val	Arg	Leu	Gly	His	Gly	Leu	Leu	Ala	Phe	Phe	Lys		
			260					265					270				
Ser	Glu	Lys	Leu	Asp	Met	Ile	Arg	Leu	Arg	Asn	Pro	Trp	Gly	Glu	Arg		
		275					280					285					
Glu	Trp	Asn	Gly	Pro	Trp	Ser	Asp	Thr	Ser	Glu	Glu	Trp	Gln	Lys	Val		
	290					295					300						
Ser	Lys	Ser	Glu	Arg	Glu	Lys	Met	Gly	Val	Thr	Val	Gln	Asp	Asp	Gly		
305					310					315					320		
Glu	Phe	Trp	Met	Thr	Phe	Glu	Asp	Val	Cys	Arg	Tyr	Phe	Thr	Asp	Ile		
				325					330					335			

Ile	Lys	Cys	Arg	Val	Ile	Asn	Thr	Ser	His	Leu	Ser	Ile	His	Lys	Thr			
			340					345					350					
Trp	Glu	Glu	Ala	Arg	Leu	His	Gly	Ala	Trp	Thr	Leu	His	Glu	Asp	Pro			
		355					360					365						
Arg	Gln	Asn	Arg	Gly	Gly	Gly	Cys	Ile	Asn	His	Lys	Asp	Thr	Phe	Phe			
	370					375					380							
Gln	Asn	Pro	Gln	Tyr	Ile	Phe	Glu	Val	Lys	Lys	Pro	Glu	Asp	Glu	Val			
385					390					395					400			
Leu	Ile	Cys	Ile	Gln	Gln	Arg	Pro	Lys	Arg	Ser	Thr	Arg	Arg	Glu	Gly			
				405					410					415				
Lys	Gly	Glu	Asn	Leu	Ala	Ile	Gly	Phe	Asp	Ile	Tyr	Lys	Val	Glu	Glu			
			420					425					430					
Asn	Arg	Gln	Tyr	Arg	Met	His	Ser	Leu	Gln	His	Lys	Ala	Ala	Ser	Ser			
		435					440					445						
Ile	Tyr	Ile	Asn	Ser	Arg	Ser	Val	Phe	Leu	Arg	Thr	Asp	Gln	Pro	Glu			
	450					455					460							
Gly	Arg	Tyr	Val	Ile	Ile	Pro	Thr	Thr	Phe	Glu	Pro	Gly	His	Thr	Gly			
465					470					475					480			
Glu	Phe	Leu	Leu	Arg	Val	Phe	Thr	Asp	Val	Pro	Ser	Asn	Cys	Arg	Glu			
				485					490					495				
Leu	Arg	Leu	Asp	Glu	Pro	Pro	His	Thr	Cys	Trp	Ser	Ser	Leu	Cys	Gly			
			500					505					510					
Tyr	Pro	Gln	Leu	Val	Thr	Gln	Val	His	Val	Leu	Gly	Ala	Ala	Gly	Leu			
		515					520					525						
Lys	Asp	Ser	Pro	Thr	Gly	Ala	Asn	Ser	Tyr	Val	Ile	Ile	Lys	Cys	Glu			
	530					535					540							
Gly	Asp	Lys	Val	Arg	Ser	Ala	Val	Gln	Lys	Gly	Thr	Ser	Thr	Pro	Glu			
545					550					555					560			

Tyr Asn Val Lys Gly Ile Phe Tyr Arg Lys Lys Leu Ser Gln Pro Ile
565 570 575

Thr Val Gln Val Trp Asn His Arg Val Leu Lys Asp Glu Phe Leu Gly
580 585 590

Gln Val His Leu Lys Ala Asp Pro Asp Asn Leu Gln Ala Leu His Thr
595 600 605

Leu His Leu Arg Asp Arg Asn Ser Arg Gln Pro Ser Asn Leu Pro Gly
610 615 620

Thr Val Ala Val His Ile Leu Ser Ser Thr Ser Leu Met Ala Val
625 630 635

<210> 11179
<211> 641
<212> PRT
<213> Homo sapiens

<220>
<221> source
<223> /note="Payload ID: 2206"

<220>
<221> source
<223> /note="Gene Symbol: CAPN6"

<220>
<221> source
<223> /note="Gene Name:
calpain 6"

<220>
<221> source
<223> /note="Uniprot ID: Q9Y6Q1"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000317214"

<400> 11179
Met Gly Pro Pro Leu Lys Leu Phe Lys Asn Gln Lys Tyr Gln Glu Leu
1 5 10 15

Lys Gln Glu Cys Ile Lys Asp Ser Arg Leu Phe Cys Asp Pro Thr Phe
20 25 30

Leu Pro Glu Asn Asp Ser Leu Phe Tyr Asn Arg Leu Leu Pro Gly Lys
35 40 45

Ser	Ala	Glu	Lys	Val	Tyr	Met	Val	Arg	Leu	Arg	Asn	Pro	Leu	Gly	Arg		
		275					280					285					
Gln	Glu	Trp	Ser	Gly	Pro	Trp	Ser	Glu	Ile	Ser	Glu	Glu	Trp	Gln	Gln		
	290					295					300						
Leu	Thr	Ala	Ser	Asp	Arg	Lys	Asn	Leu	Gly	Leu	Val	Met	Ser	Asp	Asp		
305					310					315					320		
Gly	Glu	Phe	Trp	Met	Ser	Leu	Glu	Asp	Phe	Cys	Arg	Asn	Phe	His	Lys		
				325					330					335			
Leu	Asn	Val	Cys	Arg	Asn	Val	Asn	Asn	Pro	Ile	Phe	Gly	Arg	Lys	Glu		
			340					345					350				
Leu	Glu	Ser	Val	Leu	Gly	Cys	Trp	Thr	Val	Asp	Asp	Asp	Pro	Leu	Met		
		355					360					365					
Asn	Arg	Ser	Gly	Gly	Cys	Tyr	Asn	Asn	Arg	Asp	Thr	Phe	Leu	Gln	Asn		
	370					375					380						
Pro	Gln	Tyr	Ile	Phe	Thr	Val	Pro	Glu	Asp	Gly	His	Lys	Val	Ile	Met		
385					390					395					400		
Ser	Leu	Gln	Gln	Lys	Asp	Leu	Arg	Thr	Tyr	Arg	Arg	Met	Gly	Arg	Pro		
				405					410					415			
Asp	Asn	Tyr	Ile	Ile	Gly	Phe	Glu	Leu	Phe	Lys	Val	Glu	Met	Asn	Arg		
			420					425					430				
Lys	Phe	Arg	Leu	His	His	Leu	Tyr	Ile	Gln	Glu	Arg	Ala	Gly	Thr	Ser		
		435					440					445					
Thr	Tyr	Ile	Asp	Thr	Arg	Thr	Val	Phe	Leu	Ser	Lys	Tyr	Leu	Lys	Lys		
	450					455					460						
Gly	Asn	Tyr	Val	Leu	Val	Pro	Thr	Met	Phe	Gln	His	Gly	Arg	Thr	Ser		
465					470					475					480		
Glu	Phe	Leu	Leu	Arg	Ile	Phe	Ser	Glu	Val	Pro	Val	Gln	Leu	Arg	Glu		
				485					490					495			

Leu Thr Leu Asp Met Pro Lys Met Ser Cys Trp Asn Leu Ala Arg Gly
500 505 510

Tyr Pro Lys Val Val Thr Gln Ile Thr Val His Ser Ala Glu Asp Leu
515 520 525

Glu Lys Lys Tyr Ala Asn Glu Thr Val Asn Pro Tyr Leu Val Ile Lys
530 535 540

Cys Gly Lys Glu Glu Val Arg Ser Pro Val Gln Lys Asn Thr Val His
545 550 555 560

Ala Ile Phe Asp Thr Gln Ala Ile Phe Tyr Arg Arg Thr Thr Asp Ile
565 570 575

Pro Ile Ile Val Gln Val Trp Asn Ser Arg Lys Phe Cys Asp Gln Phe
580 585 590

Leu Gly Gln Val Thr Leu Asp Ala Asp Pro Ser Asp Cys Arg Asp Leu
595 600 605

Lys Ser Leu Tyr Leu Arg Lys Lys Gly Gly Pro Thr Ala Lys Val Lys
610 615 620

Gln Gly His Ile Ser Phe Lys Val Ile Ser Ser Asp Asp Leu Thr Glu
625 630 635 640

Leu

<210> 11180
<211> 813
<212> PRT
<213> Homo sapiens

<220>
<221> source
<223> /note="Payload ID: 2207"

<220>
<221> source
<223> /note="Gene Symbol: CAPN7"

<220>
<221> source
<223> /note="Gene Name:
calpain 7"

<220>
<221> source
<223> /note="Uniprot ID: Q9Y6W3"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000253693"

<400> 11180
Met Asp Ala Thr Ala Leu Glu Arg Asp Ala Val Gln Phe Ala Arg Leu
1 5 10 15

Ala Val Gln Arg Asp His Glu Gly Arg Tyr Ser Glu Ala Val Phe Tyr
20 25 30

Tyr Lys Glu Ala Ala Gln Ala Leu Ile Tyr Ala Glu Met Ala Gly Ser
35 40 45

Ser Leu Glu Asn Ile Gln Glu Lys Ile Thr Glu Tyr Leu Glu Arg Val
50 55 60

Gln Ala Leu His Ser Ala Val Gln Ser Lys Ser Ala Asp Pro Leu Lys
65 70 75 80

Ser Lys His Gln Leu Asp Leu Glu Arg Ala His Phe Leu Val Thr Gln
85 90 95

Ala Phe Asp Glu Asp Glu Lys Glu Asn Val Glu Asp Ala Ile Glu Leu
100 105 110

Tyr Thr Glu Ala Val Asp Leu Cys Leu Lys Thr Ser Tyr Glu Thr Ala
115 120 125

Asp Lys Val Leu Gln Asn Lys Leu Lys Gln Leu Ala Arg Gln Ala Leu
130 135 140

Asp Arg Ala Glu Ala Leu Ser Glu Pro Leu Thr Lys Pro Val Gly Lys
145 150 155 160

Ile Ser Ser Thr Ser Val Lys Pro Lys Pro Pro Pro Val Arg Ala His
165 170 175

Phe Pro Leu Gly Ala Asn Pro Phe Leu Glu Arg Pro Gln Ser Phe Ile
180 185 190

Ser	Pro	Gln	Ser	Cys	Asp	Ala	Gln	Gly	Gln	Arg	Tyr	Thr	Ala	Glu	Glu			
		195					200					205						
Ile	Glu	Val	Leu	Arg	Thr	Thr	Ser	Lys	Ile	Asn	Gly	Ile	Glu	Tyr	Val			
	210					215					220							
Pro	Phe	Met	Asn	Val	Asp	Leu	Arg	Glu	Arg	Phe	Ala	Tyr	Pro	Met	Pro			
225					230					235					240			
Phe	Cys	Asp	Arg	Trp	Gly	Lys	Leu	Pro	Leu	Ser	Pro	Lys	Gln	Lys	Thr			
				245					250					255				
Thr	Phe	Ser	Lys	Trp	Val	Arg	Pro	Glu	Asp	Leu	Thr	Asn	Asn	Pro	Thr			
			260					265					270					
Met	Ile	Tyr	Thr	Val	Ser	Ser	Phe	Ser	Ile	Lys	Gln	Thr	Ile	Val	Ser			
		275					280					285						
Asp	Cys	Ser	Phe	Val	Ala	Ser	Leu	Ala	Ile	Ser	Ala	Ala	Tyr	Glu	Arg			
	290					295					300							
Arg	Phe	Asn	Lys	Lys	Leu	Ile	Thr	Gly	Ile	Ile	Tyr	Pro	Gln	Asn	Lys			
305					310					315					320			
Asp	Gly	Glu	Pro	Glu	Tyr	Asn	Pro	Cys	Gly	Lys	Tyr	Met	Val	Lys	Leu			
				325					330					335				
His	Leu	Asn	Gly	Val	Pro	Arg	Lys	Val	Ile	Ile	Asp	Asp	Gln	Leu	Pro			
			340					345					350					
Val	Asp	His	Lys	Gly	Glu	Leu	Leu	Cys	Ser	Tyr	Ser	Asn	Asn	Lys	Ser			
		355					360					365						
Glu	Leu	Trp	Val	Ser	Leu	Ile	Glu	Lys	Ala	Tyr	Met	Lys	Val	Met	Gly			
	370					375					380							
Gly	Tyr	Asp	Phe	Pro	Gly	Ser	Asn	Ser	Asn	Ile	Asp	Leu	His	Ala	Leu			
385					390					395					400			
Thr	Gly	Trp	Ile	Pro	Glu	Arg	Ile	Ala	Met	His	Ser	Asp	Ser	Gln	Thr			
				405					410					415				

Phe	Ser	Lys	Asp	Asn	Ser	Phe	Arg	Met	Leu	Tyr	Gln	Arg	Phe	His	Lys	
			420					425					430			
Gly	Asp	Val	Leu	Ile	Thr	Ala	Ser	Thr	Gly	Met	Met	Thr	Glu	Ala	Glu	
		435					440					445				
Gly	Glu	Lys	Trp	Gly	Leu	Val	Pro	Thr	His	Ala	Tyr	Ala	Val	Leu	Asp	
	450					455					460					
Ile	Arg	Glu	Phe	Lys	Gly	Leu	Arg	Phe	Ile	Gln	Leu	Lys	Asn	Pro	Trp	
465					470					475					480	
Ser	His	Leu	Arg	Trp	Lys	Gly	Arg	Tyr	Ser	Glu	Asn	Asp	Val	Lys	Asn	
				485					490					495		
Trp	Thr	Pro	Glu	Leu	Gln	Lys	Tyr	Leu	Asn	Phe	Asp	Pro	Arg	Thr	Ala	
			500					505					510			
Gln	Lys	Ile	Asp	Asn	Gly	Ile	Phe	Trp	Ile	Ser	Trp	Asp	Asp	Leu	Cys	
		515					520					525				
Gln	Tyr	Tyr	Asp	Val	Ile	Tyr	Leu	Ser	Trp	Asn	Pro	Gly	Leu	Phe	Lys	
	530					535					540					
Glu	Ser	Thr	Cys	Ile	His	Ser	Thr	Trp	Asp	Ala	Lys	Gln	Gly	Pro	Val	
545					550					555					560	
Lys	Asp	Ala	Tyr	Ser	Leu	Ala	Asn	Asn	Pro	Gln	Tyr	Lys	Leu	Glu	Val	
				565					570					575		
Gln	Cys	Pro	Gln	Gly	Gly	Ala	Ala	Val	Trp	Val	Leu	Leu	Ser	Arg	His	
			580					585					590			
Ile	Thr	Asp	Lys	Asp	Asp	Phe	Ala	Asn	Asn	Arg	Glu	Phe	Ile	Thr	Met	
		595					600					605				
Val	Val	Tyr	Lys	Thr	Asp	Gly	Lys	Lys	Val	Tyr	Tyr	Pro	Ala	Asp	Pro	
	610					615					620					
Pro	Pro	Tyr	Ile	Asp	Gly	Ile	Arg	Ile	Asn	Ser	Pro	His	Tyr	Leu	Thr	
625					630					635					640	
Lys	Ile	Lys	Leu	Thr	Thr	Pro	Gly	Thr	His	Thr	Phe	Thr	Leu	Val	Val	

645								650					655				
Ser	Gln	Tyr	Glu 660	Lys	Gln	Asn	Thr	Ile 665	His	Tyr	Thr	Val	Arg 670	Val	Tyr		
Ser	Ala	Cys 675	Ser	Phe	Thr	Phe	Ser 680	Lys	Ile	Pro	Ser	Pro 685	Tyr	Thr	Leu		
Ser	Lys 690	Arg	Ile	Asn	Gly	Lys 695	Trp	Ser	Gly	Gln	Ser 700	Ala	Gly	Gly	Cys		
Gly 705	Asn	Phe	Gln	Glu	Thr 710	His	Lys	Asn	Asn	Pro 715	Ile	Tyr	Gln	Phe	His 720		
Ile	Glu	Lys	Thr	Gly 725	Pro	Leu	Leu	Ile	Glu 730	Leu	Arg	Gly	Pro	Arg 735	Gln		
Tyr	Ser	Val	Gly 740	Phe	Glu	Val	Val	Thr 745	Val	Ser	Thr	Leu	Gly 750	Asp	Pro		
Gly	Pro	His 755	Gly	Phe	Leu	Arg	Lys 760	Ser	Ser	Gly	Asp	Tyr 765	Arg	Cys	Gly		
Phe	Cys 770	Tyr	Leu	Glu	Leu	Glu 775	Asn	Ile	Pro	Ser	Gly 780	Ile	Phe	Asn	Ile		
Ile 785	Pro	Ser	Thr	Phe	Leu 790	Pro	Lys	Gln	Glu	Gly 795	Pro	Phe	Phe	Leu	Asp 800		
Phe	Asn	Ser	Ile	Ile 805	Pro	Ile	Lys	Ile	Thr 810	Gln	Leu	Gln					

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<221> source
<223> /note="Gene Name:
        calpain 7"

<220>
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<223> /note="ENSP ID: ENSP00000389786"

<400> 11181
Met Asp Ala Thr Ala Leu Glu Arg Asp Ala Val Gln Phe Ala Arg Leu
1          5          10          15

Ala Val Gln Arg Asp His Glu Gly Arg Tyr Ser Glu Ala Val Phe Tyr
          20          25          30

Tyr Lys Phe Ser Gln Arg Val Leu Ile Leu
          35          40

<210> 11182
<211> 112
<212> PRT
<213> Homo sapiens

<220>
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<220>
<221> source
<223> /note="Gene Symbol: CAPN7"

<220>
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<223> /note="Gene Name:
        calpain 7"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000394708"

<400> 11182
His Leu Arg Trp Lys Gly Arg Tyr Ser Glu Asn Asp Val Lys Asn Trp
1          5          10          15

Thr Pro Glu Leu Gln Lys Tyr Leu Asn Phe Asp Pro Arg Thr Ala Gln
          20          25          30

Lys Ile Asp Asn Gly Ile Phe Trp Ile Ser Trp Asp Asp Leu Cys Gln
          35          40          45

Tyr Tyr Asp Val Ile Tyr Leu Ser Trp Asn Pro Gly Leu Phe Lys Glu
          25100

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50					55					60					
Ser	Thr	Cys	Ile	His	Arg	Met	Ile	Leu	Arg	Ile	Ile	Glu	Asn	Leu	Ser
65					70					75					80
Gln	Trp	Leu	Tyr	Thr	Arg	Leu	Met	Gly	Lys	Lys	Phe	Ile	Thr	Gln	Leu
				85					90					95	
Thr	His	Leu	His	Thr	Leu	Met	Glu	Phe	Glu	Leu	Thr	Ala	Leu	Ile	Ile
			100					105					110		

50						55						60					
Arg	Lys	Asn	Thr	Tyr	Lys	Leu	Asn	Ile	Ser	Asn	Leu	Lys	Ile	Gln	Asn		
65					70					75					80		
Thr	Pro	Val	Ile	Ile	Asp	Asp	Gln	Leu	Pro	Val	Asp	His	Lys	Gly	Glu		
				85					90					95			
Leu	Leu	Cys	Ser	Tyr	Ser	Asn	Asn	Lys	Ser	Glu	Leu	Trp	Val	Ser	Leu		
			100					105					110				
Ile	Glu	Lys	Ala	Tyr	Met	Lys	Val	Met	Gly	Gly	Tyr	Asp	Phe	Pro	Gly		
		115					120					125					
Ser	Asn	Ser	Asn	Ile	Asp	Leu	His	Ala	Leu	Thr	Gly	Trp	Ile	Pro	Glu		
	130					135					140						
Arg	Ile	Ala	Met	His	Ser	Asp	Ser	Gln	Thr	Phe	Ser	Lys	Asp	Asn	Ser		
145					150					155					160		
Phe	Arg	Met	Leu	Tyr	Gln	Arg	Phe	His	Lys	Gly	Asp	Val	Leu	Ile	Thr		
				165					170					175			
Ala	Ser	Thr	Gly	Met	Met	Thr	Glu	Ala	Glu	Gly	Glu	Lys	Trp	Gly	Leu		
			180					185					190				
Val	Pro	Thr	His	Ala	Tyr	Ala	Val	Leu	Asp	Ile	Arg	Glu	Phe	Lys	Gly		
		195					200					205					
Leu	Arg	Phe	Ile	Gln	Leu	Lys	Asn	Pro	Trp	Ser	His	Leu	Arg	Trp	Lys		
	210					215					220						
Gly	Arg	Tyr	Ser	Glu	Asn	Asp	Val	Lys	Asn	Trp	Thr	Pro	Glu	Leu	Gln		
225					230					235					240		
Lys	Tyr	Leu	Asn	Phe	Asp	Pro	Arg										
				245													

<210> 11184

<211> 36

<212> PRT

<213> Homo sapiens

<220>

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<221> source
<223> /note="Payload ID: 2207"

<220>
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<220>
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<223> /note="Gene Name:
        calpain 7"

<220>
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<400> 11184
Met Asp Ala Thr Ala Leu Glu Arg Asp Ala Val Gln Phe Ala Arg Leu
1          5          10          15

Ala Val Gln Arg Asp His Glu Gly Arg Tyr Ser Glu Ala Val Phe Tyr
          20          25          30

Tyr Lys Val Gln
          35

<210> 11185
<211> 703
<212> PRT
<213> Homo sapiens

<220>
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<223> /note="Payload ID: 2208"

<220>
<221> source
<223> /note="Gene Symbol: CAPN8"

<220>
<221> source
<223> /note="Gene Name:
        calpain 8"

<220>
<221> source
<223> /note="Uniprot ID: A6NHC0"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000355837"

<400> 11185
Met Ala Ala Gln Ala Ala Gly Val Ser Arg Gln Arg Ala Ala Thr Gln

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1				5					10					15			
Gly	Leu	Gly	Ser	Asn	Gln	Asn	Ala	Leu	Lys	Tyr	Leu	Gly	Gln	Asp	Phe		
			20					25					30				
Lys	Thr	Leu	Arg	Gln	Gln	Cys	Leu	Asp	Ser	Gly	Val	Leu	Phe	Lys	Asp		
		35					40					45					
Pro	Glu	Phe	Pro	Ala	Cys	Pro	Ser	Ala	Leu	Gly	Tyr	Lys	Asp	Leu	Gly		
	50					55					60						
Pro	Gly	Ser	Pro	Gln	Thr	Gln	Gly	Ile	Ile	Trp	Lys	Arg	Pro	Thr	Glu		
65					70					75					80		
Leu	Cys	Pro	Ser	Pro	Gln	Phe	Ile	Val	Gly	Gly	Ala	Thr	Arg	Thr	Asp		
				85					90					95			
Ile	Cys	Gln	Gly	Gly	Leu	Gly	Asp	Cys	Trp	Leu	Leu	Ala	Ala	Ile	Ala		
			100					105					110				
Ser	Leu	Thr	Leu	Asn	Glu	Glu	Leu	Leu	Tyr	Arg	Val	Val	Pro	Arg	Asp		
		115					120					125					
Gln	Asp	Phe	Gln	Glu	Asn	Tyr	Ala	Gly	Ile	Phe	His	Phe	Gln	Phe	Trp		
	130					135					140						
Gln	Tyr	Gly	Glu	Trp	Val	Glu	Val	Val	Ile	Asp	Asp	Arg	Leu	Pro	Thr		
145					150					155					160		
Lys	Asn	Gly	Gln	Leu	Leu	Phe	Leu	His	Ser	Glu	Gln	Gly	Asn	Glu	Phe		
				165					170					175			
Trp	Ser	Ala	Leu	Leu	Glu	Lys	Ala	Tyr	Ala	Lys	Leu	Asn	Gly	Cys	Tyr		
			180					185					190				
Glu	Ala	Leu	Ala	Gly	Gly	Ser	Thr	Val	Glu	Gly	Phe	Glu	Asp	Phe	Thr		
		195					200					205					
Gly	Gly	Ile	Ser	Glu	Phe	Tyr	Asp	Leu	Lys	Lys	Pro	Pro	Ala	Asn	Leu		
	210					215					220						
Tyr	Gln	Ile	Ile	Arg	Lys	Ala	Leu	Cys	Ala	Gly	Ser	Leu	Leu	Gly	Cys		
225					230					235					240		

Ser	Ile	Asp	Val	Ser	Ser	Ala	Ala	Glu	Ala	Glu	Ala	Ile	Thr	Ser	Gln	
				245					250					255		
Lys	Leu	Val	Lys	Ser	His	Ala	Tyr	Ser	Val	Thr	Gly	Val	Glu	Glu	Val	
			260					265					270			
Asn	Phe	Gln	Gly	His	Pro	Glu	Lys	Leu	Ile	Arg	Leu	Arg	Asn	Pro	Trp	
		275					280					285				
Gly	Glu	Val	Glu	Trp	Ser	Gly	Ala	Trp	Ser	Asp	Asp	Ala	Pro	Glu	Trp	
	290					295					300					
Asn	His	Ile	Asp	Pro	Arg	Arg	Lys	Glu	Glu	Leu	Asp	Lys	Lys	Val	Glu	
305					310					315					320	
Asp	Gly	Glu	Phe	Trp	Met	Ser	Leu	Ser	Asp	Phe	Val	Arg	Gln	Phe	Ser	
				325					330					335		
Arg	Leu	Glu	Ile	Cys	Asn	Leu	Ser	Pro	Asp	Ser	Leu	Ser	Ser	Glu	Glu	
			340					345					350			
Val	His	Lys	Trp	Asn	Leu	Val	Leu	Phe	Asn	Gly	His	Trp	Thr	Arg	Gly	
		355					360					365				
Ser	Thr	Ala	Gly	Gly	Cys	Gln	Asn	Tyr	Pro	Ala	Thr	Tyr	Trp	Thr	Asn	
	370					375					380					
Pro	Gln	Phe	Lys	Ile	Arg	Leu	Asp	Glu	Val	Asp	Glu	Asp	Gln	Glu	Glu	
385					390					395					400	
Ser	Ile	Gly	Glu	Pro	Cys	Cys	Thr	Val	Leu	Leu	Gly	Leu	Met	Gln	Lys	
				405					410					415		
Asn	Arg	Arg	Trp	Arg	Lys	Arg	Ile	Gly	Gln	Gly	Met	Leu	Ser	Ile	Gly	
			420					425					430			
Tyr	Ala	Val	Tyr	Gln	Val	Pro	Lys	Glu	Leu	Glu	Ser	His	Thr	Asp	Ala	
		435					440					445				
His	Leu	Gly	Arg	Asp	Phe	Phe	Leu	Ala	Tyr	Gln	Pro	Ser	Ala	Arg	Thr	
	450					455					460					

Ser	Thr	Tyr	Val	Asn	Leu	Arg	Glu	Val	Ser	Gly	Arg	Ala	Arg	Leu	Pro	465	470	475	480
Pro	Gly	Glu	Tyr	Leu	Val	Val	Pro	Ser	Thr	Phe	Glu	Pro	Phe	Lys	Asp		485	490	495
Gly	Glu	Phe	Cys	Leu	Arg	Val	Phe	Ser	Glu	Lys	Lys	Ala	Gln	Ala	Leu		500	505	510
Glu	Ile	Gly	Asp	Val	Val	Ala	Gly	Asn	Pro	Tyr	Glu	Pro	His	Pro	Ser		515	520	525
Glu	Val	Asp	Gln	Glu	Asp	Asp	Gln	Phe	Arg	Arg	Leu	Phe	Glu	Lys	Leu		530	535	540
Ala	Gly	Lys	Asp	Ser	Glu	Ile	Thr	Ala	Asn	Ala	Leu	Lys	Ile	Leu	Leu	545	550	555	560
Asn	Glu	Ala	Phe	Ser	Lys	Arg	Thr	Asp	Ile	Lys	Phe	Asp	Gly	Phe	Asn		565	570	575
Ile	Asn	Thr	Cys	Arg	Glu	Met	Ile	Ser	Leu	Leu	Asp	Ser	Asn	Gly	Thr		580	585	590
Gly	Thr	Leu	Gly	Ala	Val	Glu	Phe	Lys	Thr	Leu	Trp	Leu	Lys	Ile	Gln		595	600	605
Lys	Tyr	Leu	Glu	Ile	Tyr	Trp	Glu	Thr	Asp	Tyr	Asn	His	Ser	Gly	Thr		610	615	620
Ile	Asp	Ala	His	Glu	Met	Arg	Thr	Ala	Leu	Arg	Lys	Ala	Gly	Phe	Thr	625	630	635	640
Leu	Asn	Ser	Gln	Val	Gln	Gln	Thr	Ile	Ala	Leu	Arg	Tyr	Ala	Cys	Ser		645	650	655
Lys	Leu	Gly	Ile	Asn	Phe	Asp	Ser	Phe	Val	Ala	Cys	Met	Ile	Arg	Leu		660	665	670
Glu	Thr	Leu	Phe	Lys	Leu	Phe	Ser	Leu	Leu	Asp	Glu	Asp	Lys	Asp	Gly		675	680	685

Met Val Gln Leu Ser Leu Ala Glu Trp Leu Cys Cys Val Leu Val
690 695 700

<210> 11186

<211> 381

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2208"

<220>

<221> source

<223> /note="Gene Symbol: CAPN8"

<220>

<221> source

<223> /note="Gene Name:
calpain 8"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000355838"

<400> 11186

Met Ala Ala Gln Ala Ala Gly Val Ser Arg Gln Arg Ala Ala Thr Gln
1 5 10 15

Gly Leu Gly Ser Asn Gln Asn Ala Leu Lys Tyr Leu Gly Gln Asp Phe
20 25 30

Lys Thr Leu Arg Gln Gln Cys Leu Asp Ser Gly Val Leu Phe Lys Asp
35 40 45

Pro Glu Phe Pro Ala Cys Pro Ser Ala Leu Gly Tyr Lys Asp Leu Gly
50 55 60

Pro Gly Ser Pro Gln Thr Gln Gly Ile Ile Trp Lys Arg Pro Thr Glu
65 70 75 80

Leu Cys Pro Ser Pro Gln Phe Ile Val Gly Gly Ala Thr Arg Thr Asp
85 90 95

Ile Cys Gln Gly Gly Leu Gly Asp Cys Trp Leu Leu Ala Ala Ile Ala
100 105 110

Ser Leu Thr Leu Asn Glu Glu Leu Leu Tyr Arg Val Val Pro Arg Asp
115 120 125

Gln	Asp	Phe	Gln	Glu	Asn	Tyr	Ala	Gly	Ile	Phe	His	Phe	Gln	Phe	Trp
	130					135					140				
Gln	Tyr	Gly	Glu	Trp	Val	Glu	Val	Val	Ile	Asp	Asp	Arg	Leu	Pro	Thr
145					150					155					160
Lys	Asn	Gly	Gln	Leu	Leu	Phe	Leu	His	Ser	Glu	Gln	Gly	Asn	Glu	Phe
				165					170					175	
Trp	Ser	Ala	Leu	Leu	Glu	Lys	Ala	Tyr	Ala	Lys	Leu	Asn	Gly	Cys	Tyr
			180					185					190		
Glu	Ala	Leu	Ala	Gly	Gly	Ser	Thr	Val	Glu	Gly	Phe	Glu	Asp	Phe	Thr
		195					200					205			
Gly	Gly	Ile	Ser	Glu	Phe	Tyr	Asp	Leu	Lys	Lys	Pro	Pro	Ala	Asn	Leu
	210					215					220				
Tyr	Gln	Ile	Ile	Arg	Lys	Ala	Leu	Cys	Ala	Gly	Ser	Leu	Leu	Gly	Cys
225					230					235					240
Ser	Ile	Asp	Val	Ser	Ser	Ala	Ala	Glu	Ala	Glu	Ala	Ile	Thr	Ser	Gln
				245					250					255	
Lys	Leu	Val	Lys	Ser	His	Ala	Tyr	Ser	Val	Thr	Gly	Val	Glu	Glu	Val
			260					265					270		
Asn	Phe	Gln	Gly	His	Pro	Glu	Lys	Leu	Ile	Arg	Leu	Arg	Asn	Pro	Trp
		275					280					285			
Gly	Glu	Val	Glu	Trp	Ser	Gly	Ala	Trp	Ser	Asp	Asp	Ala	Pro	Glu	Trp
	290					295					300				
Asn	His	Ile	Asp	Pro	Arg	Arg	Lys	Glu	Glu	Leu	Asp	Lys	Lys	Val	Glu
305					310					315					320
Asp	Gly	Glu	Phe	Trp	Met	Ser	Leu	Ser	Asp	Phe	Val	Arg	Gln	Phe	Ser
				325					330					335	
Arg	Leu	Glu	Ile	Cys	Asn	Leu	Ser	Pro	Asp	Ser	Leu	Ser	Ser	Glu	Glu
			340					345					350		

Val His Lys Trp Asn Leu Val Leu Phe Asn Gly His Trp Thr Arg Gly
355 360 365

Ser Thr Ala Gly Gly Cys Gln Asn Tyr Pro Gly Ser Ser
370 375 380

<210> 11187

<211> 156

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2208"

<220>

<221> source

<223> /note="Gene Symbol: CAPN8"

<220>

<221> source

<223> /note="Gene Name:
calpain 8"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000390294"

<400> 11187

Asp Ser Glu Ile Thr Ala Asn Ala Leu Lys Ile Leu Leu Asn Glu Ala
1 5 10 15

Phe Ser Lys Arg Thr Asp Ile Lys Phe Asp Gly Phe Asn Ile Asn Thr
20 25 30

Cys Arg Glu Met Ile Ser Leu Leu Asp Ser Asn Gly Thr Gly Thr Leu
35 40 45

Gly Ala Val Glu Phe Lys Thr Leu Trp Leu Lys Ile Gln Lys Tyr Leu
50 55 60

Glu Ile Tyr Trp Glu Thr Asp Tyr Asn His Ser Gly Thr Ile Asp Ala
65 70 75 80

His Glu Met Arg Thr Ala Leu Arg Lys Ala Gly Phe Thr Leu Asn Ser
85 90 95

Gln Val Gln Gln Thr Ile Ala Leu Arg Tyr Ala Cys Ser Lys Leu Gly

Ile	Asn	Phe	Asp	Ser	Phe	Val	Ala	Cys	Met	Ile	Arg	Leu	Glu	Thr	Leu	
		115					120					125				
Phe	Lys	Leu	Phe	Ser	Leu	Leu	Asp	Glu	Asp	Lys	Asp	Gly	Met	Val	Gln	
	130					135					140					
Leu	Ser	Leu	Ala	Glu	Trp	Leu	Cys	Cys	Val	Leu	Val					
145					150					155						

Leu	Cys	Pro	Ser	Pro	Gln	Phe	Ile	Val	Gly	Gly	Ala	Thr	Arg	Thr	Asp	
				85					90					95		
Ile	Cys	Gln	Gly	Gly	Leu	Gly	Asp	Cys	Trp	Leu	Leu	Ala	Ala	Ile	Ala	
			100					105					110			
Ser	Leu	Thr	Leu	Asn	Glu	Glu	Leu	Leu	Tyr	Arg	Val	Val	Pro	Arg	Asp	
		115					120					125				
Gln	Asp	Phe	Gln	Glu	Asn	Tyr	Ala	Gly	Ile	Phe	His	Phe	Gln	Phe	Trp	
	130					135					140					
Gln	Tyr	Gly	Glu	Trp	Val	Glu	Val	Val	Ile	Asp	Asp	Arg	Leu	Pro	Thr	
145					150					155					160	
Lys	Asn	Gly	Gln	Leu	Leu	Phe	Leu	His	Ser	Glu	Gln	Gly	Asn	Glu	Phe	
				165					170					175		
Trp	Ser	Ala	Leu	Leu	Glu	Lys	Ala	Tyr	Ala	Lys	Leu	Asn	Gly	Cys	Tyr	
			180					185					190			
Glu	Ala	Leu	Ala	Gly	Gly	Ser	Thr	Val	Glu	Gly	Phe	Glu	Asp	Phe	Thr	
		195					200					205				
Gly	Gly	Ile	Ser	Glu	Phe	Tyr	Asp	Leu	Lys	Lys	Pro	Pro	Ala	Asn	Leu	
	210					215					220					
Tyr	Gln	Ile	Ile	Arg	Lys	Ala	Leu	Cys	Ala	Gly	Ser	Leu	Leu	Gly	Cys	
225					230					235					240	
Ser	Ile	Asp	Val	Ser	Ser	Ala	Ala	Glu	Ala	Glu	Ala	Ile	Thr	Ser	Gln	
				245					250					255		
Lys	Leu	Val	Lys	Ser	His	Ala	Tyr	Ser	Val	Thr	Gly	Val	Glu	Glu	Val	
			260					265					270			
Asn	Phe	Gln	Gly	His	Pro	Glu	Lys	Leu	Ile	Arg	Leu	Arg	Asn	Pro	Trp	
		275					280					285				
Gly	Glu	Val	Glu	Trp	Ser	Gly	Ala	Trp	Ser	Asp	Asp	Ala	Pro	Glu	Trp	
	290					295					300					

Asn His Ile Asp Pro Arg Arg Lys Glu Glu Leu Asp Lys Lys Val Glu
305 310 315 320

Asp Gly Glu Phe Trp Met Ser Leu Ser Asp Phe Val Arg Gln Phe Ser
325 330 335

Arg Leu Glu Ile Cys Asn Leu Ser Pro Asp Ser Leu Ser Ser Glu Glu
340 345 350

Val His Lys Trp Asn Leu Val Leu Phe Asn Gly His Trp Thr Arg Gly
355 360 365

Ser Thr Ala Gly Gly Cys Gln Asn Tyr Pro Ala Thr Tyr Trp Thr Asn
370 375 380

Pro Gln Phe Lys Ile Arg Leu Asp Glu Val Asp Glu Asp Gln Glu Glu
385 390 395 400

Ser Ile Gly Glu Pro Cys Cys Thr Val Leu Leu Gly Leu Met Gln Lys
405 410 415

Asn Arg Arg Trp Arg Lys Arg Ile Gly Gln Gly Met Leu Ser Ile Gly
420 425 430

Tyr Ala Val Tyr Gln
435

<210> 11189
<211> 101
<212> PRT
<213> Homo sapiens

<220>
<221> source
<223> /note="Payload ID: 2208"

<220>
<221> source
<223> /note="Gene Symbol: CAPN8"

<220>
<221> source
<223> /note="Gene Name:
calpain 8"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000409233"


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<400> 11189
Asp Ser Glu Ile Thr Ala Asn Ala Leu Lys Ile Leu Leu Asn Glu Ala
1          5          10          15

Phe Ser Lys Arg Thr Asp Ile Lys Phe Asp Gly Phe Asn Ile Asn Thr
          20          25          30

Cys Arg Glu Met Ile Ser Leu Leu Asp Glu Glu Thr Gln Asp Thr Met
          35          40          45

Gln Val Pro Asp Ser Ser Glu Thr Phe Trp Asn Thr Glu Ala Asp Ile
          50          55          60

Leu Asp Thr Val Arg Arg Trp Pro Ser Met Asn Gln Glu Gly Gly Pro
65          70          75          80

His Arg His Gln Ile Cys Gln Cys Phe Asp Leu Gly Leu Leu Ser Leu
          85          90          95

Arg Asn Tyr Glu Lys
          100

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<210> 11190
<211> 38
<212> PRT
<213> Homo sapiens

<220>
<221> source
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<220>
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<223> /note="Gene Symbol: CAPN8"

<220>
<221> source
<223> /note="Gene Name:
        calpain 8"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000434013"

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<400> 11190
Glu Leu Cys Pro Ser Pro Gln Phe Ile Val Gly Gly Ala Thr Arg Thr
1          5          10          15

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Asp Ile Cys Gln Gly Gly Leu Glu Thr Arg Trp Met Arg Ile Gly Leu
20 25 30

Val Gly Phe Arg Ser Asn
35

<210> 11191
<211> 173
<212> PRT
<213> Homo sapiens

<220>
<221> source
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<220>
<221> source
<223> /note="Gene Symbol: CAPN8"

<220>
<221> source
<223> /note="Gene Name:
calpain 8"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000435953"

<220>
<221> MOD_RES
<222> (1)..(1)
<223> Any amino acid

<400> 11191
Xaa Gln Asp Phe Gln Glu Asn Tyr Ala Gly Ile Phe His Phe Gln Phe
1 5 10 15

Trp Gln Tyr Gly Glu Trp Val Glu Val Val Ile Asp Asp Arg Leu Pro
20 25 30

Thr Lys Asn Gly Gln Leu Leu Phe Leu His Ser Glu Gln Gly Asn Glu
35 40 45

Phe Trp Ser Ala Leu Leu Glu Lys Ala Tyr Ala Lys Leu Asn Gly Cys
50 55 60

Tyr Glu Ala Leu Ala Gly Gly Ser Thr Val Glu Gly Phe Glu Asp Phe
65 70 75 80

Thr Gly Gly Ile Ser Glu Phe Tyr Asp Leu Lys Lys Pro Pro Ala Asn
85 90 95

Leu Tyr Gln Ile Ile Arg Lys Ala Leu Cys Ala Gly Ser Leu Leu Gly
100 105 110

Cys Ser Ile Asp Val Ser Ser Ala Ala Glu Ala Glu Ala Ile Thr Ser
115 120 125

Gln Lys Leu Val Lys Ser His Ala Tyr Ser Val Thr Gly Val Glu Glu
130 135 140

Val Asn Phe Gln Gly His Pro Glu Lys Leu Ile Arg Leu Arg Asn Pro
145 150 155 160

Trp Gly Glu Val Glu Trp Ser Gly Ala Trp Ser Asp Glu
165 170

<210> 11192
<211> 20
<212> PRT
<213> Homo sapiens

<220>
<221> source
<223> /note="Payload ID: 2208"

<220>
<221> source
<223> /note="Gene Symbol: CAPN8"

<220>
<221> source
<223> /note="Gene Name:
calpain 8"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000436371"

<220>
<221> MOD_RES
<222> (1)..(1)
<223> Any amino acid

<400> 11192
Xaa Leu Phe Ser Leu Leu Asp Glu Asp Lys Asp Gly Met Val Gln Leu
1 5 10 15

Ser Leu Ala Glu
20

<210> 11193
<211> 690
<212> PRT
<213> Homo sapiens

<220>
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<220>
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<223> /note="Gene Symbol: CAPN9"

<220>
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<223> /note="Gene Name:
calpain 9"

<220>
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<223> /note="Uniprot ID: O14815"

<220>
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<400> 11193
Met Pro Tyr Leu Tyr Arg Ala Pro Gly Pro Gln Ala His Pro Val Pro
1 5 10 15

Lys Asp Ala Arg Ile Thr His Ser Ser Gly Gln Ser Phe Glu Gln Met
20 25 30

Arg Gln Glu Cys Leu Gln Arg Gly Thr Leu Phe Glu Asp Ala Asp Phe
35 40 45

Pro Ala Ser Asn Ser Ser Leu Phe Tyr Ser Glu Arg Pro Gln Ile Pro
50 55 60

Phe Val Trp Lys Arg Pro Gly Glu Ile Val Lys Asn Pro Glu Phe Ile
65 70 75 80

Leu Gly Gly Ala Thr Arg Thr Asp Ile Cys Gln Gly Glu Leu Gly Asp
85 90 95

Cys Trp Leu Leu Ala Ala Ile Ala Ser Leu Thr Leu Asn Gln Lys Ala
100 105 110

Leu	Ala	Arg	Val	Ile	Pro	Gln	Asp	Gln	Ser	Phe	Gly	Pro	Gly	Tyr	Ala	
		115					120					125				
Gly	Ile	Phe	His	Phe	Gln	Phe	Trp	Gln	His	Ser	Glu	Trp	Leu	Asp	Val	
	130					135					140					
Val	Ile	Asp	Asp	Arg	Leu	Pro	Thr	Phe	Arg	Asp	Arg	Leu	Val	Phe	Leu	
145					150					155					160	
His	Ser	Ala	Asp	His	Asn	Glu	Phe	Trp	Ser	Ala	Leu	Leu	Glu	Lys	Ala	
				165					170					175		
Tyr	Ala	Lys	Leu	Asn	Gly	Ser	Tyr	Glu	Ala	Leu	Lys	Gly	Gly	Ser	Ala	
			180					185					190			
Ile	Glu	Ala	Met	Glu	Asp	Phe	Thr	Gly	Gly	Val	Ala	Glu	Thr	Phe	Gln	
		195					200					205				
Thr	Lys	Glu	Ala	Pro	Glu	Asn	Phe	Tyr	Glu	Ile	Leu	Glu	Lys	Ala	Leu	
	210					215					220					
Lys	Arg	Gly	Ser	Leu	Leu	Gly	Cys	Phe	Ile	Asp	Thr	Arg	Ser	Ala	Ala	
225					230					235					240	
Glu	Ser	Glu	Ala	Arg	Thr	Pro	Phe	Gly	Leu	Ile	Lys	Gly	His	Ala	Tyr	
				245					250					255		
Ser	Val	Thr	Gly	Ile	Asp	Gln	Val	Ser	Phe	Arg	Gly	Gln	Arg	Ile	Glu	
			260					265					270			
Leu	Ile	Arg	Ile	Arg	Asn	Pro	Trp	Gly	Gln	Val	Glu	Trp	Asn	Gly	Ser	
		275					280					285				
Trp	Ser	Asp	Ser	Ser	Pro	Glu	Trp	Arg	Ser	Val	Gly	Pro	Ala	Glu	Gln	
	290					295					300					
Lys	Arg	Leu	Cys	His	Thr	Ala	Leu	Asp	Asp	Gly	Glu	Phe	Trp	Met	Ala	
305					310					315					320	
Phe	Lys	Asp	Phe	Lys	Ala	His	Phe	Asp	Lys	Val	Glu	Ile	Cys	Asn	Leu	
				325					330					335		

Thr	Pro	Asp	Ala	Leu	Glu	Glu	Asp	Ala	Ile	His	Lys	Trp	Glu	Val	Thr		
			340					345					350				
Val	His	Gln	Gly	Ser	Trp	Val	Arg	Gly	Ser	Thr	Ala	Gly	Gly	Cys	Arg		
		355					360					365					
Asn	Phe	Leu	Asp	Thr	Phe	Trp	Thr	Asn	Pro	Gln	Ile	Lys	Leu	Ser	Leu		
	370					375					380						
Thr	Glu	Lys	Asp	Glu	Gly	Gln	Glu	Glu	Cys	Ser	Phe	Leu	Val	Ala	Leu		
385					390					395					400		
Met	Gln	Lys	Asp	Arg	Arg	Lys	Leu	Lys	Arg	Phe	Gly	Ala	Asn	Val	Leu		
				405					410					415			
Thr	Ile	Gly	Tyr	Ala	Ile	Tyr	Glu	Cys	Pro	Asp	Lys	Asp	Glu	His	Leu		
			420					425					430				
Asn	Lys	Asp	Phe	Phe	Arg	Tyr	His	Ala	Ser	Arg	Ala	Arg	Ser	Lys	Thr		
		435					440					445					
Phe	Ile	Asn	Leu	Arg	Glu	Val	Ser	Asp	Arg	Phe	Lys	Leu	Pro	Pro	Gly		
	450					455					460						
Glu	Tyr	Ile	Leu	Ile	Pro	Ser	Thr	Phe	Glu	Pro	His	Gln	Glu	Ala	Asp		
465					470					475					480		
Phe	Cys	Leu	Arg	Ile	Phe	Ser	Glu	Lys	Lys	Ala	Ile	Thr	Arg	Asp	Met		
				485					490					495			
Asp	Gly	Asn	Val	Asp	Ile	Asp	Leu	Pro	Glu	Pro	Pro	Lys	Pro	Thr	Pro		
			500					505					510				
Pro	Asp	Gln	Glu	Thr	Glu	Glu	Glu	Gln	Arg	Phe	Arg	Ala	Leu	Phe	Glu		
		515					520					525					
Gln	Val	Ala	Gly	Glu	Asp	Met	Glu	Val	Thr	Ala	Glu	Glu	Leu	Glu	Tyr		
	530					535					540						
Val	Leu	Asn	Ala	Val	Leu	Gln	Lys	Lys	Lys	Asp	Ile	Lys	Phe	Lys	Lys		
545					550					555					560		

Leu Ser Leu Ile Ser Cys Lys Asn Ile Ile Ser Leu Met Asp Thr Ser
565 570 575

Gly Asn Gly Lys Leu Glu Phe Asp Glu Phe Lys Val Phe Trp Asp Lys
580 585 590

Leu Lys Gln Trp Ile Asn Leu Phe Leu Arg Phe Asp Ala Asp Lys Ser
595 600 605

Gly Thr Met Ser Thr Tyr Glu Leu Arg Thr Ala Leu Lys Ala Ala Gly
610 615 620

Phe Gln Leu Ser Ser His Leu Leu Gln Leu Ile Val Leu Arg Tyr Ala
625 630 635 640

Asp Glu Glu Leu Gln Leu Asp Phe Asp Asp Phe Leu Asn Cys Leu Val
645 650 655

Arg Leu Glu Asn Ala Ser Arg Val Phe Gln Ala Leu Ser Thr Lys Asn
660 665 670

Lys Glu Phe Ile His Leu Asn Ile Asn Glu Phe Ile His Leu Thr Met
675 680 685

Asn Ile
690

<210> 11194
<211> 664
<212> PRT
<213> Homo sapiens

<220>
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<223> /note="Payload ID: 2209"

<220>
<221> source
<223> /note="Gene Symbol: CAPN9"

<220>
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<223> /note="Gene Name:
calpain 9"

<220>
<221> source
<223> /note="Uniprot ID: O14815"

<220>

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<223> /note="ENSP ID: ENSP00000346538"

<400> 11194

Met Pro Tyr Leu Tyr Arg Ala Pro Gly Pro Gln Ala His Pro Val Pro
1 5 10 15

Lys Asp Ala Arg Ile Thr His Ser Ser Gly Gln Ser Phe Glu Gln Met
20 25 30

Arg Gln Glu Cys Leu Gln Arg Gly Thr Leu Phe Glu Asp Ala Asp Phe
35 40 45

Pro Ala Ser Asn Ser Ser Leu Phe Tyr Ser Glu Arg Pro Gln Ile Pro
50 55 60

Phe Val Trp Lys Arg Pro Gly Glu Ile Val Lys Asn Pro Glu Phe Ile
65 70 75 80

Leu Gly Gly Ala Thr Arg Thr Asp Ile Cys Gln Gly Glu Leu Gly Asp
85 90 95

Cys Trp Leu Leu Ala Ala Ile Ala Ser Leu Thr Leu Asn Gln Lys Ala
100 105 110

Leu Ala Arg Val Ile Pro Gln Asp Gln Ser Phe Gly Pro Gly Tyr Ala
115 120 125

Gly Ile Phe His Phe Gln Phe Trp Gln His Ser Glu Trp Leu Asp Val
130 135 140

Val Ile Asp Asp Arg Leu Pro Thr Phe Arg Asp Arg Leu Val Phe Leu
145 150 155 160

His Ser Ala Asp His Asn Glu Phe Trp Ser Ala Leu Leu Glu Lys Ala
165 170 175

Tyr Ala Lys Leu Asn Gly Ser Tyr Glu Ala Leu Lys Gly Gly Ser Ala
180 185 190

Ile Glu Ala Met Glu Asp Phe Thr Gly Gly Val Ala Glu Thr Phe Gln
195 200 205

Thr	Lys	Glu	Ala	Pro	Glu	Asn	Phe	Tyr	Glu	Ile	Leu	Glu	Lys	Ala	Leu			
	210					215					220							
Lys	Arg	Gly	Ser	Leu	Leu	Gly	Cys	Phe	Ile	Asp	Thr	Arg	Ser	Ala	Ala			
225					230					235					240			
Glu	Ser	Glu	Ala	Arg	Thr	Pro	Phe	Gly	Leu	Ile	Lys	Gly	His	Ala	Tyr			
				245					250					255				
Ser	Val	Thr	Gly	Ile	Asp	Gln	Val	Ser	Phe	Arg	Gly	Gln	Arg	Ile	Glu			
			260					265					270					
Leu	Ile	Arg	Ile	Arg	Asn	Pro	Trp	Gly	Gln	Val	Glu	Trp	Asn	Gly	Ser			
		275					280					285						
Trp	Ser	Asp	Arg	Met	Ala	Phe	Lys	Asp	Phe	Lys	Ala	His	Phe	Asp	Lys			
	290					295					300							
Val	Glu	Ile	Cys	Asn	Leu	Thr	Pro	Asp	Ala	Leu	Glu	Glu	Asp	Ala	Ile			
305					310					315					320			
His	Lys	Trp	Glu	Val	Thr	Val	His	Gln	Gly	Ser	Trp	Val	Arg	Gly	Ser			
				325					330					335				
Thr	Ala	Gly	Gly	Cys	Arg	Asn	Phe	Leu	Asp	Thr	Phe	Trp	Thr	Asn	Pro			
			340					345					350					
Gln	Ile	Lys	Leu	Ser	Leu	Thr	Glu	Lys	Asp	Glu	Gly	Gln	Glu	Glu	Cys			
		355					360					365						
Ser	Phe	Leu	Val	Ala	Leu	Met	Gln	Lys	Asp	Arg	Arg	Lys	Leu	Lys	Arg			
	370					375					380							
Phe	Gly	Ala	Asn	Val	Leu	Thr	Ile	Gly	Tyr	Ala	Ile	Tyr	Glu	Cys	Pro			
385					390					395					400			
Asp	Lys	Asp	Glu	His	Leu	Asn	Lys	Asp	Phe	Phe	Arg	Tyr	His	Ala	Ser			
				405					410					415				
Arg	Ala	Arg	Ser	Lys	Thr	Phe	Ile	Asn	Leu	Arg	Glu	Val	Ser	Asp	Arg			
			420					425					430					

Phe Lys Leu Pro Pro Gly Glu Tyr Ile Leu Ile Pro Ser Thr Phe Glu
 435 440 445

Pro His Gln Glu Ala Asp Phe Cys Leu Arg Ile Phe Ser Glu Lys Lys
 450 455 460

Ala Ile Thr Arg Asp Met Asp Gly Asn Val Asp Ile Asp Leu Pro Glu
 465 470 475 480

Pro Pro Lys Pro Thr Pro Pro Asp Gln Glu Thr Glu Glu Glu Gln Arg
 485 490 495

Phe Arg Ala Leu Phe Glu Gln Val Ala Gly Glu Asp Met Glu Val Thr
 500 505 510

Ala Glu Glu Leu Glu Tyr Val Leu Asn Ala Val Leu Gln Lys Lys Lys
 515 520 525

Asp Ile Lys Phe Lys Lys Leu Ser Leu Ile Ser Cys Lys Asn Ile Ile
 530 535 540

Ser Leu Met Asp Thr Ser Gly Asn Gly Lys Leu Glu Phe Asp Glu Phe
 545 550 555 560

Lys Val Phe Trp Asp Lys Leu Lys Gln Trp Ile Asn Leu Phe Leu Arg
 565 570 575

Phe Asp Ala Asp Lys Ser Gly Thr Met Ser Thr Tyr Glu Leu Arg Thr
 580 585 590

Ala Leu Lys Ala Ala Gly Phe Gln Leu Ser Ser His Leu Leu Gln Leu
 595 600 605

Ile Val Leu Arg Tyr Ala Asp Glu Glu Leu Gln Leu Asp Phe Asp Asp
 610 615 620

Phe Leu Asn Cys Leu Val Arg Leu Glu Asn Ala Ser Arg Val Phe Gln
 625 630 635 640

Ala Leu Ser Thr Lys Asn Lys Glu Phe Ile His Leu Asn Ile Asn Glu
 645 650 655

Phe Ile His Leu Thr Met Asn Ile

<210> 11195

<211> 627

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2209"

<220>

<221> source

<223> /note="Gene Symbol: CAPN9"

<220>

<221> source

<223> /note="Gene Name:
calpain 9"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000355626"

<400> 11195

Met Pro Tyr Leu Tyr Arg Ala Pro Gly Pro Gln Ala His Pro Val Pro
1 5 10 15

Lys Asp Ala Arg Ile Thr His Ser Ser Gly Gln Ser Phe Glu Gln Met
20 25 30

Arg Gln Glu Cys Leu Gln Arg Gly Thr Leu Phe Glu Asp Ala Asp Phe
35 40 45

Pro Ala Ser Asn Ser Ser Leu Phe Tyr Ser Glu Arg Pro Gln Ile Pro
50 55 60

Phe Val Trp Lys Arg Pro Gly Phe Trp Gln His Ser Glu Trp Leu Asp
65 70 75 80

Val Val Ile Asp Asp Arg Leu Pro Thr Phe Arg Asp Arg Leu Val Phe
85 90 95

Leu His Ser Ala Asp His Asn Glu Phe Trp Ser Ala Leu Leu Glu Lys
100 105 110

Ala Tyr Ala Lys Leu Asn Gly Ser Tyr Glu Ala Leu Lys Gly Gly Ser
115 120 125

Ala	Ile	Glu	Ala	Met	Glu	Asp	Phe	Thr	Gly	Gly	Val	Ala	Glu	Thr	Phe	
130						135					140					
Gln	Thr	Lys	Glu	Ala	Pro	Glu	Asn	Phe	Tyr	Glu	Ile	Leu	Glu	Lys	Ala	
145					150					155					160	
Leu	Lys	Arg	Gly	Ser	Leu	Leu	Gly	Cys	Phe	Ile	Asp	Thr	Arg	Ser	Ala	
				165					170					175		
Ala	Glu	Ser	Glu	Ala	Arg	Thr	Pro	Phe	Gly	Leu	Ile	Lys	Gly	His	Ala	
			180					185					190			
Tyr	Ser	Val	Thr	Gly	Ile	Asp	Gln	Val	Ser	Phe	Arg	Gly	Gln	Arg	Ile	
		195					200					205				
Glu	Leu	Ile	Arg	Ile	Arg	Asn	Pro	Trp	Gly	Gln	Val	Glu	Trp	Asn	Gly	
	210					215					220					
Ser	Trp	Ser	Asp	Ser	Ser	Pro	Glu	Trp	Arg	Ser	Val	Gly	Pro	Ala	Glu	
225					230					235					240	
Gln	Lys	Arg	Leu	Cys	His	Thr	Ala	Leu	Asp	Asp	Gly	Glu	Phe	Trp	Met	
				245					250					255		
Ala	Phe	Lys	Asp	Phe	Lys	Ala	His	Phe	Asp	Lys	Val	Glu	Ile	Cys	Asn	
			260					265					270			
Leu	Thr	Pro	Asp	Ala	Leu	Glu	Glu	Asp	Ala	Ile	His	Lys	Trp	Glu	Val	
		275					280					285				
Thr	Val	His	Gln	Gly	Ser	Trp	Val	Arg	Gly	Ser	Thr	Ala	Gly	Gly	Cys	
	290					295					300					
Arg	Asn	Phe	Leu	Asp	Thr	Phe	Trp	Thr	Asn	Pro	Gln	Ile	Lys	Leu	Ser	
305					310					315					320	
Leu	Thr	Glu	Lys	Asp	Glu	Gly	Gln	Glu	Glu	Cys	Ser	Phe	Leu	Val	Ala	
				325				330						335		
Leu	Met	Gln	Lys	Asp	Arg	Arg	Lys	Leu	Lys	Arg	Phe	Gly	Ala	Asn	Val	
			340					345					350			

Leu Thr Ile Gly Tyr Ala Ile Tyr Glu Cys Pro Asp Lys Asp Glu His
355 360 365

Leu Asn Lys Asp Phe Phe Arg Tyr His Ala Ser Arg Ala Arg Ser Lys
370 375 380

Thr Phe Ile Asn Leu Arg Glu Val Ser Asp Arg Phe Lys Leu Pro Pro
385 390 395 400

Gly Glu Tyr Ile Leu Ile Pro Ser Thr Phe Glu Pro His Gln Glu Ala
405 410 415

Asp Phe Cys Leu Arg Ile Phe Ser Glu Lys Lys Ala Ile Thr Arg Asp
420 425 430

Met Asp Gly Asn Val Asp Ile Asp Leu Pro Glu Pro Pro Lys Pro Thr
435 440 445

Pro Pro Asp Gln Glu Thr Glu Glu Glu Gln Arg Phe Arg Ala Leu Phe
450 455 460

Glu Gln Val Ala Gly Glu Asp Met Glu Val Thr Ala Glu Glu Leu Glu
465 470 475 480

Tyr Val Leu Asn Ala Val Leu Gln Lys Lys Lys Asp Ile Lys Phe Lys
485 490 495

Lys Leu Ser Leu Ile Ser Cys Lys Asn Ile Ile Ser Leu Met Asp Thr
500 505 510

Ser Gly Asn Gly Lys Leu Glu Phe Asp Glu Phe Lys Val Phe Trp Asp
515 520 525

Lys Leu Lys Gln Trp Ile Asn Leu Phe Leu Arg Phe Asp Ala Asp Lys
530 535 540

Ser Gly Thr Met Ser Thr Tyr Glu Leu Arg Thr Ala Leu Lys Ala Ala
545 550 555 560

Gly Phe Gln Leu Ser Ser His Leu Leu Gln Leu Ile Val Leu Arg Tyr
565 570 575

Ala Asp Glu Glu Leu Gln Leu Asp Phe Asp Asp Phe Leu Asn Cys Leu

580

585

590

Val Arg Leu Glu Asn Ala Ser Arg Val Phe Gln Ala Leu Ser Thr Lys
 595 600 605

Asn Lys Glu Phe Ile His Leu Asn Ile Asn Glu Phe Ile His Leu Thr
 610 615 620

Met Asn Ile
 625

<210> 11196
 <211> 268
 <212> PRT
 <213> Homo sapiens

<220>
 <221> source
 <223> /note="Payload ID: 2210"

<220>
 <221> source
 <223> /note="Gene Symbol: CAPNS1"

<220>
 <221> source
 <223> /note="Gene Name:
 calpain, small subunit 1"

<220>
 <221> source
 <223> /note="Uniprot ID: P04632"

<220>
 <221> source
 <223> /note="ENSP ID: ENSP00000246533"

<400> 11196
 Met Phe Leu Val Asn Ser Phe Leu Lys Gly Gly Gly Gly Gly Gly Gly
 1 5 10 15

Gly Gly Gly Gly Leu Gly Gly Gly Leu Gly Asn Val Leu Gly Gly Leu
 20 25 30

Ile Ser Gly Ala Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly
 35 40 45

Gly Gly Gly Gly Gly Gly Gly Gly Thr Ala Met Arg Ile Leu Gly Gly
 50 55 60

Val	Ile	Ser	Ala	Ile	Ser	Glu	Ala	Ala	Ala	Gln	Tyr	Asn	Pro	Glu	Pro	65	70	75	80
Pro	Pro	Pro	Arg	Thr	His	Tyr	Ser	Asn	Ile	Glu	Ala	Asn	Glu	Ser	Glu	85	90	95	
Glu	Val	Arg	Gln	Phe	Arg	Arg	Leu	Phe	Ala	Gln	Leu	Ala	Gly	Asp	Asp	100	105	110	
Met	Glu	Val	Ser	Ala	Thr	Glu	Leu	Met	Asn	Ile	Leu	Asn	Lys	Val	Val	115	120	125	
Thr	Arg	His	Pro	Asp	Leu	Lys	Thr	Asp	Gly	Phe	Gly	Ile	Asp	Thr	Cys	130	135	140	
Arg	Ser	Met	Val	Ala	Val	Met	Asp	Ser	Asp	Thr	Thr	Gly	Lys	Leu	Gly	145	150	155	160
Phe	Glu	Glu	Phe	Lys	Tyr	Leu	Trp	Asn	Asn	Ile	Lys	Arg	Trp	Gln	Ala	165	170	175	
Ile	Tyr	Lys	Gln	Phe	Asp	Thr	Asp	Arg	Ser	Gly	Thr	Ile	Cys	Ser	Ser	180	185	190	
Glu	Leu	Pro	Gly	Ala	Phe	Glu	Ala	Ala	Gly	Phe	His	Leu	Asn	Glu	His	195	200	205	
Leu	Tyr	Asn	Met	Ile	Ile	Arg	Arg	Tyr	Ser	Asp	Glu	Ser	Gly	Asn	Met	210	215	220	
Asp	Phe	Asp	Asn	Phe	Ile	Ser	Cys	Leu	Val	Arg	Leu	Asp	Ala	Met	Phe	225	230	235	240
Arg	Ala	Phe	Lys	Ser	Leu	Asp	Lys	Asp	Gly	Thr	Gly	Gln	Ile	Gln	Val	245	250	255	
Asn	Ile	Gln	Glu	Trp	Leu	Gln	Leu	Thr	Met	Tyr	Ser					260	265		

<210> 11197

<211> 268

<212> PRT

<213> Homo sapiens

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<220>
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<220>
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<220>
<221> source
<223> /note="Gene Name:
      calpain, small subunit 1"

<220>
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<223> /note="Uniprot ID: P04632"

<220>
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<223> /note="ENSP ID: ENSP00000464849"

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<400> 11197
Met Phe Leu Val Asn Ser Phe Leu Lys Gly Gly Gly Gly Gly Gly Gly
1          5          10          15

Gly Gly Gly Gly Leu Gly Gly Gly Leu Gly Asn Val Leu Gly Gly Leu
20          25          30

Ile Ser Gly Ala Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly
35          40          45

Gly Gly Gly Gly Gly Gly Gly Gly Thr Ala Met Arg Ile Leu Gly Gly
50          55          60

Val Ile Ser Ala Ile Ser Glu Ala Ala Ala Gln Tyr Asn Pro Glu Pro
65          70          75          80

Pro Pro Pro Arg Thr His Tyr Ser Asn Ile Glu Ala Asn Glu Ser Glu
85          90          95

Glu Val Arg Gln Phe Arg Arg Leu Phe Ala Gln Leu Ala Gly Asp Asp
100         105         110

Met Glu Val Ser Ala Thr Glu Leu Met Asn Ile Leu Asn Lys Val Val
115         120         125

Thr Arg His Pro Asp Leu Lys Thr Asp Gly Phe Gly Ile Asp Thr Cys
130         135         140

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Arg Ser Met Val Ala Val Met Asp Ser Asp Thr Thr Gly Lys Leu Gly
145 150 155 160

Phe Glu Glu Phe Lys Tyr Leu Trp Asn Asn Ile Lys Arg Trp Gln Ala
165 170 175

Ile Tyr Lys Gln Phe Asp Thr Asp Arg Ser Gly Thr Ile Cys Ser Ser
180 185 190

Glu Leu Pro Gly Ala Phe Glu Ala Ala Gly Phe His Leu Asn Glu His
195 200 205

Leu Tyr Asn Met Ile Ile Arg Arg Tyr Ser Asp Glu Ser Gly Asn Met
210 215 220

Asp Phe Asp Asn Phe Ile Ser Cys Leu Val Arg Leu Asp Ala Met Phe
225 230 235 240

Arg Ala Phe Lys Ser Leu Asp Lys Asp Gly Thr Gly Gln Ile Gln Val
245 250 255

Asn Ile Gln Glu Trp Leu Gln Leu Thr Met Tyr Ser
260 265

<210> 11198
<211> 196
<212> PRT
<213> Homo sapiens

<220>
<221> source
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<220>
<221> source
<223> /note="Gene Symbol: CAPNS1"

<220>
<221> source
<223> /note="Gene Name:
calpain, small subunit 1"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000464903"

<220>
 <221> MOD_RES
 <222> (1)..(1)
 <223> Any amino acid

 <400> 11198
 Xaa Thr Ala Met Arg Ile Leu Gly Gly Val Ile Ser Ala Ile Ser Glu
 1 5 10 15

 Ala Ala Ala Gln Tyr Asn Pro Glu Pro Pro Pro Pro Arg Thr His Tyr
 20 25 30

 Ser Asn Ile Glu Ala Asn Glu Ser Glu Glu Val Arg Gln Phe Arg Arg
 35 40 45

 Leu Phe Ala Gln Leu Ala Gly Asp Asp Met Glu Val Ser Ala Thr Glu
 50 55 60

 Leu Met Asn Ile Leu Asn Lys Val Val Thr Arg His Pro Asp Leu Lys
 65 70 75 80

 Thr Asp Gly Phe Gly Ile Asp Thr Cys Arg Ser Met Val Ala Val Met
 85 90 95

 Asp Ser Asp Thr Thr Gly Lys Leu Gly Phe Glu Glu Phe Lys Tyr Leu
 100 105 110

 Trp Asn Asn Ile Lys Arg Trp Gln Ala Ile Tyr Lys Gln Phe Asp Thr
 115 120 125

 Asp Arg Ser Gly Thr Ile Cys Ser Ser Glu Leu Pro Gly Ala Phe Glu
 130 135 140

 Ala Ala Asp Glu Ser Gly Asn Met Asp Phe Asp Asn Phe Ile Ser Cys
 145 150 155 160

 Leu Val Arg Leu Asp Ala Met Phe Arg Ala Phe Lys Ser Leu Asp Lys
 165 170 175

 Asp Gly Thr Gly Gln Ile Gln Val Asn Ile Gln Glu Trp Leu Gln Leu
 180 185 190

 Thr Met Tyr Ser
 195

<210> 11199
<211> 238
<212> PRT
<213> Homo sapiens

<220>
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<223> /note="Payload ID: 2210"

<220>
<221> source
<223> /note="Gene Symbol: CAPNS1"

<220>
<221> source
<223> /note="Gene Name:
calpain, small subunit 1"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000465575"

<400> 11199
Met Phe Leu Val Asn Ser Phe Leu Lys Gly Gly Gly Gly Gly Gly Gly
1 5 10 15

Gly Gly Gly Gly Leu Gly Gly Gly Leu Gly Asn Val Leu Gly Gly Leu
20 25 30

Ile Ser Gly Ala Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly
35 40 45

Gly Gly Gly Gly Gly Gly Gly Gly Thr Ala Met Arg Ile Leu Gly Gly
50 55 60

Val Ile Ser Ala Ile Ser Glu Ala Ala Ala Gln Tyr Asn Pro Glu Pro
65 70 75 80

Pro Asp Met Glu Val Ser Ala Thr Glu Leu Met Asn Ile Leu Asn Lys
85 90 95

Val Val Thr Arg His Pro Asp Leu Lys Thr Asp Gly Phe Gly Ile Asp
100 105 110

Thr Cys Arg Ser Met Val Ala Val Met Asp Ser Asp Thr Thr Gly Lys
115 120 125

Leu Gly Phe Glu Glu Phe Lys Tyr Leu Trp Asn Asn Ile Lys Arg Trp

130		135		140											
Gln	Ala	Ile	Tyr	Lys	Gln	Phe	Asp	Thr	Asp	Arg	Ser	Gly	Thr	Ile	Cys
145					150					155					160
Ser	Ser	Glu	Leu	Pro	Gly	Ala	Phe	Glu	Ala	Ala	Gly	Phe	His	Leu	Asn
				165					170					175	
Glu	His	Leu	Tyr	Asn	Met	Ile	Ile	Arg	Arg	Tyr	Ser	Asp	Glu	Ser	Gly
			180					185					190		
Asn	Met	Asp	Phe	Asp	Asn	Phe	Ile	Ser	Cys	Leu	Val	Arg	Leu	Asp	Ala
		195					200					205			
Met	Phe	Arg	Ala	Phe	Lys	Ser	Leu	Asp	Lys	Asp	Gly	Thr	Gly	Gln	Ile
	210					215					220				
Gln	Val	Asn	Ile	Gln	Glu	Trp	Leu	Gln	Leu	Thr	Met	Tyr	Ser		
225					230					235					

<210> 11200
 <211> 278
 <212> PRT
 <213> Homo sapiens

<220>
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<220>
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<220>
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 <223> /note="Gene Name:
 calpain, small subunit 1"

<220>
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<400>	11200														
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1				5					10					15	

Gly	Gly	Gly	Gly	Leu	Gly	Gly	Gly	Leu	Gly	Asn	Val	Leu	Gly	Gly	Leu
			20					25					30		

Ile	Ser	Gly	Ala	Gly	Gly	Gly	Gly	Gly	Gly	Gly	Gly	Gly	Gly	Gly	Gly	Gly	Gly
		35					40					45					
Gly	Gly	Gly	Gly	Gly	Gly	Gly	Gly	Thr	Ala	Met	Arg	Ile	Leu	Gly	Gly		
	50					55					60						
Val	Ile	Ser	Ala	Ile	Ser	Glu	Ala	Ala	Ala	Gln	Tyr	Asn	Pro	Glu	Pro		
65					70					75					80		
Pro	Pro	Pro	Arg	Thr	His	Tyr	Ser	Asn	Ile	Glu	Ala	Asn	Glu	Ser	Glu		
				85					90					95			
Glu	Val	Arg	Gln	Phe	Arg	Arg	Leu	Phe	Ala	Gln	Leu	Ala	Gly	Asp	Asp		
			100					105					110				
Met	Glu	Val	Ser	Ala	Thr	Glu	Leu	Met	Asn	Ile	Leu	Asn	Lys	Val	Val		
		115					120					125					
Thr	Arg	His	Pro	Asp	Leu	Lys	Thr	Asp	Gly	Phe	Gly	Ile	Asp	Thr	Cys		
	130					135					140						
Arg	Ser	Met	Val	Ala	Val	Met	Asp	Leu	Ser	Leu	Phe	Leu	Thr	Pro	Ser		
145					150					155					160		
His	Gln	Ser	Asp	Thr	Thr	Gly	Lys	Leu	Gly	Phe	Glu	Glu	Phe	Lys	Tyr		
				165					170					175			
Leu	Trp	Asn	Asn	Ile	Lys	Arg	Trp	Gln	Ala	Ile	Tyr	Lys	Gln	Phe	Asp		
			180					185					190				
Thr	Asp	Arg	Ser	Gly	Thr	Ile	Cys	Ser	Ser	Glu	Leu	Pro	Gly	Ala	Phe		
		195					200					205					
Glu	Ala	Ala	Gly	Phe	His	Leu	Asn	Glu	His	Leu	Tyr	Asn	Met	Ile	Ile		
	210					215					220						
Arg	Arg	Tyr	Ser	Asp	Glu	Ser	Gly	Asn	Met	Asp	Phe	Asp	Asn	Phe	Ile		
225					230					235					240		
Ser	Cys	Leu	Val	Arg	Leu	Asp	Ala	Met	Phe	Arg	Ala	Phe	Lys	Ser	Leu		
				245					250					255			

Asp Lys Asp Gly Thr Gly Gln Ile Gln Val Asn Ile Gln Glu Trp Leu
260 265 270

Gln Leu Thr Met Tyr Ser
275

<210> 11201

<211> 163

<212> PRT

<213> Homo sapiens

<220>

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<223> /note="Payload ID: 2210"

<220>

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<223> /note="Gene Symbol: CAPNS1"

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<223> /note="Gene Name:
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<220>

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<223> /note="ENSP ID: ENSP00000466386"

<400> 11201

Met Phe Leu Val Asn Ser Phe Leu Lys Gly Gly Gly Gly Gly Gly Gly
1 5 10 15

Gly Gly Gly Gly Leu Gly Gly Gly Leu Gly Asn Val Leu Gly Gly Leu
20 25 30

Ile Ser Gly Ala Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly
35 40 45

Gly Gly Gly Gly Gly Gly Gly Gly Thr Ala Met Arg Ile Leu Gly Gly
50 55 60

Val Ile Ser Ala Ile Ser Glu Ala Ala Ala Gln Tyr Asn Pro Glu Pro
65 70 75 80

Pro Pro Pro Arg Thr His Tyr Ser Asn Ile Glu Ala Asn Glu Ser Glu
85 90 95

Glu Val Arg Gln Phe Arg Arg Leu Phe Ala Gln Leu Ala Gly Asp Asp
100 105 110

Met Glu Val Ser Ala Thr Glu Leu Met Asn Ile Leu Asn Lys Val Val
115 120 125

Thr Arg His Pro Asp Leu Lys Thr Asp Gly Phe Gly Ile Asp Thr Cys
130 135 140

Arg Ser Met Val Ala Val Met Asp Ser Asp Thr Thr Gly Lys Leu Gly
145 150 155 160

Phe Glu Glu

<210> 11202
<211> 94
<212> PRT
<213> Homo sapiens

<220>
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<220>
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<220>
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<223> /note="Gene Name:
calpain, small subunit 1"

<220>
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<223> /note="ENSP ID: ENSP00000466601"

<400> 11202
Met Phe Leu Val Asn Ser Phe Leu Lys Gly Gly Gly Gly Gly Gly Gly
1 5 10 15

Gly Gly Gly Gly Leu Gly Ala Phe Glu Ala Ala Gly Phe His Leu Asn
20 25 30

Glu His Leu Tyr Asn Met Ile Ile Arg Arg Tyr Ser Asp Glu Ser Gly
35 40 45

Asn Met Asp Phe Asp Asn Phe Ile Ser Cys Leu Val Arg Leu Asp Ala
50 55 60

Met Phe Arg Ala Phe Lys Ser Leu Asp Lys Asp Gly Thr Gly Gln Ile
65 70 75 80

Gln Val Asn Ile Gln Glu Trp Leu Gln Leu Thr Met Tyr Ser
85 90

<210> 11203
<211> 322
<212> PRT
<213> Homo sapiens

<220>
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<220>
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<220>
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<223> /note="Gene Name:
calpain, small subunit 1"

<220>
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<223> /note="ENSP ID: ENSP00000468041"

<400> 11203
Met Phe Leu Val Asn Ser Phe Leu Lys Gly Gly Gly Gly Gly Gly Gly
1 5 10 15

Gly Gly Gly Gly Leu Gly Gly Gly Leu Gly Asn Val Leu Gly Gly Leu
20 25 30

Ile Ser Gly Ala Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly
35 40 45

Gly Gly Gly Gly Gly Gly Gly Gly Thr Ala Met Arg Ile Leu Gly Gly
50 55 60

Val Ile Ser Ala Ile Ser Glu Ala Ala Ala Gln Tyr Asn Pro Glu Pro
65 70 75 80

Pro Pro Pro Arg Thr His Tyr Ser Asn Ile Glu Ala Asn Glu Ser Glu
85 90 95

Glu Val Arg Gln Phe Arg Arg Leu Phe Ala Gln Leu Ala Gly Asp Asp
100 105 110

Met	Glu	Val	Ser	Ala	Thr	Glu	Leu	Met	Asn	Ile	Leu	Asn	Lys	Val	Val	
		115					120					125				
Thr	Arg	His	Pro	Asp	Leu	Lys	Thr	Asp	Gly	Phe	Gly	Ile	Asp	Thr	Cys	
	130					135					140					
Arg	Ser	Met	Val	Ala	Val	Met	Asp	Ser	Asp	Thr	Thr	Gly	Lys	Leu	Gly	
145					150					155					160	
Phe	Glu	Glu	Phe	Lys	Tyr	Leu	Trp	Asn	Asn	Ile	Lys	Arg	Trp	Gln	Ala	
				165					170					175		
Ile	Tyr	Lys	Gln	Phe	Asp	Thr	Asp	Arg	Ser	Gly	Thr	Ile	Cys	Ser	Ser	
			180					185					190			
Glu	Leu	Pro	Gly	Ala	Phe	Glu	Ala	Ala	Gly	Phe	His	Leu	Asn	Glu	His	
		195					200					205				
Leu	Tyr	Asn	Met	Ile	Ile	Arg	Arg	Tyr	Ser	Asp	Glu	Ser	Gly	Asn	Met	
	210					215					220					
Asp	Phe	Asp	Asn	Phe	Ile	Ser	Cys	Leu	Val	Arg	Leu	Asp	Ala	Met	Phe	
225					230					235					240	
Arg	Ala	Phe	Lys	Ser	Leu	Asp	Lys	Asp	Gly	Thr	Gly	Gln	Ile	Gln	Val	
				245					250					255		
Asn	Ile	Gln	Glu	Val	Arg	Thr	Pro	Ile	Leu	Gly	Tyr	Gly	Cys	Leu	Gly	
			260					265					270			
Gly	Pro	His	Pro	Ser	Ala	Leu	His	Thr	Ser	Ser	Glu	Leu	Gln	Ser	Pro	
		275					280					285				
Ser	Ser	Tyr	Phe	Ala	Ser	Arg	Pro	Trp	Val	Arg	Ala	Lys	Gly	Leu	Val	
	290					295					300					
Leu	Leu	Gly	Phe	Pro	Val	Leu	Thr	Leu	His	Pro	Pro	Leu	Pro	Ser	Gly	
305					310					315					320	
Cys	Ser															

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<210> 11204
<211> 72
<212> PRT
<213> Homo sapiens

<220>
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<223> /note="Payload ID: 2210"

<220>
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<220>
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<223> /note="Gene Name:
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<220>
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<223> /note="ENSP ID: ENSP00000468591"

<400> 11204
Met Phe Leu Val Asn Ser Phe Leu Lys Gly Gly Gly Gly Gly Gly Gly
1          5          10          15

Gly Gly Gly Gly Leu Gly Gly Gly Leu Gly Asn Val Leu Gly Gly Leu
20          25          30

Ile Ser Gly Ala Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly
35          40          45

Gly Gly Gly Gly Gly Gly Gly Gly Thr Ala Met Arg Ile Leu Gly Gly
50          55          60

Val Ile Ser Ala Ile Ser Glu Ala
65          70

<210> 11205
<211> 197
<212> PRT
<213> Homo sapiens

<220>
<221> source
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<220>
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<223> /note="Gene Symbol: CAPNS1"

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<220>
<221> source
<223> /note="Gene Name:
        calpain, small subunit 1"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000474036"

<400> 11205
Gly Gly Gly Gly Gly Gly Gly Thr Ala Met Arg Ile Leu Gly Gly Val
1          5          10
Ile Ser Ala Ile Ser Glu Ala Ala Ala Gln Tyr Asn Pro Glu Pro Pro
20          25          30
Pro Pro Arg Thr His Tyr Ser Asn Ile Glu Ala Asn Glu Ser Glu Glu
35          40          45
Val Arg Gln Phe Arg Arg Leu Phe Ala Gln Leu Ala Gly Asp Asp Met
50          55          60
Glu Val Ser Ala Thr Glu Leu Met Asn Ile Leu Asn Lys Val Val Thr
65          70          75
Arg His Pro Asp Leu Lys Thr Asp Gly Phe Gly Ile Asp Thr Cys Arg
85          90          95
Ser Met Val Ala Val Met Asp Ser Asp Thr Thr Gly Lys Leu Gly Phe
100         105         110
Glu Glu Phe Lys Tyr Leu Trp Asn Asn Ile Lys Arg Trp Gln Ala Ile
115         120         125
Tyr Lys Gln Phe Asp Thr Asp Arg Ser Gly Thr Ile Cys Ser Ser Glu
130         135         140
Leu Pro Gly Ala Phe Glu Ala Ala Gly Phe His Leu Asn Glu His Leu
145         150         155
Tyr Asn Met Ile Ile Arg Arg Tyr Ser Asp Glu Ser Gly Asn Met Asp
165         170         175
Phe Asp Asn Phe Ile Ser Cys Leu Ala Gln Glu Glu Ile Asn Met Pro
180         185         190

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Gln Leu Leu Ile Ser
195

<210> 11206
<211> 54
<212> PRT
<213> Homo sapiens

<220>
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<220>
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<220>
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<223> /note="Gene Name:
calpain, small subunit 1"

<220>
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<223> /note="ENSP ID: ENSP00000474280"

<220>
<221> MOD_RES
<222> (1)..(1)
<223> Any amino acid

<400> 11206
Xaa Ile Leu Gly Gly Val Ile Ser Ala Ile Ser Glu Ala Ala Ala Gln
1 5 10 15

Tyr Asn Pro Glu Pro Pro Pro Pro Arg Thr His Tyr Ser Asn Ile Glu
20 25 30

Asp Thr Leu Thr Ser Ser Val His Gly Ser Pro His Ser His Gln Ala
35 40 45

Leu His Thr Pro Thr Pro
50

<210> 11207
<211> 100
<212> PRT
<213> Homo sapiens

<220>
<221> source

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<223> /note="Payload ID: 2210"

<220>
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<220>
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<223> /note="Gene Name:
      calpain, small subunit 1"

<220>
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<223> /note="ENSP ID: ENSP00000475159"

<400> 11207
Met Glu Val Ser Ala Thr Glu Leu Met Asn Ile Leu Asn Lys Val Val
1          5          10          15

Thr Arg His Pro Asp Leu Lys Thr Asp Gly Phe Gly Ile Asp Thr Cys
          20          25          30

Arg Ser Met Val Ala Val Met Asp Ser Asp Thr Thr Gly Lys Leu Gly
          35          40          45

Phe Glu Glu Phe Lys Tyr Leu Trp Asn Asn Ile Lys Arg Trp Gln Ala
50          55          60

Ile Tyr Lys Gln Phe Asp Thr Asp Arg Ser Gly Thr Ile Cys Ser Ser
65          70          75          80

Glu Leu Pro Gly Ala Phe Glu Ala Ala Gly Phe His Leu Asn Glu His
          85          90          95

Leu Tyr Asn Met
          100

<210> 11208
<211> 161
<212> PRT
<213> Homo sapiens

<220>
<221> source
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<220>
<221> source
<223> /note="Gene Symbol: CAPNS1"

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<220>
<221> source
<223> /note="Gene Name:
        calpain, small subunit 1"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000475804"

<400> 11208
Met Gly Glu Ala Ala Ala Gln Tyr Asn Pro Glu Pro Pro Pro Pro Arg
1          5          10          15

Thr His Tyr Ser Asn Ile Glu Ala Asn Glu Ser Glu Glu Val Arg Gln
20          25          30

Phe Arg Arg Leu Phe Ala Gln Leu Ala Gly Asp Asp Met Glu Val Ser
35          40          45

Ala Thr Glu Leu Met Asn Ile Leu Asn Lys Val Val Thr Arg His Pro
50          55          60

Asp Leu Lys Thr Asp Gly Phe Gly Ile Asp Thr Cys Arg Ser Met Val
65          70          75          80

Ala Val Met Asp Ser Asp Thr Thr Gly Lys Leu Gly Phe Glu Glu Phe
85          90          95

Lys Tyr Leu Trp Asn Asn Ile Lys Arg Trp Gln Ala Ile Tyr Lys Gln
100         105         110

Phe Asp Thr Asp Arg Ser Gly Thr Ile Cys Ser Ser Glu Leu Pro Gly
115         120         125

Ala Phe Glu Ala Ala Gly Phe His Leu Asn Glu His Leu Tyr Asn Met
130         135         140

Ile Ile Arg Arg Tyr Ser Asp Glu Ser Gly Asn Met Asp Phe Asp Asn
145         150         155         160

Phe

<210> 11209
<211> 94
<212> PRT

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<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2210"

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<221> source

<223> /note="Gene Symbol: CAPNS1"

<220>

<221> source

<223> /note="Gene Name:
calpain, small subunit 1"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000486032"

<400> 11209

Met Phe Leu Val Asn Ser Phe Leu Lys Gly Gly Gly Gly Gly Gly Gly
1 5 10 15

Gly Gly Gly Gly Leu Gly Ala Phe Glu Ala Ala Gly Phe His Leu Asn
20 25 30

Glu His Leu Tyr Asn Met Ile Ile Arg Arg Tyr Ser Asp Glu Ser Gly
35 40 45

Asn Met Asp Phe Asp Asn Phe Ile Ser Cys Leu Val Arg Leu Asp Ala
50 55 60

Met Phe Arg Ala Phe Lys Ser Leu Asp Lys Asp Gly Thr Gly Gln Ile
65 70 75 80

Gln Val Asn Ile Gln Glu Trp Leu Gln Leu Thr Met Tyr Ser
85 90

<210> 11210

<211> 238

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2210"

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<221> source

<223> /note="Gene Symbol: CAPNS1"

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<220>
<221> source
<223> /note="Gene Name:
        calpain, small subunit 1"

<220>
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<223> /note="ENSP ID: ENSP00000486832"

<400> 11210
Met Phe Leu Val Asn Ser Phe Leu Lys Gly Gly Gly Gly Gly Gly Gly
1          5          10          15

Gly Gly Gly Gly Leu Gly Gly Gly Leu Gly Asn Val Leu Gly Gly Leu
20          25          30

Ile Ser Gly Ala Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly
35          40          45

Gly Gly Gly Gly Gly Gly Gly Gly Thr Ala Met Arg Ile Leu Gly Gly
50          55          60

Val Ile Ser Ala Ile Ser Glu Ala Ala Ala Gln Tyr Asn Pro Glu Pro
65          70          75          80

Pro Asp Met Glu Val Ser Ala Thr Glu Leu Met Asn Ile Leu Asn Lys
85          90          95

Val Val Thr Arg His Pro Asp Leu Lys Thr Asp Gly Phe Gly Ile Asp
100         105         110

Thr Cys Arg Ser Met Val Ala Val Met Asp Ser Asp Thr Thr Gly Lys
115         120         125

Leu Gly Phe Glu Glu Phe Lys Tyr Leu Trp Asn Asn Ile Lys Arg Trp
130         135         140

Gln Ala Ile Tyr Lys Gln Phe Asp Thr Asp Arg Ser Gly Thr Ile Cys
145         150         155         160

Ser Ser Glu Leu Pro Gly Ala Phe Glu Ala Ala Gly Phe His Leu Asn
165         170         175

Glu His Leu Tyr Asn Met Ile Ile Arg Arg Tyr Ser Asp Glu Ser Gly
180         185         190

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Asn Met Asp Phe Asp Asn Phe Ile Ser Cys Leu Val Arg Leu Asp Ala
195 200 205

Met Phe Arg Ala Phe Lys Ser Leu Asp Lys Asp Gly Thr Gly Gln Ile
210 215 220

Gln Val Asn Ile Gln Glu Trp Leu Gln Leu Thr Met Tyr Ser
225 230 235

<210> 11211
<211> 278
<212> PRT
<213> Homo sapiens

<220>
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<223> /note="Payload ID: 2210"

<220>
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<223> /note="Gene Symbol: CAPNS1"

<220>
<221> source
<223> /note="Gene Name:
calpain, small subunit 1"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000487115"

<400> 11211
Met Phe Leu Val Asn Ser Phe Leu Lys Gly Gly Gly Gly Gly Gly Gly
1 5 10 15

Gly Gly Gly Gly Leu Gly Gly Gly Leu Gly Asn Val Leu Gly Gly Leu
20 25 30

Ile Ser Gly Ala Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly
35 40 45

Gly Gly Gly Gly Gly Gly Gly Gly Thr Ala Met Arg Ile Leu Gly Gly
50 55 60

Val Ile Ser Ala Ile Ser Glu Ala Ala Ala Gln Tyr Asn Pro Glu Pro
65 70 75 80

Pro Pro Pro Arg Thr His Tyr Ser Asn Ile Glu Ala Asn Glu Ser Glu
25145

85

90

95

Glu Val Arg Gln Phe Arg Arg Leu Phe Ala Gln Leu Ala Gly Asp Asp
 100 105 110

Met Glu Val Ser Ala Thr Glu Leu Met Asn Ile Leu Asn Lys Val Val
 115 120 125

Thr Arg His Pro Asp Leu Lys Thr Asp Gly Phe Gly Ile Asp Thr Cys
 130 135 140

Arg Ser Met Val Ala Val Met Asp Leu Ser Leu Phe Leu Thr Pro Ser
 145 150 155 160

His Gln Ser Asp Thr Thr Gly Lys Leu Gly Phe Glu Glu Phe Lys Tyr
 165 170 175

Leu Trp Asn Asn Ile Lys Arg Trp Gln Ala Ile Tyr Lys Gln Phe Asp
 180 185 190

Thr Asp Arg Ser Gly Thr Ile Cys Ser Ser Glu Leu Pro Gly Ala Phe
 195 200 205

Glu Ala Ala Gly Phe His Leu Asn Glu His Leu Tyr Asn Met Ile Ile
 210 215 220

Arg Arg Tyr Ser Asp Glu Ser Gly Asn Met Asp Phe Asp Asn Phe Ile
 225 230 235 240

Ser Cys Leu Val Arg Leu Asp Ala Met Phe Arg Ala Phe Lys Ser Leu
 245 250 255

Asp Lys Asp Gly Thr Gly Gln Ile Gln Val Asn Ile Gln Glu Trp Leu
 260 265 270

Gln Leu Thr Met Tyr Ser
 275

<210> 11212

<211> 248

<212> PRT

<213> Homo sapiens

<220>

25146

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<221> source
<223> /note="Payload ID: 2211"

<220>
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<223> /note="Gene Symbol: CAPNS2"

<220>
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<223> /note="Gene Name:
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<220>
<221> source
<223> /note="Uniprot ID: Q96L46"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000400882"

<400> 11212
Met Phe Leu Ala Lys Ala Leu Leu Glu Gly Ala Asp Arg Gly Leu Gly
1          5          10          15

Glu Ala Leu Gly Gly Leu Phe Gly Gly Gly Gly Gln Arg Arg Glu Gly
20          25          30

Gly Gly Arg Asn Ile Gly Gly Ile Val Gly Gly Ile Val Asn Phe Ile
35          40          45

Ser Glu Ala Ala Ala Ala Gln Tyr Thr Pro Glu Pro Pro Pro Thr Gln
50          55          60

Gln His Phe Thr Ser Val Glu Ala Ser Glu Ser Glu Glu Val Arg Arg
65          70          75          80

Phe Arg Gln Gln Phe Thr Gln Leu Ala Gly Pro Asp Met Glu Val Gly
85          90          95

Ala Thr Asp Leu Met Asn Ile Leu Asn Lys Val Leu Ser Lys His Lys
100         105         110

Asp Leu Lys Thr Asp Gly Phe Ser Leu Asp Thr Cys Arg Ser Ile Val
115         120         125

Ser Val Met Asp Ser Asp Thr Thr Gly Lys Leu Gly Phe Glu Glu Phe
130         135         140

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Lys Tyr Leu Trp Asn Asn Ile Lys Lys Trp Gln Cys Val Tyr Lys Gln
 145 150 155 160

Tyr Asp Arg Asp His Ser Gly Ser Leu Gly Ser Ser Gln Leu Arg Gly
 165 170 175

Ala Leu Gln Ala Ala Gly Phe Gln Leu Asn Glu Gln Leu Tyr Gln Met
 180 185 190

Ile Val Arg Arg Tyr Ala Asn Glu Asp Gly Asp Met Asp Phe Asn Asn
 195 200 205

Phe Ile Ser Cys Leu Val Arg Leu Asp Ala Met Phe Arg Ala Phe Lys
 210 215 220

Ser Leu Asp Arg Asp Arg Asp Gly Leu Ile Gln Val Ser Ile Lys Glu
 225 230 235 240

Trp Leu Gln Leu Thr Met Tyr Ser
 245

<210> 11213
 <211> 686
 <212> PRT
 <213> Homo sapiens

<220>
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 <223> /note="Payload ID: 2212"

<220>
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<220>
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 <223> /note="Gene Name:
 calpastatin"

<220>
 <221> source
 <223> /note="Uniprot ID: P20810"

<220>
 <221> source
 <223> /note="ENSP ID: ENSP00000312523"

<400> 11213
 Met Asn Pro Thr Glu Thr Lys Ala Val Lys Thr Glu Pro Glu Lys Lys
 1 5 10 15

Ser	Gln	Ser	Thr	Lys	Leu	Ser	Val	Val	His	Glu	Lys	Lys	Ser	Gln	Glu	
			20					25					30			
Gly	Lys	Pro	Lys	Glu	His	Thr	Glu	Pro	Lys	Ser	Leu	Pro	Lys	Gln	Ala	
		35					40					45				
Ser	Asp	Thr	Gly	Ser	Asn	Asp	Ala	His	Asn	Lys	Lys	Ala	Val	Ser	Arg	
	50					55					60					
Ser	Ala	Glu	Gln	Gln	Pro	Ser	Glu	Lys	Ser	Thr	Glu	Pro	Lys	Thr	Lys	
65					70					75					80	
Pro	Gln	Asp	Met	Ile	Ser	Ala	Gly	Gly	Glu	Ser	Val	Ala	Gly	Ile	Thr	
				85					90					95		
Ala	Ile	Ser	Gly	Lys	Pro	Gly	Asp	Lys	Lys	Lys	Glu	Lys	Lys	Ser	Leu	
			100					105					110			
Thr	Pro	Ala	Val	Pro	Val	Glu	Ser	Lys	Pro	Asp	Lys	Pro	Ser	Gly	Lys	
		115					120					125				
Ser	Gly	Met	Asp	Ala	Ala	Leu	Asp	Asp	Leu	Ile	Asp	Thr	Leu	Gly	Gly	
	130					135					140					
Pro	Glu	Glu	Thr	Glu	Glu	Glu	Asn	Thr	Thr	Tyr	Thr	Gly	Pro	Glu	Val	
145					150					155					160	
Ser	Asp	Pro	Met	Ser	Ser	Thr	Tyr	Ile	Glu	Glu	Leu	Gly	Lys	Arg	Glu	
				165					170					175		
Val	Thr	Ile	Pro	Pro	Lys	Tyr	Arg	Glu	Leu	Leu	Ala	Lys	Lys	Glu	Gly	
			180					185					190			
Ile	Thr	Gly	Pro	Pro	Ala	Asp	Ser	Ser	Lys	Pro	Ile	Gly	Pro	Asp	Asp	
		195					200					205				
Ala	Ile	Asp	Ala	Leu	Ser	Ser	Asp	Phe	Thr	Cys	Gly	Ser	Pro	Thr	Ala	
	210					215					220					
Ala	Gly	Lys	Lys	Thr	Glu	Lys	Glu	Glu	Ser	Thr	Glu	Val	Leu	Lys	Ala	
225					230					235					240	

Gln	Ser	Ala	Gly	Thr	Val	Arg	Ser	Ala	Ala	Pro	Pro	Gln	Glu	Lys	Lys	
				245					250					255		
Arg	Lys	Val	Glu	Lys	Asp	Thr	Met	Ser	Asp	Gln	Ala	Leu	Glu	Ala	Leu	
			260					265					270			
Ser	Ala	Ser	Leu	Gly	Thr	Arg	Gln	Ala	Glu	Pro	Glu	Leu	Asp	Leu	Arg	
		275					280					285				
Ser	Ile	Lys	Glu	Val	Asp	Glu	Ala	Lys	Ala	Lys	Glu	Glu	Lys	Leu	Glu	
	290					295					300					
Lys	Cys	Gly	Glu	Asp	Asp	Glu	Thr	Ile	Pro	Ser	Glu	Tyr	Arg	Leu	Lys	
305					310					315					320	
Pro	Ala	Thr	Asp	Lys	Asp	Gly	Lys	Pro	Leu	Leu	Pro	Glu	Pro	Glu	Glu	
				325					330					335		
Lys	Pro	Lys	Pro	Arg	Ser	Glu	Ser	Glu	Leu	Ile	Asp	Glu	Leu	Ser	Glu	
			340					345					350			
Asp	Phe	Asp	Arg	Ser	Glu	Cys	Lys	Glu	Lys	Pro	Ser	Lys	Pro	Thr	Glu	
		355					360					365				
Lys	Thr	Glu	Glu	Ser	Lys	Ala	Ala	Ala	Pro	Ala	Pro	Val	Ser	Glu	Ala	
	370					375					380					
Val	Cys	Arg	Thr	Ser	Met	Cys	Ser	Ile	Gln	Ser	Ala	Pro	Pro	Glu	Pro	
385					390					395					400	
Ala	Thr	Leu	Lys	Gly	Thr	Val	Pro	Asp	Asp	Ala	Val	Glu	Ala	Leu	Ala	
				405					410					415		
Asp	Ser	Leu	Gly	Lys	Lys	Glu	Ala	Asp	Pro	Glu	Asp	Gly	Lys	Pro	Val	
			420					425					430			
Met	Asp	Lys	Val	Lys	Glu	Lys	Ala	Lys	Glu	Glu	Asp	Arg	Glu	Lys	Leu	
		435					440					445				
Gly	Glu	Lys	Glu	Glu	Thr	Ile	Pro	Pro	Asp	Tyr	Arg	Leu	Glu	Glu	Val	
	450					455					460					

Lys Asp Lys Asp Gly Lys Pro Leu Leu Pro Lys Glu Ser Lys Glu Gln
465 470 475 480

Leu Pro Pro Met Ser Glu Asp Phe Leu Leu Asp Ala Leu Ser Glu Asp
485 490 495

Phe Ser Gly Pro Gln Asn Ala Ser Ser Leu Lys Phe Glu Asp Ala Lys
500 505 510

Leu Ala Ala Ala Ile Ser Glu Val Val Ser Gln Thr Pro Ala Ser Thr
515 520 525

Thr Gln Ala Gly Ala Pro Pro Arg Asp Thr Ser Gln Ser Asp Lys Asp
530 535 540

Leu Asp Asp Ala Leu Asp Lys Leu Ser Asp Ser Leu Gly Gln Arg Gln
545 550 555 560

Pro Asp Pro Asp Glu Asn Lys Pro Met Glu Asp Lys Val Lys Glu Lys
565 570 575

Ala Lys Ala Glu His Arg Asp Lys Leu Gly Glu Arg Asp Asp Thr Ile
580 585 590

Pro Pro Glu Tyr Arg His Leu Leu Asp Asp Asn Gly Gln Asp Lys Pro
595 600 605

Val Lys Pro Pro Thr Lys Lys Ser Glu Asp Ser Lys Lys Pro Ala Asp
610 615 620

Asp Gln Asp Pro Ile Asp Ala Leu Ser Gly Asp Leu Asp Ser Cys Pro
625 630 635 640

Ser Thr Thr Glu Thr Ser Gln Asn Thr Ala Lys Asp Lys Cys Lys Lys
645 650 655

Ala Ala Ser Ser Ser Lys Ala Pro Lys Asn Gly Gly Lys Ala Lys Asp
660 665 670

Ser Ala Lys Thr Thr Glu Glu Thr Ser Lys Pro Lys Asp Asp
675 680 685

<210> 11214

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Val Trp His Asp Lys Leu Cys Asp Gly Glu Arg Arg Gly Ala Arg Glu
                20              25              30

Ala Val Arg Ile Phe Gln Asp Gln Ala Lys Ala Lys Glu Glu Lys Leu
                35              40              45

Glu Lys Cys Gly Glu Asp Asp Glu Thr Ile Pro Ser Glu Tyr Arg Leu
50              55              60

Lys Pro Ala Thr Asp Lys Asp Gly Lys Pro Leu Leu Pro Glu Pro Glu
65              70              75              80

Glu Lys Pro Lys Pro Arg Ser Glu Ser Glu Leu Ile Asp Glu Leu Ser
85              90              95

Glu Asp Phe Asp Arg Ser Glu Cys Lys Glu Lys Pro Ser Lys Pro Thr
100             105             110

Glu Lys Thr Glu Glu Ser Lys Ala Ala Ala Pro Ala Pro Val Ser Glu
115             120             125

Ala Val Cys Arg Thr Ser Met Cys Ser Ile Gln Ser Ala Pro Pro Glu
130             135             140

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Pro	Ala	Thr	Leu	Lys	Gly	Thr	Val	Pro	Asp	Asp	Ala	Val	Glu	Ala	Leu	145	150	155	160
Ala	Asp	Ser	Leu	Gly	Lys	Lys	Glu	Ala	Asp	Pro	Glu	Asp	Gly	Lys	Pro	165	170	175	
Val	Met	Asp	Lys	Val	Lys	Glu	Lys	Ala	Lys	Glu	Glu	Asp	Arg	Glu	Lys	180	185	190	
Leu	Gly	Glu	Lys	Glu	Glu	Thr	Ile	Pro	Pro	Asp	Tyr	Arg	Leu	Glu	Glu	195	200	205	
Val	Lys	Asp	Lys	Asp	Gly	Lys	Pro	Leu	Leu	Pro	Lys	Glu	Ser	Lys	Glu	210	215	220	
Gln	Leu	Pro	Pro	Met	Ser	Glu	Asp	Phe	Leu	Leu	Asp	Ala	Leu	Ser	Glu	225	230	235	240
Asp	Phe	Ser	Gly	Pro	Gln	Asn	Ala	Ser	Ser	Leu	Lys	Phe	Glu	Asp	Ala	245	250	255	
Lys	Leu	Ala	Ala	Ala	Ile	Ser	Glu	Val	Val	Ser	Gln	Thr	Pro	Ala	Ser	260	265	270	
Thr	Thr	Gln	Ala	Gly	Ala	Pro	Pro	Arg	Asp	Thr	Ser	Ser	Asp	Lys	Asp	275	280	285	
Leu	Asp	Asp	Ala	Leu	Asp	Lys	Leu	Ser	Asp	Ser	Leu	Gly	Gln	Arg	Gln	290	295	300	
Pro	Asp	Pro	Asp	Glu	Asn	Lys	Pro	Met	Glu	Asp	Lys	Val	Lys	Glu	Lys	305	310	315	320
Ala	Lys	Ala	Glu	His	Arg	Asp	Lys	Leu	Gly	Glu	Arg	Asp	Asp	Thr	Ile	325	330	335	
Pro	Pro	Glu	Tyr	Arg	His	Leu	Leu	Asp	Asp	Asn	Gly	Gln	Asp	Lys	Pro	340	345	350	
Val	Lys	Pro	Pro	Thr	Lys	Lys	Ser	Glu	Asp	Ser	Lys	Lys	Pro	Ala	Asp	355	360	365	

Asp Gln Asp Pro Ile Asp Ala Leu Ser Gly Asp Leu Asp Ser Cys Pro
 370 375 380

Ser Thr Thr Glu Thr Ser Gln Asn Thr Ala Lys Asp Lys Cys Lys Lys
 385 390 395 400

Ala Ala Ser Ser Ser Lys Ala Pro Lys Asn Gly Gly Lys Ala Lys Asp
 405 410 415

Ser Ala Lys Thr Thr Glu Glu Thr Ser Lys Pro Lys Asp Asp
 420 425 430

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 20 25 30

Thr Glu Pro Glu Lys Lys Ser Gln Ser Thr Lys Leu Ser Val Val His
 35 40 45

Glu Lys Lys Ser Gln Glu Gly Lys Pro Lys Glu His Thr Glu Pro Lys
 50 55 60

Ser	Leu	Pro	Lys	Gln	Ala	Ser	Asp	Thr	Gly	Ser	Asn	Asp	Ala	His	Asn	
65					70					75					80	
Lys	Lys	Ala	Val	Ser	Arg	Ser	Ala	Glu	Gln	Gln	Pro	Ser	Glu	Lys	Ser	
				85					90					95		
Thr	Glu	Pro	Lys	Thr	Lys	Pro	Gln	Asp	Met	Ile	Ser	Ala	Gly	Gly	Glu	
			100					105					110			
Ser	Val	Ala	Gly	Ile	Thr	Ala	Ile	Ser	Gly	Lys	Pro	Gly	Asp	Lys	Lys	
		115					120					125				
Lys	Glu	Lys	Lys	Ser	Leu	Thr	Pro	Ala	Val	Pro	Val	Glu	Ser	Lys	Pro	
	130					135					140					
Asp	Lys	Pro	Ser	Gly	Lys	Ser	Gly	Met	Asp	Ala	Ala	Leu	Asp	Asp	Leu	
145					150					155					160	
Ile	Asp	Thr	Leu	Gly	Gly	Pro	Glu	Glu	Thr	Glu	Glu	Glu	Asn	Thr	Thr	
				165					170					175		
Tyr	Thr	Gly	Pro	Glu	Val	Ser	Asp	Pro	Met	Ser	Ser	Thr	Tyr	Ile	Glu	
			180					185					190			
Glu	Leu	Gly	Lys	Arg	Glu	Val	Thr	Ile	Pro	Pro	Lys	Tyr	Arg	Glu	Leu	
		195					200					205				
Leu	Ala	Lys	Lys	Glu	Gly	Ile	Thr	Gly	Pro	Pro	Ala	Asp	Ser	Ser	Lys	
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Pro	Ile	Gly	Pro	Asp	Asp	Ala	Ile	Asp	Ala	Leu	Ser	Ser	Asp	Phe	Thr	
225					230					235					240	
Cys	Gly	Ser	Pro	Thr	Ala	Ala	Gly	Lys	Lys	Thr	Glu	Lys	Glu	Glu	Ser	
				245					250					255		
Thr	Glu	Val	Leu	Lys	Ala	Gln	Ser	Ala	Gly	Thr	Val	Arg	Ser	Ala	Ala	
			260					265					270			
Pro	Pro	Gln	Glu	Lys	Lys	Arg	Lys	Val	Glu	Lys	Asp	Thr	Met	Ser	Asp	
		275					280					285				

Gln	Ala	Leu	Glu	Ala	Leu	Ser	Ala	Ser	Leu	Gly	Thr	Arg	Gln	Ala	Glu
290						295					300				
Pro	Glu	Leu	Asp	Leu	Arg	Ser	Ile	Lys	Glu	Val	Asp	Glu	Ala	Lys	Ala
305					310					315					320
Lys	Glu	Glu	Lys	Leu	Glu	Lys	Cys	Gly	Glu	Asp	Asp	Glu	Thr	Ile	Pro
				325					330					335	
Ser	Glu	Tyr	Arg	Leu	Lys	Pro	Ala	Thr	Asp	Lys	Asp	Gly	Lys	Pro	Leu
			340					345					350		
Leu	Pro	Glu	Pro	Glu	Glu	Lys	Pro	Lys	Pro	Arg	Ser	Glu	Ser	Glu	Leu
		355					360					365			
Ile	Asp	Glu	Leu	Ser	Glu	Asp	Phe	Asp	Arg	Ser	Glu	Cys	Lys	Glu	Lys
	370					375					380				
Pro	Ser	Lys	Pro	Thr	Glu	Lys	Thr	Glu	Glu	Ser	Lys	Ala	Ala	Ala	Pro
385					390					395					400
Ala	Pro	Val	Ser	Glu	Ala	Val	Cys	Arg	Thr	Ser	Met	Cys	Ser	Ile	Gln
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Ser	Ala	Pro	Pro	Glu	Pro	Ala	Thr	Leu	Lys	Gly	Thr	Val	Pro	Asp	Asp
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Ala	Val	Glu	Ala	Leu	Ala	Asp	Ser	Leu	Gly	Lys	Lys	Glu	Ala	Asp	Pro
		435					440					445			
Glu	Asp	Gly	Lys	Pro	Val	Met	Asp	Lys	Val	Lys	Glu	Lys	Ala	Lys	Glu
	450					455					460				
Glu	Asp	Arg	Glu	Lys	Leu	Gly	Glu	Lys	Glu	Glu	Thr	Ile	Pro	Pro	Asp
465					470					475					480
Tyr	Arg	Leu	Glu	Glu	Val	Lys	Asp	Lys	Asp	Gly	Lys	Pro	Leu	Leu	Pro
				485					490					495	
Lys	Glu	Ser	Lys	Glu	Gln	Leu	Pro	Pro	Met	Ser	Glu	Asp	Phe	Leu	Leu
			500					505					510		

Asp Ala Leu Ser Glu Asp Phe Ser Gly Pro Gln Asn Ala Ser Ser Leu
515 520 525

Lys Phe Glu Asp Ala Lys Leu Ala Ala Ala Ile Ser Glu Val Val Ser
530 535 540

Gln Thr Pro Ala Ser Thr Thr Gln Ala Gly Ala Pro Pro Arg Asp Thr
545 550 555 560

Ser Gln Ser Asp Lys Asp Leu Asp Asp Ala Leu Asp Lys Leu Ser Asp
565 570 575

Ser Leu Gly Gln Arg Gln Pro Asp Pro Asp Glu Asn Lys Pro Met Glu
580 585 590

Asp Lys Val Lys Glu Lys Ala Lys Ala Glu His Arg Asp Lys Leu Gly
595 600 605

Glu Arg Asp Asp Thr Ile Pro Pro Glu Tyr Arg His Leu Leu Asp Asp
610 615 620

Asn Gly Gln Asp Lys Pro Val Lys Pro Pro Thr Lys Lys Ser Glu Asp
625 630 635 640

Ser Lys Lys Pro Ala Asp Asp Gln Asp Pro Ile Asp Ala Leu Ser Gly
645 650 655

Asp Leu Asp Ser Cys Pro Ser Thr Thr Glu Thr Ser Gln Asn Thr Ala
660 665 670

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Pro Lys Asp Asp
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<213> Homo sapiens

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20          25          30

Thr Glu Pro Glu Lys Lys Ser Gln Ser Thr Lys Leu Ser Val Val His
35          40          45

Glu Lys Lys Ser Gln Glu Gly Lys Pro Lys Glu His Thr Glu Pro Lys
50          55          60

Ser Leu Pro Lys Gln Ala Ser Asp Thr Gly Ser Asn Asp Ala His Asn
65          70          75          80

Lys Lys Ala Val Ser Arg Ser Ala Glu Gln Gln Pro Ser Glu Lys Ser
85          90          95

Thr Glu Pro Lys Thr Lys Pro Gln Asp Met Ile Ser Ala Gly Gly Glu
100         105         110

Ser Val Ala Gly Ile Thr Ala Ile Ser Gly Lys Pro Gly Asp Lys Lys
115         120         125

Lys Glu Lys Lys Ser Leu Thr Pro Ala Val Pro Val Glu Ser Lys Pro
130         135         140

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Asp 145	Lys	Pro	Ser	Gly	Lys 150	Ser	Gly	Met	Asp	Ala 155	Ala	Leu	Asp	Asp	Leu 160
Ile	Asp	Thr	Leu	Gly 165	Gly	Pro	Glu	Glu	Thr 170	Glu	Glu	Glu	Asn	Thr 175	Thr
Tyr	Thr	Gly	Pro 180	Glu	Val	Ser	Asp	Pro 185	Met	Ser	Ser	Thr	Tyr 190	Ile	Glu
Glu	Leu	Gly 195	Lys	Arg	Glu	Val	Thr 200	Ile	Pro	Pro	Lys	Tyr 205	Arg	Glu	Leu
Leu	Ala 210	Lys	Pro	Ile	Gly	Pro 215	Asp	Asp	Ala	Ile	Asp 220	Ala	Leu	Ser	Ser
Asp 225	Phe	Thr	Cys	Gly	Ser 230	Pro	Thr	Ala	Ala	Gly 235	Lys	Lys	Thr	Glu	Lys 240
Glu	Glu	Ser	Thr	Glu 245	Val	Leu	Lys	Ala	Gln 250	Ser	Ala	Gly	Thr	Val 255	Arg
Ser	Ala	Ala	Pro 260	Pro	Gln	Glu	Lys	Lys 265	Arg	Lys	Val	Glu	Lys 270	Asp	Thr
Met	Ser	Asp 275	Gln	Ala	Leu	Glu	Ala 280	Leu	Ser	Ala	Ser	Leu 285	Gly	Thr	Arg
Gln 290	Ala	Glu	Pro	Glu	Leu	Asp 295	Leu	Arg	Ser	Ile	Lys 300	Glu	Val	Asp	Glu
Ala 305	Lys	Ala	Lys	Glu	Glu 310	Lys	Leu	Glu	Lys	Cys 315	Gly	Glu	Asp	Asp	Glu 320
Thr	Ile	Pro	Ser	Glu 325	Tyr	Arg	Leu	Lys	Pro 330	Ala	Thr	Asp	Lys	Asp 335	Gly
Lys	Pro	Leu	Leu 340	Pro	Glu	Pro	Glu	Glu 345	Lys	Pro	Lys	Pro	Arg 350	Ser	Glu
Ser	Glu	Leu 355	Ile	Asp	Glu	Leu	Ser 360	Glu	Asp	Phe	Asp	Arg 365	Ser	Glu	Cys

Lys	Glu	Lys	Pro	Ser	Lys	Pro	Thr	Glu	Lys	Thr	Glu	Glu	Ser	Lys	Ala	370	375	380
Ala	Ala	Pro	Ala	Pro	Val	Ser	Glu	Ala	Val	Cys	Arg	Thr	Ser	Met	Cys	385	390	395
Ser	Ile	Gln	Ser	Ala	Pro	Pro	Glu	Pro	Ala	Thr	Leu	Lys	Gly	Thr	Val	405	410	415
Pro	Asp	Asp	Ala	Val	Glu	Ala	Leu	Ala	Asp	Ser	Leu	Gly	Lys	Lys	Glu	420	425	430
Ala	Asp	Pro	Glu	Asp	Gly	Lys	Pro	Val	Met	Asp	Lys	Val	Lys	Glu	Lys	435	440	445
Ala	Lys	Glu	Glu	Asp	Arg	Glu	Lys	Leu	Gly	Glu	Lys	Glu	Glu	Thr	Ile	450	455	460
Pro	Pro	Asp	Tyr	Arg	Leu	Glu	Glu	Val	Lys	Asp	Lys	Asp	Gly	Lys	Pro	465	470	475
Leu	Leu	Pro	Lys	Glu	Ser	Lys	Glu	Gln	Leu	Pro	Pro	Met	Ser	Glu	Asp	485	490	495
Phe	Leu	Leu	Asp	Ala	Leu	Ser	Glu	Asp	Phe	Ser	Gly	Pro	Gln	Asn	Ala	500	505	510
Ser	Ser	Leu	Lys	Phe	Glu	Asp	Ala	Lys	Leu	Ala	Ala	Ala	Ile	Ser	Glu	515	520	525
Val	Val	Ser	Gln	Thr	Pro	Ala	Ser	Thr	Thr	Gln	Ala	Gly	Ala	Pro	Pro	530	535	540
Arg	Asp	Thr	Ser	Gln	Ser	Asp	Lys	Asp	Leu	Asp	Asp	Ala	Leu	Asp	Lys	545	550	555
Leu	Ser	Asp	Ser	Leu	Gly	Gln	Arg	Gln	Pro	Asp	Pro	Asp	Glu	Asn	Lys	565	570	575
Pro	Met	Glu	Asp	Lys	Val	Lys	Glu	Lys	Ala	Lys	Ala	Glu	His	Arg	Asp	580	585	590
Lys	Leu	Gly	Glu	Arg	Asp	Asp	Thr	Ile	Pro	Pro	Glu	Tyr	Arg	His	Leu			

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Glu	Ser	Pro	Ser	Lys	Pro	Gly	Glu	Lys	Lys	Gly	Ser	Asp	Glu	Lys	Lys		
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Ala	Ala	Ser	Leu	Gly	Ser	Ser	Gln	Ser	Ser	Arg	Thr	Tyr	Ala	Gly	Gly		
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Thr	Ala	Ser	Ala	Thr	Lys	Val	Ser	Ala	Ser	Ser	Gly	Ala	Thr	Ser	Lys		
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Ser	Ser	Ser	Met	Asn	Pro	Thr	Glu	Thr	Lys	Ala	Val	Lys	Thr	Glu	Pro		
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Glu	Lys	Lys	Ser	Gln	Ser	Thr	Lys	Pro	Lys	Ser	Leu	Pro	Lys	Gln	Ala		
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Ser	Asp	Thr	Gly	Ser	Asn	Asp	Ala	His	Asn	Lys	Lys	Ala	Val	Ser	Arg		
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	130					135					140						
Pro	Gln	Asp	Met	Ile	Ser	Ala	Gly	Gly	Glu	Ser	Val	Ala	Gly	Ile	Thr		
145					150					155					160		
Ala	Ile	Ser	Gly	Lys	Pro	Gly	Asp	Lys	Lys	Lys	Glu	Lys	Lys	Ser	Leu		
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Thr	Pro	Ala	Val	Pro	Val	Glu	Ser	Lys	Pro	Asp	Lys	Pro	Ser	Gly	Lys		
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Ser	Gly	Met	Asp	Ala	Ala	Leu	Asp	Asp	Leu	Ile	Asp	Thr	Leu	Gly	Gly		
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Pro	Glu	Glu	Thr	Glu	Glu	Glu	Asn	Thr	Thr	Tyr	Thr	Gly	Pro	Glu	Val		
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Ser	Asp	Pro	Met	Ser	Ser	Thr	Tyr	Ile	Glu	Glu	Leu	Gly	Lys	Arg	Glu		
225					230					235					240		

Val	Thr	Ile	Pro	Pro	Lys	Tyr	Arg	Glu	Leu	Leu	Ala	Lys	Lys	Glu	Gly	245	250	255
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Ala	Ile	Asp	Ala	Leu	Ser	Ser	Asp	Phe	Thr	Cys	Gly	Ser	Pro	Thr	Ala	275	280	285
Ala	Gly	Lys	Lys	Thr	Glu	Lys	Glu	Glu	Ser	Thr	Glu	Val	Leu	Lys	Ala	290	295	300
Gln	Ser	Ala	Gly	Thr	Val	Arg	Ser	Ala	Ala	Pro	Pro	Gln	Glu	Lys	Lys	305	310	315
Arg	Lys	Val	Glu	Lys	Asp	Thr	Met	Ser	Asp	Gln	Ala	Leu	Glu	Ala	Leu	325	330	335
Ser	Ala	Ser	Leu	Gly	Thr	Arg	Gln	Ala	Glu	Pro	Glu	Leu	Asp	Leu	Arg	340	345	350
Ser	Ile	Lys	Glu	Val	Asp	Glu	Ala	Lys	Ala	Lys	Glu	Glu	Lys	Leu	Glu	355	360	365
Lys	Cys	Gly	Glu	Asp	Asp	Glu	Thr	Ile	Pro	Ser	Glu	Tyr	Arg	Leu	Lys	370	375	380
Pro	Ala	Thr	Asp	Lys	Asp	Gly	Lys	Pro	Leu	Leu	Pro	Glu	Pro	Glu	Glu	385	390	395
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Lys	Thr	Glu	Glu	Ser	Lys	Ala	Ala	Ala	Pro	Ala	Pro	Val	Ser	Glu	Ala	435	440	445
Val	Cys	Arg	Thr	Ser	Met	Cys	Ser	Ile	Gln	Ser	Ala	Pro	Pro	Glu	Pro	450	455	460
Ala	Thr	Leu	Lys	Gly	Thr	Val	Pro	Asp	Asp	Ala	Val	Glu	Ala	Leu	Ala			

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Asp	Ser	Leu	Gly	Lys	Lys	Glu	Ala	Asp	Pro	Glu	Asp	Gly	Lys	Pro	Val	
				485					490					495		
Met	Asp	Lys	Val	Lys	Glu	Lys	Ala	Lys	Glu	Glu	Asp	Arg	Glu	Lys	Leu	
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Gly	Glu	Lys	Glu	Glu	Thr	Ile	Pro	Pro	Asp	Tyr	Arg	Leu	Glu	Glu	Val	
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Lys	Asp	Lys	Asp	Gly	Lys	Pro	Leu	Leu	Pro	Lys	Glu	Ser	Lys	Glu	Gln	
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Leu	Pro	Pro	Met	Ser	Glu	Asp	Phe	Leu	Leu	Asp	Ala	Leu	Ser	Glu	Asp	
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Phe	Ser	Gly	Pro	Gln	Asn	Ala	Ser	Ser	Leu	Lys	Phe	Glu	Asp	Ala	Lys	
				565					570					575		
Leu	Ala	Ala	Ala	Ile	Ser	Glu	Val	Val	Ser	Gln	Thr	Pro	Ala	Ser	Thr	
			580					585					590			
Thr	Gln	Ala	Gly	Ala	Pro	Pro	Arg	Asp	Thr	Ser	Gln	Ser	Asp	Lys	Asp	
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Leu	Asp	Asp	Ala	Leu	Asp	Lys	Leu	Ser	Asp	Ser	Leu	Gly	Gln	Arg	Gln	
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Pro	Asp	Pro	Asp	Glu	Asn	Lys	Pro	Met	Glu	Asp	Lys	Val	Lys	Glu	Lys	
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Ala	Lys	Ala	Glu	His	Arg	Asp	Lys	Leu	Gly	Glu	Arg	Asp	Asp	Thr	Ile	
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Pro	Pro	Glu	Tyr	Arg	His	Leu	Leu	Asp	Asp	Asn	Gly	Gln	Asp	Lys	Pro	
			660					665					670			
Val	Lys	Pro	Pro	Thr	Lys	Lys	Ser	Glu	Asp	Ser	Lys	Lys	Pro	Ala	Asp	
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Asp	Gln	Asp	Pro	Ile	Asp	Ala	Leu	Ser	Gly	Asp	Leu	Asp	Ser	Cys	Pro	
	690					695					700					

Ser Thr Thr Glu Thr Ser Gln Asn Thr Ala Lys Asp Lys Cys Lys Lys
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Ala Ala Ser Ser Ser Lys Ala Pro Lys Asn Gly Gly Lys Ala Lys Asp
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 <223> /note="ENSP ID: ENSP00000379158"

<400> 11218
 Met Asn Pro Thr Glu Thr Lys Ala Ile Pro Val Ser Gln Gln Met Glu
 1 5 10 15

Gly Pro His Leu Pro Asn Lys Lys Lys His Lys Lys Gln Ala Val Lys
 20 25 30

Thr Glu Pro Glu Lys Lys Ser Gln Ser Thr Lys Leu Ser Val Val His
 35 40 45

Glu Lys Lys Ser Gln Glu Gly Lys Pro Lys Glu His Thr Glu Pro Lys
 50 55 60

Ser	Leu	Pro	Lys	Gln	Ala	Ser	Asp	Thr	Gly	Ser	Asn	Asp	Ala	His	Asn	
65					70					75					80	
Lys	Lys	Ala	Val	Ser	Arg	Ser	Ala	Glu	Gln	Gln	Pro	Ser	Glu	Lys	Ser	
				85					90					95		
Thr	Glu	Pro	Lys	Thr	Lys	Pro	Gln	Asp	Met	Ile	Ser	Ala	Gly	Gly	Glu	
			100					105					110			
Ser	Val	Ala	Gly	Ile	Thr	Ala	Ile	Ser	Gly	Lys	Pro	Gly	Asp	Lys	Lys	
		115					120					125				
Lys	Glu	Lys	Lys	Ser	Leu	Thr	Pro	Ala	Val	Pro	Val	Glu	Ser	Lys	Pro	
	130						135					140				
Asp	Lys	Pro	Ser	Gly	Lys	Ser	Gly	Met	Asp	Ala	Ala	Leu	Asp	Asp	Leu	
145					150					155					160	
Ile	Asp	Thr	Leu	Gly	Gly	Pro	Glu	Glu	Thr	Glu	Glu	Glu	Asn	Thr	Thr	
				165					170					175		
Tyr	Thr	Gly	Pro	Glu	Val	Ser	Asp	Pro	Met	Ser	Ser	Thr	Tyr	Ile	Glu	
			180					185					190			
Glu	Leu	Gly	Lys	Arg	Glu	Val	Thr	Ile	Pro	Pro	Lys	Tyr	Arg	Glu	Leu	
		195					200					205				
Leu	Ala	Lys	Lys	Glu	Gly	Ile	Thr	Gly	Pro	Pro	Ala	Asp	Ser	Ser	Lys	
	210					215					220					
Pro	Ile	Gly	Pro	Asp	Asp	Ala	Ile	Asp	Ala	Leu	Ser	Ser	Asp	Phe	Thr	
225					230					235					240	
Cys	Gly	Ser	Pro	Thr	Ala	Ala	Gly	Lys	Lys	Thr	Glu	Lys	Glu	Glu	Ser	
				245					250					255		
Thr	Glu	Val	Leu	Lys	Ala	Gln	Ser	Ala	Gly	Thr	Val	Arg	Ser	Ala	Ala	
			260					265					270			
Pro	Pro	Gln	Glu	Lys	Lys	Arg	Lys	Val	Glu	Lys	Asp	Thr	Met	Ser	Asp	
		275					280					285				
Gln	Ala	Leu	Glu	Ala	Leu	Ser	Ala	Ser	Leu	Gly	Thr	Arg	Gln	Ala	Glu	

290		295		300													
Pro 305	Glu	Leu	Asp	Leu	Arg 310	Ser	Ile	Lys	Glu	Val 315	Asp	Glu	Ala	Lys	Ala 320		
Lys	Glu	Glu	Lys	Leu 325	Glu	Lys	Cys	Gly	Glu 330	Asp	Asp	Glu	Thr	Ile 335	Pro		
Ser	Glu	Tyr	Arg 340	Leu	Lys	Pro	Ala	Thr 345	Asp	Lys	Asp	Gly	Lys 350	Pro	Leu		
Leu	Pro	Glu 355	Pro	Glu	Glu	Lys	Pro 360	Lys	Pro	Arg	Ser	Glu 365	Ser	Glu	Leu		
Ile	Asp 370	Glu	Leu	Ser	Glu	Asp 375	Phe	Asp	Arg	Ser	Glu 380	Cys	Lys	Glu	Lys		
Pro 385	Ser	Lys	Pro	Thr	Glu 390	Lys	Thr	Glu	Glu	Ser 395	Lys	Ala	Ala	Ala	Pro 400		
Ala	Pro	Val	Ser	Glu 405	Ala	Val	Cys	Arg	Thr 410	Ser	Met	Cys	Ser	Ile 415	Gln		
Ser	Ala	Pro	Pro 420	Glu	Pro	Ala	Thr	Leu 425	Lys	Gly	Thr	Val	Pro 430	Asp	Asp		
Ala	Val	Glu 435	Ala	Leu	Ala	Asp	Ser 440	Leu	Gly	Lys	Lys	Glu 445	Ala	Asp	Pro		
Glu	Asp 450	Gly	Lys	Pro	Val	Met 455	Asp	Lys	Val	Lys	Glu 460	Lys	Ala	Lys	Glu		
Glu 465	Asp	Arg	Glu	Lys	Leu 470	Gly	Glu	Lys	Glu	Glu 475	Thr	Ile	Pro	Pro	Asp 480		
Tyr	Arg	Leu	Glu	Glu 485	Val	Lys	Asp	Lys	Asp 490	Gly	Lys	Pro	Leu	Leu 495	Pro		
Lys	Glu	Ser	Lys 500	Glu	Gln	Leu	Pro	Pro 505	Met	Ser	Glu	Asp	Phe 510	Leu	Leu		
Asp	Ala 515	Leu	Ser	Glu	Asp	Phe	Ser 520	Gly	Pro	Gln	Asn	Ala 525	Ser	Ser	Leu		

Lys Phe Glu Asp Ala Lys Leu Ala Ala Ala Ile Ser Glu Val Val Ser
530 535 540

Gln Thr Pro Ala Ser Thr Thr Gln Ala Gly Ala Pro Pro Arg Asp Thr
545 550 555 560

Ser Gln Ser Asp Lys Asp Leu Asp Asp Ala Leu Asp Lys Leu Ser Asp
565 570 575

Ser Leu Gly Gln Arg Gln Pro Asp Pro Asp Glu Asn Lys Pro Met Glu
580 585 590

Asp Lys Val Lys Glu Lys Ala Lys Ala Glu His Arg Asp Lys Leu Gly
595 600 605

Glu Arg Asp Asp Thr Ile Pro Pro Glu Tyr Arg His Leu Leu Asp Asp
610 615 620

Asn Gly Gln Asp Lys Pro Val Lys Pro Pro Thr Lys Lys Ser Glu Asp
625 630 635 640

Ser Lys Lys Pro Ala Asp Asp Gln Asp Pro Ile Asp Ala Leu Ser Gly
645 650 655

Asp Leu Asp Ser Cys Pro Ser Thr Thr Glu Thr Ser Gln Asn Thr Ala
660 665 670

Lys Asp Lys Cys Lys Lys Ala Ala Ser Ser Ser Lys Ala Pro Lys Asn
675 680 685

Gly Gly Lys Ala Lys Asp Ser Ala Lys Thr Thr Glu Glu Thr Ser Lys
690 695 700

Pro Lys Asp Asp
705

<210> 11219

<211> 304

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2212"

<220>

<221> source

<223> /note="Gene Symbol: CAST"

<220>

<221> source

<223> /note="Gene Name:
calpastatin"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000396558"

<400> 11219

Met Ser Gln Pro Gly Gln Lys Pro Ala Ala Ser Pro Arg Pro Arg Arg
1 5 10 15

Ala Ala Ala Ala Arg Arg Thr His Glu His Val Ser Glu Lys Thr Ser
20 25 30

Glu Ser Pro Ser Lys Pro Gly Glu Lys Lys Gly Ser Asp Glu Lys Lys
35 40 45

Ala Ala Ser Leu Gly Ser Ser Gln Ser Ser Arg Thr Tyr Ala Gly Gly
50 55 60

Thr Ala Ser Ala Thr Lys Val Ser Ala Ser Ser Gly Ala Thr Ser Lys
65 70 75 80

Ser Ser Ser Met Asn Pro Thr Glu Thr Lys Ala Ile Pro Val Ser Gln
85 90 95

Gln Met Glu Gly Pro His Leu Pro Asn Lys Lys Lys His Lys Lys Gln
100 105 110

Ala Val Lys Thr Glu Pro Glu Lys Lys Ser Gln Ser Thr Lys Pro Lys
115 120 125

Ser Leu Pro Lys Gln Ala Ser Asp Thr Gly Ser Asn Asp Ala His Asn
130 135 140

Lys Lys Ala Val Ser Arg Ser Ala Glu Gln Gln Pro Ser Glu Lys Ser
145 150 155 160

Thr Glu Pro Lys Thr Lys Pro Gln Asp Met Ile Ser Ala Gly Gly Glu

165

170

175

Ser Val Ala Gly Ile Thr Ala Ile Ser Gly Lys Pro Gly Asp Lys Lys
 180 185 190

Lys Glu Lys Lys Ser Leu Thr Pro Ala Val Pro Val Glu Ser Lys Pro
 195 200 205

Asp Lys Pro Ser Gly Lys Ser Gly Met Asp Ala Ala Leu Asp Asp Leu
 210 215 220

Ile Asp Thr Leu Gly Gly Pro Glu Glu Thr Glu Glu Glu Asn Thr Thr
 225 230 235 240

Tyr Thr Gly Pro Glu Val Ser Asp Pro Met Ser Ser Thr Tyr Ile Glu
 245 250 255

Glu Leu Gly Lys Arg Glu Val Thr Ile Pro Pro Lys Tyr Arg Glu Leu
 260 265 270

Leu Ala Lys Lys Glu Gly Ile Thr Gly Pro Pro Ala Asp Ser Ser Lys
 275 280 285

Pro Ile Gly Pro Asp Asp Ala Ile Asp Ala Leu Ser Ser Asp Phe Thr
 290 295 300

<210> 11220

<211> 436

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2212"

<220>

<221> source

<223> /note="Gene Symbol: CAST"

<220>

<221> source

<223> /note="Gene Name:
calpastatin"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000412374"

<220>
 <221> MOD_RES
 <222> (1)..(1)
 <223> Any amino acid

 <400> 11220
 Xaa Lys Thr Glu Lys Glu Glu Ser Thr Glu Val Leu Lys Ala Gln Ser
 1 5 10 15

 Ala Gly Thr Val Arg Ser Ala Ala Pro Pro Gln Glu Lys Lys Arg Lys
 20 25 30

 Val Glu Lys Asp Thr Met Ser Asp Gln Ala Leu Glu Ala Leu Ser Ala
 35 40 45

 Ser Leu Gly Thr Arg Gln Ala Glu Pro Glu Leu Asp Leu Arg Ser Ile
 50 55 60

 Lys Glu Val Asp Glu Ala Lys Ala Lys Glu Glu Lys Leu Glu Lys Cys
 65 70 75 80

 Gly Glu Asp Asp Glu Thr Ile Pro Ser Glu Tyr Arg Leu Lys Pro Ala
 85 90 95

 Thr Asp Lys Asp Gly Lys Pro Leu Leu Pro Glu Pro Glu Glu Lys Pro
 100 105 110

 Lys Pro Arg Ser Glu Ser Glu Leu Ile Asp Glu Leu Ser Glu Asp Phe
 115 120 125

 Asp Arg Ser Glu Cys Lys Glu Lys Pro Ser Lys Pro Thr Glu Lys Thr
 130 135 140

 Glu Glu Ser Lys Ala Ala Ala Pro Ala Pro Val Ser Glu Ala Val Cys
 145 150 155 160

 Arg Thr Ser Met Cys Ser Ile Gln Ser Ala Pro Pro Glu Pro Ala Thr
 165 170 175

 Leu Lys Gly Thr Val Pro Asp Asp Ala Val Glu Ala Leu Ala Asp Ser
 180 185 190

 Leu Gly Lys Lys Glu Ala Asp Pro Glu Asp Gly Lys Pro Val Met Asp
 195 200 205

Pro Lys Asp Asp
435

<210> 11221
<211> 693
<212> PRT
<213> Homo sapiens

<220>
<221> source
<223> /note="Payload ID: 2212"

<220>
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<220>
<221> source
<223> /note="Gene Name:
calpastatin"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000421130"

<400> 11221
Met Glu Gly Pro His Leu Pro Asn Lys Lys Lys His Lys Lys Gln Ala
1 5 10 15

Val Lys Thr Glu Pro Glu Lys Lys Ser Gln Ser Thr Lys Leu Ser Val
20 25 30

Val His Glu Lys Lys Ser Gln Glu Gly Lys Pro Lys Glu His Thr Glu
35 40 45

Pro Lys Ser Leu Pro Lys Gln Ala Ser Asp Thr Gly Ser Asn Asp Ala
50 55 60

His Asn Lys Lys Ala Val Ser Arg Ser Ala Glu Gln Gln Pro Ser Glu
65 70 75 80

Lys Ser Thr Glu Pro Lys Thr Lys Pro Gln Asp Met Ile Ser Ala Gly
85 90 95

Gly Glu Ser Val Ala Gly Ile Thr Ala Ile Ser Gly Lys Pro Gly Asp
100 105 110

Lys Lys Lys Glu Lys Lys Ser Leu Thr Pro Ala Val Pro Val Glu Ser

115								120								125
Lys	Pro	Asp	Lys	Pro	Ser	Gly	Lys	Ser	Gly	Met	Asp	Ala	Ala	Leu	Asp	
	130					135					140					
Asp	Leu	Ile	Asp	Thr	Leu	Gly	Gly	Pro	Glu	Glu	Thr	Glu	Glu	Glu	Asn	
145					150					155					160	
Thr	Thr	Tyr	Thr	Gly	Pro	Glu	Val	Ser	Asp	Pro	Met	Ser	Ser	Thr	Tyr	
				165					170					175		
Ile	Glu	Glu	Leu	Gly	Lys	Arg	Glu	Val	Thr	Ile	Pro	Pro	Lys	Tyr	Arg	
			180					185					190			
Glu	Leu	Leu	Ala	Lys	Lys	Glu	Gly	Ile	Thr	Gly	Pro	Pro	Ala	Asp	Ser	
		195					200					205				
Ser	Lys	Pro	Ile	Gly	Pro	Asp	Asp	Ala	Ile	Asp	Ala	Leu	Ser	Ser	Asp	
	210					215					220					
Phe	Thr	Cys	Gly	Ser	Pro	Thr	Ala	Ala	Gly	Lys	Lys	Thr	Glu	Lys	Glu	
225					230					235					240	
Glu	Ser	Thr	Glu	Val	Leu	Lys	Ala	Gln	Ser	Ala	Gly	Thr	Val	Arg	Ser	
				245					250					255		
Ala	Ala	Pro	Pro	Gln	Glu	Lys	Lys	Arg	Lys	Val	Glu	Lys	Asp	Thr	Met	
			260					265					270			
Ser	Asp	Gln	Ala	Leu	Glu	Ala	Leu	Ser	Ala	Ser	Leu	Gly	Thr	Arg	Gln	
		275					280					285				
Ala	Glu	Pro	Glu	Leu	Asp	Leu	Arg	Ser	Ile	Lys	Glu	Val	Asp	Glu	Ala	
	290					295					300					
Lys	Ala	Lys	Glu	Glu	Lys	Leu	Glu	Lys	Cys	Gly	Glu	Asp	Asp	Glu	Thr	
305					310					315					320	
Ile	Pro	Ser	Glu	Tyr	Arg	Leu	Lys	Pro	Ala	Thr	Asp	Lys	Asp	Gly	Lys	
				325					330					335		
Pro	Leu	Leu	Pro	Glu	Pro	Glu	Glu	Lys	Pro	Lys	Pro	Arg	Ser	Glu	Ser	
			340					345					350			

Glu	Leu	Ile	Asp	Glu	Leu	Ser	Glu	Asp	Phe	Asp	Arg	Ser	Glu	Cys	Lys			
		355					360					365						
Glu	Lys	Pro	Ser	Lys	Pro	Thr	Glu	Lys	Thr	Glu	Glu	Ser	Lys	Ala	Ala			
	370					375					380							
Ala	Pro	Ala	Pro	Val	Ser	Glu	Ala	Val	Cys	Arg	Thr	Ser	Met	Cys	Ser			
385					390					395					400			
Ile	Gln	Ser	Ala	Pro	Pro	Glu	Pro	Ala	Thr	Leu	Lys	Gly	Thr	Val	Pro			
				405					410					415				
Asp	Asp	Ala	Val	Glu	Ala	Leu	Ala	Asp	Ser	Leu	Gly	Lys	Lys	Glu	Ala			
			420					425					430					
Asp	Pro	Glu	Asp	Gly	Lys	Pro	Val	Met	Asp	Lys	Val	Lys	Glu	Lys	Ala			
		435					440					445						
Lys	Glu	Glu	Asp	Arg	Glu	Lys	Leu	Gly	Glu	Lys	Glu	Glu	Thr	Ile	Pro			
	450					455					460							
Pro	Asp	Tyr	Arg	Leu	Glu	Glu	Val	Lys	Asp	Lys	Asp	Gly	Lys	Pro	Leu			
465					470					475					480			
Leu	Pro	Lys	Glu	Ser	Lys	Glu	Gln	Leu	Pro	Pro	Met	Ser	Glu	Asp	Phe			
				485					490					495				
Leu	Leu	Asp	Ala	Leu	Ser	Glu	Asp	Phe	Ser	Gly	Pro	Gln	Asn	Ala	Ser			
			500					505					510					
Ser	Leu	Lys	Phe	Glu	Asp	Ala	Lys	Leu	Ala	Ala	Ala	Ile	Ser	Glu	Val			
		515					520					525						
Val	Ser	Gln	Thr	Pro	Ala	Ser	Thr	Thr	Gln	Ala	Gly	Ala	Pro	Pro	Arg			
	530					535					540							
Asp	Thr	Ser	Ser	Asp	Lys	Asp	Leu	Asp	Asp	Ala	Leu	Asp	Lys	Leu	Ser			
545					550					555					560			
Asp	Ser	Leu	Gly	Gln	Arg	Gln	Pro	Asp	Pro	Asp	Glu	Asn	Lys	Pro	Met			
				565					570					575				

Glu Asp Lys Val Lys Glu Lys Ala Lys Ala Glu His Arg Asp Lys Leu
580 585 590

Gly Glu Arg Asp Asp Thr Ile Pro Pro Glu Tyr Arg His Leu Leu Asp
595 600 605

Asp Asn Gly Gln Asp Lys Pro Val Lys Pro Pro Thr Lys Lys Ser Glu
610 615 620

Asp Ser Lys Lys Pro Ala Asp Asp Gln Asp Pro Ile Asp Ala Leu Ser
625 630 635 640

Gly Asp Leu Asp Ser Cys Pro Ser Thr Thr Glu Thr Ser Gln Asn Thr
645 650 655

Ala Lys Asp Lys Cys Lys Lys Ala Ala Ser Ser Ser Lys Ala Pro Lys
660 665 670

Asn Gly Gly Lys Ala Lys Asp Ser Ala Lys Thr Thr Glu Glu Thr Ser
675 680 685

Lys Pro Lys Asp Asp
690

<210> 11222
<211> 149
<212> PRT
<213> Homo sapiens

<220>
<221> source
<223> /note="Payload ID: 2212"

<220>
<221> source
<223> /note="Gene Symbol: CAST"

<220>
<221> source
<223> /note="Gene Name:
calpastatin"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000421230"

<400> 11222
Met Ala Phe Ala Ser Trp Trp Tyr Lys Thr His Val Ser Glu Lys Thr

1		5		10		15									
Ser	Glu	Ser	Pro	Ser	Lys	Pro	Gly	Glu	Lys	Lys	Gly	Ser	Asp	Glu	Lys
			20					25					30		
Lys	Ala	Ala	Ser	Leu	Gly	Ser	Ser	Gln	Ser	Ser	Arg	Thr	Tyr	Ala	Gly
		35					40					45			
Gly	Thr	Ala	Ser	Ala	Thr	Lys	Val	Ser	Ala	Ser	Ser	Gly	Ala	Thr	Ser
	50					55						60			
Lys	Ser	Ser	Ser	Met	Asn	Pro	Thr	Glu	Thr	Lys	Ala	Ile	Pro	Val	Ser
65					70					75					80
Gln	Gln	Met	Glu	Gly	Pro	His	Leu	Pro	Asn	Lys	Lys	Lys	His	Lys	Lys
				85					90					95	
Gln	Ala	Val	Lys	Thr	Glu	Pro	Glu	Lys	Lys	Ser	Gln	Ser	Thr	Lys	Pro
			100					105					110		
Lys	Ser	Leu	Pro	Lys	Gln	Ala	Ser	Asp	Thr	Gly	Ser	Asn	Asp	Ala	His
		115					120					125			
Asn	Lys	Lys	Ala	Val	Ser	Arg	Ser	Ala	Glu	Gln	Gln	Pro	Ser	Glu	Lys
	130					135					140				
Ser	Thr	Glu	Pro	Lys											
145															

<210> 11223

<211> 769

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2212"

<220>

<221> source

<223> /note="Gene Symbol: CAST"

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<223> /note="Gene Name:
calpastatin"

<220>
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 <223> /note="Uniprot ID: P20810"

<220>
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 <223> /note="ENSP ID: ENSP00000422176"

<400> 11223

Met Ser Gln Pro Gly Gln Lys Pro Ala Ala Ser Pro Arg Pro Arg Arg
 1 5 10 15

Ala Ala Ala Ala Arg Arg Thr His Glu His Val Ser Glu Lys Thr Ser
 20 25 30

Glu Ser Pro Ser Lys Pro Gly Glu Lys Lys Gly Ser Asp Glu Lys Lys
 35 40 45

Ala Ala Ser Leu Gly Ser Ser Gln Ser Ser Arg Thr Tyr Ala Gly Gly
 50 55 60

Thr Ala Ser Ala Thr Lys Val Ser Ala Ser Ser Gly Ala Thr Ser Lys
 65 70 75 80

Ser Ser Ser Met Asn Pro Thr Glu Thr Lys Ala Val Lys Thr Glu Pro
 85 90 95

Glu Lys Lys Ser Gln Ser Thr Lys Leu Ser Val Val His Glu Lys Lys
 100 105 110

Ser Gln Glu Gly Lys Pro Lys Glu His Thr Glu Pro Lys Ser Leu Pro
 115 120 125

Lys Gln Ala Ser Asp Thr Gly Ser Asn Asp Ala His Asn Lys Lys Ala
 130 135 140

Val Ser Arg Ser Ala Glu Gln Gln Pro Ser Glu Lys Ser Thr Glu Pro
 145 150 155 160

Lys Thr Lys Pro Gln Asp Met Ile Ser Ala Gly Gly Glu Ser Val Ala
 165 170 175

Gly Ile Thr Ala Ile Ser Gly Lys Pro Gly Asp Lys Lys Lys Glu Lys
 180 185 190

Lys	Ser	Leu	Thr	Pro	Ala	Val	Pro	Val	Glu	Ser	Lys	Pro	Asp	Lys	Pro	
		195					200					205				
Ser	Gly	Lys	Ser	Gly	Met	Asp	Ala	Ala	Leu	Asp	Asp	Leu	Ile	Asp	Thr	
	210					215					220					
Leu	Gly	Gly	Pro	Glu	Glu	Thr	Glu	Glu	Glu	Asn	Thr	Thr	Tyr	Thr	Gly	
225					230					235					240	
Pro	Glu	Val	Ser	Asp	Pro	Met	Ser	Ser	Thr	Tyr	Ile	Glu	Glu	Leu	Gly	
				245					250					255		
Lys	Arg	Glu	Val	Thr	Ile	Pro	Pro	Lys	Tyr	Arg	Glu	Leu	Leu	Ala	Lys	
			260					265					270			
Lys	Glu	Gly	Ile	Thr	Gly	Pro	Pro	Ala	Asp	Ser	Ser	Lys	Pro	Ile	Gly	
		275					280					285				
Pro	Asp	Asp	Ala	Ile	Asp	Ala	Leu	Ser	Ser	Asp	Phe	Thr	Cys	Gly	Ser	
	290					295					300					
Pro	Thr	Ala	Ala	Gly	Lys	Lys	Thr	Glu	Lys	Glu	Glu	Ser	Thr	Glu	Val	
305					310					315					320	
Leu	Lys	Ala	Gln	Ser	Ala	Gly	Thr	Val	Arg	Ser	Ala	Ala	Pro	Pro	Gln	
				325					330					335		
Glu	Lys	Lys	Arg	Lys	Val	Glu	Lys	Asp	Thr	Met	Ser	Asp	Gln	Ala	Leu	
			340					345					350			
Glu	Ala	Leu	Ser	Ala	Ser	Leu	Gly	Thr	Arg	Gln	Ala	Glu	Pro	Glu	Leu	
		355					360					365				
Asp	Leu	Arg	Ser	Ile	Lys	Glu	Val	Asp	Glu	Ala	Lys	Ala	Lys	Glu	Glu	
	370					375					380					
Lys	Leu	Glu	Lys	Cys	Gly	Glu	Asp	Asp	Glu	Thr	Ile	Pro	Ser	Glu	Tyr	
385					390					395					400	
Arg	Leu	Lys	Pro	Ala	Thr	Asp	Lys	Asp	Gly	Lys	Pro	Leu	Leu	Pro	Glu	
				405					410					415		
Pro	Glu	Glu	Lys	Pro	Lys	Pro	Arg	Ser	Glu	Ser	Glu	Leu	Ile	Asp	Glu	

				420						425							430
Leu	Ser	Glu	Asp	Phe	Asp	Arg	Ser	Glu	Cys	Lys	Glu	Lys	Pro	Ser	Lys		
		435					440					445					
Pro	Thr	Glu	Lys	Thr	Glu	Glu	Ser	Lys	Ala	Ala	Ala	Pro	Ala	Pro	Val		
	450					455					460						
Ser	Glu	Ala	Val	Cys	Arg	Thr	Ser	Met	Cys	Ser	Ile	Gln	Ser	Ala	Pro		
465					470					475					480		
Pro	Glu	Pro	Ala	Thr	Leu	Lys	Gly	Thr	Val	Pro	Asp	Asp	Ala	Val	Glu		
				485					490					495			
Ala	Leu	Ala	Asp	Ser	Leu	Gly	Lys	Lys	Glu	Ala	Asp	Pro	Glu	Asp	Gly		
			500					505					510				
Lys	Pro	Val	Met	Asp	Lys	Val	Lys	Glu	Lys	Ala	Lys	Glu	Glu	Asp	Arg		
		515					520					525					
Glu	Lys	Leu	Gly	Glu	Lys	Glu	Glu	Thr	Ile	Pro	Pro	Asp	Tyr	Arg	Leu		
	530					535					540						
Glu	Glu	Val	Lys	Asp	Lys	Asp	Gly	Lys	Pro	Leu	Leu	Pro	Lys	Glu	Ser		
545					550					555					560		
Lys	Glu	Gln	Leu	Pro	Pro	Met	Ser	Glu	Asp	Phe	Leu	Leu	Asp	Ala	Leu		
				565					570					575			
Ser	Glu	Asp	Phe	Ser	Gly	Pro	Gln	Asn	Ala	Ser	Ser	Leu	Lys	Phe	Glu		
			580					585					590				
Asp	Ala	Lys	Leu	Ala	Ala	Ala	Ile	Ser	Glu	Val	Val	Ser	Gln	Thr	Pro		
		595					600					605					
Ala	Ser	Thr	Thr	Gln	Ala	Gly	Ala	Pro	Pro	Arg	Asp	Thr	Ser	Gln	Ser		
	610					615					620						
Asp	Lys	Asp	Leu	Asp	Asp	Ala	Leu	Asp	Lys	Leu	Ser	Asp	Ser	Leu	Gly		
625					630					635					640		
Gln	Arg	Gln	Pro	Asp	Pro	Asp	Glu	Asn	Lys	Pro	Met	Glu	Asp	Lys	Val		
				645					650					655			

Lys Glu Lys Ala Lys Ala Glu His Arg Asp Lys Leu Gly Glu Arg Asp
660 665 670

Asp Thr Ile Pro Pro Glu Tyr Arg His Leu Leu Asp Asp Asn Gly Gln
675 680 685

Asp Lys Pro Val Lys Pro Pro Thr Lys Lys Ser Glu Asp Ser Lys Lys
690 695 700

Pro Ala Asp Asp Gln Asp Pro Ile Asp Ala Leu Ser Gly Asp Leu Asp
705 710 715 720

Ser Cys Pro Ser Thr Thr Glu Thr Ser Gln Asn Thr Ala Lys Asp Lys
725 730 735

Cys Lys Lys Ala Ala Ser Ser Ser Lys Ala Pro Lys Asn Gly Gly Lys
740 745 750

Ala Lys Asp Ser Ala Lys Thr Thr Glu Glu Thr Ser Lys Pro Lys Asp
755 760 765

Asp

<210> 11224
<211> 642
<212> PRT
<213> Homo sapiens

<220>
<221> source
<223> /note="Payload ID: 2212"

<220>
<221> source
<223> /note="Gene Symbol: CAST"

<220>
<221> source
<223> /note="Gene Name:
calpastatin"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000422325"

<400> 11224

Met	Asn	Pro	Thr	Glu	Thr	Lys	Ala	Ile	Pro	Val	Ser	Gln	Gln	Met	Glu			
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Gly	Pro	His	Leu	Pro	Asn	Lys	Lys	Lys	His	Lys	Lys	Gln	Ala	Val	Lys			
			20					25					30					
Thr	Glu	Pro	Glu	Lys	Lys	Ser	Gln	Ser	Thr	Lys	Leu	Ser	Val	Val	His			
		35					40					45						
Glu	Lys	Lys	Ser	Gln	Glu	Gly	Lys	Pro	Lys	Glu	His	Thr	Glu	Pro	Lys			
	50					55					60							
Ser	Leu	Pro	Lys	Gln	Ala	Ser	Asp	Thr	Gly	Ser	Asn	Asp	Ala	His	Asn			
65					70					75					80			
Lys	Lys	Ala	Val	Ser	Arg	Ser	Ala	Glu	Gln	Gln	Pro	Ser	Glu	Lys	Ser			
				85					90					95				
Thr	Glu	Pro	Lys	Thr	Lys	Pro	Gln	Asp	Met	Ile	Ser	Ala	Gly	Gly	Glu			
			100					105					110					
Ser	Val	Ala	Gly	Ile	Thr	Ala	Ile	Ser	Gly	Lys	Pro	Gly	Asp	Lys	Lys			
		115					120					125						
Lys	Glu	Lys	Lys	Ser	Leu	Thr	Pro	Ala	Val	Pro	Val	Glu	Ser	Lys	Pro			
	130					135					140							
Asp	Lys	Pro	Ser	Gly	Lys	Ser	Gly	Met	Asp	Ala	Ala	Leu	Asp	Asp	Leu			
145					150					155					160			
Ile	Asp	Thr	Leu	Gly	Gly	Pro	Glu	Glu	Thr	Glu	Glu	Glu	Asn	Thr	Thr			
				165					170					175				
Tyr	Thr	Gly	Pro	Glu	Val	Ser	Asp	Pro	Met	Ser	Ser	Thr	Tyr	Ile	Glu			
			180					185					190					
Glu	Leu	Gly	Lys	Arg	Glu	Val	Thr	Ile	Pro	Pro	Lys	Tyr	Arg	Glu	Leu			
		195					200					205						
Leu	Ala	Lys	Lys	Glu	Gly	Ile	Thr	Gly	Pro	Pro	Ala	Asp	Ser	Ser	Lys			
	210					215					220							
Pro	Ile	Gly	Pro	Asp	Asp	Ala	Ile	Asp	Ala	Leu	Ser	Ser	Asp	Phe	Thr			

225					230						235					240
Cys	Gly	Ser	Pro	Thr	Ala	Ala	Gly	Lys	Lys	Thr	Glu	Lys	Glu	Glu	Ser	
				245					250					255		
Thr	Glu	Val	Leu	Lys	Ala	Gln	Ser	Ala	Gly	Thr	Val	Arg	Ser	Ala	Ala	
			260					265					270			
Pro	Pro	Gln	Glu	Lys	Lys	Arg	Lys	Val	Glu	Lys	Asp	Thr	Met	Ser	Asp	
		275					280					285				
Gln	Ala	Leu	Glu	Ala	Leu	Ser	Ala	Ser	Leu	Gly	Thr	Arg	Gln	Ala	Glu	
	290						295					300				
Pro	Glu	Leu	Asp	Leu	Arg	Ser	Ile	Lys	Glu	Val	Asp	Glu	Ala	Lys	Ala	
305					310					315					320	
Lys	Glu	Glu	Lys	Leu	Glu	Lys	Cys	Gly	Glu	Asp	Asp	Glu	Thr	Ile	Pro	
				325					330					335		
Ser	Glu	Tyr	Arg	Leu	Lys	Pro	Ala	Thr	Asp	Lys	Asp	Gly	Lys	Pro	Leu	
			340					345					350			
Leu	Pro	Glu	Pro	Glu	Glu	Lys	Pro	Lys	Pro	Arg	Ser	Glu	Ser	Glu	Leu	
		355					360					365				
Ile	Asp	Glu	Leu	Ser	Glu	Asp	Phe	Asp	Arg	Ser	Glu	Cys	Lys	Glu	Lys	
	370					375					380					
Pro	Ser	Lys	Pro	Thr	Glu	Lys	Thr	Glu	Glu	Ser	Lys	Ala	Ala	Ala	Pro	
385					390					395					400	
Ala	Pro	Val	Ser	Glu	Ala	Val	Cys	Arg	Thr	Ser	Met	Cys	Ser	Ile	Gln	
				405					410					415		
Ser	Ala	Pro	Pro	Glu	Pro	Ala	Thr	Leu	Lys	Gly	Thr	Val	Pro	Asp	Asp	
			420					425					430			
Ala	Val	Glu	Ala	Leu	Ala	Asp	Ser	Leu	Gly	Lys	Lys	Glu	Ala	Asp	Pro	
		435					440					445				
Glu	Asp	Gly	Lys	Pro	Val	Met	Asp	Lys	Val	Lys	Glu	Lys	Ala	Lys	Glu	
	450					455					460					

Glu Asp Arg Glu Lys Leu Gly Glu Lys Glu Glu Thr Ile Pro Pro Asp
465 470 475 480

Tyr Arg Leu Glu Glu Val Lys Asp Lys Asp Gly Lys Pro Leu Leu Pro
485 490 495

Lys Glu Ser Lys Glu Gln Leu Pro Pro Met Ser Glu Asp Phe Leu Leu
500 505 510

Asp Ala Leu Ser Glu Asp Phe Ser Gly Pro Gln Asn Ala Ser Ser Leu
515 520 525

Lys Phe Glu Asp Ala Lys Leu Ala Ala Ala Ile Ser Glu Val Val Ser
530 535 540

Gln Thr Pro Ala Ser Thr Thr Gln Ala Gly Ala Pro Pro Arg Asp Thr
545 550 555 560

Ser Gln Ser Asp Lys Asp Leu Asp Asp Ala Leu Asp Lys Leu Ser Asp
565 570 575

Ser Leu Gly Gln Arg Gln Pro Asp Pro Asp Glu Asn Lys Pro Met Glu
580 585 590

Asp Lys Val Lys Glu Lys Ala Lys Ala Glu His Arg Asp Lys Leu Gly
595 600 605

Glu Arg Asp Asp Thr Ile Pro Pro Glu Tyr Arg His Leu Leu Asp Asp
610 615 620

Asn Gly Gln Asp Lys Pro Val Lys Pro Pro Thr Lys Lys Ser Glu Asp
625 630 635 640

Ser Lys

<210> 11225

<211> 82

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2212"

<220>

<221> source

<223> /note="Gene Symbol: CAST"

<220>

<221> source

<223> /note="Gene Name:
calpastatin"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000422466"

<400> 11225

Met Asn Pro Thr Glu Thr Lys Ala Ile Pro Val Ser Gln Gln Met Glu
1 5 10 15

Gly Pro His Leu Pro Asn Lys Lys Lys His Lys Lys Gln Ala Val Lys
20 25 30

Thr Glu Pro Glu Lys Lys Ser Gln Ser Thr Lys Leu Ser Val Val His
35 40 45

Glu Lys Lys Ser Gln Glu Gly Lys Pro Lys Glu His Thr Glu Ala Pro
50 55 60

Val Cys Val Leu Ser Ala Lys Lys Pro Thr Gln Ala Gly Ile Arg Tyr
65 70 75 80

Arg Lys

<210> 11226

<211> 150

<212> PRT

<213> Homo sapiens

<220>

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<223> /note="Payload ID: 2212"

<220>

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<223> /note="Gene Name:
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<220>
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<223> /note="ENSP ID: ENSP00000422612"

<400> 11226
Met Ala Phe Ala Ser Trp Trp Tyr Lys Thr His Val Ser Glu Lys Thr
1 5 10 15

Ser Glu Ser Pro Ser Lys Pro Gly Glu Lys Lys Gly Ser Asp Glu Lys
20 25 30

Lys Ala Ala Ser Leu Gly Ser Ser Gln Ser Ser Arg Thr Tyr Ala Gly
35 40 45

Gly Thr Ala Ser Ala Thr Lys Val Ser Ala Ser Ser Gly Ala Thr Ser
50 55 60

Lys Ser Ser Ser Met Asn Pro Thr Glu Thr Lys Ala Val Lys Thr Glu
65 70 75 80

Pro Glu Lys Lys Ser Gln Ser Thr Lys Pro Lys Ser Leu Pro Lys Gln
85 90 95

Ala Ser Asp Thr Gly Ser Asn Asp Ala His Asn Lys Lys Ala Val Ser
100 105 110

Arg Ser Ala Glu Gln Gln Pro Ser Glu Lys Ser Thr Glu Pro Lys Thr
115 120 125

Lys Pro Gln Asp Met Ile Ser Ala Gly Gly Glu Ser Val Ala Gly Ile
130 135 140

Thr Ala Ile Ser Gly Lys
145 150

<210> 11227
<211> 754
<212> PRT
<213> Homo sapiens

<220>
<221> source
<223> /note="Payload ID: 2212"

<220>
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<220>

<221> source

<223> /note="Gene Name:
calpastatin"

<220>

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<223> /note="ENSP ID: ENSP00000422677"

<400> 11227

Met Ala Phe Ala Ser Trp Trp Tyr Lys Thr His Val Ser Glu Lys Thr
1 5 10 15

Ser Glu Ser Pro Ser Lys Pro Gly Glu Lys Lys Gly Ser Asp Glu Lys
20 25 30

Lys Ala Ala Ser Leu Gly Ser Ser Gln Ser Ser Arg Thr Tyr Ala Gly
35 40 45

Gly Thr Ala Ser Ala Thr Lys Val Ser Ala Ser Ser Gly Ala Thr Ser
50 55 60

Lys Ser Ser Ser Met Asn Pro Thr Glu Thr Lys Ala Val Lys Thr Glu
65 70 75 80

Pro Glu Lys Lys Ser Gln Ser Thr Lys Leu Ser Val Val His Glu Lys
85 90 95

Lys Ser Gln Glu Gly Lys Pro Lys Glu His Thr Glu Pro Lys Ser Leu
100 105 110

Pro Lys Gln Ala Ser Asp Thr Gly Ser Asn Asp Ala His Asn Lys Lys
115 120 125

Ala Val Ser Arg Ser Ala Glu Gln Gln Pro Ser Glu Lys Ser Thr Glu
130 135 140

Pro Lys Thr Lys Pro Gln Asp Met Ile Ser Ala Gly Gly Glu Ser Val
145 150 155 160

Ala Gly Ile Thr Ala Ile Ser Gly Lys Pro Gly Asp Lys Lys Lys Glu
165 170 175

Lys Lys Ser Leu Thr Pro Ala Val Pro Val Glu Ser Lys Pro Asp Lys

180							185					190						
Pro	Ser	Gly	Lys	Ser	Gly	Met	Asp	Ala	Ala	Leu	Asp	Asp	Leu	Ile	Asp			
		195					200					205						
Thr	Leu	Gly	Gly	Pro	Glu	Glu	Thr	Glu	Glu	Glu	Asn	Thr	Thr	Tyr	Thr			
	210					215					220							
Gly	Pro	Glu	Val	Ser	Asp	Pro	Met	Ser	Ser	Thr	Tyr	Ile	Glu	Glu	Leu			
225					230					235					240			
Gly	Lys	Arg	Glu	Val	Thr	Ile	Pro	Pro	Lys	Tyr	Arg	Glu	Leu	Leu	Ala			
				245					250					255				
Lys	Lys	Glu	Gly	Ile	Thr	Gly	Pro	Pro	Ala	Asp	Ser	Ser	Lys	Pro	Ile			
			260				265						270					
Gly	Pro	Asp	Asp	Ala	Ile	Asp	Ala	Leu	Ser	Ser	Asp	Phe	Thr	Cys	Gly			
		275					280					285						
Ser	Pro	Thr	Ala	Ala	Gly	Lys	Lys	Thr	Glu	Lys	Glu	Glu	Ser	Thr	Glu			
	290					295					300							
Val	Leu	Lys	Ala	Gln	Ser	Ala	Gly	Thr	Val	Arg	Ser	Ala	Ala	Pro	Pro			
305					310					315					320			
Gln	Glu	Lys	Lys	Arg	Lys	Val	Glu	Lys	Asp	Thr	Met	Ser	Asp	Gln	Ala			
				325					330					335				
Leu	Glu	Ala	Leu	Ser	Ala	Ser	Leu	Gly	Thr	Arg	Gln	Ala	Glu	Pro	Glu			
			340					345					350					
Leu	Asp	Leu	Arg	Ser	Ile	Lys	Glu	Val	Asp	Glu	Ala	Lys	Ala	Lys	Glu			
		355					360					365						
Glu	Lys	Leu	Glu	Lys	Cys	Gly	Glu	Asp	Asp	Glu	Thr	Ile	Pro	Ser	Glu			
	370					375					380							
Tyr	Arg	Leu	Lys	Pro	Ala	Thr	Asp	Lys	Asp	Gly	Lys	Pro	Leu	Leu	Pro			
385					390					395					400			
Glu	Pro	Glu	Glu	Lys	Pro	Lys	Pro	Arg	Ser	Glu	Ser	Glu	Leu	Ile	Asp			
				405					410					415				

Glu	Leu	Ser	Glu	Asp	Phe	Asp	Arg	Ser	Glu	Cys	Lys	Glu	Lys	Pro	Ser		
			420					425					430				
Lys	Pro	Thr	Glu	Lys	Thr	Glu	Glu	Ser	Lys	Ala	Ala	Ala	Pro	Ala	Pro		
		435					440					445					
Val	Ser	Glu	Ala	Val	Cys	Arg	Thr	Ser	Met	Cys	Ser	Ile	Gln	Ser	Ala		
	450					455					460						
Pro	Pro	Glu	Pro	Ala	Thr	Leu	Lys	Gly	Thr	Val	Pro	Asp	Asp	Ala	Val		
465					470					475					480		
Glu	Ala	Leu	Ala	Asp	Ser	Leu	Gly	Lys	Lys	Glu	Ala	Asp	Pro	Glu	Asp		
				485					490					495			
Gly	Lys	Pro	Val	Met	Asp	Lys	Val	Lys	Glu	Lys	Ala	Lys	Glu	Glu	Asp		
			500					505					510				
Arg	Glu	Lys	Leu	Gly	Glu	Lys	Glu	Glu	Thr	Ile	Pro	Pro	Asp	Tyr	Arg		
		515					520					525					
Leu	Glu	Glu	Val	Lys	Asp	Lys	Asp	Gly	Lys	Pro	Leu	Leu	Pro	Lys	Glu		
	530					535					540						
Ser	Lys	Glu	Gln	Leu	Pro	Pro	Met	Ser	Glu	Asp	Phe	Leu	Leu	Asp	Ala		
545					550					555					560		
Leu	Ser	Glu	Asp	Phe	Ser	Gly	Pro	Gln	Asn	Ala	Ser	Ser	Leu	Lys	Phe		
				565					570					575			
Glu	Asp	Ala	Lys	Leu	Ala	Ala	Ala	Ile	Ser	Glu	Val	Val	Ser	Gln	Thr		
			580					585					590				
Pro	Ala	Ser	Thr	Thr	Gln	Ala	Gly	Ala	Pro	Pro	Arg	Asp	Thr	Ser	Gln		
		595					600					605					
Ser	Asp	Lys	Asp	Leu	Asp	Asp	Ala	Leu	Asp	Lys	Leu	Ser	Asp	Ser	Leu		
	610					615					620						
Gly	Gln	Arg	Gln	Pro	Asp	Pro	Asp	Glu	Asn	Lys	Pro	Met	Glu	Asp	Lys		
625					630					635					640		

Val Lys Glu Lys Ala Lys Ala Glu His Arg Asp Lys Leu Gly Glu Arg
645 650 655

Asp Asp Thr Ile Pro Pro Glu Tyr Arg His Leu Leu Asp Asp Asn Gly
660 665 670

Gln Asp Lys Pro Val Lys Pro Pro Thr Lys Lys Ser Glu Asp Ser Lys
675 680 685

Lys Pro Ala Asp Asp Gln Asp Pro Ile Asp Ala Leu Ser Gly Asp Leu
690 695 700

Asp Ser Cys Pro Ser Thr Thr Glu Thr Ser Gln Asn Thr Ala Lys Asp
705 710 715 720

Lys Cys Lys Lys Ala Ala Ser Ser Ser Lys Ala Pro Lys Asn Gly Gly
725 730 735

Lys Ala Lys Asp Ser Ala Lys Thr Thr Glu Glu Thr Ser Lys Pro Lys
740 745 750

Asp Asp

<210> 11228
<211> 78
<212> PRT
<213> Homo sapiens

<220>
<221> source
<223> /note="Payload ID: 2212"

<220>
<221> source
<223> /note="Gene Symbol: CAST"

<220>
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<223> /note="Gene Name:
calpastatin"

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<400> 11228
Met Ser Asp Gln Ala Leu Glu Ala Leu Ser Ala Ser Leu Gly Thr Arg

Ser Ala Glu Gln Gln Pro Ser Glu Lys Ser Thr Glu Pro Lys Lys Lys
65 70 75 80

Glu Lys Lys Ser Leu Thr Pro Ala Val Pro Val Glu Ser Lys Pro Asp
85 90 95

Lys Pro Ser Gly Lys Ser Gly Met Asp Ala Ala Leu Asp Asp Leu Ile
100 105 110

Asp Thr Leu Gly Gly Pro Glu Glu Thr Glu Glu Glu Asn Thr Thr Tyr
115 120 125

Thr Gly Pro Glu Val Ser Asp Pro Met Ser Ser Thr Tyr Ile Glu Glu
130 135 140

Leu Gly Lys Arg Glu Val Thr Ile Pro Pro Lys Tyr
145 150 155

<210> 11230
<211> 431
<212> PRT
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<220>
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calpastatin"

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<400> 11230
Met Gly Gln Phe Leu Ser Ser Thr Phe Leu Glu Gly Ser Pro Ala Thr
1 5 10 15

Val Trp His Asp Lys Leu Cys Asp Gly Glu Arg Arg Gly Ala Arg Glu
20 25 30

Ala Val Arg Ile Phe Gln Asp Gln Ala Lys Ala Lys Glu Glu Lys Leu

35					40					45					
Glu	Lys	Cys	Gly	Glu	Asp	Asp	Glu	Thr	Ile	Pro	Ser	Glu	Tyr	Arg	Leu
	50					55					60				
Lys	Pro	Ala	Thr	Asp	Lys	Asp	Gly	Lys	Pro	Leu	Leu	Pro	Glu	Pro	Glu
65					70					75					80
Glu	Lys	Pro	Lys	Pro	Arg	Ser	Glu	Ser	Glu	Leu	Ile	Asp	Glu	Leu	Ser
				85					90					95	
Glu	Asp	Phe	Asp	Arg	Ser	Glu	Cys	Lys	Glu	Lys	Pro	Ser	Lys	Pro	Thr
			100					105					110		
Glu	Lys	Thr	Glu	Glu	Ser	Lys	Ala	Ala	Ala	Pro	Ala	Pro	Val	Ser	Glu
		115					120					125			
Ala	Val	Cys	Arg	Thr	Ser	Met	Cys	Ser	Ile	Gln	Ser	Ala	Pro	Pro	Glu
	130					135					140				
Pro	Ala	Thr	Leu	Lys	Gly	Thr	Val	Pro	Asp	Asp	Ala	Val	Glu	Ala	Leu
145					150					155					160
Ala	Asp	Ser	Leu	Gly	Lys	Lys	Glu	Ala	Asp	Pro	Glu	Asp	Gly	Lys	Pro
				165					170					175	
Val	Met	Asp	Lys	Val	Lys	Glu	Lys	Ala	Lys	Glu	Glu	Asp	Arg	Glu	Lys
			180					185					190		
Leu	Gly	Glu	Lys	Glu	Glu	Thr	Ile	Pro	Pro	Asp	Tyr	Arg	Leu	Glu	Glu
		195					200					205			
Val	Lys	Asp	Lys	Asp	Gly	Lys	Pro	Leu	Leu	Pro	Lys	Glu	Ser	Lys	Glu
	210					215					220				
Gln	Leu	Pro	Pro	Met	Ser	Glu	Asp	Phe	Leu	Leu	Asp	Ala	Leu	Ser	Glu
225					230					235					240
Asp	Phe	Ser	Gly	Pro	Gln	Asn	Ala	Ser	Ser	Leu	Lys	Phe	Glu	Asp	Ala
				245					250					255	
Lys	Leu	Ala	Ala	Ala	Ile	Ser	Glu	Val	Val	Ser	Gln	Thr	Pro	Ala	Ser
			260					265					270		

Thr Thr Gln Ala Gly Ala Pro Pro Arg Asp Thr Ser Gln Ser Asp Lys
275 280 285

Asp Leu Asp Asp Ala Leu Asp Lys Leu Ser Asp Ser Leu Gly Gln Arg
290 295 300

Gln Pro Asp Pro Asp Glu Asn Lys Pro Met Glu Asp Lys Val Lys Glu
305 310 315 320

Lys Ala Lys Ala Glu His Arg Asp Lys Leu Gly Glu Arg Asp Asp Thr
325 330 335

Ile Pro Pro Glu Tyr Arg His Leu Leu Asp Asp Asn Gly Gln Asp Lys
340 345 350

Pro Val Lys Pro Pro Thr Lys Lys Ser Glu Asp Ser Lys Lys Pro Ala
355 360 365

Asp Asp Gln Asp Pro Ile Asp Ala Leu Ser Gly Asp Leu Asp Ser Cys
370 375 380

Pro Ser Thr Thr Glu Thr Ser Gln Asn Thr Ala Lys Asp Lys Cys Lys
385 390 395 400

Lys Ala Ala Ser Ser Ser Lys Ala Pro Lys Asn Gly Gly Lys Ala Lys
405 410 415

Asp Ser Ala Lys Thr Thr Glu Glu Thr Ser Lys Pro Lys Asp Asp
420 425 430

<210> 11231
<211> 393
<212> PRT
<213> Homo sapiens

<220>
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<220>
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<223> /note="Gene Name:
calpastatin"

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<400> 11231

Met Ser Gln Pro Gly Gln Lys Pro Ala Ala Ser Pro Arg Pro Arg Arg
1 5 10 15

Ala Ala Ala Ala Arg Arg Thr His Glu His Val Ser Glu Lys Thr Ser
20 25 30

Glu Ser Pro Ser Lys Pro Gly Glu Lys Lys Gly Ser Asp Glu Lys Lys
35 40 45

Ala Ala Ser Leu Gly Ser Ser Gln Ser Ser Arg Thr Tyr Ala Gly Gly
50 55 60

Thr Ala Ser Ala Thr Lys Val Ser Ala Ser Ser Gly Ala Thr Ser Lys
65 70 75 80

Ser Ser Ser Met Asn Pro Thr Glu Thr Lys Ala Val Lys Thr Glu Pro
85 90 95

Glu Lys Lys Ser Gln Ser Thr Lys Leu Ser Val Val His Glu Lys Lys
100 105 110

Ser Gln Glu Gly Lys Pro Lys Glu His Thr Glu Pro Lys Ser Leu Pro
115 120 125

Lys Gln Ala Ser Asp Thr Gly Ser Asn Asp Ala His Asn Lys Lys Ala
130 135 140

Val Ser Arg Ser Ala Glu Gln Gln Pro Ser Glu Lys Ser Thr Glu Pro
145 150 155 160

Lys Thr Lys Pro Gln Asp Met Ile Ser Ala Gly Gly Glu Ser Val Ala
165 170 175

Gly Ile Thr Ala Ile Ser Gly Lys Pro Gly Asp Lys Lys Lys Glu Lys
180 185 190

Lys Ser Leu Thr Pro Ala Val Pro Val Glu Ser Lys Pro Asp Lys Pro

195		200		205											
Ser	Gly	Lys	Ser	Gly	Met	Asp	Ala	Ala	Leu	Asp	Asp	Leu	Ile	Asp	Thr
	210					215					220				
Leu	Gly	Gly	Pro	Glu	Glu	Thr	Glu	Glu	Glu	Asn	Thr	Thr	Tyr	Thr	Gly
225					230					235					240
Pro	Glu	Val	Ser	Asp	Pro	Met	Ser	Ser	Thr	Tyr	Ile	Glu	Glu	Leu	Gly
				245					250					255	
Lys	Arg	Glu	Val	Thr	Ile	Pro	Pro	Lys	Tyr	Arg	Glu	Leu	Leu	Ala	Lys
			260					265					270		
Pro	Ile	Gly	Pro	Asp	Asp	Ala	Ile	Asp	Ala	Leu	Ser	Ser	Asp	Phe	Thr
		275					280					285			
Cys	Gly	Ser	Pro	Thr	Ala	Ala	Gly	Lys	Lys	Thr	Glu	Lys	Glu	Glu	Ser
	290					295					300				
Thr	Glu	Val	Leu	Lys	Ala	Gln	Ser	Ala	Gly	Thr	Val	Arg	Ser	Ala	Ala
305					310					315					320
Pro	Pro	Gln	Glu	Lys	Lys	Arg	Lys	Val	Glu	Lys	Asp	Thr	Met	Ser	Asp
				325					330					335	
Gln	Ala	Leu	Glu	Ala	Leu	Ser	Ala	Ser	Leu	Gly	Thr	Arg	Gln	Ala	Glu
			340					345					350		
Pro	Glu	Leu	Asp	Leu	Arg	Ser	Ile	Lys	Glu	Val	Asp	Glu	Ala	Lys	Ala
		355					360					365			
Lys	Glu	Glu	Lys	Leu	Glu	Lys	Cys	Gly	Glu	Asp	Asp	Glu	Thr	Ile	Pro
	370					375					380				
Ser	Glu	Tyr	Arg	Leu	Lys	Pro	Ala	Thr							
385					390										

<210> 11232

<211> 288

<212> PRT

<213> Homo sapiens

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<220>
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<223> /note="Gene Name:
      calpastatin"

<220>
<221> source
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<400> 11232
Gly Glu Val Pro Ser Ala Met Ile Val Ser Phe Leu Arg Pro Ser Gln
1          5          10          15

Pro Phe Arg Thr His Val Ser Glu Lys Thr Ser Glu Ser Pro Ser Lys
          20          25          30

Pro Gly Glu Lys Lys Gly Ser Asp Glu Lys Lys Ala Ala Ser Leu Gly
          35          40          45

Ser Ser Gln Ser Ser Arg Thr Tyr Ala Gly Gly Thr Ala Ser Ala Thr
          50          55          60

Lys Val Ser Ala Ser Ser Gly Ala Thr Ser Lys Ser Ser Ser Met Asn
65          70          75          80

Pro Thr Glu Thr Lys Ala Ile Pro Val Ser Gln Gln Met Glu Gly Pro
          85          90          95

His Leu Pro Asn Lys Lys Lys His Lys Lys Gln Ala Val Lys Thr Glu
          100          105          110

Pro Glu Lys Lys Ser Gln Ser Thr Lys Leu Ser Val Val His Glu Lys
          115          120          125

Lys Ser Gln Glu Gly Lys Pro Lys Glu His Thr Glu Pro Lys Ser Leu
          130          135          140

Pro Lys Gln Ala Ser Asp Thr Gly Ser Asn Asp Ala His Asn Lys Lys
145          150          155          160

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Ala Val Ser Arg Ser Ala Glu Gln Gln Pro Ser Glu Lys Ser Thr Glu
165 170 175

Pro Lys Thr Lys Pro Gln Asp Met Ile Ser Ala Gly Gly Glu Ser Val
180 185 190

Ala Gly Ile Thr Ala Ile Ser Gly Lys Pro Gly Asp Lys Lys Lys Glu
195 200 205

Lys Lys Ser Leu Thr Pro Ala Val Pro Val Glu Ser Lys Pro Asp Lys
210 215 220

Pro Ser Gly Lys Ser Gly Met Asp Ala Ala Leu Asp Asp Leu Ile Asp
225 230 235 240

Thr Leu Gly Gly Pro Glu Glu Thr Glu Glu Glu Asn Thr Thr Tyr Thr
245 250 255

Gly Pro Glu Val Ser Asp Pro Met Ser Ser Thr Tyr Ile Glu Glu Leu
260 265 270

Gly Lys Arg Glu Val Thr Ile Pro Pro Lys Tyr Arg Glu Leu Leu Ala
275 280 285

<210> 11233
<211> 694
<212> PRT
<213> Homo sapiens

<220>
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<220>
<221> source
<223> /note="Gene Name:
calpastatin"

<220>
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<400> 11233
Met Glu Gly Pro His Leu Pro Asn Lys Lys Lys His Lys Lys Gln Ala
1 5 10 15

Val	Lys	Thr	Glu	Pro	Glu	Lys	Lys	Ser	Gln	Ser	Thr	Lys	Leu	Ser	Val			
			20					25					30					
Val	His	Glu	Lys	Lys	Ser	Gln	Glu	Gly	Lys	Pro	Lys	Glu	His	Thr	Glu			
		35					40					45						
Pro	Lys	Ser	Leu	Pro	Lys	Gln	Ala	Ser	Asp	Thr	Gly	Ser	Asn	Asp	Ala			
	50					55					60							
His	Asn	Lys	Lys	Ala	Val	Ser	Arg	Ser	Ala	Glu	Gln	Gln	Pro	Ser	Glu			
65					70					75					80			
Lys	Ser	Thr	Glu	Pro	Lys	Thr	Lys	Pro	Gln	Asp	Met	Ile	Ser	Ala	Gly			
				85					90					95				
Gly	Glu	Ser	Val	Ala	Gly	Ile	Thr	Ala	Ile	Ser	Gly	Lys	Pro	Gly	Asp			
			100					105					110					
Lys	Lys	Lys	Glu	Lys	Lys	Ser	Leu	Thr	Pro	Ala	Val	Pro	Val	Glu	Ser			
		115					120					125						
Lys	Pro	Asp	Lys	Pro	Ser	Gly	Lys	Ser	Gly	Met	Asp	Ala	Ala	Leu	Asp			
	130					135					140							
Asp	Leu	Ile	Asp	Thr	Leu	Gly	Gly	Pro	Glu	Glu	Thr	Glu	Glu	Glu	Asn			
145					150					155					160			
Thr	Thr	Tyr	Thr	Gly	Pro	Glu	Val	Ser	Asp	Pro	Met	Ser	Ser	Thr	Tyr			
				165					170					175				
Ile	Glu	Glu	Leu	Gly	Lys	Arg	Glu	Val	Thr	Ile	Pro	Pro	Lys	Tyr	Arg			
			180					185					190					
Glu	Leu	Leu	Ala	Lys	Lys	Glu	Gly	Ile	Thr	Gly	Pro	Pro	Ala	Asp	Ser			
		195					200					205						
Ser	Lys	Pro	Ile	Gly	Pro	Asp	Asp	Ala	Ile	Asp	Ala	Leu	Ser	Ser	Asp			
	210					215					220							
Phe	Thr	Cys	Gly	Ser	Pro	Thr	Ala	Ala	Gly	Lys	Lys	Thr	Glu	Lys	Glu			
225					230					235					240			

Glu	Ser	Thr	Glu	Val	Leu	Lys	Ala	Gln	Ser	Ala	Gly	Thr	Val	Arg	Ser	
				245					250					255		
Ala	Ala	Pro	Pro	Gln	Glu	Lys	Lys	Arg	Lys	Val	Glu	Lys	Asp	Thr	Met	
			260					265					270			
Ser	Asp	Gln	Ala	Leu	Glu	Ala	Leu	Ser	Ala	Ser	Leu	Gly	Thr	Arg	Gln	
		275					280					285				
Ala	Glu	Pro	Glu	Leu	Asp	Leu	Arg	Ser	Ile	Lys	Glu	Val	Asp	Glu	Ala	
	290					295					300					
Lys	Ala	Lys	Glu	Glu	Lys	Leu	Glu	Lys	Cys	Gly	Glu	Asp	Asp	Glu	Thr	
305					310					315					320	
Ile	Pro	Ser	Glu	Tyr	Arg	Leu	Lys	Pro	Ala	Thr	Asp	Lys	Asp	Gly	Lys	
				325					330					335		
Pro	Leu	Leu	Pro	Glu	Pro	Glu	Glu	Lys	Pro	Lys	Pro	Arg	Ser	Glu	Ser	
			340					345					350			
Glu	Leu	Ile	Asp	Glu	Leu	Ser	Glu	Asp	Phe	Asp	Arg	Ser	Glu	Cys	Lys	
		355					360					365				
Glu	Lys	Pro	Ser	Lys	Pro	Thr	Glu	Lys	Thr	Glu	Glu	Ser	Lys	Ala	Ala	
	370					375					380					
Ala	Pro	Ala	Pro	Val	Ser	Glu	Ala	Val	Cys	Arg	Thr	Ser	Met	Cys	Ser	
385					390					395					400	
Ile	Gln	Ser	Ala	Pro	Pro	Glu	Pro	Ala	Thr	Leu	Lys	Gly	Thr	Val	Pro	
				405					410					415		
Asp	Asp	Ala	Val	Glu	Ala	Leu	Ala	Asp	Ser	Leu	Gly	Lys	Lys	Glu	Ala	
			420					425					430			
Asp	Pro	Glu	Asp	Gly	Lys	Pro	Val	Met	Asp	Lys	Val	Lys	Glu	Lys	Ala	
		435					440					445				
Lys	Glu	Glu	Asp	Arg	Glu	Lys	Leu	Gly	Glu	Lys	Glu	Glu	Thr	Ile	Pro	
	450					455					460					

Pro	Asp	Tyr	Arg	Leu	Glu	Glu	Val	Lys	Asp	Lys	Asp	Gly	Lys	Pro	Leu	465	470	475		480
Leu	Pro	Lys	Glu	Ser	Lys	Glu	Gln	Leu	Pro	Pro	Met	Ser	Glu	Asp	Phe		485	490		495
Leu	Leu	Asp	Ala	Leu	Ser	Glu	Asp	Phe	Ser	Gly	Pro	Gln	Asn	Ala	Ser		500	505		510
Ser	Leu	Lys	Phe	Glu	Asp	Ala	Lys	Leu	Ala	Ala	Ala	Ile	Ser	Glu	Val		515	520		525
Val	Ser	Gln	Thr	Pro	Ala	Ser	Thr	Thr	Gln	Ala	Gly	Ala	Pro	Pro	Arg		530	535		540
Asp	Thr	Ser	Gln	Ser	Asp	Lys	Asp	Leu	Asp	Asp	Ala	Leu	Asp	Lys	Leu	545	550	555		560
Ser	Asp	Ser	Leu	Gly	Gln	Arg	Gln	Pro	Asp	Pro	Asp	Glu	Asn	Lys	Pro		565	570		575
Met	Glu	Asp	Lys	Val	Lys	Glu	Lys	Ala	Lys	Ala	Glu	His	Arg	Asp	Lys		580	585		590
Leu	Gly	Glu	Arg	Asp	Asp	Thr	Ile	Pro	Pro	Glu	Tyr	Arg	His	Leu	Leu		595	600		605
Asp	Asp	Asn	Gly	Gln	Asp	Lys	Pro	Val	Lys	Pro	Pro	Thr	Lys	Lys	Ser	610	615	620		
Glu	Asp	Ser	Lys	Lys	Pro	Ala	Asp	Asp	Gln	Asp	Pro	Ile	Asp	Ala	Leu	625	630	635		640
Ser	Gly	Asp	Leu	Asp	Ser	Cys	Pro	Ser	Thr	Thr	Glu	Thr	Ser	Gln	Asn		645	650		655
Thr	Ala	Lys	Asp	Lys	Cys	Lys	Lys	Ala	Ala	Ser	Ser	Ser	Lys	Ala	Pro		660	665		670
Lys	Asn	Gly	Gly	Lys	Ala	Lys	Asp	Ser	Ala	Lys	Thr	Thr	Glu	Glu	Thr		675	680		685
Ser	Lys	Pro	Lys	Asp	Asp															

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<210> 11234
<211> 91
<212> PRT
<213> Homo sapiens

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<220>
<221> source
<223> /note="Gene Symbol: CAST"

<220>
<221> source
<223> /note="Gene Name:
        calpastatin"

<220>
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<400> 11234
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1          5          10          15

Gln Ala Glu Pro Glu Leu Asp Leu Arg Ser Ile Lys Glu Val Asp Glu
          20          25          30

Asp Lys Asp Gly Lys Pro Leu Leu Pro Glu Pro Glu Glu Lys Pro Lys
          35          40          45

Pro Arg Ser Glu Ser Glu Leu Ile Asp Glu Leu Ser Glu Asp Phe Asp
          50          55          60

Arg Ser Glu Cys Lys Glu Lys Pro Ser Lys Pro Thr Glu Lys Thr Glu
65          70          75          80

Glu Ser Lys Ala Ala Ala Pro Ala Pro Val Ser
          85          90

<210> 11235
<211> 465
<212> PRT
<213> Homo sapiens

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<220>

<221> MOD_RES

<222> (1)..(1)

<223> Any amino acid

<400> 11235

Xaa Pro Thr Ala Ala Gly Lys Lys Thr Glu Lys Glu Glu Ser Thr Glu
1 5 10 15

Val Leu Lys Ala Gln Ser Ala Gly Thr Val Arg Ser Ala Ala Pro Pro
20 25 30

Gln Glu Lys Lys Arg Lys Val Glu Lys Asp Thr Met Ser Asp Gln Ala
35 40 45

Leu Glu Ala Leu Ser Ala Ser Leu Gly Thr Arg Gln Ala Glu Pro Glu
50 55 60

Leu Asp Leu Arg Ser Ile Lys Glu Val Asp Glu Ala Lys Ala Lys Glu
65 70 75 80

Glu Lys Leu Glu Lys Cys Gly Glu Asp Asp Glu Thr Ile Pro Ser Glu
85 90 95

Tyr Arg Leu Lys Pro Ala Thr Asp Lys Asp Gly Lys Pro Leu Leu Pro
100 105 110

Glu Pro Glu Glu Lys Pro Lys Pro Arg Ser Glu Ser Glu Leu Ile Asp
115 120 125

Glu Leu Ser Glu Asp Phe Asp Arg Ser Glu Cys Lys Glu Lys Pro Ser
130 135 140

Lys	Pro	Thr	Glu	Lys	Thr	Glu	Glu	Ser	Lys	Ala	Ala	Ala	Pro	Ala	Pro	
145					150					155					160	
Val	Ser	Glu	Ala	Val	Cys	Arg	Thr	Ser	Met	Cys	Ser	Ile	Gln	Ser	Ala	
				165					170					175		
Pro	Pro	Glu	Pro	Ala	Thr	Leu	Lys	Gly	Thr	Val	Pro	Asp	Asp	Ala	Val	
			180					185					190			
Glu	Ala	Leu	Ala	Asp	Ser	Leu	Gly	Lys	Lys	Glu	Ala	Asp	Pro	Glu	Asp	
		195					200					205				
Gly	Lys	Pro	Val	Met	Asp	Lys	Val	Lys	Glu	Lys	Ala	Lys	Glu	Glu	Asp	
	210					215					220					
Arg	Glu	Lys	Leu	Gly	Glu	Lys	Glu	Glu	Thr	Ile	Pro	Pro	Asp	Tyr	Arg	
225					230					235					240	
Leu	Glu	Glu	Val	Lys	Asp	Lys	Asp	Gly	Lys	Pro	Leu	Leu	Pro	Lys	Glu	
				245					250					255		
Ser	Lys	Glu	Gln	Leu	Pro	Pro	Met	Ser	Glu	Asp	Phe	Leu	Leu	Asp	Ala	
			260					265					270			
Leu	Ser	Glu	Asp	Phe	Ser	Gly	Pro	Gln	Asn	Ala	Ser	Ser	Leu	Lys	Phe	
		275					280					285				
Glu	Asp	Ala	Lys	Leu	Ala	Ala	Ala	Ile	Ser	Glu	Val	Val	Ser	Gln	Thr	
	290				295						300					
Pro	Ala	Ser	Thr	Thr	Gln	Ala	Gly	Ala	Pro	Pro	Arg	Asp	Thr	Ser	Ser	
305					310					315					320	
Asp	Lys	Asp	Leu	Asp	Asp	Ala	Leu	Asp	Lys	Leu	Ser	Asp	Ser	Leu	Gly	
				325					330					335		
Gln	Arg	Gln	Pro	Asp	Pro	Asp	Glu	Asn	Lys	Pro	Met	Glu	Asp	Lys	Val	
			340					345					350			
Lys	Glu	Lys	Ala	Lys	Ala	Glu	His	Arg	Asp	Lys	Leu	Gly	Glu	Arg	Asp	
		355					360					365				

Asp Thr Ile Pro Pro Glu Tyr Arg His Leu Leu Asp Asp Asn Gly Gln
370 375 380

Asp Lys Pro Val Lys Pro Pro Thr Lys Lys Ser Glu Asp Ser Lys Lys
385 390 395 400

Pro Ala Asp Asp Gln Asp Pro Ile Asp Ala Leu Ser Gly Asp Leu Asp
405 410 415

Ser Cys Pro Ser Thr Thr Glu Thr Ser Gln Asn Thr Ala Lys Asp Lys
420 425 430

Cys Lys Lys Ala Ala Ser Ser Ser Lys Ala Pro Lys Asn Gly Gly Lys
435 440 445

Ala Lys Asp Ser Ala Lys Thr Thr Glu Glu Thr Ser Lys Pro Lys Asp
450 455 460

Asp
465

<210> 11236
<211> 636
<212> PRT
<213> Homo sapiens

<220>
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<220>
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<220>
<221> source
<223> /note="Gene Name:
calpastatin"

<220>
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<400> 11236
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1 5 10 15

Ser Gln Ser Thr Lys Leu Ser Val Val His Glu Lys Lys Ser Gln Glu
20 25 30

Gly	Lys	Pro	Lys	Glu	His	Thr	Glu	Pro	Lys	Ser	Leu	Pro	Lys	Gln	Ala		
		35					40					45					
Ser	Asp	Thr	Gly	Ser	Asn	Asp	Ala	His	Asn	Lys	Lys	Ala	Val	Ser	Arg		
	50					55					60						
Ser	Ala	Glu	Gln	Gln	Pro	Ser	Glu	Lys	Ser	Thr	Glu	Pro	Lys	Ser	Gly		
65					70					75					80		
Met	Asp	Ala	Ala	Leu	Asp	Asp	Leu	Ile	Asp	Thr	Leu	Gly	Gly	Pro	Glu		
				85					90					95			
Glu	Thr	Glu	Glu	Glu	Asn	Thr	Thr	Tyr	Thr	Gly	Pro	Glu	Val	Ser	Asp		
			100					105					110				
Pro	Met	Ser	Ser	Thr	Tyr	Ile	Glu	Glu	Leu	Gly	Lys	Arg	Glu	Val	Thr		
		115					120					125					
Ile	Pro	Pro	Lys	Tyr	Arg	Glu	Leu	Leu	Ala	Lys	Lys	Glu	Gly	Ile	Thr		
	130					135					140						
Gly	Pro	Pro	Ala	Asp	Ser	Ser	Lys	Pro	Ile	Gly	Pro	Asp	Asp	Ala	Ile		
145					150					155					160		
Asp	Ala	Leu	Ser	Ser	Asp	Phe	Thr	Cys	Gly	Ser	Pro	Thr	Ala	Ala	Gly		
				165					170					175			
Lys	Lys	Thr	Glu	Lys	Glu	Glu	Ser	Thr	Glu	Val	Leu	Lys	Ala	Gln	Ser		
			180					185					190				
Ala	Gly	Thr	Val	Arg	Ser	Ala	Ala	Pro	Pro	Gln	Glu	Lys	Lys	Arg	Lys		
		195					200					205					
Val	Glu	Lys	Asp	Thr	Met	Ser	Asp	Gln	Ala	Leu	Glu	Ala	Leu	Ser	Ala		
	210					215					220						
Ser	Leu	Gly	Thr	Arg	Gln	Ala	Glu	Pro	Glu	Leu	Asp	Leu	Arg	Ser	Ile		
225					230					235					240		
Lys	Glu	Val	Asp	Glu	Ala	Lys	Ala	Lys	Glu	Glu	Lys	Leu	Glu	Lys	Cys		
				245					250					255			

Gly	Glu	Asp	Asp	Glu	Thr	Ile	Pro	Ser	Glu	Tyr	Arg	Leu	Lys	Pro	Ala	
			260					265					270			
Thr	Asp	Lys	Asp	Gly	Lys	Pro	Leu	Leu	Pro	Glu	Pro	Glu	Glu	Lys	Pro	
		275					280					285				
Lys	Pro	Arg	Ser	Glu	Ser	Glu	Leu	Ile	Asp	Glu	Leu	Ser	Glu	Asp	Phe	
	290					295					300					
Asp	Arg	Ser	Glu	Cys	Lys	Glu	Lys	Pro	Ser	Lys	Pro	Thr	Glu	Lys	Thr	
305					310					315					320	
Glu	Glu	Ser	Lys	Ala	Ala	Ala	Pro	Ala	Pro	Val	Ser	Glu	Ala	Val	Cys	
				325					330					335		
Arg	Thr	Ser	Met	Cys	Ser	Ile	Gln	Ser	Ala	Pro	Pro	Glu	Pro	Ala	Thr	
			340					345					350			
Leu	Lys	Gly	Thr	Val	Pro	Asp	Asp	Ala	Val	Glu	Ala	Leu	Ala	Asp	Ser	
		355					360					365				
Leu	Gly	Lys	Lys	Glu	Ala	Asp	Pro	Glu	Asp	Gly	Lys	Pro	Val	Met	Asp	
	370					375					380					
Lys	Val	Lys	Glu	Lys	Ala	Lys	Glu	Glu	Asp	Arg	Glu	Lys	Leu	Gly	Glu	
385					390					395					400	
Lys	Glu	Glu	Thr	Ile	Pro	Pro	Asp	Tyr	Arg	Leu	Glu	Glu	Val	Lys	Asp	
				405					410					415		
Lys	Asp	Gly	Lys	Pro	Leu	Leu	Pro	Lys	Glu	Ser	Lys	Glu	Gln	Leu	Pro	
			420					425					430			
Pro	Met	Ser	Glu	Asp	Phe	Leu	Leu	Asp	Ala	Leu	Ser	Glu	Asp	Phe	Ser	
		435					440					445				
Gly	Pro	Gln	Asn	Ala	Ser	Ser	Leu	Lys	Phe	Glu	Asp	Ala	Lys	Leu	Ala	
	450					455					460					
Ala	Ala	Ile	Ser	Glu	Val	Val	Ser	Gln	Thr	Pro	Ala	Ser	Thr	Thr	Gln	
465					470					475					480	

Ala Gly Ala Pro Pro Arg Asp Thr Ser Gln Ser Asp Lys Asp Leu Asp
485 490 495

Asp Ala Leu Asp Lys Leu Ser Asp Ser Leu Gly Gln Arg Gln Pro Asp
500 505 510

Pro Asp Glu Asn Lys Pro Met Glu Asp Lys Val Lys Glu Lys Ala Lys
515 520 525

Ala Glu His Arg Asp Lys Leu Gly Glu Arg Asp Asp Thr Ile Pro Pro
530 535 540

Glu Tyr Arg His Leu Leu Asp Asp Asn Gly Gln Asp Lys Pro Val Lys
545 550 555 560

Pro Pro Thr Lys Lys Ser Glu Asp Ser Lys Lys Pro Ala Asp Asp Gln
565 570 575

Asp Pro Ile Asp Ala Leu Ser Gly Asp Leu Asp Ser Cys Pro Ser Thr
580 585 590

Thr Glu Thr Ser Gln Asn Thr Ala Lys Asp Lys Cys Lys Lys Ala Ala
595 600 605

Ser Ser Ser Lys Ala Pro Lys Asn Gly Gly Lys Ala Lys Asp Ser Ala
610 615 620

Lys Thr Thr Glu Glu Thr Ser Lys Pro Lys Asp Asp
625 630 635

<210> 11237
<211> 791
<212> PRT
<213> Homo sapiens

<220>
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<223> /note="Payload ID: 2212"

<220>
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<220>
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 <223> /note="Uniprot ID: P20810"

<220>
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<400> 11237

Met Ser Gln Pro Gly Gln Lys Pro Ala Ala Ser Pro Arg Pro Arg Arg
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Ala Ala Ala Ala Arg Arg Thr His Glu His Val Ser Glu Lys Thr Ser
 20 25 30

Glu Ser Pro Ser Lys Pro Gly Glu Lys Lys Gly Ser Asp Glu Lys Lys
 35 40 45

Ala Ala Ser Leu Gly Ser Ser Gln Ser Ser Arg Thr Tyr Ala Gly Gly
 50 55 60

Thr Ala Ser Ala Thr Lys Val Ser Ala Ser Ser Gly Ala Thr Ser Lys
 65 70 75 80

Ser Ser Ser Met Asn Pro Thr Glu Thr Lys Ala Ile Pro Val Ser Gln
 85 90 95

Gln Met Glu Gly Pro His Leu Pro Asn Lys Lys Lys His Lys Lys Gln
 100 105 110

Ala Val Lys Thr Glu Pro Glu Lys Lys Ser Gln Ser Thr Lys Leu Ser
 115 120 125

Val Val His Glu Lys Lys Ser Gln Glu Gly Lys Pro Lys Glu His Thr
 130 135 140

Glu Pro Lys Ser Leu Pro Lys Gln Ala Ser Asp Thr Gly Ser Asn Asp
 145 150 155 160

Ala His Asn Lys Lys Ala Val Ser Arg Ser Ala Glu Gln Gln Pro Ser
 165 170 175

Glu Lys Ser Thr Glu Pro Lys Thr Lys Pro Gln Asp Met Ile Ser Ala
 180 185 190

Gly	Gly	Glu	Ser	Val	Ala	Gly	Ile	Thr	Ala	Ile	Ser	Gly	Lys	Pro	Gly	
		195					200					205				
Asp	Lys	Lys	Lys	Glu	Lys	Lys	Ser	Leu	Thr	Pro	Ala	Val	Pro	Val	Glu	
	210					215					220					
Ser	Lys	Pro	Asp	Lys	Pro	Ser	Gly	Lys	Ser	Gly	Met	Asp	Ala	Ala	Leu	
225					230					235					240	
Asp	Asp	Leu	Ile	Asp	Thr	Leu	Gly	Gly	Pro	Glu	Glu	Thr	Glu	Glu	Glu	
				245					250					255		
Asn	Thr	Thr	Tyr	Thr	Gly	Pro	Glu	Val	Ser	Asp	Pro	Met	Ser	Ser	Thr	
			260					265					270			
Tyr	Ile	Glu	Glu	Leu	Gly	Lys	Arg	Glu	Val	Thr	Ile	Pro	Pro	Lys	Tyr	
		275					280					285				
Arg	Glu	Leu	Leu	Ala	Lys	Lys	Glu	Gly	Ile	Thr	Gly	Pro	Pro	Ala	Asp	
	290					295					300					
Ser	Ser	Lys	Pro	Ile	Gly	Pro	Asp	Asp	Ala	Ile	Asp	Ala	Leu	Ser	Ser	
305					310					315					320	
Asp	Phe	Thr	Cys	Gly	Ser	Pro	Thr	Ala	Ala	Gly	Lys	Lys	Thr	Glu	Lys	
				325					330					335		
Glu	Glu	Ser	Thr	Glu	Val	Leu	Lys	Ala	Gln	Ser	Ala	Gly	Thr	Val	Arg	
			340					345					350			
Ser	Ala	Ala	Pro	Pro	Gln	Glu	Lys	Lys	Arg	Lys	Val	Glu	Lys	Asp	Thr	
		355					360					365				
Met	Ser	Asp	Gln	Ala	Leu	Glu	Ala	Leu	Ser	Ala	Ser	Leu	Gly	Thr	Arg	
	370					375					380					
Gln	Ala	Glu	Pro	Glu	Leu	Asp	Leu	Arg	Ser	Ile	Lys	Glu	Val	Asp	Glu	
385					390					395					400	
Ala	Lys	Ala	Lys	Glu	Glu	Lys	Leu	Glu	Lys	Cys	Gly	Glu	Asp	Asp	Glu	
				405					410					415		

Thr Ile Pro Ser Glu Tyr Arg Leu Lys Pro Ala Thr Asp Lys Asp Gly
 420 425 430
 Lys Pro Leu Leu Pro Glu Pro Glu Glu Lys Pro Lys Pro Arg Ser Glu
 435 440 445
 Ser Glu Leu Ile Asp Glu Leu Ser Glu Asp Phe Asp Arg Ser Glu Cys
 450 455 460
 Lys Glu Lys Pro Ser Lys Pro Thr Glu Lys Thr Glu Glu Ser Lys Ala
 465 470 475 480
 Ala Ala Pro Ala Pro Val Ser Glu Ala Val Cys Arg Thr Ser Met Cys
 485 490 495
 Ser Ile Gln Ser Ala Pro Pro Glu Pro Ala Thr Leu Lys Gly Thr Val
 500 505 510
 Pro Asp Asp Ala Val Glu Ala Leu Ala Asp Ser Leu Gly Lys Lys Glu
 515 520 525
 Ala Asp Pro Glu Asp Gly Lys Pro Val Met Asp Lys Val Lys Glu Lys
 530 535 540
 Ala Lys Glu Glu Asp Arg Glu Lys Leu Gly Glu Lys Glu Glu Thr Ile
 545 550 555 560
 Pro Pro Asp Tyr Arg Leu Glu Glu Val Lys Asp Lys Asp Gly Lys Pro
 565 570 575
 Leu Leu Pro Lys Glu Ser Lys Glu Gln Leu Pro Pro Met Ser Glu Asp
 580 585 590
 Phe Leu Leu Asp Ala Leu Ser Glu Asp Phe Ser Gly Pro Gln Asn Ala
 595 600 605
 Ser Ser Leu Lys Phe Glu Asp Ala Lys Leu Ala Ala Ala Ile Ser Glu
 610 615 620
 Val Val Ser Gln Thr Pro Ala Ser Thr Thr Gln Ala Gly Ala Pro Pro
 625 630 635 640
 Arg Asp Thr Ser Gln Ser Asp Lys Asp Leu Asp Asp Ala Leu Asp Lys

				645						650						655
Leu	Ser	Asp	Ser	Leu	Gly	Gln	Arg	Gln	Pro	Asp	Pro	Asp	Glu	Asn	Lys	
			660					665					670			
Pro	Met	Glu	Asp	Lys	Val	Lys	Glu	Lys	Ala	Lys	Ala	Glu	His	Arg	Asp	
		675					680					685				
Lys	Leu	Gly	Glu	Arg	Asp	Asp	Thr	Ile	Pro	Pro	Glu	Tyr	Arg	His	Leu	
	690					695					700					
Leu	Asp	Asp	Asn	Gly	Gln	Asp	Lys	Pro	Val	Lys	Pro	Pro	Thr	Lys	Lys	
705					710					715					720	
Ser	Glu	Asp	Ser	Lys	Lys	Pro	Ala	Asp	Asp	Gln	Asp	Pro	Ile	Asp	Ala	
				725					730					735		
Leu	Ser	Gly	Asp	Leu	Asp	Ser	Cys	Pro	Ser	Thr	Thr	Glu	Thr	Ser	Gln	
			740					745					750			
Asn	Thr	Ala	Lys	Asp	Lys	Cys	Lys	Lys	Ala	Ala	Ser	Ser	Ser	Lys	Ala	
		755					760					765				
Pro	Lys	Asn	Gly	Gly	Lys	Ala	Lys	Asp	Ser	Ala	Lys	Thr	Thr	Glu	Glu	
	770					775					780					
Thr	Ser	Lys	Pro	Lys	Asp	Asp										
785					790											

<210> 11238

<211> 423

<212> PRT

<213> Homo sapiens

<220>

<221> source

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<223> /note="Gene Name:
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<220>
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<223> /note="ENSP ID: ENSP00000425787"

<400> 11238

Met Ser Asp Gln Ala Leu Glu Ala Leu Ser Ala Ser Leu Gly Thr Arg
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Gln Ala Glu Pro Glu Leu Asp Leu Arg Ser Ile Lys Glu Val Asp Glu
20 25 30

Ala Lys Ala Lys Glu Glu Lys Leu Glu Lys Cys Gly Glu Asp Asp Glu
35 40 45

Thr Ile Pro Ser Glu Tyr Arg Leu Lys Pro Ala Thr Asp Lys Asp Gly
50 55 60

Lys Pro Leu Leu Pro Glu Pro Glu Glu Lys Pro Lys Pro Arg Ser Glu
65 70 75 80

Ser Glu Leu Ile Asp Glu Leu Ser Glu Asp Phe Asp Arg Ser Glu Cys
85 90 95

Lys Glu Lys Pro Ser Lys Pro Thr Glu Lys Thr Glu Glu Ser Lys Ala
100 105 110

Ala Ala Pro Ala Pro Val Ser Glu Ala Val Cys Arg Thr Ser Met Cys
115 120 125

Ser Ile Gln Ser Ala Pro Pro Glu Pro Ala Thr Leu Lys Gly Thr Val
130 135 140

Pro Asp Asp Ala Val Glu Ala Leu Ala Asp Ser Leu Gly Lys Lys Glu
145 150 155 160

Ala Asp Pro Glu Asp Gly Lys Pro Val Met Asp Lys Val Lys Glu Lys
165 170 175

Ala Lys Glu Glu Asp Arg Glu Lys Leu Gly Glu Lys Glu Glu Thr Ile
180 185 190

Pro Pro Asp Tyr Arg Leu Glu Glu Val Lys Asp Lys Asp Gly Lys Pro
195 200 205

Leu	Leu	Pro	Lys	Glu	Ser	Lys	Glu	Gln	Leu	Pro	Pro	Met	Ser	Glu	Asp
210						215					220				
Phe	Leu	Leu	Asp	Ala	Leu	Ser	Glu	Asp	Phe	Ser	Gly	Pro	Gln	Asn	Ala
225					230					235					240
Ser	Ser	Leu	Lys	Phe	Glu	Asp	Ala	Lys	Leu	Ala	Ala	Ala	Ile	Ser	Glu
				245					250					255	
Val	Val	Ser	Gln	Thr	Pro	Ala	Ser	Thr	Thr	Gln	Ala	Gly	Ala	Pro	Pro
			260					265					270		
Arg	Asp	Thr	Ser	Gln	Ser	Asp	Lys	Asp	Leu	Asp	Asp	Ala	Leu	Asp	Lys
		275					280					285			
Leu	Ser	Asp	Ser	Leu	Gly	Gln	Arg	Gln	Pro	Asp	Pro	Asp	Glu	Asn	Lys
	290					295					300				
Pro	Met	Glu	Asp	Lys	Val	Lys	Glu	Lys	Ala	Lys	Ala	Glu	His	Arg	Asp
305					310					315					320
Lys	Leu	Gly	Glu	Arg	Asp	Asp	Thr	Ile	Pro	Pro	Glu	Tyr	Arg	His	Leu
				325					330					335	
Leu	Asp	Asp	Asn	Gly	Gln	Asp	Lys	Pro	Val	Lys	Pro	Pro	Thr	Lys	Lys
			340					345					350		
Ser	Glu	Asp	Ser	Lys	Lys	Pro	Ala	Asp	Asp	Gln	Asp	Pro	Ile	Asp	Ala
		355					360					365			
Leu	Ser	Gly	Asp	Leu	Asp	Ser	Cys	Pro	Ser	Thr	Thr	Glu	Thr	Ser	Gln
	370					375					380				
Asn	Thr	Ala	Lys	Asp	Lys	Cys	Lys	Lys	Ala	Ala	Ser	Ser	Ser	Lys	Ala
385					390					395					400
Pro	Lys	Asn	Gly	Gly	Lys	Ala	Lys	Asp	Ser	Ala	Lys	Thr	Thr	Glu	Glu
				405					410					415	
Thr	Ser	Lys	Pro	Lys	Asp	Asp									
			420												

<210> 11239

<211> 301
<212> PRT
<213> Homo sapiens

<220>
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<223> /note="Payload ID: 2212"

<220>
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<223> /note="Gene Symbol: CAST"

<220>
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<223> /note="Gene Name:
calpastatin"

<220>
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<220>
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<222> (1)..(1)
<223> Any amino acid

<400> 11239
Xaa Ala Ala Arg Arg Thr His Glu His Val Ser Glu Lys Thr Ser Glu
1 5 10 15

Ser Pro Ser Lys Pro Gly Glu Lys Lys Gly Ser Asp Glu Lys Lys Ala
20 25 30

Ala Ser Leu Gly Ser Ser Gln Ser Ser Arg Thr Tyr Ala Gly Gly Thr
35 40 45

Ala Ser Ala Thr Lys Val Ser Ala Ser Ser Gly Ala Thr Ser Lys Ser
50 55 60

Ser Ser Met Asn Pro Thr Glu Thr Lys Ala Val Lys Thr Glu Pro Glu
65 70 75 80

Lys Lys Ser Gln Ser Thr Lys Leu Ser Val Val His Glu Lys Lys Ser
85 90 95

Gln Glu Gly Lys Pro Lys Glu His Thr Glu Pro Lys Ser Leu Pro Lys
100 105 110

Gln Ala Ser Asp Thr Gly Ser Asn Asp Ala His Asn Lys Lys Ala Val

115		120		125											
Ser	Arg	Ser	Ala	Glu	Gln	Gln	Pro	Ser	Glu	Lys	Ser	Thr	Glu	Pro	Lys
	130					135					140				
Lys	Lys	Glu	Lys	Lys	Ser	Leu	Thr	Pro	Ala	Val	Pro	Val	Glu	Ser	Lys
145					150					155					160
Pro	Asp	Lys	Pro	Ser	Gly	Lys	Ser	Gly	Met	Asp	Ala	Ala	Leu	Asp	Asp
				165					170					175	
Leu	Ile	Asp	Thr	Leu	Gly	Gly	Pro	Glu	Glu	Thr	Glu	Glu	Glu	Asn	Thr
			180					185					190		
Thr	Tyr	Thr	Gly	Pro	Glu	Val	Ser	Asp	Pro	Met	Ser	Ser	Thr	Tyr	Ile
		195					200					205			
Glu	Glu	Leu	Gly	Lys	Arg	Glu	Val	Thr	Ile	Pro	Pro	Lys	Tyr	Arg	Glu
	210					215					220				
Leu	Leu	Ala	Lys	Lys	Glu	Gly	Ile	Thr	Gly	Pro	Pro	Ala	Asp	Ser	Ser
225					230					235					240
Lys	Pro	Ile	Gly	Pro	Asp	Asp	Ala	Ile	Asp	Ala	Leu	Ser	Ser	Asp	Phe
				245					250					255	
Thr	Cys	Gly	Ser	Pro	Thr	Ala	Ala	Gly	Lys	Lys	Thr	Glu	Lys	Glu	Glu
			260					265					270		
Ser	Thr	Glu	Val	Leu	Lys	Ala	Gln	Ser	Ala	Gly	Thr	Val	Arg	Ser	Ala
		275					280					285			
Ala	Pro	Pro	Gln	Glu	Lys	Lys	Arg	Lys	Val	Glu	Lys	Val			
	290					295					300				

<210> 11240

<211> 673

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2212"

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<221> source
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<220>
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<223> /note="Gene Name:
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<220>
<221> source
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<400> 11240
Met Asn Pro Thr Glu Thr Lys Ala Val Lys Thr Glu Pro Glu Lys Lys
1          5          10          15

Ser Gln Ser Thr Lys Leu Ser Val Val His Glu Lys Lys Ser Gln Glu
          20          25          30

Gly Lys Pro Lys Glu His Thr Glu Pro Lys Ser Leu Pro Lys Gln Ala
          35          40          45

Ser Asp Thr Gly Ser Asn Asp Ala His Asn Lys Lys Ala Val Ser Arg
          50          55          60

Ser Ala Glu Gln Gln Pro Ser Glu Lys Ser Thr Glu Pro Lys Thr Lys
65          70          75          80

Pro Gln Asp Met Ile Ser Ala Gly Gly Glu Ser Val Ala Gly Ile Thr
          85          90          95

Ala Ile Ser Gly Lys Pro Gly Asp Lys Lys Lys Glu Lys Lys Ser Leu
          100          105          110

Thr Pro Ala Val Pro Val Glu Ser Lys Pro Asp Lys Pro Ser Gly Lys
          115          120          125

Ser Gly Met Asp Ala Ala Leu Asp Asp Leu Ile Asp Thr Leu Gly Gly
          130          135          140

Pro Glu Glu Thr Glu Glu Glu Asn Thr Thr Tyr Thr Gly Pro Glu Val
145          150          155          160

Ser Asp Pro Met Ser Ser Thr Tyr Ile Glu Glu Leu Gly Lys Arg Glu
          165          170          175

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Val	Thr	Ile	Pro	Pro	Lys	Tyr	Arg	Glu	Leu	Leu	Ala	Lys	Pro	Ile	Gly	
			180					185					190			
Pro	Asp	Asp	Ala	Ile	Asp	Ala	Leu	Ser	Ser	Asp	Phe	Thr	Cys	Gly	Ser	
		195					200					205				
Pro	Thr	Ala	Ala	Gly	Lys	Lys	Thr	Glu	Lys	Glu	Glu	Ser	Thr	Glu	Val	
	210					215					220					
Leu	Lys	Ala	Gln	Ser	Ala	Gly	Thr	Val	Arg	Ser	Ala	Ala	Pro	Pro	Gln	
225					230					235					240	
Glu	Lys	Lys	Arg	Lys	Val	Glu	Lys	Asp	Thr	Met	Ser	Asp	Gln	Ala	Leu	
				245					250					255		
Glu	Ala	Leu	Ser	Ala	Ser	Leu	Gly	Thr	Arg	Gln	Ala	Glu	Pro	Glu	Leu	
			260					265					270			
Asp	Leu	Arg	Ser	Ile	Lys	Glu	Val	Asp	Glu	Ala	Lys	Ala	Lys	Glu	Glu	
		275					280					285				
Lys	Leu	Glu	Lys	Cys	Gly	Glu	Asp	Asp	Glu	Thr	Ile	Pro	Ser	Glu	Tyr	
	290					295					300					
Arg	Leu	Lys	Pro	Ala	Thr	Asp	Lys	Asp	Gly	Lys	Pro	Leu	Leu	Pro	Glu	
305					310					315					320	
Pro	Glu	Glu	Lys	Pro	Lys	Pro	Arg	Ser	Glu	Ser	Glu	Leu	Ile	Asp	Glu	
				325					330					335		
Leu	Ser	Glu	Asp	Phe	Asp	Arg	Ser	Glu	Cys	Lys	Glu	Lys	Pro	Ser	Lys	
			340					345					350			
Pro	Thr	Glu	Lys	Thr	Glu	Glu	Ser	Lys	Ala	Ala	Ala	Pro	Ala	Pro	Val	
		355					360					365				
Ser	Glu	Ala	Val	Cys	Arg	Thr	Ser	Met	Cys	Ser	Ile	Gln	Ser	Ala	Pro	
	370					375					380					
Pro	Glu	Pro	Ala	Thr	Leu	Lys	Gly	Thr	Val	Pro	Asp	Asp	Ala	Val	Glu	
385					390					395					400	
Ala	Leu	Ala	Asp	Ser	Leu	Gly	Lys	Lys	Glu	Ala	Asp	Pro	Glu	Asp	Gly	

				405					410					415			
Lys	Pro	Val	Met	Asp	Lys	Val	Lys	Glu	Lys	Ala	Lys	Glu	Glu	Asp	Arg		
			420					425					430				
Glu	Lys	Leu	Gly	Glu	Lys	Glu	Glu	Thr	Ile	Pro	Pro	Asp	Tyr	Arg	Leu		
		435					440					445					
Glu	Glu	Val	Lys	Asp	Lys	Asp	Gly	Lys	Pro	Leu	Leu	Pro	Lys	Glu	Ser		
	450					455					460						
Lys	Glu	Gln	Leu	Pro	Pro	Met	Ser	Glu	Asp	Phe	Leu	Leu	Asp	Ala	Leu		
465					470					475					480		
Ser	Glu	Asp	Phe	Ser	Gly	Pro	Gln	Asn	Ala	Ser	Ser	Leu	Lys	Phe	Glu		
				485					490					495			
Asp	Ala	Lys	Leu	Ala	Ala	Ala	Ile	Ser	Glu	Val	Val	Ser	Gln	Thr	Pro		
			500					505					510				
Ala	Ser	Thr	Thr	Gln	Ala	Gly	Ala	Pro	Pro	Arg	Asp	Thr	Ser	Gln	Ser		
		515					520					525					
Asp	Lys	Asp	Leu	Asp	Asp	Ala	Leu	Asp	Lys	Leu	Ser	Asp	Ser	Leu	Gly		
	530					535					540						
Gln	Arg	Gln	Pro	Asp	Pro	Asp	Glu	Asn	Lys	Pro	Met	Glu	Asp	Lys	Val		
545					550					555					560		
Lys	Glu	Lys	Ala	Lys	Ala	Glu	His	Arg	Asp	Lys	Leu	Gly	Glu	Arg	Asp		
				565					570					575			
Asp	Thr	Ile	Pro	Pro	Glu	Tyr	Arg	His	Leu	Leu	Asp	Asp	Asn	Gly	Gln		
			580					585					590				
Asp	Lys	Pro	Val	Lys	Pro	Pro	Thr	Lys	Lys	Ser	Glu	Asp	Ser	Lys	Lys		
		595					600					605					
Pro	Ala	Asp	Asp	Gln	Asp	Pro	Ile	Asp	Ala	Leu	Ser	Gly	Asp	Leu	Asp		
	610					615					620						
Ser	Cys	Pro	Ser	Thr	Thr	Glu	Thr	Ser	Gln	Asn	Thr	Ala	Lys	Asp	Lys		
625					630					635					640		

Cys Lys Lys Ala Ala Ser Ser Ser Lys Ala Pro Lys Asn Gly Gly Lys
645 650 655

Ala Lys Asp Ser Ala Lys Thr Thr Glu Glu Thr Ser Lys Pro Lys Asp
660 665 670

Asp

<210> 11241
<211> 156
<212> PRT
<213> Homo sapiens

<220>
<221> source
<223> /note="Payload ID: 2212"

<220>
<221> source
<223> /note="Gene Symbol: CAST"

<220>
<221> source
<223> /note="Gene Name:
calpastatin"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000427092"

<400> 11241
Met Ala Phe Ala Ser Trp Trp Tyr Lys Thr His Val Ser Glu Lys Thr
1 5 10 15

Ser Glu Ser Pro Ser Lys Pro Gly Glu Lys Lys Gly Ser Asp Glu Lys
20 25 30

Lys Ala Ala Ser Leu Gly Ser Ser Gln Ser Ser Arg Thr Tyr Ala Gly
35 40 45

Gly Thr Ala Ser Ala Thr Lys Val Ser Ala Ser Ser Gly Ala Thr Ser
50 55 60

Lys Ser Ser Ser Met Asn Pro Thr Glu Thr Lys Ala Ile Pro Val Ser
65 70 75 80

Gln Gln Met Glu Gly Pro His Leu Pro Asn Lys Lys Lys His Lys Lys
85 90 95

Gln Ala Val Lys Thr Glu Pro Glu Lys Lys Ser Gln Ser Thr Lys Leu
100 105 110

Ser Val Val His Glu Lys Lys Ser Gln Glu Gly Lys Pro Lys Glu His
115 120 125

Thr Glu Pro Lys Ser Leu Pro Lys Gln Ala Ser Asp Thr Gly Ser Asn
130 135 140

Asp Ala His Asn Lys Lys Ala Val Ser Arg Ser Ala
145 150 155

<210> 11242
<211> 203
<212> PRT
<213> Homo sapiens

<220>
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<223> /note="Payload ID: 2212"

<220>
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<220>
<221> source
<223> /note="Gene Name:
calpastatin"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000427195"

<400> 11242
Met Ser Glu Asp Phe Leu Leu Asp Ala Leu Ser Glu Asp Phe Ser Gly
1 5 10 15

Pro Gln Asn Ala Ser Ser Leu Lys Phe Glu Asp Ala Lys Leu Ala Ala
20 25 30

Ala Ile Ser Glu Val Val Ser Gln Thr Pro Ala Ser Thr Thr Gln Ala
35 40 45

Gly Ala Pro Pro Arg Asp Thr Ser Gln Ser Asp Lys Asp Leu Asp Asp
50 55 60

Ala Leu Asp Lys Leu Ser Asp Ser Leu Gly Gln Arg Gln Pro Asp Pro
65 70 75 80

Asp Glu Asn Lys Pro Met Glu Asp Lys Val Lys Glu Lys Ala Lys Ala
85 90 95

Glu His Arg Asp Lys Leu Gly Glu Arg Asp Asp Thr Ile Pro Pro Glu
100 105 110

Tyr Arg His Leu Leu Asp Asp Asn Gly Gln Asp Lys Pro Val Lys Pro
115 120 125

Pro Thr Lys Lys Ser Glu Asp Ser Lys Lys Pro Ala Asp Asp Gln Asp
130 135 140

Pro Ile Asp Ala Leu Ser Gly Asp Leu Asp Ser Cys Pro Ser Thr Thr
145 150 155 160

Glu Thr Ser Gln Asn Thr Ala Lys Asp Lys Cys Lys Lys Ala Ala Ser
165 170 175

Ser Ser Lys Ala Pro Lys Asn Gly Gly Lys Ala Lys Asp Ser Ala Lys
180 185 190

Thr Thr Glu Glu Thr Ser Lys Pro Lys Asp Asp
195 200

<210> 11243

<211> 450

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2212"

<220>

<221> source

<223> /note="Gene Symbol: CAST"

<220>

<221> source

<223> /note="Gene Name:
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<220>

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<220>
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<222> (1)..(1)
<223> Any amino acid

<400> 11243

Xaa Gly Ser Leu Pro Asp Phe Gln Gln Gln Ser Leu Ser Leu Gly Leu
1 5 10 15

Pro Trp Pro Lys Met Gly Gln Phe Leu Ser Ser Thr Phe Leu Glu Gly
20 25 30

Ser Pro Ala Thr Val Trp His Asp Lys Leu Cys Asp Gly Glu Arg Arg
35 40 45

Gly Ala Arg Glu Ala Val Arg Ile Phe Gln Asp Gln Ala Lys Ala Lys
50 55 60

Glu Glu Lys Leu Glu Lys Cys Gly Glu Asp Asp Glu Thr Ile Pro Ser
65 70 75 80

Glu Tyr Arg Leu Lys Pro Ala Thr Asp Lys Asp Gly Lys Pro Leu Leu
85 90 95

Pro Glu Pro Glu Glu Lys Pro Lys Pro Arg Ser Glu Ser Glu Leu Ile
100 105 110

Asp Glu Leu Ser Glu Asp Phe Asp Arg Ser Glu Cys Lys Glu Lys Pro
115 120 125

Ser Lys Pro Thr Glu Lys Thr Glu Glu Ser Lys Ala Ala Ala Pro Ala
130 135 140

Pro Val Ser Glu Ala Val Cys Arg Thr Ser Met Cys Ser Ile Gln Ser
145 150 155 160

Ala Pro Pro Glu Pro Ala Thr Leu Lys Gly Thr Val Pro Asp Asp Ala
165 170 175

Val Glu Ala Leu Ala Asp Ser Leu Gly Lys Lys Glu Ala Asp Pro Glu
180 185 190

Asp	Gly	Lys	Pro	Val	Met	Asp	Lys	Val	Lys	Glu	Lys	Ala	Lys	Glu	Glu		
		195					200					205					
Asp	Arg	Glu	Lys	Leu	Gly	Glu	Lys	Glu	Glu	Thr	Ile	Pro	Pro	Asp	Tyr		
	210					215					220						
Arg	Leu	Glu	Glu	Val	Lys	Asp	Lys	Asp	Gly	Lys	Pro	Leu	Leu	Pro	Lys		
225					230					235					240		
Glu	Ser	Lys	Glu	Gln	Leu	Pro	Pro	Met	Ser	Glu	Asp	Phe	Leu	Leu	Asp		
				245					250						255		
Ala	Leu	Ser	Glu	Asp	Phe	Ser	Gly	Pro	Gln	Asn	Ala	Ser	Ser	Leu	Lys		
			260					265					270				
Phe	Glu	Asp	Ala	Lys	Leu	Ala	Ala	Ala	Ile	Ser	Glu	Val	Val	Ser	Gln		
		275					280					285					
Thr	Pro	Ala	Ser	Thr	Thr	Gln	Ala	Gly	Ala	Pro	Pro	Arg	Asp	Thr	Ser		
	290					295					300						
Ser	Asp	Lys	Asp	Leu	Asp	Asp	Ala	Leu	Asp	Lys	Leu	Ser	Asp	Ser	Leu		
305					310					315					320		
Gly	Gln	Arg	Gln	Pro	Asp	Pro	Asp	Glu	Asn	Lys	Pro	Met	Glu	Asp	Lys		
				325					330					335			
Val	Lys	Glu	Lys	Ala	Lys	Ala	Glu	His	Arg	Asp	Lys	Leu	Gly	Glu	Arg		
			340					345					350				
Asp	Asp	Thr	Ile	Pro	Pro	Glu	Tyr	Arg	His	Leu	Leu	Asp	Asp	Asn	Gly		
		355					360					365					
Gln	Asp	Lys	Pro	Val	Lys	Pro	Pro	Thr	Lys	Lys	Ser	Glu	Asp	Ser	Lys		
	370					375					380						
Lys	Pro	Ala	Asp	Asp	Gln	Asp	Pro	Ile	Asp	Ala	Leu	Ser	Gly	Asp	Leu		
385					390					395					400		
Asp	Ser	Cys	Pro	Ser	Thr	Thr	Glu	Thr	Ser	Gln	Asn	Thr	Ala	Lys	Asp		
				405					410					415			

Lys Cys Lys Lys Ala Ala Ser Ser Ser Lys Ala Pro Lys Asn Gly Gly
420 425 430

Lys Ala Lys Asp Ser Ala Lys Thr Thr Glu Glu Thr Ser Lys Pro Lys
435 440 445

Asp Asp
450

<210> 11244
<211> 297
<212> PRT
<213> Homo sapiens

<220>
<221> source
<223> /note="Payload ID: 2213"

<220>
<221> source
<223> /note="Gene Symbol: CNN1"

<220>
<221> source
<223> /note="Gene Name:
calponin 1, basic, smooth muscle"

<220>
<221> source
<223> /note="Uniprot ID: P51911"

<220>
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<223> /note="ENSP ID: ENSP00000252456"

<400> 11244
Met Ser Ser Ala His Phe Asn Arg Gly Pro Ala Tyr Gly Leu Ser Ala
1 5 10 15

Glu Val Lys Asn Lys Leu Ala Gln Lys Tyr Asp His Gln Arg Glu Gln
20 25 30

Glu Leu Arg Glu Trp Ile Glu Gly Val Thr Gly Arg Arg Ile Gly Asn
35 40 45

Asn Phe Met Asp Gly Leu Lys Asp Gly Ile Ile Leu Cys Glu Phe Ile
50 55 60

Asn Lys Leu Gln Pro Gly Ser Val Lys Lys Ile Asn Glu Ser Thr Gln
65 70 75 80

25225

Asn	Trp	His	Gln	Leu	Glu	Asn	Ile	Gly	Asn	Phe	Ile	Lys	Ala	Ile	Thr		
				85					90					95			
Lys	Tyr	Gly	Val	Lys	Pro	His	Asp	Ile	Phe	Glu	Ala	Asn	Asp	Leu	Phe		
			100					105					110				
Glu	Asn	Thr	Asn	His	Thr	Gln	Val	Gln	Ser	Thr	Leu	Leu	Ala	Leu	Ala		
		115					120					125					
Ser	Met	Ala	Lys	Thr	Lys	Gly	Asn	Lys	Val	Asn	Val	Gly	Val	Lys	Tyr		
	130					135					140						
Ala	Glu	Lys	Gln	Glu	Arg	Lys	Phe	Glu	Pro	Gly	Lys	Leu	Arg	Glu	Gly		
145					150					155					160		
Arg	Asn	Ile	Ile	Gly	Leu	Gln	Met	Gly	Thr	Asn	Lys	Phe	Ala	Ser	Gln		
				165					170					175			
Gln	Gly	Met	Thr	Ala	Tyr	Gly	Thr	Arg	Arg	His	Leu	Tyr	Asp	Pro	Lys		
			180					185					190				
Leu	Gly	Thr	Asp	Gln	Pro	Leu	Asp	Gln	Ala	Thr	Ile	Ser	Leu	Gln	Met		
		195					200					205					
Gly	Thr	Asn	Lys	Gly	Ala	Ser	Gln	Ala	Gly	Met	Thr	Ala	Pro	Gly	Thr		
	210					215					220						
Lys	Arg	Gln	Ile	Phe	Glu	Pro	Gly	Leu	Gly	Met	Glu	His	Cys	Asp	Thr		
225					230					235					240		
Leu	Asn	Val	Ser	Leu	Gln	Met	Gly	Ser	Asn	Lys	Gly	Ala	Ser	Gln	Arg		
				245					250					255			
Gly	Met	Thr	Val	Tyr	Gly	Leu	Pro	Arg	Gln	Val	Tyr	Asp	Pro	Lys	Tyr		
			260					265					270				
Cys	Leu	Thr	Pro	Glu	Tyr	Pro	Glu	Leu	Gly	Glu	Pro	Ala	His	Asn	His		
		275					280					285					
His	Ala	His	Asn	Tyr	Tyr	Asn	Ser	Ala									
	290					295											

<210> 11245
 <211> 247
 <212> PRT
 <213> Homo sapiens

 <220>
 <221> source
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 <220>
 <221> source
 <223> /note="Gene Symbol: CNN1"

 <220>
 <221> source
 <223> /note="Gene Name:
 calponin 1, basic, smooth muscle"

 <220>
 <221> source
 <223> /note="ENSP ID: ENSP00000442031"

 <400> 11245
 Met Asp Gly Leu Lys Asp Gly Ile Ile Leu Cys Glu Phe Ile Asn Lys
 1 5 10 15

 Leu Gln Pro Gly Ser Val Lys Lys Ile Asn Glu Ser Thr Gln Asn Trp
 20 25 30

 His Gln Leu Glu Asn Ile Gly Asn Phe Ile Lys Ala Ile Thr Lys Tyr
 35 40 45

 Gly Val Lys Pro His Asp Ile Phe Glu Ala Asn Asp Leu Phe Glu Asn
 50 55 60

 Thr Asn His Thr Gln Val Gln Ser Thr Leu Leu Ala Leu Ala Ser Met
 65 70 75 80

 Ala Lys Thr Lys Gly Asn Lys Val Asn Val Gly Val Lys Tyr Ala Glu
 85 90 95

 Lys Gln Glu Arg Lys Phe Glu Pro Gly Lys Leu Arg Glu Gly Arg Asn
 100 105 110

 Ile Ile Gly Leu Gln Met Gly Thr Asn Lys Phe Ala Ser Gln Gln Gly
 115 120 125

 Met Thr Ala Tyr Gly Thr Arg Arg His Leu Tyr Asp Pro Lys Leu Gly

130		135		140
Thr Asp Gln Pro Leu Asp Gln Ala Thr Ile Ser Leu Gln Met Gly Thr				
145		150	155	160
Asn Lys Gly Ala Ser Gln Ala Gly Met Thr Ala Pro Gly Thr Lys Arg				
	165		170	175
Gln Ile Phe Glu Pro Gly Leu Gly Met Glu His Cys Asp Thr Leu Asn				
	180		185	190
Val Ser Leu Gln Met Gly Ser Asn Lys Gly Ala Ser Gln Arg Gly Met				
	195		200	205
Thr Val Tyr Gly Leu Pro Arg Gln Val Tyr Asp Pro Lys Tyr Cys Leu				
	210		215	220
Thr Pro Glu Tyr Pro Glu Leu Gly Glu Pro Ala His Asn His His Ala				
225		230	235	240
His Asn Tyr Tyr Asn Ser Ala				
	245			

<210> 11246
 <211> 116
 <212> PRT
 <213> Homo sapiens

<220>
 <221> source
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<220>
 <221> source
 <223> /note="Gene Symbol: CNN1"

<220>
 <221> source
 <223> /note="Gene Name:
 calponin 1, basic, smooth muscle"

<220>
 <221> source
 <223> /note="ENSP ID: ENSP00000466886"

<400> 11246
 Met Asp Gly Leu Lys Asp Gly Ile Ile Leu Cys Glu Phe Ile Asn Lys
 1 5 10 15

Leu Gln Pro Gly Ser Val Lys Lys Ile Asn Glu Ser Thr Gln Asn Trp
 20 25 30

 His Gln Leu Glu Asn Ile Gly Asn Phe Ile Lys Ala Ile Thr Lys Tyr
 35 40 45

 Gly Val Lys Pro His Asp Ile Phe Glu Ala Asn Asp Leu Phe Glu Asn
 50 55 60

 Thr Asn His Thr Gln Val Gln Ser Thr Leu Leu Ala Leu Ala Ser Met
 65 70 75 80

 Ala Lys Thr Lys Gly Asn Lys Val Asn Val Gly Val Lys Tyr Ala Glu
 85 90 95

 Lys Gln Glu Arg Lys Phe Glu Pro Gly Lys Leu Arg Glu Gly Arg Asn
 100 105 110

 Ile Ile Gly Leu
 115

<210> 11247
 <211> 173
 <212> PRT
 <213> Homo sapiens

<220>
 <221> source
 <223> /note="Payload ID: 2213"

<220>
 <221> source
 <223> /note="Gene Symbol: CNN1"

<220>
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 <223> /note="Gene Name:
 calponin 1, basic, smooth muscle"

<220>
 <221> source
 <223> /note="ENSP ID: ENSP00000467701"

<220>
 <221> MOD_RES
 <222> (1)..(1)
 <223> Any amino acid

<400> 11247

Xaa Lys Ile Asn Glu Ser Thr Gln Asn Trp His Gln Leu Glu Asn Ile
1 5 10 15

Gly Asn Phe Ile Lys Ala Ile Thr Lys Tyr Gly Val Lys Pro His Asp
20 25 30

Ile Phe Glu Ala Asn Asp Leu Phe Glu Asn Thr Asn His Thr Gln Val
35 40 45

Gln Ser Thr Leu Leu Ala Leu Ala Ser Met Ala Lys Thr Lys Gly Asn
50 55 60

Lys Val Asn Val Gly Val Lys Tyr Ala Glu Lys Gln Glu Arg Lys Phe
65 70 75 80

Glu Pro Gly Lys Leu Arg Glu Gly Arg Asn Ile Ile Gly Leu Gln Met
85 90 95

Gly Thr Asn Lys Phe Ala Ser Gln Gln Gly Met Thr Ala Tyr Gly Thr
100 105 110

Arg Arg His Leu Tyr Asp Pro Lys Leu Gly Thr Asp Gln Pro Leu Asp
115 120 125

Gln Ala Thr Ile Ser Leu Gln Met Gly Thr Asn Lys Gly Ala Ser Gln
130 135 140

Val Ser Gly Gly Pro Arg Asp Thr Pro Ser Arg Pro Arg Thr Leu Ala
145 150 155 160

Thr Pro Arg Pro Asp His Thr Thr Leu Arg Arg Leu Ala
165 170

<210> 11248

<211> 228

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2213"

<220>

<221> source

<223> /note="Gene Symbol: CNN1"

<220>
 <221> source
 <223> /note="Gene Name:
 calponin 1, basic, smooth muscle"

<220>
 <221> source
 <223> /note="ENSP ID: ENSP00000468053"

<220>
 <221> MOD_RES
 <222> (1)..(1)
 <223> Any amino acid

<400> 11248
 Xaa Glu Lys Gln Glu Arg Lys Phe Glu Pro Gly Lys Leu Arg Glu Gly
 1 5 10 15

 Arg Asn Ile Ile Gly Leu Gln Met Gly Thr Asn Lys Phe Ala Ser Gln
 20 25 30

 Gln Gly Met Thr Ala Tyr Gly Thr Arg Arg His Leu Tyr Asp Pro Lys
 35 40 45

 Leu Gly Thr Asp Gln Pro Leu Asp Gln Ala Thr Ile Ser Leu Gln Met
 50 55 60

 Gly Thr Asn Lys Gly Ala Ser Gln Ala Gly Met Thr Ala Pro Gly Thr
 65 70 75 80

 Lys Arg Gln Ile Phe Glu Pro Gly Leu Gly Met Glu His Cys Asp Thr
 85 90 95

 Leu Asn Val Ser Leu Gln Met Gly Ser Asn Lys Gly Ala Ser Gln Arg
 100 105 110

 Gly Met Thr Val Tyr Gly Leu Pro Arg Gln Val Tyr Asp Pro Lys Tyr
 115 120 125

 Cys Leu Thr Pro Glu Tyr Pro Glu Leu Ala Pro Lys Gly Arg Thr Glu
 130 135 140

 Gln Arg Tyr Ser Ser Cys Pro Pro Thr Pro Ser Gln Val Gly Thr Pro
 145 150 155 160

Arg Thr Arg Ser Ser Pro Ser Lys Ala Pro Arg Ala Gln Ala Arg Pro
165 170 175

Ala Pro Thr Pro Phe Pro Gln Trp Glu Gln Thr Ala Cys Pro Glu Thr
180 185 190

Gln Arg Thr His Ala Val Trp Phe Ala Ala Thr Gly Ile Leu Cys Gly
195 200 205

Cys Asp Ser Gly Val Cys Asn Glu Ser Thr Phe Phe Phe Phe Tyr Phe
210 215 220

Thr Gly Ala Gln
225

<210> 11249
<211> 247
<212> PRT
<213> Homo sapiens

<220>
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<220>
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<220>
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<223> /note="Gene Name:
calponin 1, basic, smooth muscle"

<220>
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<400> 11249
Met Asp Gly Leu Lys Asp Gly Ile Ile Leu Cys Glu Phe Ile Asn Lys
1 5 10 15

Leu Gln Pro Gly Ser Val Lys Lys Ile Asn Glu Ser Thr Gln Asn Trp
20 25 30

His Gln Leu Glu Asn Ile Gly Asn Phe Ile Lys Ala Ile Thr Lys Tyr
35 40 45

Gly Val Lys Pro His Asp Ile Phe Glu Ala Asn Asp Leu Phe Glu Asn
50 55 60

Thr Asn His Thr Gln Val Gln Ser Thr Leu Leu Ala Leu Ala Ser Met
65 70 75 80

Ala Lys Thr Lys Gly Asn Lys Val Asn Val Gly Val Lys Tyr Ala Glu
85 90 95

Lys Gln Glu Arg Lys Phe Glu Pro Gly Lys Leu Arg Glu Gly Arg Asn
100 105 110

Ile Ile Gly Leu Gln Met Gly Thr Asn Lys Phe Ala Ser Gln Gln Gly
115 120 125

Met Thr Ala Tyr Gly Thr Arg Arg His Leu Tyr Asp Pro Lys Leu Gly
130 135 140

Thr Asp Gln Pro Leu Asp Gln Ala Thr Ile Ser Leu Gln Met Gly Thr
145 150 155 160

Asn Lys Gly Ala Ser Gln Ala Gly Met Thr Ala Pro Gly Thr Lys Arg
165 170 175

Gln Ile Phe Glu Pro Gly Leu Gly Met Glu His Cys Asp Thr Leu Asn
180 185 190

Val Ser Leu Gln Met Gly Ser Asn Lys Gly Ala Ser Gln Arg Gly Met
195 200 205

Thr Val Tyr Gly Leu Pro Arg Gln Val Tyr Asp Pro Lys Tyr Cys Leu
210 215 220

Thr Pro Glu Tyr Pro Glu Leu Gly Glu Pro Ala His Asn His His Ala
225 230 235 240

His Asn Tyr Tyr Asn Ser Ala
245

<210> 11250

<211> 175

<212> PRT

<213> Homo sapiens

<220>

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<223> /note="Payload ID: 2213"

<220>

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<220>

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<220>

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<220>

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<222> (1)..(1)

<223> Any amino acid

<400> 11250

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1				5					10					15	

Ser	Thr	Gln	Asn	Trp	His	Gln	Leu	Glu	Asn	Ile	Gly	Asn	Phe	Ile	Lys
			20					25					30		

Ala	Ile	Thr	Lys	Tyr	Gly	Val	Lys	Pro	His	Asp	Ile	Phe	Glu	Ala	Asn
		35					40					45			

Asp	Leu	Phe	Glu	Asn	Thr	Asn	His	Thr	Gln	Val	Gln	Ser	Thr	Leu	Leu
	50					55					60				

Ala	Leu	Ala	Ser	Met	Ala	Lys	Thr	Lys	Gly	Asn	Lys	Val	Asn	Val	Gly
65					70					75					80

Val	Lys	Tyr	Ala	Glu	Lys	Gln	Glu	Arg	Lys	Phe	Glu	Pro	Gly	Lys	Leu
				85					90					95	

Arg	Glu	Gly	Arg	Asn	Ile	Ile	Gly	Leu	Gln	Ala	Gly	Met	Thr	Ala	Pro
				100				105					110		

Gly	Thr	Lys	Arg	Gln	Ile	Phe	Glu	Pro	Gly	Leu	Gly	Met	Glu	His	Cys
		115					120					125			

Asp	Thr	Leu	Asn	Val	Ser	Leu	Gln	Met	Gly	Ser	Asn	Lys	Gly	Ala	Ser
	130					135					140				

Gln Arg Gly Met Thr Val Tyr Gly Leu Pro Arg Gln Val Tyr Asp Pro
145 150 155 160

Lys Tyr Cys Leu Thr Pro Glu Tyr Pro Glu Leu Gly Glu Pro Ala
165 170 175

<210> 11251

<211> 119

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2213"

<220>

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<223> /note="Gene Symbol: CNN1"

<220>

<221> source

<223> /note="Gene Name:
calponin 1, basic, smooth muscle"

<220>

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<223> /note="ENSP ID: ENSP00000468326"

<400> 11251

Met Gly Thr Gln Asp Trp Ala Lys Lys Arg Gln Arg Trp Gly Arg Glu
1 5 10 15

Arg Gln Arg Ser Arg Gly Asp Lys Arg Glu Arg Asp Ile Gln Thr Cys
20 25 30

Lys Gly Trp Gly Leu Arg Gln Arg Gln Ala Pro Thr Thr Asn Gln Arg
35 40 45

Gln Ser Pro Gly Ala Glu Asp Leu Gly Asp Thr Glu Arg Gln Arg Cys
50 55 60

Met Thr Ser Thr Pro Leu Gln Ala Ser Thr Gln Gly His Leu Leu Arg
65 70 75 80

His Pro Ser Ser Leu Pro Glu Leu Ala Gln Lys Tyr Asp His Gln Arg
85 90 95

Glu Gln Glu Leu Arg Glu Trp Ile Glu Gly Val Thr Gly Arg Arg Ile

25235

100

105

110

Gly Asn Asn Phe Met Asp Gly
115

<210> 11252

<211> 115

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2213"

<220>

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<223> /note="Gene Symbol: CNN1"

<220>

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<223> /note="Gene Name:
calponin 1, basic, smooth muscle"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000468737"

<400> 11252

Leu Cys Glu Phe Ile Asn Lys Leu Gln Pro Gly Ser Val Lys Lys Ile
1 5 10 15

Asn Glu Ser Thr Gln Asn Trp His Gln Leu Glu Asn Ile Gly Asn Phe
20 25 30

Ile Lys Ala Ile Thr Lys Tyr Gly Val Lys Pro His Asp Ile Phe Glu
35 40 45

Pro Gly Leu Gly Met Glu His Cys Asp Thr Leu Asn Val Ser Leu Gln
50 55 60

Met Gly Ser Asn Lys Gly Ala Ser Gln Arg Gly Met Thr Val Tyr Gly
65 70 75 80

Leu Pro Arg Gln Val Tyr Asp Pro Lys Tyr Cys Leu Thr Pro Glu Tyr
85 90 95

Pro Glu Leu Gly Glu Pro Ala His Asn His His Ala His Asn Tyr Tyr
100 105 110

25236

Asn Ser Ala
115

<210> 11253
<211> 309
<212> PRT
<213> Homo sapiens

<220>
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<223> /note="Payload ID: 2214"

<220>
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<220>
<221> source
<223> /note="Gene Name:
calponin 2"

<220>
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<223> /note="Uniprot ID: Q99439"

<220>
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<223> /note="ENSP ID: ENSP00000263097"

<400> 11253
Met Ser Ser Thr Gln Phe Asn Lys Gly Pro Ser Tyr Gly Leu Ser Ala
1 5 10 15

Glu Val Lys Asn Arg Leu Leu Ser Lys Tyr Asp Pro Gln Lys Glu Ala
20 25 30

Glu Leu Arg Thr Trp Ile Glu Gly Leu Thr Gly Leu Ser Ile Gly Pro
35 40 45

Asp Phe Gln Lys Gly Leu Lys Asp Gly Thr Ile Leu Cys Thr Leu Met
50 55 60

Asn Lys Leu Gln Pro Gly Ser Val Pro Lys Ile Asn Arg Ser Met Gln
65 70 75 80

Asn Trp His Gln Leu Glu Asn Leu Ser Asn Phe Ile Lys Ala Met Val
85 90 95

Ser Tyr Gly Met Asn Pro Val Asp Leu Phe Glu Ala Asn Asp Leu Phe

25237

				100						105						110			
Glu	Ser	Gly	Asn	Met	Thr	Gln	Val	Gln	Val	Ser	Leu	Leu	Ala	Leu	Ala				
		115					120					125							
Gly	Lys	Ala	Lys	Thr	Lys	Gly	Leu	Gln	Ser	Gly	Val	Asp	Ile	Gly	Val				
	130					135					140								
Lys	Tyr	Ser	Glu	Lys	Gln	Glu	Arg	Asn	Phe	Asp	Asp	Ala	Thr	Met	Lys				
145					150					155					160				
Ala	Gly	Gln	Cys	Val	Ile	Gly	Leu	Gln	Met	Gly	Thr	Asn	Lys	Cys	Ala				
				165					170					175					
Ser	Gln	Ser	Gly	Met	Thr	Ala	Tyr	Gly	Thr	Arg	Arg	His	Leu	Tyr	Asp				
			180					185					190						
Pro	Lys	Asn	His	Ile	Leu	Pro	Pro	Met	Asp	His	Ser	Thr	Ile	Ser	Leu				
		195					200					205							
Gln	Met	Gly	Thr	Asn	Lys	Cys	Ala	Ser	Gln	Val	Gly	Met	Thr	Ala	Pro				
	210					215					220								
Gly	Thr	Arg	Arg	His	Ile	Tyr	Asp	Thr	Lys	Leu	Gly	Thr	Asp	Lys	Cys				
225					230					235					240				
Asp	Asn	Ser	Ser	Met	Ser	Leu	Gln	Met	Gly	Tyr	Thr	Gln	Gly	Ala	Asn				
				245					250					255					
Gln	Ser	Gly	Gln	Val	Phe	Gly	Leu	Gly	Arg	Gln	Ile	Tyr	Asp	Pro	Lys				
			260					265					270						
Tyr	Cys	Pro	Gln	Gly	Thr	Val	Ala	Asp	Gly	Ala	Pro	Ser	Gly	Thr	Gly				
		275					280					285							
Asp	Cys	Pro	Asp	Pro	Gly	Glu	Val	Pro	Glu	Tyr	Pro	Pro	Tyr	Tyr	Gln				
	290					295					300								
Glu	Glu	Ala	Gly	Tyr															
305																			

<210> 11254
<211> 270

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<212> PRT
<213> Homo sapiens

<220>
<221> source
<223> /note="Payload ID: 2214"

<220>
<221> source
<223> /note="Gene Symbol: CNN2"

<220>
<221> source
<223> /note="Gene Name:
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<220>
<221> source
<223> /note="Uniprot ID: Q99439"

<220>
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<223> /note="ENSP ID: ENSP00000340129"

<400> 11254
Met Ser Ser Thr Gln Phe Asn Lys Gly Pro Ser Tyr Gly Leu Ser Ala
1          5          10          15

Glu Val Lys Asn Arg Leu Leu Ser Lys Tyr Asp Pro Gln Lys Glu Ala
          20          25          30

Glu Leu Arg Thr Trp Ile Glu Gly Leu Thr Gly Leu Ser Ile Gly Pro
          35          40          45

Asp Phe Gln Lys Gly Leu Lys Asp Gly Thr Ile Leu Cys Thr Leu Met
          50          55          60

Asn Lys Leu Gln Pro Gly Ser Val Pro Lys Ile Asn Arg Ser Met Gln
65          70          75          80

Asn Trp His Gln Leu Glu Asn Leu Ser Asn Phe Ile Lys Ala Met Val
          85          90          95

Ser Tyr Gly Met Asn Pro Val Asp Leu Phe Glu Ala Asn Asp Leu Phe
          100          105          110

Glu Ser Gly Asn Met Thr Gln Val Gln Val Ser Leu Leu Ala Leu Ala
          115          120          125

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Gly	Lys	Met	Gly	Thr	Asn	Lys	Cys	Ala	Ser	Gln	Ser	Gly	Met	Thr	Ala	
130						135					140					
Tyr	Gly	Thr	Arg	Arg	His	Leu	Tyr	Asp	Pro	Lys	Asn	His	Ile	Leu	Pro	
145					150					155					160	
Pro	Met	Asp	His	Ser	Thr	Ile	Ser	Leu	Gln	Met	Gly	Thr	Asn	Lys	Cys	
				165					170					175		
Ala	Ser	Gln	Val	Gly	Met	Thr	Ala	Pro	Gly	Thr	Arg	Arg	His	Ile	Tyr	
			180					185					190			
Asp	Thr	Lys	Leu	Gly	Thr	Asp	Lys	Cys	Asp	Asn	Ser	Ser	Met	Ser	Leu	
		195					200					205				
Gln	Met	Gly	Tyr	Thr	Gln	Gly	Ala	Asn	Gln	Ser	Gly	Gln	Val	Phe	Gly	
210						215					220					
Leu	Gly	Arg	Gln	Ile	Tyr	Asp	Pro	Lys	Tyr	Cys	Pro	Gln	Gly	Thr	Val	
225					230					235					240	
Ala	Asp	Gly	Ala	Pro	Ser	Gly	Thr	Gly	Asp	Cys	Pro	Asp	Pro	Gly	Glu	
				245					250					255		
Val	Pro	Glu	Tyr	Pro	Pro	Tyr	Tyr	Gln	Glu	Glu	Ala	Gly	Tyr			
			260					265					270			

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<210> 11255
<211> 154
<212> PRT
<213> Homo sapiens

<220>
<221> source
<223> /note="Payload ID: 2214"

<220>
<221> source
<223> /note="Gene Symbol: CNN2"

<220>
<221> source
<223> /note="Gene Name:
      calponin 2"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000455777"

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<400> 11255

Met Asn Lys Leu Gln Pro Gly Ser Val Pro Lys Ile Asn Arg Ser Met
1 5 10 15

Gln Asn Trp His Gln Leu Glu Asn Leu Ser Asn Phe Ile Lys Ala Met
20 25 30

Val Ser Tyr Gly Met Asn Pro Val Asp Leu Phe Glu Ala Asn Asp Leu
35 40 45

Phe Glu Ser Gly Asn Met Thr Gln Val Gln Val Ser Leu Leu Ala Leu
50 55 60

Ala Gly Lys Met Gly Thr Asn Lys Cys Ala Ser Gln Ser Gly Met Thr
65 70 75 80

Ala Tyr Gly Thr Arg Arg His Leu Tyr Asp Pro Lys Asn His Ile Leu
85 90 95

Pro Pro Met Asp His Ser Thr Ile Ser Leu Gln Met Gly Thr Asn Lys
100 105 110

Cys Ala Ser Gln Val Gly Leu Ala Arg Val Pro Pro Thr Pro Leu Pro
115 120 125

Ala Pro Leu His Pro Val Val Ser Ala Pro Pro Trp Gly His Leu Gln
130 135 140

Leu Leu Ser Pro Leu Ser Val Ser Ala Pro
145 150

<210> 11256

<211> 330

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2214"

<220>

<221> source

<223> /note="Gene Symbol: CNN2"

<220>

<221> source

<223> /note="Gene Name:
calponin 2"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000456436"

<400> 11256

Met Ser Ser Thr Gln Phe Asn Lys Gly Pro Ser Tyr Gly Leu Ser Ala
1 5 10 15

Glu Val Lys Asn Arg Leu Leu Ser Lys Tyr Asp Pro Gln Lys Glu Ala
20 25 30

Glu Leu Arg Thr Trp Ile Glu Gly Leu Thr Gly Leu Ser Ile Gly Pro
35 40 45

Asp Phe Gln Lys Gly Leu Lys Asp Gly Thr Ile Leu Cys Thr Leu Met
50 55 60

Asn Lys Leu Gln Pro Gly Ser Val Pro Lys Ile Asn Arg Ser Met Gln
65 70 75 80

Asn Trp His Gln Leu Glu Asn Leu Ser Asn Phe Ile Lys Ala Met Val
85 90 95

Ser Tyr Gly Met Asn Pro Val Asp Leu Phe Glu Ala Asn Asp Leu Phe
100 105 110

Glu Ser Gly Asn Met Thr Gln Val Gln Val Ser Leu Leu Ala Leu Ala
115 120 125

Gly Lys Gly Leu Asp Leu Gly Ser Leu Ala Ala Leu Cys Trp Tyr Ser
130 135 140

Arg Pro Leu Ser Leu Thr Gln Ala Lys Thr Lys Gly Leu Gln Ser Gly
145 150 155 160

Val Asp Ile Gly Val Lys Tyr Ser Glu Lys Gln Glu Arg Asn Phe Asp
165 170 175

Asp Ala Thr Met Lys Ala Gly Gln Cys Val Ile Gly Leu Gln Met Gly
180 185 190

Thr Asn Lys Cys Ala Ser Gln Ser Gly Met Thr Ala Tyr Gly Thr Arg

25242

195

200

205

Arg His Leu Tyr Asp Pro Lys Asn His Ile Leu Pro Pro Met Asp His
 210 215 220

Ser Thr Ile Ser Leu Gln Met Gly Thr Asn Lys Cys Ala Ser Gln Val
 225 230 235 240

Gly Met Thr Ala Pro Gly Thr Arg Arg His Ile Tyr Asp Thr Lys Leu
 245 250 255

Gly Thr Asp Lys Cys Asp Asn Ser Ser Met Ser Leu Gln Met Gly Tyr
 260 265 270

Thr Gln Gly Ala Asn Gln Ser Gly Gln Val Phe Gly Leu Gly Arg Gln
 275 280 285

Ile Tyr Asp Pro Lys Tyr Cys Pro Gln Gly Thr Val Ala Asp Gly Ala
 290 295 300

Pro Ser Gly Thr Gly Asp Cys Pro Asp Pro Gly Glu Val Pro Glu Tyr
 305 310 315 320

Pro Pro Tyr Tyr Gln Glu Glu Ala Gly Tyr
 325 330

<210> 11257
 <211> 298
 <212> PRT
 <213> Homo sapiens

<220>
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 <223> /note="Payload ID: 2214"

<220>
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 <223> /note="Gene Symbol: CNN2"

<220>
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 <223> /note="Gene Name:
 calponin 2"

<220>
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 <223> /note="ENSP ID: ENSP00000457968"

<400> 11257

Met Ser Ser Thr Gln Phe Asn Lys Gly Pro Ser Tyr Gly Leu Ser Ala
1 5 10 15

Glu Val Lys Asn Arg Leu Leu Ser Lys Tyr Asp Pro Gln Lys Glu Ala
20 25 30

Glu Leu Arg Thr Trp Ile Glu Gly Leu Thr Gly Leu Ser Ile Gly Pro
35 40 45

Asp Phe Gln Lys Gly Leu Lys Asp Gly Thr Ile Leu Cys Thr Leu Met
50 55 60

Asn Lys Leu Gln Pro Gly Ser Val Pro Lys Ile Asn Arg Ser Met Gln
65 70 75 80

Asn Trp His Gln Leu Glu Asn Leu Ser Asn Phe Ile Lys Ala Met Val
85 90 95

Ser Tyr Gly Met Asn Pro Val Asp Leu Phe Glu Ala Asn Asp Leu Phe
100 105 110

Glu Ser Gly Asn Met Thr Gln Ala Lys Thr Lys Gly Leu Gln Ser Gly
115 120 125

Val Asp Ile Gly Val Lys Tyr Ser Glu Lys Gln Glu Arg Asn Phe Asp
130 135 140

Asp Ala Thr Met Lys Ala Gly Gln Cys Val Ile Gly Leu Gln Met Gly
145 150 155 160

Thr Asn Lys Cys Ala Ser Gln Ser Gly Met Thr Ala Tyr Gly Thr Arg
165 170 175

Arg His Leu Tyr Asp Pro Lys Asn His Ile Leu Pro Pro Met Asp His
180 185 190

Ser Thr Ile Ser Leu Gln Met Gly Thr Asn Lys Cys Ala Ser Gln Val
195 200 205

Gly Met Thr Ala Pro Gly Thr Arg Arg His Ile Tyr Asp Thr Lys Leu
210 215 220

Gly Thr Asp Lys Cys Asp Asn Ser Ser Met Ser Leu Gln Met Gly Tyr
225 230 235 240

Thr Gln Gly Ala Asn Gln Ser Gly Gln Val Phe Gly Leu Gly Arg Gln
245 250 255

Ile Tyr Asp Pro Lys Tyr Cys Pro Gln Gly Thr Val Ala Asp Gly Ala
260 265 270

Pro Ser Gly Thr Gly Asp Cys Pro Asp Pro Gly Glu Val Pro Glu Tyr
275 280 285

Pro Pro Tyr Tyr Gln Glu Glu Ala Gly Tyr
290 295

<210> 11258
<211> 218
<212> PRT
<213> Homo sapiens

<220>
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<220>
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<220>
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<223> /note="Gene Name:
calponin 2"

<220>
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<223> /note="ENSP ID: ENSP00000458137"

<400> 11258
Leu Ser Ile Gly Pro Asp Phe Gln Lys Gly Leu Lys Asp Gly Thr Ile
1 5 10 15

Leu Cys Thr Leu Met Asn Lys Leu Gln Pro Gly Ser Val Pro Lys Ile
20 25 30

Asn Arg Ser Met Gln Asn Trp His Gln Leu Glu Asn Leu Ser Asn Phe
35 40 45

Ile Lys Ala Met Val Ser Tyr Gly Met Asn Pro Val Asp Leu Phe Glu
50 55 60

Ala	Asn	Asp	Leu	Phe	Glu	Ser	Gly	Asn	Met	Thr	Gln	Val	Gln	Val	Ser	
65					70					75					80	
Leu	Leu	Ala	Leu	Ala	Gly	Lys	Ala	Lys	Thr	Lys	Gly	Leu	Gln	Ser	Gly	
				85					90					95		
Val	Asp	Ile	Gly	Val	Lys	Tyr	Ser	Glu	Lys	Gln	Glu	Arg	Asn	Phe	Asp	
			100					105					110			
Asp	Ala	Thr	Met	Lys	Ala	Gly	Gln	Cys	Val	Ile	Gly	Leu	Gln	Met	Gly	
		115					120					125				
Thr	Asn	Lys	Cys	Ala	Ser	Gln	Ser	Gly	Met	Thr	Ala	Tyr	Gly	Thr	Arg	
	130					135					140					
Arg	His	Leu	Tyr	Asp	Pro	Lys	Asn	His	Ile	Leu	Pro	Pro	Met	Asp	His	
145					150					155					160	
Ser	Thr	Ile	Ser	Leu	Gln	Met	Gly	Thr	Asn	Lys	Cys	Ala	Ser	Gln	Asp	
				165					170					175		
Leu	Thr	Leu	Leu	Ser	Arg	Leu	Glu	Cys	Ser	Gly	Thr	Ile	Ser	Ala	His	
			180					185					190			
Cys	Asn	Leu	Cys	Leu	Pro	Gly	Ser	Arg	Asp	Ser	Pro	Ser	Cys	Leu	Ser	
		195					200					205				
Leu	Pro	Ser	Ser	Trp	Asp	Tyr	Arg	Trp	Ala							
	210					215										

<210> 11259

<211> 148

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2214"

<220>

<221> source

<223> /note="Gene Symbol: CNN2"

<220>

<221> source

<223> /note="Gene Name:
calponin 2"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000468577"

<400> 11259

Met Ser Ser Thr Gln Phe Asn Lys Gly Pro Ser Tyr Gly Leu Ser Ala
1 5 10 15

Glu Val Lys Asn Arg Leu Leu Ser Lys Tyr Asp Pro Gln Lys Glu Ala
20 25 30

Glu Leu Arg Thr Trp Ile Glu Gly Leu Thr Gly Leu Ser Ile Gly Pro
35 40 45

Asp Phe Gln Lys Gly Leu Lys Asp Gly Thr Ile Leu Cys Thr Leu Met
50 55 60

Asn Lys Leu Gln Pro Gly Ser Val Pro Lys Ile Asn Arg Ser Met Gln
65 70 75 80

Asn Trp His Gln Leu Glu Asn Leu Ser Asn Phe Ile Lys Ala Met Val
85 90 95

Ser Tyr Gly Met Asn Pro Val Asp Leu Phe Glu Ala Asn Asp Leu Phe
100 105 110

Glu Ser Gly Asn Met Thr Gln Val Gln Val Ser Leu Leu Ala Leu Ala
115 120 125

Gly Lys Val Arg Pro Arg Glu Gly Gln Pro Pro Ala Gln Ser His Thr
130 135 140

Ala Arg Trp Met
145

<210> 11260

<211> 103

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2214"

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<220>
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<220>
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<223> /note="Gene Name:
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<220>
<221> MOD_RES
<222> (1)..(1)
<223> Any amino acid

<400> 11260
Xaa Ser Tyr Gly Leu Ser Ala Glu Val Lys Asn Arg Met Gly Thr Asn
1          5          10          15

Lys Cys Ala Ser Gln Ser Gly Met Thr Ala Tyr Gly Thr Arg Arg His
          20          25          30

Leu Tyr Asp Pro Lys Asn His Ile Leu Pro Pro Met Asp His Ser Thr
          35          40          45

Ile Ser Leu Gln Met Gly Thr Asn Lys Cys Ala Ser Gln Val Gly Leu
          50          55          60

Ala Arg Val Pro Pro Thr Pro Leu Pro Ala Pro Leu His Pro Val Val
65          70          75          80

Ser Ala Pro Pro Trp Gly His Leu Gln Leu Leu Ser Pro Leu Ser Val
          85          90          95

Ser Ala Pro Ser Leu Asp His
          100

<210> 11261
<211> 66
<212> PRT
<213> Homo sapiens

<220>
<221> source
<223> /note="Payload ID: 2214"

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<220>
<221> source
<223> /note="Gene Symbol: CNN2"

<220>
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        calponin 2"

<220>
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<223> /note="ENSP ID: ENSP00000479188"

<400> 11261
Met Asn Lys Leu Gln Pro Gly Ser Val Pro Lys Ile Asn Arg Ser Met
1          5          10          15

Gln Asn Trp His Gln Leu Glu Asn Leu Ser Asn Phe Ile Lys Ala Met
          20          25          30

Val Ser Tyr Gly Met Asn Pro Val Asp Leu Phe Glu Ala Asn Asp Leu
          35          40          45

Phe Glu Ser Gly Asn Met Thr Gln Val Gln Val Ser Leu Leu Ala Leu
          50          55          60

Ala Gly
65

<210> 11262
<211> 191
<212> PRT
<213> Homo sapiens

<220>
<221> source
<223> /note="Payload ID: 2214"

<220>
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<220>
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<223> /note="Gene Name:
        calponin 2"

<220>
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<223> /note="ENSP ID: ENSP00000484533"

<400> 11262

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<220>
<221> source
<223> /note="Gene Symbol: CNN2"

<220>
<221> source
<223> /note="Gene Name:
calponin 2"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000484749"

<400> 11263

Met Ser Ser Thr Gln Phe Asn Lys Gly Pro Ser Tyr Gly Leu Ser Ala
1 5 10 15

Glu Val Lys Asn Arg Leu Leu Ser Lys Tyr Asp Pro Gln Lys Glu Ala
20 25 30

Glu Leu Arg Thr Trp Ile Glu Gly Leu Thr Gly Leu Ser Ile Gly Pro
35 40 45

Asp Phe Gln Lys Gly Leu Lys Asp Gly Thr Ile Leu Cys Thr Leu Met
50 55 60

Asn Lys Leu Gln Pro Gly Ser Val Pro Lys Ile Asn Arg Ser Met Gln
65 70 75 80

Asn Trp His Gln Leu Glu Asn Leu Ser Asn Phe Ile Lys Ala Met Val
85 90 95

Ser Tyr Gly Met Asn Pro Val Asp Leu Phe Glu Ala Asn Asp Leu Phe
100 105 110

Glu Ser Gly Asn Met Thr Gln Val Gln Ala Lys Thr Lys Gly Leu Gln
115 120 125

Ser Gly Val Asp Ile Gly Val Lys Tyr Ser Glu Lys Gln Glu Arg Asn
130 135 140

Phe Asp Asp Ala Thr Met Lys Ala Gly Gln Cys Val Ile Gly Leu Gln
145 150 155 160

Met Gly Thr Asn Lys Cys Ala Ser Gln Ser Gly Met Thr Ala Tyr Gly
165 170 175

Thr Arg Arg

<210> 11264

<211> 329

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2215"

<220>

<221> source

<223> /note="Gene Symbol: CNN3"

<220>

<221> source

<223> /note="Gene Name:
calponin 3, acidic"

<220>

<221> source

<223> /note="Uniprot ID: Q15417"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000359225"

<400> 11264

Met	Thr	His	Phe	Asn	Lys	Gly	Pro	Ser	Tyr	Gly	Leu	Ser	Ala	Glu	Val
1				5					10					15	

Lys	Asn	Lys	Ile	Ala	Ser	Lys	Tyr	Asp	His	Gln	Ala	Glu	Glu	Asp	Leu
			20					25					30		

Arg	Asn	Trp	Ile	Glu	Glu	Val	Thr	Gly	Met	Ser	Ile	Gly	Pro	Asn	Phe
		35					40					45			

Gln	Leu	Gly	Leu	Lys	Asp	Gly	Ile	Ile	Leu	Cys	Glu	Leu	Ile	Asn	Lys
	50					55					60				

Leu	Gln	Pro	Gly	Ser	Val	Lys	Lys	Val	Asn	Glu	Ser	Ser	Leu	Asn	Trp
65					70					75					80

Pro	Gln	Leu	Glu	Asn	Ile	Gly	Asn	Phe	Ile	Lys	Ala	Ile	Gln	Ala	Tyr
				85					90					95	

Gly Met Lys Pro His Asp Ile Phe Glu Ala Asn Asp Leu Phe Glu Asn

	100						105					110				
Gly	Asn	Met 115	Thr	Gln	Val	Gln	Thr 120	Thr	Leu	Val	Ala	Leu 125	Ala	Gly	Leu	
Ala	Lys 130	Thr	Lys	Gly	Phe	His 135	Thr	Thr	Ile	Asp	Ile 140	Gly	Val	Lys	Tyr	
Ala 145	Glu	Lys	Gln	Thr	Arg 150	Arg	Phe	Asp	Glu	Gly 155	Lys	Leu	Lys	Ala	Gly 160	
Gln	Ser	Val	Ile	Gly 165	Leu	Gln	Met	Gly	Thr 170	Asn	Lys	Cys	Ala	Ser 175	Gln	
Ala	Gly	Met	Thr 180	Ala	Tyr	Gly	Thr	Arg 185	Arg	His	Leu	Tyr	Asp 190	Pro	Lys	
Met	Gln	Thr 195	Asp	Lys	Pro	Phe	Asp 200	Gln	Thr	Thr	Ile	Ser 205	Leu	Gln	Met	
Gly	Thr 210	Asn	Lys	Gly	Ala	Ser 215	Gln	Ala	Gly	Met	Leu 220	Ala	Pro	Gly	Thr	
Arg 225	Arg	Asp	Ile	Tyr	Asp 230	Gln	Lys	Leu	Thr	Leu 235	Gln	Pro	Val	Asp	Asn 240	
Ser	Thr	Ile	Ser	Leu 245	Gln	Met	Gly	Thr	Asn 250	Lys	Val	Ala	Ser	Gln 255	Lys	
Gly	Met	Ser	Val 260	Tyr	Gly	Leu	Gly	Arg 265	Gln	Val	Tyr	Asp	Pro 270	Lys	Tyr	
Cys	Ala	Ala 275	Pro	Thr	Glu	Pro	Val 280	Ile	His	Asn	Gly	Ser 285	Gln	Gly	Thr	
Gly	Thr 290	Asn	Gly	Ser	Glu	Ile 295	Ser	Asp	Ser	Asp	Tyr 300	Gln	Ala	Glu	Tyr	
Pro 305	Asp	Glu	Tyr	His	Gly 310	Glu	Tyr	Gln	Asp	Asp 315	Tyr	Pro	Arg	Asp	Tyr 320	
Gln	Tyr	Ser	Asp	Gln 325	Gly	Ile	Asp	Tyr								

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<210> 11265
<211> 283
<212> PRT
<213> Homo sapiens

<220>
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<223> /note="Payload ID: 2215"

<220>
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<223> /note="Gene Symbol: CNN3"

<220>
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<223> /note="Gene Name:
        calponin 3, acidic"

<220>
<221> source
<223> /note="Uniprot ID: Q15417"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000377752"

<400> 11265
Met Thr His Phe Asn Lys Gly Pro Ser Tyr Gly Leu Ser Ala Glu Val
1              5              10              15

Lys Asn Lys Ile Ala Ser Lys Tyr Asp His Gln Ala Glu Glu Asp Leu
          20              25              30

Arg Asn Trp Ile Glu Glu Val Thr Gly Met Ser Ile Gly Pro Asn Phe
          35              40              45

Gln Leu Gly Leu Lys Asp Gly Ile Ile Leu Cys Glu Leu Ile Asn Lys
          50              55              60

Leu Gln Pro Gly Ser Val Lys Lys Val Asn Glu Ser Ser Leu Asn Trp
65              70              75              80

Pro Gln Ala Lys Thr Lys Gly Phe His Thr Thr Ile Asp Ile Gly Val
          85              90              95

Lys Tyr Ala Glu Lys Gln Thr Arg Arg Phe Asp Glu Gly Lys Leu Lys
          100              105              110

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Ala Gly Gln Ser Val Ile Gly Leu Gln Met Gly Thr Asn Lys Cys Ala
115 120 125

Ser Gln Ala Gly Met Thr Ala Tyr Gly Thr Arg Arg His Leu Tyr Asp
130 135 140

Pro Lys Met Gln Thr Asp Lys Pro Phe Asp Gln Thr Thr Ile Ser Leu
145 150 155 160

Gln Met Gly Thr Asn Lys Gly Ala Ser Gln Ala Gly Met Leu Ala Pro
165 170 175

Gly Thr Arg Arg Asp Ile Tyr Asp Gln Lys Leu Thr Leu Gln Pro Val
180 185 190

Asp Asn Ser Thr Ile Ser Leu Gln Met Gly Thr Asn Lys Val Ala Ser
195 200 205

Gln Lys Gly Met Ser Val Tyr Gly Leu Gly Arg Gln Val Tyr Asp Pro
210 215 220

Lys Tyr Cys Ala Ala Pro Thr Glu Pro Val Ile His Asn Gly Ser Gln
225 230 235 240

Gly Thr Gly Thr Asn Gly Ser Glu Ile Ser Asp Ser Asp Tyr Gln Ala
245 250 255

Glu Tyr Pro Asp Glu Tyr His Gly Glu Tyr Gln Asp Asp Tyr Pro Arg
260 265 270

Asp Tyr Gln Tyr Ser Asp Gln Gly Ile Asp Tyr
275 280

<210> 11266

<211> 185

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2215"

<220>

<221> source

<223> /note="Gene Symbol: CNN3"

<220>
 <221> source
 <223> /note="Gene Name:
 calponin 3, acidic"

<220>
 <221> source
 <223> /note="ENSP ID: ENSP00000401452"

<400> 11266

Met Ser Ile Gly Pro Asn Phe Gln Leu Gly Leu Lys Asp Gly Ile Ile
 1 5 10 15

Leu Cys Glu Leu Ile Asn Lys Leu Gln Pro Gly Ser Val Lys Lys Val
 20 25 30

Asn Glu Ser Ser Leu Asn Trp Pro Gln Leu Glu Asn Ile Gly Asn Phe
 35 40 45

Ile Lys Ala Ile Gln Ala Tyr Gly Met Lys Pro His Asp Ile Phe Glu
 50 55 60

Ala Asn Asp Leu Phe Glu Asn Gly Asn Met Thr Gln Val Gln Thr Thr
 65 70 75 80

Leu Val Ala Leu Ala Gly Leu Ala Lys Thr Lys Gly Phe His Thr Thr
 85 90 95

Ile Asp Ile Gly Val Lys Tyr Ala Glu Lys Gln Thr Arg Arg Phe Asp
 100 105 110

Glu Gly Lys Leu Lys Ala Gly Gln Ser Val Ile Gly Leu Gln Met Gly
 115 120 125

Thr Asn Lys Cys Ala Ser Gln Ala Gly Met Thr Ala Tyr Gly Thr Arg
 130 135 140

Arg His Leu Tyr Asp Pro Lys Met Gln Thr Asp Lys Pro Phe Asp Gln
 145 150 155 160

Thr Thr Ile Ser Leu Gln Met Gly Thr Asn Lys Gly Ala Ser Gln Ala
 165 170 175

Gly Met Leu Ala Pro Gly Thr Arg Arg
 180 185


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<210> 11267
<211> 288
<212> PRT
<213> Homo sapiens

<220>
<221> source
<223> /note="Payload ID: 2215"

<220>
<221> source
<223> /note="Gene Symbol: CNN3"

<220>
<221> source
<223> /note="Gene Name:
        calponin 3, acidic"

<220>
<221> source
<223> /note="Uniprot ID: Q15417"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000440081"

<400> 11267
Met Ser Ile Gly Pro Asn Phe Gln Leu Gly Leu Lys Asp Gly Ile Ile
1          5          10          15

Leu Cys Glu Leu Ile Asn Lys Leu Gln Pro Gly Ser Val Lys Lys Val
          20          25          30

Asn Glu Ser Ser Leu Asn Trp Pro Gln Leu Glu Asn Ile Gly Asn Phe
          35          40          45

Ile Lys Ala Ile Gln Ala Tyr Gly Met Lys Pro His Asp Ile Phe Glu
          50          55          60

Ala Asn Asp Leu Phe Glu Asn Gly Asn Met Thr Gln Val Gln Thr Thr
65          70          75          80

Leu Val Ala Leu Ala Gly Leu Ala Lys Thr Lys Gly Phe His Thr Thr
          85          90          95

Ile Asp Ile Gly Val Lys Tyr Ala Glu Lys Gln Thr Arg Arg Phe Asp
          100          105          110

Glu Gly Lys Leu Lys Ala Gly Gln Ser Val Ile Gly Leu Gln Met Gly

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	115						120				125				
Thr	Asn	Lys	Cys	Ala	Ser	Gln	Ala	Gly	Met	Thr	Ala	Tyr	Gly	Thr	Arg
	130					135					140				
Arg	His	Leu	Tyr	Asp	Pro	Lys	Met	Gln	Thr	Asp	Lys	Pro	Phe	Asp	Gln
145					150					155					160
Thr	Thr	Ile	Ser	Leu	Gln	Met	Gly	Thr	Asn	Lys	Gly	Ala	Ser	Gln	Ala
				165					170					175	
Gly	Met	Leu	Ala	Pro	Gly	Thr	Arg	Arg	Asp	Ile	Tyr	Asp	Gln	Lys	Leu
			180					185					190		
Thr	Leu	Gln	Pro	Val	Asp	Asn	Ser	Thr	Ile	Ser	Leu	Gln	Met	Gly	Thr
		195					200					205			
Asn	Lys	Val	Ala	Ser	Gln	Lys	Gly	Met	Ser	Val	Tyr	Gly	Leu	Gly	Arg
	210					215					220				
Gln	Val	Tyr	Asp	Pro	Lys	Tyr	Cys	Ala	Ala	Pro	Thr	Glu	Pro	Val	Ile
225					230					235					240
His	Asn	Gly	Ser	Gln	Gly	Thr	Gly	Thr	Asn	Gly	Ser	Glu	Ile	Ser	Asp
				245					250					255	
Ser	Asp	Tyr	Gln	Ala	Glu	Tyr	Pro	Asp	Glu	Tyr	His	Gly	Glu	Tyr	Gln
			260					265					270		
Asp	Asp	Tyr	Pro	Arg	Asp	Tyr	Gln	Tyr	Ser	Asp	Gln	Gly	Ile	Asp	Tyr
		275					280					285			

<210> 11268

<211> 417

<212> PRT

<213> Homo sapiens

 $\langle 220 \rangle$

<221> source

<223> /note="Payload ID: 2216"

 $\langle 220 \rangle$

<221> source

<223> /note="Gene Symbol: CALR"

 $\langle 220 \rangle$

<221> source
 <223> /note="Gene Name:
 calreticulin"

<220>
 <221> source
 <223> /note="Uniprot ID: P27797"

<220>
 <221> source
 <223> /note="ENSP ID: ENSP00000320866"

<400> 11268
 Met Leu Leu Ser Val Pro Leu Leu Leu Gly Leu Leu Gly Leu Ala Val
 1 5 10 15

Ala Glu Pro Ala Val Tyr Phe Lys Glu Gln Phe Leu Asp Gly Asp Gly
 20 25 30

Trp Thr Ser Arg Trp Ile Glu Ser Lys His Lys Ser Asp Phe Gly Lys
 35 40 45

Phe Val Leu Ser Ser Gly Lys Phe Tyr Gly Asp Glu Glu Lys Asp Lys
 50 55 60

Gly Leu Gln Thr Ser Gln Asp Ala Arg Phe Tyr Ala Leu Ser Ala Ser
 65 70 75 80

Phe Glu Pro Phe Ser Asn Lys Gly Gln Thr Leu Val Val Gln Phe Thr
 85 90 95

Val Lys His Glu Gln Asn Ile Asp Cys Gly Gly Gly Tyr Val Lys Leu
 100 105 110

Phe Pro Asn Ser Leu Asp Gln Thr Asp Met His Gly Asp Ser Glu Tyr
 115 120 125

Asn Ile Met Phe Gly Pro Asp Ile Cys Gly Pro Gly Thr Lys Lys Val
 130 135 140

His Val Ile Phe Asn Tyr Lys Gly Lys Asn Val Leu Ile Asn Lys Asp
 145 150 155 160

Ile Arg Cys Lys Asp Asp Glu Phe Thr His Leu Tyr Thr Leu Ile Val
 165 170 175

Arg	Pro	Asp	Asn	Thr	Tyr	Glu	Val	Lys	Ile	Asp	Asn	Ser	Gln	Val	Glu		
			180					185					190				
Ser	Gly	Ser	Leu	Glu	Asp	Asp	Trp	Asp	Phe	Leu	Pro	Pro	Lys	Lys	Ile		
		195					200					205					
Lys	Asp	Pro	Asp	Ala	Ser	Lys	Pro	Glu	Asp	Trp	Asp	Glu	Arg	Ala	Lys		
	210					215					220						
Ile	Asp	Asp	Pro	Thr	Asp	Ser	Lys	Pro	Glu	Asp	Trp	Asp	Lys	Pro	Glu		
225					230					235					240		
His	Ile	Pro	Asp	Pro	Asp	Ala	Lys	Lys	Pro	Glu	Asp	Trp	Asp	Glu	Glu		
				245					250					255			
Met	Asp	Gly	Glu	Trp	Glu	Pro	Pro	Val	Ile	Gln	Asn	Pro	Glu	Tyr	Lys		
			260					265					270				
Gly	Glu	Trp	Lys	Pro	Arg	Gln	Ile	Asp	Asn	Pro	Asp	Tyr	Lys	Gly	Thr		
		275					280					285					
Trp	Ile	His	Pro	Glu	Ile	Asp	Asn	Pro	Glu	Tyr	Ser	Pro	Asp	Pro	Ser		
	290					295					300						
Ile	Tyr	Ala	Tyr	Asp	Asn	Phe	Gly	Val	Leu	Gly	Leu	Asp	Leu	Trp	Gln		
305					310					315					320		
Val	Lys	Ser	Gly	Thr	Ile	Phe	Asp	Asn	Phe	Leu	Ile	Thr	Asn	Asp	Glu		
				325					330					335			
Ala	Tyr	Ala	Glu	Glu	Phe	Gly	Asn	Glu	Thr	Trp	Gly	Val	Thr	Lys	Ala		
			340					345					350				
Ala	Glu	Lys	Gln	Met	Lys	Asp	Lys	Gln	Asp	Glu	Glu	Gln	Arg	Leu	Lys		
		355				360						365					
Glu	Glu	Glu	Glu	Asp	Lys	Lys	Arg	Lys	Glu	Glu	Glu	Glu	Ala	Glu	Asp		
	370					375					380						
Lys	Glu	Asp	Asp	Glu	Asp	Lys	Asp	Glu	Asp	Glu	Glu	Asp	Glu	Glu	Asp		
385					390					395					400		
Lys	Glu	Glu	Asp	Glu	Glu	Glu	Asp	Val	Pro	Gly	Gln	Ala	Lys	Asp	Glu		

405

410

415

Leu

<210> 11269

<211> 247

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2216"

<220>

<221> source

<223> /note="Gene Symbol: CALR"

<220>

<221> source

<223> /note="Gene Name:
calreticulin"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000465105"

<400> 11269

Met	Leu	Leu	Ser	Val	Pro	Leu	Leu	Leu	Gly	Leu	Leu	Gly	Leu	Ala	Val
1				5					10					15	

Ala	Glu	Pro	Ala	Val	Tyr	Phe	Lys	Glu	Gln	Phe	Leu	Asp	Gly	Asp	Gly
			20					25					30		

Trp	Thr	Ser	Arg	Trp	Ile	Glu	Ser	Lys	His	Lys	Ser	Asp	Phe	Gly	Lys
		35					40					45			

Phe	Val	Leu	Ser	Ser	Gly	Lys	Phe	Tyr	Gly	Asp	Glu	Glu	Lys	Asp	Lys
	50					55					60				

Gly	Pro	Asp	Ile	Cys	Gly	Pro	Gly	Thr	Lys	Lys	Val	His	Val	Ile	Phe
65					70					75					80

Asn	Tyr	Lys	Gly	Lys	Asn	Val	Leu	Ile	Asn	Lys	Asp	Ile	Arg	Cys	Lys
				85					90					95	

Asp	Asp	Glu	Phe	Thr	His	Leu	Tyr	Thr	Leu	Ile	Val	Arg	Pro	Asp	Asn
			100					105						110	

25261

Thr Tyr Glu Val Lys Ile Asp Asn Ser Gln Val Glu Ser Gly Ser Leu
 115 120 125
 Glu Asp Asp Trp Asp Phe Leu Pro Pro Lys Lys Ile Lys Asp Pro Asp
 130 135 140
 Ala Ser Lys Pro Glu Asp Trp Asp Glu Arg Ala Lys Ile Asp Asp Pro
 145 150 155 160
 Thr Asp Ser Lys Pro Glu Asp Trp Asp Lys Pro Glu His Ile Pro Asp
 165 170 175
 Pro Asp Ala Lys Lys Pro Glu Asp Trp Asp Glu Glu Met Asp Gly Glu
 180 185 190
 Trp Glu Pro Pro Val Ile Gln Asn Pro Glu Tyr Lys Gly Glu Trp Lys
 195 200 205
 Pro Arg Gln Ile Asp Asn Pro Asp Tyr Lys Gly Thr Trp Ile His Pro
 210 215 220
 Glu Ile Asp Asn Pro Glu Tyr Ser Pro Asp Pro Ser Ile Tyr Ala Tyr
 225 230 235 240
 Asp Asn Phe Gly Val Leu Gly
 245

<210> 11270

<211> 163

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2216"

<220>

<221> source

<223> /note="Gene Symbol: CALR"

<220>

<221> source

<223> /note="Gene Name:
calreticulin"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000465918"

<220>

<221> MOD_RES

<222> (1)..(1)

<223> Any amino acid

<400> 11270

Xaa Glu Asp Trp Asp Glu Arg Ala Lys Ile Asp Asp Pro Thr Asp Ser
1 5 10 15

Lys Pro Glu Asp Trp Asp Lys Pro Glu His Ile Pro Asp Pro Asp Ala
20 25 30

Lys Lys Pro Glu Asp Trp Asp Glu Glu Met Asp Gly Glu Trp Glu Pro
35 40 45

Pro Val Ile Gln Asn Pro Glu Tyr Lys Gly Glu Trp Lys Pro Arg Gln
50 55 60

Ile Asp Asn Pro Asp Tyr Lys Gly Thr Trp Ile His Pro Glu Ile Asp
65 70 75 80

Asn Pro Glu Tyr Ser Pro Asp Pro Ser Ile Tyr Ala Tyr Asp Asn Phe
85 90 95

Gly Val Leu Gly Leu Asp Leu Trp Gln Val Lys Ser Gly Thr Ile Phe
100 105 110

Asp Asn Phe Leu Ile Thr Asn Asp Glu Ala Tyr Ala Glu Glu Phe Gly
115 120 125

Asn Glu Thr Trp Gly Val Thr Lys Ala Ala Glu Lys Gln Met Lys Asp
130 135 140

Lys Gln Asp Glu Glu Gln Arg Pro Glu Arg Ser Cys Arg Arg Ala Gly
145 150 155 160

Arg Ala Lys

<210> 11271

<211> 13

<212> PRT

<213> Homo sapiens

<220>
<221> source
<223> /note="Payload ID: 2216"

<220>
<221> source
<223> /note="Gene Symbol: CALR"

<220>
<221> source
<223> /note="Gene Name:
calreticulin"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000466037"

<220>
<221> MOD_RES
<222> (1)..(1)
<223> Any amino acid

<400> 11271
Xaa Glu Glu Asp Val Pro Gly Gln Ala Lys Asp Glu Leu
1 5 10

<210> 11272
<211> 384
<212> PRT
<213> Homo sapiens

<220>
<221> source
<223> /note="Payload ID: 2217"

<220>
<221> source
<223> /note="Gene Symbol: CALR3"

<220>
<221> source
<223> /note="Gene Name:
calreticulin 3"

<220>
<221> source
<223> /note="Uniprot ID: Q96L12"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000269881"

<400> 11272
Met Ala Arg Ala Leu Val Gln Leu Trp Ala Ile Cys Met Leu Arg Val

1				5						10					15		
Ala	Leu	Ala	Thr	Val	Tyr	Phe	Gln	Glu	Glu	Phe	Leu	Asp	Gly	Glu	His		
			20					25					30				
Trp	Arg	Asn	Arg	Trp	Leu	Gln	Ser	Thr	Asn	Asp	Ser	Arg	Phe	Gly	His		
		35					40					45					
Phe	Arg	Leu	Ser	Ser	Gly	Lys	Phe	Tyr	Gly	His	Lys	Glu	Lys	Asp	Lys		
	50					55					60						
Gly	Leu	Gln	Thr	Thr	Gln	Asn	Gly	Arg	Phe	Tyr	Ala	Ile	Ser	Ala	Arg		
65					70					75					80		
Phe	Lys	Pro	Phe	Ser	Asn	Lys	Gly	Lys	Thr	Leu	Val	Ile	Gln	Tyr	Thr		
				85					90					95			
Val	Lys	His	Glu	Gln	Lys	Met	Asp	Cys	Gly	Gly	Gly	Tyr	Ile	Lys	Val		
			100					105					110				
Phe	Pro	Ala	Asp	Ile	Asp	Gln	Lys	Asn	Leu	Asn	Gly	Lys	Ser	Gln	Tyr		
		115					120					125					
Tyr	Ile	Met	Phe	Gly	Pro	Asp	Ile	Cys	Gly	Phe	Asp	Ile	Lys	Lys	Val		
	130					135					140						
His	Val	Ile	Leu	His	Phe	Lys	Asn	Lys	Tyr	His	Glu	Asn	Lys	Lys	Leu		
145					150					155					160		
Ile	Arg	Cys	Lys	Val	Asp	Gly	Phe	Thr	His	Leu	Tyr	Thr	Leu	Ile	Leu		
				165					170					175			
Arg	Pro	Asp	Leu	Ser	Tyr	Asp	Val	Lys	Ile	Asp	Gly	Gln	Ser	Ile	Glu		
			180					185					190				
Ser	Gly	Ser	Ile	Glu	Tyr	Asp	Trp	Asn	Leu	Thr	Ser	Leu	Lys	Lys	Glu		
		195					200					205					
Thr	Ser	Pro	Ala	Glu	Ser	Lys	Asp	Trp	Glu	Gln	Thr	Lys	Asp	Asn	Lys		
	210					215					220						
Ala	Gln	Asp	Trp	Glu	Lys	His	Phe	Leu	Asp	Ala	Ser	Thr	Ser	Lys	Gln		
225					230					235					240		

Ser Asp Trp Asn Gly Asp Leu Asp Gly Asp Trp Pro Ala Pro Met Leu
245 250 255

Gln Lys Pro Pro Tyr Gln Asp Gly Leu Lys Pro Glu Gly Ile His Lys
260 265 270

Asp Val Trp Leu His Arg Lys Met Lys Asn Thr Asp Tyr Leu Thr Gln
275 280 285

Tyr Asp Leu Ser Glu Phe Glu Asn Ile Gly Ala Ile Gly Leu Glu Leu
290 295 300

Trp Gln Val Arg Ser Gly Thr Ile Phe Asp Asn Phe Leu Ile Thr Asp
305 310 315 320

Asp Glu Glu Tyr Ala Asp Asn Phe Gly Lys Ala Thr Trp Gly Glu Thr
325 330 335

Lys Gly Pro Glu Arg Glu Met Asp Ala Ile Gln Ala Lys Glu Glu Met
340 345 350

Lys Lys Ala Arg Glu Glu Glu Glu Glu Glu Leu Leu Ser Gly Lys Ile
355 360 365

Asn Arg His Glu His Tyr Phe Asn Gln Phe His Arg Arg Asn Glu Leu
370 375 380

<210> 11273

<211> 142

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2217"

<220>

<221> source

<223> /note="Gene Symbol: CALR3"

<220>

<221> source

<223> /note="Gene Name:
calreticulin 3"

<220>

<221> source
<223> /note="ENSP ID: ENSP00000471533"

<220>
<221> MOD_RES
<222> (1)..(1)
<223> Any amino acid

<400> 11273
Xaa Leu Val Gln Leu Trp Ala Ile Cys Met Leu Arg Val Ala Leu Ala
1 5 10 15

Thr Val Tyr Phe Gln Glu Glu Phe Leu Asp Gly Glu His Trp Arg Asn
20 25 30

Arg Trp Leu Gln Ser Thr Asn Asp Ser Arg Phe Gly His Phe Arg Leu
35 40 45

Ser Ser Gly Lys Phe Tyr Gly His Lys Glu Lys Asp Lys Gly Pro Asp
50 55 60

Ile Cys Gly Phe Asp Ile Lys Lys Val His Val Ile Leu His Phe Lys
65 70 75 80

Asn Lys Tyr His Glu Asn Lys Lys Leu Ile Arg Cys Lys Val Asp Gly
85 90 95

Phe Thr His Leu Tyr Thr Leu Ile Leu Arg Pro Asp Leu Ser Tyr Asp
100 105 110

Val Lys Ile Asp Gly Gln Ser Ile Glu Ser Gly Ser Ile Glu Tyr Asp
115 120 125

Trp Asn Leu Thr Ser Leu Lys Lys Glu Thr Ser Pro Ala Glu
130 135 140

<210> 11274
<211> 396
<212> PRT
<213> Homo sapiens

<220>
<221> source
<223> /note="Payload ID: 2218"

<220>
<221> source

<223> /note="Gene Symbol: CASQ1"

<220>

<221> source

<223> /note="Gene Name:
calsequestrin 1 (fast-twitch, skeletal muscle)"

<220>

<221> source

<223> /note="Uniprot ID: P31415"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000357057"

<400> 11274

Met Ser Ala Thr Asp Arg Met Gly Pro Arg Ala Val Pro Gly Leu Arg
1 5 10 15

Leu Ala Leu Leu Leu Leu Val Leu Gly Thr Pro Lys Ser Gly Val
20 25 30

Gln Gly Gln Glu Gly Leu Asp Phe Pro Glu Tyr Asp Gly Val Asp Arg
35 40 45

Val Ile Asn Val Asn Ala Lys Asn Tyr Lys Asn Val Phe Lys Lys Tyr
50 55 60

Glu Val Leu Ala Leu Leu Tyr His Glu Pro Pro Glu Asp Asp Lys Ala
65 70 75 80

Ser Gln Arg Gln Phe Glu Met Glu Glu Leu Ile Leu Glu Leu Ala Ala
85 90 95

Gln Val Leu Glu Asp Lys Gly Val Gly Phe Gly Leu Val Asp Ser Glu
100 105 110

Lys Asp Ala Ala Val Ala Lys Lys Leu Gly Leu Thr Glu Val Asp Ser
115 120 125

Met Tyr Val Phe Lys Gly Asp Glu Val Ile Glu Tyr Asp Gly Glu Phe
130 135 140

Ser Ala Asp Thr Ile Val Glu Phe Leu Leu Asp Val Leu Glu Asp Pro
145 150 155 160

Val Glu Leu Ile Glu Gly Glu Arg Glu Leu Gln Ala Phe Glu Asn Ile

165								170				175			
Glu	Asp	Glu	Ile	Lys	Leu	Ile	Gly	Tyr	Phe	Lys	Ser	Lys	Asp	Ser	Glu
			180					185					190		
His	Tyr	Lys	Ala	Phe	Glu	Asp	Ala	Ala	Glu	Glu	Phe	His	Pro	Tyr	Ile
		195					200					205			
Pro	Phe	Phe	Ala	Thr	Phe	Asp	Ser	Lys	Val	Ala	Lys	Lys	Leu	Thr	Leu
	210					215					220				
Lys	Leu	Asn	Glu	Ile	Asp	Phe	Tyr	Glu	Ala	Phe	Met	Glu	Glu	Pro	Val
225					230					235					240
Thr	Ile	Pro	Asp	Lys	Pro	Asn	Ser	Glu	Glu	Glu	Ile	Val	Asn	Phe	Val
				245					250					255	
Glu	Glu	His	Arg	Arg	Ser	Thr	Leu	Arg	Lys	Leu	Lys	Pro	Glu	Ser	Met
			260					265					270		
Tyr	Glu	Thr	Trp	Glu	Asp	Asp	Met	Asp	Gly	Ile	His	Ile	Val	Ala	Phe
		275					280					285			
Ala	Glu	Glu	Ala	Asp	Pro	Asp	Gly	Phe	Glu	Phe	Leu	Glu	Thr	Leu	Lys
	290					295					300				
Ala	Val	Ala	Gln	Asp	Asn	Thr	Glu	Asn	Pro	Asp	Leu	Ser	Ile	Ile	Trp
305					310					315					320
Ile	Asp	Pro	Asp	Asp	Phe	Pro	Leu	Leu	Val	Pro	Tyr	Trp	Glu	Lys	Thr
				325					330					335	
Phe	Asp	Ile	Asp	Leu	Ser	Ala	Pro	Gln	Ile	Gly	Val	Val	Asn	Val	Thr
			340					345					350		
Asp	Ala	Asp	Ser	Val	Trp	Met	Glu	Met	Asp	Asp	Glu	Glu	Asp	Leu	Pro
		355					360					365			
Ser	Ala	Glu	Glu	Leu	Glu	Asp	Trp	Leu	Glu	Asp	Val	Leu	Glu	Gly	Glu
	370					375					380				
Ile	Asn	Thr	Glu	Asp	Asp	Asp	Asp	Asp	Asp	Asp	Asp	Asp	Asp	Asp	Asp
385					390						395				

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<210> 11275
<211> 117
<212> PRT
<213> Homo sapiens

<220>
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<223> /note="Payload ID: 2218"

<220>
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<223> /note="Gene Symbol: CASQ1"

<220>
<221> source
<223> /note="Gene Name:
      calsequestrin 1 (fast-twitch, skeletal muscle)"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000418051"

<400> 11275
Met Asp Gly Ile His Ile Val Ala Phe Ala Glu Glu Ala Asp Pro Asp
1          5          10          15

Gly Phe Glu Phe Leu Glu Thr Leu Lys Ala Val Ala Gln Asp Asn Thr
      20          25          30

Glu Asn Pro Asp Leu Ser Ile Ile Trp Ile Asp Pro Asp Asp Phe Pro
      35          40          45

Leu Leu Val Pro Tyr Trp Glu Lys Thr Phe Asp Ile Asp Leu Ser Ala
      50          55          60

Pro Gln Ile Gly Val Val Asn Val Thr Asp Ala Asp Ser Val Trp Met
65          70          75          80

Glu Met Asp Asp Glu Glu Asp Leu Pro Ser Ala Glu Glu Leu Glu Asp
      85          90          95

Trp Leu Glu Asp Val Leu Glu Gly Glu Ile Asn Thr Glu Asp Asp Asp
      100          105          110

Asp Asp Asp Asp Asp
      115

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<210> 11276
<211> 399
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<220>
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<220>
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<223> /note="Gene Symbol: CASQ2"

<220>
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<223> /note="Gene Name:
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<220>
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<220>
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<400> 11276
Met Lys Arg Thr His Leu Phe Ile Val Gly Ile Tyr Phe Leu Ser Ser
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Cys Arg Ala Glu Glu Gly Leu Asn Phe Pro Thr Tyr Asp Gly Lys Asp
          20          25          30

Arg Val Val Ser Leu Ser Glu Lys Asn Phe Lys Gln Val Leu Lys Lys
          35          40          45

Tyr Asp Leu Leu Cys Leu Tyr Tyr His Glu Pro Val Ser Ser Asp Lys
          50          55          60

Val Thr Gln Lys Gln Phe Gln Leu Lys Glu Ile Val Leu Glu Leu Val
65          70          75          80

Ala Gln Val Leu Glu His Lys Ala Ile Gly Phe Val Met Val Asp Ala
          85          90          95

Lys Lys Glu Ala Lys Leu Ala Lys Lys Leu Gly Phe Asp Glu Glu Gly
          100          105          110

Ser Leu Tyr Ile Leu Lys Gly Asp Arg Thr Ile Glu Phe Asp Gly Glu
          115          120          125

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Phe	Ala	Ala	Asp	Val	Leu	Val	Glu	Phe	Leu	Leu	Asp	Leu	Ile	Glu	Asp	130	135	140
Pro	Val	Glu	Ile	Ile	Ser	Ser	Lys	Leu	Glu	Val	Gln	Ala	Phe	Glu	Arg	145	150	155
Ile	Glu	Asp	Tyr	Ile	Lys	Leu	Ile	Gly	Phe	Phe	Lys	Ser	Glu	Asp	Ser	165	170	175
Glu	Tyr	Tyr	Lys	Ala	Phe	Glu	Glu	Ala	Ala	Glu	His	Phe	Gln	Pro	Tyr	180	185	190
Ile	Lys	Phe	Phe	Ala	Thr	Phe	Asp	Lys	Gly	Val	Ala	Lys	Lys	Leu	Ser	195	200	205
Leu	Lys	Met	Asn	Glu	Val	Asp	Phe	Tyr	Glu	Pro	Phe	Met	Asp	Glu	Pro	210	215	220
Ile	Ala	Ile	Pro	Asn	Lys	Pro	Tyr	Thr	Glu	Glu	Glu	Leu	Val	Glu	Phe	225	230	235
Val	Lys	Glu	His	Gln	Arg	Pro	Thr	Leu	Arg	Arg	Leu	Arg	Pro	Glu	Glu	245	250	255
Met	Phe	Glu	Thr	Trp	Glu	Asp	Asp	Leu	Asn	Gly	Ile	His	Ile	Val	Ala	260	265	270
Phe	Ala	Glu	Lys	Ser	Asp	Pro	Asp	Gly	Tyr	Glu	Phe	Leu	Glu	Ile	Leu	275	280	285
Lys	Gln	Val	Ala	Arg	Asp	Asn	Thr	Asp	Asn	Pro	Asp	Leu	Ser	Ile	Leu	290	295	300
Trp	Ile	Asp	Pro	Asp	Asp	Phe	Pro	Leu	Leu	Val	Ala	Tyr	Trp	Glu	Lys	305	310	315
Thr	Phe	Lys	Ile	Asp	Leu	Phe	Arg	Pro	Gln	Ile	Gly	Val	Val	Asn	Val	325	330	335
Thr	Asp	Ala	Asp	Ser	Val	Trp	Met	Glu	Ile	Pro	Asp	Asp	Asp	Asp	Leu	340	345	350

Pro Thr Ala Glu Glu Leu Glu Asp Trp Ile Glu Asp Val Leu Ser Gly
355 360 365

Lys Ile Asn Thr Glu Asp Asp Asp Glu Asp Asp Asp Asp Asp Asn
370 375 380

Ser Asp Glu Glu Asp Asn Asp Asp Ser Asp Asp Asp Asp Glu
385 390 395

<210> 11277

<211> 971

<212> PRT

<213> Homo sapiens

<220>

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<223> /note="Payload ID: 2220"

<220>

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<223> /note="Gene Symbol: CLSTN1"

<220>

<221> source

<223> /note="Gene Name:
calsyntenin 1"

<220>

<221> source

<223> /note="Uniprot ID: O94985"

<220>

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<400> 11277

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Leu Ala Gly Leu Leu Cys Gly Gly Gly Val Trp Ala Ala Arg Val Asn
20 25 30

Lys His Lys Pro Trp Leu Glu Pro Thr Tyr His Gly Ile Val Thr Glu
35 40 45

Asn Asp Asn Thr Val Leu Leu Asp Pro Pro Leu Ile Ala Leu Asp Lys
50 55 60

Asp Ala Pro Leu Arg Phe Ala Gly Glu Ile Cys Gly Phe Lys Ile His

25273

65					70					75					80
Gly	Gln	Asn	Val	Pro	Phe	Asp	Ala	Val	Val	Val	Asp	Lys	Ser	Thr	Gly
				85					90					95	
Glu	Gly	Val	Ile	Arg	Ser	Lys	Glu	Lys	Leu	Asp	Cys	Glu	Leu	Gln	Lys
			100					105					110		
Asp	Tyr	Ser	Phe	Thr	Ile	Gln	Ala	Tyr	Asp	Cys	Gly	Lys	Gly	Pro	Asp
		115					120					125			
Gly	Thr	Asn	Val	Lys	Lys	Ser	His	Lys	Ala	Thr	Val	His	Ile	Gln	Val
	130					135					140				
Asn	Asp	Val	Asn	Glu	Tyr	Ala	Pro	Val	Phe	Lys	Glu	Lys	Ser	Tyr	Lys
145					150					155					160
Ala	Thr	Val	Ile	Glu	Gly	Lys	Gln	Tyr	Asp	Ser	Ile	Leu	Arg	Val	Glu
				165					170					175	
Ala	Val	Asp	Ala	Asp	Cys	Ser	Pro	Gln	Phe	Ser	Gln	Ile	Cys	Ser	Tyr
			180					185					190		
Glu	Ile	Ile	Thr	Pro	Asp	Val	Pro	Phe	Thr	Val	Asp	Lys	Asp	Gly	Tyr
		195					200					205			
Ile	Lys	Asn	Thr	Glu	Lys	Leu	Asn	Tyr	Gly	Lys	Glu	His	Gln	Tyr	Lys
	210					215					220				
Leu	Thr	Val	Thr	Ala	Tyr	Asp	Cys	Gly	Lys	Lys	Arg	Ala	Thr	Glu	Asp
225					230					235					240
Val	Leu	Val	Lys	Ile	Ser	Ile	Lys	Pro	Thr	Cys	Thr	Pro	Gly	Trp	Gln
				245					250					255	
Gly	Trp	Asn	Asn	Arg	Ile	Glu	Tyr	Glu	Pro	Gly	Thr	Gly	Ala	Leu	Ala
		260						265					270		
Val	Phe	Pro	Asn	Ile	His	Leu	Glu	Thr	Cys	Asp	Glu	Pro	Val	Ala	Ser
		275					280					285			
Val	Gln	Ala	Thr	Val	Glu	Leu	Glu	Thr	Ser	His	Ile	Gly	Lys	Gly	Cys
	290					295					300				

Asp	Arg	Asp	Thr	Tyr	Ser	Glu	Lys	Ser	Leu	His	Arg	Leu	Cys	Gly	Ala	
305					310					315					320	
Ala	Ala	Gly	Thr	Ala	Glu	Leu	Leu	Pro	Ser	Pro	Ser	Gly	Ser	Leu	Asn	
				325					330					335		
Trp	Thr	Met	Gly	Leu	Pro	Thr	Asp	Asn	Gly	His	Asp	Ser	Asp	Gln	Val	
			340					345					350			
Phe	Glu	Phe	Asn	Gly	Thr	Gln	Ala	Val	Arg	Ile	Pro	Asp	Gly	Val	Val	
		355					360					365				
Ser	Val	Ser	Pro	Lys	Glu	Pro	Phe	Thr	Ile	Ser	Val	Trp	Met	Arg	His	
	370					375					380					
Gly	Pro	Phe	Gly	Arg	Lys	Lys	Glu	Thr	Ile	Leu	Cys	Ser	Ser	Asp	Lys	
385					390					395					400	
Thr	Asp	Met	Asn	Arg	His	His	Tyr	Ser	Leu	Tyr	Val	His	Gly	Cys	Arg	
				405					410					415		
Leu	Ile	Phe	Leu	Phe	Arg	Gln	Asp	Pro	Ser	Glu	Glu	Lys	Lys	Tyr	Arg	
			420					425					430			
Pro	Ala	Glu	Phe	His	Trp	Lys	Leu	Asn	Gln	Val	Cys	Asp	Glu	Glu	Trp	
		435					440					445				
His	His	Tyr	Val	Leu	Asn	Val	Glu	Phe	Pro	Ser	Val	Thr	Leu	Tyr	Val	
	450					455					460					
Asp	Gly	Thr	Ser	His	Glu	Pro	Phe	Ser	Val	Thr	Glu	Asp	Tyr	Pro	Leu	
465					470					475					480	
His	Pro	Ser	Lys	Ile	Glu	Thr	Gln	Leu	Val	Val	Gly	Ala	Cys	Trp	Gln	
				485					490					495		
Glu	Phe	Ser	Gly	Val	Glu	Asn	Asp	Asn	Glu	Thr	Glu	Pro	Val	Thr	Val	
			500					505					510			
Ala	Ser	Ala	Gly	Gly	Asp	Leu	His	Met	Thr	Gln	Phe	Phe	Arg	Gly	Asn	
		515					520					525				

Leu	Ala	Gly	Leu	Thr	Leu	Arg	Ser	Gly	Lys	Leu	Ala	Asp	Lys	Lys	Val
530						535					540				
Ile	Asp	Cys	Leu	Tyr	Thr	Cys	Lys	Glu	Gly	Leu	Asp	Leu	Gln	Val	Leu
545					550					555					560
Glu	Asp	Ser	Gly	Arg	Gly	Val	Gln	Ile	Gln	Ala	His	Pro	Ser	Gln	Leu
				565					570					575	
Val	Leu	Thr	Leu	Glu	Gly	Glu	Asp	Leu	Gly	Glu	Leu	Asp	Lys	Ala	Met
			580					585					590		
Gln	His	Ile	Ser	Tyr	Leu	Asn	Ser	Arg	Gln	Phe	Pro	Thr	Pro	Gly	Ile
		595					600					605			
Arg	Arg	Leu	Lys	Ile	Thr	Ser	Thr	Ile	Lys	Cys	Phe	Asn	Glu	Ala	Thr
	610					615					620				
Cys	Ile	Ser	Val	Pro	Pro	Val	Asp	Gly	Tyr	Val	Met	Val	Leu	Gln	Pro
625					630					635					640
Glu	Glu	Pro	Lys	Ile	Ser	Leu	Ser	Gly	Val	His	His	Phe	Ala	Arg	Ala
				645					650					655	
Ala	Ser	Glu	Phe	Glu	Ser	Ser	Glu	Gly	Val	Phe	Leu	Phe	Pro	Glu	Leu
			660					665					670		
Arg	Ile	Ile	Ser	Thr	Ile	Thr	Arg	Glu	Val	Glu	Pro	Glu	Gly	Asp	Gly
		675					680					685			
Ala	Glu	Asp	Pro	Thr	Val	Gln	Glu	Ser	Leu	Val	Ser	Glu	Glu	Ile	Val
	690					695					700				
His	Asp	Leu	Asp	Thr	Cys	Glu	Val	Thr	Val	Glu	Gly	Glu	Glu	Leu	Asn
705					710					715					720
His	Glu	Gln	Glu	Ser	Leu	Glu	Val	Asp	Met	Ala	Arg	Leu	Gln	Gln	Lys
				725					730					735	
Gly	Ile	Glu	Val	Ser	Ser	Ser	Glu	Leu	Gly	Met	Thr	Phe	Thr	Gly	Val
			740					745						750	

Asp Thr Met Ala Ser Tyr Glu Glu Val Leu His Leu Leu Arg Tyr Arg
755 760 765

Asn Trp His Ala Arg Ser Leu Leu Asp Arg Lys Phe Lys Leu Ile Cys
770 775 780

Ser Glu Leu Asn Gly Arg Tyr Ile Ser Asn Glu Phe Lys Val Glu Val
785 790 795 800

Asn Val Ile His Thr Ala Asn Pro Met Glu His Ala Asn His Met Ala
805 810 815

Ala Gln Pro Gln Phe Val His Pro Glu His Arg Ser Phe Val Asp Leu
820 825 830

Ser Gly His Asn Leu Ala Asn Pro His Pro Phe Ala Val Val Pro Ser
835 840 845

Thr Ala Thr Val Val Ile Val Val Cys Val Ser Phe Leu Val Phe Met
850 855 860

Ile Ile Leu Gly Val Phe Arg Ile Arg Ala Ala His Arg Arg Thr Met
865 870 875 880

Arg Asp Gln Asp Thr Gly Lys Glu Asn Glu Met Asp Trp Asp Asp Ser
885 890 895

Ala Leu Thr Ile Thr Val Asn Pro Met Glu Thr Tyr Glu Asp Gln His
900 905 910

Ser Ser Glu Glu Glu Glu Glu Glu Glu Glu Glu Glu Ser Glu Asp
915 920 925

Gly Glu Glu Glu Asp Asp Ile Thr Ser Ala Glu Ser Glu Ser Ser Glu
930 935 940

Glu Glu Glu Gly Glu Gln Gly Asp Pro Gln Asn Ala Thr Arg Gln Gln
945 950 955 960

Gln Leu Glu Trp Asp Asp Ser Thr Leu Ser Tyr
965 970

<210> 11278

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<211> 981
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<220>
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Met Leu Arg Arg Pro Ala Pro Ala Leu Ala Pro Ala Ala Arg Leu Leu
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Leu Ala Gly Leu Leu Cys Gly Gly Gly Val Trp Ala Ala Arg Val Asn
      20          25          30

Lys His Lys Pro Trp Leu Glu Pro Thr Tyr His Gly Ile Val Thr Glu
      35          40          45

Asn Asp Asn Thr Val Leu Leu Asp Pro Pro Leu Ile Ala Leu Asp Lys
      50          55          60

Asp Ala Pro Leu Arg Phe Ala Glu Ser Phe Glu Val Thr Val Thr Lys
65          70          75          80

Glu Gly Glu Ile Cys Gly Phe Lys Ile His Gly Gln Asn Val Pro Phe
      85          90          95

Asp Ala Val Val Val Asp Lys Ser Thr Gly Glu Gly Val Ile Arg Ser
      100          105          110

Lys Glu Lys Leu Asp Cys Glu Leu Gln Lys Asp Tyr Ser Phe Thr Ile
      115          120          125

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Gln	Ala	Tyr	Asp	Cys	Gly	Lys	Gly	Pro	Asp	Gly	Thr	Asn	Val	Lys	Lys	
130						135					140					
Ser	His	Lys	Ala	Thr	Val	His	Ile	Gln	Val	Asn	Asp	Val	Asn	Glu	Tyr	
145					150					155					160	
Ala	Pro	Val	Phe	Lys	Glu	Lys	Ser	Tyr	Lys	Ala	Thr	Val	Ile	Glu	Gly	
				165					170					175		
Lys	Gln	Tyr	Asp	Ser	Ile	Leu	Arg	Val	Glu	Ala	Val	Asp	Ala	Asp	Cys	
			180					185					190			
Ser	Pro	Gln	Phe	Ser	Gln	Ile	Cys	Ser	Tyr	Glu	Ile	Ile	Thr	Pro	Asp	
		195					200					205				
Val	Pro	Phe	Thr	Val	Asp	Lys	Asp	Gly	Tyr	Ile	Lys	Asn	Thr	Glu	Lys	
	210					215					220					
Leu	Asn	Tyr	Gly	Lys	Glu	His	Gln	Tyr	Lys	Leu	Thr	Val	Thr	Ala	Tyr	
225					230					235					240	
Asp	Cys	Gly	Lys	Lys	Arg	Ala	Thr	Glu	Asp	Val	Leu	Val	Lys	Ile	Ser	
				245					250					255		
Ile	Lys	Pro	Thr	Cys	Thr	Pro	Gly	Trp	Gln	Gly	Trp	Asn	Asn	Arg	Ile	
			260					265					270			
Glu	Tyr	Glu	Pro	Gly	Thr	Gly	Ala	Leu	Ala	Val	Phe	Pro	Asn	Ile	His	
		275					280					285				
Leu	Glu	Thr	Cys	Asp	Glu	Pro	Val	Ala	Ser	Val	Gln	Ala	Thr	Val	Glu	
	290					295					300					
Leu	Glu	Thr	Ser	His	Ile	Gly	Lys	Gly	Cys	Asp	Arg	Asp	Thr	Tyr	Ser	
305					310					315					320	
Glu	Lys	Ser	Leu	His	Arg	Leu	Cys	Gly	Ala	Ala	Ala	Gly	Thr	Ala	Glu	
				325					330					335		
Leu	Leu	Pro	Ser	Pro	Ser	Gly	Ser	Leu	Asn	Trp	Thr	Met	Gly	Leu	Pro	
			340					345					350			

Thr	Asp	Asn	Gly	His	Asp	Ser	Asp	Gln	Val	Phe	Glu	Phe	Asn	Gly	Thr	
		355					360					365				
Gln	Ala	Val	Arg	Ile	Pro	Asp	Gly	Val	Val	Ser	Val	Ser	Pro	Lys	Glu	
	370					375					380					
Pro	Phe	Thr	Ile	Ser	Val	Trp	Met	Arg	His	Gly	Pro	Phe	Gly	Arg	Lys	
385					390					395					400	
Lys	Glu	Thr	Ile	Leu	Cys	Ser	Ser	Asp	Lys	Thr	Asp	Met	Asn	Arg	His	
				405					410					415		
His	Tyr	Ser	Leu	Tyr	Val	His	Gly	Cys	Arg	Leu	Ile	Phe	Leu	Phe	Arg	
			420					425					430			
Gln	Asp	Pro	Ser	Glu	Glu	Lys	Lys	Tyr	Arg	Pro	Ala	Glu	Phe	His	Trp	
		435					440					445				
Lys	Leu	Asn	Gln	Val	Cys	Asp	Glu	Glu	Trp	His	His	Tyr	Val	Leu	Asn	
	450					455					460					
Val	Glu	Phe	Pro	Ser	Val	Thr	Leu	Tyr	Val	Asp	Gly	Thr	Ser	His	Glu	
465					470					475					480	
Pro	Phe	Ser	Val	Thr	Glu	Asp	Tyr	Pro	Leu	His	Pro	Ser	Lys	Ile	Glu	
				485					490					495		
Thr	Gln	Leu	Val	Val	Gly	Ala	Cys	Trp	Gln	Glu	Phe	Ser	Gly	Val	Glu	
			500					505					510			
Asn	Asp	Asn	Glu	Thr	Glu	Pro	Val	Thr	Val	Ala	Ser	Ala	Gly	Gly	Asp	
		515					520					525				
Leu	His	Met	Thr	Gln	Phe	Phe	Arg	Gly	Asn	Leu	Ala	Gly	Leu	Thr	Leu	
	530					535					540					
Arg	Ser	Gly	Lys	Leu	Ala	Asp	Lys	Lys	Val	Ile	Asp	Cys	Leu	Tyr	Thr	
545					550					555					560	
Cys	Lys	Glu	Gly	Leu	Asp	Leu	Gln	Val	Leu	Glu	Asp	Ser	Gly	Arg	Gly	
				565					570					575		
Val	Gln	Ile	Gln	Ala	His	Pro	Ser	Gln	Leu	Val	Leu	Thr	Leu	Glu	Gly	

580							585					590				
Glu	Asp	Leu	Gly	Glu	Leu	Asp	Lys	Ala	Met	Gln	His	Ile	Ser	Tyr	Leu	
		595					600					605				
Asn	Ser	Arg	Gln	Phe	Pro	Thr	Pro	Gly	Ile	Arg	Arg	Leu	Lys	Ile	Thr	
	610					615					620					
Ser	Thr	Ile	Lys	Cys	Phe	Asn	Glu	Ala	Thr	Cys	Ile	Ser	Val	Pro	Pro	
625					630					635					640	
Val	Asp	Gly	Tyr	Val	Met	Val	Leu	Gln	Pro	Glu	Glu	Pro	Lys	Ile	Ser	
				645					650					655		
Leu	Ser	Gly	Val	His	His	Phe	Ala	Arg	Ala	Ala	Ser	Glu	Phe	Glu	Ser	
			660					665					670			
Ser	Glu	Gly	Val	Phe	Leu	Phe	Pro	Glu	Leu	Arg	Ile	Ile	Ser	Thr	Ile	
		675					680					685				
Thr	Arg	Glu	Val	Glu	Pro	Glu	Gly	Asp	Gly	Ala	Glu	Asp	Pro	Thr	Val	
	690					695					700					
Gln	Glu	Ser	Leu	Val	Ser	Glu	Glu	Ile	Val	His	Asp	Leu	Asp	Thr	Cys	
705					710					715					720	
Glu	Val	Thr	Val	Glu	Gly	Glu	Glu	Leu	Asn	His	Glu	Gln	Glu	Ser	Leu	
				725					730					735		
Glu	Val	Asp	Met	Ala	Arg	Leu	Gln	Gln	Lys	Gly	Ile	Glu	Val	Ser	Ser	
			740					745					750			
Ser	Glu	Leu	Gly	Met	Thr	Phe	Thr	Gly	Val	Asp	Thr	Met	Ala	Ser	Tyr	
		755					760					765				
Glu	Glu	Val	Leu	His	Leu	Leu	Arg	Tyr	Arg	Asn	Trp	His	Ala	Arg	Ser	
	770					775					780					
Leu	Leu	Asp	Arg	Lys	Phe	Lys	Leu	Ile	Cys	Ser	Glu	Leu	Asn	Gly	Arg	
785					790					795					800	
Tyr	Ile	Ser	Asn	Glu	Phe	Lys	Val	Glu	Val	Asn	Val	Ile	His	Thr	Ala	
				805					810					815		

Asn Pro Met Glu His Ala Asn His Met Ala Ala Gln Pro Gln Phe Val
820 825 830

His Pro Glu His Arg Ser Phe Val Asp Leu Ser Gly His Asn Leu Ala
835 840 845

Asn Pro His Pro Phe Ala Val Val Pro Ser Thr Ala Thr Val Val Ile
850 855 860

Val Val Cys Val Ser Phe Leu Val Phe Met Ile Ile Leu Gly Val Phe
865 870 875 880

Arg Ile Arg Ala Ala His Arg Arg Thr Met Arg Asp Gln Asp Thr Gly
885 890 895

Lys Glu Asn Glu Met Asp Trp Asp Asp Ser Ala Leu Thr Ile Thr Val
900 905 910

Asn Pro Met Glu Thr Tyr Glu Asp Gln His Ser Ser Glu Glu Glu Glu
915 920 925

Glu Glu Glu Glu Glu Glu Glu Ser Glu Asp Gly Glu Glu Glu Asp Asp
930 935 940

Ile Thr Ser Ala Glu Ser Glu Ser Ser Glu Glu Glu Glu Gly Glu Gln
945 950 955 960

Gly Asp Pro Gln Asn Ala Thr Arg Gln Gln Gln Leu Glu Trp Asp Asp
965 970 975

Ser Thr Leu Ser Tyr
980

<210> 11279

<211> 782

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2220"

<220>

<221> source

<223> /note="Gene Symbol: CLSTN1"

<220>

<221> source

<223> /note="Gene Name:
calsyntenin 1"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000401934"

<400> 11279

Ser Ile Leu Arg Val Glu Ala Val Asp Ala Asp Cys Ser Pro Gln Phe
1 5 10 15

Ser Gln Ile Cys Ser Tyr Glu Ile Ile Thr Pro Asp Val Pro Phe Thr
20 25 30

Val Asp Lys Asp Gly Tyr Ile Lys Asn Thr Glu Lys Leu Asn Tyr Gly
35 40 45

Lys Glu His Gln Tyr Lys Leu Thr Val Thr Ala Tyr Asp Cys Gly Lys
50 55 60

Lys Arg Ala Thr Glu Asp Val Leu Val Lys Ile Ser Ile Lys Pro Thr
65 70 75 80

Cys Thr Pro Gly Trp Gln Gly Trp Asn Asn Arg Ile Glu Tyr Glu Pro
85 90 95

Gly Thr Gly Ala Leu Ala Val Phe Pro Asn Ile His Leu Glu Thr Cys
100 105 110

Asp Glu Pro Val Ala Ser Val Gln Ala Thr Val Glu Leu Glu Thr Ser
115 120 125

His Ile Gly Lys Gly Cys Asp Arg Asp Thr Tyr Ser Glu Lys Ser Leu
130 135 140

His Arg Leu Cys Gly Ala Ala Ala Gly Thr Ala Glu Leu Leu Pro Ser
145 150 155 160

Pro Ser Gly Ser Leu Asn Trp Thr Met Gly Leu Pro Thr Asp Asn Gly
165 170 175

His Asp Ser Asp Gln Val Phe Glu Phe Asn Gly Thr Gln Ala Val Arg

Pro	Gly	Ile	Arg	Arg	Leu	Lys	Ile	Thr	Ser	Thr	Ile	Lys	Cys	Phe	Asn	
			420					425					430			
Glu	Ala	Thr	Cys	Ile	Ser	Val	Pro	Pro	Val	Asp	Gly	Tyr	Val	Met	Val	
		435					440					445				
Leu	Gln	Pro	Glu	Glu	Pro	Lys	Ile	Ser	Leu	Ser	Gly	Val	His	His	Phe	
	450					455					460					
Ala	Arg	Ala	Ala	Ser	Glu	Phe	Glu	Ser	Ser	Glu	Gly	Val	Phe	Leu	Phe	
465					470					475					480	
Pro	Glu	Leu	Arg	Ile	Ile	Ser	Thr	Ile	Thr	Arg	Glu	Val	Glu	Pro	Glu	
				485					490					495		
Gly	Asp	Gly	Ala	Glu	Asp	Pro	Thr	Val	Gln	Glu	Ser	Leu	Val	Ser	Glu	
			500					505					510			
Glu	Ile	Val	His	Asp	Leu	Asp	Thr	Cys	Glu	Val	Thr	Val	Glu	Gly	Glu	
		515					520					525				
Glu	Leu	Asn	His	Glu	Gln	Glu	Ser	Leu	Glu	Val	Asp	Met	Ala	Arg	Leu	
	530					535					540					
Gln	Gln	Lys	Gly	Ile	Glu	Val	Ser	Ser	Ser	Glu	Leu	Gly	Met	Thr	Phe	
545					550					555					560	
Thr	Gly	Val	Asp	Thr	Met	Ala	Ser	Tyr	Glu	Glu	Val	Leu	His	Leu	Leu	
				565					570					575		
Arg	Tyr	Arg	Asn	Trp	His	Ala	Arg	Ser	Leu	Leu	Asp	Arg	Lys	Phe	Lys	
			580					585					590			
Leu	Ile	Cys	Ser	Glu	Leu	Asn	Gly	Arg	Tyr	Ile	Ser	Asn	Glu	Phe	Lys	
		595					600					605				
Val	Glu	Val	Asn	Val	Ile	His	Thr	Ala	Asn	Pro	Met	Glu	His	Ala	Asn	
	610					615					620					
His	Met	Ala	Ala	Gln	Pro	Gln	Phe	Val	His	Pro	Glu	His	Arg	Ser	Phe	
625					630					635					640	

Val Asp Leu Ser Gly His Asn Leu Ala Asn Pro His Pro Phe Ala Val
645 650 655

Val Pro Ser Thr Ala Thr Val Val Ile Val Val Cys Val Ser Phe Leu
660 665 670

Val Phe Met Ile Ile Leu Gly Val Phe Arg Ile Arg Ala Ala His Arg
675 680 685

Arg Thr Met Arg Asp Gln Asp Thr Gly Lys Glu Asn Glu Met Asp Trp
690 695 700

Asp Asp Ser Ala Leu Thr Ile Thr Val Asn Pro Met Glu Thr Tyr Glu
705 710 715 720

Asp Gln His Ser Ser Glu Glu Glu Glu Glu Glu Glu Glu Glu Glu
725 730 735

Ser Glu Asp Gly Glu Glu Glu Asp Asp Ile Thr Ser Ala Glu Ser Glu
740 745 750

Ser Ser Glu Glu Glu Gly Glu Gln Gly Asp Pro Gln Asn Ala Thr
755 760 765

Arg Gln Gln Gln Leu Glu Trp Asp Asp Ser Thr Leu Ser Tyr
770 775 780

<210> 11280

<211> 955

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2221"

<220>

<221> source

<223> /note="Gene Symbol: CLSTN2"

<220>

<221> source

<223> /note="Gene Name:
calsyntenin 2"

<220>

<221> source

<223> /note="Uniprot ID: Q9H4D0"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000402460"

<400> 11280

Met Leu Pro Gly Arg Leu Cys Trp Val Pro Leu Leu Leu Ala Leu Gly
1 5 10 15

Val Gly Ser Gly Ser Gly Gly Gly Gly Asp Ser Arg Gln Arg Arg Leu
20 25 30

Leu Ala Ala Lys Val Asn Lys His Lys Pro Trp Ile Glu Thr Ser Tyr
35 40 45

His Gly Val Ile Thr Glu Asn Asn Asp Thr Val Ile Leu Asp Pro Pro
50 55 60

Leu Val Ala Leu Asp Lys Asp Ala Pro Val Pro Phe Ala Gly Glu Ile
65 70 75 80

Cys Ala Phe Lys Ile His Gly Gln Glu Leu Pro Phe Glu Ala Val Val
85 90 95

Leu Asn Lys Thr Ser Gly Glu Gly Arg Leu Arg Ala Lys Ser Pro Ile
100 105 110

Asp Cys Glu Leu Gln Lys Glu Tyr Thr Phe Ile Ile Gln Ala Tyr Asp
115 120 125

Cys Gly Ala Gly Pro His Glu Thr Ala Trp Lys Lys Ser His Lys Ala
130 135 140

Val Val His Ile Gln Val Lys Asp Val Asn Glu Phe Ala Pro Thr Phe
145 150 155 160

Lys Glu Pro Ala Tyr Lys Ala Val Val Thr Glu Gly Lys Ile Tyr Asp
165 170 175

Ser Ile Leu Gln Val Glu Ala Ile Asp Glu Asp Cys Ser Pro Gln Tyr
180 185 190

Ser Gln Ile Cys Asn Tyr Glu Ile Val Thr Thr Asp Val Pro Phe Ala
195 200 205

25287

Ile	Asp	Arg	Asn	Gly	Asn	Ile	Arg	Asn	Thr	Glu	Lys	Leu	Ser	Tyr	Asp	
	210					215					220					
Lys	Gln	His	Gln	Tyr	Glu	Ile	Leu	Val	Thr	Ala	Tyr	Asp	Cys	Gly	Gln	
225					230					235					240	
Lys	Pro	Ala	Ala	Gln	Asp	Thr	Leu	Val	Gln	Val	Asp	Val	Lys	Pro	Val	
				245					250					255		
Cys	Lys	Pro	Gly	Trp	Gln	Asp	Trp	Thr	Lys	Arg	Ile	Glu	Tyr	Gln	Pro	
			260					265					270			
Gly	Ser	Gly	Ser	Met	Pro	Leu	Phe	Pro	Ser	Ile	His	Leu	Glu	Thr	Cys	
		275					280					285				
Asp	Gly	Ala	Val	Ser	Ser	Leu	Gln	Ile	Val	Thr	Glu	Leu	Gln	Thr	Asn	
	290					295					300					
Tyr	Ile	Gly	Lys	Gly	Cys	Asp	Arg	Glu	Thr	Tyr	Ser	Glu	Lys	Ser	Leu	
305					310					315					320	
Gln	Lys	Leu	Cys	Gly	Ala	Ser	Ser	Gly	Ile	Ile	Asp	Leu	Leu	Pro	Ser	
				325					330					335		
Pro	Ser	Ala	Ala	Thr	Asn	Trp	Thr	Ala	Gly	Leu	Leu	Val	Asp	Ser	Ser	
			340					345					350			
Glu	Met	Ile	Phe	Lys	Phe	Asp	Gly	Arg	Gln	Gly	Ala	Lys	Val	Pro	Asp	
		355					360					365				
Gly	Ile	Val	Pro	Lys	Asn	Leu	Thr	Asp	Gln	Phe	Thr	Ile	Thr	Met	Trp	
	370					375					380					
Met	Lys	His	Gly	Pro	Ser	Pro	Gly	Val	Arg	Ala	Glu	Lys	Glu	Thr	Ile	
385					390					395					400	
Leu	Cys	Asn	Ser	Asp	Lys	Thr	Glu	Met	Asn	Arg	His	His	Tyr	Ala	Leu	
				405					410					415		
Tyr	Val	His	Asn	Cys	Arg	Leu	Val	Phe	Leu	Leu	Arg	Lys	Asp	Phe	Asp	
			420					425					430			

Gln	Ala	Asp	Thr	Phe	Arg	Pro	Ala	Glu	Phe	His	Trp	Lys	Leu	Asp	Gln			
		435					440					445						
Ile	Cys	Asp	Lys	Glu	Trp	His	Tyr	Tyr	Val	Ile	Asn	Val	Glu	Phe	Pro			
	450					455					460							
Val	Val	Thr	Leu	Tyr	Met	Asp	Gly	Ala	Thr	Tyr	Glu	Pro	Tyr	Leu	Val			
465					470					475					480			
Thr	Asn	Asp	Trp	Pro	Ile	His	Pro	Ser	His	Ile	Ala	Met	Gln	Leu	Thr			
				485					490					495				
Val	Gly	Ala	Cys	Trp	Gln	Gly	Gly	Glu	Val	Thr	Lys	Pro	Gln	Phe	Ala			
			500					505					510					
Gln	Phe	Phe	His	Gly	Ser	Leu	Ala	Ser	Leu	Thr	Ile	Arg	Pro	Gly	Lys			
		515					520					525						
Met	Glu	Ser	Gln	Lys	Val	Ile	Ser	Cys	Leu	Gln	Ala	Cys	Lys	Glu	Gly			
	530					535					540							
Leu	Asp	Ile	Asn	Ser	Leu	Glu	Ser	Leu	Gly	Gln	Gly	Ile	Lys	Tyr	His			
545					550					555					560			
Phe	Asn	Pro	Ser	Gln	Ser	Ile	Leu	Val	Met	Glu	Gly	Asp	Asp	Ile	Gly			
				565					570					575				
Asn	Ile	Asn	Arg	Ala	Leu	Gln	Lys	Val	Ser	Tyr	Ile	Asn	Ser	Arg	Gln			
			580					585					590					
Phe	Pro	Thr	Ala	Gly	Val	Arg	Arg	Leu	Lys	Val	Ser	Ser	Lys	Val	Gln			
		595					600					605						
Cys	Phe	Gly	Glu	Asp	Val	Cys	Ile	Ser	Ile	Pro	Glu	Val	Asp	Ala	Tyr			
	610					615					620							
Val	Met	Val	Leu	Gln	Ala	Ile	Glu	Pro	Arg	Ile	Thr	Leu	Arg	Gly	Thr			
625					630					635					640			
Asp	His	Phe	Trp	Arg	Pro	Ala	Ala	Gln	Phe	Glu	Ser	Ala	Arg	Gly	Val			
				645					650					655				

Thr	Leu	Phe	Pro	Asp	Ile	Lys	Ile	Val	Ser	Thr	Phe	Ala	Lys	Thr	Glu
			660					665					670		
Ala	Pro	Gly	Asp	Val	Lys	Thr	Thr	Asp	Pro	Lys	Ser	Glu	Val	Leu	Glu
		675					680					685			
Glu	Met	Leu	His	Asn	Leu	Asp	Phe	Cys	Asp	Ile	Leu	Val	Ile	Gly	Gly
	690					695					700				
Asp	Leu	Asp	Pro	Arg	Gln	Glu	Cys	Leu	Glu	Leu	Asn	His	Ser	Glu	Leu
705					710					715					720
His	Gln	Arg	His	Leu	Asp	Ala	Thr	Asn	Ser	Thr	Ala	Gly	Tyr	Ser	Ile
				725					730					735	
Tyr	Gly	Val	Gly	Ser	Met	Ser	Arg	Tyr	Glu	Gln	Val	Leu	His	His	Ile
			740					745					750		
Arg	Tyr	Arg	Asn	Trp	Arg	Pro	Ala	Ser	Leu	Glu	Ala	Arg	Arg	Phe	Arg
		755					760					765			
Ile	Lys	Cys	Ser	Glu	Leu	Asn	Gly	Arg	Tyr	Thr	Ser	Asn	Glu	Phe	Asn
	770					775					780				
Leu	Glu	Val	Ser	Ile	Leu	His	Glu	Asp	Gln	Val	Ser	Asp	Lys	Glu	His
785					790					795					800
Val	Asn	His	Leu	Ile	Val	Gln	Pro	Pro	Phe	Leu	Gln	Ser	Val	His	His
				805					810					815	
Pro	Glu	Ser	Arg	Ser	Ser	Ile	Gln	His	Ser	Ser	Val	Val	Pro	Ser	Ile
			820					825					830		
Ala	Thr	Val	Val	Ile	Ile	Ile	Ser	Val	Cys	Met	Leu	Val	Phe	Val	Val
		835					840					845			
Ala	Met	Gly	Val	Tyr	Arg	Val	Arg	Ile	Ala	His	Gln	His	Phe	Ile	Gln
	850					855					860				
Glu	Thr	Glu	Ala	Ala	Lys	Glu	Ser	Glu	Met	Asp	Trp	Asp	Asp	Ser	Ala
865					870					875					880
Leu	Thr	Ile	Thr	Val	Asn	Pro	Met	Glu	Lys	His	Glu	Gly	Pro	Gly	His

885

890

895

Gly Glu Asp Glu Thr Glu Gly Glu Glu Glu Glu Glu Ala Glu Glu Glu
 900 905 910

Met Ser Ser Ser Ser Gly Ser Asp Asp Ser Glu Glu Glu Glu Glu Glu
 915 920 925

Glu Gly Met Gly Arg Gly Arg His Gly Gln Asn Gly Ala Arg Gln Ala
 930 935 940

Gln Leu Glu Trp Asp Asp Ser Thr Leu Pro Tyr
 945 950 955

<210> 11281

<211> 891

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2221"

<220>

<221> source

<223> /note="Gene Symbol: CLSTN2"

<220>

<221> source

<223> /note="Gene Name:
 calsyntenin 2"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000478883"

<400> 11281

Leu Ala Ser Gln Asp Ser His Ser Leu Phe Pro Ser Ala Gly Glu Ile
 1 5 10 15

Cys Ala Phe Lys Ile His Gly Gln Glu Leu Pro Phe Glu Ala Val Val
 20 25 30

Leu Asn Lys Thr Ser Gly Glu Gly Arg Leu Arg Ala Lys Ser Pro Ile
 35 40 45

Asp Cys Glu Leu Gln Lys Glu Tyr Thr Phe Ile Ile Gln Ala Tyr Asp
 50 55 60

25291

Cys	Gly	Ala	Gly	Pro	His	Glu	Thr	Ala	Trp	Lys	Lys	Ser	His	Lys	Ala	
65					70					75					80	
Val	Val	His	Ile	Gln	Val	Lys	Asp	Val	Asn	Glu	Phe	Ala	Pro	Thr	Phe	
				85					90					95		
Lys	Glu	Pro	Ala	Tyr	Lys	Ala	Val	Val	Thr	Glu	Gly	Lys	Ile	Tyr	Asp	
			100					105					110			
Ser	Ile	Leu	Gln	Val	Glu	Ala	Ile	Asp	Glu	Asp	Cys	Ser	Pro	Gln	Tyr	
		115					120					125				
Ser	Gln	Ile	Cys	Asn	Tyr	Glu	Ile	Val	Thr	Thr	Asp	Val	Pro	Phe	Ala	
	130					135					140					
Ile	Asp	Arg	Asn	Gly	Asn	Ile	Arg	Asn	Thr	Glu	Lys	Leu	Ser	Tyr	Asp	
145					150					155					160	
Lys	Gln	His	Gln	Tyr	Glu	Ile	Leu	Val	Thr	Ala	Tyr	Asp	Cys	Gly	Gln	
				165					170					175		
Lys	Pro	Ala	Ala	Gln	Asp	Thr	Leu	Val	Gln	Val	Asp	Val	Lys	Pro	Val	
			180					185					190			
Cys	Lys	Pro	Gly	Trp	Gln	Asp	Trp	Thr	Lys	Arg	Ile	Glu	Tyr	Gln	Pro	
		195					200					205				
Gly	Ser	Gly	Ser	Met	Pro	Leu	Phe	Pro	Ser	Ile	His	Leu	Glu	Thr	Cys	
	210					215					220					
Asp	Gly	Ala	Val	Ser	Ser	Leu	Gln	Ile	Val	Thr	Glu	Leu	Gln	Thr	Asn	
225					230					235					240	
Tyr	Ile	Gly	Lys	Gly	Cys	Asp	Arg	Glu	Thr	Tyr	Ser	Glu	Lys	Ser	Leu	
				245					250					255		
Gln	Lys	Leu	Cys	Gly	Ala	Ser	Ser	Gly	Ile	Ile	Asp	Leu	Leu	Pro	Ser	
			260					265					270			
Pro	Ser	Ala	Ala	Thr	Asn	Trp	Thr	Ala	Gly	Leu	Leu	Val	Asp	Ser	Ser	
		275					280					285				

Glu	Met	Ile	Phe	Lys	Phe	Asp	Gly	Arg	Gln	Gly	Ala	Lys	Val	Pro	Asp	290	295	300
Gly	Ile	Val	Pro	Lys	Asn	Leu	Thr	Asp	Gln	Phe	Thr	Ile	Thr	Met	Trp	305	310	315
Met	Lys	His	Gly	Pro	Ser	Pro	Gly	Val	Arg	Ala	Glu	Lys	Glu	Thr	Ile	325	330	335
Leu	Cys	Asn	Ser	Asp	Lys	Thr	Glu	Met	Asn	Arg	His	His	Tyr	Ala	Leu	340	345	350
Tyr	Val	His	Asn	Cys	Arg	Leu	Val	Phe	Leu	Leu	Arg	Lys	Asp	Phe	Asp	355	360	365
Gln	Ala	Asp	Thr	Phe	Arg	Pro	Ala	Glu	Phe	His	Trp	Lys	Leu	Asp	Gln	370	375	380
Ile	Cys	Asp	Lys	Glu	Trp	His	Tyr	Tyr	Val	Ile	Asn	Val	Glu	Phe	Pro	385	390	395
Val	Val	Thr	Leu	Tyr	Met	Asp	Gly	Ala	Thr	Tyr	Glu	Pro	Tyr	Leu	Val	405	410	415
Thr	Asn	Asp	Trp	Pro	Ile	His	Pro	Ser	His	Ile	Ala	Met	Gln	Leu	Thr	420	425	430
Val	Gly	Ala	Cys	Trp	Gln	Gly	Gly	Glu	Val	Thr	Lys	Pro	Gln	Phe	Ala	435	440	445
Gln	Phe	Phe	His	Gly	Ser	Leu	Ala	Ser	Leu	Thr	Ile	Arg	Pro	Gly	Lys	450	455	460
Met	Glu	Ser	Gln	Lys	Val	Ile	Ser	Cys	Leu	Gln	Ala	Cys	Lys	Glu	Gly	465	470	475
Leu	Asp	Ile	Asn	Ser	Leu	Glu	Ser	Leu	Gly	Gln	Gly	Ile	Lys	Tyr	His	485	490	495
Phe	Asn	Pro	Ser	Gln	Ser	Ile	Leu	Val	Met	Glu	Gly	Asp	Asp	Ile	Gly	500	505	510
Asn	Ile	Asn	Arg	Ala	Leu	Gln	Lys	Val	Ser	Tyr	Ile	Asn	Ser	Arg	Gln			

515		520		525											
Phe	Pro	Thr	Ala	Gly	Val	Arg	Arg	Leu	Lys	Val	Ser	Ser	Lys	Val	Gln
	530					535					540				
Cys	Phe	Gly	Glu	Asp	Val	Cys	Ile	Ser	Ile	Pro	Glu	Val	Asp	Ala	Tyr
545					550					555					560
Val	Met	Val	Leu	Gln	Ala	Ile	Glu	Pro	Arg	Ile	Thr	Leu	Arg	Gly	Thr
				565					570					575	
Asp	His	Phe	Trp	Arg	Pro	Ala	Ala	Gln	Phe	Glu	Ser	Ala	Arg	Gly	Val
			580					585					590		
Thr	Leu	Phe	Pro	Asp	Ile	Lys	Ile	Val	Ser	Thr	Phe	Ala	Lys	Thr	Glu
		595					600					605			
Ala	Pro	Gly	Asp	Val	Lys	Thr	Thr	Asp	Pro	Lys	Ser	Glu	Val	Leu	Glu
	610					615					620				
Glu	Met	Leu	His	Asn	Leu	Asp	Phe	Cys	Asp	Ile	Leu	Val	Ile	Gly	Gly
625					630					635					640
Asp	Leu	Asp	Pro	Arg	Gln	Glu	Cys	Leu	Glu	Leu	Asn	His	Ser	Glu	Leu
				645					650					655	
His	Gln	Arg	His	Leu	Asp	Ala	Thr	Asn	Ser	Thr	Ala	Gly	Tyr	Ser	Ile
			660					665					670		
Tyr	Gly	Val	Gly	Ser	Met	Ser	Arg	Tyr	Glu	Gln	Val	Leu	His	His	Ile
		675					680					685			
Arg	Tyr	Arg	Asn	Trp	Arg	Pro	Ala	Ser	Leu	Glu	Ala	Arg	Arg	Phe	Arg
	690					695					700				
Ile	Lys	Cys	Ser	Glu	Leu	Asn	Gly	Arg	Tyr	Thr	Ser	Asn	Glu	Phe	Asn
705					710					715					720
Leu	Glu	Val	Ser	Ile	Leu	His	Glu	Asp	Gln	Val	Ser	Asp	Lys	Glu	His
				725					730					735	
Val	Asn	His	Leu	Ile	Val	Gln	Pro	Pro	Phe	Leu	Gln	Ser	Val	His	His
			740				745						750		

Pro Glu Ser Arg Ser Ser Ile Gln His Ser Ser Val Val Pro Ser Ile
755 760 765

Ala Thr Val Val Ile Ile Ile Ser Val Cys Met Leu Val Phe Val Val
770 775 780

Ala Met Gly Val Tyr Arg Val Arg Ile Ala His Gln His Phe Ile Gln
785 790 795 800

Glu Thr Glu Ala Ala Lys Glu Ser Glu Met Asp Trp Asp Asp Ser Ala
805 810 815

Leu Thr Ile Thr Val Asn Pro Met Glu Lys His Glu Gly Pro Gly His
820 825 830

Gly Glu Asp Glu Thr Glu Gly Glu Glu Glu Glu Ala Glu Glu Glu
835 840 845

Met Ser Ser Ser Ser Gly Ser Asp Asp Ser Glu Glu Glu Glu Glu
850 855 860

Glu Gly Met Gly Arg Gly Arg His Gly Gln Asn Gly Ala Arg Gln Ala
865 870 875 880

Gln Leu Glu Trp Asp Asp Ser Thr Leu Pro Tyr
885 890

<210> 11282
<211> 956
<212> PRT
<213> Homo sapiens

<220>
<221> source
<223> /note="Payload ID: 2222"

<220>
<221> source
<223> /note="Gene Symbol: CLSTN3"

<220>
<221> source
<223> /note="Gene Name:
calsyntenin 3"

<220>

<221> source
<223> /note="Uniprot ID: Q9BQT9"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000266546"

<400> 11282

Met Thr Leu Leu Leu Leu Pro Leu Leu Leu Ala Ser Leu Leu Ala Ser
1 5 10 15

Cys Ser Cys Asn Lys Ala Asn Lys His Lys Pro Trp Ile Glu Ala Glu
20 25 30

Tyr Gln Gly Ile Val Met Glu Asn Asp Asn Thr Val Leu Leu Asn Pro
35 40 45

Pro Leu Phe Ala Leu Asp Lys Asp Ala Pro Leu Arg Tyr Ala Gly Glu
50 55 60

Ile Cys Gly Phe Arg Leu His Gly Ser Gly Val Pro Phe Glu Ala Val
65 70 75 80

Ile Leu Asp Lys Ala Thr Gly Glu Gly Leu Ile Arg Ala Lys Glu Pro
85 90 95

Val Asp Cys Glu Ala Gln Lys Glu His Thr Phe Thr Ile Gln Ala Tyr
100 105 110

Asp Cys Gly Glu Gly Pro Asp Gly Ala Asn Thr Lys Lys Ser His Lys
115 120 125

Ala Thr Val His Val Arg Val Asn Asp Val Asn Glu Phe Ala Pro Val
130 135 140

Phe Val Glu Arg Leu Tyr Arg Ala Ala Val Thr Glu Gly Lys Leu Tyr
145 150 155 160

Asp Arg Ile Leu Arg Val Glu Ala Ile Asp Gly Asp Cys Ser Pro Gln
165 170 175

Tyr Ser Gln Ile Cys Tyr Tyr Glu Ile Leu Thr Pro Asn Thr Pro Phe
180 185 190

Leu Ile Asp Asn Asp Gly Asn Ile Glu Asn Thr Glu Lys Leu Gln Tyr

195	200	205														
Ser	Gly	Glu	Arg	Leu	Tyr	Lys	Phe	Thr	Val	Thr	Ala	Tyr	Asp	Cys	Gly	
	210					215					220					
Lys	Lys	Arg	Ala	Ala	Asp	Asp	Ala	Glu	Val	Glu	Ile	Gln	Val	Lys	Pro	
225					230					235					240	
Thr	Cys	Lys	Pro	Ser	Trp	Gln	Gly	Trp	Asn	Lys	Arg	Ile	Glu	Tyr	Ala	
				245					250					255		
Pro	Gly	Ala	Gly	Ser	Leu	Ala	Leu	Phe	Pro	Gly	Ile	Arg	Leu	Glu	Thr	
			260					265					270			
Cys	Asp	Glu	Pro	Leu	Trp	Asn	Ile	Gln	Ala	Thr	Ile	Glu	Leu	Gln	Thr	
		275					280					285				
Ser	His	Val	Ala	Lys	Gly	Cys	Asp	Arg	Asp	Asn	Tyr	Ser	Glu	Arg	Ala	
	290					295					300					
Leu	Arg	Lys	Leu	Cys	Gly	Ala	Ala	Thr	Gly	Glu	Val	Asp	Leu	Leu	Pro	
305					310					315					320	
Met	Pro	Gly	Pro	Asn	Ala	Asn	Trp	Thr	Ala	Gly	Leu	Ser	Val	His	Tyr	
				325					330					335		
Ser	Gln	Asp	Ser	Ser	Leu	Ile	Tyr	Trp	Phe	Asn	Gly	Thr	Gln	Ala	Val	
			340					345					350			
Gln	Val	Pro	Leu	Gly	Gly	Pro	Ser	Gly	Leu	Gly	Ser	Gly	Pro	Gln	Asp	
		355					360					365				
Ser	Leu	Ser	Asp	His	Phe	Thr	Leu	Ser	Phe	Trp	Met	Lys	His	Gly	Val	
	370					375					380					
Thr	Pro	Asn	Lys	Gly	Lys	Lys	Glu	Glu	Glu	Thr	Ile	Val	Cys	Asn	Thr	
385					390					395					400	
Val	Gln	Asn	Glu	Asp	Gly	Phe	Ser	His	Tyr	Ser	Leu	Thr	Val	His	Gly	
				405					410					415		
Cys	Arg	Ile	Ala	Phe	Leu	Tyr	Trp	Pro	Leu	Leu	Glu	Ser	Ala	Arg	Pro	
			420					425					430			

Val	Lys	Phe	Leu	Trp	Lys	Leu	Glu	Gln	Val	Cys	Asp	Asp	Glu	Trp	His	
		435					440					445				
His	Tyr	Ala	Leu	Asn	Leu	Glu	Phe	Pro	Thr	Val	Thr	Leu	Tyr	Thr	Asp	
	450					455					460					
Gly	Ile	Ser	Phe	Asp	Pro	Ala	Leu	Ile	His	Asp	Asn	Gly	Leu	Ile	His	
465					470					475					480	
Pro	Pro	Arg	Arg	Glu	Pro	Ala	Leu	Met	Ile	Gly	Ala	Cys	Trp	Thr	Glu	
				485					490					495		
Glu	Lys	Asn	Lys	Glu	Lys	Glu	Lys	Gly	Asp	Asn	Ser	Thr	Asp	Thr	Thr	
			500					505					510			
Gln	Gly	Asp	Pro	Leu	Ser	Ile	His	His	Tyr	Phe	His	Gly	Tyr	Leu	Ala	
		515					520					525				
Gly	Phe	Ser	Val	Arg	Ser	Gly	Arg	Leu	Glu	Ser	Arg	Glu	Val	Ile	Glu	
	530					535					540					
Cys	Leu	Tyr	Ala	Cys	Arg	Glu	Gly	Leu	Asp	Tyr	Arg	Asp	Phe	Glu	Ser	
545					550					555					560	
Leu	Gly	Lys	Gly	Met	Lys	Val	His	Val	Asn	Pro	Ser	Gln	Ser	Leu	Leu	
				565					570					575		
Thr	Leu	Glu	Gly	Asp	Asp	Val	Glu	Thr	Phe	Asn	His	Ala	Leu	Gln	His	
			580					585					590			
Val	Ala	Tyr	Met	Asn	Thr	Leu	Arg	Phe	Ala	Thr	Pro	Gly	Val	Arg	Pro	
		595					600					605				
Leu	Arg	Leu	Thr	Thr	Ala	Val	Lys	Cys	Phe	Ser	Glu	Glu	Ser	Cys	Val	
	610					615					620					
Ser	Ile	Pro	Glu	Val	Glu	Gly	Tyr	Val	Val	Val	Leu	Gln	Pro	Asp	Ala	
625					630					635					640	
Pro	Gln	Ile	Leu	Leu	Ser	Gly	Thr	Ala	His	Phe	Ala	Arg	Pro	Ala	Val	
				645					650					655		

Asp	Phe	Glu	Gly	Thr	Asn	Gly	Val	Pro	Leu	Phe	Pro	Asp	Leu	Gln	Ile	
			660					665					670			
Thr	Cys	Ser	Ile	Ser	His	Gln	Val	Glu	Ala	Lys	Lys	Asp	Glu	Ser	Trp	
		675					680					685				
Gln	Gly	Thr	Val	Thr	Asp	Thr	Arg	Met	Ser	Asp	Glu	Ile	Val	His	Asn	
	690					695					700					
Leu	Asp	Gly	Cys	Glu	Ile	Ser	Leu	Val	Gly	Asp	Asp	Leu	Asp	Pro	Glu	
705					710					715					720	
Arg	Glu	Ser	Leu	Leu	Leu	Asp	Thr	Thr	Ser	Leu	Gln	Gln	Arg	Gly	Leu	
				725					730					735		
Glu	Leu	Thr	Asn	Thr	Ser	Ala	Tyr	Leu	Thr	Ile	Ala	Gly	Val	Glu	Ser	
			740					745					750			
Ile	Thr	Val	Tyr	Glu	Glu	Ile	Leu	Arg	Gln	Ala	Arg	Tyr	Arg	Leu	Arg	
		755					760					765				
His	Gly	Ala	Ala	Leu	Tyr	Thr	Arg	Lys	Phe	Arg	Leu	Ser	Cys	Ser	Glu	
	770					775					780					
Met	Asn	Gly	Arg	Tyr	Ser	Ser	Asn	Glu	Phe	Ile	Val	Glu	Val	Asn	Val	
785					790					795					800	
Leu	His	Ser	Met	Asn	Arg	Val	Ala	His	Pro	Ser	His	Val	Leu	Ser	Ser	
				805					810					815		
Gln	Gln	Phe	Leu	His	Arg	Gly	His	Gln	Pro	Pro	Pro	Glu	Met	Ala	Gly	
			820					825					830			
His	Ser	Leu	Ala	Ser	Ser	His	Arg	Asn	Ser	Met	Ile	Pro	Ser	Ala	Ala	
		835					840					845				
Thr	Leu	Ile	Ile	Val	Val	Cys	Val	Gly	Phe	Leu	Val	Leu	Met	Val	Val	
	850					855					860					
Leu	Gly	Leu	Val	Arg	Ile	His	Ser	Leu	His	Arg	Arg	Val	Ser	Gly	Ala	
865					870					875					880	

Gly Gly Pro Pro Gly Ala Ser Ser Asp Pro Lys Asp Pro Asp Leu Phe
885 890 895

Trp Asp Asp Ser Ala Leu Thr Ile Ile Val Asn Pro Met Glu Ser Tyr
900 905 910

Gln Asn Arg Gln Ser Cys Val Thr Gly Ala Val Gly Gly Gln Gln Glu
915 920 925

Asp Glu Asp Ser Ser Asp Ser Glu Val Ala Asp Ser Pro Ser Ser Asp
930 935 940

Glu Arg Arg Ile Ile Glu Thr Pro Pro His Arg Tyr
945 950 955

<210> 11283
<211> 968
<212> PRT
<213> Homo sapiens

<220>
<221> source
<223> /note="Payload ID: 2222"

<220>
<221> source
<223> /note="Gene Symbol: CLSTN3"

<220>
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<223> /note="Gene Name:
calsyntenin 3"

<220>
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<223> /note="Uniprot ID: Q9BQT9"

<220>
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<400> 11283
Met Val Leu Gly Cys Glu Leu Ser Gly Ser Thr Arg Val Val Val Gly
1 5 10 15

Val Glu Ala Leu Leu Thr Gly Ala Ser Ser Pro Leu Pro Gly Val Gly
20 25 30

Pro Ala Asn Lys His Lys Pro Trp Ile Glu Ala Glu Tyr Gln Gly Ile
35 40 45

25300

Val	Met	Glu	Asn	Asp	Asn	Thr	Val	Leu	Leu	Asn	Pro	Pro	Leu	Phe	Ala	
50						55					60					
Leu	Asp	Lys	Asp	Ala	Pro	Leu	Arg	Tyr	Ala	Gly	Glu	Ile	Cys	Gly	Phe	
65					70					75					80	
Arg	Leu	His	Gly	Ser	Gly	Val	Pro	Phe	Glu	Ala	Val	Ile	Leu	Asp	Lys	
				85					90					95		
Ala	Thr	Gly	Glu	Gly	Leu	Ile	Arg	Ala	Lys	Glu	Pro	Val	Asp	Cys	Glu	
			100					105					110			
Ala	Gln	Lys	Glu	His	Thr	Phe	Thr	Ile	Gln	Ala	Tyr	Asp	Cys	Gly	Glu	
		115					120					125				
Gly	Pro	Asp	Gly	Ala	Asn	Thr	Lys	Lys	Ser	His	Lys	Ala	Thr	Val	His	
	130					135					140					
Val	Arg	Val	Asn	Asp	Val	Asn	Glu	Phe	Ala	Pro	Val	Phe	Val	Glu	Arg	
145					150					155					160	
Leu	Tyr	Arg	Ala	Ala	Val	Thr	Glu	Gly	Lys	Leu	Tyr	Asp	Arg	Ile	Leu	
				165					170					175		
Arg	Val	Glu	Ala	Ile	Asp	Gly	Asp	Cys	Ser	Pro	Gln	Tyr	Ser	Gln	Ile	
			180					185					190			
Cys	Tyr	Tyr	Glu	Ile	Leu	Thr	Pro	Asn	Thr	Pro	Phe	Leu	Ile	Asp	Asn	
		195					200					205				
Asp	Gly	Asn	Ile	Glu	Asn	Thr	Glu	Lys	Leu	Gln	Tyr	Ser	Gly	Glu	Arg	
	210					215					220					
Leu	Tyr	Lys	Phe	Thr	Val	Thr	Ala	Tyr	Asp	Cys	Gly	Lys	Lys	Arg	Ala	
225					230					235					240	
Ala	Asp	Asp	Ala	Glu	Val	Glu	Ile	Gln	Val	Lys	Pro	Thr	Cys	Lys	Pro	
				245					250					255		
Ser	Trp	Gln	Gly	Trp	Asn	Lys	Arg	Ile	Glu	Tyr	Ala	Pro	Gly	Ala	Gly	
			260					265					270			

Ser Leu Ala Leu Phe Pro Gly Ile Arg Leu Glu Thr Cys Asp Glu Pro
 275 280 285

Leu Trp Asn Ile Gln Ala Thr Ile Glu Leu Gln Thr Ser His Val Ala
 290 295 300

Lys Gly Cys Asp Arg Asp Asn Tyr Ser Glu Arg Ala Leu Arg Lys Leu
 305 310 315 320

Cys Gly Ala Ala Thr Gly Glu Val Asp Leu Leu Pro Met Pro Gly Pro
 325 330 335

Asn Ala Asn Trp Thr Ala Gly Leu Ser Val His Tyr Ser Gln Asp Ser
 340 345 350

Ser Leu Ile Tyr Trp Phe Asn Gly Thr Gln Ala Val Gln Val Pro Leu
 355 360 365

Gly Gly Pro Ser Gly Leu Gly Ser Gly Pro Gln Asp Ser Leu Ser Asp
 370 375 380

His Phe Thr Leu Ser Phe Trp Met Lys His Gly Val Thr Pro Asn Lys
 385 390 395 400

Gly Lys Lys Glu Glu Glu Thr Ile Val Cys Asn Thr Val Gln Asn Glu
 405 410 415

Asp Gly Phe Ser His Tyr Ser Leu Thr Val His Gly Cys Arg Ile Ala
 420 425 430

Phe Leu Tyr Trp Pro Leu Leu Glu Ser Ala Arg Pro Val Lys Phe Leu
 435 440 445

Trp Lys Leu Glu Gln Val Cys Asp Asp Glu Trp His His Tyr Ala Leu
 450 455 460

Asn Leu Glu Phe Pro Thr Val Thr Leu Tyr Thr Asp Gly Ile Ser Phe
 465 470 475 480

Asp Pro Ala Leu Ile His Asp Asn Gly Leu Ile His Pro Pro Arg Arg
 485 490 495

Glu	Pro	Ala	Leu	Met	Ile	Gly	Ala	Cys	Trp	Thr	Glu	Glu	Lys	Asn	Lys	500	505	510
Glu	Lys	Glu	Lys	Gly	Asp	Asn	Ser	Thr	Asp	Thr	Thr	Gln	Gly	Asp	Pro	515	520	525
Leu	Ser	Ile	His	His	Tyr	Phe	His	Gly	Tyr	Leu	Ala	Gly	Phe	Ser	Val	530	535	540
Arg	Ser	Gly	Arg	Leu	Glu	Ser	Arg	Glu	Val	Ile	Glu	Cys	Leu	Tyr	Ala	545	550	555
Cys	Arg	Glu	Gly	Leu	Asp	Tyr	Arg	Asp	Phe	Glu	Ser	Leu	Gly	Lys	Gly	565	570	575
Met	Lys	Val	His	Val	Asn	Pro	Ser	Gln	Ser	Leu	Leu	Thr	Leu	Glu	Gly	580	585	590
Asp	Asp	Val	Glu	Thr	Phe	Asn	His	Ala	Leu	Gln	His	Val	Ala	Tyr	Met	595	600	605
Asn	Thr	Leu	Arg	Phe	Ala	Thr	Pro	Gly	Val	Arg	Pro	Leu	Arg	Leu	Thr	610	615	620
Thr	Ala	Val	Lys	Cys	Phe	Ser	Glu	Glu	Ser	Cys	Val	Ser	Ile	Pro	Glu	625	630	635
Val	Glu	Gly	Tyr	Val	Val	Val	Leu	Gln	Pro	Asp	Ala	Pro	Gln	Ile	Leu	645	650	655
Leu	Ser	Gly	Thr	Ala	His	Phe	Ala	Arg	Pro	Ala	Val	Asp	Phe	Glu	Gly	660	665	670
Thr	Asn	Gly	Val	Pro	Leu	Phe	Pro	Asp	Leu	Gln	Ile	Thr	Cys	Ser	Ile	675	680	685
Ser	His	Gln	Val	Glu	Ala	Lys	Lys	Asp	Glu	Ser	Trp	Gln	Gly	Thr	Val	690	695	700
Thr	Asp	Thr	Arg	Met	Ser	Asp	Glu	Ile	Val	His	Asn	Leu	Asp	Gly	Cys	705	710	715
Glu	Ile	Ser	Leu	Val	Gly	Asp	Asp	Leu	Asp	Pro	Glu	Arg	Glu	Ser	Leu			

725

730

735

Leu Leu Asp Thr Thr Ser Leu Gln Gln Arg Gly Leu Glu Leu Thr Asn
740 745 750

Thr Ser Ala Tyr Leu Thr Ile Ala Gly Val Glu Ser Ile Thr Val Tyr
755 760 765

Glu Glu Ile Leu Arg Gln Ala Arg Tyr Arg Leu Arg His Gly Ala Ala
770 775 780

Leu Tyr Thr Arg Lys Phe Arg Leu Ser Cys Ser Glu Met Asn Gly Arg
785 790 795 800

Tyr Ser Ser Asn Glu Phe Ile Val Glu Val Asn Val Leu His Ser Met
805 810 815

Asn Arg Val Ala His Pro Ser His Val Leu Ser Ser Gln Gln Phe Leu
820 825 830

His Arg Gly His Gln Pro Pro Pro Glu Met Ala Gly His Ser Leu Ala
835 840 845

Ser Ser His Arg Asn Ser Met Ile Pro Ser Ala Ala Thr Leu Ile Ile
850 855 860

Val Val Cys Val Gly Phe Leu Val Leu Met Val Val Leu Gly Leu Val
865 870 875 880

Arg Ile His Ser Leu His Arg Arg Val Ser Gly Ala Gly Gly Pro Pro
885 890 895

Gly Ala Ser Ser Asp Pro Lys Asp Pro Asp Leu Phe Trp Asp Asp Ser
900 905 910

Ala Leu Thr Ile Ile Val Asn Pro Met Glu Ser Tyr Gln Asn Arg Gln
915 920 925

Ser Cys Val Thr Gly Ala Val Gly Gly Gln Gln Glu Asp Glu Asp Ser
930 935 940

Ser Asp Ser Glu Val Ala Asp Ser Pro Ser Ser Asp Glu Arg Arg Ile
945 950 955 960

25304

Ile Glu Thr Pro Pro His Arg Tyr
965

<210> 11284

<211> 142

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2222"

<220>

<221> source

<223> /note="Gene Symbol: CLSTN3"

<220>

<221> source

<223> /note="Gene Name:
calsyntenin 3"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000442612"

<400> 11284

Met Glu Asn Asp Asn Thr Val Leu Leu Asn Pro Pro Leu Phe Ala Leu
1 5 10 15

Asp Lys Asp Ala Pro Leu Arg Tyr Ala Gly Glu Ile Cys Gly Phe Arg
20 25 30

Leu His Gly Ser Gly Val Pro Phe Glu Ala Val Ile Leu Asp Lys Ala
35 40 45

Thr Gly Glu Gly Leu Ile Arg Ala Lys Glu Pro Val Asp Cys Glu Ala
50 55 60

Gln Lys Glu His Thr Phe Thr Ile Gln Ala Tyr Asp Cys Gly Glu Gly
65 70 75 80

Pro Asp Gly Ala Asn Thr Lys Lys Ser His Lys Ala Thr Val His Val
85 90 95

Arg Val Asn Asp Val Asn Glu Phe Ala Pro Val Phe Val Glu Arg Leu
100 105 110

Tyr Arg Ala Ala Val Thr Glu Gly Lys Leu Tyr Asp Arg Ile Leu Arg
115 120 125

Val Glu Ala Ile Asp Gly Asp Cys Ser Pro Gln Tyr Ser Gln
130 135 140

<210> 11285

<211> 176

<212> PRT

<213> Homo sapiens

<220>

<221> source

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<221> source

<223> /note="Gene Name:
calsyntenin 3"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000442801"

<400> 11285

Met Val Val Ile Thr Asn Lys His Lys Pro Trp Ile Glu Ala Glu Tyr
1 5 10 15

Gln Gly Ile Val Met Glu Asn Asp Asn Thr Val Leu Leu Asn Pro Pro
20 25 30

Leu Phe Ala Leu Asp Lys Asp Ala Pro Leu Arg Tyr Ala Gly Glu Ile
35 40 45

Cys Gly Phe Arg Leu His Gly Ser Gly Val Pro Phe Glu Ala Val Ile
50 55 60

Leu Asp Lys Ala Thr Gly Glu Gly Leu Ile Arg Ala Lys Glu Pro Val
65 70 75 80

Asp Cys Glu Ala Gln Lys Glu His Thr Phe Thr Ile Gln Ala Tyr Asp
85 90 95

Cys Gly Glu Gly Pro Asp Gly Ala Asn Thr Lys Lys Ser His Lys Ala
100 105 110

Thr Val His Val Arg Val Asn Asp Val Asn Glu Phe Ala Pro Val Phe
115 120 125

Val Glu Arg Leu Tyr Arg Ala Ala Val Thr Glu Gly Lys Leu Tyr Asp
130 135 140

Arg Ile Leu Arg Val Glu Ala Ile Asp Gly Asp Cys Ser Pro Gln Tyr
145 150 155 160

Ser Gln Ile Cys Tyr Tyr Glu Ile Leu Thr Pro Asn Thr Pro Phe Leu
165 170 175

<210> 11286
<211> 129
<212> PRT
<213> Homo sapiens

<220>
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<220>
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<220>
<221> source
<223> /note="Gene Name:
calsyntenin 3"

<220>
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<223> /note="ENSP ID: ENSP00000443468"

<400> 11286
Met Glu Asn Asp Asn Thr Val Leu Leu Asn Pro Pro Leu Phe Ala Leu
1 5 10 15

Asp Lys Asp Ala Pro Leu Arg Tyr Ala Gly Glu Ile Cys Gly Phe Arg
20 25 30

Leu His Gly Ser Gly Val Pro Phe Glu Ala Val Ile Leu Asp Lys Ala
35 40 45

Thr Gly Glu Gly Leu Ile Arg Ala Lys Glu Pro Val Asp Cys Glu Ala
50 55 60

Gln Lys Glu His Thr Phe Thr Ile Gln Ala Tyr Asp Cys Gly Glu Gly
65 70 75 80

Pro Asp Gly Ala Asn Thr Lys Lys Ser His Lys Ala Thr Val His Val
85 90 95

Arg Val Asn Asp Val Asn Glu Phe Ala Pro Val Phe Val Glu Arg Leu
100 105 110

Tyr Arg Ala Ala Val Thr Glu Gly Lys Leu Tyr Asp Arg Ile Leu Arg
115 120 125

Val

<210> 11287
<211> 154
<212> PRT
<213> Homo sapiens

<220>
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<220>
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<223> /note="Gene Name:
calsyntenin 3"

<220>
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<223> /note="ENSP ID: ENSP00000443490"

<400> 11287
Met Glu Asn Asp Asn Thr Val Leu Leu Asn Pro Pro Leu Phe Ala Leu
1 5 10 15

Asp Lys Asp Ala Pro Leu Arg Tyr Ala Gly Glu Ile Cys Gly Phe Arg
20 25 30

Leu His Gly Ser Gly Val Pro Phe Glu Ala Val Ile Leu Asp Lys Ala
35 40 45

Thr Gly Glu Gly Leu Ile Arg Ala Lys Glu Pro Val Asp Cys Glu Ala
50 55 60

Gln Lys Glu His Thr Phe Thr Ile Gln Ala Tyr Asp Cys Gly Glu Gly
65 70 75 80

Pro Asp Gly Ala Asn Thr Lys Lys Ser His Lys Ala Thr Val His Val
85 90 95

Arg Val Asn Asp Val Asn Glu Phe Ala Pro Val Phe Val Glu Arg Leu
100 105 110

Tyr Arg Ala Ala Val Thr Glu Gly Lys Leu Tyr Asp Arg Ile Leu Arg
115 120 125

Val Glu Ala Ile Asp Gly Asp Cys Ser Pro Gln Tyr Ser Gln Ile Cys
130 135 140

Tyr Tyr Glu Ile Leu Thr Pro Asn Thr Pro
145 150

<210> 11288
<211> 134
<212> PRT
<213> Homo sapiens

<220>
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<220>
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<223> /note="Gene Name:
calsyntenin 3"

<220>
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<223> /note="ENSP ID: ENSP00000443959"

<400> 11288
Met Thr Leu Leu Leu Leu Pro Leu Leu Leu Ala Ser Leu Leu Ala Ser
1 5 10 15

Cys Ser Cys Asn Lys Ala Asn Lys His Lys Pro Trp Ile Glu Ala Glu
20 25 30

Tyr Gln Gly Ile Val Met Glu Asn Asp Asn Thr Val Leu Leu Asn Pro
35 40 45

Pro Leu Phe Ala Leu Asp Lys Asp Ala Pro Leu Arg Tyr Ala Gly Glu
50 55 60

Ile Cys Gly Phe Arg Leu His Gly Ser Gly Val Pro Phe Glu Ala Val
65 70 75 80

Ile Leu Asp Lys Ala Thr Gly Glu Gly Leu Ile Arg Ala Lys Glu Pro
85 90 95

Val Asp Cys Glu Ala Gln Lys Glu His Thr Phe Thr Ile Gln Ala Tyr
100 105 110

Asp Cys Gly Glu Gly Pro Asp Gly Ala Asn Thr Lys Lys Ser His Lys
115 120 125

Ala Thr Val His Val Arg
130

<210> 11289
<211> 315
<212> PRT
<213> Homo sapiens

<220>
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<223> /note="Payload ID: 2223"

<220>
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<223> /note="Gene Symbol: CALU"

<220>
<221> source
<223> /note="Gene Name:
calumenin"

<220>
<221> source
<223> /note="Uniprot ID: O43852"

<220>
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<223> /note="ENSP ID: ENSP00000249364"

<400> 11289
Met Asp Leu Arg Gln Phe Leu Met Cys Leu Ser Leu Cys Thr Ala Phe
1 5 10 15

Arg Asp Lys Asn Arg Asp Gly Lys Met Asp Lys Glu Glu Thr Lys Asp
245 250 255

Trp Ile Leu Pro Ser Asp Tyr Asp His Ala Glu Ala Glu Ala Arg His
260 265 270

Leu Val Tyr Glu Ser Asp Gln Asn Lys Asp Gly Lys Leu Thr Lys Glu
275 280 285

Glu Ile Val Asp Lys Tyr Asp Leu Phe Val Gly Ser Gln Ala Thr Asp
290 295 300

Phe Gly Glu Ala Leu Val Arg His Asp Glu Phe
305 310 315

<210> 11290
<211> 315
<212> PRT
<213> Homo sapiens

<220>
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<223> /note="Payload ID: 2223"

<220>
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<223> /note="Gene Name:
calumenin"

<220>
<221> source
<223> /note="Uniprot ID: O43852"

<220>
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<223> /note="ENSP ID: ENSP00000408838"

<400> 11290
Met Asp Leu Arg Gln Phe Leu Met Cys Leu Ser Leu Cys Thr Ala Phe
1 5 10 15

Ala Leu Ser Lys Pro Thr Glu Lys Lys Asp Arg Val His His Glu Pro
20 25 30

Gln Leu Ser Asp Lys Val His Asn Asp Ala Gln Ser Phe Asp Tyr Asp

35					40					45					
His	Asp	Ala	Phe	Leu	Gly	Ala	Glu	Glu	Ala	Lys	Thr	Phe	Asp	Gln	Leu
	50					55					60				
Thr	Pro	Glu	Glu	Ser	Lys	Glu	Arg	Leu	Gly	Met	Ile	Val	Asp	Lys	Ile
65					70					75					80
Asp	Ala	Asp	Lys	Asp	Gly	Phe	Val	Thr	Glu	Gly	Glu	Leu	Lys	Ser	Trp
				85					90					95	
Ile	Lys	His	Ala	Gln	Lys	Lys	Tyr	Ile	Tyr	Asp	Asn	Val	Glu	Asn	Gln
			100					105					110		
Trp	Gln	Glu	Phe	Asp	Met	Asn	Gln	Asp	Gly	Leu	Ile	Ser	Trp	Asp	Glu
		115					120					125			
Tyr	Arg	Asn	Val	Thr	Tyr	Gly	Thr	Tyr	Leu	Asp	Asp	Pro	Asp	Pro	Asp
	130					135					140				
Asp	Gly	Phe	Asn	Tyr	Lys	Gln	Met	Met	Val	Arg	Asp	Glu	Arg	Arg	Phe
145					150					155					160
Lys	Met	Ala	Asp	Lys	Asp	Gly	Asp	Leu	Ile	Ala	Thr	Lys	Glu	Glu	Phe
				165					170					175	
Thr	Ala	Phe	Leu	His	Pro	Glu	Glu	Tyr	Asp	Tyr	Met	Lys	Asp	Ile	Val
			180					185					190		
Val	Gln	Glu	Thr	Met	Glu	Asp	Ile	Asp	Lys	Asn	Ala	Asp	Gly	Phe	Ile
		195					200					205			
Asp	Leu	Glu	Glu	Tyr	Ile	Gly	Asp	Met	Tyr	Ser	His	Asp	Gly	Asn	Thr
	210					215					220				
Asp	Glu	Pro	Glu	Trp	Val	Lys	Thr	Glu	Arg	Glu	Gln	Phe	Val	Glu	Phe
225					230					235					240
Arg	Asp	Lys	Asn	Arg	Asp	Gly	Lys	Met	Asp	Lys	Glu	Glu	Thr	Lys	Asp
				245					250					255	
Trp	Ile	Leu	Pro	Ser	Asp	Tyr	Asp	His	Ala	Glu	Ala	Glu	Ala	Arg	His
			260					265					270		

Leu Val Tyr Glu Ser Asp Gln Asn Lys Asp Gly Lys Leu Thr Lys Glu
275 280 285

Glu Ile Val Asp Lys Tyr Asp Leu Phe Val Gly Ser Gln Ala Thr Asp
290 295 300

Phe Gly Glu Ala Leu Val Arg His Asp Glu Phe
305 310 315

<210> 11291
<211> 147
<212> PRT
<213> Homo sapiens

<220>
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<223> /note="Payload ID: 2223"

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calumenin"

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<400> 11291
Xaa Ile Ala Thr Lys Glu Glu Phe Thr Ala Phe Leu His Pro Glu Glu
1 5 10 15

Tyr Asp Tyr Met Lys Asp Ile Val Val Gln Glu Thr Met Glu Asp Ile
20 25 30

Asp Lys Asn Ala Asp Gly Phe Ile Asp Leu Glu Glu Tyr Ile Gly Asp
35 40 45

Met Tyr Ser His Asp Gly Asn Thr Asp Glu Pro Glu Trp Val Lys Thr
50 55 60

Glu Arg Glu Gln Phe Val Glu Phe Arg Asp Lys Asn Arg Asp Gly Lys
65 70 75 80

Met Asp Lys Glu Glu Thr Lys Asp Trp Ile Leu Pro Ser Asp Tyr Asp
85 90 95

His Ala Glu Ala Glu Ala Arg His Leu Val Tyr Glu Ser Asp Gln Asn
100 105 110

Lys Asp Gly Lys Leu Thr Lys Glu Glu Ile Val Asp Lys Tyr Asp Leu
115 120 125

Phe Val Gly Ser Gln Ala Thr Asp Phe Gly Glu Ala Leu Val Arg His
130 135 140

Asp Glu Phe
145

<210> 11292
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<220>
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<400> 11292
Met Lys Glu Thr Asp Leu Ile Ile Met Asp Leu Arg Gln Phe Leu Met
1 5 10 15

Cys	Leu	Ser	Leu	Cys	Thr	Ala	Phe	Ala	Leu	Ser	Lys	Pro	Thr	Glu	Lys	
			20					25						30		
Lys	Asp	Arg	Val	His	His	Glu	Pro	Gln	Leu	Ser	Asp	Lys	Val	His	Asn	
		35					40					45				
Asp	Ala	Gln	Ser	Phe	Asp	Tyr	Asp	His	Asp	Ala	Phe	Leu	Gly	Ala	Glu	
	50					55					60					
Glu	Ala	Lys	Thr	Phe	Asp	Gln	Leu	Thr	Pro	Glu	Glu	Ser	Lys	Glu	Arg	
65					70					75					80	
Leu	Gly	Lys	Ile	Val	Ser	Lys	Ile	Asp	Gly	Asp	Lys	Asp	Gly	Phe	Val	
			85						90					95		
Thr	Val	Asp	Glu	Leu	Lys	Asp	Trp	Ile	Lys	Phe	Ala	Gln	Lys	Arg	Trp	
			100					105					110			
Ile	Tyr	Glu	Asp	Val	Glu	Arg	Gln	Trp	Lys	Gly	His	Asp	Leu	Asn	Glu	
		115					120					125				
Asp	Gly	Leu	Val	Ser	Trp	Glu	Glu	Tyr	Lys	Asn	Ala	Thr	Tyr	Gly	Tyr	
	130					135					140					
Val	Leu	Asp	Asp	Pro	Asp	Pro	Asp	Asp	Gly	Phe	Asn	Tyr	Lys	Gln	Met	
145					150					155					160	
Met	Val	Arg	Asp	Glu	Arg	Arg	Phe	Lys	Met	Ala	Asp	Lys	Asp	Gly	Asp	
				165					170					175		
Leu	Ile	Ala	Thr	Lys	Glu	Glu	Phe	Thr	Ala	Phe	Leu	His	Pro	Glu	Glu	
			180					185					190			
Tyr	Asp	Tyr	Met	Lys	Asp	Ile	Val	Val	Gln	Glu	Thr	Met	Glu	Asp	Ile	
		195					200					205				
Asp	Lys	Asn	Ala	Asp	Gly	Phe	Ile	Asp	Leu	Glu	Glu	Tyr	Ile	Gly	Asp	
	210					215					220					
Met	Tyr	Ser	His	Asp	Gly	Asn	Thr	Asp	Glu	Pro	Glu	Trp	Val	Lys	Thr	
225					230					235					240	
Glu	Arg	Glu	Gln	Phe	Val	Glu	Phe	Arg	Asp	Lys	Asn	Arg	Asp	Gly	Lys	

				245					250					255	
Met	Asp	Lys	Glu	Glu	Thr	Lys	Asp	Trp	Ile	Leu	Pro	Ser	Asp	Tyr	Asp
			260					265					270		
His	Ala	Glu	Ala	Glu	Ala	Arg	His	Leu	Val	Tyr	Glu	Ser	Asp	Gln	Asn
		275					280					285			
Lys	Asp	Gly	Lys	Leu	Thr	Lys	Glu	Glu	Ile	Val	Asp	Lys	Tyr	Asp	Leu
	290					295					300				
Phe	Val	Gly	Ser	Gln	Ala	Thr	Asp	Phe	Gly	Glu	Ala	Leu	Val	Arg	His
305					310					315					320

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<220>
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Cys Leu Ser Leu Cys Thr Ala Phe Ala Leu Ser Lys Pro Thr Glu Lys
20 25 30

Met Asp Lys Glu Glu Thr Lys Asp Trp Ile Leu Pro Ser Asp Tyr Asp
260 265 270

His Ala Glu Ala Glu Ala Arg His Leu Val Tyr Glu Ser Asp Gln Asn
275 280 285

Lys Asp Gly Lys Leu Thr Lys Glu Glu Ile Val Asp Lys Tyr Asp Leu
290 295 300

Phe Val Gly Ser Gln Ala Thr Asp Phe Gly Glu Ala Leu Val Arg His
305 310 315 320

Asp Glu Phe

<210> 11294
<211> 224
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<220>
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Met Asp Leu Arg Gln Phe Leu Met Cys Leu Ser Leu Cys Thr Ala Phe
1 5 10 15

Ala Leu Ser Lys Pro Thr Glu Lys Lys Asp Arg Val His His Glu Pro
20 25 30

Gln Leu Ser Asp Lys Val His Asn Asp Ala Gln Ser Phe Asp Tyr Asp
35 40 45

His Asp Ala Phe Leu Gly Ala Glu Glu Ala Lys Thr Phe Asp Gln Leu
 50 55 60
 Thr Pro Glu Glu Ser Lys Glu Arg Leu Gly Lys Ile Val Ser Lys Ile
 65 70 75 80
 Asp Gly Asp Lys Asp Gly Phe Val Thr Val Asp Glu Leu Lys Asp Trp
 85 90 95
 Ile Lys Phe Ala Gln Lys Arg Trp Ile Tyr Glu Asp Val Glu Arg Gln
 100 105 110
 Trp Lys Gly His Asp Leu Asn Glu Asp Gly Leu Val Ser Trp Glu Glu
 115 120 125
 Tyr Lys Asn Ala Thr Tyr Gly Tyr Val Leu Asp Asp Pro Asp Pro Asp
 130 135 140
 Asp Gly Phe Asn Tyr Lys Gln Met Met Val Arg Asp Glu Arg Arg Phe
 145 150 155 160
 Lys Met Ala Asp Lys Asp Gly Asp Leu Ile Ala Thr Lys Glu Glu Phe
 165 170 175
 Thr Ala Phe Leu His Pro Glu Glu Tyr Asp Tyr Met Lys Asp Ile Val
 180 185 190
 Val Gln Glu Thr Met Glu Asp Ile Asp Lys Asn Ala Asp Gly Phe Ile
 195 200 205
 Asp Leu Glu Glu Tyr Ile Gly Trp Gln Ala Tyr Gln Gly Gly Asp Arg
 210 215 220

<210> 11295

<211> 473

<212> PRT

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<220>

<221> source

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<220>

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<223> /note="Gene Symbol: CAMKV"

<220>

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<223> /note="Gene Name:
CaM kinase-like vesicle-associated"

<220>

<221> source

<223> /note="Uniprot ID: Q8NCB2"

<220>

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<223> /note="ENSP ID: ENSP00000296471"

<400> 11295

Met Pro Phe Gly Cys Val Thr Leu Gly Asp Lys Lys Asn Tyr Asn Gln
1 5 10 15

Pro Ser Glu Val Thr Asp Arg Tyr Asp Leu Gly Gln Val Ile Lys Thr
20 25 30

Glu Glu Phe Cys Glu Ile Phe Arg Ala Lys Asp Lys Thr Thr Gly Lys
35 40 45

Leu His Thr Cys Lys Lys Phe Gln Lys Arg Asp Gly Arg Lys Val Arg
50 55 60

Lys Ala Ala Lys Asn Glu Ile Gly Ile Leu Lys Met Val Lys His Pro
65 70 75 80

Asn Ile Leu Gln Leu Val Asp Val Phe Val Thr Arg Lys Glu Tyr Phe
85 90 95

Ile Phe Leu Glu Leu Ala Thr Gly Arg Glu Val Phe Asp Trp Ile Leu
100 105 110

Asp Gln Gly Tyr Tyr Ser Glu Arg Asp Thr Ser Asn Val Val Arg Gln
115 120 125

Val Leu Glu Ala Val Ala Tyr Leu His Ser Leu Lys Ile Val His Arg
130 135 140

Asn Leu Lys Leu Glu Asn Leu Val Tyr Tyr Asn Arg Leu Lys Asn Ser
145 150 155 160

Lys Ile Val Ile Ser Asp Phe His Leu Ala Lys Leu Glu Asn Gly Leu

165

170

175

Ile Lys Glu Pro Cys Gly Thr Pro Glu Tyr Leu Gly Asn Pro Pro Phe
 180 185 190

Tyr Glu Glu Val Glu Glu Asp Asp Tyr Glu Asn His Asp Lys Asn Leu
 195 200 205

Phe Arg Lys Ile Leu Ala Gly Asp Tyr Glu Phe Asp Ser Pro Tyr Trp
 210 215 220

Asp Asp Ile Ser Gln Ala Ala Lys Asp Leu Val Thr Arg Leu Met Glu
 225 230 235 240

Val Glu Gln Asp Gln Arg Ile Thr Ala Glu Glu Ala Ile Ser His Glu
 245 250 255

Trp Ile Ser Gly Asn Ala Ala Ser Asp Lys Asn Ile Lys Asp Gly Val
 260 265 270

Cys Ala Gln Ile Glu Lys Asn Phe Ala Arg Ala Lys Trp Lys Lys Ala
 275 280 285

Val Arg Val Thr Thr Leu Met Lys Arg Leu Arg Ala Pro Glu Gln Ser
 290 295 300

Ser Thr Ala Ala Ala Gln Ser Ala Ser Ala Thr Asp Thr Ala Thr Pro
 305 310 315 320

Gly Ala Ala Gly Gly Ala Thr Ala Ala Ala Ser Gly Ala Thr Ser
 325 330 335

Ala Pro Glu Gly Asp Ala Ala Arg Ala Ala Lys Ser Asp Asn Val Ala
 340 345 350

Pro Ala Asp Arg Ser Ala Thr Pro Ala Thr Asp Gly Ser Ala Thr Pro
 355 360 365

Ala Thr Asp Gly Ser Val Thr Pro Ala Thr Asp Gly Ser Ile Thr Pro
 370 375 380

Ala Thr Asp Gly Ser Val Thr Pro Ala Thr Asp Arg Ser Ala Thr Pro
 385 390 395 400

25322

Ala Thr Asp Gly Arg Ala Thr Pro Ala Thr Glu Glu Ser Thr Val Pro
405 410 415

Thr Thr Gln Ser Ser Ala Met Leu Ala Thr Lys Ala Ala Ala Thr Pro
420 425 430

Glu Pro Ala Met Ala Gln Pro Asp Ser Thr Ala Pro Glu Gly Ala Thr
435 440 445

Gly Gln Ala Pro Pro Ser Ser Lys Gly Glu Glu Ala Ala Gly Tyr Ala
450 455 460

Gln Glu Ser Gln Arg Glu Glu Ala Ser
465 470

<210> 11296
<211> 434
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<220>
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<220>
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Pro Ser Glu Val Thr Asp Arg Tyr Asp Leu Gly Gln Val Ile Lys Thr
20 25 30

Glu Glu Phe Cys Glu Ile Phe Arg Ala Lys Asp Lys Thr Thr Gly Lys
35 40 45

Leu	His	Thr	Cys	Lys	Lys	Phe	Gln	Lys	Arg	Asp	Gly	Arg	Lys	Val	Arg	
50						55					60					
Lys	Ala	Ala	Lys	Asn	Glu	Ile	Gly	Ile	Leu	Lys	Met	Val	Lys	His	Pro	
65					70					75					80	
Asn	Ile	Leu	Gln	Leu	Val	Asp	Val	Phe	Val	Thr	Arg	Lys	Glu	Tyr	Phe	
				85					90					95		
Ile	Phe	Leu	Glu	Leu	Ala	Thr	Gly	Arg	Glu	Val	Phe	Asp	Trp	Ile	Leu	
			100					105					110			
Asp	Gln	Gly	Tyr	Tyr	Ser	Glu	Arg	Asp	Thr	Ser	Asn	Val	Val	Arg	Gln	
		115					120					125				
Val	Leu	Glu	Ala	Val	Ala	Tyr	Leu	His	Ser	Leu	Lys	Ile	Val	His	Arg	
	130					135					140					
Asn	Leu	Lys	Leu	Glu	Asn	Leu	Val	Tyr	Tyr	Asn	Arg	Leu	Lys	Asn	Ser	
145					150					155					160	
Lys	Ile	Val	Ile	Ser	Asp	Phe	His	Leu	Ala	Lys	Leu	Glu	Asn	Gly	Leu	
				165					170					175		
Ile	Lys	Glu	Pro	Cys	Gly	Thr	Pro	Glu	Tyr	Leu	Ala	Pro	Glu	Val	Val	
			180					185					190			
Gly	Arg	Gln	Arg	Tyr	Gly	Arg	Pro	Val	Asp	Cys	Trp	Ala	Ile	Gly	Val	
		195					200					205				
Ile	Met	Tyr	Ile	Leu	Leu	Ser	Gly	Asn	Pro	Pro	Phe	Tyr	Glu	Glu	Val	
	210					215					220					
Glu	Glu	Asp	Asp	Tyr	Glu	Asn	His	Asp	Lys	Asn	Leu	Phe	Arg	Lys	Ile	
225					230					235					240	
Leu	Ala	Gly	Asp	Tyr	Glu	Phe	Asp	Ser	Pro	Tyr	Trp	Asp	Asp	Ile	Ser	
				245					250					255		
Gln	Ala	Ala	Lys	Asp	Leu	Val	Thr	Arg	Leu	Met	Glu	Val	Glu	Gln	Asp	
			260					265					270			
Gln	Arg	Ile	Thr	Ala	Glu	Glu	Ala	Ile	Ser	His	Glu	Trp	Ile	Ser	Gly	

275		280		285											
Asn	Ala	Ala	Ser	Asp	Lys	Asn	Ile	Lys	Asp	Gly	Val	Cys	Ala	Gln	Ile
290						295					300				
Glu	Lys	Asn	Phe	Ala	Arg	Ala	Lys	Trp	Lys	Thr	Val	Val	Pro	Pro	Gln
305					310					315					320
Pro	Gln	Met	Glu	Val	Pro	Pro	Gln	Pro	Leu	Met	Ala	Val	Ser	Pro	Gln
				325					330					335	
Pro	Pro	Met	Glu	Ala	Ser	Leu	Gln	Pro	Leu	Met	Gly	Val	Ser	Pro	Gln
			340					345					350		
Pro	Leu	Thr	Gly	Ala	Leu	Leu	Gln	Pro	Leu	Met	Gly	Glu	Pro	His	Gln
		355					360					365			
Pro	Gln	Lys	Arg	Ala	Leu	Cys	Pro	Pro	Pro	Lys	Ala	Val	Pro	Cys	Trp
	370					375					380				
Pro	Pro	Arg	Gln	Leu	Pro	Pro	Leu	Ser	Arg	Leu	Trp	Pro	Ser	Arg	Thr
385					390					395					400
Ala	Gln	Pro	Gln	Arg	Ala	Pro	Gln	Ala	Arg	Leu	His	Pro	Leu	Val	Lys
				405					410					415	
Gly	Lys	Arg	Leu	Leu	Val	Met	Pro	Arg	Ser	Leu	Lys	Gly	Arg	Arg	Pro
			420					425					430		

Ala Glu

<210> 11297
 <211> 470
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 <213> Homo sapiens

<220>
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 CaM kinase-like vesicle-associated"

<220>
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 <223> /note="Uniprot ID: Q8NCB2"

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 Met Pro Phe Gly Cys Val Thr Leu Gly Asp Lys Lys Asn Tyr Asn Gln
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Pro Ser Glu Val Thr Asp Arg Tyr Asp Leu Gly Gln Val Ile Lys Thr
 20 25 30

Glu Glu Phe Cys Glu Ile Phe Arg Ala Lys Asp Lys Thr Thr Gly Lys
 35 40 45

Leu His Thr Cys Lys Lys Phe Gln Lys Arg Asp Gly Arg Lys Val Arg
 50 55 60

Lys Ala Ala Lys Asn Glu Ile Gly Ile Leu Lys Met Val Lys His Pro
 65 70 75 80

Asn Ile Leu Gln Leu Val Asp Val Phe Val Thr Arg Lys Glu Tyr Phe
 85 90 95

Ile Phe Leu Glu Leu Ala Thr Gly Arg Glu Val Phe Asp Trp Ile Leu
 100 105 110

Asp Gln Gly Tyr Tyr Ser Glu Arg Asp Thr Ser Asn Val Val Arg Gln
 115 120 125

Val Leu Glu Ala Val Ala Tyr Leu His Ser Leu Lys Ile Val His Arg
 130 135 140

Asn Leu Lys Leu Glu Asn Leu Val Tyr Tyr Asn Arg Leu Lys Asn Ser
 145 150 155 160

Lys Ile Val Ile Ser Asp Phe His Leu Ala Lys Leu Glu Asn Gly Leu
 165 170 175

Ile	Lys	Glu	Pro	Cys	Gly	Thr	Pro	Glu	Tyr	Leu	Ala	Pro	Glu	Val	Val		
			180					185					190				
Gly	Arg	Gln	Arg	Tyr	Gly	Arg	Pro	Val	Asp	Cys	Trp	Ala	Ile	Gly	Val		
		195					200					205					
Ile	Met	Tyr	Ile	Leu	Leu	Ser	Gly	Asn	Pro	Pro	Phe	Tyr	Glu	Glu	Val		
	210					215					220						
Glu	Glu	Asp	Asp	Tyr	Glu	Asn	His	Asp	Lys	Asn	Leu	Phe	Arg	Lys	Ile		
225					230					235					240		
Leu	Ala	Gly	Asp	Tyr	Glu	Phe	Asp	Ser	Pro	Tyr	Trp	Asp	Asp	Ile	Ser		
				245					250					255			
Gln	Ala	Ala	Lys	Asp	Leu	Val	Thr	Arg	Leu	Met	Glu	Val	Glu	Gln	Asp		
			260					265					270				
Gln	Arg	Ile	Thr	Ala	Glu	Glu	Ala	Ile	Ser	His	Glu	Trp	Ile	Ser	Gly		
		275					280					285					
Asn	Ala	Ala	Ser	Asp	Lys	Asn	Ile	Lys	Asp	Gly	Val	Cys	Ala	Gln	Ile		
	290					295					300						
Glu	Lys	Asn	Phe	Ala	Arg	Ala	Lys	Trp	Lys	Lys	Ala	Val	Arg	Val	Thr		
305					310					315					320		
Thr	Leu	Met	Lys	Arg	Leu	Arg	Ala	Pro	Glu	Gln	Ser	Ser	Thr	Ala	Ala		
				325					330					335			
Ala	Gln	Ser	Ala	Ser	Ala	Thr	Asp	Thr	Ala	Thr	Pro	Gly	Ala	Ala	Asp		
			340					345					350				
Arg	Ser	Ala	Thr	Pro	Ala	Thr	Asp	Gly	Ser	Ala	Thr	Pro	Ala	Thr	Asp		
		355					360					365					
Gly	Ser	Val	Thr	Pro	Ala	Thr	Asp	Gly	Ser	Ile	Thr	Pro	Ala	Thr	Asp		
	370					375					380						
Gly	Ser	Val	Thr	Pro	Ala	Thr	Asp	Arg	Ser	Ala	Thr	Pro	Ala	Thr	Asp		
385					390					395					400		
Gly	Arg	Ala	Thr	Pro	Ala	Thr	Glu	Glu	Ser	Thr	Val	Pro	Thr	Thr	Gln		

405

410

415

Ser Ser Ala Met Leu Ala Thr Lys Ala Ala Ala Thr Pro Glu Pro Ala
 420 425 430

Met Ala Gln Pro Asp Ser Thr Ala Pro Glu Gly Ala Thr Gly Gln Ala
 435 440 445

Pro Pro Ser Ser Lys Gly Glu Glu Ala Ala Gly Tyr Ala Gln Glu Ser
 450 455 460

Gln Arg Glu Glu Ala Ser
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<210> 11298

<211> 501

<212> PRT

<213> Homo sapiens

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<223> /note="Gene Name:
 CaM kinase-like vesicle-associated"

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<223> /note="Uniprot ID: Q8NCB2"

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<223> /note="ENSP ID: ENSP00000419195"

<400> 11298

Met Pro Phe Gly Cys Val Thr Leu Gly Asp Lys Lys Asn Tyr Asn Gln
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Pro Ser Glu Val Thr Asp Arg Tyr Asp Leu Gly Gln Val Ile Lys Thr
 20 25 30

Glu Glu Phe Cys Glu Ile Phe Arg Ala Lys Asp Lys Thr Thr Gly Lys
 35 40 45

25328

Leu	His	Thr	Cys	Lys	Lys	Phe	Gln	Lys	Arg	Asp	Gly	Arg	Lys	Val	Arg		
50						55					60						
Lys	Ala	Ala	Lys	Asn	Glu	Ile	Gly	Ile	Leu	Lys	Met	Val	Lys	His	Pro		
65					70					75					80		
Asn	Ile	Leu	Gln	Leu	Val	Asp	Val	Phe	Val	Thr	Arg	Lys	Glu	Tyr	Phe		
				85					90					95			
Ile	Phe	Leu	Glu	Leu	Ala	Thr	Gly	Arg	Glu	Val	Phe	Asp	Trp	Ile	Leu		
			100					105					110				
Asp	Gln	Gly	Tyr	Tyr	Ser	Glu	Arg	Asp	Thr	Ser	Asn	Val	Val	Arg	Gln		
		115					120					125					
Val	Leu	Glu	Ala	Val	Ala	Tyr	Leu	His	Ser	Leu	Lys	Ile	Val	His	Arg		
	130					135					140						
Asn	Leu	Lys	Leu	Glu	Asn	Leu	Val	Tyr	Tyr	Asn	Arg	Leu	Lys	Asn	Ser		
145					150					155					160		
Lys	Ile	Val	Ile	Ser	Asp	Phe	His	Leu	Ala	Lys	Leu	Glu	Asn	Gly	Leu		
				165					170					175			
Ile	Lys	Glu	Pro	Cys	Gly	Thr	Pro	Glu	Tyr	Leu	Ala	Pro	Glu	Val	Val		
			180					185					190				
Gly	Arg	Gln	Arg	Tyr	Gly	Arg	Pro	Val	Asp	Cys	Trp	Ala	Ile	Gly	Val		
		195					200					205					
Ile	Met	Tyr	Ile	Leu	Leu	Ser	Gly	Asn	Pro	Pro	Phe	Tyr	Glu	Glu	Val		
	210					215					220						
Glu	Glu	Asp	Asp	Tyr	Glu	Asn	His	Asp	Lys	Asn	Leu	Phe	Arg	Lys	Ile		
225					230					235					240		
Leu	Ala	Gly	Asp	Tyr	Glu	Phe	Asp	Ser	Pro	Tyr	Trp	Asp	Asp	Ile	Ser		
				245					250					255			
Gln	Ala	Ala	Lys	Asp	Leu	Val	Thr	Arg	Leu	Met	Glu	Val	Glu	Gln	Asp		
			260					265					270				

Gln Arg Ile Thr Ala Glu Glu Ala Ile Ser His Glu Trp Ile Ser Gly
 275 280 285

Asn Ala Ala Ser Asp Lys Asn Ile Lys Asp Gly Val Cys Ala Gln Ile
 290 295 300

Glu Lys Asn Phe Ala Arg Ala Lys Trp Lys Lys Ala Val Arg Val Thr
 305 310 315 320

Thr Leu Met Lys Arg Leu Arg Ala Pro Glu Gln Ser Ser Thr Ala Ala
 325 330 335

Ala Gln Ser Ala Ser Ala Thr Asp Thr Ala Thr Pro Gly Ala Ala Gly
 340 345 350

Gly Ala Thr Ala Ala Ala Ala Ser Gly Ala Thr Ser Ala Pro Glu Gly
 355 360 365

Asp Ala Ala Arg Ala Ala Lys Ser Asp Asn Val Ala Pro Ala Asp Arg
 370 375 380

Ser Ala Thr Pro Ala Thr Asp Gly Ser Ala Thr Pro Ala Thr Asp Gly
 385 390 395 400

Ser Val Thr Pro Ala Thr Asp Gly Ser Ile Thr Pro Ala Thr Asp Gly
 405 410 415

Ser Val Thr Pro Ala Thr Asp Arg Ser Ala Thr Pro Ala Thr Asp Gly
 420 425 430

Arg Ala Thr Pro Ala Thr Glu Glu Ser Thr Val Pro Thr Thr Gln Ser
 435 440 445

Ser Ala Met Leu Ala Thr Lys Ala Ala Ala Thr Pro Glu Pro Ala Met
 450 455 460

Ala Gln Pro Asp Ser Thr Ala Pro Glu Gly Ala Thr Gly Gln Ala Pro
 465 470 475 480

Pro Ser Ser Lys Gly Glu Glu Ala Ala Gly Tyr Ala Gln Glu Ser Gln
 485 490 495

Arg Glu Glu Ala Ser

<210> 11299

<211> 123

<212> PRT

<213> Homo sapiens

<220>

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<221> source

<223> /note="Gene Symbol: CAMKV"

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<221> source

<223> /note="Gene Name:
CaM kinase-like vesicle-associated"

<220>

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<223> /note="ENSP ID: ENSP00000420000"

<400> 11299

Met Pro Phe Gly Cys Val Thr Leu Gly Asp Lys Lys Asn Tyr Asn Gln
1 5 10 15

Pro Ser Glu Val Phe Asp Trp Ile Leu Asp Gln Gly Tyr Tyr Ser Glu
20 25 30

Arg Asp Thr Ser Asn Val Val Arg Gln Val Leu Glu Ala Val Ala Tyr
35 40 45

Leu His Ser Leu Lys Ile Val His Arg Asn Leu Lys Leu Glu Asn Leu
50 55 60

Val Tyr Tyr Asn Arg Leu Lys Asn Ser Lys Ile Val Ile Ser Asp Phe
65 70 75 80

His Leu Ala Lys Leu Glu Asn Gly Leu Ile Lys Glu Pro Cys Gly Thr
85 90 95

Pro Asp Pro Arg Gly Gly Arg Pro Ala Ala Val Trp Thr Pro Cys Gly
100 105 110

Leu Leu Gly His Trp Ser His His Val His Pro
115 120

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<210> 11300
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<212> PRT
<213> Homo sapiens

<220>
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<220>
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<220>
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<223> /note="Gene Name:
      CaM kinase-like vesicle-associated"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000420053"

<400> 11300
Met Val Lys His Pro Asn Ile Leu Gln Leu Val Asp Val Phe Val Thr
1              5              10              15

Arg Lys Glu Tyr Phe Ile Phe Leu Glu Leu Ala Thr Gly Arg Glu Val
      20              25              30

Phe Asp Trp Ile Leu Asp Gln Gly Tyr Tyr Ser Glu Arg Asp Thr Ser
      35              40              45

Asn Val Val Arg Gln Val Leu Glu Ala Val Ala Tyr Leu His Ser Leu
      50              55              60

Lys Ile Val His Arg Asn Leu Lys Leu Glu Asn Leu Val Tyr Tyr Asn
65              70              75              80

Arg Leu Lys Asn Ser Lys Ile Val Ile Ser Asp Phe His Leu Ala Lys
      85              90              95

Leu Glu Asn Gly Leu Ile Lys Glu Pro Cys Gly Thr Pro Glu Tyr Leu
      100              105              110

Ala Pro Glu Val Val Gly Arg Gln Arg Tyr Gly Arg Pro Val Asp Cys
      115              120              125

Trp Ala Ile Gly Val Ile Met Tyr Ile Leu Leu Ser Gly Asn Pro Pro

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25332

130						135						140				
Phe	Tyr	Glu	Glu	Val	Glu	Glu	Asp	Asp	Tyr	Glu	Asn	His	Asp	Lys	Asn	
145					150					155					160	
Leu	Phe	Arg	Lys	Ile	Leu	Ala	Gly	Asp	Tyr	Glu	Phe	Asp	Ser	Pro	Tyr	
				165					170					175		
Trp	Asp	Asp	Ile	Ser	Gln	Ala	Ala	Lys	Asp	Leu	Val	Thr	Arg	Leu	Met	
			180					185					190			
Glu	Val	Glu	Gln	Asp	Gln	Arg	Ile	Thr	Ala	Glu	Glu	Ala	Ile	Ser	His	
		195					200					205				
Glu	Trp	Ile	Ser	Gly	Asn	Ala	Ala	Ser	Asp	Lys	Asn	Ile	Lys	Asp	Gly	
	210					215					220					
Val	Cys	Ala	Gln	Ile	Glu	Lys	Asn	Phe	Ala	Arg	Ala	Lys	Trp	Lys	Lys	
225					230					235					240	
Ala	Val	Arg	Val	Thr	Thr	Leu	Met	Lys	Arg	Leu	Arg	Ala	Pro	Glu	Gln	
				245					250					255		
Ser	Ser	Thr	Ala	Ala	Ala	Gln	Ser	Ala	Ser	Ala	Thr	Asp	Thr	Ala	Thr	
			260					265					270			
Pro	Gly	Ala	Ala	Gly	Gly	Ala	Thr	Ala	Ala	Ala	Ala	Ser	Gly	Ala	Thr	
		275					280					285				
Ser	Ala	Pro	Glu	Gly	Asp	Ala	Ala	Arg	Ala	Ala	Lys	Ser	Asp	Asn	Val	
	290					295					300					
Ala	Pro	Ala	Asp	Arg	Ser	Ala	Thr	Pro	Ala	Thr	Asp	Gly	Ser	Ala	Thr	
305					310					315					320	
Pro	Ala	Thr	Asp	Gly	Ser	Val	Thr	Pro	Ala	Thr	Asp	Gly	Ser	Ile	Thr	
				325					330					335		
Pro	Ala	Thr	Asp	Gly	Ser	Val	Thr	Pro	Ala	Thr	Asp	Arg	Ser	Ala	Thr	
			340					345					350			
Pro	Ala	Thr	Asp	Gly	Arg	Ala	Thr	Pro	Ala	Thr	Glu	Glu	Ser	Thr	Val	
		355					360				365					

Pro Thr Thr Gln Ser Ser Ala Met Leu Ala Thr Lys Ala Ala Ala Thr
 370 375 380

Pro Glu Pro Ala Met Ala Gln Pro Asp Ser Thr Ala Pro Glu Gly Ala
 385 390 395 400

Thr Gly Gln Ala Pro Pro Ser Ser Lys Gly Glu Glu Ala Ala Gly Tyr
 405 410 415

Ala Gln Glu Ser Gln Arg Glu Glu Ala Ser
 420 425

<210> 11301
 <211> 94
 <212> PRT
 <213> Homo sapiens

<220>
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 <223> /note="Payload ID: 2224"

<220>
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 <223> /note="Gene Symbol: CAMKV"

<220>
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 <223> /note="Gene Name:
 CaM kinase-like vesicle-associated"

<220>
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 <223> /note="ENSP ID: ENSP00000420139"

<400> 11301
 Met Pro Phe Gly Cys Val Thr Leu Gly Asp Lys Lys Asn Tyr Asn Gln
 1 5 10 15

Pro Ser Glu Val Thr Asp Arg Tyr Asp Leu Gly Gln Val Ile Lys Thr
 20 25 30

Glu Glu Phe Cys Glu Ile Phe Arg Ala Lys Asp Lys Thr Thr Gly Lys
 35 40 45

Leu His Thr Cys Lys Lys Phe Gln Lys Arg Asp Gly Arg Lys Gly Glu
 50 55 60

Ala Ser Gln His Pro Thr Ala Gly Gly Cys Val Cys Asp Pro Gln Gly
65 70 75 80

Val Leu Tyr Leu Pro Gly Ala Gly His Gly Glu Gly Gly Val
85 90

<210> 11302

<211> 427

<212> PRT

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<220>

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<223> /note="Gene Symbol: CAMKV"

<220>

<221> source

<223> /note="Gene Name:
CaM kinase-like vesicle-associated"

<220>

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<223> /note="ENSP ID: ENSP00000420724"

<400> 11302

Met Pro Phe Gly Cys Val Thr Leu Gly Asp Lys Lys Asn Tyr Asn Gln
1 5 10 15

Pro Ser Glu Val Thr Asp Arg Tyr Asp Leu Gly Gln Val Ile Lys Thr
20 25 30

Glu Glu Phe Cys Glu Ile Phe Arg Ala Lys Asp Lys Thr Thr Gly Lys
35 40 45

Leu His Thr Cys Lys Lys Phe Gln Lys Arg Asp Gly Arg Lys Val Arg
50 55 60

Lys Ala Ala Lys Asn Glu Ile Gly Ile Leu Lys Met Val Lys His Pro
65 70 75 80

Asn Ile Leu Gln Leu Val Asp Val Phe Val Thr Arg Lys Glu Tyr Phe
85 90 95

Ile Phe Leu Glu Leu Asn Leu Lys Leu Glu Asn Leu Val Tyr Tyr Asn
100 105 110

25335

Arg	Leu	Lys	Asn	Ser	Lys	Ile	Val	Ile	Ser	Asp	Phe	His	Leu	Ala	Lys	
		115					120					125				
Leu	Glu	Asn	Gly	Leu	Ile	Lys	Glu	Pro	Cys	Gly	Thr	Pro	Glu	Tyr	Leu	
	130					135					140					
Ala	Pro	Glu	Val	Val	Gly	Arg	Gln	Arg	Tyr	Gly	Arg	Pro	Val	Asp	Cys	
145					150					155					160	
Trp	Ala	Ile	Gly	Val	Ile	Met	Tyr	Ile	Leu	Leu	Ser	Gly	Asn	Pro	Pro	
				165					170					175		
Phe	Tyr	Glu	Glu	Val	Glu	Glu	Asp	Asp	Tyr	Glu	Asn	His	Asp	Lys	Asn	
			180					185					190			
Leu	Phe	Arg	Lys	Ile	Leu	Ala	Gly	Asp	Tyr	Glu	Phe	Asp	Ser	Pro	Tyr	
		195					200					205				
Trp	Asp	Asp	Ile	Ser	Gln	Ala	Ala	Lys	Asp	Leu	Val	Thr	Arg	Leu	Met	
	210					215					220					
Glu	Val	Glu	Gln	Asp	Gln	Arg	Ile	Thr	Ala	Glu	Glu	Ala	Ile	Ser	His	
225					230					235					240	
Glu	Trp	Ile	Ser	Gly	Asn	Ala	Ala	Ser	Asp	Lys	Asn	Ile	Lys	Asp	Gly	
				245					250					255		
Val	Cys	Ala	Gln	Ile	Glu	Lys	Asn	Phe	Ala	Arg	Ala	Lys	Trp	Lys	Lys	
			260					265					270			
Ala	Val	Arg	Val	Thr	Thr	Leu	Met	Lys	Arg	Leu	Arg	Ala	Pro	Glu	Gln	
		275					280					285				
Ser	Ser	Thr	Ala	Ala	Ala	Gln	Ser	Ala	Ser	Ala	Thr	Asp	Thr	Ala	Thr	
	290					295					300					
Pro	Gly	Ala	Ala	Asp	Arg	Ser	Ala	Thr	Pro	Ala	Thr	Asp	Gly	Ser	Ala	
305					310					315					320	
Thr	Pro	Ala	Thr	Asp	Gly	Ser	Val	Thr	Pro	Ala	Thr	Asp	Gly	Ser	Ile	
				325					330					335		

Thr Pro Ala Thr Asp Gly Ser Val Thr Pro Ala Thr Asp Arg Ser Ala
340 345 350

Thr Pro Ala Thr Asp Gly Arg Ala Thr Pro Ala Thr Glu Glu Ser Thr
355 360 365

Val Pro Thr Thr Gln Ser Ser Ala Met Leu Ala Thr Lys Ala Ala Ala
370 375 380

Thr Pro Glu Pro Ala Met Ala Gln Pro Asp Ser Thr Ala Pro Glu Gly
385 390 395 400

Ala Thr Gly Gln Ala Pro Pro Ser Ser Lys Gly Glu Glu Ala Ala Gly
405 410 415

Tyr Ala Gln Glu Ser Gln Arg Glu Glu Ala Ser
420 425

<210> 11303
<211> 143
<212> PRT
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<220>
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<220>
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<223> /note="Gene Name:
CaM kinase-like vesicle-associated"

<220>
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<400> 11303
Met Pro Phe Gly Cys Val Thr Leu Gly Asp Lys Lys Asn Tyr Asn Gln
1 5 10 15

Pro Ser Glu Val Thr Asp Arg Tyr Asp Leu Gly Gln Val Ile Lys Thr
20 25 30

Glu Glu Phe Cys Glu Ile Phe Arg Ala Lys Asp Lys Thr Thr Gly Lys
25337

35	40	45
Leu His Thr Cys Lys Lys Phe Gln Lys Arg Asp Gly Arg Lys Val Arg		
50	55	60
Lys Ala Ala Lys Asn Glu Ile Gly Ile Leu Lys Met Val Lys His Pro		
65	70	75
Asn Ile Leu Gln Leu Val Asp Val Phe Val Thr Arg Lys Glu Tyr Phe		
	85	90
Ile Phe Leu Glu Leu Ala Thr Thr Arg Ser Glu Thr Gln Ala Thr Trp		
	100	105
Tyr Gly Lys Ser Trp Arg Pro Trp Pro Ile Cys Thr His Ser Arg Ser		
	115	120
Cys Thr Gly Ile Ser Ser Trp Arg Thr Trp Phe Thr Thr Thr Gly		
	130	135
		140

<210> 11304
 <211> 473
 <212> PRT
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<220>
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<220>
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 CaM kinase-like vesicle-associated"

<220>
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 <223> /note="Uniprot ID: Q8NCB2"

<220>
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 <223> /note="ENSP ID: ENSP00000484045"

<400> 11304
Met Pro Phe Gly Cys Val Thr Leu Gly Asp Lys Lys Asn Tyr Asn Gln
1 5 10 15

Pro	Ser	Glu	Val	Thr	Asp	Arg	Tyr	Asp	Leu	Gly	Gln	Val	Ile	Lys	Thr		
			20					25					30				
Glu	Glu	Phe	Cys	Glu	Ile	Phe	Arg	Ala	Lys	Asp	Lys	Thr	Thr	Gly	Lys		
		35					40					45					
Leu	His	Thr	Cys	Lys	Lys	Phe	Gln	Lys	Arg	Asp	Gly	Arg	Lys	Val	Arg		
	50					55					60						
Lys	Ala	Ala	Lys	Asn	Glu	Ile	Gly	Ile	Leu	Lys	Met	Val	Lys	His	Pro		
65					70					75					80		
Asn	Ile	Leu	Gln	Leu	Val	Asp	Val	Phe	Val	Thr	Arg	Lys	Glu	Tyr	Phe		
				85					90					95			
Ile	Phe	Leu	Glu	Leu	Ala	Thr	Gly	Arg	Glu	Val	Phe	Asp	Trp	Ile	Leu		
			100					105					110				
Asp	Gln	Gly	Tyr	Tyr	Ser	Glu	Arg	Asp	Thr	Ser	Asn	Val	Val	Arg	Gln		
		115					120					125					
Val	Leu	Glu	Ala	Val	Ala	Tyr	Leu	His	Ser	Leu	Lys	Ile	Val	His	Arg		
	130					135					140						
Asn	Leu	Lys	Leu	Glu	Asn	Leu	Val	Tyr	Tyr	Asn	Arg	Leu	Lys	Asn	Ser		
145					150					155					160		
Lys	Ile	Val	Ile	Ser	Asp	Phe	His	Leu	Ala	Lys	Leu	Glu	Asn	Gly	Leu		
				165					170					175			
Ile	Lys	Glu	Pro	Cys	Gly	Thr	Pro	Glu	Tyr	Leu	Gly	Asn	Pro	Pro	Phe		
			180					185					190				
Tyr	Glu	Glu	Val	Glu	Glu	Asp	Asp	Tyr	Glu	Asn	His	Asp	Lys	Asn	Leu		
		195					200					205					
Phe	Arg	Lys	Ile	Leu	Ala	Gly	Asp	Tyr	Glu	Phe	Asp	Ser	Pro	Tyr	Trp		
	210					215					220						
Asp	Asp	Ile	Ser	Gln	Ala	Ala	Lys	Asp	Leu	Val	Thr	Arg	Leu	Met	Glu		
225					230					235					240		

Val Glu Gln Asp Gln Arg Ile Thr Ala Glu Glu Ala Ile Ser His Glu
245 250 255

Trp Ile Ser Gly Asn Ala Ala Ser Asp Lys Asn Ile Lys Asp Gly Val
260 265 270

Cys Ala Gln Ile Glu Lys Asn Phe Ala Arg Ala Lys Trp Lys Lys Ala
275 280 285

Val Arg Val Thr Thr Leu Met Lys Arg Leu Arg Ala Pro Glu Gln Ser
290 295 300

Ser Thr Ala Ala Ala Gln Ser Ala Ser Ala Thr Asp Thr Ala Thr Pro
305 310 315 320

Gly Ala Ala Gly Gly Ala Thr Ala Ala Ala Ala Ser Gly Ala Thr Ser
325 330 335

Ala Pro Glu Gly Asp Ala Ala Arg Ala Ala Lys Ser Asp Asn Val Ala
340 345 350

Pro Ala Asp Arg Ser Ala Thr Pro Ala Thr Asp Gly Ser Ala Thr Pro
355 360 365

Ala Thr Asp Gly Ser Val Thr Pro Ala Thr Asp Gly Ser Ile Thr Pro
370 375 380

Ala Thr Asp Gly Ser Val Thr Pro Ala Thr Asp Arg Ser Ala Thr Pro
385 390 395 400

Ala Thr Asp Gly Arg Ala Thr Pro Ala Thr Glu Glu Ser Thr Val Pro
405 410 415

Thr Thr Gln Ser Ser Ala Met Leu Ala Thr Lys Ala Ala Thr Pro
420 425 430

Glu Pro Ala Met Ala Gln Pro Asp Ser Thr Ala Pro Glu Gly Ala Thr
435 440 445

Gly Gln Ala Pro Pro Ser Ser Lys Gly Glu Glu Ala Ala Gly Tyr Ala
450 455 460

Gln Glu Ser Gln Arg Glu Glu Ala Ser

25340

465

470

<210> 11305

<211> 327

<212> PRT

<213> Homo sapiens

<220>

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<223> /note="Payload ID: 2225"

<220>

<221> source

<223> /note="Gene Symbol: CREB1"

<220>

<221> source

<223> /note="Gene Name:
cAMP responsive element binding protein 1"

<220>

<221> source

<223> /note="Uniprot ID: P16220"

<220>

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<223> /note="ENSP ID: ENSP00000236995"

<400> 11305

Met	Thr	Met	Glu	Ser	Gly	Ala	Glu	Asn	Gln	Gln	Ser	Gly	Asp	Ala	Ala
1				5					10					15	

Val	Thr	Glu	Ala	Glu	Asn	Gln	Gln	Met	Thr	Val	Gln	Ala	Gln	Pro	Gln
			20					25					30		

Ile	Ala	Thr	Leu	Ala	Gln	Val	Ser	Met	Pro	Ala	Ala	His	Ala	Thr	Ser
		35					40					45			

Ser	Ala	Pro	Thr	Val	Thr	Leu	Val	Gln	Leu	Pro	Asn	Gly	Gln	Thr	Val
	50					55					60				

Gln	Val	His	Gly	Val	Ile	Gln	Ala	Ala	Gln	Pro	Ser	Val	Ile	Gln	Ser
65					70					75					80

Pro	Gln	Val	Gln	Thr	Val	Gln	Ile	Ser	Thr	Ile	Ala	Glu	Ser	Glu	Asp
				85					90					95	

Ser	Gln	Glu	Ser	Val	Asp	Ser	Val	Thr	Asp	Ser	Gln	Lys	Arg	Arg	Glu
			100					105					110		

25341


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<210> 11306
<211> 341
<212> PRT
<213> Homo sapiens

<220>
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<223> /note="Payload ID: 2225"

<220>
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<223> /note="Gene Symbol: CREB1"

<220>
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<223> /note="Gene Name:
      cAMP responsive element binding protein 1"

<220>
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<223> /note="Uniprot ID: P16220"

<220>
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<223> /note="ENSP ID: ENSP00000387699"

<400> 11306
Met Thr Met Glu Ser Gly Ala Glu Asn Gln Gln Ser Gly Asp Ala Ala
1          5          10          15

Val Thr Glu Ala Glu Asn Gln Gln Met Thr Val Gln Ala Gln Pro Gln
          20          25          30

Ile Ala Thr Leu Ala Gln Val Ser Met Pro Ala Ala His Ala Thr Ser
          35          40          45

Ser Ala Pro Thr Val Thr Leu Val Gln Leu Pro Asn Gly Gln Thr Val
          50          55          60

Gln Val His Gly Val Ile Gln Ala Ala Gln Pro Ser Val Ile Gln Ser
65          70          75          80

Pro Gln Val Gln Thr Val Gln Ser Ser Cys Lys Asp Leu Lys Arg Leu
          85          90          95

Phe Ser Gly Thr Gln Ile Ser Thr Ile Ala Glu Ser Glu Asp Ser Gln
          100          105          110

Glu Ser Val Asp Ser Val Thr Asp Ser Gln Lys Arg Arg Glu Ile Leu
          115          120          125

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Ser	Arg	Arg	Pro	Ser	Tyr	Arg	Lys	Ile	Leu	Asn	Asp	Leu	Ser	Ser	Asp
	130					135					140				
Ala	Pro	Gly	Val	Pro	Arg	Ile	Glu	Glu	Glu	Lys	Ser	Glu	Glu	Glu	Thr
145					150					155					160
Ser	Ala	Pro	Ala	Ile	Thr	Thr	Val	Thr	Val	Pro	Thr	Pro	Ile	Tyr	Gln
				165					170					175	
Thr	Ser	Ser	Gly	Gln	Tyr	Ile	Ala	Ile	Thr	Gln	Gly	Gly	Ala	Ile	Gln
			180					185					190		
Leu	Ala	Asn	Asn	Gly	Thr	Asp	Gly	Val	Gln	Gly	Leu	Gln	Thr	Leu	Thr
		195					200					205			
Met	Thr	Asn	Ala	Ala	Ala	Thr	Gln	Pro	Gly	Thr	Thr	Ile	Leu	Gln	Tyr
	210					215					220				
Ala	Gln	Thr	Thr	Asp	Gly	Gln	Gln	Ile	Leu	Val	Pro	Ser	Asn	Gln	Val
225					230					235					240
Val	Val	Gln	Ala	Ala	Ser	Gly	Asp	Val	Gln	Thr	Tyr	Gln	Ile	Arg	Thr
				245					250					255	
Ala	Pro	Thr	Ser	Thr	Ile	Ala	Pro	Gly	Val	Val	Met	Ala	Ser	Ser	Pro
			260					265					270		
Ala	Leu	Pro	Thr	Gln	Pro	Ala	Glu	Glu	Ala	Ala	Arg	Lys	Arg	Glu	Val
		275					280					285			
Arg	Leu	Met	Lys	Asn	Arg	Glu	Ala	Ala	Arg	Glu	Cys	Arg	Arg	Lys	Lys
	290					295					300				
Lys	Glu	Tyr	Val	Lys	Cys	Leu	Glu	Asn	Arg	Val	Ala	Val	Leu	Glu	Asn
305					310					315					320
Gln	Asn	Lys	Thr	Leu	Ile	Glu	Glu	Leu	Lys	Ala	Leu	Lys	Asp	Leu	Tyr
				325					330					335	
Cys	His	Lys	Ser	Asp											
			340												


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<210> 11307
<211> 131
<212> PRT
<213> Homo sapiens

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<220>
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<223> /note="Gene Name:
      cAMP responsive element binding protein 1"

<220>
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<223> /note="ENSP ID: ENSP00000391125"

<400> 11307
Met Pro Ala Ala His Ala Thr Ser Ser Ala Pro Thr Val Thr Leu Val
1          5          10          15

Gln Leu Pro Asn Gly Gln Thr Val Gln Val His Gly Val Ile Gln Ala
20          25          30

Ala Gln Pro Ser Val Ile Gln Ser Pro Gln Val Gln Thr Val Gln Ser
35          40          45

Ser Cys Lys Asp Leu Lys Arg Leu Phe Ser Gly Thr Gln Ile Ser Thr
50          55          60

Ile Ala Glu Ser Glu Asp Ser Gln Glu Ser Val Asp Ser Val Thr Asp
65          70          75          80

Ser Gln Lys Arg Arg Glu Ile Leu Ser Arg Arg Pro Ser Tyr Arg Lys
85          90          95

Ile Leu Asn Asp Leu Ser Ser Asp Ala Pro Gly Val Pro Arg Ile Glu
100         105         110

Glu Glu Lys Ser Glu Glu Glu Thr Ser Ala Pro Ala Ile Thr Thr Val
115         120         125

Thr Val Pro

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<210> 11308

<211> 132

<212> PRT

<213> Homo sapiens

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<223> /note="Gene Name:
cAMP responsive element binding protein 1"

<220>

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<223> /note="ENSP ID: ENSP00000392428"

<400> 11308

Met Thr Met Glu Ser Gly Ala Glu Asn Gln Gln Ser Gly Asp Ala Ala
1 5 10 15

Val Thr Glu Ala Glu Asn Gln Gln Met Thr Val Gln Ala Gln Pro Gln
20 25 30

Ile Ala Thr Leu Ala Gln Val Ser Met Pro Ala Ala His Ala Thr Ser
35 40 45

Ser Ala Pro Thr Val Thr Leu Val Gln Leu Pro Asn Gly Gln Thr Val
50 55 60

Gln Val His Gly Val Ile Gln Ala Ala Gln Pro Ser Val Ile Gln Ser
65 70 75 80

Pro Gln Val Gln Thr Val Gln Ser Ser Cys Lys Asp Leu Lys Arg Leu
85 90 95

Phe Ser Gly Thr Gln Ile Ser Thr Ile Ala Glu Ser Glu Asp Ser Gln
100 105 110

Glu Ser Val Asp Ser Val Thr Asp Ser Gln Lys Arg Arg Glu Ile Leu
115 120 125

Ser Arg Arg Pro
130

<210> 11309
<211> 140
<212> PRT
<213> Homo sapiens

<220>
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<220>
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<223> /note="Gene Name:
cAMP responsive element binding protein 1"

<220>
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<223> /note="ENSP ID: ENSP00000401803"

<400> 11309
Gly Gly Ala Ile Gln Leu Ala Asn Asn Gly Thr Asp Gly Val Gln Gly
1 5 10 15

Leu Gln Thr Leu Thr Met Thr Asn Ala Ala Thr Gln Pro Gly Thr
20 25 30

Thr Ile Leu Gln Tyr Ala Gln Thr Thr Asp Gly Gln Gln Ile Leu Val
35 40 45

Pro Ser Asn Gln Val Val Val Gln Ala Ala Ser Gly Asp Val Gln Thr
50 55 60

Tyr Gln Ile Arg Thr Ala Pro Thr Ser Thr Ile Ala Pro Gly Val Val
65 70 75 80

Met Ala Ser Ser Pro Ala Leu Pro Thr Gln Pro Ala Glu Glu Ala Ala
85 90 95

Arg Lys Arg Glu Val Arg Leu Met Lys Asn Arg Tyr Lys Tyr Cys Ile
100 105 110

Tyr Leu Asp Cys Tyr Val Leu Ser Val Ser Ser His Ser Ala Gly Cys

115

120

125

Val Ser Leu His Leu Leu Val Ile Gly Ser Leu His
 130 135 140

<210> 11310

<211> 170

<212> PRT

<213> Homo sapiens

<220>

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<220>

<221> source

<223> /note="Gene Name:
 cAMP responsive element binding protein 1"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000403678"

<400> 11310

Met Pro Ala Ala His Ala Thr Ser Ser Ala Pro Thr Val Thr Leu Val
 1 5 10 15

Gln Leu Pro Asn Gly Gln Thr Val Gln Val His Gly Val Ile Gln Ala
 20 25 30

Ala Gln Pro Ser Val Ile Gln Ser Pro Gln Val Gln Thr Val Gln Ile
 35 40 45

Ser Thr Ile Ala Glu Ser Glu Asp Ser Gln Glu Ser Val Asp Ser Val
 50 55 60

Thr Asp Ser Gln Lys Arg Arg Glu Ile Leu Ser Arg Arg Pro Ser Tyr
 65 70 75 80

Arg Lys Ile Leu Asn Asp Leu Ser Ser Asp Ala Pro Gly Val Pro Arg
 85 90 95

Ile Glu Glu Glu Lys Ser Glu Glu Glu Thr Ser Ala Pro Ala Ile Thr
 100 105 110

25348

Thr Val Thr Val Pro Thr Pro Ile Tyr Gln Thr Ser Ser Gly Gln Tyr
115 120 125

Thr Ala Ser Gly Asp Val Gln Thr Tyr Gln Ile Arg Thr Ala Pro Thr
130 135 140

Ser Thr Ile Ala Pro Gly Val Val Met Ala Ser Ser Pro Ala Leu Pro
145 150 155 160

Thr Gln Pro Ala Glu Glu Ala Ala Arg Lys
165 170

<210> 11311

<211> 79

<212> PRT

<213> Homo sapiens

<220>

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<223> /note="Gene Name:
cAMP responsive element binding protein 1"

<220>

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<223> /note="ENSP ID: ENSP00000404890"

<400> 11311

Met Thr Met Glu Ser Gly Ala Glu Asn Gln Gln Ser Gly Asp Ala Ala
1 5 10 15

Val Thr Glu Ala Glu Asn Gln Gln Met Thr Val Gln Ala Gln Pro Gln
20 25 30

Ile Ala Thr Leu Ala Gln Val Ser Met Pro Ala Ala His Ala Thr Ser
35 40 45

Ser Ala Pro Thr Val Thr Leu Val Gln Leu Pro Asn Gly Gln Thr Val
50 55 60

Gln Val His Gly Val Ile Gln Ala Ala Gln Pro Ser Val Ile Gln

65

70

75

<210> 11312

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<212> PRT

<213> Homo sapiens

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cAMP responsive element binding protein 1"

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<223> /note="Uniprot ID: P16220"

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<223> /note="ENSP ID: ENSP00000405539"

<400> 11312

Met	Thr	Met	Glu	Ser	Gly	Ala	Glu	Asn	Gln	Gln	Ser	Gly	Asp	Ala	Ala
1				5					10					15	

Val	Thr	Glu	Ala	Glu	Asn	Gln	Gln	Met	Thr	Val	Gln	Ala	Gln	Pro	Gln
			20					25					30		

Ile	Ala	Thr	Leu	Ala	Gln	Val	Ser	Met	Pro	Ala	Ala	His	Ala	Thr	Ser
		35					40					45			

Ser	Ala	Pro	Thr	Val	Thr	Leu	Val	Gln	Leu	Pro	Asn	Gly	Gln	Thr	Val
	50					55					60				

Gln	Val	His	Gly	Val	Ile	Gln	Ala	Ala	Gln	Pro	Ser	Val	Ile	Gln	Ser
65					70					75				80	

Pro	Gln	Val	Gln	Thr	Val	Gln	Ile	Ser	Thr	Ile	Ala	Glu	Ser	Glu	Asp
				85					90					95	

Ser	Gln	Glu	Ser	Val	Asp	Ser	Val	Thr	Asp	Ser	Gln	Lys	Arg	Arg	Glu
			100					105					110		

25350

<210> 11313
<211> 251
<212> PRT
<213> Homo sapiens

<220>
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<223> /note="Payload ID: 2225"

<220>
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<223> /note="Gene Symbol: CREB1"

<220>
<221> source
<223> /note="Gene Name:
cAMP responsive element binding protein 1"

<220>
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<223> /note="ENSP ID: ENSP00000405711"

<400> 11313
Met Pro Ala Ala His Ala Thr Ser Ser Ala Pro Thr Val Thr Leu Val
1 5 10 15

Gln Leu Pro Asn Gly Gln Thr Val Gln Val His Gly Val Ile Gln Ala
20 25 30

Ala Gln Pro Ser Val Ile Gln Ser Pro Gln Val Gln Thr Val Gln Ile
35 40 45

Ser Thr Ile Ala Glu Ser Glu Asp Ser Gln Glu Ser Val Asp Ser Val
50 55 60

Thr Asp Ser Gln Lys Arg Arg Glu Ile Leu Ser Arg Arg Pro Ser Tyr
65 70 75 80

Arg Lys Ile Leu Asn Asp Leu Ser Ser Asp Ala Pro Gly Val Pro Arg
85 90 95

Ile Glu Glu Glu Lys Ser Glu Glu Glu Thr Ser Ala Pro Ala Ile Thr
100 105 110

Thr Val Thr Val Pro Thr Pro Ile Tyr Gln Thr Ser Ser Gly Gln Tyr
115 120 125

Ile Ala Ile Thr Gln Gly Gly Ala Ile Gln Leu Ala Asn Asn Gly Thr
130 135 140

Asp Gly Val Gln Gly Leu Gln Thr Leu Thr Met Thr Asn Ala Ala Ala
 145 150 155 160

Thr Gln Pro Gly Thr Thr Ile Leu Gln Tyr Ala Gln Thr Thr Asp Gly
 165 170 175

Gln Gln Ile Leu Val Pro Ser Asn Gln Val Val Val Gln Ala Ala Ser
 180 185 190

Gly Asp Val Gln Thr Tyr Gln Ile Arg Thr Ala Pro Thr Ser Thr Ile
 195 200 205

Ala Pro Gly Val Val Met Ala Ser Ser Pro Ala Leu Pro Thr Gln Pro
 210 215 220

Ala Glu Glu Ala Ala Arg Lys Arg Glu Val Arg Leu Met Lys Asn Arg
 225 230 235 240

Glu Ala Ala Arg Glu Cys Arg Arg Lys Lys Lys
 245 250

<210> 11314
 <211> 182
 <212> PRT
 <213> Homo sapiens

<220>
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<220>
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 <223> /note="Gene Name:
 cAMP responsive element binding protein 1"

<220>
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 <223> /note="ENSP ID: ENSP00000407227"

<400> 11314
 Met Thr Met Glu Ser Gly Ala Glu Asn Gln Gln Ser Gly Asp Ala Ala
 1 5 10 15

Val Thr Glu Ala Glu Asn Gln Gln Met Thr Val Gln Ala Gln Pro Gln
 20 25 30
 Ile Ala Thr Leu Ala Gln Val Ser Met Pro Ala Ala His Ala Thr Ser
 35 40 45
 Ser Ala Pro Thr Val Thr Leu Val Gln Leu Pro Asn Gly Gln Thr Val
 50 55 60
 Gln Val His Gly Val Ile Gln Ala Ala Gln Pro Ser Val Ile Gln Ser
 65 70 75 80
 Pro Gln Val Gln Thr Val Gln Ser Ser Cys Lys Asp Leu Lys Arg Leu
 85 90 95
 Phe Ser Gly Thr Gln Ile Ser Thr Ile Ala Glu Ser Glu Asp Ser Gln
 100 105 110
 Glu Ser Val Asp Ser Val Thr Asp Ser Gln Lys Arg Arg Glu Ile Leu
 115 120 125
 Ser Arg Arg Pro Ser Tyr Arg Lys Ile Leu Asn Asp Leu Ser Ser Asp
 130 135 140
 Ala Pro Gly Val Pro Arg Ile Glu Glu Glu Lys Ser Glu Glu Glu Thr
 145 150 155 160
 Ser Ala Pro Ala Ile Thr Thr Val Thr Val Pro Thr Pro Ile Tyr Gln
 165 170 175
 Thr Ser Ser Gly Gln Tyr
 180

<210> 11315

<211> 181

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2225"

<220>

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<223> /note="Gene Symbol: CREB1"

<220>
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<223> /note="Gene Name:
cAMP responsive element binding protein 1"

<220>
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<223> /note="ENSP ID: ENSP00000412016"

<220>
<221> MOD_RES
<222> (1)..(1)
<223> Any amino acid

<400> 11315
Xaa Val Ile Gln Ala Ala Gln Pro Ser Val Ile Gln Ser Pro Gln Val
1 5 10 15

Gln Thr Val Gln Ser Ser Cys Lys Asp Leu Lys Arg Leu Phe Ser Gly
20 25 30

Thr Gln Ile Ser Thr Ile Ala Glu Ser Glu Asp Ser Gln Glu Ser Val
35 40 45

Asp Ser Val Thr Asp Ser Gln Lys Arg Arg Glu Ile Leu Ser Arg Arg
50 55 60

Pro Ser Tyr Arg Lys Ile Leu Asn Asp Leu Ser Ser Asp Ala Pro Gly
65 70 75 80

Val Pro Arg Ile Glu Glu Glu Lys Ser Glu Glu Glu Thr Ser Ala Pro
85 90 95

Ala Ile Thr Thr Val Thr Val Pro Thr Pro Ile Tyr Gln Thr Ser Ser
100 105 110

Gly Gln Tyr Ile Ala Ile Thr Gln Gly Gly Ala Ile Gln Leu Ala Asn
115 120 125

Asn Gly Thr Asp Gly Val Gln Gly Leu Gln Thr Leu Thr Met Thr Asn
130 135 140

Ala Ala Ala Thr Gln Pro Gly Thr Thr Ile Leu Gln Tyr Ala Gln Thr
145 150 155 160

Thr Asp Gly Gln Gln Ile Leu Val Pro Ser Asn Gln Val Val Val Gln

165

170

175

Gly Thr Gln Lys Leu
180

<210> 11316

<211> 371

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2226"

<220>

<221> source

<223> /note="Gene Symbol: CREB3"

<220>

<221> source

<223> /note="Gene Name:
cAMP responsive element binding protein 3"

<220>

<221> source

<223> /note="Uniprot ID: O43889"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000342136"

<400> 11316

Met Glu Leu Glu Leu Asp Ala Gly Asp Gln Asp Leu Leu Ala Phe Leu
1 5 10 15

Leu Glu Glu Ser Gly Asp Leu Gly Thr Ala Pro Asp Glu Ala Val Arg
20 25 30

Ala Pro Leu Asp Trp Ala Leu Pro Leu Ser Glu Val Pro Ser Asp Trp
35 40 45

Glu Val Asp Asp Leu Leu Cys Ser Leu Leu Ser Pro Pro Ala Ser Leu
50 55 60

Asn Ile Leu Ser Ser Ser Asn Pro Cys Leu Val His His Asp His Thr
65 70 75 80

Tyr Ser Leu Pro Arg Glu Thr Val Ser Met Asp Leu Glu Ser Glu Ser
85 90 95

25356

Cys	Arg	Lys	Glu	Gly	Thr	Gln	Met	Thr	Pro	Gln	His	Met	Glu	Glu	Leu			
			100					105					110					
Ala	Glu	Gln	Glu	Ile	Ala	Arg	Leu	Val	Leu	Thr	Asp	Glu	Glu	Lys	Ser			
		115					120					125						
Leu	Leu	Glu	Lys	Glu	Gly	Leu	Ile	Leu	Pro	Glu	Thr	Leu	Pro	Leu	Thr			
	130					135					140							
Lys	Thr	Glu	Glu	Gln	Ile	Leu	Lys	Arg	Val	Arg	Arg	Lys	Ile	Arg	Asn			
145					150					155					160			
Lys	Arg	Ser	Ala	Gln	Glu	Ser	Arg	Arg	Lys	Lys	Lys	Val	Tyr	Val	Gly			
				165					170						175			
Gly	Leu	Glu	Ser	Arg	Val	Leu	Lys	Tyr	Thr	Ala	Gln	Asn	Met	Glu	Leu			
			180					185					190					
Gln	Asn	Lys	Val	Gln	Leu	Leu	Glu	Glu	Gln	Asn	Leu	Ser	Leu	Leu	Asp			
		195					200					205						
Gln	Leu	Arg	Lys	Leu	Gln	Ala	Met	Val	Ile	Glu	Ile	Ser	Asn	Lys	Thr			
	210					215					220							
Ser	Ser	Ser	Ser	Thr	Cys	Ile	Leu	Val	Leu	Leu	Val	Ser	Phe	Cys	Leu			
225					230					235					240			
Leu	Leu	Val	Pro	Ala	Met	Tyr	Ser	Ser	Asp	Thr	Arg	Gly	Ser	Leu	Pro			
				245					250					255				
Ala	Glu	His	Gly	Val	Leu	Ser	Arg	Gln	Leu	Arg	Ala	Leu	Pro	Ser	Glu			
			260					265					270					
Asp	Pro	Tyr	Gln	Leu	Glu	Leu	Pro	Ala	Leu	Gln	Ser	Glu	Val	Pro	Lys			
		275					280					285						
Asp	Ser	Thr	His	Gln	Trp	Leu	Asp	Gly	Ser	Asp	Cys	Val	Leu	Gln	Ala			
	290					295					300							
Pro	Gly	Asn	Thr	Ser	Cys	Leu	Leu	His	Tyr	Met	Pro	Gln	Ala	Pro	Ser			
305					310					315					320			

Ala Glu Pro Pro Leu Glu Trp Pro Phe Pro Asp Leu Phe Ser Glu Pro
325 330 335

Leu Cys Arg Gly Pro Ile Leu Pro Leu Gln Ala Asn Leu Thr Arg Lys
340 345 350

Gly Gly Trp Leu Pro Thr Gly Ser Pro Ser Val Ile Leu Gln Asp Arg
355 360 365

Tyr Ser Gly
370

<210> 11317
<211> 394
<212> PRT
<213> Homo sapiens

<220>
<221> source
<223> /note="Payload ID: 2226"

<220>
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<223> /note="Gene Symbol: CREB3"

<220>
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<223> /note="Gene Name:
cAMP responsive element binding protein 3"

<220>
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<223> /note="ENSP ID: ENSP00000484327"

<400> 11317
Met Glu Leu Glu Leu Asp Ala Gly Asp Gln Asp Leu Leu Ala Phe Leu
1 5 10 15

Leu Glu Glu Ser Gly Asp Leu Gly Thr Ala Pro Asp Glu Ala Val Arg
20 25 30

Ala Pro Leu Asp Trp Ala Leu Pro Leu Ser Glu Val Pro Ser Asp Trp
35 40 45

Glu Val Asp Asp Leu Leu Cys Ser Leu Leu Ser Pro Pro Ala Ser Leu
50 55 60

Asn Ile Leu Ser Ser Ser Asn Pro Cys Leu Val His His Asp His Thr
65 70 75 80

Tyr	Ser	Leu	Pro	Arg	Glu	Thr	Val	Ser	Met	Asp	Leu	Gly	Glu	Ser	Glu		
				85					90					95			
Ile	Ser	Leu	Gly	Arg	Thr	Gly	Phe	Met	Gly	Leu	Ala	Ile	His	Thr	Phe		
			100					105					110				
Pro	Phe	Ala	Glu	Ser	Glu	Ser	Cys	Arg	Lys	Glu	Gly	Thr	Gln	Met	Thr		
		115					120					125					
Pro	Gln	His	Met	Glu	Glu	Leu	Ala	Glu	Gln	Glu	Ile	Ala	Arg	Leu	Val		
	130					135					140						
Leu	Thr	Asp	Glu	Glu	Lys	Ser	Leu	Leu	Glu	Lys	Glu	Gly	Leu	Ile	Leu		
145					150					155					160		
Pro	Glu	Thr	Leu	Pro	Leu	Thr	Lys	Thr	Glu	Glu	Gln	Ile	Leu	Lys	Arg		
				165					170					175			
Val	Arg	Arg	Lys	Ile	Arg	Asn	Lys	Arg	Ser	Ala	Gln	Glu	Ser	Arg	Arg		
			180					185					190				
Lys	Lys	Lys	Val	Tyr	Val	Gly	Gly	Leu	Glu	Ser	Arg	Val	Leu	Lys	Tyr		
		195					200					205					
Thr	Ala	Gln	Asn	Met	Glu	Leu	Gln	Asn	Lys	Val	Gln	Leu	Leu	Glu	Glu		
	210					215					220						
Gln	Asn	Leu	Ser	Leu	Leu	Asp	Gln	Leu	Arg	Lys	Leu	Gln	Ala	Met	Val		
225					230					235					240		
Ile	Glu	Ile	Ser	Asn	Lys	Thr	Ser	Ser	Ser	Ser	Thr	Cys	Ile	Leu	Val		
				245					250					255			
Leu	Leu	Val	Ser	Phe	Cys	Leu	Leu	Leu	Val	Pro	Ala	Met	Tyr	Ser	Ser		
			260					265					270				
Asp	Thr	Arg	Gly	Ser	Leu	Pro	Ala	Glu	His	Gly	Val	Leu	Ser	Arg	Gln		
		275					280					285					
Leu	Arg	Ala	Leu	Pro	Ser	Glu	Asp	Pro	Tyr	Gln	Leu	Glu	Leu	Pro	Ala		
	290					295					300						

Leu Gln Ser Glu Val Pro Lys Asp Ser Thr His Gln Trp Leu Asp Gly
305 310 315 320

Ser Asp Cys Val Leu Gln Ala Pro Gly Asn Thr Ser Cys Leu Leu His
325 330 335

Tyr Met Pro Gln Ala Pro Ser Ala Glu Pro Pro Leu Glu Trp Pro Phe
340 345 350

Pro Asp Leu Phe Ser Glu Pro Leu Cys Arg Gly Pro Ile Leu Pro Leu
355 360 365

Gln Ala Asn Leu Thr Arg Lys Gly Gly Trp Leu Pro Thr Gly Ser Pro
370 375 380

Ser Val Ile Leu Gln Asp Arg Tyr Ser Gly
385 390

<210> 11318
<211> 105
<212> PRT
<213> Homo sapiens

<220>
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<223> /note="Payload ID: 2227"

<220>
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<223> /note="Gene Symbol: CREB3L1"

<220>
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<223> /note="Gene Name:
cAMP responsive element binding protein 3-like 1"

<220>
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<223> /note="ENSP ID: ENSP00000431677"

<400> 11318
Met Glu Asp Phe Ser Asn Asp Leu Phe Ser Ser Phe Phe Asp Asp Pro
1 5 10 15

Val Leu Asp Glu Lys Ser Pro Leu Leu Asp Met Glu Leu Asp Ser Pro
20 25 30

Thr Pro Gly Ile Gln Ala Glu His Ser Tyr Ser Leu Ser Gly Asp Ser

Gln Glu Ser Arg Arg Lys Lys Lys Glu Tyr Val Glu Cys Leu Glu Lys
65 70 75 80

Lys Val Glu Thr Phe Thr Ser Glu Asn Asn Glu Leu Trp Lys Lys Val
85 90 95

Glu Thr Leu Glu Asn Ala Asn Ser Phe Ser Ser Gly Ile Gln Pro Leu
100 105 110

Leu Cys Ser Leu Ile Gly Leu Glu Asn Pro Thr
115 120

<210> 11320
<211> 519
<212> PRT
<213> Homo sapiens

<220>
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<223> /note="Payload ID: 2227"

<220>
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<220>
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<223> /note="Gene Name:
cAMP responsive element binding protein 3-like 1"

<220>
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<223> /note="Uniprot ID: Q96BA8"

<220>
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<223> /note="ENSP ID: ENSP00000481956"

<400> 11320
Met Asp Ala Val Leu Glu Pro Phe Pro Ala Asp Arg Leu Phe Pro Gly
1 5 10 15

Ser Ser Phe Leu Asp Leu Gly Asp Leu Asn Glu Ser Asp Phe Leu Asn
20 25 30

Asn Ala His Phe Pro Glu His Leu Asp His Phe Thr Glu Asn Met Glu
35 40 45

Asp Phe Ser Asn Asp Leu Phe Ser Ser Phe Phe Asp Asp Pro Val Leu

50					55					60					
Asp 65	Glu	Lys	Ser	Pro	Leu 70	Leu	Asp	Met	Glu	Leu 75	Asp	Ser	Pro	Thr	Pro 80
Gly	Ile	Gln	Ala	Glu 85	His	Ser	Tyr	Ser	Leu 90	Ser	Gly	Asp	Ser	Ala 95	Pro
Gln	Ser	Pro	Leu 100	Val	Pro	Ile	Lys	Met 105	Glu	Asp	Thr	Thr	Gln	Asp	Ala 110
Glu	His	Gly 115	Ala	Trp	Ala	Leu	Gly 120	His	Lys	Leu	Cys	Ser	Ile	Met	Val
Lys 130	Gln	Glu	Gln	Ser	Pro	Glu 135	Leu	Pro	Val	Asp	Pro 140	Leu	Ala	Ala	Pro
Ser 145	Ala	Met	Ala	Ala	Ala 150	Ala	Ala	Met	Ala	Thr 155	Thr	Pro	Leu	Leu	Gly 160
Leu	Ser	Pro	Leu	Ser 165	Arg	Leu	Pro	Ile	Pro 170	His	Gln	Ala	Pro	Gly	Glu 175
Met	Thr	Gln	Leu 180	Pro	Val	Ile	Lys	Ala 185	Glu	Pro	Leu	Glu	Val	Asn	Gln 190
Phe	Leu	Lys 195	Val	Thr	Pro	Glu	Asp 200	Leu	Val	Gln	Met	Pro 205	Pro	Thr	Pro
Pro 210	Ser	Ser	His	Gly	Ser	Asp 215	Ser	Asp	Gly	Ser	Gln 220	Ser	Pro	Arg	Ser
Leu 225	Pro	Pro	Ser	Ser	Pro 230	Val	Arg	Pro	Met	Ala 235	Arg	Ser	Ser	Thr	Ala 240
Ile	Ser	Thr	Ser	Pro 245	Leu	Leu	Thr	Ala	Pro 250	His	Lys	Leu	Gln	Gly	Thr 255
Ser	Gly	Pro	Leu 260	Leu	Leu	Thr	Glu	Glu 265	Glu	Lys	Arg	Thr	Leu 270	Ile	Ala
Glu	Gly	Tyr 275	Pro	Ile	Pro	Thr	Lys 280	Leu	Pro	Leu	Thr	Lys 285	Ala	Glu	Glu

Lys	Ala	Leu	Lys	Arg	Val	Arg	Arg	Lys	Ile	Lys	Asn	Lys	Ile	Ser	Ala
	290					295					300				
Gln	Glu	Ser	Arg	Arg	Lys	Lys	Lys	Glu	Tyr	Val	Glu	Cys	Leu	Glu	Lys
305					310					315					320
Lys	Val	Glu	Thr	Phe	Thr	Ser	Glu	Asn	Asn	Glu	Leu	Trp	Lys	Lys	Val
				325					330					335	
Glu	Thr	Leu	Glu	Asn	Ala	Asn	Arg	Thr	Leu	Leu	Gln	Gln	Leu	Gln	Lys
			340					345					350		
Leu	Gln	Thr	Leu	Val	Thr	Asn	Lys	Ile	Ser	Arg	Pro	Tyr	Lys	Met	Ala
		355					360					365			
Ala	Thr	Gln	Thr	Gly	Thr	Cys	Leu	Met	Val	Ala	Ala	Leu	Cys	Phe	Val
	370					375					380				
Leu	Val	Leu	Gly	Ser	Leu	Val	Pro	Cys	Leu	Pro	Glu	Phe	Ser	Ser	Gly
385					390					395					400
Ser	Gln	Thr	Val	Lys	Glu	Asp	Pro	Leu	Ala	Ala	Asp	Gly	Val	Tyr	Thr
				405					410					415	
Ala	Ser	Gln	Met	Pro	Ser	Arg	Ser	Leu	Leu	Phe	Tyr	Asp	Asp	Gly	Ala
			420					425					430		
Gly	Leu	Trp	Glu	Asp	Gly	Arg	Ser	Thr	Leu	Leu	Pro	Met	Glu	Pro	Pro
		435					440					445			
Asp	Gly	Trp	Glu	Ile	Asn	Pro	Gly	Gly	Pro	Ala	Glu	Gln	Arg	Pro	Arg
	450					455					460				
Asp	His	Leu	Gln	His	Asp	His	Leu	Asp	Ser	Thr	His	Glu	Thr	Thr	Lys
465					470					475					480
Tyr	Leu	Ser	Glu	Ala	Trp	Pro	Lys	Asp	Gly	Gly	Asn	Gly	Thr	Ser	Pro
				485					490					495	
Asp	Phe	Ser	His	Ser	Lys	Glu	Trp	Phe	His	Asp	Arg	Asp	Leu	Gly	Pro
			500					505					510		

Asn Thr Thr Ile Lys Leu Ser
515

<210> 11321
<211> 520
<212> PRT
<213> Homo sapiens

<220>
<221> source
<223> /note="Payload ID: 2228"

<220>
<221> source
<223> /note="Gene Symbol: CREB3L2"

<220>
<221> source
<223> /note="Gene Name:
cAMP responsive element binding protein 3-like 2"

<220>
<221> source
<223> /note="Uniprot ID: Q70SY1"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000329140"

<400> 11321
Met Glu Val Leu Glu Ser Gly Glu Gln Gly Val Leu Gln Trp Asp Arg
1 5 10 15

Lys Leu Ser Glu Leu Ser Glu Pro Gly Asp Gly Glu Ala Leu Met Tyr
20 25 30

His Thr His Phe Ser Glu Leu Leu Asp Glu Phe Ser Gln Asn Val Leu
35 40 45

Gly Gln Leu Leu Asn Asp Pro Phe Leu Ser Glu Lys Ser Val Ser Met
50 55 60

Glu Val Glu Pro Ser Pro Thr Ser Pro Ala Pro Leu Ile Gln Ala Glu
65 70 75 80

His Ser Tyr Ser Leu Cys Glu Glu Pro Arg Ala Gln Ser Pro Phe Thr
85 90 95

His Ile Thr Thr Ser Asp Ser Phe Asn Asp Asp Glu Val Glu Ser Glu

			100					105					110			
Lys	Trp	Tyr	Leu	Ser	Thr	Asp	Phe	Pro	Ser	Thr	Ser	Ile	Lys	Thr	Glu	
		115					120					125				
Pro	Val	Thr	Asp	Glu	Pro	Pro	Pro	Gly	Leu	Val	Pro	Ser	Val	Thr	Leu	
	130					135					140					
Thr	Ile	Thr	Ala	Ile	Ser	Thr	Pro	Leu	Glu	Lys	Glu	Glu	Pro	Pro	Leu	
145					150					155					160	
Glu	Met	Asn	Thr	Gly	Val	Asp	Ser	Ser	Cys	Gln	Thr	Ile	Ile	Pro	Lys	
				165					170					175		
Ile	Lys	Leu	Glu	Pro	His	Glu	Val	Asp	Gln	Phe	Leu	Asn	Phe	Ser	Pro	
			180					185					190			
Lys	Glu	Ala	Pro	Val	Asp	His	Leu	His	Leu	Pro	Pro	Thr	Pro	Pro	Ser	
		195					200					205				
Ser	His	Gly	Ser	Asp	Ser	Glu	Gly	Ser	Leu	Ser	Pro	Asn	Pro	Arg	Leu	
	210					215					220					
His	Pro	Phe	Ser	Leu	Pro	Gln	Thr	His	Ser	Pro	Ser	Arg	Ala	Ala	Pro	
225					230					235					240	
Arg	Ala	Pro	Ser	Ala	Leu	Ser	Ser	Ser	Pro	Leu	Leu	Thr	Ala	Pro	His	
				245					250					255		
Lys	Leu	Gln	Gly	Ser	Gly	Pro	Leu	Val	Leu	Thr	Glu	Glu	Glu	Lys	Arg	
			260					265					270			
Thr	Leu	Ile	Ala	Glu	Gly	Tyr	Pro	Ile	Pro	Thr	Lys	Leu	Pro	Leu	Ser	
		275					280					285				
Lys	Ser	Glu	Glu	Lys	Ala	Leu	Lys	Lys	Ile	Arg	Arg	Lys	Ile	Lys	Asn	
	290					295					300					
Lys	Ile	Ser	Ala	Gln	Glu	Ser	Arg	Arg	Lys	Lys	Lys	Glu	Tyr	Met	Asp	
305					310					315					320	
Ser	Leu	Glu	Lys	Lys	Val	Glu	Ser	Cys	Ser	Thr	Glu	Asn	Leu	Glu	Leu	
				325					330					335		

Arg Lys Lys Val Glu Val Leu Glu Asn Thr Asn Arg Thr Leu Leu Gln
340 345 350

Gln Leu Gln Lys Leu Gln Thr Leu Val Met Gly Lys Val Ser Arg Thr
355 360 365

Cys Lys Leu Ala Gly Thr Gln Thr Gly Thr Cys Leu Met Val Val Val
370 375 380

Leu Cys Phe Ala Val Ala Phe Gly Ser Phe Phe Gln Gly Tyr Gly Pro
385 390 395 400

Tyr Pro Ser Ala Thr Lys Met Ala Leu Pro Ser Gln His Ser Leu Gln
405 410 415

Glu Pro Tyr Thr Ala Ser Val Val Arg Ser Arg Asn Leu Leu Ile Tyr
420 425 430

Glu Glu His Ser Pro Pro Glu Glu Ser Ser Ser Pro Gly Ser Ala Gly
435 440 445

Glu Leu Gly Gly Trp Asp Arg Gly Ser Ser Leu Leu Arg Val Ser Gly
450 455 460

Leu Glu Ser Arg Pro Asp Val Asp Leu Pro His Phe Ile Ile Ser Asn
465 470 475 480

Glu Thr Ser Leu Glu Lys Ser Val Leu Leu Glu Leu Gln Gln His Leu
485 490 495

Val Ser Ala Lys Leu Glu Gly Asn Glu Thr Leu Lys Val Val Glu Leu
500 505 510

Asp Arg Arg Val Asn Thr Thr Phe
515 520

<210> 11322

<211> 185

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2228"

<220>

<221> source

<223> /note="Gene Symbol: CREB3L2"

<220>

<221> source

<223> /note="Gene Name:
cAMP responsive element binding protein 3-like 2"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000388917"

<400> 11322

Met Glu Val Glu Pro Ser Pro Thr Ser Pro Ala Pro Leu Ile Gln Ala
1 5 10 15

Glu His Ser Tyr Ser Leu Cys Glu Glu Pro Arg Ala Gln Ser Pro Phe
20 25 30

Thr His Ile Thr Thr Ser Asp Ser Phe Asn Asp Asp Glu Val Glu Ser
35 40 45

Glu Lys Trp Tyr Leu Ser Thr Asp Phe Pro Ser Thr Ser Ile Lys Thr
50 55 60

Glu Pro Val Thr Asp Glu Pro Pro Pro Gly Leu Val Pro Ser Val Thr
65 70 75 80

Leu Thr Ile Thr Ala Ile Ser Thr Pro Leu Glu Lys Glu Glu Pro Pro
85 90 95

Leu Glu Met Asn Thr Gly Val Asp Ser Ser Cys Gln Thr Ile Ile Pro
100 105 110

Lys Ile Lys Leu Glu Pro His Glu Val Asp Gln Phe Leu Asn Phe Ser
115 120 125

Pro Lys Glu Gly Leu Ser Ala Leu Pro Val Ser Leu Trp Val Met Asp
130 135 140

Met Val Ser Gly Ser Thr Glu Arg Glu Tyr Gly Glu Arg Ala Gly Met
145 150 155 160

Ser Leu Tyr His Arg Cys Cys Ser Trp Leu Tyr Glu Ile Ala Leu Phe

165

170

175

Leu Lys Asn Lys Asn Phe Ala Ser Lys
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<210> 11323

<211> 239

<212> PRT

<213> Homo sapiens

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<223> /note="Gene Name:
 cAMP responsive element binding protein 3-like 2"

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<223> /note="ENSP ID: ENSP00000402889"

<400> 11323

Asn Leu Pro Arg Arg Pro Arg Arg Leu Ser Ser Arg Leu Ser Thr Ala
 1 5 10 15

Thr Pro Cys Ala Arg Ser Leu Gly Pro Ser Arg Pro Ser Pro Thr Leu
 20 25 30

Pro Pro Val Thr Ala Ser Met Thr Ile Cys Tyr Ile Asn Ser Lys Trp
 35 40 45

Met Tyr Gly Pro Pro Ser Leu Cys Leu Gly Phe Ala Ser Tyr Glu Tyr
 50 55 60

Cys Ile Phe Asn Pro Arg Leu Phe Glu Lys Asn Leu Leu Val Ser Gly
 65 70 75 80

Pro Ala Trp Phe Lys Thr Arg Val Val Gln Gly Pro Thr Ala Tyr Val
 85 90 95

Phe Phe Ser Tyr Glu Val Glu Ser Glu Lys Trp Tyr Leu Ser Thr Asp
 100 105 110

25369

Phe Pro Ser Thr Ser Ile Lys Thr Glu Pro Val Thr Asp Glu Pro Pro
 115 120 125
 Pro Gly Leu Val Pro Ser Val Thr Leu Thr Ile Thr Ala Ile Ser Thr
 130 135 140
 Pro Leu Glu Lys Glu Glu Pro Pro Leu Glu Met Asn Thr Gly Val Asp
 145 150 155 160
 Ser Ser Cys Gln Thr Ile Ile Pro Lys Ile Lys Leu Glu Pro His Glu
 165 170 175
 Val Asp Gln Phe Leu Asn Phe Ser Pro Lys Glu Gly Leu Ser Ala Leu
 180 185 190
 Pro Val Ser Leu Trp Val Met Asp Met Val Ser Gly Ser Thr Glu Arg
 195 200 205
 Glu Tyr Gly Glu Arg Ala Gly Met Ser Leu Tyr His Arg Cys Cys Ser
 210 215 220
 Trp Leu Tyr Glu Ile Ala Leu Phe Leu Lys Asn Lys Asn Phe Ala
 225 230 235

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Met Glu Val Leu Glu Ser Gly Glu Gln Gly Val Leu Gln Trp Asp Arg
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Lys Leu Ser Glu Leu Ser Glu Pro Gly Asp Gly Glu Ala Leu Met Tyr
20 25 30

His Thr His Phe Ser Glu Leu Leu Asp Glu Phe Ser Gln Asn Val Leu
35 40 45

Gly Gln Leu Leu Asn Asp Pro Phe Leu Ser Glu Lys Ser Val Ser Met
50 55 60

Glu Val Glu Pro Ser Pro Thr Ser Pro Ala Pro Leu Ile Gln Ala Glu
65 70 75 80

His Ser Tyr Ser Leu Cys Glu Glu Pro Arg Ala Gln Ser Pro Phe Thr
85 90 95

His Ile Thr Thr Ser Asp Ser Phe Asn Asp Asp Glu Val Glu Ser Glu
100 105 110

Lys Trp Tyr Leu Ser Thr Asp Phe Pro Ser Thr Ser Ile Lys Thr Glu
115 120 125

Pro Val Thr Asp Glu Pro Pro Pro Gly Leu Val Pro Ser Val Thr Leu
130 135 140

Thr Ile Thr Ala Ile Ser Thr Pro Leu Glu Lys Glu Glu Pro Pro Leu
145 150 155 160

Glu Met Asn Thr Gly Val Asp Ser Ser Cys Gln Thr Ile Ile Pro Lys
165 170 175

Ile Lys Leu Glu Pro His Glu Val Asp Gln Phe Leu Asn Phe Ser Pro
180 185 190

Lys Glu Ala Pro Val Asp His Leu His Leu Pro Pro Thr Pro Pro Ser
195 200 205

Ser His Gly Ser Asp Ser Glu Gly Ser Leu Ser Pro Asn Pro Arg Leu
210 215 220

25371

His	Pro	Phe	Ser	Leu	Pro	Gln	Thr	His	Ser	Pro	Ser	Arg	Ala	Ala	Pro			
225					230					235					240			
Arg	Ala	Pro	Ser	Ala	Leu	Ser	Ser	Ser	Pro	Leu	Leu	Thr	Ala	Pro	His			
				245					250					255				
Lys	Leu	Gln	Gly	Ser	Gly	Pro	Leu	Val	Leu	Thr	Glu	Glu	Glu	Lys	Arg			
			260					265					270					
Thr	Leu	Ile	Ala	Glu	Gly	Tyr	Pro	Ile	Pro	Thr	Lys	Leu	Pro	Leu	Ser			
		275					280					285						
Lys	Ser	Glu	Glu	Lys	Ala	Leu	Lys	Lys	Ile	Arg	Arg	Lys	Ile	Lys	Asn			
	290					295					300							
Lys	Ile	Ser	Ala	Gln	Glu	Ser	Arg	Arg	Lys	Lys	Lys	Glu	Tyr	Met	Asp			
305					310					315					320			
Ser	Leu	Glu	Lys	Lys	Val	Glu	Ser	Cys	Ser	Thr	Glu	Asn	Leu	Glu	Leu			
				325					330					335				
Arg	Lys	Lys	Val	Glu	Val	Leu	Glu	Asn	Thr	Asn	Arg	Thr	Leu	Leu	Gln			
			340					345					350					
Gln	Leu	Gln	Lys	Leu	Gln	Thr	Leu	Val	Met	Gly	Lys	Val	Ser	Arg	Thr			
		355					360					365						
Cys	Lys	Leu	Ala	Gly	Thr	Gln	Thr	Gly	Thr	Cys	Leu	Met	Val	Val	Val			
	370					375					380							
Leu	Cys	Phe	Ala	Val	Ala	Phe	Gly	Ser	Phe	Phe	Gln	Gly	Tyr	Gly	Pro			
385					390					395					400			
Tyr	Pro	Ser	Ala	Thr	Lys	Met	Ala	Leu	Pro	Ser	Gln	His	Ser	Leu	Gln			
				405					410					415				
Glu	Pro	Tyr	Thr	Ala	Ser	Val	Gly	Lys	Thr	Ala	Cys	Gly	Lys	Leu	Gly			
			420					425					430					
Arg	Val	Leu	Phe	Tyr	Phe	Pro	Arg	Ala	Gly	Phe	Leu	Ser	Leu	Pro	Lys			
		435					440					445						

Gly	Ile	Phe	Cys	Glu	Ser	Pro	Met	Phe	Lys	Lys	Trp
450						455					460

<210> 11325
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 Met Glu Val Leu Glu Ser Gly Glu Gln Gly Val Leu Gln Trp Asp Arg
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Lys Leu Ser Glu Leu Ser Glu Pro Gly Asp Gly Glu Ala Leu Met Tyr
 20 25 30

His Thr His Phe Ser Glu Leu Leu Asp Glu Phe Ser Gln Asn Val Leu
 35 40 45

Gly Gln Leu Leu Asn Asp Pro Phe Leu Ser Glu Lys Ser Val Ser Met
 50 55 60

Glu Val Glu Pro Ser Pro Thr Ser Pro Ala Pro Leu Ile Gln Ala Glu
 65 70 75 80

His Ser Tyr Ser Leu Cys Glu Glu Pro Arg Ala Gln Ser Pro Phe Thr
 85 90 95

His Ile Thr Thr Ser Asp Ser Phe Asn Asp Asp Glu Val Glu Ser Glu

100	105	110
Lys Trp Tyr Leu Ser Thr Asp Phe Pro Ser Thr Ser Ile Lys Thr Glu		
115	120	125
Pro Val Thr Asp Glu Pro Pro Pro Gly Leu Val Pro Ser Val Thr Leu		
130	135	140
Thr Ile Thr Ala Ile Ser Thr Pro Leu Glu Lys Glu Glu Pro Pro Leu		
145	150	155
Glu Met Asn Thr Gly Val Asp Ser Ser Cys Gln Thr Ile Ile Pro Lys		
165	170	175
Ile Lys Leu Glu Pro His Glu Val Asp Gln Phe Leu Asn Phe Ser Pro		
180	185	190
Lys Glu Gly Leu Ser Ala Leu Pro Val Ser Leu Trp Val Met Asp Met		
195	200	205
Val Ser Gly Ser Thr Glu Arg Glu Tyr Gly Glu Arg Ala Gly Met Ser		
210	215	220
Leu Tyr His Arg Cys Cys Ser Trp Leu Tyr Glu Ile Ala Leu Phe Leu		
225	230	235
Lys Asn Lys Asn Phe Ala Ser Lys		
245		

<210> 11326

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<212> PRT

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<223> /note="Gene Symbol: CREB3L2"

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<223> /note="Gene Name:
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Met Glu Val Leu Glu Ser Gly Glu Gln Gly Val Leu Gln Trp Asp Arg
1 5 10 15

Lys Leu Ser Glu Leu Ser Glu Pro Gly Asp Gly Glu Ala Leu Met Tyr
20 25 30

His Thr His Phe Ser Glu Leu Leu Asp Glu Phe Ser Gln Asn Val Leu
35 40 45

Gly Gln Leu Leu Asn Asp Pro Phe Leu Ser Glu Lys Ser Val Ser Met
50 55 60

Glu Val Glu Pro Ser Pro Thr Ser Pro Ala Pro Leu Ile Gln Ala Glu
65 70 75 80

His Ser Tyr Ser Leu Cys Glu Glu Pro Arg Ala Gln Ser Pro Phe Thr
85 90 95

His Ile Thr Thr Ser Asp Ser Phe Asn Asp Asp Glu Val Glu Ser Glu
100 105 110

Lys Trp Tyr Leu Ser Thr Asp Phe Pro Ser Thr Ser Ile Cys His Ser
115 120 125

Asp His His Ser His Leu His Pro Val Gly Lys Gly Gly Thr Ser Ser
130 135 140

Gly Asn Glu His Trp Gly
145 150

<210> 11327
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<220>
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Met Glu Val Leu Glu Ser Gly Glu Gln Gly Val Leu Gln Trp Asp Arg
1          5          10          15

Lys Leu Ser Glu Leu Ser Glu Pro Gly Asp Gly Glu Ala Leu Met Tyr
          20          25          30

His Thr His Phe Ser Glu Leu Leu Asp Glu Phe Ser Gln Asn Val Leu
          35          40          45

Gly Gln Leu Leu Asn Asp Pro Phe Leu Ser Glu Lys Ser Val Ser Met
50          55          60

Glu Val Glu Pro Ser Pro Thr Ser Pro Ala Pro Leu Ile Gln Ala Glu
65          70          75          80

His Ser Tyr Ser Leu Cys Glu Glu Pro Arg Ala Gln Ser Pro Phe Thr
          85          90          95

His Ile Thr Thr Ser Asp Ser Phe Asn Asp Asp Glu Val Glu Ser Glu
          100          105          110

Lys Trp Tyr Leu Ser Thr Asp Phe Pro Ser Thr Ser Ile Lys Thr Glu
          115          120          125

Pro Val Thr Asp Glu Pro Pro Pro Gly Leu Val Pro Ser Val Thr Leu
          130          135          140

Thr Ile Thr Ala Ile Ser Thr Pro Leu Glu Lys Glu Glu Pro Pro Leu
145          150          155          160

Glu Met Asn Thr Gly Val Asp Ser Ser Cys Gln Thr Asn Thr Thr
          165          170          175

<210> 11328
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<220>
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Met Asn Thr Asp Leu Ala Ala Gly Lys Met Ala Ser Ala Ala Cys Ser
1          5          10          15

Met Asp Pro Ile Asp Ser Phe Glu Leu Leu Asp Leu Leu Phe Asp Arg
          20          25          30

Gln Asp Gly Ile Leu Arg His Val Glu Leu Gly Glu Gly Trp Gly His
          35          40          45

Val Lys Asp Gln Gln Val Leu Pro Asn Pro Asp Ser Asp Asp Phe Leu
          50          55          60

Ser Ser Ile Leu Gly Ser Gly Asp Ser Leu Pro Ser Ser Pro Leu Trp
65          70          75          80

Ser Pro Glu Gly Ser Asp Ser Gly Ile Ser Glu Asp Leu Pro Ser Asp
          85          90          95

Pro Gln Asp Thr Pro Pro Arg Ser Gly Pro Ala Thr Ser Pro Ala Gly
          100          105          110

Cys His Pro Ala Gln Pro Gly Lys Gly Pro Cys Leu Ser Tyr His Pro
          115          120          125

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Gly	Asn	Ser	Cys	Ser	Thr	Thr	Thr	Pro	Gly	Pro	Val	Ile	Gln	Val	Pro
	130						135					140			
Glu	Ala	Ser	Val	Thr	Ile	Asp	Leu	Glu	Met	Trp	Ser	Pro	Gly	Gly	Arg
145					150					155					160
Ile	Cys	Ala	Glu	Lys	Pro	Ala	Asp	Pro	Val	Asp	Leu	Ser	Pro	Arg	Cys
				165					170					175	
Asn	Leu	Thr	Val	Lys	Asp	Leu	Leu	Leu	Ser	Gly	Ser	Ser	Gly	Asp	Leu
			180					185					190		
Gln	Gln	His	His	Leu	Gly	Ala	Ser	Tyr	Leu	Leu	Arg	Pro	Gly	Ala	Gly
		195					200					205			
His	Cys	Gln	Glu	Leu	Val	Leu	Thr	Glu	Asp	Glu	Lys	Lys	Leu	Leu	Ala
	210					215					220				
Lys	Glu	Gly	Ile	Thr	Leu	Pro	Thr	Gln	Leu	Pro	Leu	Thr	Lys	Tyr	Glu
225					230					235					240
Glu	Arg	Val	Leu	Lys	Lys	Ile	Arg	Arg	Lys	Ile	Arg	Asn	Lys	Gln	Ser
				245					250					255	
Ala	Gln	Glu	Ser	Arg	Lys	Lys	Lys	Lys	Glu	Tyr	Ile	Asp	Gly	Leu	Glu
			260					265					270		
Thr	Arg	Met	Ser	Ala	Cys	Thr	Ala	Gln	Asn	Gln	Glu	Leu	Gln	Arg	Lys
		275					280					285			
Val	Leu	His	Leu	Glu	Lys	Gln	Asn	Leu	Ser	Leu	Leu	Glu	Gln	Leu	Lys
	290					295					300				
Lys	Leu	Gln	Ala	Ile	Val	Val	Gln	Ser	Thr	Ser	Lys	Ser	Ala	Gln	Thr
305					310					315					320
Gly	Thr	Cys	Val	Ala	Val	Leu	Leu	Leu	Ser	Phe	Ala	Leu	Ile	Ile	Leu
				325					330					335	
Pro	Ser	Ile	Ser	Pro	Phe	Gly	Pro	Asn	Lys	Thr	Glu	Ser	Pro	Gly	Asp
			340					345					350		
Phe	Ala	Pro	Val	Arg	Val	Phe	Ser	Arg	Thr	Leu	His	Asn	Asp	Ala	Ala

355 360 365
 Ser Arg Val Ala Ala Asp Ala Val Pro Gly Ser Glu Ala Pro Gly Pro
 370 375 380
 Arg Pro Glu Ala Asp Thr Thr Arg Glu Glu Ser Pro Gly Ser Pro Gly
 385 390 395 400
 Ala Asp Trp Gly Phe Gln Asp Thr Ala Asn Leu Thr Asn Ser Thr Glu
 405 410 415
 Glu Leu Asp Asn Ala Thr Leu Val Leu Arg Asn Ala Thr Glu Gly Leu
 420 425 430
 Gly Gln Val Ala Leu Leu Asp Trp Val Ala Pro Gly Pro Ser Thr Gly
 435 440 445
 Ser Gly Arg Ala Gly Leu Glu Ala Ala Gly Asp Glu Leu
 450 455 460

<210> 11329

<211> 460

<212> PRT

<213> Homo sapiens

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<223> /note="Uniprot ID: Q68CJ9"

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<223> /note="ENSP ID: ENSP00000469355"

<400> 11329

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Met	Asp	Pro	Ile	Asp	Ser	Phe	Glu	Leu	Leu	Asp	Leu	Leu	Phe	Asp	Arg			
			20					25					30					
Gln	Asp	Gly	Ile	Leu	Arg	His	Val	Glu	Leu	Gly	Glu	Gly	Trp	Gly	His			
		35					40					45						
Val	Lys	Asp	Gln	Val	Leu	Pro	Asn	Pro	Asp	Ser	Asp	Asp	Phe	Leu	Ser			
	50					55					60							
Ser	Ile	Leu	Gly	Ser	Gly	Asp	Ser	Leu	Pro	Ser	Ser	Pro	Leu	Trp	Ser			
65					70					75					80			
Pro	Glu	Gly	Ser	Asp	Ser	Gly	Ile	Ser	Glu	Asp	Leu	Pro	Ser	Asp	Pro			
				85					90					95				
Gln	Asp	Thr	Pro	Pro	Arg	Ser	Gly	Pro	Ala	Thr	Ser	Pro	Ala	Gly	Cys			
			100					105					110					
His	Pro	Ala	Gln	Pro	Gly	Lys	Gly	Pro	Cys	Leu	Ser	Tyr	His	Pro	Gly			
		115					120					125						
Asn	Ser	Cys	Ser	Thr	Thr	Thr	Pro	Gly	Pro	Val	Ile	Gln	Val	Pro	Glu			
	130					135					140							
Ala	Ser	Val	Thr	Ile	Asp	Leu	Glu	Met	Trp	Ser	Pro	Gly	Gly	Arg	Ile			
145					150				155						160			
Cys	Ala	Glu	Lys	Pro	Ala	Asp	Pro	Val	Asp	Leu	Ser	Pro	Arg	Cys	Asn			
				165					170					175				
Leu	Thr	Val	Lys	Asp	Leu	Leu	Leu	Ser	Gly	Ser	Ser	Gly	Asp	Leu	Gln			
			180					185					190					
Gln	His	His	Leu	Gly	Ala	Ser	Tyr	Leu	Leu	Arg	Pro	Gly	Ala	Gly	His			
		195					200					205						
Cys	Gln	Glu	Leu	Val	Leu	Thr	Glu	Asp	Glu	Lys	Lys	Leu	Leu	Ala	Lys			
	210					215					220							
Glu	Gly	Ile	Thr	Leu	Pro	Thr	Gln	Leu	Pro	Leu	Thr	Lys	Tyr	Glu	Glu			
225					230					235					240			

Arg	Val	Leu	Lys	Lys	Ile	Arg	Arg	Lys	Ile	Arg	Asn	Lys	Gln	Ser	Ala	
				245					250					255		
Gln	Glu	Ser	Arg	Lys	Lys	Lys	Lys	Glu	Tyr	Ile	Asp	Gly	Leu	Glu	Thr	
			260					265					270			
Arg	Met	Ser	Ala	Cys	Thr	Ala	Gln	Asn	Gln	Glu	Leu	Gln	Arg	Lys	Val	
		275					280					285				
Leu	His	Leu	Glu	Lys	Gln	Asn	Leu	Ser	Leu	Leu	Glu	Gln	Leu	Lys	Lys	
	290					295					300					
Leu	Gln	Ala	Ile	Val	Val	Gln	Ser	Thr	Ser	Lys	Ser	Ala	Gln	Thr	Gly	
305					310					315					320	
Thr	Cys	Val	Ala	Val	Leu	Leu	Leu	Ser	Phe	Ala	Leu	Ile	Ile	Leu	Pro	
				325					330					335		
Ser	Ile	Ser	Pro	Phe	Gly	Pro	Asn	Lys	Thr	Glu	Ser	Pro	Gly	Asp	Phe	
			340					345					350			
Ala	Pro	Val	Arg	Val	Phe	Ser	Arg	Thr	Leu	His	Asn	Asp	Ala	Ala	Ser	
		355					360					365				
Arg	Val	Ala	Ala	Asp	Ala	Val	Pro	Gly	Ser	Glu	Ala	Pro	Gly	Pro	Arg	
	370					375					380					
Pro	Glu	Ala	Asp	Thr	Thr	Arg	Glu	Glu	Ser	Pro	Gly	Ser	Pro	Gly	Ala	
385					390					395					400	
Asp	Trp	Gly	Phe	Gln	Asp	Thr	Ala	Asn	Leu	Thr	Asn	Ser	Thr	Glu	Glu	
				405					410					415		
Leu	Asp	Asn	Ala	Thr	Leu	Val	Leu	Arg	Asn	Ala	Thr	Glu	Gly	Leu	Gly	
			420					425					430			
Gln	Val	Ala	Leu	Leu	Asp	Trp	Val	Ala	Pro	Gly	Pro	Ser	Thr	Gly	Ser	
		435					440					445				
Gly	Arg	Ala	Gly	Leu	Glu	Ala	Ala	Gly	Asp	Glu	Leu					
	450					455					460					

<210> 11330

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Met Asn Thr Asp Leu Ala Ala Gly Lys Met Ala Ser Ala Ala Cys Ser
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Met Asp Pro Ile Asp Ser Phe Glu Leu Leu Asp Leu Leu Phe Asp Arg
          20          25          30

Gln Asp Gly Ile Leu Arg His Val Glu Leu Gly Glu Gly Trp Gly His
          35          40          45

Val Lys Asp Gln Gln Val Leu Pro Asn Pro Asp Ser Asp Asp Phe Leu
          50          55          60

Ser Ser Ile Leu Gly Ser Gly Asp Ser Leu Pro Ser Ser Pro Leu Trp
65          70          75          80

Ser Pro Glu Gly Ser Asp Ser Gly Ile Ser Glu Asp Leu Pro Ser Asp
          85          90          95

Pro Gln Asp Thr Pro Pro Arg Ser Gly Pro Ala Thr Ser Pro Ala Gly
          100          105          110

Cys His Pro Ala Gln Pro Gly Lys Gly Pro Cys Leu Ser Tyr His Pro
          115          120          125

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Gly	Asn	Ser	Cys	Ser	Thr	Thr	Thr	Pro	Gly	Pro	Val	Ile	Gln	Val	Pro	
	130						135					140				
Glu	Ala	Ser	Val	Thr	Ile	Asp	Leu	Glu	Met	Trp	Ser	Pro	Gly	Gly	Arg	
145					150					155					160	
Ile	Cys	Ala	Glu	Lys	Pro	Ala	Asp	Pro	Val	Asp	Leu	Ser	Pro	Arg	Cys	
				165					170					175		
Asn	Leu	Thr	Val	Lys	Asp	Leu	Leu	Leu	Ser	Gly	Ser	Ser	Gly	Asp	Leu	
			180					185					190			
Gln	Gln	His	His	Leu	Gly	Ala	Ser	Tyr	Leu	Leu	Arg	Pro	Gly	Ala	Gly	
		195					200					205				
His	Cys	Gln	Glu	Leu	Val	Leu	Thr	Glu	Asp	Glu	Lys	Lys	Leu	Leu	Ala	
	210					215					220					
Lys	Glu	Gly	Ile	Thr	Leu	Pro	Thr	Gln	Leu	Pro	Leu	Thr	Lys	Asp	Val	
225					230					235					240	
Ser	Leu	His	Cys	Ser	Glu	Ser	Gly	Val	Thr	Glu	Glu	Ser	Leu	Ala	Ser	
				245					250					255		
Arg	Glu	Ala	Lys	Pro	Val	Pro	Leu	Gly	Ala	Thr	Glu	Glu	Thr	Pro	Gly	
			260					265					270			
His	Cys	Gly	Ala	Val	His	Gln	Gln	Val	Ser	Pro	Asp	Arg	His	Leu	Cys	
		275				280						285				
Arg	Ser	Pro	Val	Ala	Val	Leu	Cys	Pro	His	His	Pro	Pro	Leu	His	Gln	
	290					295					300					
Pro	Phe	Trp	Pro	Gln	Gln	Asn	Arg	Glu	Pro	Trp	Gly	Leu	Cys	Ala	Cys	
305					310					315					320	
Thr	Ser	Val	Leu	Gln	Asn	Phe	Ala	Gln	Arg	Cys	Cys	Leu	Pro	Arg	Gly	
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Cys																

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Met Asp Pro Ile Asp Ser Phe Glu Leu Leu Asp Leu Leu Phe Asp Arg
          20          25          30

Gln Asp Gly Ile Leu Arg His Val Glu Leu Gly Glu Gly Trp Gly His
          35          40          45

Val Lys Asp Gln Gln Val Leu Pro Asn Pro Asp Ser Asp Asp Phe Leu
          50          55          60

Ser Ser Ile Leu Gly Ser Gly Asp Ser Leu Pro Ser Ser Pro Leu Trp
65          70          75          80

Ser Pro Glu Gly Ser Asp Ser Gly Ile Ser Glu Asp Leu Pro Ser Asp
          85          90          95

Pro Gln Asp Thr Pro Pro Arg Ser Gly Pro Ala Thr Ser Pro Ala Gly
          100          105          110

Cys His Pro Ala Gln Pro Gly Lys Gly Pro Cys Leu Ser Tyr His Pro
          115          120          125

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Gly	Asn	Ser	Cys	Ser	Thr	Thr	Thr	Pro	Gly	Pro	Val	Ile	Gln	Val	Pro
130						135					140				
Glu	Ala	Ser	Val	Thr	Ile	Asp	Leu	Glu	Met	Trp	Ser	Pro	Gly	Gly	Arg
145					150					155					160
Ile	Cys	Ala	Glu	Lys	Pro	Ala	Asp	Pro	Val	Asp	Leu	Ser	Pro	Arg	Cys
				165					170					175	
Asn	Leu	Thr	Val	Lys	Asp	Leu	Leu	Leu	Ser	Gly	Ser	Ser	Gly	Asp	Leu
			180					185					190		
His	His	Leu	Gly	Ala	Ser	Tyr	Leu	Leu	Arg	Pro	Gly	Ala	Gly	His	Cys
		195					200					205			
Gln	Glu	Leu	Val	Leu	Thr	Glu	Asp	Glu	Lys	Lys	Leu	Leu	Ala	Lys	Glu
	210					215					220				
Gly	Ile	Thr	Leu	Pro	Thr	Gln	Leu	Pro	Leu	Thr	Lys	Tyr	Glu	Glu	Arg
225					230					235					240
Val	Leu	Lys	Lys	Ile	Arg	Arg	Lys	Ile	Arg	Asn	Lys	Gln	Ser	Ala	Gln
				245					250					255	
Glu	Ser	Arg	Lys	Lys	Lys	Lys	Glu	Tyr	Ile	Asp	Gly	Leu	Glu	Thr	Arg
			260					265					270		
Met	Ser	Ala	Cys	Thr	Ala	Gln	Asn	Gln	Glu	Leu	Gln	Arg	Lys	Val	Leu
		275					280					285			
His	Leu	Glu	Lys	Gln	Asn	Leu	Ser	Leu	Leu	Glu	Gln	Leu	Lys	Lys	Leu
	290					295					300				
Gln	Ala	Ile	Val	Val	Gln	Ser	Thr	Ser	Lys	Ser	Ala	Gln	Thr	Gly	Thr
305					310					315					320
Cys	Val	Ala	Val	Leu	Leu	Leu	Ser	Phe	Ala	Leu	Ile	Ile	Leu	Pro	Ser
				325					330					335	
Ile	Ser	Pro	Phe	Gly	Pro	Asn	Lys	Thr	Glu	Ser	Pro	Gly	Asp	Phe	Ala
			340					345					350		

Pro Val Arg Val Phe Ser Arg Thr Leu His Asn Asp Ala Ala Ser Arg
355 360 365

Val Ala Ala Asp Ala Val Pro Gly Ser Glu Ala Pro Gly Pro Arg Pro
370 375 380

Glu Ala Asp Thr Thr Arg Glu Glu Ser Pro Gly Ser Pro Gly Ala Asp
385 390 395 400

Trp Gly Phe Gln Asp Thr Ala Asn Leu Thr Asn Ser Thr Glu Glu Leu
405 410 415

Asp Asn Ala Thr Leu Val Leu Arg Asn Ala Thr Glu Gly Leu Gly Gln
420 425 430

Val Ala Leu Leu Asp Trp Val Ala Pro Gly Pro Ser Thr Gly Ser Gly
435 440 445

Arg Ala Gly Leu Glu Ala Ala Gly Asp Glu Leu
450 455

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			20					25					30			
Pro	Pro	Pro	Glu	Val	Pro	Val	Thr	Arg	Leu	Gln	Glu	Gln	Gly	Leu	Gln	
		35					40					45				
Gly	Trp	Lys	Ser	Gly	Gly	Asp	Arg	Gly	Cys	Gly	Leu	Gln	Glu	Ser	Glu	
	50					55					60					
Pro	Glu	Asp	Phe	Leu	Lys	Leu	Phe	Ile	Asp	Pro	Asn	Glu	Val	Tyr	Cys	
65					70				75						80	
Ser	Glu	Ala	Ser	Pro	Gly	Ser	Asp	Ser	Gly	Ile	Ser	Glu	Asp	Pro	Cys	
				85					90					95		
His	Pro	Asp	Ser	Pro	Pro	Ala	Pro	Arg	Ala	Thr	Ser	Ser	Pro	Met	Leu	
			100					105					110			
Tyr	Glu	Val	Val	Tyr	Glu	Ala	Gly	Ala	Leu	Glu	Arg	Met	Gln	Gly	Glu	
		115					120					125				
Thr	Gly	Pro	Asn	Val	Gly	Leu	Ile	Ser	Ile	Gln	Leu	Asp	Gln	Trp	Ser	
	130					135					140					
Pro	Ala	Phe	Met	Val	Pro	Asp	Ser	Cys	Met	Val	Ser	Glu	Leu	Pro	Phe	
145					150					155					160	
Asp	Ala	His	Ala	His	Ile	Leu	Pro	Arg	Ala	Gly	Thr	Val	Ala	Pro	Val	
				165					170					175		
Pro	Cys	Thr	Thr	Leu	Leu	Pro	Cys	Gln	Thr	Leu	Phe	Leu	Thr	Asp	Glu	
			180					185					190			
Glu	Lys	Arg	Leu	Leu	Gly	Gln	Glu	Gly	Val	Ser	Leu	Pro	Ser	His	Leu	
		195					200					205				
Pro	Leu	Thr	Lys	Ala	Glu	Glu	Arg	Val	Leu	Lys	Lys	Val	Arg	Arg	Lys	
	210					215					220					
Ile	Arg	Asn	Lys	Gln	Ser	Ala	Gln	Asp	Ser	Arg	Arg	Arg	Lys	Lys	Glu	
225					230					235					240	

Tyr Ile Asp Gly Leu Glu Ser Arg Val Ala Ala Cys Ser Ala Gln Asn
245 250 255

Gln Glu Leu Gln Lys Lys Val Gln Glu Leu Glu Arg His Asn Ile Ser
260 265 270

Leu Val Ala Gln Leu Arg Gln Leu Gln Thr Leu Ile Ala Gln Thr Ser
275 280 285

Asn Lys Ala Ala Gln Thr Ser Thr Cys Val Leu Ile Leu Leu Phe Ser
290 295 300

Leu Ala Leu Ile Ile Leu Pro Ser Phe Ser Pro Phe Gln Ser Arg Pro
305 310 315 320

Glu Ala Gly Ser Glu Asp Tyr Gln Pro His Gly Val Thr Ser Arg Asn
325 330 335

Ile Leu Thr His Lys Asp Val Thr Glu Asn Leu Glu Thr Gln Val Val
340 345 350

Glu Ser Arg Leu Arg Glu Pro Pro Gly Ala Lys Asp Ala Asn Gly Ser
355 360 365

Thr Arg Thr Leu Leu Glu Lys Met Gly Gly Lys Pro Arg Pro Ser Gly
370 375 380

Arg Ile Arg Ser Val Leu His Ala Asp Glu Met
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<400> 11333

Met Asp Leu Gly Ile Pro Asp Leu Leu Asp Ala Trp Leu Glu Pro Pro
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Glu Asp Ile Phe Ser Thr Gly Ser Val Leu Glu Leu Gly Leu His Cys
20 25 30

Pro Pro Pro Glu Val Pro Gly Leu Gln Glu Ser Glu Pro Glu Asp Phe
35 40 45

Leu Lys Leu Phe Ile Asp Pro Asn Glu Val Tyr Cys Ser Glu Ala Ser
50 55 60

Pro Gly Ser Asp Ser Gly Ile Ser Glu Asp Pro Cys His Pro Asp Ser
65 70 75 80

Pro Pro Ala Pro Arg Ala Thr Ser Ser Pro Met Leu Tyr Glu Val Val
85 90 95

Tyr Glu Ala Gly Ala Leu Glu Arg Met Gln Gly Glu Thr Gly Pro Asn
100 105 110

Val Gly Leu Ile Ser Ile Gln Leu Asp Gln Trp Ser Pro Ala Phe Met
115 120 125

Val Pro Asp Ser Cys Met Val Ser Glu Leu Pro Phe Asp Ala His Ala
130 135 140

His Ile Leu Pro Arg Ala Gly Thr Val Ala Pro Val Pro Cys Thr Thr
145 150 155 160

Leu Leu Pro Cys Gln Thr Leu Phe Leu Thr Asp Glu Glu Lys Arg Leu
165 170 175

Leu Gly Gln Glu Gly Val Ser Leu Pro Ser His Leu Pro Leu Thr Lys

25389

					180					185					190			
Ala	Glu	Glu	Arg	Val	Leu	Lys	Lys	Val	Arg	Arg	Lys	Ile	Arg	Asn	Lys			
		195					200					205						
Gln	Ser	Ala	Gln	Asp	Ser	Arg	Arg	Arg	Lys	Lys	Glu	Tyr	Ile	Asp	Gly			
	210					215					220							
Leu	Glu	Ser	Arg	Val	Ala	Ala	Cys	Ser	Ala	Gln	Asn	Gln	Glu	Leu	Gln			
225					230					235					240			
Lys	Lys	Val	Gln	Glu	Leu	Glu	Arg	His	Asn	Ile	Ser	Leu	Val	Ala	Gln			
				245					250					255				
Leu	Arg	Gln	Leu	Gln	Thr	Leu	Ile	Ala	Gln	Thr	Ser	Asn	Lys	Ala	Ala			
			260					265					270					
Gln	Thr	Ser	Thr	Cys	Val	Leu	Ile	Leu	Leu	Phe	Ser	Leu	Ala	Leu	Ile			
		275					280					285						
Ile	Leu	Pro	Ser	Phe	Ser	Pro	Phe	Gln	Ser	Arg	Pro	Glu	Ala	Gly	Ser			
	290					295					300							
Glu	Asp	Tyr	Gln	Pro	His	Gly	Val	Thr	Ser	Arg	Asn	Ile	Leu	Thr	His			
305					310					315					320			
Lys	Asp	Val	Thr	Glu	Asn	Leu	Glu	Thr	Gln	Val	Val	Glu	Ser	Arg	Leu			
				325					330					335				
Arg	Glu	Pro	Pro	Gly	Ala	Lys	Asp	Ala	Asn	Gly	Ser	Thr	Arg	Thr	Leu			
			340					345					350					
Leu	Glu	Lys	Met	Gly	Gly	Lys	Pro	Arg	Pro	Ser	Gly	Arg	Ile	Arg	Ser			
		355					360					365						
Val	Leu	His	Ala	Asp	Glu	Met												
	370					375												

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Met Asp Leu Gly Ile Pro Asp Leu Leu Asp Ala Trp Leu Glu Pro Pro
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Glu Asp Ile Phe Ser Thr Gly Ser Val Leu Glu Leu Gly Leu His Cys
          20          25          30

Pro Pro Pro Glu Val Pro Val Thr Arg Leu Gln Glu Gln Gly Leu Gln
          35          40          45

Gly Trp Lys Ser Gly Gly Asp Arg Gly Cys Gly Leu Gln Glu Ser Glu
          50          55          60

Pro Glu Asp Phe Leu Lys Leu Phe Ile Asp Pro Asn Glu Val Tyr Cys
65          70          75          80

Ser Glu Ala Ser Pro Gly Ser Asp Ser Gly Ile Ser Glu Asp Pro Cys
          85          90          95

His Pro Asp Ser Pro Pro Ala Pro Arg Ala Thr Ser Ser Pro Met Leu
          100          105          110

Tyr Glu Val Val Tyr Glu Ala Gly Ala Leu Glu Arg Met Gln Gly Glu
          115          120          125

Thr Gly Pro Asn Val Gly Leu Ile Ser Ile Gln Leu Asp Gln Trp Ser
          130          135          140

Pro Ala Phe Met Val Pro Asp Ser Cys Met Val Ser Glu Leu Pro Phe
145          150          155          160

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Asp Ala His Ala His Ile Leu Pro Arg Ala Gly Thr Val Ala Pro Val
165 170 175

Pro Cys Thr Thr Leu Leu Pro Cys Gln Thr Leu Phe Leu Thr Asp Glu
180 185 190

Glu Lys Arg Leu Leu Gly Gln Glu Gly Val Ser Leu Pro Ser His Leu
195 200 205

Pro Leu Thr Lys Val Thr Cys Phe Pro
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<223> /note="Uniprot ID: Q8TEY5"

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<223> /note="ENSP ID: ENSP00000357592"

<400> 11335

Met Asp Leu Gly Ile Pro Asp Leu Leu Asp Ala Trp Leu Glu Pro Pro
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Glu Asp Ile Phe Ser Thr Gly Ser Val Leu Glu Leu Gly Leu His Cys
20 25 30

Pro Pro Pro Glu Val Pro Val Thr Arg Leu Gln Glu Gln Gly Leu Gln
35 40 45

Gly Trp Lys Ser Gly Gly Asp Arg Gly Cys Gly Leu Gln Glu Ser Glu
50 55 60

Pro	Glu	Asp	Phe	Leu	Lys	Leu	Phe	Ile	Asp	Pro	Asn	Glu	Val	Tyr	Cys	
65					70					75					80	
Ser	Glu	Ala	Ser	Pro	Gly	Ser	Asp	Ser	Gly	Ile	Ser	Glu	Asp	Pro	Cys	
				85					90					95		
His	Pro	Asp	Ser	Pro	Pro	Ala	Pro	Arg	Ala	Thr	Ser	Ser	Pro	Met	Leu	
			100					105					110			
Tyr	Glu	Val	Val	Tyr	Glu	Ala	Gly	Ala	Leu	Glu	Arg	Met	Gln	Gly	Glu	
		115					120					125				
Thr	Gly	Pro	Asn	Val	Gly	Leu	Ile	Ser	Ile	Gln	Leu	Asp	Gln	Trp	Ser	
	130					135					140					
Pro	Ala	Phe	Met	Val	Pro	Asp	Ser	Cys	Met	Val	Ser	Glu	Leu	Pro	Phe	
145					150					155					160	
Asp	Ala	His	Ala	His	Ile	Leu	Pro	Arg	Ala	Gly	Thr	Val	Ala	Pro	Val	
				165					170					175		
Pro	Cys	Thr	Thr	Leu	Leu	Pro	Cys	Gln	Thr	Leu	Phe	Leu	Thr	Asp	Glu	
			180					185					190			
Glu	Lys	Arg	Leu	Leu	Gly	Gln	Glu	Gly	Val	Ser	Leu	Pro	Ser	His	Leu	
		195					200					205				
Pro	Leu	Thr	Lys	Ala	Glu	Glu	Arg	Val	Leu	Lys	Lys	Val	Arg	Arg	Lys	
	210					215					220					
Ile	Arg	Asn	Lys	Gln	Ser	Ala	Gln	Asp	Ser	Arg	Arg	Arg	Lys	Lys	Glu	
225					230					235					240	
Tyr	Ile	Asp	Gly	Leu	Glu	Ser	Arg	Val	Ala	Ala	Cys	Ser	Ala	Gln	Asn	
				245					250					255		
Gln	Glu	Leu	Gln	Lys	Lys	Val	Gln	Glu	Leu	Glu	Arg	His	Asn	Ile	Ser	
			260					265					270			
Leu	Val	Ala	Gln	Leu	Arg	Gln	Leu	Gln	Thr	Leu	Ile	Ala	Gln	Thr	Ser	
		275					280					285				

Asn Lys Ala Ala Gln Thr Ser Thr Cys Val Leu Ile Leu Leu Phe Ser
290 295 300

Leu Ala Leu Ile Ile Leu Pro Ser Phe Ser Pro Phe Gln Ser Arg Pro
305 310 315 320

Glu Ala Gly Ser Glu Asp Tyr Gln Pro His Gly Val Thr Ser Arg Asn
325 330 335

Ile Leu Thr His Lys Asp Val Thr Glu Asn Leu Glu Thr Gln Val Val
340 345 350

Glu Ser Arg Leu Arg Glu Pro Pro Gly Ala Lys Asp Ala Asn Gly Ser
355 360 365

Thr Arg Thr Leu Leu Glu Lys Met Gly Gly Lys Pro Arg Pro Ser Gly
370 375 380

Arg Ile Arg Ser Val Leu His Ala Asp Glu Met
385 390 395

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<211> 395

<212> PRT

<213> Homo sapiens

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Met Asp Leu Gly Ile Pro Asp Leu Leu Asp Ala Trp Leu Glu Pro Pro

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Glu	Asp	Ile	Phe	Ser	Thr	Gly	Ser	Val	Leu	Glu	Leu	Gly	Leu	His	Cys		
			20					25					30				
Pro	Pro	Pro	Glu	Val	Pro	Val	Thr	Arg	Leu	Gln	Glu	Gln	Gly	Leu	Gln		
		35					40					45					
Gly	Trp	Lys	Ser	Gly	Gly	Asp	Arg	Gly	Cys	Gly	Leu	Gln	Glu	Ser	Glu		
	50					55					60						
Pro	Glu	Asp	Phe	Leu	Lys	Leu	Phe	Ile	Asp	Pro	Asn	Glu	Val	Tyr	Cys		
65					70				75						80		
Ser	Glu	Ala	Ser	Pro	Gly	Ser	Asp	Ser	Gly	Ile	Ser	Glu	Asp	Pro	Cys		
				85					90					95			
His	Pro	Asp	Ser	Pro	Pro	Ala	Pro	Arg	Ala	Thr	Ser	Ser	Pro	Met	Leu		
			100					105					110				
Tyr	Glu	Val	Val	Tyr	Glu	Ala	Gly	Ala	Leu	Glu	Arg	Met	Gln	Gly	Glu		
		115					120					125					
Thr	Gly	Pro	Asn	Val	Gly	Leu	Ile	Ser	Ile	Gln	Leu	Asp	Gln	Trp	Ser		
	130					135					140						
Pro	Ala	Phe	Met	Val	Pro	Asp	Ser	Cys	Met	Val	Ser	Glu	Leu	Pro	Phe		
145					150					155					160		
Asp	Ala	His	Ala	His	Ile	Leu	Pro	Arg	Ala	Gly	Thr	Val	Ala	Pro	Val		
				165					170					175			
Pro	Cys	Thr	Thr	Leu	Leu	Pro	Cys	Gln	Thr	Leu	Phe	Leu	Thr	Asp	Glu		
			180					185					190				
Glu	Lys	Arg	Leu	Leu	Gly	Gln	Glu	Gly	Val	Ser	Leu	Pro	Ser	His	Leu		
		195					200					205					
Pro	Leu	Thr	Lys	Ala	Glu	Glu	Arg	Val	Leu	Lys	Lys	Val	Arg	Arg	Lys		
	210					215					220						
Ile	Arg	Asn	Lys	Gln	Ser	Ala	Gln	Asp	Ser	Arg	Arg	Arg	Lys	Lys	Glu		
225					230					235					240		

Tyr Ile Asp Gly Leu Glu Ser Arg Val Ala Ala Cys Ser Ala Gln Asn
245 250 255

Gln Glu Leu Gln Lys Lys Val Gln Glu Leu Glu Arg His Asn Ile Ser
260 265 270

Leu Val Ala Gln Leu Arg Gln Leu Gln Thr Leu Ile Ala Gln Thr Ser
275 280 285

Asn Lys Ala Ala Gln Thr Ser Thr Cys Val Leu Ile Leu Leu Phe Ser
290 295 300

Leu Ala Leu Ile Ile Leu Pro Ser Phe Ser Pro Phe Gln Ser Arg Pro
305 310 315 320

Glu Ala Gly Ser Glu Asp Tyr Gln Pro His Gly Val Thr Ser Arg Asn
325 330 335

Ile Leu Thr His Lys Asp Val Thr Glu Asn Leu Glu Thr Gln Val Val
340 345 350

Glu Ser Arg Leu Arg Glu Pro Pro Gly Ala Lys Asp Ala Asn Gly Ser
355 360 365

Thr Arg Thr Leu Leu Glu Lys Met Gly Gly Lys Pro Arg Pro Ser Gly
370 375 380

Arg Ile Arg Ser Val Leu His Ala Asp Glu Met
385 390 395

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Met Asp Leu Gly Ile Pro Asp Leu Leu Asp Ala Trp Leu Glu Pro Pro
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Glu Asp Ile Phe Ser Thr Gly Ser Val Leu Glu Leu Gly Leu His Cys
20 25 30

Pro Pro Pro Glu Val Pro Gly Leu Gln Glu Ser Glu Pro Glu Asp Phe
35 40 45

Leu Lys Leu Phe Ile Asp Pro Asn Glu Val Tyr Cys Ser Glu Ala Ser
50 55 60

Pro Gly Ser Asp Ser Gly Ile Ser Glu Asp Pro Cys His Pro Asp Ser
65 70 75 80

Pro Pro Ala Pro Arg Ala Thr Ser Ser Pro Met Leu Tyr Glu Val Val
85 90 95

Tyr Glu Ala Gly Ala Leu Glu Arg Met Gln Gly Glu Thr Gly Pro Asn
100 105 110

Val Gly Leu Ile Ser Ile Gln Leu Asp Gln Trp Ser Pro Ala Phe Met
115 120 125

Val Pro Asp Ser Cys Met Val Ser Glu Leu Pro Phe Asp Ala His Ala
130 135 140

His Ile Leu Pro Arg Ala Gly Thr Val Ala Pro Val Pro Cys Thr Thr
145 150 155 160

Leu Leu Pro Cys Gln Thr Leu Phe Leu Thr Asp Glu Glu Lys Arg Leu
165 170 175

Leu Gly Gln Glu Gly Val Ser Leu Pro Ser His Leu Pro Leu Thr Lys
180 185 190

Ala Glu Glu Arg Val Leu Lys Lys Val Arg Arg Lys Ile Arg Asn Lys

25397

195

200

205

Gln Ser Ala Gln Asp Ser Arg Arg Arg Lys Lys Glu Tyr Ile Asp Gly
 210 215 220

Leu Glu Ser Arg
 225

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Met Asp Leu Gly Ile Pro Asp Leu Leu Asp Ala Trp Leu Glu Pro Pro
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Glu Asp Ile Phe Ser Thr Gly Ser Val Leu Glu Leu Gly Leu His Cys
 20 25 30

Pro Pro Pro Glu Val Pro Val Thr Arg Leu Gln Glu Gln Gly Leu Gln
 35 40 45

Gly Trp Lys Ser Gly Gly Asp Arg Gly Cys Gly Leu Gln Glu Ser Glu
 50 55 60

Pro Glu Asp Phe Leu Lys Leu Phe Ile Asp Pro Asn Glu Val Tyr Cys
 65 70 75 80

Ser Glu Ala Ser Pro Gly Ser Asp Ser Gly Ile Ser Glu Asp Pro Cys
 85 90 95

25398

His Pro Asp Ser Pro Pro Ala Pro Arg Ala Thr Ser Ser Pro Met Leu
100 105 110

Tyr Glu Val Val Tyr Glu Ala Gly Ala Leu Glu Arg Met Gln Gly Glu
115 120 125

Thr Gly Pro Asn Val Gly Leu Ile Ser Ile Gln Leu Asp Gln Trp Ser
130 135 140

Pro Ala Phe Met Val Pro Asp Ser Cys Met Val Ser Glu Leu Pro Phe
145 150 155 160

Asp Ala His Ala His Ile Leu Pro Arg Ala Gly Thr Val Ala Pro Val
165 170 175

Pro Cys Thr Thr Leu Val
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1 5 10 15

Val Cys Ser Ala Pro Gly Cys Ser Gln Arg Phe Pro Thr Glu Asp His
25399

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Leu	Met	Ile	His	Arg	His	Lys	His	Glu	Met	Thr	Leu	Lys	Phe	Pro	Ser
		35					40					45			
Ile	Lys	Thr	Asp	Asn	Met	Leu	Ser	Asp	Gln	Thr	Pro	Thr	Pro	Thr	Arg
	50					55					60				
Phe	Leu	Lys	Asn	Cys	Glu	Glu	Val	Gly	Leu	Phe	Ser	Glu	Leu	Asp	Cys
65					70					75					80
Ser	Leu	Glu	His	Glu	Phe	Arg	Lys	Ala	Gln	Glu	Glu	Glu	Ser	Ser	Lys
				85					90					95	
Arg	Asn	Ile	Ser	Met	His	Asn	Ala	Val	Gly	Gly	Ala	Met	Thr	Gly	Pro
			100					105						110	
Gly	Thr	His	Gln	Leu	Ser	Ser	Ala	Arg	Leu	Pro	Asn	His	Asp	Thr	Asn
		115					120					125			
Val	Val	Ile	Gln	Gln	Ala	Met	Pro	Ser	Pro	Gln	Ser	Ser	Ser	Val	Ile
	130					135					140				
Thr	Gln	Ala	Pro	Ser	Thr	Asn	Arg	Gln	Ile	Gly	Pro	Val	Pro	Gly	Ser
145					150					155					160
Leu	Ser	Ser	Leu	Leu	His	Leu	His	Asn	Arg	Gln	Arg	Gln	Pro	Met	Pro
				165					170					175	
Ala	Ser	Met	Pro	Gly	Thr	Leu	Pro	Asn	Pro	Thr	Met	Pro	Gly	Ser	Ser
			180					185					190		
Ala	Val	Leu	Met	Pro	Met	Glu	Arg	Gln	Met	Ser	Val	Asn	Ser	Ser	Ile
		195					200					205			
Met	Gly	Met	Gln	Gly	Pro	Asn	Leu	Ser	Asn	Pro	Cys	Ala	Ser	Pro	Gln
	210					215					220				
Val	Gln	Pro	Met	His	Ser	Glu	Ala	Lys	Met	Arg	Leu	Lys	Ala	Ala	Leu
225					230					235					240
Thr	His	His	Pro	Ala	Ala	Met	Ser	Asn	Gly	Asn	Met	Asn	Thr	Met	Gly
				245					250					255	

25400

His	Met	Met	Glu	Met	Met	Gly	Ser	Arg	Gln	Asp	Gln	Thr	Pro	His	His	
			260					265					270			
His	Met	His	Ser	His	Pro	His	Gln	His	Gln	Thr	Leu	Pro	Pro	His	His	
		275					280					285				
Pro	Tyr	Pro	His	Gln	His	Gln	His	Pro	Ala	His	His	Pro	His	Pro	Gln	
	290					295					300					
Pro	His	His	Gln	Gln	Asn	His	Pro	His	His	His	Ser	His	Ser	His	Leu	
305					310					315					320	
His	Ala	His	Pro	Ala	His	His	Gln	Thr	Ser	Pro	His	Pro	Pro	Leu	His	
				325					330					335		
Thr	Gly	Asn	Gln	Ala	Gln	Val	Ser	Pro	Ala	Thr	Gln	Gln	Met	Gln	Pro	
			340					345					350			
Thr	Gln	Thr	Ile	Gln	Pro	Pro	Gln	Pro	Thr	Gly	Gly	Arg	Arg	Arg	Arg	
		355					360					365				
Val	Val	Asp	Glu	Asp	Pro	Asp	Glu	Arg	Arg	Arg	Lys	Phe	Leu	Glu	Arg	
	370					375					380					
Asn	Arg	Ala	Ala	Ala	Thr	Arg	Cys	Arg	Gln	Lys	Arg	Lys	Val	Trp	Val	
385					390					395					400	
Met	Ser	Leu	Glu	Lys	Lys	Ala	Glu	Glu	Leu	Thr	Gln	Thr	Asn	Met	Gln	
				405					410					415		
Leu	Gln	Asn	Glu	Val	Ser	Met	Leu	Lys	Asn	Glu	Val	Ala	Gln	Leu	Lys	
			420					425					430			
Gln	Leu	Leu	Leu	Thr	His	Lys	Asp	Cys	Pro	Ile	Thr	Ala	Met	Gln	Lys	
		435					440					445				
Glu	Ser	Gln	Gly	Tyr	Leu	Ser	Pro	Glu	Ser	Ser	Pro	Pro	Ala	Ser	Pro	
	450					455					460					
Val	Pro	Ala	Cys	Ser	Gln	Gln	Gln	Val	Ile	Gln	His	Asn	Thr	Ile	Thr	
465					470					475					480	

Thr Ser Ser Ser Val Ser Glu Val Val Gly Ser Ser Thr Leu Ser Gln
485 490 495

Leu Thr Thr His Arg Thr Asp Leu Asn Pro Ile Leu
500 505

<210> 11340

<211> 369

<212> PRT

<213> Homo sapiens

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<223> /note="Payload ID: 2231"

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<223> /note="Gene Symbol: CREB5"

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<223> /note="Gene Name:
cAMP responsive element binding protein 5"

<220>

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<223> /note="Uniprot ID: Q02930"

<220>

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<223> /note="ENSP ID: ENSP00000379592"

<400> 11340

Met Phe Cys Thr Ser Gly Gly Asn Ser Ala Ser Val Met Ser Met Arg
1 5 10 15

Pro Val Pro Gly Ser Leu Ser Ser Leu Leu His Leu His Asn Arg Gln
20 25 30

Arg Gln Pro Met Pro Ala Ser Met Pro Gly Thr Leu Pro Asn Pro Thr
35 40 45

Met Pro Gly Ser Ser Ala Val Leu Met Pro Met Glu Arg Gln Met Ser
50 55 60

Val Asn Ser Ser Ile Met Gly Met Gln Gly Pro Asn Leu Ser Asn Pro
65 70 75 80

Cys Ala Ser Pro Gln Val Gln Pro Met His Ser Glu Ala Lys Met Arg

25402

				85					90					95			
Leu	Lys	Ala	Ala	Leu	Thr	His	His	Pro	Ala	Ala	Met	Ser	Asn	Gly	Asn		
			100					105					110				
Met	Asn	Thr	Met	Gly	His	Met	Met	Glu	Met	Met	Gly	Ser	Arg	Gln	Asp		
		115					120					125					
Gln	Thr	Pro	His	His	His	Met	His	Ser	His	Pro	His	Gln	His	Gln	Thr		
	130					135					140						
Leu	Pro	Pro	His	His	Pro	Tyr	Pro	His	Gln	His	Gln	His	Pro	Ala	His		
145					150					155					160		
His	Pro	His	Pro	Gln	Pro	His	His	Gln	Gln	Asn	His	Pro	His	His	His		
				165					170					175			
Ser	His	Ser	His	Leu	His	Ala	His	Pro	Ala	His	His	Gln	Thr	Ser	Pro		
			180					185					190				
His	Pro	Pro	Leu	His	Thr	Gly	Asn	Gln	Ala	Gln	Val	Ser	Pro	Ala	Thr		
		195					200					205					
Gln	Gln	Met	Gln	Pro	Thr	Gln	Thr	Ile	Gln	Pro	Pro	Gln	Pro	Thr	Gly		
	210					215					220						
Gly	Arg	Arg	Arg	Arg	Val	Val	Asp	Glu	Asp	Pro	Asp	Glu	Arg	Arg	Arg		
225					230					235					240		
Lys	Phe	Leu	Glu	Arg	Asn	Arg	Ala	Ala	Ala	Thr	Arg	Cys	Arg	Gln	Lys		
				245					250					255			
Arg	Lys	Val	Trp	Val	Met	Ser	Leu	Glu	Lys	Lys	Ala	Glu	Glu	Leu	Thr		
			260					265					270				
Gln	Thr	Asn	Met	Gln	Leu	Gln	Asn	Glu	Val	Ser	Met	Leu	Lys	Asn	Glu		
		275					280					285					
Val	Ala	Gln	Leu	Lys	Gln	Leu	Leu	Leu	Thr	His	Lys	Asp	Cys	Pro	Ile		
	290					295					300						
Thr	Ala	Met	Gln	Lys	Glu	Ser	Gln	Gly	Tyr	Leu	Ser	Pro	Glu	Ser	Ser		
305					310					315					320		

Pro Pro Ala Ser Pro Val Pro Ala Cys Ser Gln Gln Gln Val Ile Gln
325 330 335

His Asn Thr Ile Thr Thr Ser Ser Ser Val Ser Glu Val Val Gly Ser
340 345 350

Ser Thr Leu Ser Gln Leu Thr Thr His Arg Thr Asp Leu Asn Pro Ile
355 360 365

Leu

<210> 11341
<211> 475
<212> PRT
<213> Homo sapiens

<220>
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<220>
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<220>
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<400> 11341
Met Ile His Arg His Lys His Glu Met Thr Leu Lys Phe Pro Ser Ile
1 5 10 15

Lys Thr Asp Asn Met Leu Ser Asp Gln Thr Pro Thr Pro Thr Arg Phe
20 25 30

Leu Lys Asn Cys Glu Glu Val Gly Leu Phe Ser Glu Leu Asp Cys Ser
35 40 45

Leu	Glu	His	Glu	Phe	Arg	Lys	Ala	Gln	Glu	Glu	Glu	Ser	Ser	Lys	Arg				
50						55					60								
Asn	Ile	Ser	Met	His	Asn	Ala	Val	Gly	Gly	Ala	Met	Thr	Gly	Pro	Gly				
65					70					75					80				
Thr	His	Gln	Leu	Ser	Ser	Ala	Arg	Leu	Pro	Asn	His	Asp	Thr	Asn	Val				
				85					90					95					
Val	Ile	Gln	Gln	Ala	Met	Pro	Ser	Pro	Gln	Ser	Ser	Ser	Val	Ile	Thr				
			100					105					110						
Gln	Ala	Pro	Ser	Thr	Asn	Arg	Gln	Ile	Gly	Pro	Val	Pro	Gly	Ser	Leu				
		115					120					125							
Ser	Ser	Leu	Leu	His	Leu	His	Asn	Arg	Gln	Arg	Gln	Pro	Met	Pro	Ala				
	130					135					140								
Ser	Met	Pro	Gly	Thr	Leu	Pro	Asn	Pro	Thr	Met	Pro	Gly	Ser	Ser	Ala				
145					150					155					160				
Val	Leu	Met	Pro	Met	Glu	Arg	Gln	Met	Ser	Val	Asn	Ser	Ser	Ile	Met				
				165					170					175					
Gly	Met	Gln	Gly	Pro	Asn	Leu	Ser	Asn	Pro	Cys	Ala	Ser	Pro	Gln	Val				
			180					185					190						
Gln	Pro	Met	His	Ser	Glu	Ala	Lys	Met	Arg	Leu	Lys	Ala	Ala	Leu	Thr				
		195					200					205							
His	His	Pro	Ala	Ala	Met	Ser	Asn	Gly	Asn	Met	Asn	Thr	Met	Gly	His				
	210					215					220								
Met	Met	Glu	Met	Met	Gly	Ser	Arg	Gln	Asp	Gln	Thr	Pro	His	His	His				
225					230					235					240				
Met	His	Ser	His	Pro	His	Gln	His	Gln	Thr	Leu	Pro	Pro	His	His	Pro				
				245					250					255					
Tyr	Pro	His	Gln	His	Gln	His	Pro	Ala	His	His	Pro	His	Pro	Gln	Pro				
			260					265					270						
His	His	Gln	Gln	Asn	His	Pro	His	His	His	Ser	His	Ser	His	Leu	His				

275																	
Ala	His	Pro	Ala	His	His	Gln	Thr	Ser	Pro	His	Pro	Pro	Leu	His	Thr		
290						295					300						
Gly	Asn	Gln	Ala	Gln	Val	Ser	Pro	Ala	Thr	Gln	Gln	Met	Gln	Pro	Thr		
305					310					315					320		
Gln	Thr	Ile	Gln	Pro	Pro	Gln	Pro	Thr	Gly	Gly	Arg	Arg	Arg	Arg	Val		
				325					330					335			
Val	Asp	Glu	Asp	Pro	Asp	Glu	Arg	Arg	Arg	Lys	Phe	Leu	Glu	Arg	Asn		
			340					345					350				
Arg	Ala	Ala	Ala	Thr	Arg	Cys	Arg	Gln	Lys	Arg	Lys	Val	Trp	Val	Met		
		355					360					365					
Ser	Leu	Glu	Lys	Lys	Ala	Glu	Glu	Leu	Thr	Gln	Thr	Asn	Met	Gln	Leu		
	370					375					380						
Gln	Asn	Glu	Val	Ser	Met	Leu	Lys	Asn	Glu	Val	Ala	Gln	Leu	Lys	Gln		
385					390					395					400		
Leu	Leu	Leu	Thr	His	Lys	Asp	Cys	Pro	Ile	Thr	Ala	Met	Gln	Lys	Glu		
				405					410					415			
Ser	Gln	Gly	Tyr	Leu	Ser	Pro	Glu	Ser	Ser	Pro	Pro	Ala	Ser	Pro	Val		
			420					425					430				
Pro	Ala	Cys	Ser	Gln	Gln	Gln	Val	Ile	Gln	His	Asn	Thr	Ile	Thr	Thr		
		435					440					445					
Ser	Ser	Ser	Val	Ser	Glu	Val	Val	Gly	Ser	Ser	Thr	Leu	Ser	Gln	Leu		
	450					455					460						
Thr	Thr	His	Arg	Thr	Asp	Leu	Asn	Pro	Ile	Leu							
465					470					475							

<210> 11342
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<223> /note="Payload ID: 2231"

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      cAMP responsive element binding protein 5"

<220>
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<220>
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<400> 11342
Met Asn Leu Glu Gln Glu Arg Pro Phe Val Cys Ser Ala Pro Gly Cys
1              5              10              15

Ser Gln Arg Phe Pro Thr Glu Asp His Leu Met Ile His Arg His Lys
      20              25              30

His Glu Met Thr Leu Lys Phe Pro Ser Ile Lys Thr Asp Asn Met Leu
      35              40              45

Ser Asp Gln Thr Pro Thr Pro Thr Arg Phe Leu Lys Asn Cys Glu Glu
      50              55              60

Val Gly Leu Phe Ser Glu Leu Asp Cys Ser Leu Glu His Glu Phe Arg
65              70              75              80

Lys Ala Gln Glu Glu Glu Ser Ser Lys Arg Asn Ile Ser Met His Asn
      85              90              95

Ala Val Gly Gly Ala Met Thr Gly Pro Gly Thr His Gln Leu Ser Ser
      100              105              110

Ala Arg Leu Pro Asn His Asp Thr Asn Val Val Ile Gln Gln Ala Met
      115              120              125

Pro Ser Pro Gln Ser Ser Ser Val Ile Thr Gln Ala Pro Ser Thr Asn
      130              135              140

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Arg Gln Ile Gly Pro Val Pro Gly Ser Leu Ser Ser Leu Leu His Leu
 145 150 155 160

His Asn Arg Gln Arg Gln Pro Met Pro Ala Ser Met Pro Gly Thr Leu
 165 170 175

Pro Asn Pro Thr Met Pro Gly Ser Ser Ala Val Leu Met Pro Met Glu
 180 185 190

Arg Gln Met Ser Val Asn Ser Ser Ile Met Gly Met Gln Gly Pro Asn
 195 200 205

Leu Ser Asn Pro Cys Ala Ser Pro Gln Val Gln Pro Met His Ser Glu
 210 215 220

Ala Lys Met Arg Leu Lys Ala Ala Leu Thr His His Pro Ala Ala Met
 225 230 235 240

Ser Asn Gly Asn Met Asn Thr Met Gly His Met Met Glu Met Met Gly
 245 250 255

Ser Arg Gln Asp Gln Thr Pro His His His Met His Ser His Pro His
 260 265 270

Gln His Gln Thr Leu Pro Pro His His Pro Tyr Pro His Gln His Gln
 275 280 285

His Pro Ala His His Pro His Pro Gln Pro His His Gln Gln Asn His
 290 295 300

Pro His His His Ser His Ser His Leu His Ala His Pro Ala His His
 305 310 315 320

Gln Thr Ser Pro His Pro Pro Leu His Thr Gly Asn Gln Ala Gln Val
 325 330 335

Ser Pro Ala Thr Gln Gln Met Gln Pro Thr Gln Thr Ile Gln Pro Pro
 340 345 350

Gln Pro Thr Gly Gly Arg Arg Arg Arg Val Val Asp Glu Asp Pro Asp
 355 360 365

Glu Arg Arg Arg Lys Phe Leu Glu Arg Asn Arg Ala Ala Ala Thr Arg

370		375		380											
Cys	Arg	Gln	Lys	Arg	Lys	Val	Trp	Val	Met	Ser	Leu	Glu	Lys	Lys	Ala
385					390					395					400
Glu	Glu	Leu	Thr	Gln	Thr	Asn	Met	Gln	Leu	Gln	Asn	Glu	Val	Ser	Met
				405					410					415	
Leu	Lys	Asn	Glu	Val	Ala	Gln	Leu	Lys	Gln	Leu	Leu	Leu	Thr	His	Lys
			420					425					430		
Asp	Cys	Pro	Ile	Thr	Ala	Met	Gln	Lys	Glu	Ser	Gln	Gly	Tyr	Leu	Ser
		435					440					445			
Pro	Glu	Ser	Ser	Pro	Pro	Ala	Ser	Pro	Val	Pro	Ala	Cys	Ser	Gln	Gln
	450					455					460				
Gln	Val	Ile	Gln	His	Asn	Thr	Ile	Thr	Thr	Ser	Ser	Ser	Val	Ser	Glu
465					470					475					480
Val	Val	Gly	Ser	Ser	Thr	Leu	Ser	Gln	Leu	Thr	Thr	His	Arg	Thr	Asp
				485					490					495	
Leu	Asn	Pro	Ile	Leu											
			500												

<210> 11343
 <211> 475
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<220>
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<220>
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 cAMP responsive element binding protein 5"

<220>
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<223> /note="ENSP ID: ENSP00000387197"

$\langle 400 \rangle$ 11343

Met Ile His Arg His Lys His Glu Met Thr Leu Lys Phe Pro Ser Ile
1 5 10 15

Lys Thr Asp Asn Met Leu Ser Asp Gln Thr Pro Thr Pro Thr Arg Phe
20 25 30

Leu Lys Asn Cys Glu Glu Val Gly Leu Phe Ser Glu Leu Asp Cys Ser
35 40 45

Leu Glu His Glu Phe Arg Lys Ala Gln Glu Glu Glu Ser Ser Lys Arg
50 55 60

Asn Ile Ser Met His Asn Ala Val Gly Gly Ala Met Thr Gly Pro Gly
65 70 75 80

Thr His Gln Leu Ser Ser Ala Arg Leu Pro Asn His Asp Thr Asn Val
85 90 95

Val	Ile	Gln	Gln	Ala	Met	Pro	Ser	Pro	Gln	Ser	Ser	Ser	Val	Ile	Thr
			100					105					110		

Gln Ala Pro Ser Thr Asn Arg Gln Ile Gly Pro Val Pro Gly Ser Leu
115 120 125

Ser Ser Leu Leu His Leu His Asn Arg Gln Arg Gln Pro Met Pro Ala
130 135 140

Ser Met Pro Gly Thr Leu Pro Asn Pro Thr Met Pro Gly Ser Ser Ala
145 150 155 160

Val	Leu	Met	Pro	Met	Glu	Arg	Gln	Met	Ser	Val	Asn	Ser	Ser	Ile	Met
				165					170					175	

Gly Met Gln Gly Pro Asn Leu Ser Asn Pro Cys Ala Ser Pro Gln Val
180 185 190

Gln Pro Met His Ser Glu Ala Lys Met Arg Leu Lys Ala Ala Leu Thr
195 200 205

His 210	His	Pro	Ala	Ala	Met	Ser 215	Asn	Gly	Asn	Met	Asn 220	Thr	Met	Gly	His
Met 225	Met	Glu	Met	Met	Gly 230	Ser	Arg	Gln	Asp	Gln 235	Thr	Pro	His	His	His 240
Met	His	Ser	His	Pro 245	His	Gln	His	Gln	Thr 250	Leu	Pro	Pro	His	His 255	Pro
Tyr	Pro	His	Gln 260	His	Gln	His	Pro	Ala 265	His	His	Pro	His	Pro 270	Gln	Pro
His	His	Gln 275	Gln	Asn	His	Pro	His 280	His	His	Ser	His	Ser 285	His	Leu	His
Ala 290	His	Pro	Ala	His	His	Gln 295	Thr	Ser	Pro	His	Pro 300	Pro	Leu	His	Thr
Gly 305	Asn	Gln	Ala	Gln	Val 310	Ser	Pro	Ala	Thr	Gln 315	Gln	Met	Gln	Pro	Thr 320
Gln	Thr	Ile	Gln	Pro 325	Pro	Gln	Pro	Thr	Gly 330	Gly	Arg	Arg	Arg	Arg 335	Val
Val	Asp	Glu	Asp 340	Pro	Asp	Glu	Arg	Arg 345	Arg	Lys	Phe	Leu	Glu 350	Arg	Asn
Arg	Ala	Ala 355	Ala	Thr	Arg	Cys	Arg 360	Gln	Lys	Arg	Lys	Val 365	Trp	Val	Met
Ser 370	Leu	Glu	Lys	Lys	Ala	Glu 375	Glu	Leu	Thr	Gln	Thr 380	Asn	Met	Gln	Leu
Gln 385	Asn	Glu	Val	Ser	Met 390	Leu	Lys	Asn	Glu	Val 395	Ala	Gln	Leu	Lys	Gln 400
Leu	Leu	Leu	Thr	His 405	Lys	Asp	Cys	Pro	Ile 410	Thr	Ala	Met	Gln	Lys 415	Glu
Ser	Gln	Gly	Tyr 420	Leu	Ser	Pro	Glu	Ser 425	Ser	Pro	Pro	Ala	Ser 430	Pro	Val
Pro	Ala	Cys	Ser	Gln	Gln	Gln	Val	Ile	Gln	His	Asn	Thr	Ile	Thr	Thr

435 440 445
 Ser Ser Ser Val Ser Glu Val Val Gly Ser Ser Thr Leu Ser Gln Leu
 450 455 460

 Thr Thr His Arg Thr Asp Leu Asn Pro Ile Leu
 465 470 475

 <210> 11344
 <211> 115
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 cAMP responsive element binding protein 5"

 <220>
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 <400> 11344
 Met Asn Leu Glu Gln Glu Arg Pro Phe Val Cys Ser Ala Pro Gly Cys
 1 5 10 15

 Ser Gln Arg Phe Pro Thr Glu Asp His Leu Met Ile His Arg His Lys
 20 25 30

 His Glu Met Thr Leu Lys Phe Pro Ser Ile Lys Thr Asp Asn Met Leu
 35 40 45

 Ser Asp Gln Thr Pro Thr Pro Thr Arg Phe Leu Lys Asn Cys Glu Glu
 50 55 60

 Val Gly Leu Phe Ser Glu Leu Asp Cys Ser Leu Glu His Glu Phe Arg
 65 70 75 80

 Lys Ala Gln Glu Glu Glu Ser Ser Lys Arg Asn Ile Ser Met His Asn
 85 90 95

Ala Val Gly Gly Ala Met Thr Gly Pro Gly Thr His Gln Leu Ser Ser
100 105 110

Ala Arg Leu
115

<210> 11345
<211> 211
<212> PRT
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<220>
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<223> /note="Gene Name:
cAMP responsive element binding protein 5"

<220>
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<400> 11345
Met Pro Ala Ser Met Pro Gly Thr Leu Pro Asn Pro Thr Met Pro Gly
1 5 10 15

Ser Ser Ala Val Leu Met Pro Met Glu Arg Gln Met Ser Val Asn Ser
20 25 30

Ser Ile Met Gly Met Gln Gly Pro Asn Leu Ser Asn Pro Cys Ala Ser
35 40 45

Pro Gln Val Gln Pro Met His Ser Glu Ala Lys Met Arg Leu Lys Ala
50 55 60

Ala Leu Thr His His Pro Ala Ala Met Ser Asn Gly Asn Met Asn Thr
65 70 75 80

Met Gly His Met Met Glu Met Met Gly Ser Arg Gln Asp Gln Thr Pro
85 90 95

His His His Met His Ser His Pro His Gln His Gln Thr Leu Pro Pro

Gln Leu Leu Leu Thr His Lys Asp Cys Pro Ile Thr Ala Met Gln Lys
20 25 30

Glu Ser Gln Gly Tyr Leu Asn
35

<210> 11347

<211> 120

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2232"

<220>

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<223> /note="Gene Symbol: CREBL2"

<220>

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<223> /note="Gene Name:
cAMP responsive element binding protein-like 2"

<220>

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<223> /note="Uniprot ID: O60519"

<220>

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<223> /note="ENSP ID: ENSP00000228865"

<400> 11347

Met Asp Asp Ser Lys Val Val Gly Gly Lys Val Lys Lys Pro Gly Lys
1 5 10 15

Arg Gly Arg Lys Pro Ala Lys Ile Asp Leu Lys Ala Lys Leu Glu Arg
20 25 30

Ser Arg Gln Ser Ala Arg Glu Cys Arg Ala Arg Lys Lys Leu Arg Tyr
35 40 45

Gln Tyr Leu Glu Glu Leu Val Ser Ser Arg Glu Arg Ala Ile Cys Ala
50 55 60

Leu Arg Glu Glu Leu Glu Met Tyr Lys Gln Trp Cys Met Ala Met Asp
65 70 75 80

Gln Gly Lys Ile Pro Ser Glu Ile Lys Ala Leu Leu Thr Gly Glu Glu

25415

85

90

95

Gln Asn Lys Ser Gln Gln Asn Ser Ser Arg His Thr Lys Ala Gly Lys
 100 105 110

Thr Asp Ala Asn Ser Asn Ser Trp
 115 120

<210> 11348

<211> 300

<212> PRT

<213> Homo sapiens

<220>

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<223> /note="Payload ID: 2233"

<220>

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<223> /note="Gene Symbol: CREM"

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<223> /note="Gene Name:
 cAMP responsive element modulator"

<220>

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<223> /note="Uniprot ID: Q03060"

<220>

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<223> /note="ENSP ID: ENSP00000265372"

<400> 11348

Met Ser Lys Cys Ala Arg Lys Lys Tyr Ile Lys Thr Asn Pro Arg Gln
 1 5 10 15

Met Thr Met Glu Thr Val Glu Ser Gln His Asp Gly Ser Ile Thr Ala
 20 25 30

Ser Leu Thr Glu Ser Lys Ser Ala His Val Gln Thr Gln Thr Gly Gln
 35 40 45

Asn Ser Ile Pro Ala Leu Ala Gln Val Ala Ala Ile Ala Glu Thr Asp
 50 55 60

Glu Ser Ala Glu Ser Glu Gly Val Ile Asp Ser His Lys Arg Arg Glu
 65 70 75 80

25416

Ile	Leu	Ser	Arg	Arg	Pro	Ser	Tyr	Arg	Lys	Ile	Leu	Asn	Glu	Leu	Ser	
				85					90					95		
Ser	Asp	Val	Pro	Gly	Val	Pro	Lys	Ile	Glu	Glu	Glu	Arg	Ser	Glu	Glu	
			100					105					110			
Glu	Gly	Thr	Pro	Pro	Ser	Ile	Ala	Thr	Met	Ala	Val	Pro	Thr	Ser	Ile	
		115					120					125				
Tyr	Gln	Thr	Ser	Thr	Gly	Gln	Tyr	Ile	Ala	Ile	Ala	Gln	Gly	Gly	Thr	
	130					135					140					
Ile	Gln	Ile	Ser	Asn	Pro	Gly	Ser	Asp	Gly	Val	Gln	Gly	Leu	Gln	Ala	
145					150					155					160	
Leu	Thr	Met	Thr	Asn	Ser	Gly	Ala	Pro	Pro	Pro	Gly	Ala	Thr	Ile	Val	
				165					170					175		
Gln	Tyr	Ala	Ala	Gln	Ser	Ala	Asp	Gly	Thr	Gln	Gln	Phe	Phe	Val	Pro	
			180					185					190			
Gly	Ser	Gln	Val	Val	Val	Gln	Ala	Ala	Thr	Gly	Asp	Met	Pro	Thr	Tyr	
		195					200					205				
Gln	Ile	Arg	Ala	Pro	Thr	Ala	Ala	Leu	Pro	Gln	Gly	Val	Val	Met	Ala	
	210					215					220					
Ala	Ser	Pro	Gly	Ser	Leu	His	Ser	Pro	Gln	Gln	Leu	Ala	Glu	Glu	Ala	
225					230					235					240	
Thr	Arg	Lys	Arg	Glu	Leu	Arg	Leu	Met	Lys	Asn	Arg	Glu	Ala	Ala	Lys	
				245					250					255		
Glu	Cys	Arg	Arg	Arg	Lys	Lys	Glu	Tyr	Val	Lys	Cys	Leu	Glu	Ser	Arg	
			260					265					270			
Val	Ala	Val	Leu	Glu	Val	Gln	Asn	Lys	Lys	Leu	Ile	Glu	Glu	Leu	Glu	
		275					280					285				
Thr	Leu	Lys	Asp	Ile	Cys	Ser	Pro	Lys	Thr	Asp	Tyr					
	290					295					300					

<210> 11349
<211> 299
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<213> Homo sapiens

<220>
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<223> /note="Payload ID: 2233"

<220>
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<220>
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<223> /note="Gene Name:
cAMP responsive element modulator"

<220>
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<223> /note="Uniprot ID: Q03060"

<220>
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<400> 11349
Met Ser Lys Cys Ala Arg Lys Lys Tyr Ile Lys Thr Asn Pro Arg Gln
1 5 10 15

Met Thr Met Glu Thr Val Glu Ser Gln His Asp Gly Ser Ile Thr Ala
20 25 30

Ser Leu Thr Glu Ser Lys Ser Ala His Val Gln Thr Gln Thr Gly Gln
35 40 45

Asn Ser Ile Pro Ala Leu Ala Gln Val Ala Ala Ile Ala Glu Thr Asp
50 55 60

Glu Ser Ala Glu Ser Glu Gly Val Ile Asp Ser His Lys Arg Arg Glu
65 70 75 80

Ile Leu Ser Arg Arg Pro Ser Tyr Arg Lys Ile Leu Asn Glu Leu Ser
85 90 95

Ser Asp Val Pro Gly Val Pro Lys Ile Glu Glu Glu Arg Ser Glu Glu
100 105 110

Glu Gly Thr Pro Pro Ser Ile Ala Thr Met Ala Val Pro Thr Ser Ile
115 120 125

Tyr Gln Thr Ser Thr Gly Gln Tyr Ile Ala Ile Ala Gln Gly Gly Thr
130 135 140

Ile Gln Ile Ser Asn Pro Gly Ser Asp Gly Val Gln Gly Leu Gln Ala
145 150 155 160

Leu Thr Met Thr Asn Ser Gly Ala Pro Pro Pro Gly Ala Thr Ile Val
165 170 175

Gln Tyr Ala Ala Gln Ser Ala Asp Gly Thr Gln Gln Phe Phe Val Pro
180 185 190

Gly Ser Gln Val Val Val Gln Ala Ala Thr Gly Asp Met Pro Thr Tyr
195 200 205

Gln Ile Arg Ala Pro Thr Ala Ala Leu Pro Gln Gly Val Val Met Ala
210 215 220

Ala Ser Pro Gly Ser Leu His Ser Pro Gln Gln Leu Ala Glu Glu Ala
225 230 235 240

Thr Arg Lys Arg Glu Leu Arg Leu Met Lys Asn Arg Glu Ala Ala Arg
245 250 255

Glu Cys Arg Arg Lys Lys Lys Glu Tyr Val Lys Cys Leu Glu Asn Arg
260 265 270

Val Ala Val Leu Glu Asn Gln Asn Lys Thr Leu Ile Glu Glu Leu Lys
275 280 285

Ala Leu Lys Asp Leu Tyr Cys His Lys Val Glu
290 295

<210> 11350

<211> 245

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2233"

<220>

<221> source

<223> /note="Gene Symbol: CREM"

<220>

<221> source

<223> /note="Gene Name:
cAMP responsive element modulator"

<220>

<221> source

<223> /note="Uniprot ID: Q03060"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000341875"

<400> 11350

Met Val Ala Ala Ile Ala Glu Thr Asp Glu Ser Ala Glu Ser Glu Gly
1 5 10 15

Val Ile Asp Ser His Lys Arg Arg Glu Ile Leu Ser Arg Arg Pro Ser
20 25 30

Tyr Arg Lys Ile Leu Asn Glu Leu Ser Ser Asp Val Pro Gly Val Pro
35 40 45

Lys Ile Glu Glu Glu Arg Ser Glu Glu Glu Gly Thr Pro Pro Ser Ile
50 55 60

Ala Thr Met Ala Val Pro Thr Ser Ile Tyr Gln Thr Ser Thr Gly Gln
65 70 75 80

Tyr Ile Ala Ile Ala Gln Gly Gly Thr Ile Gln Ile Ser Asn Pro Gly
85 90 95

Ser Asp Gly Val Gln Gly Leu Gln Ala Leu Thr Met Thr Asn Ser Gly
100 105 110

Ala Pro Pro Pro Gly Ala Thr Ile Val Gln Tyr Ala Ala Gln Ser Ala
115 120 125

Asp Gly Thr Gln Gln Phe Phe Val Pro Gly Ser Gln Val Val Val Gln
130 135 140

Ala Ala Thr Gly Asp Met Pro Thr Tyr Gln Ile Arg Ala Pro Thr Ala
145 150 155 160

Ala Leu Pro Gln Gly Val Val Met Ala Ala Ser Pro Gly Ser Leu His

165

170

175

Ser Pro Gln Gln Leu Ala Glu Glu Ala Thr Arg Lys Arg Glu Leu Arg
 180 185 190

Leu Met Lys Asn Arg Glu Ala Ala Lys Glu Cys Arg Arg Arg Lys Lys
 195 200 205

Glu Tyr Val Lys Cys Leu Glu Ser Arg Val Ala Val Leu Glu Val Gln
 210 215 220

Asn Lys Lys Leu Ile Glu Glu Leu Glu Thr Leu Lys Asp Ile Cys Ser
 225 230 235 240

Pro Lys Thr Asp Tyr
 245

<210> 11351
 <211> 95
 <212> PRT
 <213> Homo sapiens

<220>
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 <223> /note="Payload ID: 2233"

<220>
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<220>
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 <223> /note="Gene Name:
 cAMP responsive element modulator"

<220>
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 <223> /note="ENSP ID: ENSP00000344365"

<400> 11351
 Met Pro Thr Tyr Gln Ile Arg Ala Pro Thr Ala Ala Leu Pro Gln Gly
 1 5 10 15

Val Val Met Ala Ala Ser Pro Gly Ser Leu His Ser Pro Gln Gln Leu
 20 25 30

Ala Glu Glu Ala Thr Arg Lys Arg Glu Leu Arg Leu Met Lys Asn Arg
 35 40 45

25421

Glu Ala Ala Arg Glu Cys Arg Arg Lys Lys Lys Glu Tyr Val Lys Cys
50 55 60

Leu Glu Asn Arg Val Ala Val Leu Glu Asn Gln Asn Lys Thr Leu Ile
65 70 75 80

Glu Glu Leu Lys Ala Leu Lys Asp Leu Tyr Cys His Lys Val Glu
85 90 95

<210> 11352

<211> 221

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2233"

<220>

<221> source

<223> /note="Gene Symbol: CREM"

<220>

<221> source

<223> /note="Gene Name:
cAMP responsive element modulator"

<220>

<221> source

<223> /note="Uniprot ID: Q03060"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000345384"

<400> 11352

Met Thr Met Glu Thr Val Glu Ser Gln His Asp Gly Ser Ile Thr Ala
1 5 10 15

Ser Leu Thr Glu Ser Lys Ser Ala His Val Gln Thr Gln Thr Gly Gln
20 25 30

Asn Ser Ile Pro Ala Leu Ala Gln Val Ala Ala Ile Ala Glu Thr Asp
35 40 45

Glu Ser Ala Glu Ser Glu Gly Val Ile Asp Ser His Lys Arg Arg Glu
50 55 60

Ile Leu Ser Arg Arg Pro Ser Tyr Arg Lys Ile Leu Asn Glu Leu Ser

25422

65		70		75		80									
Ser	Asp	Val	Pro	Gly	Val	Pro	Lys	Ile	Glu	Glu	Glu	Arg	Ser	Glu	Glu
				85					90					95	
Glu	Gly	Thr	Pro	Pro	Ser	Ile	Ala	Thr	Met	Ala	Val	Pro	Thr	Ser	Ile
			100					105					110		
Tyr	Gln	Thr	Ser	Thr	Gly	Gln	Tyr	Thr	Ala	Thr	Gly	Asp	Met	Pro	Thr
		115					120					125			
Tyr	Gln	Ile	Arg	Ala	Pro	Thr	Ala	Ala	Leu	Pro	Gln	Gly	Val	Val	Met
	130					135					140				
Ala	Ala	Ser	Pro	Gly	Ser	Leu	His	Ser	Pro	Gln	Gln	Leu	Ala	Glu	Glu
145					150					155					160
Ala	Thr	Arg	Lys	Arg	Glu	Leu	Arg	Leu	Met	Lys	Asn	Arg	Glu	Ala	Ala
				165					170					175	
Lys	Glu	Cys	Arg	Arg	Arg	Lys	Lys	Glu	Tyr	Val	Lys	Cys	Leu	Glu	Ser
			180					185					190		
Arg	Val	Ala	Val	Leu	Glu	Val	Gln	Asn	Lys	Lys	Leu	Ile	Glu	Glu	Leu
		195					200					205			
Glu	Thr	Leu	Lys	Asp	Ile	Cys	Ser	Pro	Lys	Thr	Asp	Tyr			
	210					215					220				

<210> 11353

<211> 248

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2233"

<220>

<221> source

<223> /note="Gene Symbol: CREM"

<220>

<221> source

<223> /note="Gene Name:
cAMP responsive element modulator"

25423

<220>
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 <223> /note="Uniprot ID: Q03060"

<220>
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 <223> /note="ENSP ID: ENSP00000346804"

<400> 11353

Met Ser Lys Cys Ala Arg Lys Lys Tyr Ile Lys Thr Asn Pro Arg Gln
 1 5 10 15

Met Thr Met Glu Thr Val Glu Ser Gln His Asp Gly Ser Ile Thr Ala
 20 25 30

Ser Leu Thr Glu Ser Lys Ser Ala His Val Gln Thr Gln Thr Gly Gln
 35 40 45

Asn Ser Ile Pro Ala Leu Ala Gln Val Ala Ala Ile Ala Glu Thr Asp
 50 55 60

Glu Ser Ala Glu Ser Glu Gly Val Ile Asp Ser His Lys Arg Arg Glu
 65 70 75 80

Ile Leu Ser Arg Arg Pro Ser Tyr Arg Lys Ile Leu Asn Glu Leu Ser
 85 90 95

Ser Asp Val Pro Gly Val Pro Lys Ile Glu Glu Glu Arg Ser Glu Glu
 100 105 110

Glu Gly Thr Pro Pro Ser Ile Ala Thr Met Ala Val Pro Thr Ser Ile
 115 120 125

Tyr Gln Thr Ser Thr Gly Gln Tyr Asn Glu Glu Thr Glu Leu Ala Pro
 130 135 140

Ser His Met Ala Ala Ala Thr Gly Asp Met Pro Thr Tyr Gln Ile Arg
 145 150 155 160

Ala Pro Thr Ala Ala Leu Pro Gln Gly Val Val Met Ala Ala Ser Pro
 165 170 175

Gly Ser Leu His Ser Pro Gln Gln Leu Ala Glu Glu Ala Thr Arg Lys
 180 185 190

Arg Glu Leu Arg Leu Met Lys Asn Arg Glu Ala Ala Arg Glu Cys Arg
195 200 205

Arg Lys Lys Lys Glu Tyr Val Lys Cys Leu Glu Asn Arg Val Ala Val
210 215 220

Leu Glu Asn Gln Asn Lys Thr Leu Ile Glu Glu Leu Lys Ala Leu Lys
225 230 235 240

Asp Leu Tyr Cys His Lys Val Glu
245

<210> 11354
<211> 108
<212> PRT
<213> Homo sapiens

<220>
<221> source
<223> /note="Payload ID: 2233"

<220>
<221> source
<223> /note="Gene Symbol: CREM"

<220>
<221> source
<223> /note="Gene Name:
cAMP responsive element modulator"

<220>
<221> source
<223> /note="Uniprot ID: Q03060"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000349387"

<400> 11354
Met Ala Val Thr Gly Asp Asp Thr Ala Ala Thr Gly Asp Met Pro Thr
1 5 10 15

Tyr Gln Ile Arg Ala Pro Thr Ala Ala Leu Pro Gln Gly Val Val Met
20 25 30

Ala Ala Ser Pro Gly Ser Leu His Ser Pro Gln Gln Leu Ala Glu Glu
35 40 45

Ala Thr Arg Lys Arg Glu Leu Arg Leu Met Lys Asn Arg Glu Ala Ala
50 55 60

Arg Glu Cys Arg Arg Lys Lys Lys Glu Tyr Val Lys Cys Leu Glu Asn
65 70 75 80

Arg Val Ala Val Leu Glu Asn Gln Asn Lys Thr Leu Ile Glu Glu Leu
85 90 95

Lys Ala Leu Lys Asp Leu Tyr Cys His Lys Val Glu
100 105

<210> 11355
<211> 270
<212> PRT
<213> Homo sapiens

<220>
<221> source
<223> /note="Payload ID: 2233"

<220>
<221> source
<223> /note="Gene Symbol: CREM"

<220>
<221> source
<223> /note="Gene Name:
cAMP responsive element modulator"

<220>
<221> source
<223> /note="Uniprot ID: Q03060"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000354593"

<400> 11355
Met Trp Trp His Gln His Asn Leu Cys Phe Arg Arg Pro Ile Glu Glu
1 5 10 15

Asp Tyr Ser Ser Gly Asp Val Glu Glu Lys Val Ala Ala Ile Ala Glu
20 25 30

Thr Asp Glu Ser Ala Glu Ser Glu Gly Val Ile Asp Ser His Lys Arg
35 40 45

Arg Glu Ile Leu Ser Arg Arg Pro Ser Tyr Arg Lys Ile Leu Asn Glu
50 55 60

Leu	Ser	Ser	Asp	Val	Pro	Gly	Val	Pro	Lys	Ile	Glu	Glu	Glu	Arg	Ser	65	70	75	80
Glu	Glu	Glu	Gly	Thr	Pro	Pro	Ser	Ile	Ala	Thr	Met	Ala	Val	Pro	Thr	85	90	95	
Ser	Ile	Tyr	Gln	Thr	Ser	Thr	Gly	Gln	Tyr	Ile	Ala	Ile	Ala	Gln	Gly	100	105	110	
Gly	Thr	Ile	Gln	Ile	Ser	Asn	Pro	Gly	Ser	Asp	Gly	Val	Gln	Gly	Leu	115	120	125	
Gln	Ala	Leu	Thr	Met	Thr	Asn	Ser	Gly	Ala	Pro	Pro	Pro	Gly	Ala	Thr	130	135	140	
Ile	Val	Gln	Tyr	Ala	Ala	Gln	Ser	Ala	Asp	Gly	Thr	Gln	Gln	Phe	Phe	145	150	155	160
Val	Pro	Gly	Ser	Gln	Val	Val	Val	Gln	Ala	Ala	Thr	Gly	Asp	Met	Pro	165	170	175	
Thr	Tyr	Gln	Ile	Arg	Ala	Pro	Thr	Ala	Ala	Leu	Pro	Gln	Gly	Val	Val	180	185	190	
Met	Ala	Ala	Ser	Pro	Gly	Ser	Leu	His	Ser	Pro	Gln	Gln	Leu	Ala	Glu	195	200	205	
Glu	Ala	Thr	Arg	Lys	Arg	Glu	Leu	Arg	Leu	Met	Lys	Asn	Arg	Glu	Ala	210	215	220	
Ala	Lys	Glu	Cys	Arg	Arg	Arg	Lys	Lys	Glu	Tyr	Val	Lys	Cys	Leu	Glu	225	230	235	240
Ser	Arg	Val	Ala	Val	Leu	Glu	Val	Gln	Asn	Lys	Lys	Leu	Ile	Glu	Glu	245	250	255	
Leu	Glu	Thr	Leu	Lys	Asp	Ile	Cys	Ser	Pro	Lys	Thr	Asp	Tyr			260	265	270	

<210> 11356

<211> 269

<212> PRT

<213> Homo sapiens

<220>
<221> source
<223> /note="Payload ID: 2233"

<220>
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<223> /note="Gene Symbol: CREM"

<220>
<221> source
<223> /note="Gene Name:
cAMP responsive element modulator"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000363853"

<400> 11356

Met Thr Met Glu Thr Val Glu Ser Gln His Asp Gly Ser Ile Thr Ala
1 5 10 15

Ser Leu Thr Glu Ser Lys Ser Ala His Val Gln Thr Gln Thr Gly Gln
20 25 30

Asn Ser Ile Pro Ala Leu Ala Gln Val Ser Val Ala Gly Ser Gly Thr
35 40 45

Arg Arg Gly Ser Pro Ala Val Thr Leu Val Gln Leu Pro Ser Gly Gln
50 55 60

Thr Ile His Val Gln Gly Val Ile Gln Thr Pro Gln Pro Trp Val Ile
65 70 75 80

Gln Ser Ser Glu Ile His Thr Val Gln Val Ala Ala Ile Ala Glu Thr
85 90 95

Asp Glu Ser Ala Glu Ser Glu Gly Val Ile Asp Ser His Lys Arg Arg
100 105 110

Glu Ile Leu Ser Arg Arg Pro Ser Tyr Arg Lys Ile Leu Asn Glu Leu
115 120 125

Ser Ser Asp Val Pro Gly Val Pro Lys Ile Glu Glu Glu Arg Ser Glu
130 135 140

Glu Glu Gly Thr Pro Pro Ser Ile Ala Thr Met Ala Val Pro Thr Ser
145 150 155 160

Ile Tyr Gln Thr Ser Thr Gly Gln Tyr Thr Ala Thr Gly Asp Met Pro
165 170 175

Thr Tyr Gln Ile Arg Ala Pro Thr Ala Ala Leu Pro Gln Gly Val Val
180 185 190

Met Ala Ala Ser Pro Gly Ser Leu His Ser Pro Gln Gln Leu Ala Glu
195 200 205

Glu Ala Thr Arg Lys Arg Glu Leu Arg Leu Met Lys Asn Arg Glu Ala
210 215 220

Ala Arg Glu Cys Arg Arg Lys Lys Lys Glu Tyr Val Lys Cys Leu Glu
225 230 235 240

Asn Arg Val Ala Val Leu Glu Asn Gln Asn Lys Thr Leu Ile Glu Glu
245 250 255

Leu Lys Ala Leu Lys Asp Leu Tyr Cys His Lys Val Glu
260 265

<210> 11357
<211> 137
<212> PRT
<213> Homo sapiens

<220>
<221> source
<223> /note="Payload ID: 2233"

<220>
<221> source
<223> /note="Gene Symbol: CREM"

<220>
<221> source
<223> /note="Gene Name:
cAMP responsive element modulator"

<220>
<221> source
<223> /note="Uniprot ID: Q03060"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000363858"

<400> 11357
Met Thr Met Glu Thr Val Glu Ser Gln His Asp Gly Ser Ile Thr Ala

1		5		10		15									
Ser	Leu	Thr	Glu	Ser	Lys	Ser	Ala	His	Val	Gln	Thr	Gln	Thr	Gly	Gln
			20					25					30		
Asn	Ser	Ile	Pro	Ala	Leu	Ala	Gln	Val	Ala	Ala	Ile	Ala	Glu	Thr	Asp
		35					40					45			
Glu	Ser	Ala	Glu	Ser	Glu	Gly	Val	Ile	Asp	Ser	His	Lys	Arg	Arg	Glu
	50					55					60				
Ile	Leu	Ser	Arg	Arg	Pro	Ser	Tyr	Arg	Lys	Ile	Leu	Asn	Glu	Leu	Ser
65					70					75					80
Ser	Asp	Val	Pro	Gly	Val	Pro	Lys	Ile	Glu	Glu	Glu	Arg	Ser	Glu	Glu
				85					90					95	
Glu	Gly	Thr	Pro	Pro	Ser	Ile	Ala	Thr	Met	Ala	Val	Pro	Thr	Ser	Ile
			100					105					110		
Tyr	Gln	Thr	Ser	Thr	Gly	Gln	Tyr	Ser	Met	Tyr	Ala	Ala	Ile	Arg	Tyr
		115					120					125			
Asp	Thr	Val	Leu	Ala	Leu	Ser	Leu	Leu							
	130					135									

<210> 11358
 <211> 221
 <212> PRT
 <213> Homo sapiens

<220>
 <221> source
 <223> /note="Payload ID: 2233"

<220>
 <221> source
 <223> /note="Gene Symbol: CREM"

<220>
 <221> source
 <223> /note="Gene Name:
 cAMP responsive element modulator"

<220>
 <221> source
 <223> /note="Uniprot ID: Q03060"

<220>
 <221> source
 <223> /note="ENSP ID: ENSP00000363860"

<400> 11358

Met Thr Met Glu Thr Val Glu Ser Gln His Asp Gly Ser Ile Thr Ala
 1 5 10 15

Ser Leu Thr Glu Ser Lys Ser Ala His Val Gln Thr Gln Thr Gly Gln
 20 25 30

Asn Ser Ile Pro Ala Leu Ala Gln Val Ala Ala Ile Ala Glu Thr Asp
 35 40 45

Glu Ser Ala Glu Ser Glu Gly Val Ile Asp Ser His Lys Arg Arg Glu
 50 55 60

Ile Leu Ser Arg Arg Pro Ser Tyr Arg Lys Ile Leu Asn Glu Leu Ser
 65 70 75 80

Ser Asp Val Pro Gly Val Pro Lys Ile Glu Glu Glu Arg Ser Glu Glu
 85 90 95

Glu Gly Thr Pro Pro Ser Ile Ala Thr Met Ala Val Pro Thr Ser Ile
 100 105 110

Tyr Gln Thr Ser Thr Gly Gln Tyr Thr Ala Thr Gly Asp Met Pro Thr
 115 120 125

Tyr Gln Ile Arg Ala Pro Thr Ala Ala Leu Pro Gln Gly Val Val Met
 130 135 140

Ala Ala Ser Pro Gly Ser Leu His Ser Pro Gln Gln Leu Ala Glu Glu
 145 150 155 160

Ala Thr Arg Lys Arg Glu Leu Arg Leu Met Lys Asn Arg Glu Ala Ala
 165 170 175

Lys Glu Cys Arg Arg Arg Lys Lys Glu Tyr Val Lys Cys Leu Glu Ser
 180 185 190

Arg Val Ala Val Leu Glu Val Gln Asn Lys Lys Leu Ile Glu Glu Leu
 195 200 205

Glu	Thr	Leu	Lys	Asp	Ile	Cys	Ser	Pro	Lys	Thr	Asp	Tyr
210						215					220	

<210> 11359

<211> 236

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2233"

<220>

<221> source

<223> /note="Gene Symbol: CREM"

<220>

<221> source

<223> /note="Gene Name:
cAMP responsive element modulator"

<220>

<221> source

<223> /note="Uniprot ID: Q03060"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000363866"

<400> 11359

Met	Ser	Lys	Cys	Ala	Arg	Lys	Lys	Tyr	Ile	Lys	Thr	Asn	Pro	Arg	Gln
1				5					10					15	

Met	Thr	Met	Glu	Thr	Val	Glu	Ser	Gln	His	Asp	Gly	Ser	Ile	Thr	Ala
			20					25					30		

Ser	Leu	Thr	Glu	Ser	Lys	Ser	Ala	His	Val	Gln	Thr	Gln	Thr	Gly	Gln
		35					40					45			

Asn	Ser	Ile	Pro	Ala	Leu	Ala	Gln	Val	Ala	Ala	Ile	Ala	Glu	Thr	Asp
	50					55					60				

Glu	Ser	Ala	Glu	Ser	Glu	Gly	Val	Ile	Asp	Ser	His	Lys	Arg	Arg	Glu
65					70					75					80

Ile	Leu	Ser	Arg	Arg	Pro	Ser	Tyr	Arg	Lys	Ile	Leu	Asn	Glu	Leu	Ser
				85					90					95	

Ser	Asp	Val	Pro	Gly	Val	Pro	Lys	Ile	Glu	Glu	Glu	Arg	Ser	Glu	Glu
			100					105						110	

Glu Gly Thr Pro Pro Ser Ile Ala Thr Met Ala Val Pro Thr Ser Ile
115 120 125

Tyr Gln Thr Ser Thr Gly Gln Tyr Thr Ala Thr Gly Asp Met Pro Thr
130 135 140

Tyr Gln Ile Arg Ala Pro Thr Ala Ala Leu Pro Gln Gly Val Val Met
145 150 155 160

Ala Ala Ser Pro Gly Ser Leu His Ser Pro Gln Gln Leu Ala Glu Glu
165 170 175

Ala Thr Arg Lys Arg Glu Leu Arg Leu Met Lys Asn Arg Glu Ala Ala
180 185 190

Arg Glu Cys Arg Arg Lys Lys Lys Glu Tyr Val Lys Cys Leu Glu Asn
195 200 205

Arg Val Ala Val Leu Glu Asn Gln Asn Lys Thr Leu Ile Glu Glu Leu
210 215 220

Lys Ala Leu Lys Asp Leu Tyr Cys His Lys Val Glu
225 230 235

<210> 11360
<211> 282
<212> PRT
<213> Homo sapiens

<220>
<221> source
<223> /note="Payload ID: 2233"

<220>
<221> source
<223> /note="Gene Symbol: CREM"

<220>
<221> source
<223> /note="Gene Name:
cAMP responsive element modulator"

<220>
<221> source
<223> /note="Uniprot ID: Q03060"

<220>

<221> source
<223> /note="ENSP ID: ENSP00000379225"

<400> 11360

Met Trp Trp His Gln His Asn Leu Cys Phe Arg Arg Pro Ile Glu Glu
1 5 10 15

Asp Tyr Ser Ser Gly Asp Val Glu Glu Lys Val Ala Ala Ile Ala Glu
20 25 30

Thr Asp Glu Ser Ala Glu Ser Glu Gly Val Ile Asp Ser His Lys Arg
35 40 45

Arg Glu Ile Leu Ser Arg Arg Pro Ser Tyr Arg Lys Ile Leu Asn Glu
50 55 60

Leu Ser Ser Asp Val Pro Gly Val Pro Lys Ile Glu Glu Glu Arg Ser
65 70 75 80

Glu Glu Glu Gly Thr Pro Pro Ser Ile Ala Thr Met Ala Val Pro Thr
85 90 95

Ser Ile Tyr Gln Thr Ser Thr Gly Gln Tyr Ile Ala Ile Ala Gln Gly
100 105 110

Gly Thr Ile Gln Ile Ser Asn Pro Gly Ser Asp Gly Val Gln Gly Leu
115 120 125

Gln Ala Leu Thr Met Thr Asn Ser Gly Ala Pro Pro Pro Gly Ala Thr
130 135 140

Ile Val Gln Tyr Ala Ala Gln Ser Ala Asp Gly Thr Gln Gln Phe Phe
145 150 155 160

Val Pro Gly Ser Gln Val Val Val Gln Asp Glu Glu Thr Glu Leu Ala
165 170 175

Pro Ser His Met Ala Ala Ala Thr Gly Asp Met Pro Thr Tyr Gln Ile
180 185 190

Arg Ala Pro Thr Ala Ala Leu Pro Gln Gly Val Val Met Ala Ala Ser
195 200 205

Pro Gly Ser Leu His Ser Pro Gln Gln Leu Ala Glu Glu Ala Thr Arg

25434

210 215 220
 Lys Arg Glu Leu Arg Leu Met Lys Asn Arg Glu Ala Ala Lys Glu Cys
 225 230 235 240
 Arg Arg Arg Lys Lys Glu Tyr Val Lys Cys Leu Glu Ser Arg Val Ala
 245 250 255
 Val Leu Glu Val Gln Asn Lys Lys Leu Ile Glu Glu Leu Glu Thr Leu
 260 265 270
 Lys Asp Ile Cys Ser Pro Lys Thr Asp Tyr
 275 280

<210> 11361
 <211> 345
 <212> PRT
 <213> Homo sapiens

<220>
 <221> source
 <223> /note="Payload ID: 2233"

<220>
 <221> source
 <223> /note="Gene Symbol: CREM"

<220>
 <221> source
 <223> /note="Gene Name:
 cAMP responsive element modulator"

<220>
 <221> source
 <223> /note="ENSP ID: ENSP00000393538"

<400> 11361
 Met Thr Met Glu Thr Val Glu Ser Gln His Asp Gly Ser Ile Thr Ala
 1 5 10 15

Ser Leu Thr Glu Ser Lys Ser Ala His Val Gln Thr Gln Thr Gly Gln
 20 25 30

Asn Ser Ile Pro Ala Leu Ala Gln Val Ser Val Ala Gly Ser Gly Thr
 35 40 45

Arg Arg Gly Ser Pro Ala Val Thr Leu Val Gln Leu Pro Ser Gly Gln
 50 55 60

Thr	Ile	His	Val	Gln	Gly	Val	Ile	Gln	Thr	Pro	Gln	Pro	Trp	Val	Ile	
65					70					75					80	
Gln	Ser	Ser	Glu	Ile	His	Thr	Val	Gln	Val	Ala	Ala	Ile	Ala	Glu	Thr	
				85					90					95		
Asp	Glu	Ser	Ala	Glu	Ser	Glu	Gly	Val	Ile	Asp	Ser	His	Lys	Arg	Arg	
			100					105					110			
Glu	Ile	Leu	Ser	Arg	Arg	Pro	Ser	Tyr	Arg	Lys	Ile	Leu	Asn	Glu	Leu	
		115					120					125				
Ser	Ser	Asp	Val	Pro	Gly	Val	Pro	Lys	Ile	Glu	Glu	Glu	Arg	Ser	Glu	
	130					135					140					
Glu	Glu	Gly	Thr	Pro	Pro	Ser	Ile	Ala	Thr	Met	Ala	Val	Pro	Thr	Ser	
145					150					155					160	
Ile	Tyr	Gln	Thr	Ser	Thr	Gly	Gln	Tyr	Ile	Ala	Ile	Ala	Gln	Gly	Gly	
				165					170					175		
Thr	Ile	Gln	Ile	Ser	Asn	Pro	Gly	Ser	Asp	Gly	Val	Gln	Gly	Leu	Gln	
			180					185					190			
Ala	Leu	Thr	Met	Thr	Asn	Ser	Gly	Ala	Pro	Pro	Pro	Gly	Ala	Thr	Ile	
		195					200					205				
Val	Gln	Tyr	Ala	Ala	Gln	Ser	Ala	Asp	Gly	Thr	Gln	Gln	Phe	Phe	Val	
	210					215					220					
Pro	Gly	Ser	Gln	Val	Val	Val	Gln	Asp	Glu	Glu	Thr	Glu	Leu	Ala	Pro	
225					230					235					240	
Ser	His	Met	Ala	Ala	Ala	Thr	Gly	Asp	Met	Pro	Thr	Tyr	Gln	Ile	Arg	
			245					250						255		
Ala	Pro	Thr	Ala	Ala	Leu	Pro	Gln	Gly	Val	Val	Met	Ala	Ala	Ser	Pro	
			260					265					270			
Gly	Ser	Leu	His	Ser	Pro	Gln	Gln	Leu	Ala	Glu	Glu	Ala	Thr	Arg	Lys	
		275					280					285				

Arg Glu Leu Arg Leu Met Lys Asn Arg Glu Ala Ala Lys Glu Cys Arg
 290 295 300

Arg Arg Lys Lys Glu Tyr Val Lys Cys Leu Glu Ser Arg Val Ala Val
 305 310 315 320

Leu Glu Val Gln Asn Lys Lys Leu Ile Glu Glu Leu Glu Thr Leu Lys
 325 330 335

Asp Ile Cys Ser Pro Lys Thr Asp Tyr
 340 345

<210> 11362
 <211> 156
 <212> PRT
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<220>
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<220>
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 cAMP responsive element modulator"

<220>
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<400> 11362
 Met Ser Lys Cys Ala Arg Lys Lys Tyr Ile Lys Thr Asn Pro Arg Gln
 1 5 10 15

Met Thr Met Glu Thr Val Glu Ser Gln His Asp Gly Ser Ile Thr Ala
 20 25 30

Ser Leu Thr Glu Ser Lys Ser Ala His Val Gln Thr Gln Thr Gly Gln
 35 40 45

Asn Ser Ile Pro Ala Leu Ala Gln Val Ala Ala Ile Ala Glu Thr Asp
 50 55 60

Glu Ser Ala Glu Ser Glu Gly Val Ile Asp Ser His Lys Arg Arg Glu
 65 70 75 80

Ile Leu Ser Arg Arg Pro Ser Tyr Arg Lys Ile Leu Asn Glu Leu Ser
85 90 95

Ser Asp Val Pro Gly Val Pro Lys Ile Glu Glu Glu Arg Ser Glu Glu
100 105 110

Glu Gly Thr Pro Pro Ser Ile Ala Thr Met Ala Val Pro Thr Ser Ile
115 120 125

Tyr Gln Thr Ser Thr Gly Gln Tyr Ile Ala Ile Ala Gln Gly Gly Thr
130 135 140

Ile Gln Ile Ser Asn Pro Gly Ser Asp Gly Val Gln
145 150 155

<210> 11363

<211> 248

<212> PRT

<213> Homo sapiens

<220>

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<223> /note="Payload ID: 2233"

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<223> /note="Gene Name:
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<220>

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<223> /note="Uniprot ID: Q03060"

<220>

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<223> /note="ENSP ID: ENSP00000409220"

<400> 11363

Met Ser Lys Cys Ala Arg Lys Lys Tyr Ile Lys Thr Asn Pro Arg Gln
1 5 10 15

Met Thr Met Glu Thr Val Glu Ser Gln His Asp Gly Ser Ile Thr Ala
20 25 30

Ser Leu Thr Glu Ser Lys Ser Ala His Val Gln Thr Gln Thr Gly Gln
 35 40 45
 Asn Ser Ile Pro Ala Leu Ala Gln Val Ala Ala Ile Ala Glu Thr Asp
 50 55 60
 Glu Ser Ala Glu Ser Glu Gly Val Ile Asp Ser His Lys Arg Arg Glu
 65 70 75 80
 Ile Leu Ser Arg Arg Pro Ser Tyr Arg Lys Ile Leu Asn Glu Leu Ser
 85 90 95
 Ser Asp Val Pro Gly Val Pro Lys Ile Glu Glu Glu Arg Ser Glu Glu
 100 105 110
 Glu Gly Thr Pro Pro Ser Ile Ala Thr Met Ala Val Pro Thr Ser Ile
 115 120 125
 Tyr Gln Thr Ser Thr Gly Gln Tyr Asn Glu Glu Thr Glu Leu Ala Pro
 130 135 140
 Ser His Met Ala Ala Ala Thr Gly Asp Met Pro Thr Tyr Gln Ile Arg
 145 150 155 160
 Ala Pro Thr Ala Ala Leu Pro Gln Gly Val Val Met Ala Ala Ser Pro
 165 170 175
 Gly Ser Leu His Ser Pro Gln Gln Leu Ala Glu Glu Ala Thr Arg Lys
 180 185 190
 Arg Glu Leu Arg Leu Met Lys Asn Arg Glu Ala Ala Arg Glu Cys Arg
 195 200 205
 Arg Lys Lys Lys Glu Tyr Val Lys Cys Leu Glu Asn Arg Val Ala Val
 210 215 220
 Leu Glu Asn Gln Asn Lys Thr Leu Ile Glu Glu Leu Lys Ala Leu Lys
 225 230 235 240
 Asp Leu Tyr Cys His Lys Val Glu
 245

<210> 11364

25439

<211> 62
<212> PRT
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<220>
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<220>
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<220>
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<400> 11364
Met Thr Met Glu Thr Val Glu Ser Gln His Asp Gly Ser Ile Thr Ala
1 5 10 15

Ser Leu Thr Glu Ser Lys Ser Ala His Val Gln Thr Gln Thr Gly Gln
20 25 30

Asn Ser Ile Pro Ala Leu Ala Gln Leu Pro Leu Val Thr Cys Gln Leu
35 40 45

Thr Arg Ser Glu Leu Leu Leu Leu Cys His Arg Glu Trp
50 55 60

<210> 11365
<211> 78
<212> PRT
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<220>
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<223> /note="Gene Name:
cAMP responsive element modulator"

<220>

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<400> 11365
Met Ala Val Pro Thr Ser Ile Tyr Gln Thr Ser Thr Gly Gln Tyr Ile
1 5 10 15

Ala Ile Ala Gln Gly Gly Thr Ile Gln Ile Ser Asn Pro Gly Ser Asp
20 25 30

Gly Val Gln Gly Leu Gln Ala Leu Thr Met Thr Asn Ser Gly Ala Pro
35 40 45

Pro Pro Gly Ala Thr Ile Val Gln Tyr Ala Ala Gln Ser Ala Asp Gly
50 55 60

Thr Gln Gln Phe Phe Val Pro Gly Ser Gln Val Val Val Gln
65 70 75

<210> 11366
<211> 219
<212> PRT
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<220>
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<220>
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<220>
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<223> /note="Gene Name:
cAMP responsive element modulator"

<220>
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<400> 11366
Met Trp Trp His Gln His Asn Leu Cys Phe Arg Arg Pro Ile Glu Glu
1 5 10 15

Asp Tyr Ser Ser Gly Asp Val Glu Glu Lys Val Ala Ala Ile Ala Glu
20 25 30

Thr Asp Glu Ser Ala Glu Ser Glu Gly Val Ile Asp Ser His Lys Arg
35 40 45

Arg Glu Ile Leu Ser Arg Arg Pro Ser Tyr Arg Lys Ile Leu Asn Glu
 50 55 60
 Leu Ser Ser Asp Val Pro Gly Val Pro Lys Ile Glu Glu Glu Arg Ser
 65 70 75 80
 Glu Glu Glu Gly Thr Pro Pro Ser Ile Ala Thr Met Ala Val Pro Thr
 85 90 95
 Ser Ile Tyr Gln Thr Ser Thr Gly Gln Tyr Asn Glu Glu Thr Glu Leu
 100 105 110
 Ala Pro Ser His Met Ala Ala Ala Thr Gly Asp Met Pro Thr Tyr Gln
 115 120 125
 Ile Arg Ala Pro Thr Ala Ala Leu Pro Gln Gly Val Val Met Ala Ala
 130 135 140
 Ser Pro Gly Ser Leu His Ser Pro Gln Gln Leu Ala Glu Glu Ala Thr
 145 150 155 160
 Arg Lys Arg Glu Leu Arg Leu Met Lys Asn Arg Glu Ala Ala Lys Glu
 165 170 175
 Cys Arg Arg Arg Lys Lys Glu Tyr Val Lys Cys Leu Glu Ser Arg Val
 180 185 190
 Ala Val Leu Glu Val Gln Asn Lys Lys Leu Ile Glu Glu Leu Glu Thr
 195 200 205
 Leu Lys Asp Ile Cys Ser Pro Lys Thr Asp Tyr
 210 215

<210> 11367

<211> 113

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2233"

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<223> /note="Gene Symbol: CREM"

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<223> /note="Gene Name:
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<220>
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<223> /note="Uniprot ID: Q03060"

<220>
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<223> /note="ENSP ID: ENSP00000417327"

<400> 11367
Met Asn Arg Thr Gln Glu Leu Ser Gly Gln Leu Ser Ala Ala Thr Gly
1          5          10          15

Asp Met Pro Thr Tyr Gln Ile Arg Ala Pro Thr Ala Ala Leu Pro Gln
          20          25          30

Gly Val Val Met Ala Ala Ser Pro Gly Ser Leu His Ser Pro Gln Gln
          35          40          45

Leu Ala Glu Glu Ala Thr Arg Lys Arg Glu Leu Arg Leu Met Lys Asn
          50          55          60

Arg Glu Ala Ala Lys Glu Cys Arg Arg Arg Lys Lys Glu Tyr Val Lys
65          70          75          80

Cys Leu Glu Ser Arg Val Ala Val Leu Glu Val Gln Asn Lys Lys Leu
          85          90          95

Ile Glu Glu Leu Glu Thr Leu Lys Asp Ile Cys Ser Pro Lys Thr Asp
          100          105          110

Tyr

<210> 11368
<211> 115
<212> PRT
<213> Homo sapiens

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<220>
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<220>
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<223> /note="Gene Name:
      cAMP responsive element modulator"

<220>
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<400> 11368
Met Ala Val Pro Thr Ser Ile Tyr Gln Thr Ser Thr Gly Gln Tyr Ile
1          5          10          15

Ala Ile Ala Gln Gly Gly Thr Ile Gln Ile Ser Asn Pro Gly Ser Asp
          20          25          30

Gly Val Gln Gly Leu Gln Ala Leu Thr Met Thr Asn Ser Gly Ala Pro
          35          40          45

Pro Pro Gly Ala Thr Ile Val Gln Tyr Ala Ala Gln Ser Ala Asp Gly
          50          55          60

Thr Gln Gln Phe Phe Val Pro Gly Ser Gln Val Val Val Gln Ala Ala
65          70          75          80

Thr Gly Asp Met Pro Thr Tyr Gln Ile Arg Ala Pro Thr Ala Ala Leu
          85          90          95

Pro Gln Gly Val Val Met Ala Ala Ser Pro Gly Ser Leu His Ser Pro
          100          105          110

Gln Gln Leu
          115

<210> 11369
<211> 109
<212> PRT
<213> Homo sapiens

<220>
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<223> /note="Gene Symbol: CREM"

<220>
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<220>
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<220>
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<223> /note="ENSP ID: ENSP00000417460"

<400> 11369
Met Ala Val Thr Gly Asp Asp Thr Ala Ala Thr Gly Asp Met Pro Thr
1          5          10          15

Tyr Gln Ile Arg Ala Pro Thr Ala Ala Leu Pro Gln Gly Val Val Met
          20          25          30

Ala Ala Ser Pro Gly Ser Leu His Ser Pro Gln Gln Leu Ala Glu Glu
          35          40          45

Ala Thr Arg Lys Arg Glu Leu Arg Leu Met Lys Asn Arg Glu Ala Ala
          50          55          60

Lys Glu Cys Arg Arg Arg Lys Lys Glu Tyr Val Lys Cys Leu Glu Ser
65          70          75          80

Arg Val Ala Val Leu Glu Val Gln Asn Lys Lys Leu Ile Glu Glu Leu
          85          90          95

Glu Thr Leu Lys Asp Ile Cys Ser Pro Lys Thr Asp Tyr
          100          105

<210> 11370
<211> 112
<212> PRT
<213> Homo sapiens

<220>
<221> source
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<220>
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<220>
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<220>
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<223> /note="Uniprot ID: Q03060"

<220>
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<223> /note="ENSP ID: ENSP00000417562"

<400> 11370
Met Asn Arg Thr Gln Glu Leu Ser Gly Gln Leu Ser Ala Ala Thr Gly
1          5          10          15

Asp Met Pro Thr Tyr Gln Ile Arg Ala Pro Thr Ala Ala Leu Pro Gln
          20          25          30

Gly Val Val Met Ala Ala Ser Pro Gly Ser Leu His Ser Pro Gln Gln
          35          40          45

Leu Ala Glu Glu Ala Thr Arg Lys Arg Glu Leu Arg Leu Met Lys Asn
          50          55          60

Arg Glu Ala Ala Arg Glu Cys Arg Arg Lys Lys Lys Glu Tyr Val Lys
65          70          75          80

Cys Leu Glu Asn Arg Val Ala Val Leu Glu Asn Gln Asn Lys Thr Leu
          85          90          95

Ile Glu Glu Leu Lys Ala Leu Lys Asp Leu Tyr Cys His Lys Val Glu
          100          105          110

<210> 11371
<211> 121
<212> PRT
<213> Homo sapiens

<220>
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<220>
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<220>
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<223> /note="Gene Name:
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<220>
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<223> /note="Uniprot ID: Q03060"

<220>
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<223> /note="ENSP ID: ENSP00000417807"

<400> 11371
Met Ala Val Thr Gly Asp Asp Thr Asp Glu Glu Thr Glu Leu Ala Pro
1          5          10          15

Ser His Met Ala Ala Ala Thr Gly Asp Met Pro Thr Tyr Gln Ile Arg
          20          25          30

Ala Pro Thr Ala Ala Leu Pro Gln Gly Val Val Met Ala Ala Ser Pro
          35          40          45

Gly Ser Leu His Ser Pro Gln Gln Leu Ala Glu Glu Ala Thr Arg Lys
          50          55          60

Arg Glu Leu Arg Leu Met Lys Asn Arg Glu Ala Ala Lys Glu Cys Arg
65          70          75          80

Arg Arg Lys Lys Glu Tyr Val Lys Cys Leu Glu Ser Arg Val Ala Val
          85          90          95

Leu Glu Val Gln Asn Lys Lys Leu Ile Glu Glu Leu Glu Thr Leu Lys
          100          105          110

Asp Ile Cys Ser Pro Lys Thr Asp Tyr
          115          120

<210> 11372
<211> 138
<212> PRT
<213> Homo sapiens

<220>
<221> source
<223> /note="Payload ID: 2233"

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<220>
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 <223> /note="Gene Name:
 cAMP responsive element modulator"

<220>
 <221> source
 <223> /note="Uniprot ID: Q03060"

<220>
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 <223> /note="ENSP ID: ENSP00000418336"

<400> 11372
 Met Thr Asn Ser Gly Ala Pro Pro Pro Gly Ala Thr Ile Val Gln Tyr
 1 5 10 15

Ala Ala Gln Ser Ala Asp Gly Thr Gln Gln Phe Phe Val Pro Gly Ser
 20 25 30

Gln Val Val Val Gln Ala Ala Thr Gly Asp Met Pro Thr Tyr Gln Ile
 35 40 45

Arg Ala Pro Thr Ala Ala Leu Pro Gln Gly Val Val Met Ala Ala Ser
 50 55 60

Pro Gly Ser Leu His Ser Pro Gln Gln Leu Ala Glu Glu Ala Thr Arg
 65 70 75 80

Lys Arg Glu Leu Arg Leu Met Lys Asn Arg Glu Ala Ala Lys Glu Cys
 85 90 95

Arg Arg Arg Lys Lys Glu Tyr Val Lys Cys Leu Glu Ser Arg Val Ala
 100 105 110

Val Leu Glu Val Gln Asn Lys Lys Leu Ile Glu Glu Leu Glu Thr Leu
 115 120 125

Lys Asp Ile Cys Ser Pro Lys Thr Asp Tyr
 130 135

<210> 11373
 <211> 53
 <212> PRT
 <213> Homo sapiens

<220>
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<223> /note="Payload ID: 2233"

<220>

<221> source

<223> /note="Gene Symbol: CREM"

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<221> source

<223> /note="Gene Name:
cAMP responsive element modulator"

<220>

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<223> /note="ENSP ID: ENSP00000418450"

<220>

<221> MOD_RES

<222> (1)..(1)

<223> Any amino acid

<400> 11373

Xaa	Asp	Gly	Ser	Ile	Thr	Ala	Ser	Leu	Thr	Glu	Ser	Lys	Ser	Ala	His
1				5					10					15	

Val	Gln	Thr	Gln	Thr	Gly	Gln	Asn	Ser	Ile	Pro	Ala	Leu	Ala	Gln	Leu
			20					25					30		

Pro	Leu	Val	Thr	Cys	Gln	Leu	Thr	Arg	Ser	Glu	Leu	Leu	Leu	Leu	Leu
		35					40					45			

Cys	His	Arg	Glu	Trp
	50			

<210> 11374

<211> 186

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2233"

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<221> source

<223> /note="Gene Symbol: CREM"

<220>

<221> source

<223> /note="Gene Name:
cAMP responsive element modulator"

<220>

<221> source
<223> /note="ENSP ID: ENSP00000418798"

<400> 11374

Met Thr Met Glu Thr Val Glu Ser Gln His Asp Gly Ser Ile Thr Ala
1 5 10 15

Ser Leu Thr Glu Ser Lys Ser Ala His Val Gln Thr Gln Thr Gly Gln
20 25 30

Asn Ser Ile Pro Ala Leu Ala Gln Val Ala Ala Ile Ala Glu Thr Asp
35 40 45

Glu Ser Ala Glu Ser Glu Gly Val Ile Asp Ser His Lys Arg Arg Glu
50 55 60

Ile Leu Ser Arg Arg Pro Ser Tyr Arg Lys Ile Leu Asn Glu Leu Ser
65 70 75 80

Ser Asp Val Pro Gly Val Pro Lys Ile Glu Glu Glu Arg Ser Glu Glu
85 90 95

Glu Gly Thr Pro Pro Ser Ile Ala Thr Met Ala Val Pro Thr Ser Ile
100 105 110

Tyr Gln Thr Ser Thr Gly Gln Tyr Thr Ala Thr Gly Asp Met Pro Thr
115 120 125

Tyr Gln Ile Arg Ala Pro Thr Ala Ala Leu Pro Gln Gly Val Val Met
130 135 140

Ala Ala Ser Pro Gly Ser Leu His Ser Pro Gln Gln Leu Ala Glu Glu
145 150 155 160

Ala Thr Arg Lys Arg Glu Leu Arg Leu Met Lys Asn Arg Glu Ala Ala
165 170 175

Lys Glu Cys Arg Arg Arg Lys Lys Glu Tyr
180 185

<210> 11375

<211> 96

<212> PRT

<213> Homo sapiens

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<220>
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<223> /note="Payload ID: 2233"

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<220>
<221> source
<223> /note="Gene Name:
      cAMP responsive element modulator"

<220>
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<223> /note="ENSP ID: ENSP00000419018"

<400> 11375
Met Pro Thr Tyr Gln Ile Arg Ala Pro Thr Ala Ala Leu Pro Gln Gly
1          5          10          15

Val Val Met Ala Ala Ser Pro Gly Ser Leu His Ser Pro Gln Gln Leu
          20          25          30

Ala Glu Glu Ala Thr Arg Lys Arg Glu Leu Arg Leu Met Lys Asn Arg
          35          40          45

Glu Ala Ala Lys Glu Cys Arg Arg Arg Lys Lys Glu Tyr Val Lys Cys
          50          55          60

Leu Glu Ser Arg Val Ala Val Leu Glu Val Gln Asn Lys Lys Leu Ile
65          70          75          80

Glu Glu Leu Glu Thr Leu Lys Asp Ile Cys Ser Pro Lys Thr Asp Tyr
          85          90          95

<210> 11376
<211> 102
<212> PRT
<213> Homo sapiens

<220>
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<220>
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<223> /note="Gene Name:
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<220>

<221> source

<223> /note="Uniprot ID: Q03060"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000419075"

<400> 11376

Met Ala Ala Ala Thr Gly Asp Met Pro Thr Tyr Gln Ile Arg Ala Pro
1 5 10 15

Thr Ala Ala Leu Pro Gln Gly Val Val Met Ala Ala Ser Pro Gly Ser
20 25 30

Leu His Ser Pro Gln Gln Leu Ala Glu Glu Ala Thr Arg Lys Arg Glu
35 40 45

Leu Arg Leu Met Lys Asn Arg Glu Ala Ala Arg Glu Cys Arg Arg Lys
50 55 60

Lys Lys Glu Tyr Val Lys Cys Leu Glu Asn Arg Val Ala Val Leu Glu
65 70 75 80

Asn Gln Asn Lys Thr Leu Ile Glu Glu Leu Lys Ala Leu Lys Asp Leu
85 90 95

Tyr Cys His Lys Val Glu
100

<210> 11377

<211> 193

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2233"

<220>

<221> source

<223> /note="Gene Symbol: CREM"

<220>

<221> source

<223> /note="Gene Name:
cAMP responsive element modulator"

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<220>
<221> source
<223> /note="ENSP ID: ENSP00000419684"

<400> 11377
Val Ala Ala Ile Ala Glu Thr Asp Glu Ser Ala Glu Ser Glu Gly Val
1          5          10          15

Ile Asp Ser His Lys Arg Arg Glu Ile Leu Ser Arg Arg Pro Ser Tyr
          20          25          30

Arg Lys Ile Leu Asn Glu Leu Ser Ser Asp Val Pro Gly Val Pro Lys
          35          40          45

Ile Glu Glu Glu Arg Ser Glu Glu Glu Gly Thr Pro Pro Ser Ile Ala
50          55          60

Thr Met Ala Val Pro Thr Ser Ile Tyr Gln Thr Ser Thr Gly Gln Tyr
65          70          75          80

Asn Glu Glu Thr Glu Leu Ala Pro Ser His Met Ala Ala Ala Thr Gly
          85          90          95

Asp Met Pro Thr Tyr Gln Ile Arg Ala Pro Thr Ala Ala Leu Pro Gln
          100          105          110

Gly Val Val Met Ala Ala Ser Pro Gly Ser Leu His Ser Pro Gln Gln
          115          120          125

Leu Ala Glu Glu Ala Thr Arg Lys Arg Glu Leu Arg Leu Met Lys Asn
130          135          140

Arg Glu Ala Ala Lys Glu Cys Arg Arg Arg Lys Lys Glu Tyr Val Lys
145          150          155          160

Cys Leu Glu Ser Arg Val Ala Val Leu Glu Val Gln Asn Lys Lys Leu
          165          170          175

Ile Glu Glu Leu Glu Thr Leu Lys Asp Ile Cys Ser Pro Lys Thr Asp
          180          185          190

Tyr

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<210> 11378
<211> 125
<212> PRT
<213> Homo sapiens

<220>
<221> source
<223> /note="Payload ID: 2233"

<220>
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<220>
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<223> /note="Gene Name:
      cAMP responsive element modulator"

<220>
<221> source
<223> /note="Uniprot ID: Q03060"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000419810"

<400> 11378
Met Asn Arg Thr Gln Glu Leu Ser Gly Gln Leu Ser Asp Glu Glu Thr
1          5          10          15

Glu Leu Ala Pro Ser His Met Ala Ala Thr Gly Asp Met Pro Thr
          20          25          30

Tyr Gln Ile Arg Ala Pro Thr Ala Ala Leu Pro Gln Gly Val Val Met
          35          40          45

Ala Ala Ser Pro Gly Ser Leu His Ser Pro Gln Gln Leu Ala Glu Glu
          50          55          60

Ala Thr Arg Lys Arg Glu Leu Arg Leu Met Lys Asn Arg Glu Ala Ala
65          70          75          80

Lys Glu Cys Arg Arg Arg Lys Lys Glu Tyr Val Lys Cys Leu Glu Ser
          85          90          95

Arg Val Ala Val Leu Glu Val Gln Asn Lys Lys Leu Ile Glu Glu Leu
          100          105          110

Glu Thr Leu Lys Asp Ile Cys Ser Pro Lys Thr Asp Tyr

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115

120

125

<210> 11379

<211> 137

<212> PRT

<213> Homo sapiens

<220>

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<223> /note="Payload ID: 2233"

<220>

<221> source

<223> /note="Gene Symbol: CREM"

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<221> source

<223> /note="Gene Name:
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<220>

<221> source

<223> /note="Uniprot ID: Q03060"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000419924"

<400> 11379

Met	Thr	Met	Glu	Thr	Val	Glu	Ser	Gln	His	Asp	Gly	Ser	Ile	Thr	Ala
1				5					10					15	

Ser	Leu	Thr	Glu	Ser	Lys	Ser	Ala	His	Val	Gln	Thr	Gln	Thr	Gly	Gln
			20					25					30		

Asn	Ser	Ile	Pro	Ala	Leu	Ala	Gln	Val	Ala	Ala	Ile	Ala	Glu	Thr	Asp
		35					40					45			

Glu	Ser	Ala	Glu	Ser	Glu	Gly	Val	Ile	Asp	Ser	His	Lys	Arg	Arg	Glu
	50					55					60				

Ile	Leu	Ser	Arg	Arg	Pro	Ser	Tyr	Arg	Lys	Ile	Leu	Asn	Glu	Leu	Ser
65					70					75					80

Ser	Asp	Val	Pro	Gly	Val	Pro	Lys	Ile	Glu	Glu	Glu	Arg	Ser	Glu	Glu
				85					90					95	

Glu	Gly	Thr	Pro	Pro	Ser	Ile	Ala	Thr	Met	Ala	Val	Pro	Thr	Ser	Ile
			100					105						110	

25455

Tyr Gln Thr Ser Thr Gly Gln Tyr Ser Met Tyr Ala Ala Ile Arg Tyr
115 120 125

Asp Thr Val Leu Ala Leu Ser Leu Leu
130 135

<210> 11380

<211> 95

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2233"

<220>

<221> source

<223> /note="Gene Symbol: CREM"

<220>

<221> source

<223> /note="Gene Name:
cAMP responsive element modulator"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000420437"

<400> 11380

Met Pro Thr Tyr Gln Ile Arg Ala Pro Thr Ala Ala Leu Pro Gln Gly
1 5 10 15

Val Val Met Ala Ala Ser Pro Gly Ser Leu His Ser Pro Gln Gln Leu
20 25 30

Ala Glu Glu Ala Thr Arg Lys Arg Glu Leu Arg Leu Met Lys Asn Arg
35 40 45

Glu Ala Ala Arg Glu Cys Arg Arg Lys Lys Lys Glu Tyr Val Lys Cys
50 55 60

Leu Glu Asn Arg Val Ala Val Leu Glu Asn Gln Asn Lys Thr Leu Ile
65 70 75 80

Glu Glu Leu Lys Ala Leu Lys Asp Leu Tyr Cys His Lys Val Glu
85 90 95

<210> 11381

<211> 46
<212> PRT
<213> Homo sapiens

<220>
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<223> /note="Payload ID: 2233"

<220>
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<220>
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<223> /note="Gene Name:
cAMP responsive element modulator"

<220>
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<400> 11381
Met Thr Met Glu Thr Val Glu Ser Gln His Asp Gly Ser Ile Thr Ala
1 5 10 15

Ser Leu Thr Glu Ser Lys Ser Ala His Val Gln Thr Gln Thr Gly Gln
20 25 30

Asn Ser Ile Pro Ala Leu Ala Gln Lys Ile Leu Tyr Tyr Arg
35 40 45

<210> 11382
<211> 312
<212> PRT
<213> Homo sapiens

<220>
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<400> 11382

Met Ser Lys Cys Ala Arg Lys Lys Tyr Ile Lys Thr Asn Pro Arg Gln
1 5 10 15

Met Thr Met Glu Thr Val Glu Ser Gln His Asp Gly Ser Ile Thr Ala
20 25 30

Ser Leu Thr Glu Ser Lys Ser Ala His Val Gln Thr Gln Thr Gly Gln
35 40 45

Asn Ser Ile Pro Ala Leu Ala Gln Val Ala Ala Ile Ala Glu Thr Asp
50 55 60

Glu Ser Ala Glu Ser Glu Gly Val Ile Asp Ser His Lys Arg Arg Glu
65 70 75 80

Ile Leu Ser Arg Arg Pro Ser Tyr Arg Lys Ile Leu Asn Glu Leu Ser
85 90 95

Ser Asp Val Pro Gly Val Pro Lys Ile Glu Glu Glu Arg Ser Glu Glu
100 105 110

Glu Gly Thr Pro Pro Ser Ile Ala Thr Met Ala Val Pro Thr Ser Ile
115 120 125

Tyr Gln Thr Ser Thr Gly Gln Tyr Ile Ala Ile Ala Gln Gly Gly Thr
130 135 140

Ile Gln Ile Ser Asn Pro Gly Ser Asp Gly Val Gln Gly Leu Gln Ala
145 150 155 160

Leu Thr Met Thr Asn Ser Gly Ala Pro Pro Pro Gly Ala Thr Ile Val
165 170 175

Gln Tyr Ala Ala Gln Ser Ala Asp Gly Thr Gln Gln Phe Phe Val Pro
180 185 190

Gly Ser Gln Val Val Val Gln Asp Glu Glu Thr Glu Leu Ala Pro Ser
195 200 205

His Met Ala Ala Ala Thr Gly Asp Met Pro Thr Tyr Gln Ile Arg Ala

25458

210		215		220
Pro Thr Ala Ala Leu	Pro Gln Gly Val Val	Met Ala Ala Ser Pro Gly		
225	230	235		240
Ser Leu His Ser Pro	Gln Gln Leu Ala Glu Glu	Ala Thr Arg Lys Arg		
	245	250		255
Glu Leu Arg Leu Met	Lys Asn Arg Glu Ala Ala	Lys Glu Cys Arg Arg		
	260	265		270
Arg Lys Lys Glu Tyr	Val Lys Cys Leu Glu Ser	Arg Val Ala Val Leu		
	275	280		285
Glu Val Gln Asn Lys	Lys Leu Ile Glu Glu	Leu Glu Thr Leu Lys Asp		
	290	295		300
Ile Cys Ser Pro Lys	Thr Asp Tyr			
305	310			

<210> 11383
 <211> 120
 <212> PRT
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<220>
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<220>
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<220>
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<400> 11383
 Met Ala Val Thr Gly Asp Asp Thr Asp Glu Glu Thr Glu Leu Ala Pro
 1 5 10 15

Ser His Met Ala Ala Ala Thr Gly Asp Met Pro Thr Tyr Gln Ile Arg
20 25 30

Ala Pro Thr Ala Ala Leu Pro Gln Gly Val Val Met Ala Ala Ser Pro
35 40 45

Gly Ser Leu His Ser Pro Gln Gln Leu Ala Glu Glu Ala Thr Arg Lys
50 55 60

Arg Glu Leu Arg Leu Met Lys Asn Arg Glu Ala Ala Arg Glu Cys Arg
65 70 75 80

Arg Lys Lys Lys Glu Tyr Val Lys Cys Leu Glu Asn Arg Val Ala Val
85 90 95

Leu Glu Asn Gln Asn Lys Thr Leu Ile Glu Glu Leu Lys Ala Leu Lys
100 105 110

Asp Leu Tyr Cys His Lys Val Glu
115 120

<210> 11384
<211> 59
<212> PRT
<213> Homo sapiens

<220>
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<220>
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<220>
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<223> /note="Gene Name:
cAMP responsive element modulator"

<220>
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<400> 11384
Met Thr Met Glu Thr Val Glu Ser Gln His Asp Gly Ser Ile Thr Ala
1 5 10 15

Ser Leu Thr Glu Ser Lys Ser Ala His Val Gln Thr Gln Thr Gly Gln

	20		25		30
Asn Ser Ile Pro Ala Leu Ala Gln Cys Thr Met Cys Lys Glu Ser Leu					
	35		40		45
Gly Ile Lys Gln Pro Trp His Ala Ile Gly Asp					
	50		55		
<210> 11385					
<211> 112					
<212> PRT					
<213> Homo sapiens					
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<223> /note="Uniprot ID: P56211"					
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<223> /note="ENSP ID: ENSP00000249822"					
<400> 11385					
Met Ser Ala Glu Val Pro Glu Ala Ala Ser Ala Glu Glu Gln Lys Glu					
1		5		10	15
Met Glu Asp Lys Val Thr Ser Pro Glu Lys Ala Glu Glu Ala Lys Leu					
	20		25		30
Lys Ala Arg Tyr Pro His Leu Gly Gln Lys Pro Gly Gly Ser Asp Phe					
	35		40		45
Leu Arg Lys Arg Leu Gln Lys Gly Gln Lys Tyr Phe Asp Ser Gly Asp					
	50		55		60
Tyr Asn Met Ala Lys Ala Lys Met Lys Asn Lys Gln Leu Pro Thr Ala					
65		70		75	80

Ala Pro Asp Lys Thr Glu Val Thr Gly Asp His Ile Pro Thr Pro Gln
85 90 95

Asp Leu Pro Gln Arg Lys Pro Ser Leu Val Ala Ser Lys Leu Ala Gly
100 105 110

<210> 11386

<211> 96

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2234"

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<223> /note="Gene Symbol: ARPP19"

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<223> /note="Gene Name:
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<220>

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<223> /note="Uniprot ID: P56211"

<220>

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<223> /note="ENSP ID: ENSP00000454234"

<400> 11386

Met Glu Asp Lys Val Thr Ser Pro Glu Lys Ala Glu Glu Ala Lys Leu
1 5 10 15

Lys Ala Arg Tyr Pro His Leu Gly Gln Lys Pro Gly Gly Ser Asp Phe
20 25 30

Leu Arg Lys Arg Leu Gln Lys Gly Gln Lys Tyr Phe Asp Ser Gly Asp
35 40 45

Tyr Asn Met Ala Lys Ala Lys Met Lys Asn Lys Gln Leu Pro Thr Ala
50 55 60

Ala Pro Asp Lys Thr Glu Val Thr Gly Asp His Ile Pro Thr Pro Gln
65 70 75 80

Asp Leu Pro Gln Arg Lys Pro Ser Leu Val Ala Ser Lys Leu Ala Gly

25462

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<210> 11387
<211> 112
<212> PRT
<213> Homo sapiens

<220>
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<220>
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<400> 11387
Met Ser Ala Glu Val Pro Glu Ala Ala Ser Ala Glu Glu Gln Lys Glu
1              5              10              15

Met Glu Asp Lys Val Thr Ser Pro Glu Lys Ala Glu Glu Ala Lys Leu
      20              25              30

Lys Ala Arg Tyr Pro His Leu Gly Gln Lys Pro Gly Gly Ser Asp Phe
      35              40              45

Leu Arg Lys Arg Leu Gln Lys Gly Gln Lys Tyr Phe Asp Ser Gly Asp
      50              55              60

Tyr Asn Met Ala Lys Ala Lys Met Lys Asn Lys Gln Leu Pro Thr Ala
65              70              75              80

Ala Pro Asp Lys Thr Glu Val Thr Gly Asp His Ile Pro Thr Pro Gln
      85              90              95

Asp Leu Pro Gln Arg Lys Pro Ser Leu Val Ala Ser Lys Leu Ala Gly
      100             105             110

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<210> 11388
<211> 131
<212> PRT
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<220>
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<223> /note="ENSP ID: ENSP00000454341"

<400> 11388
Met Ser Ala Glu Val Pro Glu Ala Ala Ser Ala Glu Glu Gln Lys Ser
1              5              10              15

Glu His Asn Met Leu Pro Trp Ser Leu Gln Pro Ser Ile Pro Asn Ser
              20              25              30

Leu Glu Glu Met Glu Asp Lys Val Thr Ser Pro Glu Lys Ala Glu Glu
              35              40              45

Ala Lys Leu Lys Ala Arg Tyr Pro His Leu Gly Gln Lys Pro Gly Gly
              50              55              60

Ser Asp Phe Leu Arg Lys Arg Leu Gln Lys Gly Gln Lys Tyr Phe Asp
65              70              75              80

Ser Gly Asp Tyr Asn Met Ala Lys Ala Lys Met Lys Asn Lys Gln Leu
              85              90              95

Pro Thr Ala Ala Pro Asp Lys Thr Glu Val Thr Gly Asp His Ile Pro
              100              105              110

Thr Pro Gln Asp Leu Pro Gln Arg Lys Pro Ser Leu Val Ala Ser Lys
              115              120              125

Leu Ala Gly

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<210> 11389

<211> 131

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2234"

<220>

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<223> /note="Gene Symbol: ARPP19"

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<223> /note="Gene Name:
cAMP-regulated phosphoprotein, 19kDa"

<220>

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<223> /note="ENSP ID: ENSP00000454612"

<400> 11389

Met	Ser	Ala	Glu	Val	Pro	Glu	Ala	Ala	Ser	Ala	Glu	Glu	Gln	Lys	Ser
1				5					10					15	

Glu	His	Asn	Met	Leu	Pro	Trp	Ser	Leu	Gln	Pro	Ser	Ile	Pro	Asn	Ser
			20					25					30		

Leu	Glu	Glu	Met	Glu	Asp	Lys	Val	Thr	Ser	Pro	Glu	Lys	Ala	Glu	Glu
		35				40						45			

Ala	Lys	Leu	Lys	Ala	Arg	Tyr	Pro	His	Leu	Gly	Gln	Lys	Pro	Gly	Gly
	50					55					60				

Ser	Asp	Phe	Leu	Arg	Lys	Arg	Leu	Gln	Lys	Gly	Gln	Lys	Tyr	Phe	Asp
65					70					75					80

Ser	Gly	Asp	Tyr	Asn	Met	Ala	Lys	Ala	Lys	Met	Lys	Asn	Lys	Gln	Leu
				85					90					95	

Pro	Thr	Ala	Ala	Pro	Asp	Lys	Thr	Glu	Val	Thr	Gly	Asp	His	Ile	Pro
			100					105					110		

Thr	Pro	Gln	Asp	Leu	Pro	Gln	Arg	Lys	Pro	Ser	Leu	Val	Ala	Ser	Lys
		115					120					125			

Leu Ala Gly
130

<210> 11390
<211> 112
<212> PRT
<213> Homo sapiens

<220>
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cAMP-regulated phosphoprotein, 19kDa"

<220>
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<223> /note="Uniprot ID: P56211"

<220>
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<223> /note="ENSP ID: ENSP00000455151"

<400> 11390
Met Ser Ala Glu Val Pro Glu Ala Ala Ser Ala Glu Glu Gln Lys Glu
1 5 10 15

Met Glu Asp Lys Val Thr Ser Pro Glu Lys Ala Glu Glu Ala Lys Leu
20 25 30

Lys Ala Arg Tyr Pro His Leu Gly Gln Lys Pro Gly Gly Ser Asp Phe
35 40 45

Leu Arg Lys Arg Leu Gln Lys Gly Gln Lys Tyr Phe Asp Ser Gly Asp
50 55 60

Tyr Asn Met Ala Lys Ala Lys Met Lys Asn Lys Gln Leu Pro Thr Ala
65 70 75 80

Ala Pro Asp Lys Thr Glu Val Thr Gly Asp His Ile Pro Thr Pro Gln
85 90 95

Asp Leu Pro Gln Arg Lys Pro Ser Leu Val Ala Ser Lys Leu Ala Gly

<210> 11391
<211> 71
<212> PRT
<213> Homo sapiens

<220>
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<223> /note="Gene Name:
cAMP-regulated phosphoprotein, 19kDa"

<220>
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<223> /note="ENSP ID: ENSP00000455610"

<400> 11391
Met Ser Ala Glu Val Pro Glu Ala Ala Ser Ala Glu Glu Gln Lys Gln
1 5 10 15
Lys Tyr Phe Asp Ser Gly Asp Tyr Asn Met Ala Lys Ala Lys Met Lys
20 25 30
Asn Lys Gln Leu Pro Thr Ala Ala Pro Asp Lys Thr Glu Val Thr Gly
35 40 45
Asp His Ile Pro Thr Pro Gln Asp Leu Pro Gln Arg Lys Pro Ser Leu
50 55 60
Val Ala Ser Lys Leu Ala Gly
65 70

<210> 11392
<211> 112
<212> PRT
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<220>
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<223> /note="Gene Name:
cAMP-regulated phosphoprotein, 19kDa"

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<223> /note="Uniprot ID: P56211"

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<223> /note="ENSP ID: ENSP00000455625"

<400> 11392

Met Ser Ala Glu Val Pro Glu Ala Ala Ser Ala Glu Glu Gln Lys Glu
1 5 10 15

Met Glu Asp Lys Val Thr Ser Pro Glu Lys Ala Glu Glu Ala Lys Leu
20 25 30

Lys Ala Arg Tyr Pro His Leu Gly Gln Lys Pro Gly Gly Ser Asp Phe
35 40 45

Leu Arg Lys Arg Leu Gln Lys Gly Gln Lys Tyr Phe Asp Ser Gly Asp
50 55 60

Tyr Asn Met Ala Lys Ala Lys Met Lys Asn Lys Gln Leu Pro Thr Ala
65 70 75 80

Ala Pro Asp Lys Thr Glu Val Thr Gly Asp His Ile Pro Thr Pro Gln
85 90 95

Asp Leu Pro Gln Arg Lys Pro Ser Leu Val Ala Ser Lys Leu Ala Gly
100 105 110

<210> 11393

<211> 96

<212> PRT

<213> Homo sapiens

<220>

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<223> /note="Gene Symbol: ARPP19"

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<220>
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<223> /note="Uniprot ID: P56211"

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<223> /note="ENSP ID: ENSP00000455986"

<400> 11393
Met Glu Asp Lys Val Thr Ser Pro Glu Lys Ala Glu Glu Ala Lys Leu
1          5          10          15

Lys Ala Arg Tyr Pro His Leu Gly Gln Lys Pro Gly Gly Ser Asp Phe
          20          25          30

Leu Arg Lys Arg Leu Gln Lys Gly Gln Lys Tyr Phe Asp Ser Gly Asp
          35          40          45

Tyr Asn Met Ala Lys Ala Lys Met Lys Asn Lys Gln Leu Pro Thr Ala
          50          55          60

Ala Pro Asp Lys Thr Glu Val Thr Gly Asp His Ile Pro Thr Pro Gln
65          70          75          80

Asp Leu Pro Gln Arg Lys Pro Ser Leu Val Ala Ser Lys Leu Ala Gly
          85          90          95

<210> 11394
<211> 72
<212> PRT
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<220>
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<221> source
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<400> 11394
Met Glu Asp Lys Val Thr Ser Pro Glu Lys Ala Glu Glu Ala Lys Leu
1          5          10          15

Lys Ala Arg Tyr Pro His Leu Gly Gln Lys Pro Gly Gly Ser Asp Phe
          20          25          30

Leu Arg Lys Arg Leu Gln Lys Gly Gln Lys Tyr Phe Asp Ser Gly Asp
          35          40          45

Tyr Asn Met Ala Lys Ala Lys Met Lys Asn Lys Gln Leu Pro Thr Ala
          50          55          60

Ala Pro Asp Lys Thr Glu Val Thr
65          70

<210> 11395
<211> 96
<212> PRT
<213> Homo sapiens

<220>
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<220>
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<223> /note="Gene Name:
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<220>
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<223> /note="Uniprot ID: P56211"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000457631"

<400> 11395
Met Glu Asp Lys Val Thr Ser Pro Glu Lys Ala Glu Glu Ala Lys Leu
1          5          10          15

Lys Ala Arg Tyr Pro His Leu Gly Gln Lys Pro Gly Gly Ser Asp Phe
          20          25          30

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Leu Arg Lys Arg Leu Gln Lys Gly Gln Lys Tyr Phe Asp Ser Gly Asp
35 40 45

Tyr Asn Met Ala Lys Ala Lys Met Lys Asn Lys Gln Leu Pro Thr Ala
50 55 60

Ala Pro Asp Lys Thr Glu Val Thr Gly Asp His Ile Pro Thr Pro Gln
65 70 75 80

Asp Leu Pro Gln Arg Lys Pro Ser Leu Val Ala Ser Lys Leu Ala Gly
85 90 95

<210> 11396
<211> 96
<212> PRT
<213> Homo sapiens

<220>
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cAMP-regulated phosphoprotein, 19kDa"

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<223> /note="Uniprot ID: P56211"

<220>
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<223> /note="ENSP ID: ENSP00000457805"

<400> 11396
Met Glu Asp Lys Val Thr Ser Pro Glu Lys Ala Glu Glu Ala Lys Leu
1 5 10 15

Lys Ala Arg Tyr Pro His Leu Gly Gln Lys Pro Gly Gly Ser Asp Phe
20 25 30

Leu Arg Lys Arg Leu Gln Lys Gly Gln Lys Tyr Phe Asp Ser Gly Asp
35 40 45

Tyr Asn Met Ala Lys Ala Lys Met Lys Asn Lys Gln Leu Pro Thr Ala
50 55 60

Ala Pro Asp Lys Thr Glu Val Thr Gly Asp His Ile Pro Thr Pro Gln
65 70 75 80

Asp Leu Pro Gln Arg Lys Pro Ser Leu Val Ala Ser Lys Leu Ala Gly
85 90 95

<210> 11397

<211> 812

<212> PRT

<213> Homo sapiens

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<223> /note="Payload ID: 2235"

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<223> /note="Gene Symbol: ARPP21"

<220>

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<223> /note="Gene Name:
cAMP-regulated phosphoprotein, 21kDa"

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<223> /note="Uniprot ID: Q9UBL0"

<220>

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<223> /note="ENSP ID: ENSP00000187397"

<400> 11397

Met Ser Glu Gln Gly Asp Leu Asn Gln Ala Ile Ala Glu Glu Gly Gly
1 5 10 15

Thr Glu Gln Glu Thr Ala Thr Pro Glu Asn Gly Ile Val Lys Ser Glu
20 25 30

Ser Leu Asp Glu Glu Glu Lys Leu Glu Leu Gln Arg Arg Leu Glu Ala
35 40 45

Gln Asn Gln Glu Arg Arg Lys Ser Lys Ser Gly Ala Gly Lys Gly Lys
50 55 60

Leu Thr Arg Ser Leu Ala Val Cys Glu Glu Ser Ser Ala Arg Pro Gly
65 70 75 80

Gly	Glu	Ser	Leu	Gln	Asp	Gln	Glu	Ser	Ile	His	Leu	Gln	Leu	Ser	Ser		
				85					90					95			
Phe	Ser	Ser	Leu	Gln	Glu	Glu	Asp	Lys	Ser	Arg	Lys	Asp	Asp	Ser	Glu		
			100					105					110				
Arg	Glu	Lys	Glu	Lys	Asp	Lys	Asn	Lys	Asp	Lys	Thr	Ser	Glu	Lys	Pro		
		115					120					125					
Lys	Ile	Arg	Met	Leu	Ser	Lys	Asp	Cys	Ser	Gln	Glu	Tyr	Thr	Asp	Ser		
	130					135					140						
Thr	Gly	Ile	Asp	Leu	His	Glu	Phe	Leu	Ile	Asn	Thr	Leu	Lys	Asn	Asn		
145					150					155					160		
Ser	Arg	Asp	Arg	Met	Ile	Leu	Leu	Lys	Met	Glu	Gln	Glu	Ile	Ile	Asp		
				165					170					175			
Phe	Ile	Ala	Asp	Asn	Asn	Asn	His	Tyr	Lys	Lys	Phe	Pro	Gln	Met	Ser		
			180					185					190				
Ser	Tyr	Gln	Arg	Met	Leu	Val	His	Arg	Val	Ala	Ala	Tyr	Phe	Gly	Leu		
		195					200					205					
Asp	His	Asn	Val	Asp	Gln	Thr	Gly	Lys	Ser	Val	Ile	Ile	Asn	Lys	Thr		
	210					215					220						
Ser	Ser	Thr	Arg	Ile	Pro	Glu	Gln	Arg	Phe	Cys	Glu	His	Leu	Lys	Asp		
225					230					235					240		
Glu	Lys	Gly	Glu	Glu	Ser	Gln	Lys	Arg	Phe	Ile	Leu	Lys	Arg	Asp	Asn		
				245					250					255			
Ser	Ser	Ile	Asp	Lys	Glu	Asp	Asn	Gln	Gln	Asn	Arg	Met	His	Pro	Phe		
			260					265					270				
Arg	Asp	Asp	Arg	Arg	Ser	Lys	Ser	Ile	Glu	Glu	Arg	Glu	Glu	Glu	Tyr		
		275					280					285					
Gln	Arg	Val	Arg	Glu	Arg	Ile	Phe	Ala	His	Asp	Ser	Val	Cys	Ser	Gln		
	290					295					300						

Glu	Ser	Leu	Phe	Val	Glu	Asn	Ser	Arg	Leu	Leu	Glu	Asp	Ser	Asn	Ile	305	310	315	320
Cys	Asn	Glu	Thr	Tyr	Lys	Lys	Arg	Gln	Leu	Phe	Arg	Gly	Asn	Arg	Asp	325	330	335	
Gly	Ser	Gly	Arg	Thr	Ser	Gly	Ser	Arg	Gln	Ser	Ser	Ser	Glu	Asn	Glu	340	345	350	
Leu	Lys	Trp	Ser	Asp	His	Gln	Arg	Ala	Trp	Ser	Ser	Thr	Asp	Ser	Asp	355	360	365	
Ser	Ser	Asn	Arg	Asn	Leu	Lys	Pro	Ala	Met	Thr	Lys	Thr	Ala	Ser	Phe	370	375	380	
Gly	Gly	Ile	Thr	Val	Leu	Thr	Arg	Gly	Asp	Ser	Thr	Ser	Ser	Thr	Arg	385	390	395	400
Ser	Thr	Gly	Lys	Leu	Ser	Lys	Ala	Gly	Ser	Glu	Ser	Ser	Ser	Ser	Ala	405	410	415	
Gly	Ser	Ser	Gly	Ser	Leu	Ser	Arg	Thr	His	Pro	Pro	Leu	Gln	Ser	Thr	420	425	430	
Pro	Leu	Val	Ser	Gly	Val	Ala	Ala	Gly	Ser	Pro	Gly	Cys	Val	Pro	Tyr	435	440	445	
Pro	Glu	Asn	Gly	Ile	Gly	Gly	Gln	Val	Ala	Pro	Ser	Ser	Thr	Ser	Tyr	450	455	460	
Ile	Leu	Leu	Pro	Leu	Glu	Ala	Ala	Thr	Gly	Ile	Pro	Pro	Gly	Ser	Ile	465	470	475	480
Leu	Leu	Asn	Pro	His	Thr	Gly	Gln	Pro	Phe	Val	Asn	Pro	Asp	Gly	Thr	485	490	495	
Pro	Ala	Ile	Tyr	Asn	Pro	Pro	Thr	Ser	Gln	Gln	Pro	Leu	Arg	Ser	Ala	500	505	510	
Met	Val	Gly	Gln	Ser	Gln	Gln	Gln	Pro	Pro	Gln	Gln	Gln	Pro	Ser	Pro	515	520	525	

Gln Pro Gln Gln Gln Val Gln Pro Pro Gln Pro Gln Met Ala Gly Pro
530 535 540

Leu Val Thr Gln Arg Asp Asp Val Ala Thr Gln Phe Gly Gln Met Thr
545 550 555 560

Leu Ser Arg Gln Ser Ser Gly Glu Thr Pro Glu Pro Pro Ser Gly Pro
565 570 575

Val Tyr Pro Ser Ser Leu Met Pro Gln Pro Ala Gln Gln Pro Ser Tyr
580 585 590

Val Ile Ala Ser Thr Gly Gln Gln Leu Pro Thr Gly Gly Phe Ser Gly
595 600 605

Ser Gly Pro Pro Ile Ser Gln Gln Val Leu Gln Pro Pro Pro Ser Pro
610 615 620

Gln Gly Phe Val Gln Gln Pro Pro Pro Ala Gln Met Pro Val Tyr Tyr
625 630 635 640

Tyr Pro Ser Gly Gln Tyr Pro Thr Ser Thr Thr Gln Gln Tyr Arg Pro
645 650 655

Met Ala Pro Val Gln Tyr Asn Ala Gln Arg Ser Gln Gln Met Pro Gln
660 665 670

Ala Ala Gln Gln Ala Gly Tyr Gln Pro Val Leu Ser Gly Gln Gln Gly
675 680 685

Phe Gln Gly Leu Ile Gly Val Gln Gln Pro Pro Gln Ser Gln Asn Val
690 695 700

Ile Asn Asn Gln Gln Gly Thr Pro Val Gln Ser Val Met Val Ser Tyr
705 710 715 720

Pro Thr Met Ser Ser Tyr Gln Val Pro Met Thr Gln Gly Ser Gln Gly
725 730 735

Leu Pro Gln Gln Ser Tyr Gln Gln Pro Ile Met Leu Pro Asn Gln Ala
740 745 750

Gly Gln Gly Ser Leu Pro Ala Thr Gly Met Pro Val Tyr Cys Asn Val

755

760

765

Thr Pro Pro Thr Pro Gln Asn Asn Leu Arg Leu Ile Gly Pro His Cys
 770 775 780

Pro Ser Ser Thr Val Pro Val Met Ser Ala Ser Cys Arg Thr Asn Cys
 785 790 795 800

Ala Ser Met Ser Asn Ala Gly Trp Gln Val Lys Phe
 805 810

<210> 11398

<211> 89

<212> PRT

<213> Homo sapiens

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<223> /note="Gene Name:
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<223> /note="Uniprot ID: Q9UBL0"

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<400> 11398

Met Ser Glu Gln Gly Asp Leu Asn Gln Ala Ile Ala Glu Glu Gly Gly
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Thr Glu Gln Glu Thr Ala Thr Pro Glu Asn Gly Ile Val Lys Ser Glu
 20 25 30

Ser Leu Asp Glu Glu Glu Lys Leu Glu Leu Gln Arg Arg Leu Glu Ala
 35 40 45

Gln Asn Gln Glu Arg Arg Lys Ser Lys Ser Gly Ala Gly Lys Gly Lys
 50 55 60

Leu Thr Arg Ser Leu Ala Val Cys Glu Glu Ser Ser Ala Arg Pro Gly
65 70 75 80

Gly Glu Ser Leu Gln Asp Gln Thr Leu
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<210> 11399

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<400> 11399

Met Ser Glu Gln Gly Asp Leu Asn Gln Ala Ile Ala Glu Glu Gly Gly
1 5 10 15

Thr Glu Gln Glu Thr Ala Thr Pro Glu Asn Gly Ile Val Lys Ser Glu
20 25 30

Ser Leu Asp Glu Glu Glu Lys Leu Glu Leu Gln Arg Arg Leu Glu Ala
35 40 45

Gln Asn Gln Glu Arg Arg Lys Ser Lys Ser Gly Ala Gly Lys Gly Lys
50 55 60

Leu Thr Arg Ser Leu Ala Val Cys Glu Glu Ser Ser Ala Arg Pro Gly
65 70 75 80

Gly Glu Ser Leu Gln Asp Gln Thr Leu

25477

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<210> 11400
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<400> 11400
Met Ser Glu Gln Gly Asp Leu Asn Gln Ala Ile Ala Glu Glu Gly Gly
1          5          10          15

Thr Glu Gln Glu Thr Ala Thr Pro Glu Asn Gly Ile Val Lys Ser Glu
          20          25          30

Ser Leu Asp Glu Glu Glu Lys Leu Glu Leu Gln Arg Arg Leu Glu Ala
          35          40          45

Gln Asn Gln Glu Arg Arg Lys Ser Lys Ser Gly Ala Gly Lys Gly Lys
          50          55          60

Leu Thr Arg Ser Leu Ala Val Cys Glu Glu Ser Ser Ala Arg Pro Gly
65          70          75          80

Gly Glu Ser Leu Gln Asp Gln Thr Leu
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<210> 11401
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<400> 11401

Met Ser Glu Gln Gly Asp Leu Asn Gln Ala Ile Ala Glu Glu Gly Gly
1 5 10 15

Thr Glu Gln Glu Thr Ala Thr Pro Glu Asn Gly Ile Val Lys Ser Glu
20 25 30

Ser Leu Asp Glu Glu Glu Lys Leu Glu Leu Gln Arg Arg Leu Glu Ala
35 40 45

Gln Asn Gln Glu Arg Arg Lys Ser Lys Ser Gly Ala Gly Lys Gly Lys
50 55 60

Leu Thr Arg Ser Leu Ala Val Cys Glu Glu Ser Ser Ala Arg Pro Gly
65 70 75 80

Gly Glu Ser Leu Gln Asp Gln Thr Leu
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<210> 11402

<211> 98

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<400> 11402
Met Ser Glu Gln Gly Asp Leu Asn Gln Ala Ile Ala Glu Glu Gly Gly
1 5 10 15

Thr Glu Gln Glu Thr Ala Thr Pro Glu Asn Gly Ile Val Lys Ser Glu
20 25 30

Ser Leu Asp Glu Glu Glu Lys Leu Glu Leu Gln Arg Arg Leu Glu Ala
35 40 45

Gln Asn Gln Glu Arg Arg Lys Ser Lys Ser Gly Ala Gly Lys Gly Lys
50 55 60

Leu Thr Arg Ser Leu Ala Val Cys Glu Glu Ser Ser Ala Arg Pro Gly
65 70 75 80

Gly Glu Ser Leu Gln Asp Gln Glu Ser Ile His Leu Gln Leu Ser Ser
85 90 95

Phe Ser

<210> 11403
<211> 124
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<222> (1)..(1)

<223> Any amino acid

<400> 11403

Xaa Cys Arg Asp Arg Met Ile Leu Leu Lys Met Glu Gln Glu Ile Ile
1 5 10 15

Asp Phe Ile Ala Asp Asn Asn Asn His Tyr Lys Lys Phe Pro Gln Met
20 25 30

Ser Ser Tyr Gln Arg Met Leu Val His Arg Val Ala Ala Tyr Phe Gly
35 40 45

Leu Asp His Asn Val Asp Gln Thr Gly Lys Ser Val Ile Ile Asn Lys
50 55 60

Thr Ser Ser Thr Arg Ile Gln Phe Ala Pro Arg Lys Ala Phe Leu Trp
65 70 75 80

Lys Thr Gly Ala Thr Glu Met Ala Gln Gly Glu His Leu Gly Val Asp
85 90 95

Arg Ala Ala Gln Lys Met Asn Ser Ser Gly Leu Thr Thr Lys Gly Pro
100 105 110

Gly Ala Ala Gln Thr Pro Thr Val Pro Thr Ala Ile
115 120

<210> 11404

<211> 96

<212> PRT

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Met Ser Glu Gln Gly Asp Leu Asn Gln Ala Ile Ala Glu Glu Gly Gly
1 5 10 15

Thr Glu Gln Glu Thr Ala Thr Pro Glu Asn Gly Ile Val Lys Ser Glu
20 25 30

Ser Leu Asp Glu Glu Glu Lys Leu Glu Leu Gln Arg Arg Leu Glu Ala
35 40 45

Gln Asn Gln Glu Arg Arg Lys Ser Lys Ser Gly Ala Gly Lys Gly Lys
50 55 60

Leu Thr Arg Ser Leu Ala Val Cys Glu Glu Ser Ser Ala Arg Pro Gly
65 70 75 80

Gly Glu Ser Leu Gln Asp Gln Val Tyr Pro Leu Ala Ile Ile Ile Asn
85 90 95

<210> 11405

<211> 89

<212> PRT

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 Met Ser Glu Gln Gly Asp Leu Asn Gln Ala Ile Ala Glu Glu Gly Gly
 1 5 10 15

 Thr Glu Gln Glu Thr Ala Thr Pro Glu Asn Gly Ile Val Lys Ser Glu
 20 25 30

 Ser Leu Asp Glu Glu Glu Lys Leu Glu Leu Gln Arg Arg Leu Glu Ala
 35 40 45

 Gln Asn Gln Glu Arg Arg Lys Ser Lys Ser Gly Ala Gly Lys Gly Lys
 50 55 60

 Leu Thr Arg Ser Leu Ala Val Cys Glu Glu Ser Ser Ala Arg Pro Gly
 65 70 75 80

 Gly Glu Ser Leu Gln Asp Gln Thr Leu
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<210> 11406
 <211> 32
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<400> 11406
 Met Ser Glu Gln Gly Asp Leu Asn Gln Ala Ile Ala Glu Glu Gly Gly
 1 5 10 15

Thr Glu Gln Glu Thr Ala Thr Pro Glu Asn Gly Ile Val Lys Ser Glu
20 25 30

<210> 11407

<211> 145

<212> PRT

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<400> 11407

Xaa Gln Glu Tyr Thr Asp Ser Thr Gly Ile Asp Leu His Glu Phe Leu
1 5 10 15

Ile Asn Thr Leu Lys Asn Asn Ser Arg Asp Arg Met Ile Leu Leu Lys
20 25 30

Met Glu Gln Glu Ile Ile Asp Phe Ile Ala Asp Asn Asn Asn His Tyr
35 40 45

Lys Lys Phe Pro Gln Met Ser Ser Tyr Gln Arg Met Leu Val His Arg
50 55 60

Val Ala Ala Tyr Phe Gly Leu Asp His Asn Val Asp Gln Thr Gly Lys
65 70 75 80

Ser Val Ile Ile Asn Lys Thr Ser Ser Thr Arg Ile Pro Glu Gln Arg
85 90 95

Phe Cys Glu His Leu Lys Asp Glu Lys Gly Glu Glu Ser Gln Lys Arg
100 105 110

Phe Ile Leu Lys Arg Asp Asn Ser Ser Ile Asp Lys Glu Asp Asn Gln
115 120 125

Leu Cys Pro Ser Val Val His Lys Leu Ser Trp Ile Ile Asn Thr Asp
130 135 140

Arg
145

<210> 11408
<211> 89
<212> PRT
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Met Ser Glu Gln Gly Asp Leu Asn Gln Ala Ile Ala Glu Glu Gly Gly
1 5 10 15

Thr Glu Gln Glu Thr Ala Thr Pro Glu Asn Gly Ile Val Lys Ser Glu
20 25 30

Ser Leu Asp Glu Glu Glu Lys Leu Glu Leu Gln Arg Arg Leu Glu Ala
35 40 45

Gln Asn Gln Glu Arg Arg Lys Ser Lys Ser Gly Ala Gly Lys Gly Lys
50 55 60

Leu Thr Arg Ser Leu Ala Val Cys Glu Glu Ser Ser Ala Arg Pro Gly
65 70 75 80

Gly Glu Ser Leu Gln Asp Gln Thr Leu
85

<210> 11409

<211> 793

<212> PRT

<213> Homo sapiens

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<223> /note="Uniprot ID: Q9UBL0"

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<223> /note="ENSP ID: ENSP00000405276"

<400> 11409

Met Ser Glu Gln Gly Asp Leu Asn Gln Ala Ile Ala Glu Glu Gly Gly
1 5 10 15

Thr Glu Gln Glu Thr Ala Thr Pro Glu Asn Gly Ile Val Lys Ser Glu
20 25 30

Ser Leu Asp Glu Glu Glu Lys Leu Glu Leu Gln Arg Arg Leu Glu Ala
35 40 45

Gln Asn Gln Glu Arg Arg Lys Ser Lys Ser Gly Ala Gly Lys Gly Lys
50 55 60

Leu Thr Arg Ser Leu Ala Val Cys Glu Glu Ser Ser Ala Arg Pro Gly
65 70 75 80

Gly	Glu	Ser	Leu	Gln	Asp	Gln	Glu	Ser	Ile	His	Leu	Gln	Leu	Ser	Ser		
				85					90					95			
Phe	Ser	Ser	Leu	Gln	Glu	Glu	Asp	Lys	Ser	Arg	Lys	Asp	Asp	Ser	Glu		
			100					105					110				
Arg	Glu	Lys	Glu	Lys	Asp	Lys	Asn	Lys	Asp	Lys	Thr	Ser	Glu	Lys	Pro		
		115					120					125					
Lys	Ile	Arg	Met	Leu	Ser	Lys	Asp	Cys	Ser	Gln	Glu	Tyr	Thr	Asp	Ser		
	130					135					140						
Thr	Gly	Ile	Asp	Leu	His	Glu	Phe	Leu	Ile	Asn	Thr	Leu	Lys	Asn	Asn		
145					150					155					160		
Ser	Arg	Asp	Arg	Met	Ile	Leu	Leu	Lys	Met	Glu	Gln	Glu	Ile	Ile	Asp		
				165					170					175			
Phe	Ile	Ala	Asp	Asn	Asn	Asn	His	Tyr	Lys	Lys	Phe	Pro	Gln	Met	Ser		
			180					185					190				
Ser	Tyr	Gln	Arg	Met	Leu	Val	His	Arg	Val	Ala	Ala	Tyr	Phe	Gly	Leu		
		195					200					205					
Asp	His	Asn	Val	Asp	Gln	Thr	Gly	Lys	Ser	Val	Ile	Ile	Asn	Lys	Thr		
	210					215					220						
Ser	Ser	Thr	Arg	Ile	Pro	Glu	Gln	Arg	Phe	Cys	Glu	His	Leu	Lys	Asp		
225					230					235					240		
Glu	Lys	Gly	Glu	Glu	Ser	Gln	Lys	Arg	Phe	Ile	Leu	Lys	Arg	Asp	Asn		
				245					250					255			
Ser	Ser	Ile	Asp	Lys	Glu	Asp	Asn	Gln	Ser	Val	Cys	Ser	Gln	Glu	Ser		
			260					265					270				
Leu	Phe	Val	Glu	Asn	Arg	Gly	Asn	Arg	Asp	Gly	Ser	Gly	Arg	Thr	Ser		
		275					280					285					
Gly	Ser	Arg	Gln	Ser	Ser	Ser	Glu	Asn	Glu	Leu	Lys	Trp	Ser	Asp	His		
	290					295					300						
Gln	Arg	Ala	Trp	Ser	Ser	Thr	Asp	Ser	Asp	Ser	Ser	Asn	Arg	Asn	Leu		

305					310						315				320
Lys	Pro	Ala	Met	Thr	Lys	Thr	Ala	Ser	Phe	Gly	Gly	Ile	Thr	Val	Leu
				325					330					335	
Thr	Arg	Gly	Asp	Ser	Thr	Ser	Ser	Thr	Arg	Ser	Thr	Gly	Lys	Leu	Ser
			340					345					350		
Lys	Ala	Gly	Ser	Glu	Ser	Ser	Ser	Ser	Ala	Gly	Ser	Ser	Gly	Ser	Leu
		355					360					365			
Ser	Arg	Thr	His	Pro	Pro	Leu	Gln	Ser	Thr	Pro	Leu	Val	Ser	Gly	Val
	370					375					380				
Ala	Ala	Gly	Ser	Pro	Gly	Cys	Val	Pro	Tyr	Pro	Glu	Asn	Gly	Ile	Gly
385					390				395						400
Gly	Gln	Val	Ala	Pro	Ser	Ser	Thr	Ser	Tyr	Ile	Leu	Leu	Pro	Leu	Glu
				405					410					415	
Ala	Ala	Thr	Gly	Ile	Pro	Pro	Gly	Ser	Ile	Leu	Leu	Asn	Pro	His	Thr
			420					425					430		
Gly	Gln	Pro	Phe	Val	Asn	Pro	Asp	Gly	Thr	Pro	Ala	Ile	Tyr	Asn	Pro
		435					440					445			
Pro	Thr	Ser	Gln	Gln	Pro	Leu	Arg	Ser	Ala	Met	Val	Gly	Gln	Ser	Gln
	450					455					460				
Gln	Gln	Pro	Pro	Gln	Gln	Gln	Pro	Ser	Pro	Gln	Pro	Gln	Gln	Gln	Val
465					470					475					480
Gln	Pro	Pro	Gln	Pro	Gln	Met	Ala	Gly	Pro	Leu	Val	Thr	Gln	Ser	Val
				485				490						495	
Gln	Gly	Leu	Gln	Ala	Ser	Ser	Gln	Ser	Val	Gln	Tyr	Pro	Ala	Val	Ser
			500					505					510		
Phe	Pro	Pro	Gln	His	Leu	Leu	Pro	Val	Ser	Pro	Thr	Gln	His	Phe	Pro
		515					520					525			
Met	Arg	Asp	Asp	Val	Ala	Thr	Gln	Phe	Gly	Gln	Met	Thr	Leu	Ser	Arg
	530					535					540				

Gln	Ser	Ser	Gly	Glu	Thr	Pro	Glu	Pro	Pro	Ser	Gly	Pro	Val	Tyr	Pro	545	550	555	560
Ser	Ser	Leu	Met	Pro	Gln	Pro	Ala	Gln	Gln	Pro	Ser	Tyr	Val	Ile	Ala	565	570	575	
Ser	Thr	Gly	Gln	Gln	Leu	Pro	Thr	Gly	Gly	Phe	Ser	Gly	Ser	Gly	Pro	580	585	590	
Pro	Ile	Ser	Gln	Gln	Val	Leu	Gln	Pro	Pro	Pro	Ser	Pro	Gln	Gly	Phe	595	600	605	
Val	Gln	Gln	Pro	Pro	Pro	Ala	Gln	Met	Pro	Val	Tyr	Tyr	Tyr	Pro	Ser	610	615	620	
Gly	Gln	Tyr	Pro	Thr	Ser	Thr	Thr	Gln	Gln	Tyr	Arg	Pro	Met	Ala	Pro	625	630	635	640
Val	Gln	Tyr	Asn	Ala	Gln	Arg	Ser	Gln	Gln	Met	Pro	Gln	Ala	Ala	Gln	645	650	655	
Gln	Ala	Gly	Tyr	Gln	Pro	Val	Leu	Ser	Gly	Gln	Gln	Gly	Phe	Gln	Gly	660	665	670	
Leu	Ile	Gly	Val	Gln	Gln	Pro	Pro	Gln	Ser	Gln	Asn	Val	Ile	Asn	Asn	675	680	685	
Gln	Gln	Gly	Thr	Pro	Val	Gln	Ser	Val	Met	Val	Ser	Tyr	Pro	Thr	Met	690	695	700	
Ser	Ser	Tyr	Gln	Val	Pro	Met	Thr	Gln	Gly	Ser	Gln	Gly	Leu	Pro	Gln	705	710	715	720
Gln	Ser	Tyr	Gln	Gln	Pro	Ile	Met	Leu	Pro	Asn	Gln	Ala	Gly	Gln	Gly	725	730	735	
Ser	Leu	Pro	Ala	Thr	Gly	Met	Pro	Val	Tyr	Cys	Asn	Val	Thr	Pro	Pro	740	745	750	
Thr	Pro	Gln	Asn	Asn	Leu	Arg	Leu	Ile	Gly	Pro	His	Cys	Pro	Ser	Ser	755	760	765	

Thr Val Pro Val Met Ser Ala Ser Cys Arg Thr Asn Cys Ala Ser Met
770 775 780

Ser Asn Ala Gly Trp Gln Val Lys Phe
785 790

<210> 11410

<211> 89

<212> PRT

<213> Homo sapiens

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<223> /note="Gene Name:
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<223> /note="Uniprot ID: Q9UBL0"

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<400> 11410

Met Ser Glu Gln Gly Asp Leu Asn Gln Ala Ile Ala Glu Glu Gly Gly
1 5 10 15

Thr Glu Gln Glu Thr Ala Thr Pro Glu Asn Gly Ile Val Lys Ser Glu
20 25 30

Ser Leu Asp Glu Glu Glu Lys Leu Glu Leu Gln Arg Arg Leu Glu Ala
35 40 45

Gln Asn Gln Glu Arg Arg Lys Ser Lys Ser Gly Ala Gly Lys Gly Lys
50 55 60

Leu Thr Arg Ser Leu Ala Val Cys Glu Glu Ser Ser Ala Arg Pro Gly
65 70 75 80

Gly Glu Ser Leu Gln Asp Gln Thr Leu

25490

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<210> 11411
<211> 261
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<222> (1)..(1)
<223> Any amino acid

<400> 11411
Xaa Phe Cys Arg Asp Arg Met Ile Leu Leu Lys Met Glu Gln Glu Ile
 1              5              10              15

Ile Asp Phe Ile Ala Asp Asn Asn Asn His Tyr Lys Lys Phe Pro Gln
      20              25              30

Met Ser Ser Tyr Gln Arg Met Leu Val His Arg Val Ala Ala Tyr Phe
      35              40              45

Gly Leu Asp His Asn Val Asp Gln Thr Gly Lys Ser Val Ile Ile Asn
 50              55              60

Lys Thr Ser Ser Thr Arg Ile Gln Phe Ala Pro Arg Lys Ala Phe Leu
65              70              75              80

Trp Lys Thr Val Gly Ser Trp Lys Thr Val Thr Tyr Ala Met Arg Pro
      85              90              95

Ile Arg Lys Asp Ser Ser Phe Gly Trp Gly Asn Arg Asp Gly Ser Gly

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100	105	110
Arg Thr Ser Gly Ser Arg Gln Ser Ser Ser Glu Asn Glu Leu Lys Trp		
115	120	125
Ser Asp His Gln Arg Ala Trp Ser Ser Thr Asp Ser Asp Ser Ser Asn		
130	135	140
Arg Asn Leu Lys Pro Ala Met Thr Lys Thr Ala Ser Phe Gly Gly Ile		
145	150	155
Thr Val Leu Thr Arg Gly Asp Ser Thr Ser Ser Thr Arg Ser Thr Gly		
165	170	175
Lys Leu Ser Lys Ala Gly Ser Glu Ser Ser Ser Ser Ala Gly Ser Ser		
180	185	190
Gly Ser Leu Ser Arg Thr His Pro Pro Leu Gln Ser Thr Pro Leu Val		
195	200	205
Ser Gly Val Ala Ala Gly Ser Pro Gly Cys Val Pro Tyr Pro Glu Asn		
210	215	220
Gly Ile Gly Gly Gln Val Ala Pro Ser Ser Thr Ser Tyr Ile Leu Leu		
225	230	235
Pro Leu Glu Ala Ala Thr Gly Ile Pro Pro Gly Ser Ile Leu Leu Asn		
245	250	255
Pro His Thr Gly Glu		
260		

<210> 11412

<211> 94

<212> PRT

<213> Homo sapiens

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<221> source
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<400> 11412
Met Ser Glu Gln Gly Asp Leu Asn Gln Ala Ile Ala Glu Glu Gly Gly
1          5          10          15

Thr Glu Gln Glu Thr Ala Thr Pro Glu Asn Gly Ile Val Lys Ser Glu
          20          25          30

Ser Leu Asp Glu Glu Glu Lys Leu Glu Leu Gln Arg Arg Leu Glu Ala
          35          40          45

Gln Asn Gln Glu Arg Arg Lys Ser Lys Ser Gly Ala Gly Lys Gly Lys
          50          55          60

Leu Thr Arg Ser Leu Ala Val Cys Glu Glu Ser Ser Ala Arg Pro Gly
65          70          75          80

Gly Glu Ser Leu Gln Asp Gln Glu Ser Ile His Leu Gln Leu
          85          90

<210> 11413
<211> 54
<212> PRT
<213> Homo sapiens

<220>
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<223> /note="Gene Name:
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<223> /note="ENSP ID: ENSP00000409808"

<400> 11413
Met Ser Glu Gln Gly Asp Leu Asn Gln Ala Ile Ala Glu Glu Gly Gly

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1 5 10 15

Thr Glu Gln Glu Thr Ala Thr Pro Glu Asn Gly Ile Val Lys Ser Glu
20 25 30

Ser Leu Asp Glu Glu Glu Lys Leu Glu Leu Gln Arg Arg Leu Glu Ala
35 40 45

Gln Asn Gln Glu Arg Arg
50

<210> 11414
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<220>
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<400> 11414
 Met Ser Glu Gln Gly Asp Leu Asn Gln Ala Ile Ala Glu Glu Gly Gly
1 5 10 15

Thr Glu Gln Glu Thr Ala Thr Pro Glu Asn Gly Ile Val Lys Ser Glu
20 25 30

Ser Leu Asp Glu Glu Glu Lys Leu Glu Leu Gln Arg Arg Leu Glu Ala
35 40 45

Gln Asn Gln Glu Arg Arg Lys Ser Lys Ser Gly Ala Gly Lys Gly Lys
50 55 60

Leu Thr Arg Ser Leu Ala Val Cys Glu Glu Ser Ser Ala Arg Pro Gly
65 70 75 80

Gly Glu Ser Leu Gln Asp Gln Thr Leu
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<210> 11415

<211> 104

<212> PRT

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<220>

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<223> /note="Gene Symbol: ARPP21"

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<223> /note="Gene Name:
cAMP-regulated phosphoprotein, 21kDa"

<220>

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<223> /note="ENSP ID: ENSP00000411644"

<400> 11415

Met Ser Glu Gln Gly Asp Leu Asn Gln Ala Ile Ala Glu Glu Gly Gly
1 5 10 15

Thr Glu Gln Glu Thr Ala Thr Pro Glu Asn Gly Ile Val Lys Ser Glu
20 25 30

Ser Leu Asp Glu Glu Glu Lys Leu Glu Leu Gln Arg Arg Leu Glu Ala
35 40 45

Gln Asn Gln Glu Arg Arg Lys Ser Lys Ser Gly Ala Gly Lys Gly Lys
50 55 60

Leu Thr Arg Ser Leu Ala Val Cys Glu Glu Ser Ser Ala Arg Pro Gly
65 70 75 80

Gly Glu Ser Leu Gln Asp Gln Glu Ser Ile His Leu Gln Leu Ser Ser
85 90 95

Phe Ser Ser Leu Gln Glu Glu Asp

25495

<210> 11416

<211> 241

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<220>

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<223> /note="ENSP ID: ENSP00000412233"

<400> 11416

Gly Ser Arg Gln Ser Ser Glu Asn Glu Leu Lys Trp Ser Asp His
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Gln Arg Ala Trp Ser Ser Thr Asp Ser Asp Ser Ser Asn Arg Asn Leu
20 25 30

Lys Pro Ala Met Thr Lys Thr Ala Ser Phe Gly Gly Ile Thr Val Leu
35 40 45

Thr Arg Gly Asp Ser Thr Ser Ser Thr Arg Ser Thr Gly Lys Leu Ser
50 55 60

Lys Ala Gly Ser Glu Ser Ser Ser Ser Ala Gly Ser Ser Gly Ser Leu
65 70 75 80

Ser Arg Thr His Pro Pro Leu Gln Ser Thr Pro Leu Val Ser Gly Val
85 90 95

Ala Ala Gly Ser Pro Gly Cys Val Pro Tyr Pro Glu Asn Gly Ile Gly
100 105 110

Gly Gln Val Ala Pro Ser Ser Thr Ser Tyr Ile Leu Leu Pro Leu Glu
115 120 125

Ala Ala Thr Gly Ile Pro Pro Gly Ser Ile Leu Leu Asn Pro His Thr
130 135 140

Ala Leu Cys Glu Ser Arg Trp Asn Ser Cys Asn Ile Gln Pro Thr His
145 150 155 160

Gln Ser Ala Ala Pro Ala Lys Arg His Gly Gly Ala Val Pro Thr Ala
165 170 175

Ala Thr Thr Ala Ala Ala Leu Pro Ala Ala Pro Thr Ala Gly Pro Ala
180 185 190

Thr Ala Ala Thr Asp Gly Arg Pro Ser Gly His Ser Val Cys Pro Gly
195 200 205

Ala Ala Gly Phe Leu Pro Val Ser Ala Ile Ser Ser Ser Leu Phe Ser
210 215 220

Ser Pro Ala Pro Pro Thr Cys Val Ser Asn Ala Ala Leu Ser His Glu
225 230 235 240

Arg

<210> 11417
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<212> PRT
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Met Ser Glu Gln Gly Asp Leu Asn Gln Ala Ile Ala Glu Glu Gly Gly
1 5 10 15

Thr Glu Gln Glu Thr Ala Thr Pro Glu Asn Gly Ile Val Lys Ser Glu
20 25 30

Ser Leu Asp Glu Glu Glu Lys Leu Glu Leu Gln Arg Arg Leu Glu Ala
35 40 45

Gln Asn Gln Glu Arg Arg Lys Ser Lys Ser Gly Ala Gly Lys Gly Lys
50 55 60

Leu Thr Arg Ser Leu Ala Val Cys Glu Glu Ser Ser Ala Arg Pro Gly
65 70 75 80

Gly Glu Ser Leu Gln Asp Gln Glu Ser Ile His Leu Gln Leu Ser Ser
85 90 95

Phe Ser Ser Leu Gln Glu Glu Asp Lys Ser Arg Lys Asp Asp Ser Glu
100 105 110

Arg Glu Lys Glu Lys Asp Lys Asn Lys Asp Lys Thr Ser Glu Lys Pro
115 120 125

Lys Ile Arg Met Leu Ser Lys Asp Cys Ser Gln Glu Tyr Thr Asp Ser
130 135 140

Thr Gly Ile Asp Leu His Glu Phe Leu Ile Asn Thr Leu Lys Asn Asn
145 150 155 160

Ser Arg Asp Arg Met Ile Leu Leu Lys Met Glu Gln Glu Ile Ile Asp
165 170 175

Phe Ile Ala Asp Asn Asn Asn His Tyr Lys Lys Phe Pro Gln Met Ser
180 185 190

Ser Tyr Gln Arg Met Leu Val His Arg Val Ala Ala Tyr Phe Gly Leu
195 200 205

Asp His Asn Val Asp Gln Thr Gly Lys Ser Val Ile Ile Asn Lys Thr
210 215 220

Ser 225	Ser	Thr	Arg	Ile	Pro 230	Glu	Gln	Arg	Phe	Cys 235	Glu	His	Leu	Lys	Asp 240
Glu	Lys	Gly	Glu	Glu 245	Ser	Gln	Lys	Arg	Phe 250	Ile	Leu	Lys	Arg	Asp 255	Asn
Ser	Ser	Ile	Asp 260	Lys	Glu	Asp	Asn 265	Gln	Ser	Val	Cys	Ser	Gln 270	Glu	Ser
Leu	Phe	Val 275	Glu	Asn	Ser	Arg	Leu 280	Leu	Glu	Asp	Ser	Asn 285	Ile	Cys	Asn
Glu	Thr 290	Tyr	Lys	Lys	Arg	Gln 295	Leu	Phe	Arg	Gly	Asn 300	Arg	Asp	Gly	Ser
Gly 305	Arg	Thr	Ser	Gly	Ser 310	Arg	Gln	Ser	Ser	Ser 315	Glu	Asn	Glu	Leu	Lys 320
Trp	Ser	Asp	His	Gln 325	Arg	Ala	Trp	Ser	Ser 330	Thr	Asp	Ser	Asp	Ser 335	Ser
Asn	Arg	Asn	Leu 340	Lys	Pro	Ala	Met	Thr 345	Lys	Thr	Ala	Ser	Phe 350	Gly	Gly
Ile	Thr 355	Val	Leu	Thr	Arg	Gly	Asp 360	Ser	Thr	Ser	Ser	Thr 365	Arg	Ser	Thr
Gly	Lys 370	Leu	Ser	Lys	Ala	Gly 375	Ser	Glu	Ser	Ser	Ser 380	Ser	Ala	Gly	Ser
Ser 385	Gly	Ser	Leu	Ser	Arg 390	Thr	His	Pro	Pro	Leu 395	Gln	Ser	Thr	Pro	Leu 400
Val	Ser	Gly	Val	Ala 405	Ala	Gly	Ser	Pro	Gly 410	Cys	Val	Pro	Tyr	Pro 415	Glu
Asn	Gly	Ile	Gly 420	Gly	Gln	Val	Ala	Pro 425	Ser	Ser	Thr	Ser	Tyr 430	Ile	Leu
Leu	Pro 435	Leu	Glu	Ala	Ala	Thr	Gly 440	Ile	Pro	Pro	Gly	Ser 445	Ile	Leu	Leu

Asn	Pro	His	Thr	Gly	Gln	Pro	Phe	Val	Asn	Pro	Asp	Gly	Thr	Pro	Ala	
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Ile	Tyr	Asn	Pro	Pro	Thr	Ser	Gln	Gln	Pro	Leu	Arg	Ser	Ala	Met	Val	
465					470					475					480	
Gly	Gln	Ser	Gln	Gln	Gln	Pro	Pro	Gln	Gln	Gln	Pro	Ser	Pro	Gln	Pro	
				485					490					495		
Gln	Gln	Gln	Val	Gln	Pro	Pro	Gln	Pro	Gln	Met	Ala	Gly	Pro	Leu	Val	
			500					505					510			
Thr	Gln	Ser	Val	Gln	Gly	Leu	Gln	Ala	Ser	Ser	Gln	Ser	Val	Gln	Tyr	
		515					520					525				
Pro	Ala	Val	Ser	Phe	Pro	Pro	Gln	His	Leu	Leu	Pro	Val	Ser	Pro	Thr	
	530					535					540					
Gln	His	Phe	Pro	Met	Arg	Asp	Asp	Val	Ala	Thr	Gln	Phe	Gly	Gln	Met	
545					550					555					560	
Thr	Leu	Ser	Arg	Gln	Ser	Ser	Gly	Glu	Thr	Pro	Glu	Pro	Pro	Ser	Gly	
				565					570					575		
Pro	Val	Tyr	Pro	Ser	Ser	Leu	Met	Pro	Gln	Pro	Ala	Gln	Gln	Pro	Ser	
			580					585					590			
Tyr	Val	Ile	Ala	Ser	Thr	Gly	Gln	Gln	Leu	Pro	Thr	Gly	Gly	Phe	Ser	
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Gly	Ser	Gly	Pro	Pro	Ile	Ser	Gln	Gln	Val	Leu	Gln	Pro	Pro	Pro	Ser	
	610					615					620					
Pro	Gln	Gly	Phe	Val	Gln	Gln	Pro	Pro	Pro	Ala	Gln	Met	Pro	Val	Tyr	
625					630					635					640	
Tyr	Tyr	Pro	Ser	Gly	Gln	Tyr	Pro	Thr	Ser	Thr	Thr	Gln	Gln	Tyr	Arg	
				645					650					655		
Pro	Met	Ala	Pro	Val	Gln	Tyr	Asn	Ala	Gln	Arg	Ser	Gln	Gln	Met	Pro	
			660					665					670			

Gln Ala Ala Gln Gln Ala Gly Tyr Gln Pro Val Leu Ser Gly Gln Gln
 675 680 685
 Gly Phe Gln Gly Leu Ile Gly Val Gln Gln Pro Pro Gln Ser Gln Asn
 690 695 700
 Val Ile Asn Asn Gln Gln Gly Thr Pro Val Gln Ser Val Met Val Ser
 705 710 715 720
 Tyr Pro Thr Met Ser Ser Tyr Gln Val Pro Met Thr Gln Gly Ser Gln
 725 730 735
 Gly Leu Pro Gln Gln Ser Tyr Gln Gln Pro Ile Met Leu Pro Asn Gln
 740 745 750
 Ala Gly Gln Gly Ser Leu Pro Ala Thr Gly Met Pro Val Tyr Cys Asn
 755 760 765
 Val Thr Pro Pro Thr Pro Gln Asn Asn Leu Arg Leu Ile Gly Pro His
 770 775 780
 Cys Pro Ser Ser Thr Val Pro Val Met Ser Ala Ser Cys Arg Thr Asn
 785 790 795 800
 Cys Ala Ser Met Ser Asn Ala Gly Trp Gln Val Lys Phe
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<210> 11418

<211> 101

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<221> source

<223> /note="Payload ID: 2235"

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<221> source

<223> /note="Gene Symbol: ARPP21"

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<223> /note="Gene Name:
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<220>

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<223> /note="ENSP ID: ENSP00000412341"

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Met Ser Glu Gln Gly Asp Leu Asn Gln Ala Ile Ala Glu Glu Gly Gly
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Thr Glu Gln Glu Thr Ala Thr Pro Glu Asn Gly Ile Val Lys Ser Glu
20 25 30

Ser Leu Asp Glu Glu Glu Lys Leu Glu Leu Gln Arg Arg Leu Glu Ala
35 40 45

Gln Asn Gln Glu Arg Arg Lys Ser Lys Ser Gly Ala Gly Lys Gly Lys
50 55 60

Leu Thr Arg Ser Leu Ala Val Cys Glu Glu Ser Ser Ala Arg Pro Gly
65 70 75 80

Gly Glu Ser Leu Gln Asp Gln Val Tyr Pro Leu Ala Ile Ile Ile Asn
85 90 95

Cys Met Asn Gly Ile
100

<210> 11419
<211> 89
<212> PRT
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cAMP-regulated phosphoprotein, 21kDa"

<220>
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<223> /note="Uniprot ID: Q9UBL0"

<220>
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<223> /note="ENSP ID: ENSP00000412411"

<400> 11419

Met Ser Glu Gln Gly Asp Leu Asn Gln Ala Ile Ala Glu Glu Gly Gly
1 5 10 15

Thr Glu Gln Glu Thr Ala Thr Pro Glu Asn Gly Ile Val Lys Ser Glu
20 25 30

Ser Leu Asp Glu Glu Glu Lys Leu Glu Leu Gln Arg Arg Leu Glu Ala
35 40 45

Gln Asn Gln Glu Arg Arg Lys Ser Lys Ser Gly Ala Gly Lys Gly Lys
50 55 60

Leu Thr Arg Ser Leu Ala Val Cys Glu Glu Ser Ser Ala Arg Pro Gly
65 70 75 80

Gly Glu Ser Leu Gln Asp Gln Thr Leu
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<210> 11420
<211> 43
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<220>
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cAMP-regulated phosphoprotein, 21kDa"

<220>
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<400> 11420
Met Ser Glu Gln Gly Asp Leu Asn Gln Ala Ile Ala Glu Glu Gly Gly
1 5 10 15

Thr Glu Gln Glu Thr Ala Thr Pro Glu Asn Gly Ile Val Lys Ser Glu
20 25 30

Ser Leu Asp Glu Glu Glu Lys Leu Glu Leu Gln
35 40

25503

<210> 11421
<211> 98
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<213> Homo sapiens

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<220>
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<223> /note="Gene Name:
cAMP-regulated phosphoprotein, 21kDa"

<220>
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<223> /note="ENSP ID: ENSP00000415134"

<400> 11421
Met Ser Glu Gln Gly Asp Leu Asn Gln Ala Ile Ala Glu Glu Gly Gly
1 5 10 15

Thr Glu Gln Glu Thr Ala Thr Pro Glu Asn Gly Ile Val Lys Ser Glu
20 25 30

Ser Leu Asp Glu Glu Glu Lys Leu Glu Leu Gln Arg Arg Leu Glu Ala
35 40 45

Gln Asn Gln Glu Arg Arg Lys Ser Lys Ser Gly Ala Gly Lys Gly Lys
50 55 60

Leu Thr Arg Ser Leu Ala Val Cys Glu Glu Ser Ser Ala Arg Pro Gly
65 70 75 80

Gly Glu Ser Leu Gln Asp Gln Ile Ala Ala Lys Asn Thr Arg Ile Leu
85 90 95

Gln Ala

<210> 11422
<211> 89
<212> PRT
<213> Homo sapiens


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      cAMP-regulated phosphoprotein, 21kDa"

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<223> /note="Uniprot ID: Q9UBL0"

<220>
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<223> /note="ENSP ID: ENSP00000417838"

<400> 11422
Met Ser Glu Gln Gly Asp Leu Asn Gln Ala Ile Ala Glu Glu Gly Gly
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Thr Glu Gln Glu Thr Ala Thr Pro Glu Asn Gly Ile Val Lys Ser Glu
          20          25          30

Ser Leu Asp Glu Glu Glu Lys Leu Glu Leu Gln Arg Arg Leu Glu Ala
          35          40          45

Gln Asn Gln Glu Arg Arg Lys Ser Lys Ser Gly Ala Gly Lys Gly Lys
          50          55          60

Leu Thr Arg Ser Leu Ala Val Cys Glu Glu Ser Ser Ala Arg Pro Gly
65          70          75          80

Gly Glu Ser Leu Gln Asp Gln Thr Leu
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<210> 11423
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<212> PRT
<213> Homo sapiens

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<223> /note="Gene Symbol: CAGE1"

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<223> /note="Gene Name:
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<221> source
<223> /note="Uniprot ID: Q8TC20"

<220>
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<223> /note="ENSP ID: ENSP00000296742"

<400> 11423
Met Thr Glu Lys Pro Glu Phe Gln Ser Gln Val Tyr Asn Tyr Ala Lys
1          5          10          15

Asp Asn Asn Ile Lys Gln Asp Ser Phe Lys Glu Glu Asn Pro Met Glu
20          25          30

Thr Ser Val Ser Ala Asn Thr Asp Gln Leu Gly Asn Glu Tyr Phe Arg
35          40          45

Gln Pro Pro Pro Arg Ser Pro Pro Leu Ile His Cys Ser Gly Glu Met
50          55          60

Leu Lys Phe Thr Glu Lys Ser Leu Ala Lys Ser Ile Ala Lys Glu Ser
65          70          75          80

Ala Leu Asn Pro Ser Gln Pro Pro Ser Phe Leu Cys Lys Thr Ala Val
85          90          95

Pro Ser Lys Glu Ile Gln Asn Tyr Gly Glu Ile Pro Glu Met Ser Val
100         105         110

Ser Tyr Glu Lys Glu Val Thr Ala Glu Gly Val Glu Arg Pro Glu Ile
115         120         125

Val Ser Thr Trp Ser Ser Ala Gly Ile Ser Trp Arg Ser Glu Ala Cys
130         135         140

Arg Glu Asn Cys Glu Met Pro Asp Trp Glu Gln Ser Ala Glu Ser Leu
145         150         155         160

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Gln	Pro	Val	Gln	Glu	Asp	Met	Ala	Leu	Asn	Glu	Val	Leu	Gln	Lys	Leu		
				165					170					175			
Lys	His	Thr	Asn	Arg	Lys	Gln	Glu	Val	Arg	Ile	Gln	Glu	Leu	Gln	Cys		
			180					185					190				
Ser	Asn	Leu	Tyr	Leu	Glu	Lys	Arg	Val	Lys	Glu	Leu	Gln	Met	Lys	Ile		
		195					200					205					
Thr	Lys	Gln	Gln	Val	Phe	Ile	Asp	Val	Ile	Asn	Lys	Leu	Lys	Glu	Asn		
	210					215					220						
Val	Glu	Glu	Leu	Ile	Glu	Asp	Lys	Tyr	Lys	Ile	Ile	Leu	Glu	Lys	Asn		
225					230					235					240		
Asp	Thr	Lys	Lys	Thr	Leu	Gln	Asn	Leu	Glu	Glu	Val	Leu	Ala	Asn	Thr		
				245					250					255			
Gln	Lys	His	Leu	Gln	Glu	Ser	Arg	Asn	Asp	Lys	Glu	Met	Leu	Gln	Leu		
			260					265					270				
Gln	Phe	Lys	Lys	Ile	Lys	Ala	Asn	Tyr	Val	Cys	Leu	Gln	Glu	Arg	Tyr		
		275					280					285					
Met	Thr	Glu	Met	Gln	Gln	Lys	Asn	Lys	Ser	Val	Ser	Gln	Tyr	Leu	Glu		
	290					295					300						
Met	Asp	Lys	Thr	Leu	Ser	Lys	Lys	Glu	Glu	Glu	Val	Glu	Arg	Leu	Gln		
305					310					315					320		
Gln	Leu	Lys	Lys	Glu	Leu	Glu	Lys	Ala	Thr	Ala	Ser	Ala	Leu	Asp	Leu		
				325					330					335			
Leu	Lys	Arg	Glu	Lys	Glu	Ala	Gln	Glu	Gln	Glu	Phe	Leu	Ser	Leu	Gln		
			340					345					350				
Glu	Glu	Phe	Gln	Lys	Leu	Glu	Lys	Glu	Asn	Leu	Glu	Glu	Arg	Gln	Lys		
		355					360					365					
Leu	Lys	Ser	Arg	Leu	Glu	Lys	Leu	Leu	Thr	Gln	Val	Arg	Asn	Leu	Gln		
	370					375					380						
Phe	Met	Ser	Glu	Asn	Glu	Arg	Thr	Lys	Asn	Ile	Lys	Leu	Gln	Gln	Gln		

385					390						395					400
Ile	Asn	Glu	Val	Lys	Asn	Glu	Asn	Ala	Lys	Leu	Lys	Gln	Gln	Val	Ala	
				405					410					415		
Arg	Ser	Glu	Glu	Gln	Asn	Tyr	Val	Pro	Lys	Phe	Glu	Thr	Ala	Gln	Leu	
			420					425					430			
Lys	Asp	Gln	Leu	Glu	Glu	Val	Leu	Lys	Ser	Asp	Ile	Thr	Lys	Asp	Thr	
		435					440					445				
Lys	Thr	Thr	His	Ser	Asn	Leu	Leu	Pro	Asp	Cys	Ser	Pro	Cys	Glu	Glu	
	450					455					460					
Arg	Leu	Asn	Pro	Ala	Asp	Ile	Lys	Arg	Ala	Ser	Gln	Leu	Ala	Ser	Lys	
465					470					475					480	
Met	His	Ser	Leu	Leu	Ala	Leu	Met	Val	Gly	Leu	Leu	Thr	Cys	Gln	Asp	
				485					490					495		
Ile	Ile	Asn	Ser	Asp	Ala	Glu	His	Phe	Lys	Glu	Ser	Glu	Lys	Val	Ser	
			500					505					510			
Asp	Ile	Met	Leu	Gln	Lys	Leu	Lys	Ser	Leu	His	Leu	Lys	Lys	Lys	Thr	
		515					520					525				
Leu	Asp	Lys	Glu	Val	Ile	Asp	Cys	Asp	Ser	Asp	Glu	Ala	Lys	Ser	Ile	
	530					535					540					
Arg	Asp	Val	Pro	Thr	Leu	Leu	Gly	Ala	Lys	Leu	Asp	Lys	Tyr	His	Ser	
545					550					555					560	
Leu	Asn	Glu	Glu	Leu	Asp	Phe	Leu	Val	Thr	Ser	Tyr	Glu	Glu	Ile	Ile	
				565					570					575		
Glu	Cys	Ala	Asp	Gln	Arg	Leu	Ala	Ile	Ser	His	Ser	Gln	Ile	Ala	His	
			580					585					590			
Leu	Glu	Glu	Arg	Asn	Lys	His	Leu	Glu	Asp	Leu	Ile	Arg	Lys	Pro	Arg	
		595					600					605				
Glu	Lys	Ala	Arg	Lys	Pro	Arg	Ser	Lys	Ser	Leu	Glu	Asn	His	Pro	Lys	
	610					615					620					

Ser	Met	Thr	Met	Met	Pro	Ala	Leu	Phe	Lys	Glu	Asn	Arg	Asn	Asp	Leu
625					630					635					640

Asp

<210> 11424
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 cancer antigen 1"

<220>
 <221> source
 <223> /note="Uniprot ID: Q8TC20"

<220>
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 <223> /note="ENSP ID: ENSP00000338107"

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 1 5 10 15

His Phe Glu Val Asp Thr Ser His Glu Lys Val Glu Ser Met Ser Glu
 20 25 30

Ser Asp Thr Met Asn Val Ser Asn Leu Ser Gln Gly Val Met Leu Ser
 35 40 45

His Ser Pro Ile Cys Met Glu Thr Thr Gly Thr Thr Cys Asp Leu Pro
 50 55 60

Gln Asn Glu Ile Lys Asn Phe Glu Arg Glu Asn Glu Tyr Glu Ser Thr
 65 70 75 80

Leu	Cys	Glu	Asp	Ala	Tyr	Gly	Thr	Leu	Asp	Asn	Leu	Leu	Asn	Asp	Asn		
				85					90					95			
Asn	Ile	Glu	Asn	Tyr	Ser	Thr	Asn	Ala	Leu	Ile	Gln	Pro	Val	Asp	Thr		
			100					105					110				
Ile	Ser	Ile	Ser	Ser	Leu	Arg	Gln	Phe	Glu	Thr	Val	Cys	Lys	Phe	His		
		115					120					125					
Trp	Val	Glu	Ala	Phe	Asp	Asp	Glu	Met	Thr	Glu	Lys	Pro	Glu	Phe	Gln		
	130					135					140						
Ser	Gln	Val	Tyr	Asn	Tyr	Ala	Lys	Asp	Asn	Asn	Ile	Lys	Gln	Asp	Ser		
145					150					155					160		
Phe	Lys	Glu	Glu	Asn	Pro	Met	Glu	Thr	Ser	Val	Ser	Ala	Asn	Thr	Asp		
				165					170					175			
Gln	Leu	Gly	Asn	Glu	Tyr	Phe	Arg	Gln	Pro	Pro	Pro	Arg	Ser	Pro	Pro		
			180					185					190				
Leu	Ile	His	Cys	Ser	Gly	Glu	Met	Leu	Lys	Phe	Thr	Glu	Lys	Ser	Leu		
		195					200					205					
Ala	Lys	Ser	Ile	Ala	Lys	Glu	Ser	Ala	Leu	Asn	Pro	Ser	Gln	Pro	Pro		
	210					215					220						
Ser	Phe	Leu	Cys	Lys	Thr	Ala	Val	Pro	Ser	Lys	Glu	Ile	Gln	Asn	Tyr		
225					230					235					240		
Gly	Glu	Ile	Pro	Glu	Met	Ser	Val	Ser	Tyr	Glu	Lys	Glu	Val	Thr	Ala		
				245					250					255			
Glu	Gly	Val	Glu	Arg	Pro	Glu	Ile	Val	Ser	Thr	Trp	Ser	Ser	Ala	Gly		
			260					265					270				
Ile	Ser	Trp	Arg	Ser	Glu	Ala	Cys	Arg	Glu	Asn	Cys	Glu	Met	Pro	Asp		
		275					280					285					
Trp	Glu	Gln	Ser	Ala	Glu	Ser	Leu	Gln	Pro	Val	Gln	Glu	Asp	Met	Ala		
	290					295					300						
Leu	Asn	Glu	Val	Leu	Gln	Lys	Leu	Lys	His	Thr	Asn	Arg	Lys	Gln	Glu		

305					310						315					320
Val	Arg	Ile	Gln	Glu	Leu	Gln	Cys	Ser	Asn	Leu	Tyr	Leu	Glu	Lys	Arg	
				325					330					335		
Val	Lys	Glu	Leu	Gln	Met	Lys	Ile	Thr	Lys	Gln	Gln	Val	Phe	Ile	Asp	
			340					345					350			
Val	Ile	Asn	Lys	Leu	Lys	Glu	Asn	Val	Glu	Glu	Leu	Ile	Glu	Asp	Lys	
		355					360					365				
Tyr	Lys	Ile	Ile	Leu	Glu	Lys	Asn	Asp	Thr	Lys	Lys	Thr	Leu	Gln	Asn	
	370					375						380				
Leu	Glu	Glu	Val	Leu	Ala	Asn	Thr	Gln	Lys	His	Leu	Gln	Glu	Ser	Arg	
385					390					395					400	
Asn	Asp	Lys	Glu	Met	Leu	Gln	Leu	Gln	Phe	Lys	Lys	Ile	Lys	Ala	Asn	
				405					410					415		
Tyr	Val	Cys	Leu	Gln	Glu	Arg	Tyr	Met	Thr	Glu	Met	Gln	Gln	Lys	Asn	
			420					425					430			
Lys	Ser	Val	Ser	Gln	Tyr	Leu	Glu	Met	Asp	Lys	Thr	Leu	Ser	Lys	Lys	
		435					440					445				
Glu	Glu	Glu	Val	Glu	Arg	Leu	Gln	Gln	Leu	Lys	Lys	Glu	Leu	Glu	Lys	
	450					455					460					
Ala	Thr	Ala	Ser	Ala	Leu	Asp	Leu	Leu	Lys	Arg	Glu	Lys	Glu	Ala	Gln	
465					470					475					480	
Glu	Gln	Glu	Phe	Leu	Ser	Leu	Gln	Glu	Glu	Phe	Gln	Lys	Leu	Glu	Lys	
				485					490					495		
Glu	Asn	Leu	Glu	Glu	Arg	Gln	Lys	Leu	Lys	Ser	Arg	Leu	Glu	Lys	Leu	
		500						505					510			
Leu	Thr	Gln	Val	Arg	Asn	Leu	Gln	Phe	Met	Ser	Glu	Asn	Glu	Arg	Thr	
		515					520					525				
Lys	Asn	Ile	Lys	Leu	Gln	Gln	Gln	Ile	Asn	Glu	Val	Lys	Asn	Glu	Asn	
	530					535					540					

Ala	Lys	Leu	Lys	Gln	Gln	Val	Ala	Arg	Ser	Glu	Glu	Gln	Asn	Tyr	Val	
545					550					555					560	
Pro	Lys	Phe	Glu	Thr	Ala	Gln	Leu	Lys	Asp	Gln	Leu	Glu	Glu	Val	Leu	
				565					570					575		
Lys	Ser	Asp	Ile	Thr	Lys	Asp	Thr	Lys	Thr	Thr	His	Ser	Asn	Leu	Leu	
			580					585					590			
Pro	Asp	Cys	Ser	Pro	Cys	Glu	Glu	Arg	Leu	Asn	Pro	Ala	Asp	Ile	Lys	
		595					600					605				
Arg	Ala	Ser	Gln	Leu	Ala	Ser	Lys	Met	His	Ser	Leu	Leu	Ala	Leu	Met	
	610					615					620					
Val	Gly	Leu	Leu	Thr	Cys	Gln	Asp	Ile	Ile	Asn	Ser	Asp	Ala	Glu	His	
625					630					635					640	
Phe	Lys	Glu	Ser	Glu	Lys	Val	Ser	Asp	Ile	Met	Leu	Gln	Lys	Leu	Lys	
				645					650					655		
Ser	Leu	His	Leu	Lys	Lys	Lys	Thr	Leu	Asp	Lys	Glu	Leu	Leu	Lys	His	
			660					665					670			
Lys	Asp	Arg	Ile	Thr	Thr	Phe	Arg	Glu	Leu	Ile	Ala	Lys	Glu	Lys	Ala	
		675					680					685				
Phe	Gln	Asp	His	Ala	Ile	Lys	Val	Ile	Asp	Cys	Asp	Ser	Asp	Glu	Ala	
	690					695					700					
Lys	Ser	Ile	Arg	Asp	Val	Pro	Thr	Leu	Leu	Gly	Ala	Lys	Leu	Asp	Lys	
705					710					715					720	
Tyr	His	Ser	Leu	Asn	Glu	Glu	Leu	Asp	Phe	Leu	Val	Thr	Ser	Tyr	Glu	
				725					730					735		
Glu	Ile	Ile	Glu	Cys	Ala	Asp	Gln	Arg	Leu	Ala	Ile	Ser	His	Ser	Gln	
			740					745					750			
Ile	Ala	His	Leu	Glu	Glu	Arg	Asn	Lys	His	Leu	Glu	Asp	Leu	Ile	Arg	
		755					760					765				

Lys Pro Arg Glu Lys Ala Arg Lys Pro Arg Ser Lys Ser Leu Glu Asn
770 775 780

His Pro Lys Ser Met Thr Met Leu Ala Tyr Asn Leu Tyr Ile Phe Ile
785 790 795 800

Gly Tyr Arg Leu Gly Ala Val Ala Asp Ala Cys Asn Pro Ser Thr Leu
805 810 815

Gly Gly Arg Gly Gly Trp Ile Thr
820

<210> 11425
<211> 817
<212> PRT
<213> Homo sapiens

<220>
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<223> /note="Payload ID: 2236"

<220>
<221> source
<223> /note="Gene Symbol: CAGE1"

<220>
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<223> /note="Gene Name:
cancer antigen 1"

<220>
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<400> 11425
Met Asn Lys Asp Tyr Gln Lys Phe Trp Ser Ser Pro Ser Asp Pro Val
1 5 10 15

His Phe Glu Val Asp Thr Ser His Glu Lys Val Glu Ser Met Ser Glu
20 25 30

Ser Asp Thr Met Asn Val Ser Asn Leu Ser Gln Gly Val Met Leu Ser
35 40 45

His Ser Pro Ile Cys Met Glu Thr Thr Gly Thr Thr Cys Asp Leu Pro
50 55 60

Gln Asn Glu Ile Lys Asn Phe Glu Arg Glu Asn Glu Tyr Glu Ser Thr

65					70						75					80
Leu	Cys	Glu	Asp	Ala	Tyr	Gly	Thr	Leu	Asp	Asn	Leu	Leu	Asn	Asp	Asn	
				85					90					95		
Asn	Ile	Glu	Asn	Tyr	Ser	Thr	Asn	Ala	Leu	Ile	Gln	Pro	Val	Asp	Thr	
			100					105					110			
Ile	Ser	Ile	Ser	Ser	Leu	Arg	Gln	Phe	Glu	Thr	Val	Cys	Lys	Phe	His	
		115					120					125				
Trp	Val	Glu	Ala	Phe	Asp	Asp	Glu	Met	Thr	Glu	Lys	Pro	Glu	Phe	Gln	
	130					135					140					
Ser	Gln	Val	Tyr	Asn	Tyr	Ala	Lys	Asp	Asn	Asn	Ile	Lys	Gln	Asp	Ser	
145					150					155					160	
Phe	Lys	Glu	Glu	Asn	Pro	Met	Glu	Thr	Ser	Val	Ser	Ala	Asn	Thr	Asp	
				165					170					175		
Gln	Leu	Gly	Asn	Glu	Tyr	Phe	Arg	Gln	Pro	Pro	Pro	Arg	Ser	Pro	Pro	
			180					185					190			
Leu	Ile	His	Cys	Ser	Gly	Glu	Met	Leu	Lys	Phe	Thr	Glu	Lys	Ser	Leu	
		195					200					205				
Ala	Lys	Ser	Ile	Ala	Lys	Glu	Ser	Ala	Leu	Asn	Pro	Ser	Gln	Pro	Pro	
	210					215					220					
Ser	Phe	Leu	Cys	Lys	Thr	Ala	Val	Pro	Ser	Lys	Glu	Ile	Gln	Asn	Tyr	
225					230					235					240	
Gly	Glu	Ile	Pro	Glu	Met	Ser	Val	Ser	Tyr	Glu	Lys	Glu	Val	Thr	Ala	
				245					250					255		
Glu	Gly	Val	Glu	Arg	Pro	Glu	Ile	Val	Ser	Thr	Trp	Ser	Ser	Ala	Gly	
			260					265					270			
Ile	Ser	Trp	Arg	Ser	Glu	Ala	Cys	Arg	Glu	Asn	Cys	Glu	Met	Pro	Asp	
		275					280					285				
Trp	Glu	Gln	Ser	Ala	Glu	Ser	Leu	Gln	Pro	Val	Gln	Glu	Asp	Met	Ala	
	290					295					300					

Leu	Asn	Glu	Val	Leu	Gln	Lys	Leu	Lys	His	Thr	Asn	Arg	Lys	Gln	Glu	
305					310					315					320	
Val	Arg	Ile	Gln	Glu	Leu	Gln	Cys	Ser	Asn	Leu	Tyr	Leu	Glu	Lys	Arg	
				325					330					335		
Val	Lys	Glu	Leu	Gln	Met	Lys	Ile	Thr	Lys	Gln	Gln	Val	Phe	Ile	Asp	
			340					345					350			
Val	Ile	Asn	Lys	Leu	Lys	Glu	Asn	Val	Glu	Glu	Leu	Ile	Glu	Asp	Lys	
		355					360					365				
Tyr	Lys	Ile	Ile	Leu	Glu	Lys	Asn	Asp	Thr	Lys	Lys	Thr	Leu	Gln	Asn	
	370					375						380				
Leu	Glu	Glu	Val	Leu	Ala	Asn	Thr	Gln	Lys	His	Leu	Gln	Glu	Ser	Arg	
385					390					395					400	
Asn	Asp	Lys	Glu	Met	Leu	Gln	Leu	Gln	Phe	Lys	Lys	Ile	Lys	Ala	Asn	
				405					410					415		
Tyr	Val	Cys	Leu	Gln	Glu	Arg	Tyr	Met	Thr	Glu	Met	Gln	Gln	Lys	Asn	
			420					425					430			
Lys	Ser	Val	Ser	Gln	Tyr	Leu	Glu	Met	Asp	Lys	Thr	Leu	Ser	Lys	Lys	
		435					440					445				
Glu	Glu	Glu	Val	Glu	Arg	Leu	Gln	Gln	Leu	Lys	Lys	Glu	Leu	Glu	Lys	
	450					455					460					
Ala	Thr	Ala	Ser	Ala	Leu	Asp	Leu	Leu	Lys	Arg	Glu	Lys	Glu	Ala	Gln	
465					470					475					480	
Glu	Gln	Glu	Phe	Leu	Ser	Leu	Gln	Glu	Glu	Phe	Gln	Lys	Leu	Glu	Lys	
				485					490					495		
Glu	Asn	Leu	Glu	Glu	Arg	Gln	Lys	Leu	Lys	Ser	Arg	Leu	Glu	Lys	Leu	
		500						505					510			
Leu	Thr	Gln	Val	Arg	Asn	Leu	Gln	Phe	Met	Ser	Glu	Asn	Glu	Arg	Thr	
		515					520					525				

Lys	Asn	Ile	Lys	Leu	Gln	Gln	Gln	Ile	Asn	Glu	Val	Lys	Asn	Glu	Asn
530						535					540				
Ala	Lys	Leu	Lys	Gln	Gln	Val	Ala	Arg	Ser	Glu	Glu	Gln	Asn	Tyr	Val
545					550					555					560
Pro	Lys	Phe	Glu	Thr	Ala	Gln	Leu	Lys	Asp	Gln	Leu	Glu	Glu	Val	Leu
				565					570					575	
Lys	Ser	Asp	Ile	Thr	Lys	Asp	Thr	Lys	Thr	Thr	His	Ser	Asn	Leu	Leu
			580					585					590		
Pro	Asp	Cys	Ser	Pro	Cys	Glu	Glu	Arg	Leu	Asn	Pro	Ala	Asp	Ile	Lys
		595					600					605			
Arg	Ala	Ser	Gln	Leu	Ala	Ser	Lys	Met	His	Ser	Leu	Leu	Ala	Leu	Met
	610					615					620				
Val	Gly	Leu	Leu	Thr	Cys	Gln	Asp	Ile	Ile	Asn	Ser	Asp	Ala	Glu	His
625					630					635					640
Phe	Lys	Glu	Ser	Glu	Lys	Leu	Leu	Lys	His	Lys	Asp	Arg	Ile	Thr	Thr
				645					650					655	
Phe	Arg	Glu	Leu	Ile	Ala	Lys	Glu	Lys	Ala	Phe	Gln	Asp	His	Ala	Ile
			660					665					670		
Lys	Val	Ile	Asp	Cys	Asp	Ser	Asp	Glu	Ala	Lys	Ser	Ile	Arg	Asp	Val
		675					680					685			
Pro	Thr	Leu	Leu	Gly	Ala	Lys	Leu	Asp	Lys	Tyr	His	Ser	Leu	Asn	Glu
	690					695					700				
Glu	Leu	Asp	Phe	Leu	Ile	Thr	Lys	Leu	Gly	His	Leu	Leu	Glu	Ser	Lys
705					710					715					720
Glu	Asn	His	Cys	Asn	Arg	Leu	Ile	Glu	Glu	Asn	Asp	Lys	Tyr	Gln	Arg
				725					730					735	
His	Leu	Gly	Asn	Leu	Ile	Lys	Lys	Val	Thr	Ser	Tyr	Glu	Glu	Ile	Ile
			740					745					750		

Glu Cys Ala Asp Gln Arg Leu Ala Ile Ser His Ser Gln Ile Ala His
755 760 765

Leu Glu Glu Arg Asn Lys His Leu Glu Asp Leu Ile Arg Lys Pro Arg
770 775 780

Glu Lys Ala Arg Lys Pro Arg Ser Lys Ser Leu Glu Asn His Pro Lys
785 790 795 800

Ser Met Thr Met Met Pro Ala Leu Phe Lys Glu Asn Arg Asn Asp Leu
805 810 815

Asp

<210> 11426
<211> 700
<212> PRT
<213> Homo sapiens

<220>
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<223> /note="Payload ID: 2236"

<220>
<221> source
<223> /note="Gene Symbol: CAGE1"

<220>
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<223> /note="Gene Name:
cancer antigen 1"

<220>
<221> source
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<220>
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<400> 11426
Met Asn Lys Asp Tyr Gln Lys Phe Trp Ser Ser Pro Ser Asp Pro Val
1 5 10 15

His Phe Glu Val Asp Thr Ser His Glu Lys Val Glu Ser Met Ser Glu
20 25 30

Ser Asp Thr Met Asn Val Ser Asn Leu Ser Gln Gly Val Met Leu Ser
35 40 45

His	Ser	Pro	Ile	Cys	Met	Glu	Thr	Thr	Gly	Thr	Thr	Cys	Asp	Leu	Pro		
	50					55						60					
Gln	Asn	Glu	Ile	Lys	Asn	Phe	Glu	Arg	Glu	Asn	Glu	Tyr	Glu	Ser	Thr		
65					70					75					80		
Leu	Cys	Glu	Asp	Ala	Tyr	Gly	Thr	Leu	Asp	Asn	Leu	Leu	Asn	Asp	Asn		
				85					90					95			
Asn	Ile	Glu	Asn	Tyr	Ser	Thr	Asn	Ala	Leu	Ile	Gln	Pro	Val	Asp	Thr		
			100					105						110			
Ile	Ser	Ile	Ser	Ser	Leu	Arg	Gln	Phe	Glu	Thr	Val	Cys	Lys	Phe	His		
		115					120					125					
Trp	Val	Glu	Ala	Phe	Asp	Asp	Glu	Met	Thr	Glu	Lys	Pro	Glu	Phe	Gln		
	130					135					140						
Ser	Gln	Val	Tyr	Asn	Tyr	Ala	Lys	Asp	Asn	Asn	Ile	Lys	Gln	Asp	Ser		
145					150					155					160		
Phe	Lys	Glu	Glu	Asn	Pro	Met	Glu	Thr	Ser	Val	Ser	Ala	Asn	Thr	Asp		
				165					170					175			
Gln	Leu	Gly	Asn	Glu	Tyr	Phe	Arg	Gln	Pro	Pro	Pro	Arg	Ser	Pro	Pro		
			180					185					190				
Leu	Ile	His	Cys	Ser	Gly	Glu	Met	Leu	Lys	Phe	Thr	Glu	Lys	Ser	Leu		
		195					200					205					
Ala	Lys	Ser	Ile	Ala	Lys	Glu	Ser	Ala	Leu	Asn	Pro	Ser	Gln	Pro	Pro		
	210					215					220						
Ser	Phe	Leu	Cys	Lys	Thr	Ala	Val	Pro	Ser	Lys	Glu	Ile	Gln	Asn	Tyr		
225					230					235					240		
Gly	Glu	Ile	Pro	Glu	Met	Ser	Val	Ser	Tyr	Glu	Lys	Glu	Val	Thr	Ala		
				245					250					255			
Glu	Gly	Val	Glu	Arg	Pro	Glu	Ile	Val	Ser	Thr	Trp	Ser	Ser	Ala	Gly		
			260					265						270			

Ile	Ser	Trp	Arg	Ser	Glu	Ala	Cys	Arg	Glu	Asn	Cys	Glu	Met	Pro	Asp		
		275					280					285					
Trp	Glu	Gln	Ser	Ala	Glu	Ser	Leu	Gln	Pro	Val	Gln	Glu	Asp	Met	Ala		
	290					295					300						
Leu	Asn	Glu	Val	Leu	Gln	Lys	Leu	Lys	His	Thr	Asn	Arg	Lys	Gln	Glu		
305					310					315					320		
Val	Arg	Ile	Gln	Glu	Leu	Gln	Cys	Ser	Asn	Leu	Tyr	Leu	Glu	Lys	Arg		
				325					330					335			
Val	Lys	Glu	Leu	Gln	Met	Lys	Ile	Thr	Lys	Gln	Gln	Val	Phe	Ile	Asp		
			340					345					350				
Val	Ile	Asn	Lys	Leu	Lys	Glu	Asn	Val	Glu	Glu	Leu	Ile	Glu	Asp	Lys		
		355					360					365					
Tyr	Lys	Ile	Ile	Leu	Glu	Lys	Asn	Asp	Thr	Lys	Lys	Thr	Leu	Gln	Asn		
	370					375					380						
Leu	Glu	Glu	Val	Leu	Ala	Asn	Thr	Gln	Lys	His	Leu	Gln	Glu	Ser	Arg		
385					390					395					400		
Asn	Asp	Lys	Glu	Met	Leu	Gln	Leu	Gln	Phe	Lys	Lys	Ile	Lys	Ala	Asn		
				405					410					415			
Tyr	Val	Cys	Leu	Gln	Glu	Arg	Tyr	Met	Thr	Glu	Met	Gln	Gln	Lys	Asn		
			420					425					430				
Lys	Ser	Val	Ser	Gln	Tyr	Leu	Glu	Met	Asp	Lys	Thr	Leu	Ser	Lys	Lys		
		435					440					445					
Glu	Glu	Glu	Val	Glu	Arg	Leu	Gln	Gln	Leu	Lys	Lys	Glu	Leu	Glu	Lys		
	450					455					460						
Ala	Thr	Ala	Ser	Ala	Leu	Asp	Leu	Leu	Lys	Arg	Glu	Lys	Glu	Ala	Gln		
465					470					475					480		
Glu	Gln	Glu	Phe	Leu	Ser	Leu	Gln	Glu	Glu	Phe	Gln	Lys	Leu	Glu	Lys		
				485					490					495			

Glu Asn Leu Glu Glu Arg Gln Lys Leu Lys Ser Arg Leu Glu Lys Leu
500 505 510

Leu Thr Gln Val Arg Asn Leu Gln Phe Met Ser Glu Asn Glu Arg Thr
515 520 525

Lys Asn Ile Lys Leu Gln Gln Gln Ile Asn Glu Val Lys Asn Glu Asn
530 535 540

Ala Lys Leu Lys Gln Gln Val Ala Arg Ser Glu Glu Gln Asn Tyr Val
545 550 555 560

Pro Lys Phe Glu Thr Ala Gln Leu Lys Asp Gln Leu Glu Glu Val Leu
565 570 575

Lys Ser Asp Ile Thr Lys Asp Thr Lys Thr Thr His Ser Asn Leu Leu
580 585 590

Pro Asp Cys Ser Pro Cys Glu Glu Arg Leu Asn Pro Ala Asp Ile Lys
595 600 605

Arg Ala Ser Gln Leu Ala Ser Lys Met His Ser Leu Leu Ala Leu Met
610 615 620

Val Gly Leu Leu Thr Cys Gln Asp Ile Ile Asn Ser Asp Ala Glu His
625 630 635 640

Phe Lys Glu Ser Glu Lys Val Ser Asp Ile Met Leu Gln Lys Leu Lys
645 650 655

Ser Leu His Leu Lys Lys Lys Thr Leu Asp Lys Glu Leu Leu Lys His
660 665 670

Lys Asp Arg Ile Thr Thr Phe Arg Glu Leu Ile Ala Lys Glu Lys Ala
675 680 685

Phe Gln Asp His Ala Ile Lys Val Phe Gln Gly Val
690 695 700

<210> 11427

<211> 242

<212> PRT

<213> Homo sapiens

<220>
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<220>
<221> source
<223> /note="Gene Symbol: CAGE1"

<220>
<221> source
<223> /note="Gene Name:
cancer antigen 1"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000391746"

<400> 11427
Met Asn Lys Asp Tyr Gln Lys Phe Trp Ser Ser Pro Ser Asp Pro Val
1 5 10 15

His Phe Glu Val Asp Thr Ser His Glu Lys Val Glu Ser Met Ser Glu
20 25 30

Ser Asp Thr Met Asn Val Ser Asn Leu Ser Gln Gly Val Met Leu Ser
35 40 45

His Ser Pro Ile Cys Met Glu Thr Thr Gly Thr Thr Cys Asp Leu Pro
50 55 60

Gln Asn Glu Ile Lys Asn Phe Glu Arg Glu Asn Glu Tyr Glu Ser Thr
65 70 75 80

Leu Cys Glu Asp Ala Tyr Gly Thr Leu Asp Asn Leu Leu Asn Asp Asn
85 90 95

Asn Ile Glu Asn Tyr Ser Thr Asn Ala Leu Ile Gln Pro Val Asp Thr
100 105 110

Ile Ser Ile Ser Ser Leu Arg Gln Phe Glu Thr Val Cys Lys Phe His
115 120 125

Trp Val Glu Ala Phe Asp Asp Glu Met Thr Glu Lys Pro Glu Phe Gln
130 135 140

Ser Gln Val Tyr Asn Tyr Ala Lys Asp Asn Asn Ile Lys Gln Asp Ser
145 150 155 160

Phe Lys Glu Glu Asn Pro Met Glu Thr Ser Val Ser Ala Asn Thr Asp
165 170 175

Gln Leu Gly Asn Glu Tyr Phe Arg Gln Pro Pro Pro Arg Ser Pro Pro
180 185 190

Leu Ile His Cys Ser Gly Glu Met Leu Lys Phe Thr Glu Lys Ser Leu
195 200 205

Ala Lys Ser Ile Ala Lys Glu Ser Ala Leu Asn Pro Ser Gln Pro Pro
210 215 220

Ser Phe Leu Tyr Cys Ser Ser Phe Lys Arg Asn Thr Glu Leu Trp Gly
225 230 235 240

Asp Ser

<210> 11428
<211> 558
<212> PRT
<213> Homo sapiens

<220>
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<220>
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cancer antigen 1"

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<400> 11428
Met Asp Pro Gly Lys Val Phe Tyr Cys Ser Thr Val Met Asn Lys Asp
1 5 10 15

Tyr Gln Lys Phe Trp Ser Ser Pro Ser Asp Pro Val His Phe Glu Val
20 25 30

Asp Thr Ser His Glu Lys Val Glu Ser Met Ser Glu Ser Asp Thr Met

35					40					45					
Asn	Val	Ser	Asn	Leu	Ser	Gln	Gly	Val	Met	Leu	Ser	His	Ser	Pro	Ile
50						55					60				
Cys	Met	Glu	Thr	Thr	Gly	Thr	Thr	Cys	Asp	Leu	Pro	Gln	Asn	Glu	Ile
65					70					75				80	
Lys	Asn	Phe	Glu	Arg	Glu	Asn	Glu	Tyr	Glu	Ser	Thr	Leu	Cys	Glu	Asp
				85					90					95	
Ala	Tyr	Gly	Thr	Leu	Asp	Asn	Leu	Leu	Asn	Asp	Asn	Asn	Ile	Glu	Asn
			100					105					110		
Tyr	Ser	Thr	Asn	Ala	Leu	Ile	Gln	Pro	Val	Asp	Thr	Ile	Ser	Ile	Ser
		115					120					125			
Ser	Leu	Arg	Gln	Phe	Glu	Thr	Val	Cys	Lys	Phe	His	Trp	Val	Glu	Ala
	130					135					140				
Phe	Asp	Asp	Glu	Met	Thr	Glu	Lys	Pro	Glu	Phe	Gln	Ser	Gln	Val	Tyr
145					150					155					160
Asn	Tyr	Ala	Lys	Asp	Asn	Asn	Ile	Lys	Gln	Asp	Ser	Phe	Lys	Glu	Glu
				165					170					175	
Asn	Pro	Met	Glu	Thr	Ser	Val	Ser	Ala	Asn	Thr	Asp	Gln	Leu	Gly	Asn
			180					185					190		
Glu	Tyr	Phe	Arg	Gln	Pro	Pro	Pro	Arg	Ser	Pro	Pro	Leu	Ile	His	Cys
		195					200					205			
Ser	Gly	Glu	Met	Leu	Lys	Phe	Thr	Glu	Lys	Ser	Leu	Ala	Lys	Ser	Ile
	210					215					220				
Ala	Lys	Glu	Ser	Ala	Leu	Asn	Pro	Ser	Gln	Pro	Pro	Ser	Phe	Leu	Cys
225					230					235					240
Lys	Thr	Ala	Val	Pro	Ser	Lys	Glu	Ile	Gln	Asn	Tyr	Gly	Glu	Ile	Pro
				245					250					255	
Glu	Met	Ser	Val	Ser	Tyr	Glu	Lys	Glu	Val	Thr	Ala	Glu	Gly	Val	Glu
			260					265					270		

Leu Ser Leu Gln Glu Glu Phe Gln Lys Leu Glu Lys Glu Asn Leu Glu
500 505 510

Glu Arg Gln Lys Leu Lys Ser Arg Leu Glu Lys Leu Leu Thr Gln Val
515 520 525

Arg Asn Leu Gln Phe Met Ser Glu Asn Glu Arg Thr Lys Asn Ile Lys
530 535 540

Leu Gln Gln Gln Ile Asn Glu Val Lys Asn Glu Asn Ala Lys
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<210> 11429

<211> 839

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<223> /note="Uniprot ID: Q8TC20"

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<400> 11429

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His Phe Glu Val Asp Thr Ser His Glu Lys Val Glu Ser Met Ser Glu
20 25 30

Ser Asp Thr Met Asn Val Ser Asn Leu Ser Gln Gly Val Met Leu Ser
35 40 45

His Ser Pro Ile Cys Met Glu Thr Thr Gly Thr Thr Cys Asp Leu Pro

25525

50					55					60					
Gln 65	Asn	Glu	Ile	Lys	Asn 70	Phe	Glu	Arg	Glu	Asn 75	Glu	Tyr	Glu	Ser	Thr 80
Leu	Cys	Glu	Asp	Ala 85	Tyr	Gly	Thr	Leu	Asp 90	Asn	Leu	Leu	Asn	Asp 95	Asn
Asn	Ile	Glu	Asn 100	Tyr	Ser	Thr	Asn	Ala 105	Leu	Ile	Gln	Pro	Val 110	Asp	Thr
Ile	Ser	Ile 115	Ser	Ser	Leu	Arg	Gln 120	Phe	Glu	Thr	Val	Cys 125	Lys	Phe	His
Trp	Val 130	Glu	Ala	Phe	Asp	Asp 135	Glu	Met	Thr	Glu	Lys 140	Pro	Glu	Phe	Gln
Ser 145	Gln	Val	Tyr	Asn	Tyr 150	Ala	Lys	Asp	Asn	Asn 155	Ile	Lys	Gln	Asp	Ser 160
Phe	Lys	Glu	Glu	Asn 165	Pro	Met	Glu	Thr	Ser 170	Val	Ser	Ala	Asn	Thr 175	Asp
Gln	Leu	Gly	Asn 180	Glu	Tyr	Phe	Arg	Gln 185	Pro	Pro	Pro	Arg	Ser 190	Pro	Pro
Leu	Ile	His 195	Cys	Ser	Gly	Glu	Met 200	Leu	Lys	Phe	Thr	Glu 205	Lys	Ser	Leu
Ala	Lys 210	Ser	Ile	Ala	Lys	Glu 215	Ser	Ala	Leu	Asn 220	Pro	Ser	Gln	Pro	Pro
Ser 225	Phe	Leu	Cys	Lys	Thr 230	Ala	Val	Pro	Ser	Lys 235	Glu	Ile	Gln	Asn	Tyr 240
Gly	Glu	Ile	Pro	Glu 245	Met	Ser	Val	Ser	Tyr 250	Glu	Lys	Glu	Val	Thr 255	Ala
Glu	Gly	Val 260	Glu	Arg	Pro	Glu	Ile 265	Val	Ser	Thr	Trp	Ser	Ser 270	Ala	Gly
Ile	Ser	Trp 275	Arg	Ser	Glu	Ala	Cys 280	Arg	Glu	Asn	Cys	Glu 285	Met	Pro	Asp

Trp	Glu	Gln	Ser	Ala	Glu	Ser	Leu	Gln	Pro	Val	Gln	Glu	Asp	Met	Ala	
	290					295					300					
Leu	Asn	Glu	Val	Leu	Gln	Lys	Leu	Lys	His	Thr	Asn	Arg	Lys	Gln	Glu	
305					310					315					320	
Val	Arg	Ile	Gln	Glu	Leu	Gln	Cys	Ser	Asn	Leu	Tyr	Leu	Glu	Lys	Arg	
				325					330					335		
Val	Lys	Glu	Leu	Gln	Met	Lys	Ile	Thr	Lys	Gln	Gln	Val	Phe	Ile	Asp	
			340					345					350			
Val	Ile	Asn	Lys	Leu	Lys	Glu	Asn	Val	Glu	Glu	Leu	Ile	Glu	Asp	Lys	
		355					360					365				
Tyr	Lys	Ile	Ile	Leu	Glu	Lys	Asn	Asp	Thr	Lys	Lys	Thr	Leu	Gln	Asn	
	370					375					380					
Leu	Glu	Glu	Val	Leu	Ala	Asn	Thr	Gln	Lys	His	Leu	Gln	Glu	Ser	Arg	
385					390					395					400	
Asn	Asp	Lys	Glu	Met	Leu	Gln	Leu	Gln	Phe	Lys	Lys	Ile	Lys	Ala	Asn	
				405					410					415		
Tyr	Val	Cys	Leu	Gln	Glu	Arg	Tyr	Met	Thr	Glu	Met	Gln	Gln	Lys	Asn	
			420					425					430			
Lys	Ser	Val	Ser	Gln	Tyr	Leu	Glu	Met	Asp	Lys	Thr	Leu	Ser	Lys	Lys	
		435					440					445				
Glu	Glu	Glu	Val	Glu	Arg	Leu	Gln	Gln	Leu	Lys	Lys	Glu	Leu	Glu	Lys	
	450					455					460					
Ala	Thr	Ala	Ser	Ala	Leu	Asp	Leu	Leu	Lys	Arg	Glu	Lys	Glu	Ala	Gln	
465					470					475					480	
Glu	Gln	Glu	Phe	Leu	Ser	Leu	Gln	Glu	Glu	Phe	Gln	Lys	Leu	Glu	Lys	
				485					490					495		
Glu	Asn	Leu	Glu	Glu	Arg	Gln	Lys	Leu	Lys	Ser	Arg	Leu	Glu	Lys	Leu	
			500					505					510			

Leu	Thr	Gln	Val	Arg	Asn	Leu	Gln	Phe	Met	Ser	Glu	Asn	Glu	Arg	Thr
		515					520					525			
Lys	Asn	Ile	Lys	Leu	Gln	Gln	Gln	Ile	Asn	Glu	Val	Lys	Asn	Glu	Asn
	530					535					540				
Ala	Lys	Leu	Lys	Gln	Gln	Val	Ala	Arg	Ser	Glu	Glu	Gln	Asn	Tyr	Val
545					550					555					560
Pro	Lys	Phe	Glu	Thr	Ala	Gln	Leu	Lys	Asp	Gln	Leu	Glu	Glu	Val	Leu
				565					570					575	
Lys	Ser	Asp	Ile	Thr	Lys	Asp	Thr	Lys	Thr	Thr	His	Ser	Asn	Leu	Leu
			580					585					590		
Pro	Asp	Cys	Ser	Pro	Cys	Glu	Glu	Arg	Leu	Asn	Pro	Ala	Asp	Ile	Lys
		595					600					605			
Arg	Ala	Ser	Gln	Leu	Ala	Ser	Lys	Met	His	Ser	Leu	Leu	Ala	Leu	Met
	610					615					620				
Val	Gly	Leu	Leu	Thr	Cys	Gln	Asp	Ile	Ile	Asn	Ser	Asp	Ala	Glu	His
625					630					635					640
Phe	Lys	Glu	Ser	Glu	Lys	Val	Ser	Asp	Ile	Met	Leu	Gln	Lys	Leu	Lys
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Ser	Leu	His	Leu	Lys	Lys	Lys	Thr	Leu	Asp	Lys	Glu	Leu	Leu	Lys	His
			660					665					670		
Lys	Asp	Arg	Ile	Thr	Thr	Phe	Arg	Glu	Leu	Ile	Ala	Lys	Glu	Lys	Ala
		675					680					685			
Phe	Gln	Asp	His	Ala	Ile	Lys	Val	Ile	Asp	Cys	Asp	Ser	Asp	Glu	Ala
	690					695					700				
Lys	Ser	Ile	Arg	Asp	Val	Pro	Thr	Leu	Leu	Gly	Ala	Lys	Leu	Asp	Lys
705					710					715					720
Tyr	His	Ser	Leu	Asn	Glu	Glu	Leu	Asp	Phe	Leu	Ile	Thr	Lys	Leu	Gly
				725					730					735	

His Leu Leu Glu Ser Lys Glu Asn His Cys Asn Arg Leu Ile Glu Glu
740 745 750

Asn Asp Lys Tyr Gln Arg His Leu Gly Asn Leu Ile Lys Lys Val Thr
755 760 765

Ser Tyr Glu Glu Ile Ile Glu Cys Ala Asp Gln Arg Leu Ala Ile Ser
770 775 780

His Ser Gln Ile Ala His Leu Glu Glu Arg Asn Lys His Leu Glu Asp
785 790 795 800

Leu Ile Arg Lys Pro Arg Glu Lys Ala Arg Lys Pro Arg Ser Lys Ser
805 810 815

Leu Glu Asn His Pro Lys Ser Met Thr Met Met Pro Ala Leu Phe Lys
820 825 830

Glu Asn Arg Asn Asp Leu Asp
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			20					25					30					
Ser	Asp	Thr	Met	Asn	Val	Ser	Asn	Leu	Ser	Gln	Gly	Val	Met	Leu	Ser			
		35					40					45						
His	Ser	Pro	Ile	Cys	Met	Glu	Thr	Thr	Gly	Thr	Thr	Cys	Asp	Leu	Pro			
	50					55					60							
Gln	Asn	Glu	Ile	Lys	Asn	Phe	Glu	Arg	Glu	Asn	Glu	Tyr	Glu	Ser	Thr			
65					70					75					80			
Leu	Cys	Glu	Asp	Ala	Tyr	Gly	Thr	Leu	Asp	Asn	Leu	Leu	Asn	Asp	Asn			
				85					90					95				
Asn	Ile	Glu	Asn	Tyr	Ser	Thr	Asn	Ala	Leu	Ile	Gln	Pro	Val	Asp	Thr			
			100					105					110					
Ile	Ser	Ile	Ser	Ser	Leu	Arg	Gln	Phe	Glu	Thr	Val	Cys	Lys	Phe	His			
		115					120					125						
Trp	Val	Glu	Ala	Phe	Asp	Asp	Glu	Met	Thr	Glu	Lys	Pro	Glu	Phe	Gln			
	130					135					140							
Ser	Gln	Val	Tyr	Asn	Tyr	Ala	Lys	Asp	Asn	Asn	Ile	Lys	Gln	Asp	Ser			
145					150					155					160			
Phe	Lys	Glu	Glu	Asn	Pro	Met	Glu	Thr	Ser	Val	Ser	Ala	Asn	Thr	Asp			
				165					170					175				
Gln	Leu	Gly	Asn	Glu	Tyr	Phe	Arg	Gln	Pro	Pro	Pro	Arg	Ser	Pro	Pro			
			180					185					190					
Leu	Ile	His	Cys	Ser	Gly	Glu	Met	Leu	Lys	Phe	Thr	Glu	Lys	Ser	Leu			
		195					200					205						
Ala	Lys	Ser	Ile	Ala	Lys	Glu	Ser	Ala	Leu	Asn	Pro	Ser	Gln	Pro	Pro			
	210					215					220							
Ser	Phe	Leu	Cys	Lys	Thr	Ala	Val	Pro	Ser	Lys	Glu	Ile	Gln	Asn	Tyr			
225					230					235					240			

Gly	Glu	Ile	Pro	Glu	Met	Ser	Val	Ser	Tyr	Glu	Lys	Glu	Val	Thr	Ala	
				245					250					255		
Glu	Gly	Val	Glu	Arg	Pro	Glu	Ile	Val	Ser	Thr	Trp	Ser	Ser	Ala	Gly	
			260					265					270			
Ile	Ser	Trp	Arg	Ser	Glu	Ala	Cys	Arg	Glu	Asn	Cys	Glu	Met	Pro	Asp	
		275					280					285				
Trp	Glu	Gln	Ser	Ala	Glu	Ser	Leu	Gln	Pro	Val	Gln	Glu	Asp	Met	Ala	
	290					295					300					
Leu	Asn	Glu	Val	Leu	Gln	Lys	Leu	Lys	His	Thr	Asn	Arg	Lys	Gln	Glu	
305					310					315					320	
Val	Arg	Ile	Gln	Glu	Leu	Gln	Cys	Ser	Asn	Leu	Tyr	Leu	Glu	Lys	Arg	
				325					330					335		
Val	Lys	Glu	Leu	Gln	Met	Lys	Ile	Thr	Lys	Gln	Gln	Val	Phe	Ile	Asp	
			340					345					350			
Val	Ile	Asn	Lys	Leu	Lys	Glu	Asn	Val	Glu	Glu	Leu	Ile	Glu	Asp	Lys	
		355					360					365				
Tyr	Lys	Ile	Ile	Leu	Glu	Lys	Asn	Asp	Thr	Lys	Lys	Thr	Leu	Gln	Asn	
	370					375					380					
Leu	Glu	Glu	Val	Leu	Ala	Asn	Thr	Gln	Lys	His	Leu	Gln	Glu	Ser	Arg	
385					390					395					400	
Asn	Asp	Lys	Glu	Met	Leu	Gln	Leu	Gln	Phe	Lys	Lys	Ile	Lys	Ala	Asn	
				405					410					415		
Tyr	Val	Cys	Leu	Gln	Glu	Arg	Tyr	Met	Thr	Glu	Met	Gln	Gln	Lys	Asn	
			420					425					430			
Lys	Ser	Val	Ser	Gln	Tyr	Leu	Glu	Met	Asp	Lys	Thr	Leu	Ser	Lys	Lys	
		435					440					445				
Glu	Glu	Glu	Val	Glu	Arg	Leu	Gln	Gln	Leu	Lys	Lys	Glu	Leu	Glu	Lys	
	450					455					460					

Ala Thr Ala Ser Ala Leu Asp Leu Leu Lys Arg Glu Lys Glu Ala Gln
465 470 475 480

Glu Gln Glu Phe Leu Ser Leu Gln Glu Glu Phe Gln Lys Leu Glu Lys
485 490 495

Glu Asn Leu Glu Glu Arg Gln Lys Leu Lys Ser Arg Leu Glu Lys Leu
500 505 510

Leu Thr Gln Val Arg Asn Leu Gln Phe Met Ser Glu Asn Glu Arg Thr
515 520 525

Lys Asn Ile Lys Leu Gln Gln Gln Ile Asn Glu Val Lys Asn Glu Asn
530 535 540

Ala Lys Leu Lys Gln Gln Val Ala Arg Ser Glu Glu Gln Asn Tyr Val
545 550 555 560

Pro Lys Phe Glu Thr Ala Gln Leu Lys Asp Gln Leu Glu Glu Val Leu
565 570 575

Lys Ser Asp Ile Thr Lys Asp Thr Lys Thr Thr His Ser Asn Leu Leu
580 585 590

Pro Asp Cys Ser Pro Cys Glu Glu Arg Leu Asn Pro Ala Asp Ile Lys
595 600 605

Arg Ala Ser Gln Leu Ala Ser Lys Met His Ser Leu Leu Ala Leu Met
610 615 620

Val Gly Leu Leu Thr Cys Gln Asp Ile Ile Asn Ser Asp Ala Glu His
625 630 635 640

Phe Lys Glu Ser Glu Lys Val Ser Asp Ile Met Leu Gln Lys Leu Lys
645 650 655

Ser Leu His Leu Lys Lys Lys Thr Leu Asp Lys Glu Val Ile Asp Cys
660 665 670

Asp Ser Asp Glu Ala Lys Ser Ile Arg Asp Val Pro Thr Leu Leu Gly
675 680 685

Ala Lys Leu Asp Lys Tyr His Ser Leu Asn Glu Glu Leu Asp Phe Leu

690		695		700
Val Thr Ser Tyr Glu Glu Ile Ile Glu Cys Ala Asp Gln Arg Leu Ala				
705		710	715	720
Ile Ser His Ser Gln Ile Ala His Leu Glu Glu Arg Asn Lys His Leu				
	725		730	735
Glu Asp Leu Ile Arg Lys Pro Arg Glu Lys Ala Arg Lys Pro Arg Ser				
	740		745	750
Lys Ser Leu Glu Asn His Pro Lys Ser Met Thr Met Met Pro Ala Leu				
	755		760	765
Phe Lys Glu Asn Arg Asn Asp Leu Asp				
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<210> 11431
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 cancer susceptibility candidate 1"

<220>
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<220>
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Leu Leu Gln Glu Glu Glu Glu Arg Arg Leu Lys Glu Glu Glu Glu Ala				
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Arg	Leu	Lys	Tyr	Glu	Lys	Glu	Glu	Met	Glu	Arg	Leu	Glu	Ile	Gln	Arg			
		35					40					45						
Ile	Glu	Lys	Glu	Lys	Trp	His	Arg	Leu	Glu	Ala	Lys	Asp	Leu	Glu	Arg			
	50					55					60							
Arg	Asn	Glu	Glu	Leu	Glu	Glu	Leu	Tyr	Leu	Leu	Glu	Arg	Cys	Phe	Pro			
65					70					75					80			
Glu	Ala	Glu	Lys	Leu	Lys	Gln	Glu	Thr	Lys	Leu	Leu	Ser	Gln	Trp	Lys			
				85					90					95				
His	Tyr	Ile	Gln	Cys	Asp	Gly	Ser	Pro	Asp	Pro	Ser	Val	Ala	Gln	Glu			
			100					105					110					
Met	Asn	Thr	Phe	Ile	Ser	Leu	Trp	Lys	Glu	Lys	Thr	Asn	Glu	Thr	Phe			
		115					120					125						
Glu	Glu	Val	Ile	Glu	Lys	Ser	Lys	Val	Val	Leu	Asn	Leu	Ile	Glu	Lys			
	130					135					140							
Leu	Lys	Phe	Ile	Leu	Leu	Glu	Thr	Pro	Pro	Cys	Asp	Leu	Gln	Asp	Lys			
145					150					155					160			
Asn	Ile	Ile	Gln	Tyr	Gln	Glu	Ser	Ile	Leu	Gln	Leu	Gln	Glu	Leu	Leu			
				165					170					175				
His	Leu	Lys	Phe	Gly	Val	Ala	Thr	Glu	Ile	Leu	Leu	Lys	Gln	Ala	Ser			
			180					185					190					
Thr	Leu	Ala	Asp	Leu	Asp	Ser	Gly	Asn	Met	Glu	Lys	Val	Ile	Lys	Asp			
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Glu	Asn	Val	Thr	Leu	Tyr	Val	Trp	Ala	Asn	Leu	Lys	Lys	Asn	Pro	Arg			
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His	Arg	Ser	Val	Arg	Phe	Ser	Glu	Thr	Gln	Ile	Gly	Phe	Glu	Ile	Pro			
225					230					235					240			
Arg	Ile	Leu	Ala	Thr	Ser	Asp	Ile	Ala	Val	Arg	Leu	Leu	His	Thr	His			
				245					250					255				

Tyr Asp His Val Ser Ala Leu His Pro Val Ser Thr Pro Ser Lys Glu
 260 265 270

Tyr Thr Ser Ala Val Thr Glu Leu Val Lys Asp Asp Val Lys Asn Val
 275 280 285

Glu Lys Ala Ile Ser Lys Glu Val Glu Glu Glu Ser Lys Gln Gln Glu
 290 295 300

Arg Gly Ser His Leu Ile Gln Glu Glu Glu Ile Lys Val Glu Glu Glu
 305 310 315 320

Gln Gly Asp Ile Glu Val Lys Met Ser Ser Ala Glu Glu Glu Ser Glu
 325 330 335

Ala Ile Lys Cys Glu Arg Glu Met Lys Val Leu Ser Glu Thr Val Ser
 340 345 350

Ala Ala Gln Leu Leu Leu Val Glu Asn Ser Ser Glu Lys Pro Asp Phe
 355 360 365

Phe Glu Asp Asn Val Val Asp Leu Cys Gln Phe Thr Thr Leu Gly Gly
 370 375 380

Val Tyr His Leu Asp Ile Leu Glu Leu Pro Pro Gln Cys Lys Pro Val
 385 390 395 400

Lys Gly Trp Met Ile Val Glu Ile Leu Lys Glu Gly Leu Gln Lys Tyr
 405 410 415

Thr Tyr Pro Pro Glu Thr Thr Glu Glu Phe Glu Thr Glu Asn Ala Phe
 420 425 430

Pro Pro Ile Glu Val Thr Leu Glu Val His Glu Asn Val Ile Phe Phe
 435 440 445

Glu Asp Pro Val Val Val Arg Trp Asp Ala Glu Gly Lys His Trp Arg
 450 455 460

Thr Asp Gly Ile Ser Asn Val Ser Tyr Lys Pro Lys Glu Arg Leu Val
 465 470 475 480

Thr Phe Ser Leu Asp Thr Phe Gly Pro Val Thr Leu Ile Gln Asp Ala

485

490

495

His Ile Asn Met Pro Tyr Gln Ser Trp Glu Leu Arg Pro Leu Asp Val
500 505 510

Asn Lys Val Leu Leu Thr Val Thr Thr Val Phe Thr Glu Ile Gln Ile
515 520 525

Gln Ile Lys Glu Asn Leu Cys Met Leu Ser Ser Ile Lys Leu Lys Asp
530 535 540

Lys Lys His Ile Ser Ile Leu Glu Gly Thr Trp Met Thr Pro Ile Pro
545 550 555 560

Phe Ile Ile Ala Leu Lys Glu Ala Gly Leu Asn Ile Phe Pro Thr Arg
565 570 575

His Ser His Phe Tyr Val Ile Ile Asn Asn Lys Val Pro Leu Val Glu
580 585 590

Val Lys Ala Tyr Arg Gln Met Ala Leu Leu Ser Ser Ala Phe Ala Phe
595 600 605

Gly Trp Ser Lys Trp Asn Leu Leu Cys Asn Ser Thr Lys Val Val Phe
610 615 620

Lys Val Arg Glu His Leu Thr Glu Ala Cys Thr Glu Asn Pro Asn Trp
625 630 635 640

Ala Leu Leu Met Phe Ser Gly Asp Arg Ala Gln Arg Leu Lys Ile Lys
645 650 655

Glu Glu Ser Glu Ala Phe Ser Glu Ala Leu Lys Glu Glu Thr Glu Phe
660 665 670

His Ser Thr Leu Tyr His Met Val Lys Asp Phe Ala Ser Glu Glu Ala
675 680 685

Met Glu Lys Val Arg Ser Ser Asn Cys Gln Phe Val Asn Ser Val Cys
690 695 700

His Met Leu Leu Ser Thr Arg Leu Leu Ser Tyr Ser
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25536


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<210> 11432
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          20          25          30

Gly Leu Gly Asn Asn Ser Tyr Leu Gly Val Gly Arg Pro Ser Ser Gln
          35          40          45

Gln Trp Leu Ser Leu Pro Gly Pro Gly Gly Gln Gly Pro Lys Ala Lys
          50          55          60

Lys Ser Gly Ser Lys Lys Lys Lys Val Thr Lys Ala Glu Arg Leu Lys
65          70          75          80

Leu Leu Gln Glu Glu Glu Glu Arg Arg Leu Lys Glu Glu Glu Glu Ala
          85          90          95

Arg Leu Lys Tyr Glu Lys Glu Glu Met Glu Arg Leu Glu Ile Gln Arg
          100          105          110

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Ile	Glu	Lys	Glu	Lys	Trp	His	Arg	Leu	Glu	Ala	Lys	Asp	Leu	Glu	Arg			
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Arg	Asn	Glu	Glu	Leu	Glu	Glu	Leu	Tyr	Leu	Leu	Glu	Arg	Cys	Phe	Pro			
	130					135					140							
Glu	Ala	Glu	Lys	Leu	Lys	Gln	Glu	Thr	Lys	Leu	Leu	Ser	Gln	Trp	Lys			
145					150					155					160			
His	Tyr	Ile	Gln	Cys	Asp	Gly	Ser	Pro	Asp	Pro	Ser	Val	Ala	Gln	Glu			
				165					170					175				
Met	Asn	Thr	Phe	Ile	Ser	Leu	Trp	Lys	Glu	Lys	Thr	Asn	Glu	Thr	Phe			
			180					185					190					
Glu	Glu	Val	Ile	Glu	Lys	Ser	Lys	Val	Val	Leu	Asn	Leu	Ile	Glu	Lys			
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Leu	Lys	Phe	Ile	Leu	Leu	Glu	Thr	Pro	Pro	Cys	Asp	Leu	Gln	Asp	Lys			
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Asn	Ile	Ile	Gln	Tyr	Gln	Glu	Ser	Ile	Leu	Gln	Leu	Gln	Glu	Leu	Leu			
225					230					235					240			
His	Leu	Lys	Phe	Gly	Val	Ala	Thr	Glu	Ile	Leu	Leu	Lys	Gln	Ala	Ser			
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Thr	Leu	Ala	Asp	Leu	Asp	Ser	Gly	Asn	Met	Glu	Lys	Val	Ile	Lys	Asp			
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Glu	Asn	Val	Thr	Leu	Tyr	Val	Trp	Ala	Asn	Leu	Lys	Lys	Asn	Pro	Arg			
		275					280					285						
His	Arg	Ser	Val	Arg	Phe	Ser	Glu	Thr	Gln	Ile	Gly	Phe	Glu	Ile	Pro			
	290					295					300							
Arg	Ile	Leu	Ala	Thr	Ser	Asp	Ile	Ala	Val	Arg	Leu	Leu	His	Thr	His			
305					310					315					320			
Tyr	Asp	His	Val	Ser	Ala	Leu	His	Pro	Val	Ser	Thr	Pro	Ser	Lys	Glu			
				325					330					335				
Tyr	Thr	Ser	Ala	Val	Thr	Glu	Leu	Val	Lys	Asp	Asp	Val	Lys	Asn	Val			

340						345						350				
Glu	Lys	Ala	Ile	Ser	Lys	Glu	Val	Glu	Glu	Glu	Ser	Lys	Gln	Gln	Glu	
		355					360					365				
Arg	Gly	Ser	His	Leu	Ile	Gln	Glu	Glu	Glu	Ile	Lys	Val	Glu	Glu	Glu	
		370				375					380					
Gln	Gly	Asp	Ile	Glu	Val	Lys	Met	Ser	Ser	Ala	Glu	Glu	Glu	Ser	Glu	
385					390					395						400
Ala	Ile	Lys	Cys	Glu	Arg	Glu	Met	Lys	Val	Leu	Ser	Glu	Thr	Val	Ser	
				405					410							
Ala	Ala	Gln	Leu	Leu	Leu	Val	Glu	Asn	Ser	Ser	Glu	Lys	Pro	Asp	Phe	
			420					425								
Phe	Glu	Asp	Asn	Val	Val	Asp	Leu	Cys	Gln	Phe	Thr	Thr	Leu	Gly	Gly	
		435					440					445				
Val	Tyr	His	Leu	Asp	Ile	Leu	Glu	Leu	Pro	Pro	Gln	Cys	Lys	Pro	Val	
		450				455					460					
Lys	Gly	Trp	Met	Ile	Val	Glu	Ile	Leu	Lys	Glu	Gly	Leu	Gln	Lys	Tyr	
465					470					475						480
Thr	Tyr	Pro	Pro	Glu	Thr	Thr	Glu	Glu	Phe	Glu	Thr	Glu	Asn	Ala	Phe	
				485					490							
Pro	Pro	Ile	Glu	Val	Thr	Leu	Glu	Val	His	Glu	Asn	Val	Ile	Phe	Phe	
			500					505					510			
Glu	Asp	Pro	Val	Val	Val	Arg	Trp	Asp	Ala	Glu	Gly	Lys	His	Trp	Arg	
		515					520					525				
Thr	Asp	Gly	Ile	Ser	Asn	Val	Ser	Tyr	Lys	Pro	Lys	Glu	Arg	Leu	Val	
		530				535					540					
Thr	Phe	Ser	Leu	Asp	Thr	Phe	Gly	Pro	Val	Thr	Leu	Ile	Gln	Asp	Ala	
545					550					555						560
His	Ile	Asn	Met	Pro	Tyr	Gln	Ser	Trp	Glu	Leu	Arg	Pro	Leu	Asp	Val	
				565					570							575

Asn Lys Val Leu Leu Thr Val Thr Thr Val Phe Thr Glu Ile Gln Ile
580 585 590

Gln Ile Lys Glu Asn Leu Cys Met Leu Ser Ser Ile Lys Leu Lys Asp
595 600 605

Lys Lys His Ile Ser Ile Leu Glu Gly Thr Trp Met Thr Pro Ile Pro
610 615 620

Phe Ile Ile Ala Leu Lys Glu Ala Gly Leu Asn Ile Phe Pro Thr Arg
625 630 635 640

His Ser His Phe Tyr Val Ile Ile Asn Asn Lys Val Pro Leu Val Glu
645 650 655

Val Lys Ala Tyr Arg Gln Met Ala Leu Leu Ser Ser Ala Phe Ala Phe
660 665 670

Gly Trp Ser Lys Trp Asn Leu Leu Cys Asn Ser Thr Lys Val Val Phe
675 680 685

Lys Trp
690

<210> 11433
<211> 722
<212> PRT
<213> Homo sapiens

<220>
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<220>
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<223> /note="Gene Symbol: CASC1"

<220>
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<223> /note="Gene Name:
cancer susceptibility candidate 1"

<220>
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<400> 11433

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1				5					10					15			
Lys	Ala	Glu	Arg	Leu	Lys	Leu	Leu	Gln	Glu	Glu	Glu	Glu	Arg	Arg	Leu		
			20					25					30				
Lys	Glu	Glu	Glu	Glu	Ala	Arg	Leu	Lys	Tyr	Glu	Lys	Glu	Glu	Met	Glu		
		35					40					45					
Arg	Leu	Glu	Ile	Gln	Arg	Ile	Glu	Lys	Glu	Lys	Trp	His	Arg	Leu	Glu		
	50					55					60						
Ala	Lys	Asp	Leu	Glu	Arg	Arg	Asn	Glu	Glu	Leu	Glu	Glu	Leu	Tyr	Leu		
65					70					75					80		
Leu	Glu	Arg	Cys	Phe	Pro	Glu	Ala	Glu	Lys	Leu	Lys	Gln	Glu	Thr	Lys		
				85					90					95			
Leu	Leu	Ser	Gln	Trp	Lys	His	Tyr	Ile	Gln	Cys	Asp	Gly	Ser	Pro	Asp		
			100					105					110				
Pro	Ser	Val	Ala	Gln	Glu	Met	Asn	Thr	Phe	Ile	Ser	Leu	Trp	Lys	Glu		
		115					120					125					
Lys	Thr	Asn	Glu	Thr	Phe	Glu	Glu	Val	Ile	Glu	Lys	Ser	Lys	Val	Val		
	130					135					140						
Leu	Asn	Leu	Ile	Glu	Lys	Leu	Lys	Phe	Ile	Leu	Leu	Glu	Thr	Pro	Pro		
145					150					155					160		
Cys	Asp	Leu	Gln	Asp	Lys	Asn	Ile	Ile	Gln	Tyr	Gln	Glu	Ser	Ile	Leu		
				165					170					175			
Gln	Leu	Gln	Glu	Leu	Leu	His	Leu	Lys	Phe	Gly	Val	Ala	Thr	Glu	Ile		
			180					185					190				
Leu	Leu	Lys	Gln	Ala	Ser	Thr	Leu	Ala	Asp	Leu	Asp	Ser	Gly	Asn	Met		
		195					200					205					
Glu	Lys	Val	Ile	Lys	Asp	Glu	Asn	Val	Thr	Leu	Tyr	Val	Trp	Ala	Asn		
	210					215					220						
Leu	Lys	Lys	Asn	Pro	Arg	His	Arg	Ser	Val	Arg	Phe	Ser	Glu	Thr	Gln		

225					230					235					240
Ile	Gly	Phe	Glu	Ile	Pro	Arg	Ile	Leu	Ala	Thr	Ser	Asp	Ile	Ala	Val
			245						250					255	
Arg	Leu	Leu	His	Thr	His	Tyr	Asp	His	Val	Ser	Ala	Leu	His	Pro	Val
			260					265					270		
Ser	Thr	Pro	Ser	Lys	Glu	Tyr	Thr	Ser	Ala	Val	Thr	Glu	Leu	Val	Lys
		275					280					285			
Asp	Asp	Val	Lys	Asn	Val	Glu	Lys	Ala	Ile	Ser	Lys	Glu	Val	Glu	Glu
	290					295					300				
Glu	Ser	Lys	Gln	Gln	Glu	Arg	Gly	Ser	His	Leu	Ile	Gln	Glu	Glu	Glu
305					310					315					320
Ile	Lys	Val	Glu	Glu	Glu	Gln	Gly	Asp	Ile	Glu	Val	Lys	Met	Ser	Ser
				325					330					335	
Ala	Glu	Glu	Glu	Ser	Glu	Ala	Ile	Lys	Cys	Glu	Arg	Glu	Met	Lys	Val
			340					345					350		
Leu	Ser	Glu	Thr	Val	Ser	Ala	Ala	Gln	Leu	Leu	Leu	Val	Glu	Asn	Ser
		355					360					365			
Ser	Glu	Lys	Pro	Asp	Phe	Phe	Glu	Asp	Asn	Val	Val	Asp	Leu	Cys	Gln
	370					375					380				
Phe	Thr	Thr	Leu	Gly	Gly	Val	Tyr	His	Leu	Asp	Ile	Leu	Glu	Leu	Pro
385					390					395					400
Pro	Gln	Cys	Lys	Pro	Val	Lys	Gly	Trp	Met	Ile	Val	Glu	Ile	Leu	Lys
				405					410					415	
Glu	Gly	Leu	Gln	Lys	Tyr	Thr	Tyr	Pro	Pro	Glu	Thr	Thr	Glu	Glu	Phe
			420					425					430		
Glu	Thr	Glu	Asn	Ala	Phe	Pro	Pro	Ile	Glu	Val	Thr	Leu	Glu	Val	His
		435					440					445			
Glu	Asn	Val	Ile	Phe	Phe	Glu	Asp	Pro	Val	Val	Val	Arg	Trp	Asp	Ala
	450					455					460				

Glu Gly Lys His Trp Arg Thr Asp Gly Ile Ser Asn Val Ser Tyr Lys
 465 470 475 480

Pro Lys Glu Arg Leu Val Thr Phe Ser Leu Asp Thr Phe Gly Pro Val
 485 490 495

Thr Leu Ile Gln Asp Ala His Ile Asn Met Pro Tyr Gln Ser Trp Glu
 500 505 510

Leu Arg Pro Leu Asp Val Asn Lys Val Leu Leu Thr Val Thr Thr Val
 515 520 525

Phe Thr Glu Ile Gln Ile Gln Ile Lys Glu Asn Leu Cys Met Leu Ser
 530 535 540

Ser Ile Lys Leu Lys Asp Lys Lys His Ile Ser Ile Leu Glu Gly Thr
 545 550 555 560

Trp Met Thr Pro Ile Pro Phe Ile Ile Ala Leu Lys Glu Ala Gly Leu
 565 570 575

Asn Ile Phe Pro Thr Arg His Ser His Phe Tyr Val Ile Ile Asn Asn
 580 585 590

Lys Val Pro Leu Val Glu Val Lys Ala Tyr Arg Gln Met Ala Leu Leu
 595 600 605

Ser Ser Ala Phe Ala Phe Gly Trp Ser Lys Trp Asn Leu Leu Cys Asn
 610 615 620

Ser Thr Lys Val Val Phe Lys Val Arg Glu His Leu Thr Glu Ala Cys
 625 630 635 640

Thr Glu Asn Pro Asn Trp Ala Leu Leu Met Phe Ser Gly Asp Arg Ala
 645 650 655

Gln Arg Leu Lys Ile Lys Glu Glu Ser Glu Ala Phe Ser Glu Ala Leu
 660 665 670

Lys Glu Glu Thr Glu Phe His Ser Thr Leu Tyr His Met Val Lys Asp
 675 680 685

Phe Ala Ser Glu Glu Ala Met Glu Lys Val Arg Ser Ser Asn Cys Gln
690 695 700

Phe Val Asn Ser Val Cys His Met Leu Leu Ser Thr Arg Leu Leu Ser
705 710 715 720

Tyr Ser

<210> 11434
<211> 676
<212> PRT
<213> Homo sapiens

<220>
<221> source
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<220>
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<220>
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<223> /note="Gene Name:
cancer susceptibility candidate 1"

<220>
<221> source
<223> /note="Uniprot ID: Q6TDU7"

<220>
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<223> /note="ENSP ID: ENSP00000379313"

<400> 11434
Met Glu Arg Leu Glu Ile Gln Arg Ile Glu Lys Glu Lys Trp His Arg
1 5 10 15

Leu Glu Ala Lys Asp Leu Glu Arg Arg Asn Glu Glu Leu Glu Glu Leu
20 25 30

Tyr Leu Leu Glu Arg Cys Phe Pro Glu Ala Glu Lys Leu Lys Gln Glu
35 40 45

Thr Lys Leu Leu Ser Gln Trp Lys His Tyr Ile Gln Cys Asp Gly Ser
50 55 60

Pro Asp Pro Ser Val Ala Gln Glu Met Asn Thr Phe Ile Ser Leu Trp

65					70						75					80
Lys	Glu	Lys	Thr	Asn	Glu	Thr	Phe	Glu	Glu	Val	Ile	Glu	Lys	Ser	Lys	
				85					90					95		
Val	Val	Leu	Asn	Leu	Ile	Glu	Lys	Leu	Lys	Phe	Ile	Leu	Leu	Glu	Thr	
			100					105					110			
Pro	Pro	Cys	Asp	Leu	Gln	Asp	Lys	Asn	Ile	Ile	Gln	Tyr	Gln	Glu	Ser	
		115					120					125				
Ile	Leu	Gln	Leu	Gln	Glu	Leu	Leu	His	Leu	Lys	Phe	Gly	Val	Ala	Thr	
	130					135					140					
Glu	Ile	Leu	Leu	Lys	Gln	Ala	Ser	Thr	Leu	Ala	Asp	Leu	Asp	Ser	Gly	
145					150					155					160	
Asn	Met	Glu	Lys	Val	Ile	Lys	Asp	Glu	Asn	Val	Thr	Leu	Tyr	Val	Trp	
				165					170					175		
Ala	Asn	Leu	Lys	Lys	Asn	Pro	Arg	His	Arg	Ser	Val	Arg	Phe	Ser	Glu	
			180					185					190			
Thr	Gln	Ile	Gly	Phe	Glu	Ile	Pro	Arg	Ile	Leu	Ala	Thr	Ser	Asp	Ile	
		195					200					205				
Ala	Val	Arg	Leu	Leu	His	Thr	His	Tyr	Asp	His	Val	Ser	Ala	Leu	His	
	210					215					220					
Pro	Val	Ser	Thr	Pro	Ser	Lys	Glu	Tyr	Thr	Ser	Ala	Val	Thr	Glu	Leu	
225					230					235					240	
Val	Lys	Asp	Asp	Val	Lys	Asn	Val	Glu	Lys	Ala	Ile	Ser	Lys	Glu	Val	
				245					250					255		
Glu	Glu	Glu	Ser	Lys	Gln	Gln	Glu	Arg	Gly	Ser	His	Leu	Ile	Gln	Glu	
			260					265					270			
Glu	Glu	Ile	Lys	Val	Glu	Glu	Glu	Gln	Gly	Asp	Ile	Glu	Val	Lys	Met	
		275					280					285				
Ser	Ser	Ala	Glu	Glu	Glu	Ser	Glu	Ala	Ile	Lys	Cys	Glu	Arg	Glu	Met	
	290					295					300					

Lys	Val	Leu	Ser	Glu	Thr	Val	Ser	Ala	Ala	Gln	Leu	Leu	Leu	Val	Glu	305	310	315	320
Asn	Ser	Ser	Glu	Lys	Pro	Asp	Phe	Phe	Glu	Asp	Asn	Val	Val	Asp	Leu	325	330	335	
Cys	Gln	Phe	Thr	Thr	Leu	Gly	Gly	Val	Tyr	His	Leu	Asp	Ile	Leu	Glu	340	345	350	
Leu	Pro	Pro	Gln	Cys	Lys	Pro	Val	Lys	Gly	Trp	Met	Ile	Val	Glu	Ile	355	360	365	
Leu	Lys	Glu	Gly	Leu	Gln	Lys	Tyr	Thr	Tyr	Pro	Pro	Glu	Thr	Thr	Glu	370	375	380	
Glu	Phe	Glu	Thr	Glu	Asn	Ala	Phe	Pro	Pro	Ile	Glu	Val	Thr	Leu	Glu	385	390	395	400
Val	His	Glu	Asn	Val	Ile	Phe	Phe	Glu	Asp	Pro	Val	Val	Val	Arg	Trp	405	410	415	
Asp	Ala	Glu	Gly	Lys	His	Trp	Arg	Thr	Asp	Gly	Ile	Ser	Asn	Val	Ser	420	425	430	
Tyr	Lys	Pro	Lys	Glu	Arg	Leu	Val	Thr	Phe	Ser	Leu	Asp	Thr	Phe	Gly	435	440	445	
Pro	Val	Thr	Leu	Ile	Gln	Asp	Ala	His	Ile	Asn	Met	Pro	Tyr	Gln	Ser	450	455	460	
Trp	Glu	Leu	Arg	Pro	Leu	Asp	Val	Asn	Lys	Val	Leu	Leu	Thr	Val	Thr	465	470	475	480
Thr	Val	Phe	Thr	Glu	Ile	Gln	Ile	Gln	Ile	Lys	Glu	Asn	Leu	Cys	Met	485	490	495	
Leu	Ser	Ser	Ile	Lys	Leu	Lys	Asp	Lys	Lys	His	Ile	Ser	Ile	Leu	Glu	500	505	510	
Gly	Thr	Trp	Met	Thr	Pro	Ile	Pro	Phe	Ile	Ile	Ala	Leu	Lys	Glu	Ala	515	520	525	

Gly Leu Asn Ile Phe Pro Thr Arg His Ser His Phe Tyr Val Ile Ile
530 535 540

Asn Asn Lys Val Pro Leu Val Glu Val Lys Ala Tyr Arg Gln Met Ala
545 550 555 560

Leu Leu Ser Ser Ala Phe Ala Phe Gly Trp Ser Lys Trp Asn Leu Leu
565 570 575

Cys Asn Ser Thr Lys Val Val Phe Lys Val Arg Glu His Leu Thr Glu
580 585 590

Ala Cys Thr Glu Asn Pro Asn Trp Ala Leu Leu Met Phe Ser Gly Asp
595 600 605

Arg Ala Gln Arg Leu Lys Ile Lys Glu Glu Ser Glu Ala Phe Ser Glu
610 615 620

Ala Leu Lys Glu Glu Thr Glu Phe His Ser Thr Leu Tyr His Met Val
625 630 635 640

Lys Asp Phe Ala Ser Glu Glu Ala Met Glu Lys Val Arg Ser Ser Asn
645 650 655

Cys Gln Phe Val Asn Ser Val Cys His Met Leu Leu Ser Thr Arg Leu
660 665 670

Leu Ser Tyr Ser
675

<210> 11435
<211> 657
<212> PRT
<213> Homo sapiens

<220>
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<220>
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<223> /note="Gene Symbol: CASC1"

<220>
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cancer susceptibility candidate 1"

<220>

<221> source

<223> /note="Uniprot ID: Q6TDU7"

<220>

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<223> /note="ENSP ID: ENSP00000437373"

<400> 11435

Met Asp Leu Glu Arg Arg Asn Glu Glu Leu Glu Glu Leu Tyr Leu Leu
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Glu Arg Cys Phe Pro Glu Ala Glu Lys Leu Lys Gln Glu Thr Lys Leu
20 25 30

Leu Ser Gln Trp Lys His Tyr Ile Gln Cys Asp Gly Ser Pro Asp Pro
35 40 45

Ser Val Ala Gln Glu Met Asn Thr Phe Ile Ser Leu Trp Lys Glu Lys
50 55 60

Thr Asn Glu Thr Phe Glu Glu Val Ile Glu Lys Ser Lys Val Val Leu
65 70 75 80

Asn Leu Ile Glu Lys Leu Lys Phe Ile Leu Leu Glu Thr Pro Pro Cys
85 90 95

Asp Leu Gln Asp Lys Asn Ile Ile Gln Tyr Gln Glu Ser Ile Leu Gln
100 105 110

Leu Gln Glu Leu Leu His Leu Lys Phe Gly Val Ala Thr Glu Ile Leu
115 120 125

Leu Lys Gln Ala Ser Thr Leu Ala Asp Leu Asp Ser Gly Asn Met Glu
130 135 140

Lys Val Ile Lys Asp Glu Asn Val Thr Leu Tyr Val Trp Ala Asn Leu
145 150 155 160

Lys Lys Asn Pro Arg His Arg Ser Val Arg Phe Ser Glu Thr Gln Ile
165 170 175

Gly Phe Glu Ile Pro Arg Ile Leu Ala Thr Ser Asp Ile Ala Val Arg
180 185 190

25548

Leu	Leu	His	Thr	His	Tyr	Asp	His	Val	Ser	Ala	Leu	His	Pro	Val	Ser	
		195					200					205				
Thr	Pro	Ser	Lys	Glu	Tyr	Thr	Ser	Ala	Val	Thr	Glu	Leu	Val	Lys	Asp	
	210					215					220					
Asp	Val	Lys	Asn	Val	Glu	Lys	Ala	Ile	Ser	Lys	Glu	Val	Glu	Glu	Glu	
225					230					235					240	
Ser	Lys	Gln	Gln	Glu	Arg	Gly	Ser	His	Leu	Ile	Gln	Glu	Glu	Glu	Ile	
				245					250						255	
Lys	Val	Glu	Glu	Glu	Gln	Gly	Asp	Ile	Glu	Val	Lys	Met	Ser	Ser	Ala	
			260					265					270			
Glu	Glu	Glu	Ser	Glu	Ala	Ile	Lys	Cys	Glu	Arg	Glu	Met	Lys	Val	Leu	
		275					280					285				
Ser	Glu	Thr	Val	Ser	Ala	Ala	Gln	Leu	Leu	Leu	Val	Glu	Asn	Ser	Ser	
	290					295					300					
Glu	Lys	Pro	Asp	Phe	Phe	Glu	Asp	Asn	Val	Val	Asp	Leu	Cys	Gln	Phe	
305					310					315					320	
Thr	Thr	Leu	Gly	Gly	Val	Tyr	His	Leu	Asp	Ile	Leu	Glu	Leu	Pro	Pro	
				325					330					335		
Gln	Cys	Lys	Pro	Val	Lys	Gly	Trp	Met	Ile	Val	Glu	Ile	Leu	Lys	Glu	
			340					345					350			
Gly	Leu	Gln	Lys	Tyr	Thr	Tyr	Pro	Pro	Glu	Thr	Thr	Glu	Glu	Phe	Glu	
		355					360					365				
Thr	Glu	Asn	Ala	Phe	Pro	Pro	Ile	Glu	Val	Thr	Leu	Glu	Val	His	Glu	
	370					375					380					
Asn	Val	Ile	Phe	Phe	Glu	Asp	Pro	Val	Val	Val	Arg	Trp	Asp	Ala	Glu	
385					390					395					400	
Gly	Lys	His	Trp	Arg	Thr	Asp	Gly	Ile	Ser	Asn	Val	Ser	Tyr	Lys	Pro	
				405					410					415		

Lys	Glu	Arg	Leu	Val	Thr	Phe	Ser	Leu	Asp	Thr	Phe	Gly	Pro	Val	Thr		
			420					425					430				
Leu	Ile	Gln	Asp	Ala	His	Ile	Asn	Met	Pro	Tyr	Gln	Ser	Trp	Glu	Leu		
		435					440					445					
Arg	Pro	Leu	Asp	Val	Asn	Lys	Val	Leu	Leu	Thr	Val	Thr	Thr	Val	Phe		
	450					455					460						
Thr	Glu	Ile	Gln	Ile	Gln	Ile	Lys	Glu	Asn	Leu	Cys	Met	Leu	Ser	Ser		
465					470					475					480		
Ile	Lys	Leu	Lys	Asp	Lys	Lys	His	Ile	Ser	Ile	Leu	Glu	Gly	Thr	Trp		
				485					490					495			
Met	Thr	Pro	Ile	Pro	Phe	Ile	Ile	Ala	Leu	Lys	Glu	Ala	Gly	Leu	Asn		
			500					505					510				
Ile	Phe	Pro	Thr	Arg	His	Ser	His	Phe	Tyr	Val	Ile	Ile	Asn	Asn	Lys		
		515					520					525					
Val	Pro	Leu	Val	Glu	Val	Lys	Ala	Tyr	Arg	Gln	Met	Ala	Leu	Leu	Ser		
	530					535					540						
Ser	Ala	Phe	Ala	Phe	Gly	Trp	Ser	Lys	Trp	Asn	Leu	Leu	Cys	Asn	Ser		
545					550					555					560		
Thr	Lys	Val	Val	Phe	Lys	Val	Arg	Glu	His	Leu	Thr	Glu	Ala	Cys	Thr		
				565					570					575			
Glu	Asn	Pro	Asn	Trp	Ala	Leu	Leu	Met	Phe	Ser	Gly	Asp	Arg	Ala	Gln		
			580					585					590				
Arg	Leu	Lys	Ile	Lys	Glu	Glu	Ser	Glu	Ala	Phe	Ser	Glu	Ala	Leu	Lys		
		595					600					605					
Glu	Glu	Thr	Glu	Phe	His	Ser	Thr	Leu	Tyr	His	Met	Val	Lys	Asp	Phe		
	610					615					620						
Ala	Ser	Glu	Glu	Ala	Met	Glu	Lys	Val	Arg	Ser	Ser	Asn	Cys	Gln	Phe		
625					630					635					640		

Val Asn Ser Val Cys His Met Leu Leu Ser Thr Arg Leu Leu Ser Tyr
645 650 655

Ser

<210> 11436
<211> 35
<212> PRT
<213> Homo sapiens

<220>
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<220>
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<220>
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<223> /note="Gene Name:
cancer susceptibility candidate 1"

<220>
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<400> 11436
Met Ser Gly Ser Lys Lys Lys Lys Val Thr Lys Ala Glu Arg Leu Lys
1 5 10 15

Leu Leu Gln Glu Glu Glu Arg Arg Leu Lys Glu Glu Gly Ser Arg
20 25 30

Lys Glu Lys
35

<210> 11437
<211> 45
<212> PRT
<213> Homo sapiens

<220>
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<220>
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<220>

<221> source
 <223> /note="Gene Name:
 cancer susceptibility candidate 1"

 <220>
 <221> source
 <223> /note="ENSP ID: ENSP00000451011"

 <400> 11437
 Met Ser Gly Ser Lys Lys Lys Lys Val Thr Lys Ala Glu Arg Leu Lys
 1 5 10 15

 Leu Leu Gln Glu Glu Glu Glu Arg Arg Leu Lys Glu Glu Val Thr Val
 20 25 30

 Leu Lys Lys Gly Glu Leu Thr Leu Phe Ser Tyr Leu Pro
 35 40 45

 <210> 11438
 <211> 92
 <212> PRT
 <213> Homo sapiens

 <220>
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 <223> /note="Gene Name:
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 <220>
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 <400> 11438
 Met Glu Arg Leu Glu Ile Gln Arg Ile Glu Lys Glu Lys Trp His Arg
 1 5 10 15

 Leu Glu Ala Lys Asp Leu Glu Arg Arg Asn Glu Glu Leu Glu Glu Leu
 20 25 30

 Tyr Leu Leu Glu Arg Cys Phe Pro Glu Ala Glu Lys Leu Lys Gln Glu
 35 40 45

 Thr Lys Leu Leu Ser Gln Trp Lys His Tyr Ile Gln Cys Asp Gly Ser

50					55					60					
Pro	Asp	Pro	Ser	Val	Ala	Gln	Glu	Met	Asn	Thr	Phe	Ile	Ser	Leu	Trp
65					70					75					80
Lys	Glu	Lys	Thr	Asn	Glu	Thr	Phe	Glu	Glu	Val	Ile				
				85					90						

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<210> 11439
<211> 548
<212> PRT
<213> Homo sapiens
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<220>
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<223> /note="Gene Name:
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<220>
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<223> /note="ENSP ID: ENSP00000451813"
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<221> MOD_RES  
<222> (1)..(1)  
<223> Any amino acid
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<400> 11439
Xaa Glu Ala Arg Leu Lys Tyr Glu Lys Glu Glu Met Glu Arg Leu Glu
1 5 10 15

Ile Gln Arg Ile Glu Lys Glu Lys Trp His Arg Leu Glu Ala Lys Asp
20 25 30

Leu Glu Arg Arg Asn Glu Glu Leu Glu Glu Leu Tyr Leu Leu Glu Arg
35 40 45

Cys Phe Pro Glu Ala Glu Lys Leu Lys Gln Glu Thr Lys Leu Leu Ser
50 55 60

Gln Trp Lys His Tyr Ile Gln Cys Asp Gly Ser Pro Asp Pro Ser Val
25553

65					70						75					80
Ala	Gln	Glu	Met	Asn	Thr	Phe	Ile	Ser	Leu	Trp	Lys	Glu	Lys	Thr	Asn	
				85					90					95		
Glu	Thr	Phe	Glu	Glu	Val	Ile	Glu	Lys	Ser	Lys	Val	Val	Leu	Asn	Leu	
			100					105					110			
Ile	Glu	Lys	Leu	Lys	Phe	Ile	Leu	Leu	Glu	Thr	Pro	Pro	Cys	Asp	Leu	
		115					120					125				
Gln	Asp	Lys	Asn	Ile	Ile	Gln	Tyr	Gln	Glu	Ser	Ile	Leu	Gln	Leu	Gln	
	130					135					140					
Glu	Leu	Leu	His	Leu	Lys	Phe	Gly	Val	Ala	Thr	Glu	Ile	Leu	Leu	Lys	
145					150					155					160	
Ser	Ser	Ala	Glu	Glu	Glu	Ser	Glu	Ala	Ile	Lys	Cys	Glu	Arg	Glu	Met	
				165					170					175		
Lys	Val	Leu	Ser	Glu	Thr	Val	Ser	Ala	Ala	Gln	Leu	Leu	Leu	Val	Glu	
			180					185					190			
Asn	Ser	Ser	Glu	Lys	Pro	Asp	Phe	Phe	Glu	Asp	Asn	Val	Val	Asp	Leu	
		195					200					205				
Cys	Gln	Phe	Thr	Thr	Leu	Gly	Gly	Val	Tyr	His	Leu	Asp	Ile	Leu	Glu	
	210					215					220					
Leu	Pro	Pro	Gln	Cys	Lys	Pro	Val	Lys	Gly	Trp	Met	Ile	Val	Glu	Ile	
225					230					235					240	
Leu	Lys	Glu	Gly	Leu	Gln	Lys	Tyr	Thr	Tyr	Pro	Pro	Glu	Thr	Thr	Glu	
				245					250					255		
Glu	Phe	Glu	Thr	Glu	Asn	Ala	Phe	Pro	Pro	Ile	Glu	Val	Thr	Leu	Glu	
			260					265					270			
Val	His	Glu	Asn	Val	Ile	Phe	Phe	Glu	Asp	Pro	Val	Val	Val	Arg	Trp	
		275					280					285				
Asp	Ala	Glu	Gly	Lys	His	Trp	Arg	Thr	Asp	Gly	Ile	Ser	Asn	Val	Ser	
	290					295					300					

Tyr	Lys	Pro	Lys	Glu	Arg	Leu	Val	Thr	Phe	Ser	Leu	Asp	Thr	Phe	Gly	305	310	315	320
Pro	Val	Thr	Leu	Ile	Gln	Asp	Ala	His	Ile	Asn	Met	Pro	Tyr	Gln	Ser	325	330	335	
Trp	Glu	Leu	Arg	Pro	Leu	Asp	Val	Asn	Lys	Val	Leu	Leu	Thr	Val	Thr	340	345	350	
Thr	Val	Phe	Thr	Glu	Ile	Gln	Ile	Gln	Ile	Lys	Glu	Asn	Leu	Cys	Met	355	360	365	
Leu	Ser	Ser	Ile	Lys	Leu	Lys	Asp	Lys	Lys	His	Ile	Ser	Ile	Leu	Glu	370	375	380	
Gly	Thr	Trp	Met	Thr	Pro	Ile	Pro	Phe	Ile	Ile	Ala	Leu	Lys	Glu	Ala	385	390	395	400
Gly	Leu	Asn	Ile	Phe	Pro	Thr	Arg	His	Ser	His	Phe	Tyr	Val	Ile	Ile	405	410	415	
Asn	Asn	Lys	Val	Pro	Leu	Val	Glu	Val	Lys	Ala	Tyr	Arg	Gln	Met	Ala	420	425	430	
Leu	Leu	Ser	Ser	Ala	Phe	Ala	Phe	Gly	Trp	Ser	Lys	Trp	Asn	Leu	Leu	435	440	445	
Cys	Asn	Ser	Thr	Lys	Val	Val	Phe	Lys	Val	Arg	Glu	His	Leu	Thr	Glu	450	455	460	
Ala	Cys	Thr	Glu	Asn	Pro	Asn	Trp	Ala	Leu	Leu	Met	Phe	Ser	Gly	Asp	465	470	475	480
Arg	Ala	Gln	Arg	Leu	Lys	Ile	Lys	Glu	Glu	Ser	Glu	Ala	Phe	Ser	Glu	485	490	495	
Ala	Leu	Lys	Glu	Glu	Thr	Glu	Phe	His	Ser	Thr	Leu	Tyr	His	Met	Val	500	505	510	
Lys	Asp	Phe	Ala	Ser	Glu	Glu	Ala	Met	Glu	Lys	Val	Arg	Ser	Ser	Asn	515	520	525	

Cys Gln Phe Val Asn Ser Val Cys His Met Leu Leu Ser Thr Arg Leu
530 535 540

Leu Ser Tyr Ser
545

<210> 11440
<211> 136
<212> PRT
<213> Homo sapiens

<220>
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<223> /note="Payload ID: 2238"

<220>
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<223> /note="Gene Symbol: CASC10"

<220>
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<223> /note="Gene Name:
cancer susceptibility candidate 10"

<220>
<221> source
<223> /note="Uniprot ID: Q5T4H9"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000366317"

<400> 11440
Met Gln Ser Arg Glu Pro Ser Gly Trp Arg Thr Ala Glu Arg Arg Arg
1 5 10 15

Gly Trp Arg Cys Arg Gly Val Pro Thr Pro Ser Gly Asp Arg Gly Pro
20 25 30

Gly Ala Ala Arg Pro Ala Ala Arg Gly Gly Ala Gly Glu Thr Thr Gly
35 40 45

Gln Gln Arg Pro Leu Gln Val Pro Gly Ala Ser Ala Ala Ala Ala Arg
50 55 60

Thr Arg Leu Leu Arg Trp His His Arg Val Pro Ser Pro Arg Ala Thr
65 70 75 80

Arg Ser Pro Gly Ser Ile Arg Arg Thr Ser Pro Cys Ser Gly Gly Pro

25556

85

90

95

Asp Arg Pro Glu Arg Pro Glu Cys Ala Asp Ala Cys Cys Tyr Leu Leu
 100 105 110

Asp Pro Phe Thr Leu Pro Leu Ile Gln Asp Phe Phe Arg Gly Cys Ala
 115 120 125

Ala Ser Asp Phe Asp Arg Arg Asp
 130 135

<210> 11441

<211> 703

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2239"

<220>

<221> source

<223> /note="Gene Symbol: CASC3"

<220>

<221> source

<223> /note="Gene Name:
 cancer susceptibility candidate 3"

<220>

<221> source

<223> /note="Uniprot ID: O15234"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000264645"

<400> 11441

Met Ala Asp Arg Arg Arg Gln Arg Ala Ser Gln Asp Thr Glu Asp Glu
 1 5 10 15

Glu Ser Gly Ala Ser Gly Ser Asp Ser Gly Gly Ser Pro Leu Arg Gly
 20 25 30

Gly Gly Ser Cys Ser Gly Ser Ala Gly Gly Gly Gly Ser Gly Ser Leu
 35 40 45

Pro Ser Gln Arg Gly Gly Arg Thr Gly Ala Leu His Leu Arg Arg Val
 50 55 60

25557

Glu	Ser	Gly	Gly	Ala	Lys	Ser	Ala	Glu	Glu	Ser	Glu	Cys	Glu	Ser	Glu	
65					70					75					80	
Asp	Gly	Ile	Glu	Gly	Asp	Ala	Val	Leu	Ser	Asp	Tyr	Glu	Ser	Ala	Glu	
				85					90					95		
Asp	Ser	Glu	Gly	Glu	Glu	Gly	Glu	Tyr	Ser	Glu	Glu	Glu	Asn	Ser	Lys	
			100					105					110			
Val	Glu	Leu	Lys	Ser	Glu	Ala	Asn	Asp	Ala	Val	Asn	Ser	Ser	Thr	Lys	
		115					120					125				
Glu	Glu	Lys	Gly	Glu	Glu	Lys	Pro	Asp	Thr	Lys	Ser	Thr	Val	Thr	Gly	
	130					135					140					
Glu	Arg	Gln	Ser	Gly	Asp	Gly	Gln	Glu	Ser	Thr	Glu	Pro	Val	Glu	Asn	
145					150					155					160	
Lys	Val	Gly	Lys	Lys	Gly	Pro	Lys	His	Leu	Asp	Asp	Asp	Glu	Asp	Arg	
				165					170					175		
Lys	Asn	Pro	Ala	Tyr	Ile	Pro	Arg	Lys	Gly	Leu	Phe	Phe	Glu	His	Asp	
			180					185					190			
Leu	Arg	Gly	Gln	Thr	Gln	Glu	Glu	Glu	Val	Arg	Pro	Lys	Gly	Arg	Gln	
		195					200					205				
Arg	Lys	Leu	Trp	Lys	Asp	Glu	Gly	Arg	Trp	Glu	His	Asp	Lys	Phe	Arg	
	210					215					220					
Glu	Asp	Glu	Gln	Ala	Pro	Lys	Ser	Arg	Gln	Glu	Leu	Ile	Ala	Leu	Tyr	
225					230					235					240	
Gly	Tyr	Asp	Ile	Arg	Ser	Ala	His	Asn	Pro	Asp	Asp	Ile	Lys	Pro	Arg	
				245					250					255		
Arg	Ile	Arg	Lys	Pro	Arg	Tyr	Gly	Ser	Pro	Pro	Gln	Arg	Asp	Pro	Asn	
			260					265					270			
Trp	Asn	Gly	Glu	Arg	Leu	Asn	Lys	Ser	His	Arg	His	Gln	Gly	Leu	Gly	
		275					280					285				

Gly Thr Leu Pro Pro Arg Thr Phe Ile Asn Arg Asn Ala Ala Gly Thr
290 295 300

Gly Arg Met Ser Ala Pro Arg Asn Tyr Ser Arg Ser Gly Gly Phe Lys
305 310 315 320

Glu Gly Arg Ala Gly Phe Arg Pro Val Glu Ala Gly Gly Gln His Gly
325 330 335

Gly Arg Ser Gly Glu Thr Val Lys His Glu Ile Ser Tyr Arg Ser Arg
340 345 350

Arg Leu Glu Gln Thr Ser Val Arg Asp Pro Ser Pro Glu Ala Asp Ala
355 360 365

Pro Val Leu Gly Ser Pro Glu Lys Glu Glu Ala Ala Ser Glu Pro Pro
370 375 380

Ala Ala Ala Pro Asp Ala Ala Pro Pro Pro Pro Asp Arg Pro Ile Glu
385 390 395 400

Lys Lys Ser Tyr Ser Arg Ala Arg Arg Thr Arg Thr Lys Val Gly Asp
405 410 415

Ala Val Lys Leu Ala Glu Glu Val Pro Pro Pro Pro Glu Gly Leu Ile
420 425 430

Pro Ala Pro Pro Val Pro Glu Thr Thr Pro Thr Pro Thr Lys Thr
435 440 445

Gly Thr Trp Glu Ala Pro Val Asp Ser Ser Thr Ser Gly Leu Glu Gln
450 455 460

Asp Val Ala Gln Leu Asn Ile Ala Glu Gln Asn Trp Ser Pro Gly Gln
465 470 475 480

Pro Ser Phe Leu Gln Pro Arg Glu Leu Arg Gly Met Pro Asn His Ile
485 490 495

His Met Gly Ala Gly Pro Pro Pro Gln Phe Asn Arg Met Glu Glu Met
500 505 510

Gly Val Gln Gly Gly Arg Ala Lys Arg Tyr Ser Ser Gln Arg Gln Arg

515		520		525
Pro Val Pro Glu Pro Pro Ala Pro Pro Val His Ile Ser Ile Met Glu				
530		535		540
Gly His Tyr Tyr Asp Pro Leu Gln Phe Gln Gly Pro Ile Tyr Thr His				
545		550		555
Gly Asp Ser Pro Ala Pro Leu Pro Pro Gln Gly Met Leu Val Gln Pro				
		565		570
				575
Gly Met Asn Leu Pro His Pro Gly Leu His Pro His Gln Thr Pro Ala				
		580		585
				590
Pro Leu Pro Asn Pro Gly Leu Tyr Pro Pro Pro Val Ser Met Ser Pro				
		595		600
				605
Gly Gln Pro Pro Pro Gln Gln Leu Leu Ala Pro Thr Tyr Phe Ser Ala				
		610		615
				620
Pro Gly Val Met Asn Phe Gly Asn Pro Ser Tyr Pro Tyr Ala Pro Gly				
625		630		635
				640
Ala Leu Pro Pro Pro Pro Pro Pro His Leu Tyr Pro Asn Thr Gln Ala				
		645		650
				655
Pro Ser Gln Val Tyr Gly Gly Val Thr Tyr Tyr Asn Pro Ala Gln Gln				
		660		665
				670
Gln Val Gln Pro Lys Pro Ser Pro Pro Arg Arg Thr Pro Gln Pro Val				
		675		680
				685
Thr Ile Lys Pro Pro Pro Pro Glu Val Val Ser Arg Gly Ser Ser				
690		695		700

<210> 11442

<211> 223

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2239"

<220>

25560

<221> source
<223> /note="Gene Symbol: CASC3"

<220>
<221> source
<223> /note="Gene Name:
cancer susceptibility candidate 3"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000462713"

<220>
<221> MOD_RES
<222> (1)..(1)
<223> Any amino acid

<400> 11442
Xaa Leu Lys Ser Glu Ala Asn Asp Ala Val Asn Ser Ser Thr Lys Glu
1 5 10 15

Glu Lys Gly Glu Glu Lys Pro Asp Thr Lys Ser Thr Val Thr Gly Glu
20 25 30

Arg Gln Ser Gly Asp Gly Gln Glu Ser Thr Glu Pro Val Glu Asn Lys
35 40 45

Val Gly Lys Lys Gly Pro Lys His Leu Asp Asp Asp Glu Asp Arg Lys
50 55 60

Asn Pro Ala Tyr Ile Pro Arg Lys Gly Leu Phe Phe Glu His Asp Leu
65 70 75 80

Arg Gly Gln Thr Gln Glu Glu Glu Val Arg Pro Lys Gly Arg Gln Arg
85 90 95

Lys Leu Trp Lys Asp Glu Gly Arg Trp Glu His Asp Lys Phe Arg Glu
100 105 110

Asp Glu Gln Ala Pro Lys Ser Arg Gln Glu Leu Ile Ala Leu Tyr Gly
115 120 125

Tyr Asp Ile Arg Ser Ala His Asn Pro Asp Asp Ile Lys Pro Arg Arg
130 135 140

Ile Arg Lys Pro Arg Tyr Gly Ser Pro Pro Gln Arg Asp Pro Asn Trp
145 150 155 160

Asn Gly Glu Arg Leu Asn Lys Ser His Arg His Gln Gly Leu Gly Gly
165 170 175

Thr Leu Pro Pro Arg Thr Phe Ile Asn Arg Asn Ala Ala Gly Pro Leu
180 185 190

Arg Arg Asn Pro Ile Pro Gly Gln Glu Glu Leu Glu Pro Lys Leu Glu
195 200 205

Met Gln Ser Ser Leu Gln Arg Arg Cys Pro Leu Leu Leu Lys Asp
210 215 220

<210> 11443
<211> 129
<212> PRT
<213> Homo sapiens

<220>
<221> source
<223> /note="Payload ID: 2239"

<220>
<221> source
<223> /note="Gene Symbol: CASC3"

<220>
<221> source
<223> /note="Gene Name:
cancer susceptibility candidate 3"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000464626"

<220>
<221> MOD_RES
<222> (1)..(1)
<223> Any amino acid

<400> 11443
Xaa Ala Arg Arg Thr Arg Thr Lys Val Gly Asp Ala Val Lys Leu Ala
1 5 10 15

Glu Glu Val Pro Pro Pro Pro Glu Gly Leu Ile Pro Ala Pro Pro Val
20 25 30

Pro Glu Thr Thr Pro Thr Pro Pro Thr Lys Thr Gly Thr Trp Glu Ala
35 40 45

Pro Val Asp Ser Ser Thr Ser Gly Leu Glu Gln Asp Val Ala Gln Leu
50 55 60

Asn Ile Ala Glu Gln Asn Trp Ser Pro Gly Gln Pro Ser Phe Leu Gln
65 70 75 80

Pro Arg Glu Leu Arg Gly Met Pro Asn His Ile His Met Gly Ala Gly
85 90 95

Pro Pro Pro Gln Phe Asn Arg Met Glu Glu Met Leu Thr Leu Gln Ile
100 105 110

Ser Ile Lys Tyr Leu Pro Cys Thr Lys Cys Phe Ser Thr Pro Lys Gly
115 120 125

Arg

<210> 11444
<211> 66
<212> PRT
<213> Homo sapiens

<220>
<221> source
<223> /note="Payload ID: 2239"

<220>
<221> source
<223> /note="Gene Symbol: CASC3"

<220>
<221> source
<223> /note="Gene Name:
cancer susceptibility candidate 3"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000467654"

<400> 11444
Met Ser Ser Ala Phe Phe Gln Glu Ser Glu Asp Gly Ile Glu Gly Asp
1 5 10 15

Ala Val Leu Ser Asp Tyr Glu Ser Ala Glu Asp Ser Glu Gly Glu Glu
20 25 30

Gly Glu Tyr Ser Glu Glu Glu Asn Ser Lys Val Glu Leu Lys Ser Glu
35 40 45

Ala Asn Asp Ala Val Asn Ser Ser Thr Lys Glu Glu Lys Gly Glu Glu
50 55 60

Lys Pro
65

<210> 11445
<211> 436
<212> PRT
<213> Homo sapiens

<220>
<221> source
<223> /note="Payload ID: 2240"

<220>
<221> source
<223> /note="Gene Symbol: CASC4"

<220>
<221> source
<223> /note="Gene Name:
cancer susceptibility candidate 4"

<220>
<221> source
<223> /note="Uniprot ID: Q6P4E1"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000299957"

<400> 11445
Met Val Gly Phe Gly Ala Asn Arg Arg Ala Gly Arg Leu Pro Ser Leu
1 5 10 15

Val Leu Val Val Leu Leu Val Val Ile Val Val Leu Ala Phe Asn Tyr
20 25 30

Trp Ser Ile Ser Ser Arg His Val Leu Leu Gln Glu Glu Val Ala Glu
35 40 45

Leu Gln Gly Gln Val Gln Arg Thr Glu Val Ala Arg Gly Arg Leu Glu
50 55 60

Lys Arg Asn Ser Asp Leu Leu Leu Leu Val Asp Thr His Lys Lys Gln
65 70 75 80

Ile	Asp	Gln	Lys	Glu	Ala	Asp	Tyr	Gly	Arg	Leu	Ser	Ser	Arg	Leu	Gln	
				85					90					95		
Ala	Arg	Glu	Gly	Leu	Gly	Lys	Arg	Cys	Glu	Asp	Asp	Lys	Val	Lys	Leu	
			100					105					110			
Gln	Asn	Asn	Ile	Ser	Tyr	Gln	Met	Ala	Asp	Ile	His	His	Leu	Lys	Glu	
		115					120					125				
Gln	Leu	Ala	Glu	Leu	Arg	Gln	Glu	Phe	Leu	Arg	Gln	Glu	Asp	Gln	Leu	
	130					135					140					
Gln	Asp	Tyr	Arg	Lys	Asn	Asn	Thr	Tyr	Leu	Val	Lys	Arg	Leu	Glu	Tyr	
145					150					155					160	
Glu	Ser	Phe	Gln	Cys	Gly	Gln	Gln	Met	Lys	Glu	Leu	Arg	Ala	Gln	His	
				165					170					175		
Glu	Glu	Asn	Ile	Lys	Lys	Leu	Ala	Asp	Gln	Phe	Leu	Glu	Glu	Gln	Lys	
			180					185					190			
Gln	Glu	Thr	Gln	Lys	Ile	Gln	Ser	Asn	Asp	Gly	Lys	Glu	Leu	Asp	Ile	
		195					200					205				
Asn	Asn	Gln	Val	Val	Pro	Lys	Asn	Ile	Pro	Lys	Val	Ala	Glu	Asn	Val	
		210				215					220					
Ala	Asp	Lys	Asn	Glu	Glu	Pro	Ser	Ser	Asn	His	Ile	Pro	His	Gly	Lys	
225					230					235					240	
Glu	Gln	Ile	Lys	Arg	Gly	Gly	Asp	Ala	Gly	Met	Pro	Gly	Ile	Glu	Glu	
				245					250					255		
Asn	Asp	Leu	Ala	Lys	Val	Asp	Asp	Leu	Pro	Pro	Ala	Leu	Arg	Lys	Pro	
			260					265					270			
Pro	Ile	Ser	Val	Ser	Gln	His	Glu	Ser	His	Gln	Ala	Ile	Ser	His	Leu	
		275					280					285				
Pro	Thr	Gly	Gln	Pro	Leu	Ser	Pro	Asn	Met	Pro	Pro	Asp	Ser	His	Ile	
	290					295					300					

Asn His Asn Gly Asn Pro Gly Thr Ser Lys Gln Asn Pro Ser Ser Pro
305 310 315 320

Leu Gln Arg Leu Ile Pro Gly Ser Asn Leu Asp Ser Glu Pro Arg Ile
325 330 335

Gln Thr Asp Ile Leu Lys Gln Ala Thr Lys Asp Arg Val Ser Asp Phe
340 345 350

His Lys Leu Lys Gln Ser Arg Phe Phe Asp Glu Asn Glu Ser Pro Val
355 360 365

Asp Pro Gln His Gly Ser Lys Leu Ala Asp Tyr Asn Gly Asp Asp Gly
370 375 380

Asn Val Gly Glu Tyr Glu Ala Asp Lys Gln Ala Glu Leu Ala Tyr Asn
385 390 395 400

Glu Glu Glu Asp Gly Asp Gly Gly Glu Glu Asp Val Gln Asp Asp Glu
405 410 415

Glu Arg Glu Leu Gln Met Asp Pro Ala Asp Tyr Gly Lys Gln His Phe
420 425 430

Asn Asp Val Leu
435

<210> 11446
<211> 380
<212> PRT
<213> Homo sapiens

<220>
<221> source
<223> /note="Payload ID: 2240"

<220>
<221> source
<223> /note="Gene Symbol: CASC4"

<220>
<221> source
<223> /note="Gene Name:
cancer susceptibility candidate 4"

<220>
<221> source

<223> /note="Uniprot ID: Q6P4E1"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000335063"

<400> 11446

Met Val Gly Phe Gly Ala Asn Arg Arg Ala Gly Arg Leu Pro Ser Leu
1 5 10 15

Val Leu Val Val Leu Leu Val Val Ile Val Val Leu Ala Phe Asn Tyr
20 25 30

Trp Ser Ile Ser Ser Arg His Val Leu Leu Gln Glu Glu Val Ala Glu
35 40 45

Leu Gln Gly Gln Val Gln Arg Thr Glu Val Ala Arg Gly Arg Leu Glu
50 55 60

Lys Arg Asn Ser Asp Leu Leu Leu Leu Val Asp Thr His Lys Lys Gln
65 70 75 80

Ile Asp Gln Lys Glu Ala Asp Tyr Gly Arg Leu Ser Ser Arg Leu Gln
85 90 95

Ala Arg Glu Gly Leu Gly Lys Arg Cys Glu Asp Asp Lys Val Lys Leu
100 105 110

Gln Asn Asn Ile Ser Tyr Gln Met Ala Asp Ile His His Leu Lys Glu
115 120 125

Gln Leu Ala Glu Leu Arg Gln Glu Phe Leu Arg Gln Glu Asp Gln Leu
130 135 140

Gln Asp Tyr Arg Lys Asn Asn Thr Tyr Leu Val Lys Arg Leu Glu Tyr
145 150 155 160

Glu Ser Phe Gln Cys Gly Gln Gln Met Lys Glu Leu Arg Ala Gln His
165 170 175

Glu Glu Asn Ile Lys Lys Leu Ala Asp Gln Phe Leu Glu Glu Gln Lys
180 185 190

Gln Glu Thr Gln Lys Ile Gln Ser Asn Asp Gly Lys Glu Leu Asp Ile
195 200 205

25567

Asn Asn Gln Val Val Pro Lys Asn Ile Pro Lys Val Ala Glu Asn Val
210 215 220

Ala Asp Lys Asn Glu Glu Pro Ser Ser Asn His Ile Pro His Gly Lys
225 230 235 240

Glu Gln Ile Lys Arg Gly Gly Asp Ala Gly Met Pro Gly Ile Glu Glu
245 250 255

Asn Asp Leu Ala Lys Val Asp Asp Leu Pro Pro Ala Leu Arg Lys Pro
260 265 270

Pro Ile Ser Val Ser Gln His Glu Ser His Gln Ala Ile Ser His Leu
275 280 285

Pro Thr Gly Gln Pro Leu Ser Pro Asn Met Pro Pro Asp Ser His Ile
290 295 300

Asn His Asn Gly Asn Pro Gly Thr Ser Lys Gln Asn Pro Ser Ser Pro
305 310 315 320

Leu Gln Arg Leu Ile Pro Gly Ser Asn Leu Asp Ser Glu Pro Arg Ile
325 330 335

Gln Thr Asp Ile Leu Lys Gln Ala Thr Lys Asp Arg Val Ser Asp Phe
340 345 350

His Lys Leu Lys Gln Asn Asp Glu Glu Arg Glu Leu Gln Met Asp Pro
355 360 365

Ala Asp Tyr Gly Lys Gln His Phe Asn Asp Val Leu
370 375 380

<210> 11447

<211> 24

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2240"

<220>

<221> source

<223> /note="Gene Symbol: CASC4"

<220>

<221> source

<223> /note="Gene Name:
cancer susceptibility candidate 4"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000452833"

<400> 11447

Gln	Asp	Asp	Glu	Glu	Arg	Glu	Leu	Gln	Met	Asp	Pro	Ala	Asp	Tyr	Gly
1				5					10					15	

Lys	Gln	His	Phe	Asn	Asp	Val	Leu
							20

<210> 11448

<211> 161

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2240"

<220>

<221> source

<223> /note="Gene Symbol: CASC4"

<220>

<221> source

<223> /note="Gene Name:
cancer susceptibility candidate 4"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000453465"

<220>

<221> MOD_RES

<222> (1)..(1)

<223> Any amino acid

<400> 11448

Xaa	Glu	Thr	Gln	Lys	Ile	Gln	Ser	Asn	Asp	Gly	Lys	Glu	Leu	Asp	Ile
1				5					10					15	

Asn	Asn	Gln	Val	Val	Pro	Lys	Asn	Ile	Pro	Lys	Val	Ala	Glu	Asn	Val
			20					25					30		

Ala Asp Lys Asn Glu Glu Pro Ser Ser Asn His Ile Pro His Gly Lys
35 40 45

Ala Leu Arg Lys Pro Pro Ile Ser Val Ser Gln His Glu Ser His Gln
50 55 60

Ala Ile Ser His Leu Pro Thr Gly Gln Pro Leu Ser Pro Asn Met Pro
65 70 75 80

Pro Asp Ser His Ile Asn His Asn Gly Asn Pro Gly Thr Ser Lys Gln
85 90 95

Asn Pro Ser Ser Pro Leu Gln Arg Leu Ile Pro Gly Ser Asn Leu Asp
100 105 110

Ser Glu Pro Arg Ile Gln Thr Asp Ile Leu Lys Gln Ala Thr Lys Asp
115 120 125

Arg Val Ser Asp Phe His Lys Leu Lys Gln Asn Asp Glu Glu Arg Glu
130 135 140

Leu Gln Met Asp Pro Ala Asp Tyr Gly Lys Gln His Phe Asn Asp Val
145 150 155 160

Leu

<210> 11449
<211> 112
<212> PRT
<213> Homo sapiens

<220>
<221> source
<223> /note="Payload ID: 2240"

<220>
<221> source
<223> /note="Gene Symbol: CASC4"

<220>
<221> source
<223> /note="Gene Name:
cancer susceptibility candidate 4"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000453703"

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<400> 11449
Met Ala Asp Ile His His Leu Lys Glu Gln Leu Ala Glu Leu Arg Gln
1          5          10          15

Glu Phe Leu Arg Gln Glu Asp Gln Leu Gln Asp Tyr Arg Lys Asn Asn
20          25          30

Thr Tyr Leu Val Lys Arg Leu Glu Tyr Glu Ser Phe Gln Cys Gly Gln
35          40          45

Gln Met Lys Glu Leu Arg Ala Gln His Glu Glu Asn Ile Lys Lys Leu
50          55          60

Ala Asp Gln Phe Leu Glu Glu Gln Lys Gln Glu Thr Gln Lys Ile Gln
65          70          75          80

Ser Asn Asp Gly Lys Glu Leu Asp Ile Asn Asn Gln Val Val Pro Lys
85          90          95

Asn Ile Pro Lys Val Ala Glu Asn Val Ala Asp Lys Asn Glu Glu Pro
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<400> 11450

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 20 25 30
 Trp Ser Ile Ser Ser Arg His Val Leu Leu Gln Glu Glu Val Ala Glu
 35 40 45
 Leu Gln Gly Gln Val Gln Arg Thr Glu Val Ala Arg Gly Arg Leu Glu
 50 55 60
 Lys Arg Asn Ser Asp Leu Leu Leu Leu Val Asp Thr His Lys Lys Gln
 65 70 75 80
 Ile Asp Gln Lys Glu Ala Asp Tyr Gly Arg Leu Ser Ser Arg Leu Gln
 85 90 95
 Ala Arg Glu Gly Leu Gly Lys Arg Cys Glu Asp Asp Lys Val Lys Leu
 100 105 110
 Gln Asn Asn Ile Ser Tyr Gln Met Ala Asp Ile His His Leu Lys Glu
 115 120 125
 Gln Leu Ala Glu Leu Arg Gln Glu Phe Leu Arg Gln Glu Asp Gln Leu
 130 135 140
 Gln Asp Tyr Arg Lys Asn Asn Thr Tyr Leu Val Lys Arg Leu Glu Tyr
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 Glu Ser Lys Arg Pro Lys Arg Phe Asn Gln Met Met Glu Arg Asn Trp
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Ile

<210> 11451
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<400> 11451
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Ala Ser Gly Gly Gly Gly Arg Ala Ala Gly Pro Gly Pro Ala His Arg
20 25 30

Ser Gly Pro Arg Ala Ala Gly Lys Ala Gln Phe Gly Pro Leu Ala Val
35 40 45

Gly Gly His Ala Gln Glu Thr Asp Arg Pro Glu Gly Gly Arg Leu Arg
50 55 60

Pro Pro Gln Gln Pro Ala Ala Gly Gln Arg Gly Pro Arg Glu Glu Met
65 70 75 80

Arg Gly

<210> 11452
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Arg Pro Val Arg Arg Arg His Ser Ser Ile Leu Lys Pro Pro Arg Ser
                20                               25                               30

Pro Leu Gln Asp Leu Arg Gly Gly Asn Glu Arg Val Gln Glu Ser Asn
          35                               40                               45

Ala Leu Arg Asn Lys Lys Asn Ser Arg Arg Val Ser Phe Ala Asp Thr
          50                               55                               60

Ile Lys Val Phe Gln Thr Glu Ser His Met Lys Ile Val Arg Lys Ser
65                               70                               75                               80

Glu Met Glu Gly Cys Ser Ala Met Val Pro Ser Gln Leu Gln Leu Leu
          85                               90                               95

Pro Pro Gly Phe Lys Arg Phe Ser Cys Leu Ser Leu Pro Glu Thr Glu
          100                               105                               110

Thr Gly Glu Asn Leu Leu Leu Ile Gln Asn Lys Lys Leu Glu Asp Asn
          115                               120                               125

Tyr Cys Glu Ile Thr Gly Met Asn Thr Leu Leu Ser Ala Pro Ile His
          130                               135                               140

Thr Gln Met Gln Gln Lys Glu Phe Ser Ile Ile Glu His Thr Arg Glu
145                               150                               155                               160

Arg Lys His Ala Asn Asp Gln Thr Val Ile Phe Ser Asp Glu Asn Gln
          165                               170                               175

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Met	Asp	Leu	Thr	Ser	Ser	His	Thr	Val	Met	Ile	Thr	Lys	Gly	Leu	Leu	180	185	190
Asp	Asn	Pro	Ile	Ser	Glu	Lys	Ser	Thr	Lys	Ile	Asp	Thr	Thr	Ser	Phe	195	200	205
Leu	Ala	Asn	Leu	Lys	Leu	His	Thr	Glu	Asp	Ser	Arg	Met	Lys	Lys	Glu	210	215	220
Val	Asn	Phe	Ser	Val	Asp	Gln	Asn	Thr	Ser	Ser	Glu	Asn	Lys	Ile	Asp	225	230	235
Phe	Asn	Asp	Phe	Ile	Lys	Arg	Leu	Lys	Thr	Gly	Lys	Cys	Ser	Ala	Phe	245	250	255
Pro	Asp	Val	Pro	Asp	Lys	Glu	Asn	Phe	Glu	Ile	Pro	Ile	Tyr	Ser	Lys	260	265	270
Glu	Pro	Asn	Ser	Ala	Ser	Ser	Thr	His	Gln	Met	His	Val	Ser	Leu	Lys	275	280	285
Glu	Asp	Glu	Asn	Asn	Ser	Asn	Ile	Thr	Arg	Leu	Phe	Arg	Glu	Lys	Asp	290	295	300
Asp	Gly	Met	Asn	Phe	Thr	Gln	Cys	His	Thr	Ala	Asn	Ile	Gln	Thr	Leu	305	310	315
Ile	Pro	Thr	Ser	Ser	Glu	Thr	Asn	Ser	Arg	Glu	Ser	Lys	Gly	Asn	Asp	325	330	335
Ile	Thr	Ile	Tyr	Gly	Asn	Asp	Phe	Met	Asp	Leu	Thr	Phe	Asn	His	Thr	340	345	350
Leu	Gln	Ile	Leu	Pro	Ala	Thr	Gly	Asn	Phe	Ser	Glu	Ile	Glu	Asn	Gln	355	360	365
Thr	Gln	Asn	Ala	Met	Asp	Val	Thr	Thr	Gly	Tyr	Gly	Thr	Lys	Ala	Ser	370	375	380
Gly	Asn	Lys	Thr	Val	Phe	Lys	Ser	Lys	Gln	Asn	Thr	Ala	Phe	Gln	Asp	385	390	395
																		400

Leu Ser Ile Asn Ser Ala Asp Lys Ile His Ile Thr Arg Ser His Ile
405 410 415

Met Gly Ala Glu Thr His Ile Val Ser Gln Thr Cys Asn Gln Asp Ala
420 425 430

Arg Ile Leu Ala Met Thr Pro Glu Ser Ile Tyr Ser Asn Pro Ser Ile
435 440 445

Gln Gly Cys Lys Thr Val Phe Tyr Ser Ser Cys Asn Asp Ala Met Glu
450 455 460

Met Thr Lys Cys Leu Ser Asn Met Arg Glu Glu Lys Asn Leu Leu Lys
465 470 475 480

His Asp Ser Asn Tyr Ala Lys Met Tyr Cys Asn Pro Asp Ala Met Ser
485 490 495

Ser Leu Thr Glu Lys Thr Ile Tyr Ser Gly Glu Glu Asn Met Asp Ile
500 505 510

Thr Lys Ser His Thr Val Ala Ile Asp Asn Gln Ile Phe Lys Gln Asp
515 520 525

Gln Ser Asn Val Gln Ile Ala Ala Ala Pro Thr Pro Glu Lys Glu Met
530 535 540

Met Leu Gln Asn Leu Met Thr Thr Ser Glu Asp Gly Lys Met Asn Val
545 550 555 560

Asn Cys Asn Ser Val Pro His Val Ser Lys Glu Arg Ile Gln Gln Ser
565 570 575

Leu Ser Asn Pro Leu Ser Ile Ser Leu Thr Asp Arg Lys Thr Glu Leu
580 585 590

Leu Ser Gly Glu Asn Met Asp Leu Thr Glu Ser His Thr Ser Asn Leu
595 600 605

Gly Ser Gln Val Pro Leu Ala Ala Tyr Asn Leu Ala Pro Glu Ser Thr
610 615 620

Ser Glu Ser His Ser Gln Ser Lys Ser Ser Ser Asp Glu Cys Glu Glu

625					630						635					640
Ile	Thr	Lys	Ser	Arg	Asn	Glu	Pro	Phe	Gln	Arg	Ser	Asp	Ile	Ile	Ala	
				645					650					655		
Lys	Asn	Ser	Leu	Thr	Asp	Thr	Trp	Asn	Lys	Asp	Lys	Asp	Trp	Val	Leu	
			660					665					670			
Lys	Ile	Leu	Pro	Tyr	Leu	Asp	Lys	Asp	Ser	Pro	Gln	Ser	Ala	Asp	Cys	
		675					680					685				
Asn	Gln	Glu	Ile	Ala	Thr	Ser	His	Asn	Ile	Val	Tyr	Cys	Gly	Gly	Val	
	690						695				700					
Leu	Asp	Lys	Gln	Ile	Thr	Asn	Arg	Asn	Thr	Val	Ser	Trp	Glu	Gln	Ser	
705					710					715					720	
Leu	Phe	Ser	Thr	Thr	Lys	Pro	Leu	Phe	Ser	Ser	Gly	Gln	Phe	Ser	Met	
				725					730					735		
Lys	Asn	His	Asp	Thr	Ala	Ile	Ser	Ser	His	Thr	Val	Lys	Ser	Val	Leu	
			740					745					750			
Gly	Gln	Asn	Ser	Lys	Leu	Ala	Glu	Pro	Leu	Arg	Lys	Ser	Leu	Ser	Asn	
		755					760					765				
Pro	Thr	Pro	Asp	Tyr	Cys	His	Asp	Lys	Met	Ile	Ile	Cys	Ser	Glu	Glu	
	770					775					780					
Glu	Gln	Asn	Met	Asp	Leu	Thr	Lys	Ser	His	Thr	Val	Val	Ile	Gly	Phe	
785					790					795					800	
Gly	Pro	Ser	Glu	Leu	Gln	Glu	Leu	Gly	Lys	Thr	Asn	Leu	Glu	His	Thr	
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Thr	Gly	Gln	Leu	Thr	Thr	Met	Asn	Arg	Gln	Ile	Ala	Val	Lys	Val	Glu	
			820					825					830			
Lys	Cys	Gly	Lys	Ser	Pro	Ile	Glu	Lys	Ser	Gly	Val	Leu	Lys	Ser	Asn	
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Cys	Ile	Met	Asp	Val	Leu	Glu	Asp	Glu	Ser	Val	Gln	Lys	Pro	Lys	Phe	
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Pro Lys Glu Lys Gln Asn Val Lys Ile Trp Gly Arg Lys Ser Val Gly
865 870 875 880

Gly Pro Lys Ile Asp Lys Thr Ile Val Phe Ser Glu Asp Asp Lys Asn
885 890 895

Asp Met Asp Ile Thr Lys Ser Tyr Thr Ile Glu Ile Asn His Arg Pro
900 905 910

Leu Leu Glu Lys Arg Asp Cys His Leu Val Pro Leu Ala Gly Thr Ser
915 920 925

Glu Thr Ile Leu Tyr Thr Cys Arg Gln Asp Asp Met Glu Ile Thr Arg
930 935 940

Ser His Thr Thr Ala Leu Glu Cys Lys Thr Val Ser Pro Asp Glu Ile
945 950 955 960

Thr Thr Arg Pro Met Asp Lys Thr Val Val Phe Val Asp Asn His Val
965 970 975

Glu Leu Glu Met Thr Glu Ser His Thr Val Phe Ile Asp Tyr Gln Glu
980 985 990

Lys Glu Arg Thr Asp Arg Pro Asn Phe Glu Leu Ser Gln Arg Lys
Ser 995 1000 1005

Leu Gly Thr Pro Thr Val Ile Cys Thr Pro Thr Glu Glu Ser Val
1010 1015 1020

Phe Phe Pro Gly Asn Gly Glu Ser Asp Arg Leu Val Ala Asn Asp
1025 1030 1035

Ser Gln Leu Thr Pro Leu Glu Glu Trp Ser Asn Asn Arg Gly Pro
1040 1045 1050

Val Glu Val Ala Asp Asn Met Glu Leu Ser Lys Ser Ala Thr Cys
1055 1060 1065

Lys Asn Ile Lys Asp Val Gln Ser Pro Gly Phe Leu Asn Glu Pro
1070 1075 1080

Leu	Ser	Ser	Lys	Ser	Gln	Arg	Arg	Lys	Ser	Leu	Lys	Leu	Lys	Asn
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	1100					1105					1110			
Ile	Thr	Gln	Ser	Cys	Met	Val	Glu	Ile	Asp	Asn	Glu	Ser	Ala	Leu
	1115					1120					1125			
Glu	Asp	Lys	Glu	Asp	Phe	His	Leu	Ala	Gly	Ala	Ser	Lys	Thr	Ile
	1130					1135					1140			
Leu	Tyr	Ser	Cys	Gly	Gln	Asp	Asp	Met	Glu	Ile	Thr	Arg	Ser	His
	1145					1150					1155			
Thr	Thr	Ala	Leu	Glu	Cys	Lys	Thr	Leu	Leu	Pro	Asn	Glu	Ile	Ala
	1160					1165					1170			
Ile	Arg	Pro	Met	Asp	Lys	Thr	Val	Leu	Phe	Thr	Asp	Asn	Tyr	Ser
	1175					1180					1185			
Asp	Leu	Glu	Val	Thr	Asp	Ser	His	Thr	Val	Phe	Ile	Asp	Cys	Gln
	1190					1195					1200			
Ala	Thr	Glu	Lys	Ile	Leu	Glu	Glu	Asn	Pro	Lys	Phe	Gly	Ile	Gly
	1205					1210					1215			
Lys	Gly	Lys	Asn	Leu	Gly	Val	Ser	Phe	Pro	Lys	Asp	Asn	Ser	Cys
	1220					1225					1230			
Val	Gln	Glu	Ile	Ala	Glu	Lys	Gln	Ala	Leu	Ala	Val	Gly	Asn	Lys
	1235					1240					1245			
Ile	Val	Leu	His	Thr	Glu	Gln	Lys	Gln	Gln	Leu	Phe	Ala	Ala	Thr
	1250					1255					1260			
Asn	Arg	Thr	Thr	Asn	Glu	Ile	Ile	Lys	Phe	His	Ser	Ala	Ala	Met
	1265					1270					1275			
Asp	Glu	Lys	Val	Ile	Gly	Lys	Val	Val	Asp	Gln	Ala	Cys	Thr	Leu
	1280					1285					1290			

Glu	Lys	Ala	Gln	Val	Glu	Ser	Cys	Gln	Leu	Asn	Asn	Arg	Asp	Arg
1295						1300					1305			
Arg	Asn	Val	Asp	Phe	Thr	Ser	Ser	His	Ala	Thr	Ala	Val	Cys	Gly
1310						1315					1320			
Ser	Ser	Asp	Asn	Tyr	Ser	Cys	Leu	Pro	Asn	Val	Ile	Ser	Cys	Thr
1325						1330					1335			
Asp	Asn	Leu	Glu	Gly	Ser	Ala	Met	Leu	Leu	Cys	Asp	Lys	Asp	Glu
1340						1345					1350			
Glu	Lys	Ala	Asn	Tyr	Cys	Pro	Val	Gln	Asn	Asp	Leu	Ala	Tyr	Ala
1355						1360					1365			
Asn	Asp	Phe	Ala	Ser	Glu	Tyr	Tyr	Leu	Glu	Ser	Glu	Gly	Gln	Pro
1370						1375					1380			
Leu	Ser	Ala	Pro	Cys	Pro	Leu	Leu	Glu	Lys	Glu	Glu	Val	Ile	Gln
1385						1390					1395			
Thr	Ser	Thr	Lys	Gly	Gln	Leu	Asp	Cys	Val	Ile	Thr	Leu	His	Lys
1400						1405					1410			
Asp	Gln	Asp	Leu	Ile	Lys	Asp	Pro	Arg	Asn	Leu	Leu	Ala	Asn	Gln
1415						1420					1425			
Thr	Leu	Val	Tyr	Ser	Gln	Asp	Leu	Gly	Glu	Met	Thr	Lys	Leu	Asn
1430						1435					1440			
Ser	Lys	Arg	Val	Ser	Phe	Lys	Leu	Pro	Lys	Asp	Gln	Met	Lys	Val
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Tyr	Val	Asp	Asp	Ile	Tyr	Val	Ile	Pro	Gln	Pro	His	Phe	Ser	Thr
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Asp	Gln	Pro	Pro	Leu	Pro	Lys	Lys	Gly	Gln	Ser	Ser	Ile	Asn	Lys
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1490						1495					1500			

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Leu	Asn	Ser	Glu	Glu	Trp	Phe	Ala	Ala	Ala	Cys	Lys	Lys	Glu	Leu
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Lys	Glu	Asn	Ile	Gln	Thr	Thr	Asn	Tyr	Asn	Thr	Ala	Leu	Asp	Phe
1535						1540					1545			
His	Ser	Asn	Ser	Asp	Val	Thr	Lys	Gln	Val	Ile	Gln	Thr	His	Val
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Asn	Ala	Gly	Glu	Ala	Pro	Asp	Pro	Val	Ile	Thr	Ser	Asn	Val	Pro
1565						1570					1575			
Cys	Phe	His	Ser	Ile	Lys	Pro	Asn	Leu	Asn	Asn	Leu	Asn	Gly	Lys
1580						1585					1590			
Thr	Gly	Glu	Phe	Leu	Ala	Phe	Gln	Thr	Val	His	Leu	Pro	Pro	Leu
1595						1600					1605			
Pro	Glu	Gln	Leu	Leu	Glu	Leu	Gly	Asn	Lys	Ala	His	Asn	Asp	Met
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1625						1630					1635			
Ser	Asn	Ala	Lys	Asp	Ser	Arg	Asp	Glu	Glu	Asn	Lys	Lys	Ser	His
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1670						1675					1680			
Pro	Asn	Lys	Arg	Asn	Cys	Ser	Val	Thr	Gly	Ile	Asp	Asp	Leu	Glu
1685						1690					1695			
Gln	Ile	Pro	Ala	Asp	Thr	Thr	Asp	Ile	Asn	His	Leu	Glu	Thr	Gln
1700						1705					1710			
Pro	Val	Ser	Ser	Lys	Asp	Ser	Gly	Ile	Gly	Ser	Val	Ala	Gly	Lys

1715						1720						1725			
Leu	Asn	Leu	Ser	Pro	Ser	Gln	Tyr	Ile	Asn	Glu	Glu	Asn	Leu	Pro	
	1730					1735						1740			
Val	Tyr	Pro	Asp	Glu	Ile	Asn	Ser	Ser	Asp	Ser	Ile	Asn	Ile	Glu	
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Thr	Glu	Glu	Lys	Ala	Leu	Ile	Glu	Thr	Tyr	Gln	Lys	Glu	Ile	Ser	
	1760					1765					1770				
Pro	Tyr	Glu	Asn	Lys	Met	Gly	Lys	Thr	Cys	Asn	Ser	Gln	Lys	Arg	
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Thr	Trp	Val	Gln	Glu	Glu	Glu	Asp	Ile	His	Lys	Glu	Lys	Lys	Ile	
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Arg	Lys	Asn	Glu	Ile	Lys	Phe	Ser	Asp	Thr	Thr	Gln	Asp	Arg	Glu	
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Ile	Phe	Asp	His	His	Thr	Glu	Glu	Asp	Ile	Asp	Lys	Ser	Ala	Asn	
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Ser	Thr	Tyr	Arg	Ser	Ser	Gln	Met	Glu	Ser	Gln	Phe	Leu	Arg	Asp	
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Thr	Ile	Cys	Glu	Glu	Ser	Leu	Arg	Glu	Lys	Leu	Gln	Asp	Gly	Arg	
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Ile	Gln	Lys	Pro	Arg	Gln	Ser	Asn	Leu	Pro	Gly	Asn	Phe	Thr	Val	
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Asn	Thr	Pro	Pro	Thr	Pro	Glu	Asp	Leu	Met	Leu	Ser	Gln	Tyr	Val	
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Tyr	Arg	Pro	Lys	Ile	Gln	Ile	Tyr	Arg	Glu	Asp	Cys	Glu	Ala	Arg
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Arg	Gln	Lys	Ile	Glu	Glu	Leu	Lys	Leu	Ser	Ala	Ser	Asn	Gln	Asp
1955						1960					1965			
Lys	Leu	Leu	Val	Asp	Ile	Asn	Lys	Asn	Leu	Trp	Glu	Lys	Met	Arg
1970						1975					1980			
His	Cys	Ser	Asp	Lys	Glu	Leu	Lys	Ala	Phe	Gly	Ile	Tyr	Leu	Asn
1985						1990					1995			
Lys	Ile	Lys	Ser	Cys	Phe	Thr	Lys	Met	Thr	Lys	Val	Phe	Thr	His
2000						2005					2010			
Gln	Gly	Lys	Val	Ala	Leu	Tyr	Gly	Lys	Leu	Val	Gln	Ser	Ala	Gln
2015						2020					2025			
Asn	Glu	Arg	Glu	Lys	Leu	Gln	Ile	Lys	Ile	Asp	Glu	Met	Asp	Lys
2030						2035					2040			
Ile	Leu	Lys	Lys	Ile	Asp	Asn	Cys	Leu	Thr	Glu	Met	Glu	Thr	Glu
2045						2050					2055			
Thr	Lys	Asn	Leu	Glu	Asp	Glu	Glu	Lys	Asn	Asn	Pro	Val	Glu	Glu
2060						2065					2070			
Trp	Asp	Ser	Glu	Met	Arg	Ala	Ala	Glu	Lys	Glu	Leu	Glu	Gln	Leu
2075						2080					2085			
Lys	Thr	Glu	Glu	Glu	Glu	Leu	Gln	Arg	Asn	Leu	Leu	Glu	Leu	Glu
2090						2095					2100			
Val	Gln	Lys	Glu	Gln	Thr	Leu	Ala	Gln	Ile	Asp	Phe	Met	Gln	Lys
2105						2110					2115			
Gln	Arg	Asn	Arg	Thr	Glu	Glu	Leu	Leu	Asp	Gln	Leu	Ser	Leu	Ser
2120						2125					2130			
Glu	Trp	Asp	Val	Val	Glu	Trp	Ser	Asp	Asp	Gln	Ala	Val	Phe	Thr
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Phe	Val	Tyr	Asp	Thr	Ile	Gln	Leu	Thr	Ile	Thr	Phe	Glu	Glu	Ser
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Val	Val	Gly	Phe	Pro	Phe	Leu	Asp	Lys	Arg	Tyr	Arg	Lys	Ile	Val
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Asp	Val	Asn	Phe	Gln	Ser	Leu	Leu	Asp	Glu	Asp	Gln	Ala	Pro	Pro
2180						2185					2190			
Ser	Ser	Leu	Leu	Val	His	Lys	Leu	Ile	Phe	Gln	Tyr	Val	Glu	Glu
2195						2200					2205			
Lys	Glu	Ser	Trp	Lys	Lys	Thr	Cys	Thr	Thr	Gln	His	Gln	Leu	Pro
2210						2215					2220			
Lys	Met	Leu	Glu	Glu	Phe	Ser	Leu	Val	Val	His	His	Cys	Arg	Leu
2225						2230					2235			
Leu	Gly	Glu	Glu	Ile	Glu	Tyr	Leu	Lys	Arg	Trp	Gly	Pro	Asn	Tyr
2240						2245					2250			
Asn	Leu	Met	Asn	Ile	Asp	Ile	Asn	Asn	Asn	Glu	Leu	Arg	Leu	Leu
2255						2260					2265			
Phe	Ser	Ser	Ser	Ala	Ala	Phe	Ala	Lys	Phe	Glu	Ile	Thr	Leu	Phe
2270						2275					2280			
Leu	Ser	Ala	Tyr	Tyr	Pro	Ser	Val	Pro	Leu	Pro	Ser	Thr	Ile	Gln
2285						2290					2295			
Asn	His	Val	Gly	Asn	Thr	Ser	Gln	Asp	Asp	Ile	Ala	Thr	Ile	Leu
2300						2305					2310			
Ser	Lys	Val	Pro	Leu	Glu	Asn	Asn	Tyr	Leu	Lys	Asn	Val	Val	Lys
2315						2320					2325			
Gln	Ile	Tyr	Gln	Asp	Leu	Phe	Gln	Asp	Cys	His	Phe	Tyr	His	
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Arg Pro Val Arg Arg Arg His Ser Ser Ile Leu Lys Pro Pro Arg Ser
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Pro Leu Gln Asp Leu Arg Gly Gly Asn Glu Arg Val Gln Glu Ser Asn
          35              40              45

Ala Leu Arg Asn Lys Lys Asn Ser Arg Arg Val Ser Phe Ala Asp Thr
          50              55              60

Ile Lys Val Phe Gln Thr Glu Ser His Met Lys Ile Val Arg Lys Ser
65              70              75              80

Glu Met Glu Glu Thr Glu Thr Gly Glu Asn Leu Leu Leu Ile Gln Asn
          85              90              95

Lys Lys Leu Glu Asp Asn Tyr Cys Glu Ile Thr Gly Met Asn Thr Leu
          100             105             110

Leu Ser Ala Pro Ile His Thr Gln Met Gln Gln Lys Glu Phe Ser Ile
          115             120             125

Ile Glu His Thr Arg Glu Arg Lys His Ala Asn Asp Gln Thr Val Ile
130             135             140

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Phe	Ser	Asp	Glu	Asn	Gln	Met	Asp	Leu	Thr	Ser	Ser	His	Thr	Val	Met	145	150	155	160
Ile	Thr	Lys	Gly	Leu	Leu	Asp	Asn	Pro	Ile	Ser	Glu	Lys	Ser	Thr	Lys	165	170	175	
Ile	Asp	Thr	Thr	Ser	Phe	Leu	Ala	Asn	Leu	Lys	Leu	His	Thr	Glu	Asp	180	185	190	
Ser	Arg	Met	Lys	Lys	Glu	Val	Asn	Phe	Ser	Val	Asp	Gln	Asn	Thr	Ser	195	200	205	
Ser	Glu	Asn	Lys	Ile	Asp	Phe	Asn	Asp	Phe	Ile	Lys	Arg	Leu	Lys	Thr	210	215	220	
Gly	Lys	Cys	Ser	Ala	Phe	Pro	Asp	Val	Pro	Asp	Lys	Glu	Asn	Phe	Glu	225	230	235	240
Ile	Pro	Ile	Tyr	Ser	Lys	Glu	Pro	Asn	Ser	Ala	Ser	Ser	Thr	His	Gln	245	250	255	
Met	His	Val	Ser	Leu	Lys	Glu	Asp	Glu	Asn	Asn	Ser	Asn	Ile	Thr	Arg	260	265	270	
Leu	Phe	Arg	Glu	Lys	Asp	Asp	Gly	Met	Asn	Phe	Thr	Gln	Cys	His	Thr	275	280	285	
Ala	Asn	Ile	Gln	Thr	Leu	Ile	Pro	Thr	Ser	Ser	Glu	Thr	Asn	Ser	Arg	290	295	300	
Glu	Ser	Lys	Gly	Asn	Asp	Ile	Thr	Ile	Tyr	Gly	Asn	Asp	Phe	Met	Asp	305	310	315	320
Leu	Thr	Phe	Asn	His	Thr	Leu	Gln	Ile	Leu	Pro	Ala	Thr	Gly	Asn	Phe	325	330	335	
Ser	Glu	Ile	Glu	Asn	Gln	Thr	Gln	Asn	Ala	Met	Asp	Val	Thr	Thr	Gly	340	345	350	
Tyr	Gly	Thr	Lys	Ala	Ser	Gly	Asn	Lys	Thr	Val	Phe	Lys	Ser	Lys	Gln	355	360	365	

Asn	Thr	Ala	Phe	Gln	Asp	Leu	Ser	Ile	Asn	Ser	Ala	Asp	Lys	Ile	His
	370					375					380				
Ile	Thr	Arg	Ser	His	Ile	Met	Gly	Ala	Glu	Thr	His	Ile	Val	Ser	Gln
385					390					395					400
Thr	Cys	Asn	Gln	Asp	Ala	Arg	Ile	Leu	Ala	Met	Thr	Pro	Glu	Ser	Ile
				405					410					415	
Tyr	Ser	Asn	Pro	Ser	Ile	Gln	Gly	Cys	Lys	Thr	Val	Phe	Tyr	Ser	Ser
			420					425					430		
Cys	Asn	Asp	Ala	Met	Glu	Met	Thr	Lys	Cys	Leu	Ser	Asn	Met	Arg	Glu
		435					440					445			
Glu	Lys	Asn	Leu	Leu	Lys	His	Asp	Ser	Asn	Tyr	Ala	Lys	Met	Tyr	Cys
	450					455					460				
Asn	Pro	Asp	Ala	Met	Ser	Ser	Leu	Thr	Glu	Lys	Thr	Ile	Tyr	Ser	Gly
465					470					475					480
Glu	Glu	Asn	Met	Asp	Ile	Thr	Lys	Ser	His	Thr	Val	Ala	Ile	Asp	Asn
				485					490					495	
Gln	Ile	Phe	Lys	Gln	Asp	Gln	Ser	Asn	Val	Gln	Ile	Ala	Ala	Ala	Pro
			500					505					510		
Thr	Pro	Glu	Lys	Glu	Met	Met	Leu	Gln	Asn	Leu	Met	Thr	Thr	Ser	Glu
		515					520					525			
Asp	Gly	Lys	Met	Asn	Val	Asn	Cys	Asn	Ser	Val	Pro	His	Val	Ser	Lys
	530					535					540				
Glu	Arg	Ile	Gln	Gln	Ser	Leu	Ser	Asn	Pro	Leu	Ser	Ile	Ser	Leu	Thr
545					550					555					560
Asp	Arg	Lys	Thr	Glu	Leu	Leu	Ser	Gly	Glu	Asn	Met	Asp	Leu	Thr	Glu
				565					570					575	
Ser	His	Thr	Ser	Asn	Leu	Gly	Ser	Gln	Val	Pro	Leu	Ala	Ala	Tyr	Asn
			580					585					590		

Leu	Ala	Pro	Glu	Ser	Thr	Ser	Glu	Ser	His	Ser	Gln	Ser	Lys	Ser	Ser		
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Ser	Asp	Glu	Cys	Glu	Glu	Ile	Thr	Lys	Ser	Arg	Asn	Glu	Pro	Phe	Gln		
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Arg	Ser	Asp	Ile	Ile	Ala	Lys	Asn	Ser	Leu	Thr	Asp	Thr	Trp	Asn	Lys		
625					630					635					640		
Asp	Lys	Asp	Trp	Val	Leu	Lys	Ile	Leu	Pro	Tyr	Leu	Asp	Lys	Asp	Ser		
				645					650					655			
Pro	Gln	Ser	Ala	Asp	Cys	Asn	Gln	Glu	Ile	Ala	Thr	Ser	His	Asn	Ile		
			660					665					670				
Val	Tyr	Cys	Gly	Gly	Val	Leu	Asp	Lys	Gln	Ile	Thr	Asn	Arg	Asn	Thr		
		675					680					685					
Val	Ser	Trp	Glu	Gln	Ser	Leu	Phe	Ser	Thr	Thr	Lys	Pro	Leu	Phe	Ser		
	690					695					700						
Ser	Gly	Gln	Phe	Ser	Met	Lys	Asn	His	Asp	Thr	Ala	Ile	Ser	Ser	His		
705					710					715					720		
Thr	Val	Lys	Ser	Val	Leu	Gly	Gln	Asn	Ser	Lys	Leu	Ala	Glu	Pro	Leu		
				725					730					735			
Arg	Lys	Ser	Leu	Ser	Asn	Pro	Thr	Pro	Asp	Tyr	Cys	His	Asp	Lys	Met		
			740					745					750				
Ile	Ile	Cys	Ser	Glu	Glu	Glu	Gln	Asn	Met	Asp	Leu	Thr	Lys	Ser	His		
		755					760					765					
Thr	Val	Val	Ile	Gly	Phe	Gly	Pro	Ser	Glu	Leu	Gln	Glu	Leu	Gly	Lys		
	770					775					780						
Thr	Asn	Leu	Glu	His	Thr	Thr	Gly	Gln	Leu	Thr	Thr	Met	Asn	Arg	Gln		
785					790					795					800		
Ile	Ala	Val	Lys	Val	Glu	Lys	Cys	Gly	Lys	Ser	Pro	Ile	Glu	Lys	Ser		
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Gly	Val	Leu	Lys	Ser	Asn	Cys	Ile	Met	Asp	Val	Leu	Glu	Asp	Glu	Ser		

820							825					830					
Val	Gln	Lys	Pro	Lys	Phe	Pro	Lys	Glu	Lys	Gln	Asn	Val	Lys	Ile	Trp		
		835					840					845					
Gly	Arg	Lys	Ser	Val	Gly	Gly	Pro	Lys	Ile	Asp	Lys	Thr	Ile	Val	Phe		
		850				855					860						
Ser	Glu	Asp	Asp	Lys	Asn	Asp	Met	Asp	Ile	Thr	Lys	Ser	Tyr	Thr	Ile		
865					870					875					880		
Glu	Ile	Asn	His	Arg	Pro	Leu	Leu	Glu	Lys	Arg	Asp	Cys	His	Leu	Val		
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Pro	Leu	Ala	Gly	Thr	Ser	Glu	Thr	Ile	Leu	Tyr	Thr	Cys	Arg	Gln	Asp		
			900					905					910				
Asp	Met	Glu	Ile	Thr	Arg	Ser	His	Thr	Thr	Ala	Leu	Glu	Cys	Lys	Thr		
		915					920					925					
Val	Ser	Pro	Asp	Glu	Ile	Thr	Thr	Arg	Pro	Met	Asp	Lys	Thr	Val	Val		
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Phe	Val	Asp	Asn	His	Val	Glu	Leu	Glu	Met	Thr	Glu	Ser	His	Thr	Val		
945					950					955					960		
Phe	Ile	Asp	Tyr	Gln	Glu	Lys	Glu	Arg	Thr	Asp	Arg	Pro	Asn	Phe	Glu		
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Leu	Ser	Gln	Arg	Lys	Ser	Leu	Gly	Thr	Pro	Thr	Val	Ile	Cys	Thr	Pro		
			980					985					990				
Thr	Glu	Glu	Ser	Val	Phe	Phe	Pro	Gly	Asn	Gly	Glu	Ser	Asp	Arg			
Leu	995						1000				1005						
Val	Ala	Asn	Asp	Ser	Gln	Leu	Thr	Pro	Leu	Glu	Glu	Trp	Ser	Asn			
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Asn	Arg	Gly	Pro	Val	Glu	Val	Ala	Asp	Asn	Met	Glu	Leu	Ser	Lys			
1025						1030				1035							
Ser	Ala	Thr	Cys	Lys	Asn	Ile	Lys	Asp	Val	Gln	Ser	Pro	Gly	Phe			

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Leu Asn Glu Pro Leu Ser Ser Lys Ser Gln Arg Arg Lys Ser Leu	1055	1060		1065
Lys Leu Lys Asn Asp Lys Thr Ile Val Phe Ser Glu Asn His Lys	1070	1075		1080
Asn Asp Met Asp Ile Thr Gln Ser Cys Met Val Glu Ile Asp Asn	1085	1090		1095
Glu Ser Ala Leu Glu Asp Lys Glu Asp Phe His Leu Ala Gly Ala	1100	1105		1110
Ser Lys Thr Ile Leu Tyr Ser Cys Gly Gln Asp Asp Met Glu Ile	1115	1120		1125
Thr Arg Ser His Thr Thr Ala Leu Glu Cys Lys Thr Leu Leu Pro	1130	1135		1140
Asn Glu Ile Ala Ile Arg Pro Met Asp Lys Thr Val Leu Phe Thr	1145	1150		1155
Asp Asn Tyr Ser Asp Leu Glu Val Thr Asp Ser His Thr Val Phe	1160	1165		1170
Ile Asp Cys Gln Ala Thr Glu Lys Ile Leu Glu Glu Asn Pro Lys	1175	1180		1185
Phe Gly Ile Gly Lys Gly Lys Asn Leu Gly Val Ser Phe Pro Lys	1190	1195		1200
Asp Asn Ser Cys Val Gln Glu Ile Ala Glu Lys Gln Ala Leu Ala	1205	1210		1215
Val Gly Asn Lys Ile Val Leu His Thr Glu Gln Lys Gln Gln Leu	1220	1225		1230
Phe Ala Ala Thr Asn Arg Thr Thr Asn Glu Ile Ile Lys Phe His	1235	1240		1245
Ser Ala Ala Met Asp Glu Lys Val Ile Gly Lys Val Val Asp Gln	1250	1255		1260

25590

Ala	Cys	Thr	Leu	Glu	Lys	Ala	Gln	Val	Glu	Ser	Cys	Gln	Leu	Asn
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Asn	Arg	Asp	Arg	Arg	Asn	Val	Asp	Phe	Thr	Ser	Ser	His	Ala	Thr
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Ala	Val	Cys	Gly	Ser	Ser	Asp	Asn	Tyr	Ser	Cys	Leu	Pro	Asn	Val
1295						1300					1305			
Ile	Ser	Cys	Thr	Asp	Asn	Leu	Glu	Gly	Ser	Ala	Met	Leu	Leu	Cys
1310						1315					1320			
Asp	Lys	Asp	Glu	Glu	Lys	Ala	Asn	Tyr	Cys	Pro	Val	Gln	Asn	Asp
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Leu	Ala	Tyr	Ala	Asn	Asp	Phe	Ala	Ser	Glu	Tyr	Tyr	Leu	Glu	Ser
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Glu	Gly	Gln	Pro	Leu	Ser	Ala	Pro	Cys	Pro	Leu	Leu	Glu	Lys	Glu
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Glu	Val	Ile	Gln	Thr	Ser	Thr	Lys	Gly	Gln	Leu	Asp	Cys	Val	Ile
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Thr	Leu	His	Lys	Asp	Gln	Asp	Leu	Ile	Lys	Asp	Pro	Arg	Asn	Leu
1385						1390					1395			
Leu	Ala	Asn	Gln	Thr	Leu	Val	Tyr	Ser	Gln	Asp	Leu	Gly	Glu	Met
1400						1405					1410			
Thr	Lys	Leu	Asn	Ser	Lys	Arg	Val	Ser	Phe	Lys	Leu	Pro	Lys	Asp
1415						1420					1425			
Gln	Met	Lys	Val	Tyr	Val	Asp	Asp	Ile	Tyr	Val	Ile	Pro	Gln	Pro
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His	Phe	Ser	Thr	Asp	Gln	Pro	Pro	Leu	Pro	Lys	Lys	Gly	Gln	Ser
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Ser	Ile	Asn	Lys	Glu	Glu	Val	Ile	Leu	Ser	Lys	Ala	Gly	Asn	Lys
1460						1465					1470			

Ser	Leu	Asn	Ile	Ile	Glu	Asn	Ser	Ser	Ala	Pro	Ile	Cys	Glu	Asn
1475						1480					1485			
Lys	Pro	Lys	Ile	Leu	Asn	Ser	Glu	Glu	Trp	Phe	Ala	Ala	Ala	Cys
1490						1495					1500			
Lys	Lys	Glu	Leu	Lys	Glu	Asn	Ile	Gln	Thr	Thr	Asn	Tyr	Asn	Thr
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Ala	Leu	Asp	Phe	His	Ser	Asn	Ser	Asp	Val	Thr	Lys	Gln	Val	Ile
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Gln	Thr	His	Val	Asn	Ala	Gly	Glu	Ala	Pro	Asp	Pro	Val	Ile	Thr
1535						1540					1545			
Ser	Asn	Val	Pro	Cys	Phe	His	Ser	Ile	Lys	Pro	Asn	Leu	Asn	Asn
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Leu	Asn	Gly	Lys	Thr	Gly	Glu	Phe	Leu	Ala	Phe	Gln	Thr	Val	His
1565						1570					1575			
Leu	Pro	Pro	Leu	Pro	Glu	Gln	Leu	Leu	Glu	Leu	Gly	Asn	Lys	Ala
1580						1585					1590			
His	Asn	Asp	Met	His	Ile	Val	Gln	Ala	Thr	Glu	Ile	His	Asn	Ile
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Asn	Ile	Ile	Ser	Ser	Asn	Ala	Lys	Asp	Ser	Arg	Asp	Glu	Glu	Asn
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Lys	Lys	Ser	His	Asn	Gly	Ala	Glu	Thr	Thr	Ser	Leu	Pro	Pro	Lys
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Thr	Val	Phe	Lys	Asp	Lys	Val	Arg	Arg	Cys	Ser	Leu	Gly	Ile	Phe
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Leu	Pro	Arg	Leu	Pro	Asn	Lys	Arg	Asn	Cys	Ser	Val	Thr	Gly	Ile
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Asp	Asp	Leu	Glu	Gln	Ile	Pro	Ala	Asp	Thr	Thr	Asp	Ile	Asn	His
1670						1675					1680			

Leu	Glu	Thr	Gln	Pro	Val	Ser	Ser	Lys	Asp	Ser	Gly	Ile	Gly	Ser
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Val	Ala	Gly	Lys	Leu	Asn	Leu	Ser	Pro	Ser	Gln	Tyr	Ile	Asn	Glu
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Glu	Asn	Leu	Pro	Val	Tyr	Pro	Asp	Glu	Ile	Asn	Ser	Ser	Asp	Ser
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Ile	Asn	Ile	Glu	Thr	Glu	Glu	Lys	Ala	Leu	Ile	Glu	Thr	Tyr	Gln
1730						1735					1740			
Lys	Glu	Ile	Ser	Pro	Tyr	Glu	Asn	Lys	Met	Gly	Lys	Thr	Cys	Asn
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Ser	Gln	Lys	Arg	Thr	Trp	Val	Gln	Glu	Glu	Glu	Asp	Ile	His	Lys
1760						1765					1770			
Glu	Lys	Lys	Ile	Arg	Lys	Asn	Glu	Ile	Lys	Phe	Ser	Asp	Thr	Thr
1775						1780					1785			
Gln	Asp	Arg	Glu	Ile	Phe	Asp	His	His	Thr	Glu	Glu	Asp	Ile	Asp
1790						1795					1800			
Lys	Ser	Ala	Asn	Ser	Val	Leu	Ile	Lys	Asn	Leu	Ser	Arg	Thr	Pro
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Ser	Ser	Cys	Ser	Ser	Ser	Leu	Asp	Ser	Ile	Lys	Ala	Asp	Gly	Thr
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Ser	Leu	Asp	Phe	Ser	Thr	Tyr	Arg	Ser	Ser	Gln	Met	Glu	Ser	Gln
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Phe	Leu	Arg	Asp	Thr	Ile	Cys	Glu	Glu	Ser	Leu	Arg	Glu	Lys	Leu
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Gln	Asp	Gly	Arg	Ile	Thr	Ile	Arg	Glu	Phe	Phe	Ile	Leu	Leu	Gln
1865						1870					1875			
Val	His	Ile	Leu	Ile	Gln	Lys	Pro	Arg	Gln	Ser	Asn	Leu	Pro	Gly
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Asn	Phe	Thr	Val	Asn	Thr	Pro	Pro	Thr	Pro	Glu	Asp	Leu	Met	Leu

1895				1900				1905						
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Cys	Glu	Ala	Arg	Arg	Gln	Lys	Ile	Glu	Glu	Leu	Lys	Leu	Ser	Ala
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Ser	Asn	Gln	Asp	Lys	Leu	Leu	Val	Asp	Ile	Asn	Lys	Asn	Leu	Trp
1940						1945					1950			
Glu	Lys	Met	Arg	His	Cys	Ser	Asp	Lys	Glu	Leu	Lys	Ala	Phe	Gly
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Ile	Tyr	Leu	Asn	Lys	Ile	Lys	Ser	Cys	Phe	Thr	Lys	Met	Thr	Lys
1970						1975					1980			
Val	Phe	Thr	His	Gln	Gly	Lys	Val	Ala	Leu	Tyr	Gly	Lys	Leu	Val
1985						1990					1995			
Gln	Ser	Ala	Gln	Asn	Glu	Arg	Glu	Lys	Leu	Gln	Ile	Lys	Ile	Asp
2000						2005					2010			
Glu	Met	Asp	Lys	Ile	Leu	Lys	Lys	Ile	Asp	Asn	Cys	Leu	Thr	Glu
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Met	Glu	Thr	Glu	Thr	Lys	Asn	Leu	Glu	Asp	Glu	Glu	Lys	Asn	Asn
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Pro	Val	Glu	Glu	Trp	Asp	Ser	Glu	Met	Arg	Ala	Ala	Glu	Lys	Glu
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Leu	Glu	Gln	Leu	Lys	Thr	Glu	Glu	Glu	Glu	Leu	Gln	Arg	Asn	Leu
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Leu	Glu	Leu	Glu	Val	Gln	Lys	Glu	Gln	Thr	Leu	Ala	Gln	Ile	Asp
2075						2080					2085			
Phe	Met	Gln	Lys	Gln	Arg	Asn	Arg	Thr	Glu	Glu	Leu	Leu	Asp	Gln
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Leu	Ser	Leu	Ser	Glu	Trp	Asp	Val	Val	Glu	Trp	Ser	Asp	Asp	Gln
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Ala	Val	Phe	Thr	Phe	Val	Tyr	Asp	Thr	Ile	Gln	Leu	Thr	Ile	Thr
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Phe	Glu	Glu	Ser	Val	Val	Gly	Phe	Pro	Phe	Leu	Asp	Lys	Arg	Tyr
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Arg	Lys	Ile	Val	Asp	Val	Asn	Phe	Gln	Ser	Leu	Leu	Asp	Glu	Asp
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Gln	Ala	Pro	Pro	Ser	Ser	Leu	Leu	Val	His	Lys	Leu	Ile	Phe	Gln
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Tyr	Val	Glu	Glu	Lys	Glu	Ser	Trp	Lys	Lys	Thr	Cys	Thr	Thr	Gln
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His	Gln	Leu	Pro	Lys	Met	Leu	Glu	Glu	Phe	Ser	Leu	Val	Val	His
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His	Cys	Arg	Leu	Leu	Gly	Glu	Glu	Ile	Glu	Tyr	Leu	Lys	Arg	Trp
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Gly	Pro	Asn	Tyr	Asn	Leu	Met	Asn	Ile	Asp	Ile	Asn	Asn	Asn	Glu
2225						2230					2235			
Leu	Arg	Leu	Leu	Phe	Ser	Ser	Ser	Ala	Ala	Phe	Ala	Lys	Phe	Glu
2240						2245					2250			
Ile	Thr	Leu	Phe	Leu	Ser	Ala	Tyr	Tyr	Pro	Ser	Val	Pro	Leu	Pro
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Ser	Thr	Ile	Gln	Asn	His	Val	Gly	Asn	Thr	Ser	Gln	Asp	Asp	Ile
2270						2275					2280			
Ala	Thr	Ile	Leu	Ser	Lys	Val	Pro	Leu	Glu	Asn	Asn	Tyr	Leu	Lys
2285						2290					2295			
Asn	Val	Val	Lys	Gln	Ile	Tyr	Gln	Asp	Leu	Phe	Gln	Asp	Cys	His
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Phe	Tyr	His												
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Val Ile Cys Thr Pro Thr Glu Glu Ser Val Phe Phe Pro Gly Asn Gly
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Glu Ser Asp Arg Leu Val Ala Asn Asp Ser Gln Leu Thr Pro Leu Glu
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Glu Trp Ser Asn Asn Arg Gly Pro Val Glu Val Ala Asp Asn Met Glu
65                      70                      75                      80

Leu Ser Lys Ser Ala Thr Cys Lys Asn Ile Lys Asp Val Gln Ser Pro
                85                      90                      95

Gly Phe Leu Asn Glu Pro Leu Ser Ser Lys Ser Gln Arg Arg Lys Ser
                100                      105                      110

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Leu	Lys	Leu	Lys	Asn	Asp	Lys	Thr	Ile	Val	Phe	Ser	Glu	Asn	His	Lys	
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Asn	Asp	Met	Asp	Ile	Thr	Gln	Ser	Cys	Met	Val	Glu	Ile	Asp	Asn	Glu	
	130					135					140					
Ser	Ala	Leu	Glu	Asp	Lys	Glu	Asp	Phe	His	Leu	Ala	Gly	Ala	Ser	Lys	
145					150					155					160	
Thr	Ile	Leu	Tyr	Ser	Cys	Gly	Gln	Asp	Asp	Met	Glu	Ile	Thr	Arg	Ser	
				165					170					175		
His	Thr	Thr	Ala	Leu	Glu	Cys	Lys	Thr	Leu	Leu	Pro	Asn	Glu	Ile	Ala	
			180					185					190			
Ile	Arg	Pro	Met	Asp	Lys	Thr	Val	Leu	Phe	Thr	Asp	Asn	Tyr	Ser	Asp	
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Leu	Glu	Val	Thr	Asp	Ser	His	Thr	Val	Phe	Ile	Asp	Cys	Gln	Ala	Thr	
	210					215					220					
Glu	Lys	Ile	Leu	Glu	Glu	Asn	Pro	Lys	Phe	Gly	Ile	Gly	Lys	Gly	Lys	
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				245					250					255		
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			260					265					270			
Glu	Gln	Lys	Gln	Gln	Leu	Phe	Ala	Ala	Thr	Asn	Arg	Thr	Thr	Asn	Glu	
		275					280					285				
Ile	Ile	Lys	Phe	His	Ser	Ala	Ala	Met	Asp	Glu	Lys	Val	Ile	Gly	Lys	
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Val	Val	Asp	Gln	Ala	Cys	Thr	Leu	Glu	Lys	Ala	Gln	Val	Glu	Ser	Cys	
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Gln	Leu	Asn	Asn	Arg	Asp	Arg	Arg	Asn	Val	Asp	Phe	Thr	Ser	Ser	His	
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Ala Thr Ala Val Cys Gly Ser Ser Asp Asn Tyr Ser Cys Leu Pro Asn
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Val Ile Ser Cys Thr Asp Asn Leu Glu Gly Ser Ala Met Leu Leu Cys
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Asp Lys Asp Glu Glu Lys Ala Asn Tyr Cys Pro Val Gln Asn Asp Leu
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Ala Tyr Ala Asn Asp Phe Ala Ser Glu Tyr Tyr Leu Glu Ser Glu Gly
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Gln Pro Leu Ser Ala Pro Cys Pro Leu Leu Glu Lys Glu Glu Val Ile
 405 410 415

Gln Thr Ser Thr Lys Gly Gln Leu Asp Cys Val Ile Thr Leu His Lys
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Asp Gln Asp Leu Ile Lys Asp Pro Arg Asn Leu Leu Ala Asn Gln Thr
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Leu Val Tyr Ser Gln Asp Leu Gly Glu Met Thr Lys Leu Asn Ser Lys
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Arg Val Ser Phe Lys Leu Pro Lys Asp Gln Met Lys Val Tyr Val Asp
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Asp Ile Tyr Val Ile Pro Gln Pro His Phe Ser Thr Asp Gln Pro Pro
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Leu Pro Lys Lys Gly Gln Ser Ser Ile Asn Lys Glu Glu Val Ile Leu
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Ser Lys Ala Gly Asn Lys Ser Leu Asn Ile Ile Glu Asn Ser Ser Ala
 515 520 525

Pro Ile Cys Glu Asn Lys Pro Lys Ile Leu Asn Ser Glu Glu Trp Phe
 530 535 540

Ala Ala Ala Cys Lys Lys Glu Leu Lys Glu Asn Ile Gln Thr Thr Asn
 545 550 555 560

Tyr Asn Thr Ala Leu Asp Phe His Ser Asn Ser Asp Val Thr Lys Gln

565

570

575

Val Ile Gln Thr His Val Asn Ala Gly Glu Ala Pro Asp Pro Val Ile
580 585 590

Thr Ser Asn Val Pro Cys Phe His Ser Ile Lys Pro Asn Leu Asn Asn
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Leu Asn Gly Lys Thr Gly Glu Phe Leu Ala Phe Gln Thr Val His Leu
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Pro Pro Leu Pro Glu Gln Leu Leu Glu Leu Gly Asn Lys Ala His Asn
625 630 635 640

Asp Met His Ile Val Gln Ala Thr Glu Ile His Asn Ile Asn Ile Ile
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Ser Ser Asn Ala Lys Asp Ser Arg Asp Glu Glu Asn Lys Lys Ser His
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Asn Gly Ala Glu Thr Thr Ser Leu Pro Pro Lys Thr Val Phe Lys Asp
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Lys Val Arg Arg Cys Ser Leu Gly Ile Phe Leu Pro Arg Leu Pro Asn
690 695 700

Lys Arg Asn Cys Ser Val Thr Gly Ile Asp Asp Leu Glu Gln Ile Pro
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Ala Asp Thr Thr Asp Ile Asn His Leu Glu Thr Gln Pro Val Ser Ser
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Lys Asp Ser Gly Ile Gly Ser Val Ala Gly Lys Leu Asn Leu Ser Pro
740 745 750

Ser Gln Tyr Ile Asn Glu Glu Asn Leu Pro Val Tyr Pro Asp Glu Ile
755 760 765

Asn Ser Ser Asp Ser Ile Asn Ile Glu Thr Glu Glu Lys Ala Leu Ile
770 775 780

Glu Thr Tyr Gln Lys Glu Ile Ser Pro Tyr Glu Asn Lys Met Gly Lys
785 790 795 800

25599

Thr Cys Asn Ser Gln Lys Arg Thr Trp Val Gln Glu Glu Glu Asp Ile
805 810 815

His Lys Glu Lys Lys Ile Arg Lys Asn Glu Ile Lys Phe Ser Asp Thr
820 825 830

Thr Gln Asp Arg Glu Ile Phe Asp His His Thr Glu Glu Asp Ile Asp
835 840 845

Lys Ser Ala Asn Ser Val Leu Ile Lys Asn Leu Ser Arg Thr Pro Ser
850 855 860

Ser Cys Ser Ser Ser Leu Asp Ser Ile Lys Ala Asp Gly Thr Ser Leu
865 870 875 880

Asp Phe Ser Thr Tyr Arg Ser Ser Gln Met Glu Ser Gln Phe Leu Arg
885 890 895

Asp Thr Ile Cys Glu Glu Ser Leu Arg Glu Lys Leu Gln Asp Gly Arg
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Ile Thr Ile Arg Glu Phe Phe Ile Leu Leu Gln Val His Ile Leu Ile
915 920 925

Gln Lys Pro Arg Gln Ser Asn Leu Pro Gly Asn Phe Thr Val Asn Thr
930 935 940

Pro Pro Thr Pro Glu Asp Leu Met Leu Ser Gln Tyr Val Tyr Arg Pro
945 950 955 960

Lys Ile Gln Ile Tyr Arg Glu Asp Cys Glu Ala Arg Arg Gln Lys Ile
965 970 975

Glu Glu Leu Lys Leu Ser Ala Ser Asn Gln Asp Lys Leu Leu Val Asp
980 985 990

Ile Asn Lys Asn Leu Trp Glu Lys Met Arg His Cys Ser Asp Lys
Glu
995 1000 1005

Leu Lys Ala Phe Gly Ile Tyr Leu Asn Lys Ile Lys Ser Cys Phe
1010 1015 1020

25600

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Gln	Ile	Lys	Ile	Asp	Glu	Met	Asp	Lys	Ile	Leu	Lys	Lys	Ile	Asp
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Asn	Cys	Leu	Thr	Glu	Met	Glu	Thr	Glu	Thr	Lys	Asn	Leu	Glu	Asp
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Ala	Ala	Glu	Lys	Glu	Leu	Glu	Gln	Leu	Lys	Thr	Glu	Glu	Glu	Glu
1100						1105					1110			
Leu	Gln	Arg	Asn	Leu	Leu	Glu	Leu	Glu	Val	Gln	Lys	Glu	Gln	Thr
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1130						1135					1140			
Glu	Leu	Leu	Asp	Gln	Leu	Ser	Leu	Ser	Glu	Trp	Asp	Val	Val	Glu
1145						1150					1155			
Trp	Ser	Asp	Asp	Gln	Ala	Val	Phe	Thr	Phe	Val	Tyr	Asp	Thr	Ile
1160						1165					1170			
Gln	Leu	Thr	Ile	Thr	Phe	Glu	Glu	Ser	Val	Val	Gly	Phe	Pro	Phe
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Leu	Asp	Lys	Arg	Tyr	Arg	Lys	Ile	Val	Asp	Val	Asn	Phe	Gln	Ser
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Leu	Leu	Asp	Glu	Asp	Gln	Ala	Pro	Pro	Ser	Ser	Leu	Leu	Val	His
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Lys	Leu	Ile	Phe	Gln	Tyr	Val	Glu	Glu	Lys	Glu	Ser	Trp	Lys	Lys
1220						1225					1230			

Thr	Cys	Thr	Thr	Gln	His	Gln	Leu	Pro	Lys	Met	Leu	Glu	Glu	Phe
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Ser	Leu	Val	Val	His	His	Cys	Arg	Leu	Leu	Gly	Glu	Glu	Ile	Glu
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Tyr	Leu	Lys	Arg	Trp	Gly	Pro	Asn	Tyr	Asn	Leu	Met	Asn	Ile	Asp
1265						1270					1275			
Ile	Asn	Asn	Asn	Glu	Leu	Arg	Leu	Leu	Phe	Ser	Ser	Ser	Ala	Ala
1280						1285					1290			
Phe	Ala	Lys	Phe	Glu	Ile	Thr	Leu	Phe	Leu	Ser	Ala	Tyr	Tyr	Pro
1295						1300					1305			
Ser	Val	Pro	Leu	Pro	Ser	Thr	Ile	Gln	Asn	His	Val	Gly	Asn	Thr
1310						1315					1320			
Ser	Gln	Asp	Asp	Ile	Ala	Thr	Ile	Leu	Ser	Lys	Val	Pro	Leu	Glu
1325						1330					1335			
Asn	Asn	Tyr	Leu	Lys	Asn	Val	Val	Lys	Gln	Ile	Tyr	Gln	Asp	Leu
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Phe	Gln	Asp	Cys	His	Phe	Tyr	His							
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35 40 45

Ala Leu Arg Asn Lys Lys Asn Ser Arg Arg Val Ser Phe Ala Asp Thr
50 55 60

Ile Lys Val Phe Gln Thr Glu Ser His Met Lys Ile Val Arg Lys Ser
65 70 75 80

Glu Met Glu Glu Thr Glu Thr Gly Glu Asn Leu Leu Leu Ile Gln Asn
85 90 95

Lys Lys Leu Glu Asp Asn Tyr Cys Glu Ile Thr Gly Met Asn Thr Leu
100 105 110

Leu Ser Ala Pro Ile His Thr Gln Met Gln Gln Lys Glu Phe Ser Ile
115 120 125

Ile Glu His Thr Arg Glu Arg Lys His Ala Asn Asp Gln Thr Val Ile
130 135 140

Phe Ser Asp Glu Asn Gln Met Asp Leu Thr Ser Ser His Thr Val Met
145 150 155 160

Ile Thr Lys Gly Leu Leu Asp Asn Pro Ile Ser Glu Lys Ser Thr Lys
165 170 175

Ile Asp Thr Thr Ser Phe Leu Ala Asn Leu Lys Leu His Thr Glu Asp
180 185 190

Ser Arg Met Lys Lys Glu Val Asn Phe Ser Val Asp Gln Asn Thr Ser
195 200 205

Ser Glu Asn Lys Ile Asp Phe Asn Asp Phe Ile Lys Arg Leu Lys Thr
210 215 220

Gly	Lys	Cys	Ser	Ala	Phe	Pro	Asp	Val	Pro	Asp	Lys	Glu	Asn	Phe	Glu	225	230	235	240
Ile	Pro	Ile	Tyr	Ser	Lys	Glu	Pro	Asn	Ser	Ala	Ser	Ser	Thr	His	Gln	245	250	255	
Met	His	Val	Ser	Leu	Lys	Glu	Asp	Glu	Asn	Asn	Ser	Asn	Ile	Thr	Arg	260	265	270	
Leu	Phe	Arg	Glu	Lys	Asp	Asp	Gly	Met	Asn	Phe	Thr	Gln	Cys	His	Thr	275	280	285	
Ala	Asn	Ile	Gln	Thr	Leu	Ile	Pro	Thr	Ser	Ser	Glu	Thr	Asn	Ser	Arg	290	295	300	
Glu	Ser	Lys	Gly	Asn	Asp	Ile	Thr	Ile	Tyr	Gly	Asn	Asp	Phe	Met	Asp	305	310	315	320
Leu	Thr	Phe	Asn	His	Thr	Leu	Gln	Ile	Leu	Pro	Ala	Thr	Gly	Asn	Phe	325	330	335	
Ser	Glu	Ile	Glu	Asn	Gln	Thr	Gln	Asn	Ala	Met	Asp	Val	Thr	Thr	Gly	340	345	350	
Tyr	Gly	Thr	Lys	Ala	Ser	Gly	Asn	Lys	Thr	Val	Phe	Lys	Ser	Lys	Gln	355	360	365	
Asn	Thr	Ala	Phe	Gln	Asp	Leu	Ser	Ile	Asn	Ser	Ala	Asp	Lys	Ile	His	370	375	380	
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Thr	Cys	Asn	Gln	Asp	Ala	Arg	Ile	Leu	Ala	Met	Thr	Pro	Glu	Ser	Ile	405	410	415	
Tyr	Ser	Asn	Pro	Ser	Ile	Gln	Gly	Cys	Lys	Thr	Val	Phe	Tyr	Ser	Ser	420	425	430	
Cys	Asn	Asp	Ala	Met	Glu	Met	Thr	Lys	Cys	Leu	Ser	Asn	Met	Arg	Glu	435	440	445	

Glu	Lys	Asn	Leu	Leu	Lys	His	Asp	Ser	Asn	Tyr	Ala	Lys	Met	Tyr	Cys
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Asn	Pro	Asp	Ala	Met	Ser	Ser	Leu	Thr	Glu	Lys	Thr	Ile	Tyr	Ser	Gly
465					470					475					480
Glu	Glu	Asn	Met	Asp	Ile	Thr	Lys	Ser	His	Thr	Val	Ala	Ile	Asp	Asn
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Gln	Ile	Phe	Lys	Gln	Asp	Gln	Ser	Asn	Val	Gln	Ile	Ala	Ala	Ala	Pro
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Thr	Pro	Glu	Lys	Glu	Met	Met	Leu	Gln	Asn	Leu	Met	Thr	Thr	Ser	Glu
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Glu	Arg	Ile	Gln	Gln	Ser	Leu	Ser	Asn	Pro	Leu	Ser	Ile	Ser	Leu	Thr
545					550					555					560
Asp	Arg	Lys	Thr	Glu	Leu	Leu	Ser	Gly	Glu	Asn	Met	Asp	Leu	Thr	Glu
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Ser	His	Thr	Ser	Asn	Leu	Gly	Ser	Gln	Val	Pro	Leu	Ala	Ala	Tyr	Asn
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Leu	Ala	Pro	Glu	Ser	Thr	Ser	Glu	Ser	His	Ser	Gln	Ser	Lys	Ser	Ser
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Ser	Asp	Glu	Cys	Glu	Glu	Ile	Thr	Lys	Ser	Arg	Asn	Glu	Pro	Phe	Gln
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Arg	Ser	Asp	Ile	Ile	Ala	Lys	Asn	Ser	Leu	Thr	Asp	Thr	Trp	Asn	Lys
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Asp	Lys	Asp	Trp	Val	Leu	Lys	Ile	Leu	Pro	Tyr	Leu	Asp	Lys	Asp	Ser
				645					650					655	
Pro	Gln	Ser	Ala	Asp	Cys	Asn	Gln	Glu	Ile	Ala	Thr	Ser	His	Asn	Ile
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Val	Tyr	Cys	Gly	Gly	Val	Leu	Asp	Lys	Gln	Ile	Thr	Asn	Arg	Asn	Thr		
		675					680					685					
Val	Ser	Trp	Glu	Gln	Ser	Leu	Phe	Ser	Thr	Thr	Lys	Pro	Leu	Phe	Ser		
	690					695					700						
Ser	Gly	Gln	Phe	Ser	Met	Lys	Asn	His	Asp	Thr	Ala	Ile	Ser	Ser	His		
705					710					715					720		
Thr	Val	Lys	Ser	Val	Leu	Gly	Gln	Asn	Ser	Lys	Leu	Ala	Glu	Pro	Leu		
				725					730					735			
Arg	Lys	Ser	Leu	Ser	Asn	Pro	Thr	Pro	Asp	Tyr	Cys	His	Asp	Lys	Met		
			740					745					750				
Ile	Ile	Cys	Ser	Glu	Glu	Glu	Gln	Asn	Met	Asp	Leu	Thr	Lys	Ser	His		
		755					760					765					
Thr	Val	Val	Ile	Gly	Phe	Gly	Pro	Ser	Glu	Leu	Gln	Glu	Leu	Gly	Lys		
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785					790					795					800		
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				805					810					815			
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Gly	Arg	Lys	Ser	Val	Gly	Gly	Pro	Lys	Ile	Asp	Lys	Thr	Ile	Val	Phe		
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Ser	Glu	Asp	Asp	Lys	Asn	Asp	Met	Asp	Ile	Thr	Lys	Ser	Tyr	Thr	Ile		
865					870					875					880		
Glu	Ile	Asn	His	Arg	Pro	Leu	Leu	Glu	Lys	Arg	Asp	Cys	His	Leu	Val		
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Pro	Leu	Ala	Gly	Thr	Ser	Glu	Thr	Ile	Leu	Tyr	Thr	Cys	Arg	Gln	Asp		

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Glu	Val	Ile	Gln	Thr	Ser	Thr	Lys	Gly	Gln	Leu	Asp	Cys	Val	Ile
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Gln	Met	Lys	Val	Tyr	Val	Asp	Asp	Ile	Tyr	Val	Ile	Pro	Gln	Pro
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<221> MOD_RES
<222> (1)..(1)
<223> Any amino acid

<400> 11456
Xaa Asp His His Thr Glu Glu Asp Ile Asp Lys Ser Ala Asn Ser Val
1          5          10          15

Leu Ile Lys Asn Leu Ser Arg Thr Pro Ser Ser Cys Ser Ser Ser Leu
          20          25          30

Asp Ser Ile Lys Ala Asp Gly Thr Ser Leu Asp Phe Ser Thr Tyr Arg
          35          40          45

Ser Ser Gln Met Glu Ser Gln Phe Leu Arg Asp Thr Ile Cys Glu Glu
          50          55          60

Ser Leu Arg Glu Phe Thr Val Asn Thr Pro Pro Thr Pro Glu Asp Leu
65          70          75          80

Met Leu Ser Gln Tyr Val Tyr Arg Pro Lys Ile Gln Ile Tyr Arg Glu
          85          90          95

Asp Cys Glu Ala Arg Arg Gln Lys Ile Glu Glu Leu Lys Leu Ser Ala
          100          105          110

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Ser Asn Gln Asp Lys Leu Leu Val Asp Ile Asn Lys Asn Leu Trp Glu
115 120 125

Lys Met Arg His Cys Ser Asp Lys Glu Leu Lys Ala Phe Gly Ile Tyr
130 135 140

Leu Asn Lys Ile Lys Ser Cys Phe Thr Lys Met Thr Lys Val Phe Thr
145 150 155 160

His Gln Gly Lys Val Ala Leu Tyr Gly Lys Leu Val Gln Ser Ala Gln
165 170 175

Asn Glu Arg Glu Lys Leu Gln Ile Lys Ile Asp Glu Met Asp Lys Ile
180 185 190

Leu

<210> 11457
<211> 80
<212> PRT
<213> Homo sapiens

<220>
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<223> /note="Payload ID: 2241"

<220>
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<223> /note="Gene Symbol: CASC5"

<220>
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<223> /note="Gene Name:
cancer susceptibility candidate 5"

<220>
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<223> /note="ENSP ID: ENSP00000453857"

<400> 11457
Met Asp Gly Val Ser Ser Glu Ala Asn Glu Glu Asn Asp Asn Ile Glu
1 5 10 15

Arg Pro Val Arg Arg Arg His Ser Ser Ile Leu Lys Pro Pro Arg Ser
20 25 30

Pro Leu Gln Asp Leu Arg Gly Pro His Leu Asp Thr Glu Thr Pro Thr
35 40 45

Glu Gln Ser Pro Arg Gln Phe Tyr Cys Lys His Thr Thr Tyr Ser Arg
50 55 60

Arg Pro Asp Val Lys Ser Ile Cys Leu Pro Thr Gln Asp Thr Asp Leu
65 70 75 80

<210> 11458
<211> 10
<212> PRT
<213> Homo sapiens

<220>
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<223> /note="Payload ID: 2241"

<220>
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<223> /note="Gene Symbol: CASC5"

<220>
<221> source
<223> /note="Gene Name:
cancer susceptibility candidate 5"

<220>
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<223> /note="ENSP ID: ENSP00000454002"

<400> 11458
Met Lys Ile Val Arg Lys Ser Glu Met Glu
1 5 10

<210> 11459
<211> 7
<212> PRT
<213> Homo sapiens

<220>
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<223> /note="Payload ID: 2241"

<220>
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<223> /note="Gene Symbol: CASC5"

<220>
<221> source
<223> /note="Gene Name:
cancer susceptibility candidate 5"

<220>
<221> source

<223> /note="ENSP ID: ENSP00000454087"

<400> 11459

Met Lys Ile Val Arg Lys Ser
1 5

<210> 11460

<211> 180

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2242"

<220>

<221> source

<223> /note="Gene Symbol: CTAG1A"

<220>

<221> source

<223> /note="Gene Name:
cancer/testis antigen 1A"

<220>

<221> source

<223> /note="Uniprot ID: P78358"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000469441"

<400> 11460

Met Gln Ala Glu Gly Arg Gly Thr Gly Gly Ser Thr Gly Asp Ala Asp
1 5 10 15

Gly Pro Gly Gly Pro Gly Ile Pro Asp Gly Pro Gly Gly Asn Ala Gly
20 25 30

Gly Pro Gly Glu Ala Gly Ala Thr Gly Gly Arg Gly Pro Arg Gly Ala
35 40 45

Gly Ala Ala Arg Ala Ser Gly Pro Gly Gly Gly Ala Pro Arg Gly Pro
50 55 60

His Gly Gly Ala Ala Ser Gly Leu Asn Gly Cys Cys Arg Cys Gly Ala
65 70 75 80

Arg Gly Pro Glu Ser Arg Leu Leu Glu Phe Tyr Leu Ala Met Pro Phe
85 90 95

Ala Thr Pro Met Glu Ala Glu Leu Ala Arg Arg Ser Leu Ala Gln Asp
100 105 110

Ala Pro Pro Leu Pro Val Pro Gly Val Leu Leu Lys Glu Phe Thr Val
115 120 125

Ser Gly Asn Ile Leu Thr Ile Arg Leu Thr Ala Ala Asp His Arg Gln
130 135 140

Leu Gln Leu Ser Ile Ser Ser Cys Leu Gln Gln Leu Ser Leu Leu Met
145 150 155 160

Trp Ile Thr Gln Cys Phe Leu Pro Val Phe Leu Ala Gln Pro Pro Ser
165 170 175

Gly Gln Arg Arg
180

<210> 11461
<211> 210
<212> PRT
<213> Homo sapiens

<220>
<221> source
<223> /note="Payload ID: 2242"

<220>
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<223> /note="Gene Symbol: CTAG1A"

<220>
<221> source
<223> /note="Gene Name:
cancer/testis antigen 1A"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000472220"

<400> 11461
Met Gln Ala Glu Gly Arg Gly Thr Gly Gly Ser Thr Gly Asp Ala Asp
1 5 10 15

Gly Pro Gly Gly Pro Gly Ile Pro Asp Gly Pro Gly Gly Asn Ala Gly
20 25 30

Gly Pro Gly Glu Ala Gly Ala Thr Gly Gly Arg Gly Pro Arg Gly Ala
25615

35		40		45											
Gly	Ala	Ala	Arg	Ala	Ser	Gly	Pro	Gly	Gly	Gly	Ala	Pro	Arg	Gly	Pro
50						55					60				
His	Gly	Gly	Ala	Ala	Ser	Gly	Leu	Asn	Gly	Cys	Cys	Arg	Cys	Gly	Ala
65					70					75					80
Arg	Gly	Pro	Glu	Ser	Arg	Leu	Leu	Glu	Phe	Tyr	Leu	Ala	Met	Pro	Phe
				85					90					95	
Ala	Thr	Pro	Met	Glu	Ala	Glu	Leu	Ala	Arg	Arg	Ser	Leu	Ala	Gln	Asp
			100					105						110	
Ala	Pro	Pro	Leu	Pro	Val	Pro	Gly	Val	Leu	Leu	Lys	Glu	Phe	Thr	Val
		115					120					125			
Ser	Gly	Asn	Ile	Leu	Thr	Met	Ser	Val	Gln	Asp	Gln	Asp	Arg	Asp	Gly
	130					135					140				
Ala	Gly	Trp	Arg	Ser	Val	Ala	Gly	Trp	Gly	Leu	Gly	Ser	Ala	Tyr	Pro
145					150					155					160
His	Gly	Gln	Ala	Ala	Arg	Asn	Leu	Gly	Thr	Pro	Gln	His	Arg	Val	Ser
				165					170					175	
Glu	Gln	Arg	Pro	Gly	Thr	Pro	Gly	Pro	Pro	Pro	Pro	Glu	Gly	Ala	Gln
			180					185					190		
Gly	Asp	Gly	Cys	Arg	Gly	Val	Ala	Phe	Asn	Val	Met	Phe	Ser	Ala	Pro
		195					200					205			
His	Ile														
	210														

<210> 11462
 <211> 180
 <212> PRT
 <213> Homo sapiens

<220>
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 <223> /note="Payload ID: 2243"
 <220>


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<221> source
<223> /note="Gene Symbol: CTAG1B"

<220>
<221> source
<223> /note="Gene Name:
      cancer/testis antigen 1B"

<220>
<221> source
<223> /note="Uniprot ID: P78358"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000332602"

<400> 11462
Met Gln Ala Glu Gly Arg Gly Thr Gly Gly Ser Thr Gly Asp Ala Asp
1          5          10          15

Gly Pro Gly Gly Pro Gly Ile Pro Asp Gly Pro Gly Gly Asn Ala Gly
20          25          30

Gly Pro Gly Glu Ala Gly Ala Thr Gly Gly Arg Gly Pro Arg Gly Ala
35          40          45

Gly Ala Ala Arg Ala Ser Gly Pro Gly Gly Gly Ala Pro Arg Gly Pro
50          55          60

His Gly Gly Ala Ala Ser Gly Leu Asn Gly Cys Cys Arg Cys Gly Ala
65          70          75          80

Arg Gly Pro Glu Ser Arg Leu Leu Glu Phe Tyr Leu Ala Met Pro Phe
85          90          95

Ala Thr Pro Met Glu Ala Glu Leu Ala Arg Arg Ser Leu Ala Gln Asp
100         105         110

Ala Pro Pro Leu Pro Val Pro Gly Val Leu Leu Lys Glu Phe Thr Val
115         120         125

Ser Gly Asn Ile Leu Thr Ile Arg Leu Thr Ala Ala Asp His Arg Gln
130         135         140

Leu Gln Leu Ser Ile Ser Ser Cys Leu Gln Gln Leu Ser Leu Leu Met
145         150         155         160

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Trp Ile Thr Gln Cys Phe Leu Pro Val Phe Leu Ala Gln Pro Pro Ser
165 170 175

Gly Gln Arg Arg
180

<210> 11463
<211> 168
<212> PRT
<213> Homo sapiens

<220>
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<223> /note="Payload ID: 2243"

<220>
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<220>
<221> source
<223> /note="Gene Name:
cancer/testis antigen 1B"

<220>
<221> source
<223> /note="Uniprot ID: P78358"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000352953"

<400> 11463
Met Gln Ala Glu Gly Arg Gly Thr Gly Gly Ser Thr Gly Asp Ala Asp
1 5 10 15

Gly Pro Gly Gly Pro Gly Ile Pro Asp Gly Pro Gly Gly Asn Ala Gly
20 25 30

Gly Pro Gly Glu Ala Gly Ala Thr Gly Gly Arg Gly Pro Arg Gly Ala
35 40 45

Gly Ala Ala Arg Ala Ser Gly Pro Gly Gly Gly Ala Pro Arg Gly Pro
50 55 60

His Gly Gly Ala Ala Ser Gly Leu Asn Gly Cys Cys Arg Cys Gly Ala
65 70 75 80

Arg Gly Pro Glu Ser Arg Leu Leu Glu Phe Tyr Leu Ala Met Pro Phe
85 90 95

Ala Thr Pro Met Glu Ala Glu Leu Ala Arg Arg Ser Leu Ala Gln Asp
100 105 110

Ala Pro Pro Leu Pro Val Pro Gly Val Leu Leu Lys Glu Phe Thr Val
115 120 125

Ser Gly Asn Ile Leu Thr Met Ser Val Gln Asp Gln Asp Arg Asp Gly
130 135 140

Ala Trp Val Gly Gly Gly His Ser Val Ala Gly Trp Gly Leu Gly Ser
145 150 155 160

Ala Tyr Thr Pro Arg Ser Gly Cys
165

<210> 11464
<211> 210
<212> PRT
<213> Homo sapiens

<220>
<221> source
<223> /note="Payload ID: 2243"

<220>
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<223> /note="Gene Symbol: CTAG1B"

<220>
<221> source
<223> /note="Gene Name:
cancer/testis antigen 1B"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000469269"

<400> 11464
Met Gln Ala Glu Gly Arg Gly Thr Gly Gly Ser Thr Gly Asp Ala Asp
1 5 10 15

Gly Pro Gly Gly Pro Gly Ile Pro Asp Gly Pro Gly Gly Asn Ala Gly
20 25 30

Gly Pro Gly Glu Ala Gly Ala Thr Gly Gly Arg Gly Pro Arg Gly Ala
35 40 45

Gly Ala Ala Arg Ala Ser Gly Pro Gly Gly Gly Ala Pro Arg Gly Pro
50 55 60

His Gly Gly Ala Ala Ser Gly Leu Asn Gly Cys Cys Arg Cys Gly Ala
65 70 75 80

Arg Gly Pro Glu Ser Arg Leu Leu Glu Phe Tyr Leu Ala Met Pro Phe
85 90 95

Ala Thr Pro Met Glu Ala Glu Leu Ala Arg Arg Ser Leu Ala Gln Asp
100 105 110

Ala Pro Pro Leu Pro Val Pro Gly Val Leu Leu Lys Glu Phe Thr Val
115 120 125

Ser Gly Asn Ile Leu Thr Met Ser Val Gln Asp Gln Asp Arg Asp Gly
130 135 140

Ala Gly Trp Arg Ser Val Ala Gly Trp Gly Leu Gly Ser Ala Tyr Pro
145 150 155 160

His Gly Gln Ala Ala Arg Asn Leu Gly Thr Pro Gln His Arg Val Ser
165 170 175

Glu Gln Arg Pro Gly Thr Pro Gly Pro Pro Pro Glu Gly Ala Gln
180 185 190

Gly Asp Gly Cys Arg Gly Val Ala Phe Asn Val Met Phe Ser Ala Pro
195 200 205

His Ile
210

<210> 11465
<211> 210
<212> PRT
<213> Homo sapiens

<220>
<221> source
<223> /note="Payload ID: 2244"

<220>
<221> source
<223> /note="Gene Symbol: CTAG2"

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<220>
<221> source
<223> /note="Gene Name:
        cancer/testis antigen 2"

<220>
<221> source
<223> /note="Uniprot ID: O75638"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000247306"

<400> 11465
Met Gln Ala Glu Gly Arg Gly Thr Gly Gly Ser Thr Gly Asp Ala Asp
1          5          10          15

Gly Pro Gly Gly Pro Gly Ile Pro Asp Gly Pro Gly Gly Asn Ala Gly
20          25          30

Gly Pro Gly Glu Ala Gly Ala Thr Gly Gly Arg Gly Pro Arg Gly Ala
35          40          45

Gly Ala Ala Arg Ala Ser Gly Pro Arg Gly Gly Ala Pro Arg Gly Pro
50          55          60

His Gly Gly Ala Ala Ser Ala Gln Asp Gly Arg Cys Pro Cys Gly Ala
65          70          75          80

Arg Arg Pro Asp Ser Arg Leu Leu Glu Leu His Ile Thr Met Pro Phe
85          90          95

Ser Ser Pro Met Glu Ala Glu Leu Val Arg Arg Ile Leu Ser Arg Asp
100         105         110

Ala Ala Pro Leu Pro Arg Pro Gly Ala Val Leu Lys Asp Phe Thr Val
115         120         125

Ser Gly Asn Leu Leu Phe Met Ser Val Arg Asp Gln Asp Arg Glu Gly
130         135         140

Ala Gly Arg Met Arg Val Val Gly Trp Gly Leu Gly Ser Ala Ser Pro
145         150         155         160

Glu Gly Gln Lys Ala Arg Asp Leu Arg Thr Pro Lys His Lys Val Ser
165         170         175

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Glu Gln Arg Pro Gly Thr Pro Gly Pro Pro Pro Pro Glu Gly Ala Gln
180 185 190

Gly Asp Gly Cys Arg Gly Val Ala Phe Asn Val Met Phe Ser Ala Pro
195 200 205

His Ile
210

<210> 11466
<211> 180
<212> PRT
<213> Homo sapiens

<220>
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<223> /note="Payload ID: 2244"

<220>
<221> source
<223> /note="Gene Symbol: CTAG2"

<220>
<221> source
<223> /note="Gene Name:
cancer/testis antigen 2"

<220>
<221> source
<223> /note="Uniprot ID: O75638"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000358598"

<400> 11466
Met Gln Ala Glu Gly Arg Gly Thr Gly Gly Ser Thr Gly Asp Ala Asp
1 5 10 15

Gly Pro Gly Gly Pro Gly Ile Pro Asp Gly Pro Gly Gly Asn Ala Gly
20 25 30

Gly Pro Gly Glu Ala Gly Ala Thr Gly Gly Arg Gly Pro Arg Gly Ala
35 40 45

Gly Ala Ala Arg Ala Ser Gly Pro Arg Gly Gly Ala Pro Arg Gly Pro
50 55 60

His Gly Gly Ala Ala Ser Ala Gln Asp Gly Arg Cys Pro Cys Gly Ala
25622

65		70		75		80									
Arg	Arg	Pro	Asp	Ser	Arg	Leu	Leu	Glu	Leu	His	Ile	Thr	Met	Pro	Phe
				85					90					95	
Ser	Ser	Pro	Met	Glu	Ala	Glu	Leu	Val	Arg	Arg	Ile	Leu	Ser	Arg	Asp
			100					105					110		
Ala	Ala	Pro	Leu	Pro	Arg	Pro	Gly	Ala	Val	Leu	Lys	Asp	Phe	Thr	Val
		115					120					125			
Ser	Gly	Asn	Leu	Leu	Phe	Ile	Arg	Leu	Thr	Ala	Ala	Asp	His	Arg	Gln
	130					135					140				
Leu	Gln	Leu	Ser	Ile	Ser	Ser	Cys	Leu	Gln	Gln	Leu	Ser	Leu	Leu	Met
145					150					155					160
Trp	Ile	Thr	Gln	Cys	Phe	Leu	Pro	Val	Phe	Leu	Ala	Gln	Ala	Pro	Ser
				165					170					175	
Gly	Gln	Arg	Arg												
				180											

<210> 11467
 <211> 264
 <212> PRT
 <213> Homo sapiens

<220>
 <221> source
 <223> /note="Payload ID: 2245"

<220>
 <221> source
 <223> /note="Gene Symbol: CT55"

<220>
 <221> source
 <223> /note="Gene Name:
 cancer/testis antigen 55"

<220>
 <221> source
 <223> /note="Uniprot ID: Q8WUE5"

<220>
 <221> source
 <223> /note="ENSP ID: ENSP00000276241"

<400> 11467

Met Leu Arg Leu Leu Arg Leu Ala Leu Ala Phe Tyr Gly Arg Thr Ala
1 5 10 15

Asp Pro Ala Glu Arg Gln Gly Pro Gln Gln Gln Gly Leu Pro Gln Gly
20 25 30

Asp Thr Gln Leu Thr Thr Val Gln Gly Val Val Thr Ser Phe Cys Gly
35 40 45

Asp Tyr Gly Met Ile Asp Glu Ser Ile Tyr Phe Ser Ser Asp Val Val
50 55 60

Thr Gly Asn Val Pro Leu Lys Val Gly Gln Lys Val Asn Val Val Val
65 70 75 80

Glu Glu Asp Lys Pro His Tyr Gly Leu Arg Ala Ile Lys Val Asp Val
85 90 95

Val Pro Arg His Leu Tyr Gly Ala Gly Pro Ser Asp Ser Gly Thr Arg
100 105 110

Val Leu Ile Gly Cys Val Thr Ser Ile Asn Glu Asp Asn Ile Tyr Ile
115 120 125

Ser Asn Ser Ile Tyr Phe Ser Ile Ala Ile Val Ser Glu Asp Phe Val
130 135 140

Pro Tyr Lys Gly Asp Leu Leu Glu Val Glu Tyr Ser Thr Glu Pro Gly
145 150 155 160

Ile Ser Asn Ile Lys Ala Thr Ser Val Lys Pro Ile Arg Cys Ile His
165 170 175

Thr Glu Glu Val Cys Ile Thr Ser Val His Gly Arg Asn Gly Val Ile
180 185 190

Asp Tyr Thr Ile Phe Phe Thr Leu Asp Ser Val Lys Leu Pro Asp Gly
195 200 205

Tyr Val Pro Gln Val Asp Asp Ile Val Asn Val Val Met Val Glu Ser
210 215 220

Ile Gln Phe Cys Phe Ile Trp Arg Ala Ile Ser Ile Thr Pro Val His
225 230 235 240

Lys Ser Ser Ser Gly Phe Gln Asp Asp Gly Gly Leu Gly Arg Pro Lys
245 250 255

Arg Glu Arg Arg Ser Gln Ser Ile
260

<210> 11468
<211> 242
<212> PRT
<213> Homo sapiens

<220>
<221> source
<223> /note="Payload ID: 2245"

<220>
<221> source
<223> /note="Gene Symbol: CT55"

<220>
<221> source
<223> /note="Gene Name:
cancer/testis antigen 55"

<220>
<221> source
<223> /note="Uniprot ID: Q8WUE5"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000343893"

<400> 11468
Met Leu Arg Leu Leu Arg Leu Ala Leu Ala Phe Tyr Gly Arg Thr Ala
1 5 10 15

Asp Pro Ala Glu Arg Gln Gly Pro Gln Gln Gln Gly Leu Pro Gln Gly
20 25 30

Asp Thr Gln Leu Thr Thr Val Gln Gly Val Val Thr Ser Phe Cys Gly
35 40 45

Asp Tyr Gly Met Ile Asp Glu Ser Ile Tyr Phe Ser Ser Asp Val Val
50 55 60

Thr Gly Asn Val Pro Leu Lys Val Gly Gln Lys Val Asn Val Val Val
65 70 75 80

Glu Glu Asp Lys Pro His Tyr Gly Leu Arg Ala Ile Lys Val Asp Val
85 90 95

Val Pro Arg His Leu Tyr Gly Ala Gly Pro Ser Asp Ser Gly Thr Arg
100 105 110

Val Leu Ile Gly Cys Val Thr Ser Ile Asn Glu Asp Asn Ile Tyr Ile
115 120 125

Ser Asn Ser Ile Tyr Phe Ser Ile Ala Ile Val Ser Glu Asp Phe Val
130 135 140

Pro Tyr Lys Gly Asp Leu Leu Glu Val Glu Tyr Ser Thr Glu Pro Gly
145 150 155 160

Ile Ser Asn Ile Lys Ala Thr Ser Val Lys Pro Ile Arg Cys Ile His
165 170 175

Thr Glu Glu Val Cys Ile Thr Ser Val His Gly Arg Asn Gly Val Ile
180 185 190

Asp Tyr Thr Ile Phe Phe Thr Leu Asp Ser Val Lys Leu Pro Asp Gly
195 200 205

Tyr Val Pro Gln Val Asp Asp Ile Val Asn Val Val Met Val Glu Ser
210 215 220

Ile Gln Phe Cys Phe Ile Trp Arg Ala Ile Ser Ile Thr Pro Val His
225 230 235 240

Lys Ser

<210> 11469

<211> 136

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2246"

<220>

<221> source

<223> /note="Gene Symbol: CT62"

<220>

<221> source

<223> /note="Gene Name:
cancer/testis antigen 62"

<220>

<221> source

<223> /note="Uniprot ID: P0C5K7"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000399356"

<400> 11469

Met Met His Thr Thr Ser Tyr Arg Arg Leu Ser Pro Pro His Leu Thr
1 5 10 15

Asp Gln Pro Ser Ala Tyr Ser His Thr His Arg Thr Phe Ser His Phe
20 25 30

Ser Cys Gly Ser Gln Pro Ala Ala Gln Arg Leu His Val Glu Leu Trp
35 40 45

Asn Ala Asp Leu Gln Ser Glu Phe Leu Cys Pro Cys Leu Gly Leu Thr
50 55 60

Leu Tyr Leu Thr Cys Asn Pro Gln Leu Gly Lys Arg Lys Phe Cys Ser
65 70 75 80

His Ser Ser Glu Asp Met Ser Lys Met Val Ser Arg Arg Asn Val Lys
85 90 95

Asp Ser His Glu Val Ser Gly Ser Leu Gln Ala Thr Leu Gln Val Ile
100 105 110

Ser Phe Ser Phe Pro Phe Leu Leu His Thr Cys Ser His Pro Leu Ser
115 120 125

His Pro Thr Ser Gly Gln Arg Arg
130 135

<210> 11470

<211> 97

<212> PRT

<213> Homo sapiens

<220>
<221> source
<223> /note="Payload ID: 2246"

<220>
<221> source
<223> /note="Gene Symbol: CT62"

<220>
<221> source
<223> /note="Gene Name:
cancer/testis antigen 62"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000455569"

<400> 11470
Met Met His Thr Thr Ser Tyr Arg Arg Leu Ser Pro Pro His Leu Thr
1 5 10 15

Asp Gln Pro Ser Ala Tyr Ser His Thr His Arg Thr Phe Ser His Phe
20 25 30

Ser Cys Gly Ser Gln Pro Ala Ala Gln Arg Leu His Val Glu Leu Trp
35 40 45

Asn Ala Asp Leu Gln Ser Glu Phe Leu Cys Pro Cys Leu Gly Leu Thr
50 55 60

Leu Tyr Leu Thr Cys Asn Pro Gln Leu Gly Lys Arg Lys Phe Cys Ser
65 70 75 80

His Ser Ser Glu Asp Met Ser Lys Met Val Ser Arg Arg Asn Val Lys
85 90 95

Asp

<210> 11471
<211> 77
<212> PRT
<213> Homo sapiens

<220>
<221> source
<223> /note="Payload ID: 2246"

<220>
<221> source

<223> /note="Gene Symbol: CT62"

<220>
 <221> source
 <223> /note="Gene Name:
 cancer/testis antigen 62"

<220>
 <221> source
 <223> /note="ENSP ID: ENSP00000456091"

<400> 11471
 Met Met His Thr Thr Ser Tyr Arg Arg Leu Ser Pro Pro His Leu Thr
 1 5 10 15

Asp Gln Pro Ser Ala Tyr Ser His Thr His Arg Thr Phe Ser His Phe
 20 25 30

Ser Cys Gly Ser Gln Pro Ala Ala Gln Arg Leu His Val Val Arg Ala
 35 40 45

Pro Lys Ser Leu Arg Asn Glu Trp Leu Thr Ala Glu Ser Asn Leu Leu
 50 55 60

Gly Val Gln Gly Met Trp Asn Trp Asn Lys Ser Asn Val
 65 70 75

<210> 11472
 <211> 103
 <212> PRT
 <213> Homo sapiens

<220>
 <221> source
 <223> /note="Payload ID: 2246"

<220>
 <221> source
 <223> /note="Gene Symbol: CT62"

<220>
 <221> source
 <223> /note="Gene Name:
 cancer/testis antigen 62"

<220>
 <221> source
 <223> /note="ENSP ID: ENSP00000477026"

<220>
 <221> MOD_RES

<222> (1)..(1)
<223> Any amino acid

<400> 11472

Xaa Glu Leu Trp Asn Ala Asp Leu Gln Ser Glu Phe Leu Cys Pro Cys
1 5 10 15

Leu Gly Leu Thr Leu Tyr Leu Thr Cys Asn Pro Gln Leu Gly Lys Arg
20 25 30

Lys Phe Cys Ser His Ser Ser Glu Asp Met Ser Lys Met Val Ser Arg
35 40 45

Arg Asn Val Lys Asp Ser His Glu Val Ser Gly Ser Leu Gln Ala Thr
50 55 60

Leu Gln Pro Arg Gly Ile Thr Arg Ile Arg Gly Cys Phe Ser Leu Gly
65 70 75 80

His Ala Asp Arg Arg Arg Arg Arg Gly Trp Gln Pro Pro Val His Ser
85 90 95

Leu Pro Phe Phe Phe Arg Arg
100

<210> 11473
<211> 113
<212> PRT
<213> Homo sapiens

<220>
<221> source
<223> /note="Payload ID: 2247"

<220>
<221> source
<223> /note="Gene Symbol: CT83"

<220>
<221> source
<223> /note="Gene Name:
cancer/testis antigen 83"

<220>
<221> source
<223> /note="Uniprot ID: Q5H943"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000360961"

<400> 11473

Met Asn Phe Tyr Leu Leu Leu Ala Ser Ser Ile Leu Cys Ala Leu Ile
1 5 10 15

Val Phe Trp Lys Tyr Arg Arg Phe Gln Arg Asn Thr Gly Glu Met Ser
20 25 30

Ser Asn Ser Thr Ala Leu Ala Leu Val Arg Pro Ser Ser Ser Gly Leu
35 40 45

Ile Asn Ser Asn Thr Asp Asn Asn Leu Ala Val Tyr Asp Leu Ser Arg
50 55 60

Asp Ile Leu Asn Asn Phe Pro His Ser Ile Ala Arg Gln Lys Arg Ile
65 70 75 80

Leu Val Asn Leu Ser Met Val Glu Asn Lys Leu Val Glu Leu Glu His
85 90 95

Thr Leu Leu Ser Lys Gly Phe Arg Gly Ala Ser Pro His Arg Lys Ser
100 105 110

Thr

<210> 11474

<211> 189

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2248"

<220>

<221> source

<223> /note="Gene Symbol: CT45A1"

<220>

<221> source

<223> /note="Gene Name:
cancer/testis antigen family 45, member A1"

<220>

<221> source

<223> /note="Uniprot ID: Q5HYN5"

<220>

<221> source
<223> /note="ENSP ID: ENSP00000470185"

<400> 11474

Met Thr Asp Lys Thr Glu Lys Val Ala Val Asp Pro Glu Thr Val Phe
1 5 10 15

Lys Arg Pro Arg Glu Cys Asp Ser Pro Ser Tyr Gln Lys Arg Gln Arg
20 25 30

Met Ala Leu Leu Ala Arg Lys Gln Gly Ala Gly Asp Ser Leu Ile Ala
35 40 45

Gly Ser Ala Met Ser Lys Ala Lys Lys Leu Met Thr Gly His Ala Ile
50 55 60

Pro Pro Ser Gln Leu Asp Ser Gln Ile Asp Asp Phe Thr Gly Phe Ser
65 70 75 80

Lys Asp Arg Met Met Gln Lys Pro Gly Ser Asn Ala Pro Val Gly Gly
85 90 95

Asn Val Thr Ser Ser Phe Ser Gly Asp Asp Leu Glu Cys Arg Glu Thr
100 105 110

Ala Ser Ser Pro Lys Ser Gln Arg Glu Ile Asn Ala Asp Ile Lys Arg
115 120 125

Lys Leu Val Lys Glu Leu Arg Cys Val Gly Gln Lys Tyr Glu Lys Ile
130 135 140

Phe Glu Met Leu Glu Gly Val Gln Gly Pro Thr Ala Val Arg Lys Arg
145 150 155 160

Phe Phe Glu Ser Ile Ile Lys Glu Ala Ala Arg Cys Met Arg Arg Asp
165 170 175

Phe Val Lys His Leu Lys Lys Lys Leu Lys Arg Met Ile
180 185

<210> 11475

<211> 189

<212> PRT

<213> Homo sapiens


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<220>
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<223> /note="Gene Name:
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<220>
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<223> /note="Uniprot ID: Q5HYN5"

<220>
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<400> 11475
Met Thr Asp Lys Thr Glu Lys Val Ala Val Asp Pro Glu Thr Val Phe
1              5              10              15

Lys Arg Pro Arg Glu Cys Asp Ser Pro Ser Tyr Gln Lys Arg Gln Arg
                20              25              30

Met Ala Leu Leu Ala Arg Lys Gln Gly Ala Gly Asp Ser Leu Ile Ala
        35              40              45

Gly Ser Ala Met Ser Lys Ala Lys Lys Leu Met Thr Gly His Ala Ile
        50              55              60

Pro Pro Ser Gln Leu Asp Ser Gln Ile Asp Asp Phe Thr Gly Phe Ser
65              70              75              80

Lys Asp Arg Met Met Gln Lys Pro Gly Ser Asn Ala Pro Val Gly Gly
                85              90              95

Asn Val Thr Ser Ser Phe Ser Gly Asp Asp Leu Glu Cys Arg Glu Thr
                100              105              110

Ala Ser Ser Pro Lys Ser Gln Arg Glu Ile Asn Ala Asp Ile Lys Arg
        115              120              125

Lys Leu Val Lys Glu Leu Arg Cys Val Gly Gln Lys Tyr Glu Lys Ile
130              135              140

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Phe Glu Met Leu Glu Gly Val Gln Gly Pro Thr Ala Val Arg Lys Arg
145 150 155 160

Phe Phe Glu Ser Ile Ile Lys Glu Ala Ala Arg Cys Met Arg Arg Asp
165 170 175

Phe Val Lys His Leu Lys Lys Lys Leu Lys Arg Met Ile
180 185

<210> 11476
<211> 189
<212> PRT
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<220>
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<223> /note="Gene Name:
cancer/testis antigen family 45, member A10"

<220>
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<223> /note="Uniprot ID: P0DMU9"

<220>
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<223> /note="ENSP ID: ENSP00000481558"

<400> 11476
Met Thr Asp Lys Thr Glu Lys Val Ala Val Asp Pro Glu Thr Val Phe
1 5 10 15

Lys Arg Pro Arg Glu Cys Asp Ser Pro Ser Tyr Gln Lys Arg Gln Arg
20 25 30

Met Ala Leu Leu Ala Arg Lys Gln Gly Ala Gly Asp Ser Leu Ile Ala
35 40 45

Gly Ser Ala Met Ser Lys Glu Lys Lys Leu Met Thr Gly His Ala Ile
50 55 60

Pro Pro Ser Gln Leu Asp Ser Gln Ile Asp Asp Phe Thr Gly Phe Ser
25634

<400> 11477

Met Thr Asp Lys Thr Glu Lys Val Ala Val Asp Pro Glu Thr Val Phe
1 5 10 15

Lys Arg Pro Arg Glu Cys Asp Ser Pro Ser Tyr Gln Lys Arg Gln Arg
20 25 30

Met Ala Leu Leu Ala Arg Lys Gln Gly Ala Gly Asp Ser Leu Ile Ala
35 40 45

Gly Ser Ala Met Ser Lys Glu Lys Lys Leu Met Thr Gly His Ala Ile
50 55 60

Pro Pro Ser Gln Leu Asp Ser Gln Ile Asp Asp Phe Thr Gly Phe Ser
65 70 75 80

Lys Asp Gly Met Met Gln Lys Pro Gly Ser Asn Ala Pro Val Gly Gly
85 90 95

Asn Val Thr Ser Asn Phe Ser Gly Asp Asp Leu Glu Cys Arg Gly Ile
100 105 110

Ala Ser Ser Pro Lys Ser Gln Gln Glu Ile Asn Ala Asp Ile Lys Cys
115 120 125

Gln Val Val Lys Glu Ile Arg Cys Leu Gly Arg Lys Tyr Glu Lys Ile
130 135 140

Phe Glu Met Leu Glu Gly Val Gln Gly Pro Thr Ala Val Arg Lys Arg
145 150 155 160

Phe Phe Glu Ser Ile Ile Lys Glu Ala Ala Arg Cys Met Arg Arg Asp
165 170 175

Phe Val Lys His Leu Lys Lys Lys Leu Lys Arg Met Ile
180 185

<210> 11478

<211> 189

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2250"

25636

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<223> /note="Gene Symbol: CT45A2"

<220>
<221> source
<223> /note="Gene Name:
cancer/testis antigen family 45, member A2"

<220>
<221> source
<223> /note="Uniprot ID: Q5DJT8"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000474632"

<400> 11478
Met Thr Asp Lys Thr Glu Lys Val Ala Val Asp Pro Glu Thr Val Phe
1 5 10 15

Lys Arg Pro Arg Glu Cys Asp Ser Pro Ser Tyr Gln Lys Arg Gln Arg
20 25 30

Met Ala Leu Leu Ala Arg Lys Gln Gly Ala Gly Asp Ser Leu Ile Ala
35 40 45

Gly Ser Ala Met Ser Lys Glu Lys Lys Leu Met Thr Gly His Ala Ile
50 55 60

Pro Pro Ser Gln Leu Asp Ser Gln Ile Asp Asp Phe Thr Gly Phe Ser
65 70 75 80

Lys Asp Arg Met Met Gln Lys Pro Gly Ser Asn Ala Pro Val Gly Gly
85 90 95

Asn Val Thr Ser Ser Phe Ser Gly Asp Asp Leu Glu Cys Arg Glu Thr
100 105 110

Ala Phe Ser Pro Lys Ser Gln Gln Glu Ile Asn Ala Asp Ile Lys Arg
115 120 125

Gln Leu Val Lys Glu Leu Arg Cys Val Gly Gln Lys Tyr Glu Lys Ile
130 135 140

Phe Glu Met Leu Glu Gly Val Gln Gly Pro Thr Ala Val Arg Lys Arg
145 150 155 160

Phe Phe Glu Ser Ile Ile Lys Glu Ala Ala Arg Cys Met Arg Arg Asp
165 170 175

Phe Val Lys His Leu Lys Lys Lys Leu Lys Arg Met Ile
180 185

<210> 11479
<211> 189
<212> PRT
<213> Homo sapiens

<220>
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<220>
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<220>
<221> source
<223> /note="Gene Name:
cancer/testis antigen family 45, member A2"

<220>
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<223> /note="Uniprot ID: Q5DJT8"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000483619"

<400> 11479
Met Thr Asp Lys Thr Glu Lys Val Ala Val Asp Pro Glu Thr Val Phe
1 5 10 15

Lys Arg Pro Arg Glu Cys Asp Ser Pro Ser Tyr Gln Lys Arg Gln Arg
20 25 30

Met Ala Leu Leu Ala Arg Lys Gln Gly Ala Gly Asp Ser Leu Ile Ala
35 40 45

Gly Ser Ala Met Ser Lys Glu Lys Lys Leu Met Thr Gly His Ala Ile
50 55 60

Pro Pro Ser Gln Leu Asp Ser Gln Ile Asp Asp Phe Thr Gly Phe Ser
65 70 75 80

Lys Asp Arg Met Met Gln Lys Pro Gly Ser Asn Ala Pro Val Gly Gly
85 90 95

Asn Val Thr Ser Ser Phe Ser Gly Asp Asp Leu Glu Cys Arg Glu Thr
100 105 110

Ala Phe Ser Pro Lys Ser Gln Gln Glu Ile Asn Ala Asp Ile Lys Arg
115 120 125

Gln Leu Val Lys Glu Leu Arg Cys Val Gly Gln Lys Tyr Glu Lys Ile
130 135 140

Phe Glu Met Leu Glu Gly Val Gln Gly Pro Thr Ala Val Arg Lys Arg
145 150 155 160

Phe Phe Glu Ser Ile Ile Lys Glu Ala Ala Arg Cys Met Arg Arg Asp
165 170 175

Phe Val Lys His Leu Lys Lys Lys Leu Lys Arg Met Ile
180 185

<210> 11480
<211> 189
<212> PRT
<213> Homo sapiens

<220>
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<223> /note="Payload ID: 2251"

<220>
<221> source
<223> /note="Gene Symbol: CT45A3"

<220>
<221> source
<223> /note="Gene Name:
cancer/testis antigen family 45, member A3"

<220>
<221> source
<223> /note="Uniprot ID: Q8NHU0"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000471418"

<400> 11480
Met Thr Asp Lys Thr Glu Lys Val Ala Val Asp Pro Glu Thr Val Phe
1 5 10 15

Lys Arg Pro Arg Glu Cys Asp Ser Pro Ser Tyr Gln Lys Arg Gln Arg
 20 25 30

 Met Ala Leu Leu Ala Arg Lys Gln Gly Ala Gly Asp Ser Leu Ile Ala
 35 40 45

 Gly Ser Ala Met Ser Lys Glu Lys Lys Leu Met Thr Gly His Ala Ile
 50 55 60

 Pro Pro Ser Gln Leu Asp Ser Gln Ile Asp Asp Phe Thr Gly Phe Ser
 65 70 75 80

 Lys Asp Arg Met Met Gln Lys Pro Gly Ser Asn Ala Pro Val Gly Gly
 85 90 95

 Asn Val Thr Ser Ser Phe Ser Gly Asp Asp Leu Glu Cys Arg Glu Thr
 100 105 110

 Ala Ser Ser Pro Lys Ser Gln Arg Glu Ile Asn Ala Asp Ile Lys Arg
 115 120 125

 Lys Leu Val Lys Glu Leu Arg Cys Val Gly Gln Lys Tyr Glu Lys Ile
 130 135 140

 Phe Glu Met Leu Glu Gly Val Gln Gly Pro Thr Ala Val Arg Lys Arg
 145 150 155 160

 Phe Phe Glu Ser Ile Ile Lys Glu Ala Ala Arg Cys Met Arg Arg Asp
 165 170 175

 Phe Val Lys His Leu Lys Lys Lys Leu Lys Arg Met Ile
 180 185

<210> 11481

<211> 189

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2251"

<220>

<221> source

<223> /note="Gene Symbol: CT45A3"

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<221> source

<223> /note="Gene Name:
cancer/testis antigen family 45, member A3"

<220>

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<223> /note="Uniprot ID: Q8NHU0"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000471571"

<400> 11481

Met Thr Asp Lys Thr Glu Lys Val Ala Val Asp Pro Glu Thr Val Phe
1 5 10 15

Lys Arg Pro Arg Glu Cys Asp Ser Pro Ser Tyr Gln Lys Arg Gln Arg
20 25 30

Met Ala Leu Leu Ala Arg Lys Gln Gly Ala Gly Asp Ser Leu Ile Ala
35 40 45

Gly Ser Ala Met Ser Lys Glu Lys Lys Leu Met Thr Gly His Ala Ile
50 55 60

Pro Pro Ser Gln Leu Asp Ser Gln Ile Asp Asp Phe Thr Gly Phe Ser
65 70 75 80

Lys Asp Arg Met Met Gln Lys Pro Gly Ser Asn Ala Pro Val Gly Gly
85 90 95

Asn Val Thr Ser Ser Phe Ser Gly Asp Asp Leu Glu Cys Arg Glu Thr
100 105 110

Ala Ser Ser Pro Lys Ser Gln Arg Glu Ile Asn Ala Asp Ile Lys Arg
115 120 125

Lys Leu Val Lys Glu Leu Arg Cys Val Gly Gln Lys Tyr Glu Lys Ile
130 135 140

Phe Glu Met Leu Glu Gly Val Gln Gly Pro Thr Ala Val Arg Lys Arg
145 150 155 160

Phe Phe Glu Ser Ile Ile Lys Glu Ala Ala Arg Cys Met Arg Arg Asp

165

170

175

Phe Val Lys His Leu Lys Lys Lys Leu Lys Arg Met Ile
 180 185

<210> 11482

<211> 189

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2252"

<220>

<221> source

<223> /note="Gene Symbol: CT45A5"

<220>

<221> source

<223> /note="Gene Name:
 cancer/testis antigen family 45, member A5"

<220>

<221> source

<223> /note="Uniprot ID: P0DMU8"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000427342"

<400> 11482

Met Thr Asp Lys Thr Glu Lys Val Ala Val Asp Pro Glu Thr Val Phe
 1 5 10 15

Lys Arg Pro Arg Glu Cys Asp Ser Pro Ser Tyr Gln Lys Arg Gln Arg
 20 25 30

Met Ala Leu Leu Ala Arg Lys Gln Gly Ala Gly Asp Ser Leu Ile Ala
 35 40 45

Gly Ser Ala Met Ser Lys Glu Lys Lys Leu Met Thr Gly His Ala Ile
 50 55 60

Pro Pro Ser Gln Leu Asp Ser Gln Ile Asp Asp Phe Thr Gly Phe Ser
 65 70 75 80

Lys Asp Gly Met Met Gln Lys Pro Gly Ser Asn Ala Pro Val Gly Gly
 85 90 95

25642

Asn Val Thr Ser Ser Phe Ser Gly Asp Asp Leu Glu Cys Arg Glu Thr
100 105 110

Ala Ser Ser Pro Lys Ser Gln Arg Glu Ile Asn Ala Asp Ile Lys Arg
115 120 125

Lys Leu Val Lys Glu Leu Arg Cys Val Gly Gln Lys Tyr Glu Lys Ile
130 135 140

Phe Glu Met Leu Glu Gly Val Gln Gly Pro Thr Ala Val Arg Lys Arg
145 150 155 160

Phe Phe Glu Ser Ile Ile Lys Glu Ala Ala Arg Cys Met Arg Arg Asp
165 170 175

Phe Val Lys His Leu Lys Lys Lys Leu Lys Arg Met Ile
180 185

<210> 11483
<211> 189
<212> PRT
<213> Homo sapiens

<220>
<221> source
<223> /note="Payload ID: 2252"

<220>
<221> source
<223> /note="Gene Symbol: CT45A5"

<220>
<221> source
<223> /note="Gene Name:
cancer/testis antigen family 45, member A5"

<220>
<221> source
<223> /note="Uniprot ID: P0DMU8"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000483658"

<400> 11483
Met Thr Asp Lys Thr Glu Lys Val Ala Val Asp Pro Glu Thr Val Phe
1 5 10 15

Lys Arg Pro Arg Glu Cys Asp Ser Pro Ser Tyr Gln Lys Arg Gln Arg

20					25					30					
Met	Ala	Leu	Leu	Ala	Arg	Lys	Gln	Gly	Ala	Gly	Asp	Ser	Leu	Ile	Ala
		35					40					45			
Gly	Ser	Ala	Met	Ser	Lys	Glu	Lys	Lys	Leu	Met	Thr	Gly	His	Ala	Ile
	50					55					60				
Pro	Pro	Ser	Gln	Leu	Asp	Ser	Gln	Ile	Asp	Asp	Phe	Thr	Gly	Phe	Ser
65					70					75					80
Lys	Asp	Gly	Met	Met	Gln	Lys	Pro	Gly	Ser	Asn	Ala	Pro	Val	Gly	Gly
				85					90					95	
Asn	Val	Thr	Ser	Ser	Phe	Ser	Gly	Asp	Asp	Leu	Glu	Cys	Arg	Glu	Thr
			100					105					110		
Ala	Ser	Ser	Pro	Lys	Ser	Gln	Arg	Glu	Ile	Asn	Ala	Asp	Ile	Lys	Arg
		115					120					125			
Lys	Leu	Val	Lys	Glu	Leu	Arg	Cys	Val	Gly	Gln	Lys	Tyr	Glu	Lys	Ile
	130					135					140				
Phe	Glu	Met	Leu	Glu	Gly	Val	Gln	Gly	Pro	Thr	Ala	Val	Arg	Lys	Arg
145					150					155					160
Phe	Phe	Glu	Ser	Ile	Ile	Lys	Glu	Ala	Ala	Arg	Cys	Met	Arg	Arg	Asp
				165					170					175	
Phe	Val	Lys	His	Leu	Lys	Lys	Lys	Leu	Lys	Arg	Met	Ile			
			180					185							

<210> 11484

<211> 189

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2253"

<220>

<221> source

<223> /note="Gene Symbol: CT45A6"

<220>

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<221> source
<223> /note="Gene Name:
      cancer/testis antigen family 45, member A6"

<220>
<221> source
<223> /note="Uniprot ID: P0DMU7"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000479608"

<400> 11484
Met Thr Asp Lys Thr Glu Lys Val Ala Val Asp Pro Glu Thr Val Phe
1          5          10          15

Lys Arg Pro Arg Glu Cys Asp Ser Pro Ser Tyr Gln Lys Arg Gln Arg
          20          25          30

Met Ala Leu Leu Ala Arg Lys Gln Gly Ala Gly Asp Ser Leu Ile Ala
          35          40          45

Gly Ser Ala Met Ser Lys Glu Lys Lys Leu Met Thr Gly His Ala Ile
50          55          60

Pro Pro Ser Gln Leu Asp Ser Gln Ile Asp Asp Phe Thr Gly Phe Ser
65          70          75          80

Lys Asp Gly Met Met Gln Lys Pro Gly Ser Asn Ala Pro Val Gly Gly
          85          90          95

Asn Val Thr Ser Ser Phe Ser Gly Asp Asp Leu Glu Cys Arg Glu Thr
          100          105          110

Ala Ser Ser Pro Lys Ser Gln Arg Glu Ile Asn Ala Asp Ile Lys Arg
          115          120          125

Lys Leu Val Lys Glu Leu Arg Cys Val Gly Gln Lys Tyr Glu Lys Ile
130          135          140

Phe Glu Met Leu Glu Gly Val Gln Gly Pro Thr Ala Val Arg Lys Arg
145          150          155          160

Phe Phe Glu Ser Ile Ile Lys Glu Ala Ala Arg Cys Met Arg Arg Asp
          165          170          175

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Phe Val Lys His Leu Lys Lys Lys Leu Lys Arg Met Ile
180 185

<210> 11485

<211> 189

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2253"

<220>

<221> source

<223> /note="Gene Symbol: CT45A6"

<220>

<221> source

<223> /note="Gene Name:
cancer/testis antigen family 45, member A6"

<220>

<221> source

<223> /note="Uniprot ID: P0DMU7"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000483910"

<400> 11485

Met Thr Asp Lys Thr Glu Lys Val Ala Val Asp Pro Glu Thr Val Phe
1 5 10 15

Lys Arg Pro Arg Glu Cys Asp Ser Pro Ser Tyr Gln Lys Arg Gln Arg
20 25 30

Met Ala Leu Leu Ala Arg Lys Gln Gly Ala Gly Asp Ser Leu Ile Ala
35 40 45

Gly Ser Ala Met Ser Lys Glu Lys Lys Leu Met Thr Gly His Ala Ile
50 55 60

Pro Pro Ser Gln Leu Asp Ser Gln Ile Asp Asp Phe Thr Gly Phe Ser
65 70 75 80

Lys Asp Gly Met Met Gln Lys Pro Gly Ser Asn Ala Pro Val Gly Gly
85 90 95

Asn Val Thr Ser Ser Phe Ser Gly Asp Asp Leu Glu Cys Arg Glu Thr
100 105 110

Ala Ser Ser Pro Lys Ser Gln Arg Glu Ile Asn Ala Asp Ile Lys Arg
115 120 125

Lys Leu Val Lys Glu Leu Arg Cys Val Gly Gln Lys Tyr Glu Lys Ile
130 135 140

Phe Glu Met Leu Glu Gly Val Gln Gly Pro Thr Ala Val Arg Lys Arg
145 150 155 160

Phe Phe Glu Ser Ile Ile Lys Glu Ala Ala Arg Cys Met Arg Arg Asp
165 170 175

Phe Val Lys His Leu Lys Lys Lys Leu Lys Arg Met Ile
180 185

<210> 11486
<211> 189
<212> PRT
<213> Homo sapiens

<220>
<221> source
<223> /note="Payload ID: 2254"

<220>
<221> source
<223> /note="Gene Symbol: CT45A7"

<220>
<221> source
<223> /note="Gene Name:
cancer/testis antigen family 45, member A7"

<220>
<221> source
<223> /note="Uniprot ID: P0DMV0"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000480765"

<400> 11486
Met Thr Asp Lys Thr Glu Lys Val Ala Val Asp Pro Glu Thr Val Phe
1 5 10 15

Lys Arg Pro Arg Glu Cys Asp Ser Pro Ser Tyr Gln Lys Arg Gln Arg
20 25 30

Met Ala Leu Leu Ala Arg Lys Gln Gly Ala Gly Asp Ser Leu Ile Ala
35 40 45

Gly Ser Ala Met Ser Lys Glu Lys Lys Leu Met Thr Gly His Ala Ile
50 55 60

Pro Pro Ser Gln Leu Asp Ser Gln Ile Asp Asp Phe Thr Gly Phe Ser
65 70 75 80

Lys Asp Gly Met Met Gln Lys Pro Gly Ser Asn Ala Pro Val Gly Gly
85 90 95

Asn Val Thr Ser Ser Phe Ser Gly Asp Asp Leu Glu Cys Arg Glu Thr
100 105 110

Ala Ser Ser Pro Lys Ser Gln Arg Glu Ile Asn Ala Asp Ile Lys Arg
115 120 125

Lys Leu Val Lys Glu Leu Arg Cys Val Gly Gln Lys Tyr Glu Lys Ile
130 135 140

Phe Glu Met Leu Glu Gly Val Gln Gly Pro Thr Ala Val Arg Lys Arg
145 150 155 160

Phe Phe Glu Ser Ile Ile Lys Glu Ala Ala Arg Cys Met Arg Arg Asp
165 170 175

Phe Val Lys His Leu Lys Lys Lys Leu Lys Arg Met Ile
180 185

<210> 11487
<211> 189
<212> PRT
<213> Homo sapiens

<220>
<221> source
<223> /note="Payload ID: 2254"

<220>
<221> source
<223> /note="Gene Symbol: CT45A7"

<220>
<221> source
<223> /note="Gene Name:
cancer/testis antigen family 45, member A7"

<220>
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 <223> /note="Uniprot ID: P0DMV0"

<220>
 <221> source
 <223> /note="ENSP ID: ENSP00000482241"

<400> 11487
 Met Thr Asp Lys Thr Glu Lys Val Ala Val Asp Pro Glu Thr Val Phe
 1 5 10 15

Lys Arg Pro Arg Glu Cys Asp Ser Pro Ser Tyr Gln Lys Arg Gln Arg
 20 25 30

Met Ala Leu Leu Ala Arg Lys Gln Gly Ala Gly Asp Ser Leu Ile Ala
 35 40 45

Gly Ser Ala Met Ser Lys Glu Lys Lys Leu Met Thr Gly His Ala Ile
 50 55 60

Pro Pro Ser Gln Leu Asp Ser Gln Ile Asp Asp Phe Thr Gly Phe Ser
 65 70 75 80

Lys Asp Gly Met Met Gln Lys Pro Gly Ser Asn Ala Pro Val Gly Gly
 85 90 95

Asn Val Thr Ser Ser Phe Ser Gly Asp Asp Leu Glu Cys Arg Glu Thr
 100 105 110

Ala Ser Ser Pro Lys Ser Gln Arg Glu Ile Asn Ala Asp Ile Lys Arg
 115 120 125

Lys Leu Val Lys Glu Leu Arg Cys Val Gly Gln Lys Tyr Glu Lys Ile
 130 135 140

Phe Glu Met Leu Glu Gly Val Gln Gly Pro Thr Ala Val Arg Lys Arg
 145 150 155 160

Phe Phe Glu Ser Ile Ile Lys Glu Ala Ala Arg Cys Met Arg Arg Asp
 165 170 175

Phe Val Lys His Leu Lys Lys Lys Leu Lys Arg Met Ile
 180 185

<210> 11488
 <211> 189
 <212> PRT
 <213> Homo sapiens

 <220>
 <221> source
 <223> /note="Payload ID: 2255"

 <220>
 <221> source
 <223> /note="Gene Symbol: CT45A8"

 <220>
 <221> source
 <223> /note="Gene Name:
 cancer/testis antigen family 45, member A8"

 <220>
 <221> source
 <223> /note="Uniprot ID: P0DMV1"

 <220>
 <221> source
 <223> /note="ENSP ID: ENSP00000480644"

 <400> 11488
 Met Thr Asp Lys Thr Glu Lys Val Ala Val Asp Pro Glu Thr Val Phe
 1 5 10 15

 Lys Arg Pro Arg Glu Cys Asp Ser Pro Ser Tyr Gln Lys Arg Gln Arg
 20 25 30

 Met Ala Leu Leu Ala Arg Lys Gln Gly Ala Gly Asp Ser Leu Ile Ala
 35 40 45

 Gly Ser Ala Met Ser Lys Glu Lys Lys Leu Met Thr Gly His Ala Ile
 50 55 60

 Pro Pro Ser Gln Leu Asp Ser Gln Ile Asp Asp Phe Thr Gly Phe Ser
 65 70 75 80

 Lys Asp Arg Met Met Gln Lys Pro Gly Ser Asn Ala Pro Val Gly Gly
 85 90 95

 Asn Val Thr Ser Ser Phe Ser Gly Asp Asp Leu Glu Cys Arg Glu Thr
 100 105 110

 Ala Phe Ser Pro Lys Ser Gln Gln Glu Ile Asn Ala Asp Ile Lys Arg

Gly Ser Ala Met Ser Lys Glu Lys Lys Leu Met Thr Gly His Ala Ile
50 55 60

Pro Pro Ser Gln Leu Asp Ser Gln Ile Asp Asp Phe Thr Gly Phe Ser
65 70 75 80

Lys Asp Arg Met Met Gln Lys Pro Gly Ser Asn Ala Pro Val Gly Gly
85 90 95

Asn Val Thr Ser Ser Phe Ser Gly Asp Asp Leu Glu Cys Arg Glu Thr
100 105 110

Ala Phe Ser Pro Lys Ser Gln Gln Glu Ile Asn Ala Asp Ile Lys Arg
115 120 125

Gln Leu Val Lys Glu Leu Arg Cys Val Gly Gln Lys Tyr Glu Lys Ile
130 135 140

Phe Glu Met Leu Glu Gly Val Gln Gly Pro Thr Ala Val Arg Lys Arg
145 150 155 160

Phe Phe Glu Ser Ile Ile Lys Glu Ala Ala Arg Cys Met Arg Arg Asp
165 170 175

Phe Val Lys His Leu Lys Lys Lys Leu Lys Arg Met Ile
180 185

<210> 11490
<211> 189
<212> PRT
<213> Homo sapiens

<220>
<221> source
<223> /note="Payload ID: 2256"

<220>
<221> source
<223> /note="Gene Symbol: CT45A9"

<220>
<221> source
<223> /note="Gene Name:
cancer/testis antigen family 45, member A9"

<220>
<221> source

<223> /note="Uniprot ID: P0DMV2"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000475060"

<400> 11490

Met Thr Asp Lys Thr Glu Lys Val Ala Val Asp Pro Glu Thr Val Phe
1 5 10 15

Lys Arg Pro Arg Glu Cys Asp Ser Pro Ser Tyr Gln Lys Arg Gln Arg
20 25 30

Met Ala Leu Leu Ala Arg Lys Gln Gly Ala Gly Asp Ser Leu Ile Ala
35 40 45

Gly Ser Ala Met Ser Lys Glu Lys Lys Leu Met Thr Gly His Ala Ile
50 55 60

Pro Pro Ser Gln Leu Asp Ser Gln Ile Asp Asp Phe Thr Gly Phe Ser
65 70 75 80

Lys Asp Arg Met Met Gln Lys Pro Gly Ser Asn Ala Pro Val Gly Gly
85 90 95

Asn Val Thr Ser Ser Phe Ser Gly Asp Asp Leu Glu Cys Arg Glu Thr
100 105 110

Ala Phe Ser Pro Lys Ser Gln Gln Glu Ile Asn Ala Asp Ile Lys Arg
115 120 125

Gln Leu Val Lys Glu Leu Arg Cys Val Gly Gln Lys Tyr Glu Lys Ile
130 135 140

Phe Glu Met Leu Glu Gly Val Gln Gly Pro Thr Ala Val Arg Lys Arg
145 150 155 160

Phe Phe Glu Ser Ile Ile Lys Glu Ala Ala Arg Cys Met Arg Arg Asp
165 170 175

Phe Val Lys His Leu Lys Lys Lys Leu Lys Arg Met Ile
180 185

<210> 11491

<211> 189

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<212> PRT
<213> Homo sapiens

<220>
<221> source
<223> /note="Payload ID: 2256"

<220>
<221> source
<223> /note="Gene Symbol: CT45A9"

<220>
<221> source
<223> /note="Gene Name:
        cancer/testis antigen family 45, member A9"

<220>
<221> source
<223> /note="Uniprot ID: P0DMV2"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000483637"

<400> 11491
Met Thr Asp Lys Thr Glu Lys Val Ala Val Asp Pro Glu Thr Val Phe
1              5              10              15

Lys Arg Pro Arg Glu Cys Asp Ser Pro Ser Tyr Gln Lys Arg Gln Arg
                20              25              30

Met Ala Leu Leu Ala Arg Lys Gln Gly Ala Gly Asp Ser Leu Ile Ala
        35              40              45

Gly Ser Ala Met Ser Lys Glu Lys Lys Leu Met Thr Gly His Ala Ile
        50              55              60

Pro Pro Ser Gln Leu Asp Ser Gln Ile Asp Asp Phe Thr Gly Phe Ser
65              70              75              80

Lys Asp Arg Met Met Gln Lys Pro Gly Ser Asn Ala Pro Val Gly Gly
                85              90              95

Asn Val Thr Ser Ser Phe Ser Gly Asp Asp Leu Glu Cys Arg Glu Thr
                100              105              110

Ala Phe Ser Pro Lys Ser Gln Gln Glu Ile Asn Ala Asp Ile Lys Arg
        115              120              125

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Gln Leu Val Lys Glu Leu Arg Cys Val Gly Gln Lys Tyr Glu Lys Ile
 130 135 140

Phe Glu Met Leu Glu Gly Val Gln Gly Pro Thr Ala Val Arg Lys Arg
 145 150 155 160

Phe Phe Glu Ser Ile Ile Lys Glu Ala Ala Arg Cys Met Arg Arg Asp
 165 170 175

Phe Val Lys His Leu Lys Lys Lys Leu Lys Arg Met Ile
 180 185

<210> 11492
 <211> 288
 <212> PRT
 <213> Homo sapiens

<220>
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 <223> /note="Payload ID: 2257"

<220>
 <221> source
 <223> /note="Gene Symbol: CT47A1"

<220>
 <221> source
 <223> /note="Gene Name:
 cancer/testis antigen family 47, member A1"

<220>
 <221> source
 <223> /note="Uniprot ID: Q5JQC4"

<220>
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 <223> /note="ENSP ID: ENSP00000393315"

<400> 11492
 Met Ser Ala Thr Gly Asp Arg His Pro Thr Gln Gly Asp Gln Glu Ala
 1 5 10 15

Pro Val Ser Gln Glu Gly Ala Gln Ala Glu Ala Ala Gly Ala Gly Asn
 20 25 30

Gln Glu Gly Gly Asp Ser Gly Pro Asp Ser Ser Asp Val Val Pro Ala
 35 40 45

Ala Glu Val Val Gly Val Ala Gly Pro Val Glu Gly Leu Gly Glu Glu
 50 55 60

Glu	Gly	Glu	Gln	Ala	Ala	Gly	Leu	Ala	Ala	Val	Pro	Arg	Gly	Gly	Ser	
65					70					75					80	
Ala	Glu	Glu	Asp	Ser	Asp	Ile	Gly	Pro	Ala	Thr	Glu	Glu	Glu	Glu	Glu	
				85					90					95		
Glu	Glu	Gly	Asn	Glu	Ala	Ala	Asn	Phe	Asp	Leu	Ala	Val	Val	Ala	Arg	
			100					105					110			
Arg	Tyr	Pro	Ala	Ser	Gly	Ile	His	Phe	Val	Leu	Leu	Asp	Met	Val	His	
		115					120						125			
Ser	Leu	Leu	His	Arg	Leu	Ser	His	Asn	Asp	His	Ile	Leu	Ile	Glu	Asn	
	130					135					140					
Arg	Gln	Leu	Ser	Arg	Leu	Met	Val	Gly	Pro	His	Ala	Ala	Ala	Arg	Asn	
145					150					155					160	
Leu	Trp	Gly	Asn	Leu	Pro	Pro	Leu	Leu	Leu	Pro	Gln	Arg	Leu	Gly	Ala	
				165					170					175		
Gly	Ala	Ala	Ala	Arg	Ala	Gly	Glu	Gly	Leu	Gly	Leu	Ile	Gln	Glu	Ala	
			180					185					190			
Ala	Ser	Val	Pro	Glu	Pro	Ala	Val	Pro	Ala	Asp	Leu	Ala	Glu	Met	Ala	
		195					200					205				
Arg	Glu	Pro	Ala	Glu	Glu	Ala	Ala	Glu	Glu	Lys	Leu	Ser	Glu	Glu	Ala	
	210					215					220					
Thr	Glu	Glu	Pro	Asp	Ala	Glu	Glu	Pro	Ala	Thr	Glu	Glu	Pro	Thr	Ala	
225					230					235					240	
Gln	Glu	Ala	Thr	Ala	Pro	Glu	Glu	Val	Thr	Lys	Ser	Gln	Pro	Glu	Lys	
				245					250					255		
Trp	Asp	Glu	Glu	Ala	Gln	Asp	Ala	Ala	Gly	Glu	Glu	Glu	Lys	Glu	Gln	
			260				265						270			
Glu	Lys	Glu	Lys	Asp	Ala	Glu	Asn	Lys	Val	Lys	Asn	Ser	Lys	Gly	Thr	
		275					280					285				


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<210> 11493
<211> 288
<212> PRT
<213> Homo sapiens

<220>
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<223> /note="Payload ID: 2258"

<220>
<221> source
<223> /note="Gene Symbol: CT47A10"

<220>
<221> source
<223> /note="Gene Name:
        cancer/testis antigen family 47, member A10"

<220>
<221> source
<223> /note="Uniprot ID: Q5JQC4"

<220>
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<223> /note="ENSP ID: ENSP00000411909"

<400> 11493
Met Ser Ala Thr Gly Asp Arg His Pro Thr Gln Gly Asp Gln Glu Ala
1          5          10          15

Pro Val Ser Gln Glu Gly Ala Gln Ala Glu Ala Ala Gly Ala Gly Asn
          20          25          30

Gln Glu Gly Gly Asp Ser Gly Pro Asp Ser Ser Asp Val Val Pro Ala
          35          40          45

Ala Glu Val Val Gly Val Ala Gly Pro Val Glu Gly Leu Gly Glu Glu
          50          55          60

Glu Gly Glu Gln Ala Ala Gly Leu Ala Ala Val Pro Arg Gly Gly Ser
65          70          75          80

Ala Glu Glu Asp Ser Asp Ile Gly Pro Ala Thr Glu Glu Glu Glu Glu
          85          90          95

Glu Glu Gly Asn Glu Ala Ala Asn Phe Asp Leu Ala Val Val Ala Arg
          100          105          110

Arg Tyr Pro Ala Ser Gly Ile His Phe Val Leu Leu Asp Met Val His

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115	120	125
Ser Leu Leu His Arg Leu Ser His Asn Asp His Ile Leu Ile Glu Asn		
130	135	140
Arg Gln Leu Ser Arg Leu Met Val Gly Pro His Ala Ala Ala Arg Asn		
145	150	155
Leu Trp Gly Asn Leu Pro Pro Leu Leu Leu Pro Gln Arg Leu Gly Ala		
	165	170
		175
Gly Ala Ala Ala Arg Ala Gly Glu Gly Leu Gly Leu Ile Gln Glu Ala		
	180	185
		190
Ala Ser Val Pro Glu Pro Ala Val Pro Ala Asp Leu Ala Glu Met Ala		
	195	200
		205
Arg Glu Pro Ala Glu Glu Ala Ala Glu Glu Lys Leu Ser Glu Glu Ala		
210	215	220
Thr Glu Glu Pro Asp Ala Glu Glu Pro Ala Thr Glu Glu Pro Thr Ala		
225	230	235
		240
Gln Glu Ala Thr Ala Pro Glu Glu Val Thr Lys Ser Gln Pro Glu Lys		
	245	250
		255
Trp Asp Glu Glu Ala Gln Asp Ala Ala Gly Glu Glu Glu Lys Glu Gln		
	260	265
		270
Glu Lys Glu Lys Asp Ala Glu Asn Lys Val Lys Asn Ser Lys Gly Thr		
275	280	285

<210> 11494

<211> 288

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2259"

<220>

<221> source

<223> /note="Gene Symbol: CT47A11"

<220>

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<221> source
<223> /note="Gene Name:
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<220>
<221> source
<223> /note="Uniprot ID: Q5JQC4"

<220>
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<223> /note="ENSP ID: ENSP00000410400"

<400> 11494
Met Ser Ala Thr Gly Asp Arg His Pro Thr Gln Gly Asp Gln Glu Ala
1          5          10          15

Pro Val Ser Gln Glu Gly Ala Gln Ala Glu Ala Ala Gly Ala Gly Asn
          20          25          30

Gln Glu Gly Gly Asp Ser Gly Pro Asp Ser Ser Asp Val Val Pro Ala
          35          40          45

Ala Glu Val Val Gly Val Ala Gly Pro Val Glu Gly Leu Gly Glu Glu
          50          55          60

Glu Gly Glu Gln Ala Ala Gly Leu Ala Ala Val Pro Arg Gly Gly Ser
65          70          75          80

Ala Glu Glu Asp Ser Asp Ile Gly Pro Ala Thr Glu Glu Glu Glu Glu
          85          90          95

Glu Glu Gly Asn Glu Ala Ala Asn Phe Asp Leu Ala Val Val Ala Arg
          100          105          110

Arg Tyr Pro Ala Ser Gly Ile His Phe Val Leu Leu Asp Met Val His
          115          120          125

Ser Leu Leu His Arg Leu Ser His Asn Asp His Ile Leu Ile Glu Asn
          130          135          140

Arg Gln Leu Ser Arg Leu Met Val Gly Pro His Ala Ala Ala Arg Asn
145          150          155          160

Leu Trp Gly Asn Leu Pro Pro Leu Leu Leu Pro Gln Arg Leu Gly Ala
          165          170          175

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Gly Ala Ala Ala Arg Ala Gly Glu Gly Leu Gly Leu Ile Gln Glu Ala
180 185 190

Ala Ser Val Pro Glu Pro Ala Val Pro Ala Asp Leu Ala Glu Met Ala
195 200 205

Arg Glu Pro Ala Glu Glu Ala Ala Glu Glu Lys Leu Ser Glu Glu Ala
210 215 220

Thr Glu Glu Pro Asp Ala Glu Glu Pro Ala Thr Glu Glu Pro Thr Ala
225 230 235 240

Gln Glu Ala Thr Ala Pro Glu Glu Val Thr Lys Ser Gln Pro Glu Lys
245 250 255

Trp Asp Glu Glu Ala Gln Asp Ala Ala Gly Glu Glu Glu Lys Glu Gln
260 265 270

Glu Lys Glu Lys Asp Ala Glu Asn Lys Val Lys Asn Ser Lys Gly Thr
275 280 285

<210> 11495
<211> 288
<212> PRT
<213> Homo sapiens

<220>
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<223> /note="Payload ID: 2260"

<220>
<221> source
<223> /note="Gene Symbol: CT47A12"

<220>
<221> source
<223> /note="Gene Name:
cancer/testis antigen family 47, member A12"

<220>
<221> source
<223> /note="Uniprot ID: Q5JQC4"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000391318"

<400> 11495
Met Ser Ala Thr Gly Asp Arg His Pro Thr Gln Gly Asp Gln Glu Ala
1 5 10 15

Pro	Val	Ser	Gln	Glu	Gly	Ala	Gln	Ala	Glu	Ala	Ala	Gly	Ala	Gly	Asn	
			20					25					30			
Gln	Glu	Gly	Gly	Asp	Ser	Gly	Pro	Asp	Ser	Ser	Asp	Val	Val	Pro	Ala	
		35					40					45				
Ala	Glu	Val	Val	Gly	Val	Ala	Gly	Pro	Val	Glu	Gly	Leu	Gly	Glu	Glu	
	50					55					60					
Glu	Gly	Glu	Gln	Ala	Ala	Gly	Leu	Ala	Ala	Val	Pro	Arg	Gly	Gly	Ser	
65					70					75					80	
Ala	Glu	Glu	Asp	Ser	Asp	Ile	Gly	Pro	Ala	Thr	Glu	Glu	Glu	Glu	Glu	
				85					90					95		
Glu	Glu	Gly	Asn	Glu	Ala	Ala	Asn	Phe	Asp	Leu	Ala	Val	Val	Ala	Arg	
			100					105					110			
Arg	Tyr	Pro	Ala	Ser	Gly	Ile	His	Phe	Val	Leu	Leu	Asp	Met	Val	His	
		115					120					125				
Ser	Leu	Leu	His	Arg	Leu	Ser	His	Asn	Asp	His	Ile	Leu	Ile	Glu	Asn	
	130					135					140					
Arg	Gln	Leu	Ser	Arg	Leu	Met	Val	Gly	Pro	His	Ala	Ala	Ala	Arg	Asn	
145					150					155					160	
Leu	Trp	Gly	Asn	Leu	Pro	Pro	Leu	Leu	Leu	Pro	Gln	Arg	Leu	Gly	Ala	
				165					170					175		
Gly	Ala	Ala	Ala	Arg	Ala	Gly	Glu	Gly	Leu	Gly	Leu	Ile	Gln	Glu	Ala	
			180					185					190			
Ala	Ser	Val	Pro	Glu	Pro	Ala	Val	Pro	Ala	Asp	Leu	Ala	Glu	Met	Ala	
		195					200					205				
Arg	Glu	Pro	Ala	Glu	Glu	Ala	Ala	Glu	Glu	Lys	Leu	Ser	Glu	Glu	Ala	
	210					215					220					
Thr	Glu	Glu	Pro	Asp	Ala	Glu	Glu	Pro	Ala	Thr	Glu	Glu	Pro	Thr	Ala	
225					230					235					240	

Gln Glu Ala Thr Ala Pro Glu Glu Val Thr Lys Ser Gln Pro Glu Lys
245 250 255

Trp Asp Glu Glu Ala Gln Asp Ala Ala Gly Glu Glu Glu Lys Glu Gln
260 265 270

Glu Lys Glu Lys Asp Ala Glu Asn Lys Val Lys Asn Ser Lys Gly Thr
275 280 285

<210> 11496
<211> 288
<212> PRT
<213> Homo sapiens

<220>
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<223> /note="Payload ID: 2261"

<220>
<221> source
<223> /note="Gene Symbol: CT47A2"

<220>
<221> source
<223> /note="Gene Name:
cancer/testis antigen family 47, member A2"

<220>
<221> source
<223> /note="Uniprot ID: Q5JQC4"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000414253"

<400> 11496
Met Ser Ala Thr Gly Asp Arg His Pro Thr Gln Gly Asp Gln Glu Ala
1 5 10 15

Pro Val Ser Gln Glu Gly Ala Gln Ala Glu Ala Ala Gly Ala Gly Asn
20 25 30

Gln Glu Gly Gly Asp Ser Gly Pro Asp Ser Ser Asp Val Val Pro Ala
35 40 45

Ala Glu Val Val Gly Val Ala Gly Pro Val Glu Gly Leu Gly Glu Glu
50 55 60

Glu Gly Glu Gln Ala Ala Gly Leu Ala Ala Val Pro Arg Gly Gly Ser
25662

65					70					75					80
Ala	Glu	Glu	Asp	Ser	Asp	Ile	Gly	Pro	Ala	Thr	Glu	Glu	Glu	Glu	Glu
				85					90					95	
Glu	Glu	Gly	Asn	Glu	Ala	Ala	Asn	Phe	Asp	Leu	Ala	Val	Val	Ala	Arg
			100					105					110		
Arg	Tyr	Pro	Ala	Ser	Gly	Ile	His	Phe	Val	Leu	Leu	Asp	Met	Val	His
		115					120					125			
Ser	Leu	Leu	His	Arg	Leu	Ser	His	Asn	Asp	His	Ile	Leu	Ile	Glu	Asn
	130					135					140				
Arg	Gln	Leu	Ser	Arg	Leu	Met	Val	Gly	Pro	His	Ala	Ala	Ala	Arg	Asn
145					150					155					160
Leu	Trp	Gly	Asn	Leu	Pro	Pro	Leu	Leu	Leu	Pro	Gln	Arg	Leu	Gly	Ala
				165					170					175	
Gly	Ala	Ala	Ala	Arg	Ala	Gly	Glu	Gly	Leu	Gly	Leu	Ile	Gln	Glu	Ala
			180					185					190		
Ala	Ser	Val	Pro	Glu	Pro	Ala	Val	Pro	Ala	Asp	Leu	Ala	Glu	Met	Ala
		195					200					205			
Arg	Glu	Pro	Ala	Glu	Glu	Ala	Ala	Glu	Glu	Lys	Leu	Ser	Glu	Glu	Ala
	210					215					220				
Thr	Glu	Glu	Pro	Asp	Ala	Glu	Glu	Pro	Ala	Thr	Glu	Glu	Pro	Thr	Ala
225					230					235					240
Gln	Glu	Ala	Thr	Ala	Pro	Glu	Glu	Val	Thr	Lys	Ser	Gln	Pro	Glu	Lys
				245					250					255	
Trp	Asp	Glu	Glu	Ala	Gln	Asp	Ala	Ala	Gly	Glu	Glu	Glu	Lys	Glu	Gln
			260				265						270		
Glu	Lys	Glu	Lys	Asp	Ala	Glu	Asn	Lys	Val	Lys	Asn	Ser	Lys	Gly	Thr
	275						280					285			

<210> 11497
<211> 288

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<212> PRT
<213> Homo sapiens

<220>
<221> source
<223> /note="Payload ID: 2262"

<220>
<221> source
<223> /note="Gene Symbol: CT47A3"

<220>
<221> source
<223> /note="Gene Name:
        cancer/testis antigen family 47, member A3"

<220>
<221> source
<223> /note="Uniprot ID: Q5JQC4"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000398559"

<400> 11497
Met Ser Ala Thr Gly Asp Arg His Pro Thr Gln Gly Asp Gln Glu Ala
1          5          10          15

Pro Val Ser Gln Glu Gly Ala Gln Ala Glu Ala Ala Gly Ala Gly Asn
          20          25          30

Gln Glu Gly Gly Asp Ser Gly Pro Asp Ser Ser Asp Val Val Pro Ala
          35          40          45

Ala Glu Val Val Gly Val Ala Gly Pro Val Glu Gly Leu Gly Glu Glu
          50          55          60

Glu Gly Glu Gln Ala Ala Gly Leu Ala Ala Val Pro Arg Gly Gly Ser
65          70          75          80

Ala Glu Glu Asp Ser Asp Ile Gly Pro Ala Thr Glu Glu Glu Glu Glu
          85          90          95

Glu Glu Gly Asn Glu Ala Ala Asn Phe Asp Leu Ala Val Val Ala Arg
          100          105          110

Arg Tyr Pro Ala Ser Gly Ile His Phe Val Leu Leu Asp Met Val His
          115          120          125

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Ser Leu Leu His Arg Leu Ser His Asn Asp His Ile Leu Ile Glu Asn
 130 135 140
 Arg Gln Leu Ser Arg Leu Met Val Gly Pro His Ala Ala Ala Arg Asn
 145 150 155 160
 Leu Trp Gly Asn Leu Pro Pro Leu Leu Leu Pro Gln Arg Leu Gly Ala
 165 170 175
 Gly Ala Ala Ala Arg Ala Gly Glu Gly Leu Gly Leu Ile Gln Glu Ala
 180 185 190
 Ala Ser Val Pro Glu Pro Ala Val Pro Ala Asp Leu Ala Glu Met Ala
 195 200 205
 Arg Glu Pro Ala Glu Glu Ala Ala Glu Glu Lys Leu Ser Glu Glu Ala
 210 215 220
 Thr Glu Glu Pro Asp Ala Glu Glu Pro Ala Thr Glu Glu Pro Thr Ala
 225 230 235 240
 Gln Glu Ala Thr Ala Pro Glu Glu Val Thr Lys Ser Gln Pro Glu Lys
 245 250 255
 Trp Asp Glu Glu Ala Gln Asp Ala Ala Gly Glu Glu Glu Lys Glu Gln
 260 265 270
 Glu Lys Glu Lys Asp Ala Glu Asn Lys Val Lys Asn Ser Lys Gly Thr
 275 280 285

<210> 11498

<211> 288

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2263"

<220>

<221> source

<223> /note="Gene Symbol: CT47A4"

<220>

<221> source

<223> /note="Gene Name:
cancer/testis antigen family 47, member A4"

<220>
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 <223> /note="Uniprot ID: Q5JQC4"

<220>
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 <223> /note="ENSP ID: ENSP00000389513"

<400> 11498

Met Ser Ala Thr Gly Asp Arg His Pro Thr Gln Gly Asp Gln Glu Ala
 1 5 10 15

Pro Val Ser Gln Glu Gly Ala Gln Ala Glu Ala Ala Gly Ala Gly Asn
 20 25 30

Gln Glu Gly Gly Asp Ser Gly Pro Asp Ser Ser Asp Val Val Pro Ala
 35 40 45

Ala Glu Val Val Gly Val Ala Gly Pro Val Glu Gly Leu Gly Glu Glu
 50 55 60

Glu Gly Glu Gln Ala Ala Gly Leu Ala Ala Val Pro Arg Gly Gly Ser
 65 70 75 80

Ala Glu Glu Asp Ser Asp Ile Gly Pro Ala Thr Glu Glu Glu Glu Glu
 85 90 95

Glu Glu Gly Asn Glu Ala Ala Asn Phe Asp Leu Ala Val Val Ala Arg
 100 105 110

Arg Tyr Pro Ala Ser Gly Ile His Phe Val Leu Leu Asp Met Val His
 115 120 125

Ser Leu Leu His Arg Leu Ser His Asn Asp His Ile Leu Ile Glu Asn
 130 135 140

Arg Gln Leu Ser Arg Leu Met Val Gly Pro His Ala Ala Ala Arg Asn
 145 150 155 160

Leu Trp Gly Asn Leu Pro Pro Leu Leu Leu Pro Gln Arg Leu Gly Ala
 165 170 175

Gly Ala Ala Ala Arg Ala Gly Glu Gly Leu Gly Leu Ile Gln Glu Ala
 180 185 190

Ala Ser Val Pro Glu Pro Ala Val Pro Ala Asp Leu Ala Glu Met Ala
195 200 205

Arg Glu Pro Ala Glu Glu Ala Ala Glu Glu Lys Leu Ser Glu Glu Ala
210 215 220

Thr Glu Glu Pro Asp Ala Glu Glu Pro Ala Thr Glu Glu Pro Thr Ala
225 230 235 240

Gln Glu Ala Thr Ala Pro Glu Glu Val Thr Lys Ser Gln Pro Glu Lys
245 250 255

Trp Asp Glu Glu Ala Gln Asp Ala Ala Gly Glu Glu Glu Lys Glu Gln
260 265 270

Glu Lys Glu Lys Asp Ala Glu Asn Lys Val Lys Asn Ser Lys Gly Thr
275 280 285

<210> 11499
<211> 288
<212> PRT
<213> Homo sapiens

<220>
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<223> /note="Payload ID: 2264"

<220>
<221> source
<223> /note="Gene Symbol: CT47A5"

<220>
<221> source
<223> /note="Gene Name:
cancer/testis antigen family 47, member A5"

<220>
<221> source
<223> /note="Uniprot ID: Q5JQC4"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000390070"

<400> 11499
Met Ser Ala Thr Gly Asp Arg His Pro Thr Gln Gly Asp Gln Glu Ala
1 5 10 15

Pro Val Ser Gln Glu Gly Ala Gln Ala Glu Ala Ala Gly Ala Gly Asn
25667

20							25					30						
Gln	Glu	Gly	Gly	Asp	Ser	Gly	Pro	Asp	Ser	Ser	Asp	Val	Val	Pro	Ala			
		35					40					45						
Ala	Glu	Val	Val	Gly	Val	Ala	Gly	Pro	Val	Glu	Gly	Leu	Gly	Glu	Glu			
	50					55					60							
Glu	Gly	Glu	Gln	Ala	Ala	Gly	Leu	Ala	Ala	Val	Pro	Arg	Gly	Gly	Ser			
65					70					75					80			
Ala	Glu	Glu	Asp	Ser	Asp	Ile	Gly	Pro	Ala	Thr	Glu	Glu	Glu	Glu	Glu			
				85					90					95				
Glu	Glu	Gly	Asn	Glu	Ala	Ala	Asn	Phe	Asp	Leu	Ala	Val	Val	Ala	Arg			
			100					105					110					
Arg	Tyr	Pro	Ala	Ser	Gly	Ile	His	Phe	Val	Leu	Leu	Asp	Met	Val	His			
		115					120					125						
Ser	Leu	Leu	His	Arg	Leu	Ser	His	Asn	Asp	His	Ile	Leu	Ile	Glu	Asn			
	130					135					140							
Arg	Gln	Leu	Ser	Arg	Leu	Met	Val	Gly	Pro	His	Ala	Ala	Ala	Arg	Asn			
145					150					155					160			
Leu	Trp	Gly	Asn	Leu	Pro	Pro	Leu	Leu	Leu	Pro	Gln	Arg	Leu	Gly	Ala			
				165					170					175				
Gly	Ala	Ala	Ala	Arg	Ala	Gly	Glu	Gly	Leu	Gly	Leu	Ile	Gln	Glu	Ala			
			180					185					190					
Ala	Ser	Val	Pro	Glu	Pro	Ala	Val	Pro	Ala	Asp	Leu	Ala	Glu	Met	Ala			
		195					200					205						
Arg	Glu	Pro	Ala	Glu	Glu	Ala	Ala	Glu	Glu	Lys	Leu	Ser	Glu	Glu	Ala			
	210					215					220							
Thr	Glu	Glu	Pro	Asp	Ala	Glu	Glu	Pro	Ala	Thr	Glu	Glu	Pro	Thr	Ala			
225					230					235					240			
Gln	Glu	Ala	Thr	Ala	Pro	Glu	Glu	Val	Thr	Lys	Ser	Gln	Pro	Glu	Lys			
				245					250					255				

Trp Asp Glu Glu Ala Gln Asp Ala Ala Gly Glu Glu Glu Lys Glu Gln
260 265 270

Glu Lys Glu Lys Asp Ala Glu Asn Lys Val Lys Asn Ser Lys Gly Thr
275 280 285

<210> 11500

<211> 288

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2264"

<220>

<221> source

<223> /note="Gene Symbol: CT47A5"

<220>

<221> source

<223> /note="Gene Name:
cancer/testis antigen family 47, member A5"

<220>

<221> source

<223> /note="Uniprot ID: Q5JQC4"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000414509"

<400> 11500

Met Ser Ala Thr Gly Asp Arg His Pro Thr Gln Gly Asp Gln Glu Ala
1 5 10 15

Pro Val Ser Gln Glu Gly Ala Gln Ala Glu Ala Ala Gly Ala Gly Asn
20 25 30

Gln Glu Gly Gly Asp Ser Gly Pro Asp Ser Ser Asp Val Val Pro Ala
35 40 45

Ala Glu Val Val Gly Val Ala Gly Pro Val Glu Gly Leu Gly Glu Glu
50 55 60

Glu Gly Glu Gln Ala Ala Gly Leu Ala Ala Val Pro Arg Gly Gly Ser
65 70 75 80

Ala	Glu	Glu	Asp	Ser	Asp	Ile	Gly	Pro	Ala	Thr	Glu	Glu	Glu	Glu	Glu	
				85					90					95		
Glu	Glu	Gly	Asn	Glu	Ala	Ala	Asn	Phe	Asp	Leu	Ala	Val	Val	Ala	Arg	
			100					105					110			
Arg	Tyr	Pro	Ala	Ser	Gly	Ile	His	Phe	Val	Leu	Leu	Asp	Met	Val	His	
		115					120					125				
Ser	Leu	Leu	His	Arg	Leu	Ser	His	Asn	Asp	His	Ile	Leu	Ile	Glu	Asn	
	130					135					140					
Arg	Gln	Leu	Ser	Arg	Leu	Met	Val	Gly	Pro	His	Ala	Ala	Ala	Arg	Asn	
145					150					155					160	
Leu	Trp	Gly	Asn	Leu	Pro	Pro	Leu	Leu	Leu	Pro	Gln	Arg	Leu	Gly	Ala	
				165					170					175		
Gly	Ala	Ala	Ala	Arg	Ala	Gly	Glu	Gly	Leu	Gly	Leu	Ile	Gln	Glu	Ala	
			180					185					190			
Ala	Ser	Val	Pro	Glu	Pro	Ala	Val	Pro	Ala	Asp	Leu	Ala	Glu	Met	Ala	
		195					200					205				
Arg	Glu	Pro	Ala	Glu	Glu	Ala	Ala	Glu	Glu	Lys	Leu	Ser	Glu	Glu	Ala	
	210					215					220					
Thr	Glu	Glu	Pro	Asp	Ala	Glu	Glu	Pro	Ala	Thr	Glu	Glu	Pro	Thr	Ala	
225					230					235					240	
Gln	Glu	Ala	Thr	Ala	Pro	Glu	Glu	Val	Thr	Lys	Ser	Gln	Pro	Glu	Lys	
				245					250					255		
Trp	Asp	Glu	Glu	Ala	Gln	Asp	Ala	Ala	Gly	Glu	Glu	Glu	Lys	Glu	Gln	
			260					265					270			
Glu	Lys	Glu	Lys	Asp	Ala	Glu	Asn	Lys	Val	Lys	Asn	Ser	Lys	Gly	Thr	
		275					280					285				

<210> 11501

<211> 288

<212> PRT

<213> Homo sapiens

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<220>
<221> source
<223> /note="Payload ID: 2265"

<220>
<221> source
<223> /note="Gene Symbol: CT47A6"

<220>
<221> source
<223> /note="Gene Name:
        cancer/testis antigen family 47, member A6"

<220>
<221> source
<223> /note="Uniprot ID: Q5JQC4"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000399711"

<400> 11501
Met Ser Ala Thr Gly Asp Arg His Pro Thr Gln Gly Asp Gln Glu Ala
1          5          10          15

Pro Val Ser Gln Glu Gly Ala Gln Ala Glu Ala Ala Gly Ala Gly Asn
          20          25          30

Gln Glu Gly Gly Asp Ser Gly Pro Asp Ser Ser Asp Val Val Pro Ala
          35          40          45

Ala Glu Val Val Gly Val Ala Gly Pro Val Glu Gly Leu Gly Glu Glu
          50          55          60

Glu Gly Glu Gln Ala Ala Gly Leu Ala Ala Val Pro Arg Gly Gly Ser
65          70          75          80

Ala Glu Glu Asp Ser Asp Ile Gly Pro Ala Thr Glu Glu Glu Glu Glu
          85          90          95

Glu Glu Gly Asn Glu Ala Ala Asn Phe Asp Leu Ala Val Val Ala Arg
          100          105          110

Arg Tyr Pro Ala Ser Gly Ile His Phe Val Leu Leu Asp Met Val His
          115          120          125

Ser Leu Leu His Arg Leu Ser His Asn Asp His Ile Leu Ile Glu Asn
          130          135          140

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Arg Gln Leu Ser Arg Leu Met Val Gly Pro His Ala Ala Ala Arg Asn
145 150 155 160

Leu Trp Gly Asn Leu Pro Pro Leu Leu Leu Pro Gln Arg Leu Gly Ala
165 170 175

Gly Ala Ala Ala Arg Ala Gly Glu Gly Leu Gly Leu Ile Gln Glu Ala
180 185 190

Ala Ser Val Pro Glu Pro Ala Val Pro Ala Asp Leu Ala Glu Met Ala
195 200 205

Arg Glu Pro Ala Glu Glu Ala Ala Glu Glu Lys Leu Ser Glu Glu Ala
210 215 220

Thr Glu Glu Pro Asp Ala Glu Glu Pro Ala Thr Glu Glu Pro Thr Ala
225 230 235 240

Gln Glu Ala Thr Ala Pro Glu Glu Val Thr Lys Ser Gln Pro Glu Lys
245 250 255

Trp Asp Glu Glu Ala Gln Asp Ala Ala Gly Glu Glu Glu Lys Glu Gln
260 265 270

Glu Lys Glu Lys Asp Ala Glu Asn Lys Val Lys Asn Ser Lys Gly Thr
275 280 285

<210> 11502
<211> 288
<212> PRT
<213> Homo sapiens

<220>
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<223> /note="Payload ID: 2265"

<220>
<221> source
<223> /note="Gene Symbol: CT47A6"

<220>
<221> source
<223> /note="Gene Name:
cancer/testis antigen family 47, member A6"

<220>
<221> source

<223> /note="Uniprot ID: Q5JQC4"

<220>

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<223> /note="ENSP ID: ENSP00000478317"

<400> 11502

Met Ser Ala Thr Gly Asp Arg His Pro Thr Gln Gly Asp Gln Glu Ala
1 5 10 15

Pro Val Ser Gln Glu Gly Ala Gln Ala Glu Ala Ala Gly Ala Gly Asn
20 25 30

Gln Glu Gly Gly Asp Ser Gly Pro Asp Ser Ser Asp Val Val Pro Ala
35 40 45

Ala Glu Val Val Gly Val Ala Gly Pro Val Glu Gly Leu Gly Glu Glu
50 55 60

Glu Gly Glu Gln Ala Ala Gly Leu Ala Ala Val Pro Arg Gly Gly Ser
65 70 75 80

Ala Glu Glu Asp Ser Asp Ile Gly Pro Ala Thr Glu Glu Glu Glu Glu
85 90 95

Glu Glu Gly Asn Glu Ala Ala Asn Phe Asp Leu Ala Val Val Ala Arg
100 105 110

Arg Tyr Pro Ala Ser Gly Ile His Phe Val Leu Leu Asp Met Val His
115 120 125

Ser Leu Leu His Arg Leu Ser His Asn Asp His Ile Leu Ile Glu Asn
130 135 140

Arg Gln Leu Ser Arg Leu Met Val Gly Pro His Ala Ala Ala Arg Asn
145 150 155 160

Leu Trp Gly Asn Leu Pro Pro Leu Leu Leu Pro Gln Arg Leu Gly Ala
165 170 175

Gly Ala Ala Ala Arg Ala Gly Glu Gly Leu Gly Leu Ile Gln Glu Ala
180 185 190

Ala Ser Val Pro Glu Pro Ala Val Pro Ala Asp Leu Ala Glu Met Ala
195 200 205

25673

Arg Glu Pro Ala Glu Glu Ala Ala Glu Glu Lys Leu Ser Glu Glu Ala
 210 215 220

Thr Glu Glu Pro Asp Ala Glu Glu Pro Ala Thr Glu Glu Pro Thr Ala
 225 230 235 240

Gln Glu Ala Thr Ala Pro Glu Glu Val Thr Lys Ser Gln Pro Glu Lys
 245 250 255

Trp Asp Glu Glu Ala Gln Asp Ala Ala Gly Glu Glu Glu Lys Glu Gln
 260 265 270

Glu Lys Glu Lys Asp Ala Glu Asn Lys Val Lys Asn Ser Lys Gly Thr
 275 280 285

<210> 11503
 <211> 288
 <212> PRT
 <213> Homo sapiens

<220>
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 <223> /note="Payload ID: 2266"

<220>
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 <223> /note="Gene Symbol: CT47A7"

<220>
 <221> source
 <223> /note="Gene Name:
 cancer/testis antigen family 47, member A7"

<220>
 <221> source
 <223> /note="Uniprot ID: Q5JQC4"

<220>
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 <223> /note="ENSP ID: ENSP00000392283"

<400> 11503
 Met Ser Ala Thr Gly Asp Arg His Pro Thr Gln Gly Asp Gln Glu Ala
 1 5 10 15

Pro Val Ser Gln Glu Gly Ala Gln Ala Glu Ala Ala Gly Ala Gly Asn
 20 25 30

Gln	Glu	Gly	Gly	Asp	Ser	Gly	Pro	Asp	Ser	Ser	Asp	Val	Val	Pro	Ala	
		35					40					45				
Ala	Glu	Val	Val	Gly	Val	Ala	Gly	Pro	Val	Glu	Gly	Leu	Gly	Glu	Glu	
	50					55					60					
Glu	Gly	Glu	Gln	Ala	Ala	Gly	Leu	Ala	Ala	Val	Pro	Arg	Gly	Gly	Ser	
65					70					75					80	
Ala	Glu	Glu	Asp	Ser	Asp	Ile	Gly	Pro	Ala	Thr	Glu	Glu	Glu	Glu	Glu	
				85					90					95		
Glu	Glu	Gly	Asn	Glu	Ala	Ala	Asn	Phe	Asp	Leu	Ala	Val	Val	Ala	Arg	
			100					105					110			
Arg	Tyr	Pro	Ala	Ser	Gly	Ile	His	Phe	Val	Leu	Leu	Asp	Met	Val	His	
		115					120					125				
Ser	Leu	Leu	His	Arg	Leu	Ser	His	Asn	Asp	His	Ile	Leu	Ile	Glu	Asn	
	130					135					140					
Arg	Gln	Leu	Ser	Arg	Leu	Met	Val	Gly	Pro	His	Ala	Ala	Ala	Arg	Asn	
145					150					155					160	
Leu	Trp	Gly	Asn	Leu	Pro	Pro	Leu	Leu	Leu	Pro	Gln	Arg	Leu	Gly	Ala	
				165					170					175		
Gly	Ala	Ala	Ala	Arg	Ala	Gly	Glu	Gly	Leu	Gly	Leu	Ile	Gln	Glu	Ala	
			180					185					190			
Ala	Ser	Val	Pro	Glu	Pro	Ala	Val	Pro	Ala	Asp	Leu	Ala	Glu	Met	Ala	
		195					200					205				
Arg	Glu	Pro	Ala	Glu	Glu	Ala	Ala	Glu	Glu	Lys	Leu	Ser	Glu	Glu	Ala	
	210					215					220					
Thr	Glu	Glu	Pro	Asp	Ala	Glu	Glu	Pro	Ala	Thr	Glu	Glu	Pro	Thr	Ala	
225					230					235					240	
Gln	Glu	Ala	Thr	Ala	Pro	Glu	Glu	Val	Thr	Lys	Ser	Gln	Pro	Glu	Lys	
				245					250					255		
Trp	Asp	Glu	Glu	Ala	Gln	Asp	Ala	Ala	Gly	Glu	Glu	Glu	Lys	Glu	Gln	

260

265

270

Glu Lys Glu Lys Asp Ala Glu Asn Lys Val Lys Asn Ser Lys Gly Thr
 275 280 285

<210> 11504

<211> 288

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2267"

<220>

<221> source

<223> /note="Gene Symbol: CT47A8"

<220>

<221> source

<223> /note="Gene Name:
 cancer/testis antigen family 47, member A8"

<220>

<221> source

<223> /note="Uniprot ID: Q5JQC4"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000400046"

<400> 11504

Met Ser Ala Thr Gly Asp Arg His Pro Thr Gln Gly Asp Gln Glu Ala
 1 5 10 15

Pro Val Ser Gln Glu Gly Ala Gln Ala Glu Ala Ala Gly Ala Gly Asn
 20 25 30

Gln Glu Gly Gly Asp Ser Gly Pro Asp Ser Ser Asp Val Val Pro Ala
 35 40 45

Ala Glu Val Val Gly Val Ala Gly Pro Val Glu Gly Leu Gly Glu Glu
 50 55 60

Glu Gly Glu Gln Ala Ala Gly Leu Ala Ala Val Pro Arg Gly Gly Ser
 65 70 75 80

Ala Glu Glu Asp Ser Asp Ile Gly Pro Ala Thr Glu Glu Glu Glu Glu
 85 90 95

25676

Glu Glu Gly Asn Glu Ala Ala Asn Phe Asp Leu Ala Val Val Ala Arg
 100 105 110
 Arg Tyr Pro Ala Ser Gly Ile His Phe Val Leu Leu Asp Met Val His
 115 120 125
 Ser Leu Leu His Arg Leu Ser His Asn Asp His Ile Leu Ile Glu Asn
 130 135 140
 Arg Gln Leu Ser Arg Leu Met Val Gly Pro His Ala Ala Ala Arg Asn
 145 150 155 160
 Leu Trp Gly Asn Leu Pro Pro Leu Leu Leu Pro Gln Arg Leu Gly Ala
 165 170 175
 Gly Ala Ala Ala Arg Ala Gly Glu Gly Leu Gly Leu Ile Gln Glu Ala
 180 185 190
 Ala Ser Val Pro Glu Pro Ala Val Pro Ala Asp Leu Ala Glu Met Ala
 195 200 205
 Arg Glu Pro Ala Glu Glu Ala Ala Glu Glu Lys Leu Ser Glu Glu Ala
 210 215 220
 Thr Glu Glu Pro Asp Ala Glu Glu Pro Ala Thr Glu Glu Pro Thr Ala
 225 230 235 240
 Gln Glu Ala Thr Ala Pro Glu Glu Val Thr Lys Ser Gln Pro Glu Lys
 245 250 255
 Trp Asp Glu Glu Ala Gln Asp Ala Ala Gly Glu Glu Glu Lys Glu Gln
 260 265 270
 Glu Lys Glu Lys Asp Ala Glu Asn Lys Val Lys Asn Ser Lys Gly Thr
 275 280 285

<210> 11505

<211> 288

<212> PRT

<213> Homo sapiens

<220>

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<223> /note="Payload ID: 2267"

25677

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<220>
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<223> /note="Gene Symbol: CT47A8"

<220>
<221> source
<223> /note="Gene Name:
      cancer/testis antigen family 47, member A8"

<220>
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<223> /note="Uniprot ID: Q5JQC4"

<220>
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<223> /note="ENSP ID: ENSP00000487301"

<400> 11505
Met Ser Ala Thr Gly Asp Arg His Pro Thr Gln Gly Asp Gln Glu Ala
1          5          10          15

Pro Val Ser Gln Glu Gly Ala Gln Ala Glu Ala Ala Gly Ala Gly Asn
          20          25          30

Gln Glu Gly Gly Asp Ser Gly Pro Asp Ser Ser Asp Val Val Pro Ala
          35          40          45

Ala Glu Val Val Gly Val Ala Gly Pro Val Glu Gly Leu Gly Glu Glu
          50          55          60

Glu Gly Glu Gln Ala Ala Gly Leu Ala Ala Val Pro Arg Gly Gly Ser
65          70          75          80

Ala Glu Glu Asp Ser Asp Ile Gly Pro Ala Thr Glu Glu Glu Glu Glu
          85          90          95

Glu Glu Gly Asn Glu Ala Ala Asn Phe Asp Leu Ala Val Val Ala Arg
          100          105          110

Arg Tyr Pro Ala Ser Gly Ile His Phe Val Leu Leu Asp Met Val His
          115          120          125

Ser Leu Leu His Arg Leu Ser His Asn Asp His Ile Leu Ile Glu Asn
          130          135          140

Arg Gln Leu Ser Arg Leu Met Val Gly Pro His Ala Ala Ala Arg Asn
145          150          155          160

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Leu Trp Gly Asn Leu Pro Pro Leu Leu Leu Pro Gln Arg Leu Gly Ala
165 170 175

Gly Ala Ala Ala Arg Ala Gly Glu Gly Leu Gly Leu Ile Gln Glu Ala
180 185 190

Ala Ser Val Pro Glu Pro Ala Val Pro Ala Asp Leu Ala Glu Met Ala
195 200 205

Arg Glu Pro Ala Glu Glu Ala Ala Glu Glu Lys Leu Ser Glu Glu Ala
210 215 220

Thr Glu Glu Pro Asp Ala Glu Glu Pro Ala Thr Glu Glu Pro Thr Ala
225 230 235 240

Gln Glu Ala Thr Ala Pro Glu Glu Val Thr Lys Ser Gln Pro Glu Lys
245 250 255

Trp Asp Glu Glu Ala Gln Asp Ala Ala Gly Glu Glu Glu Lys Glu Gln
260 265 270

Glu Lys Glu Lys Asp Ala Glu Asn Lys Val Lys Asn Ser Lys Gly Thr
275 280 285

<210> 11506
<211> 288
<212> PRT
<213> Homo sapiens

<220>
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<223> /note="Payload ID: 2268"

<220>
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<223> /note="Gene Symbol: CT47A9"

<220>
<221> source
<223> /note="Gene Name:
cancer/testis antigen family 47, member A9"

<220>
<221> source
<223> /note="Uniprot ID: Q5JQC4"

<220>

<221> source
<223> /note="ENSP ID: ENSP00000408204"

<400> 11506

Met Ser Ala Thr Gly Asp Arg His Pro Thr Gln Gly Asp Gln Glu Ala
1 5 10 15

Pro Val Ser Gln Glu Gly Ala Gln Ala Glu Ala Ala Gly Ala Gly Asn
20 25 30

Gln Glu Gly Gly Asp Ser Gly Pro Asp Ser Ser Asp Val Val Pro Ala
35 40 45

Ala Glu Val Val Gly Val Ala Gly Pro Val Glu Gly Leu Gly Glu Glu
50 55 60

Glu Gly Glu Gln Ala Ala Gly Leu Ala Ala Val Pro Arg Gly Gly Ser
65 70 75 80

Ala Glu Glu Asp Ser Asp Ile Gly Pro Ala Thr Glu Glu Glu Glu Glu
85 90 95

Glu Glu Gly Asn Glu Ala Ala Asn Phe Asp Leu Ala Val Val Ala Arg
100 105 110

Arg Tyr Pro Ala Ser Gly Ile His Phe Val Leu Leu Asp Met Val His
115 120 125

Ser Leu Leu His Arg Leu Ser His Asn Asp His Ile Leu Ile Glu Asn
130 135 140

Arg Gln Leu Ser Arg Leu Met Val Gly Pro His Ala Ala Ala Arg Asn
145 150 155 160

Leu Trp Gly Asn Leu Pro Pro Leu Leu Leu Pro Gln Arg Leu Gly Ala
165 170 175

Gly Ala Ala Ala Arg Ala Gly Glu Gly Leu Gly Leu Ile Gln Glu Ala
180 185 190

Ala Ser Val Pro Glu Pro Ala Val Pro Ala Asp Leu Ala Glu Met Ala
195 200 205

Arg Glu Pro Ala Glu Glu Ala Ala Glu Glu Lys Leu Ser Glu Glu Ala

25680

210 215 220
 Thr Glu Glu Pro Asp Ala Glu Glu Pro Ala Thr Glu Glu Pro Thr Ala
 225 230 235 240
 Gln Glu Ala Thr Ala Pro Glu Glu Val Thr Lys Ser Gln Pro Glu Lys
 245 250 255
 Trp Asp Glu Glu Ala Gln Asp Ala Ala Gly Glu Glu Glu Lys Glu Gln
 260 265 270
 Glu Lys Glu Lys Asp Ala Glu Asn Lys Val Lys Asn Ser Lys Gly Thr
 275 280 285

<210> 11507
 <211> 299
 <212> PRT
 <213> Homo sapiens

<220>
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 <223> /note="Payload ID: 2269"

<220>
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 <223> /note="Gene Symbol: CT47B1"

<220>
 <221> source
 <223> /note="Gene Name:
 cancer/testis antigen family 47, member B1"

<220>
 <221> source
 <223> /note="Uniprot ID: P0C2W7"

<220>
 <221> source
 <223> /note="ENSP ID: ENSP00000360360"

<400> 11507
 Met Ser Ala Thr Gly Asp Arg His Pro Thr Gln Gly Asp Gln Glu Ala
 1 5 10 15

Pro Val Ser Gln Glu Gly Ala Gln Ala Glu Ala Ala Gly Ala Gly Asn
 20 25 30

Gln Glu Gly Gly Asp Ser Gly Pro Asp Ser Ser Asp Met Val Pro Ala
 35 40 45

Ala	Glu	Val	Val	Gly	Val	Ala	Gly	Pro	Val	Glu	Gly	Leu	Gly	Glu	Glu	
50						55					60					
Glu	Gly	Glu	Gln	Ala	Ala	Gly	Leu	Ala	Ala	Val	Pro	Gln	Gly	Gly	Ser	
65					70					75					80	
Ala	Glu	Glu	Asp	Ser	Asp	Ile	Gly	Pro	Ala	Thr	Glu	Glu	Glu	Glu	Glu	
				85					90					95		
Glu	Glu	Glu	Gly	Asn	Glu	Ala	Ala	Asn	Phe	Asp	Leu	Ala	Val	Ala	Thr	
			100					105					110			
Arg	Arg	Tyr	Pro	Ala	Ala	Gly	Ile	Gly	Phe	Val	Phe	Leu	Tyr	Leu	Val	
		115					120					125				
His	Ser	Leu	Leu	Arg	Arg	Leu	Tyr	His	Asn	Asp	His	Ile	Gln	Ile	Ala	
	130					135					140					
Asn	Arg	His	Leu	Ser	Arg	Leu	Met	Val	Gly	Pro	His	Ala	Ala	Val	Pro	
145					150					155					160	
Asn	Leu	Trp	Asp	Asn	Pro	Pro	Leu	Leu	Leu	Leu	Ser	Gln	Arg	Leu	Gly	
				165					170					175		
Ala	Gly	Ala	Ala	Ala	Pro	Glu	Gly	Glu	Gly	Leu	Gly	Leu	Ile	Gln	Glu	
			180					185					190			
Ala	Ala	Ser	Val	Gln	Glu	Ala	Ala	Ser	Val	Pro	Glu	Pro	Ala	Val	Pro	
		195					200					205				
Ala	Asp	Leu	Ala	Glu	Met	Ala	Arg	Glu	Pro	Ala	Glu	Glu	Ala	Ala	Asp	
	210					215					220					
Glu	Lys	Pro	Pro	Glu	Glu	Ala	Ala	Glu	Glu	Lys	Leu	Thr	Glu	Glu	Ala	
225					230					235					240	
Thr	Glu	Glu	Pro	Ala	Ala	Glu	Glu	Pro	Thr	Ser	Glu	Glu	Ala	Val	Ala	
				245					250					255		
Pro	Glu	Glu	Val	Thr	Lys	Ser	Gln	Pro	Glu	Lys	Trp	Asp	Glu	Glu	Ala	
			260					265					270			

Gln Asp Ala Ala Gly Glu Glu Glu Lys Glu Gln Glu Lys Glu Lys Asp
275 280 285

Val Glu Asn Lys Val Lys Asn Ser Lys Gly Thr
290 295

<210> 11508
<211> 36
<212> PRT
<213> Homo sapiens

<220>
<221> source
<223> /note="Payload ID: 2270"

<220>
<221> source
<223> /note="Gene Symbol: CNR1"

<220>
<221> source
<223> /note="Gene Name:
cannabinoid receptor 1 (brain)"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000355418"

<400> 11508
Met Lys Ser Ile Leu Asp Gly Leu Ala Asp Thr Thr Phe Arg Thr Ile
1 5 10 15

Thr Thr Asp Leu Leu Tyr Val Gly Ser Asn Asp Ile Gln Tyr Glu Asp
20 25 30

Ile Lys Gly Glu
35

<210> 11509
<211> 472
<212> PRT
<213> Homo sapiens

<220>
<221> source
<223> /note="Payload ID: 2270"

<220>
<221> source
<223> /note="Gene Symbol: CNR1"

<220>

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<221> source
<223> /note="Gene Name:
        cannabinoid receptor 1 (brain)"

<220>
<221> source
<223> /note="Uniprot ID: P21554"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000358511"

<400> 11509
Met Lys Ser Ile Leu Asp Gly Leu Ala Asp Thr Thr Phe Arg Thr Ile
1          5          10

Thr Thr Asp Leu Leu Tyr Val Gly Ser Asn Asp Ile Gln Tyr Glu Asp
20          25          30

Ile Lys Gly Asp Met Ala Ser Lys Leu Gly Tyr Phe Pro Gln Lys Phe
35          40          45

Pro Leu Thr Ser Phe Arg Gly Ser Pro Phe Gln Glu Lys Met Thr Ala
50          55          60

Gly Asp Asn Pro Gln Leu Val Pro Ala Asp Gln Val Asn Ile Thr Glu
65          70          75          80

Phe Tyr Asn Lys Ser Leu Ser Ser Phe Lys Glu Asn Glu Glu Asn Ile
85          90          95

Gln Cys Gly Glu Asn Phe Met Asp Ile Glu Cys Phe Met Val Leu Asn
100         105         110

Pro Ser Gln Gln Leu Ala Ile Ala Val Leu Ser Leu Thr Leu Gly Thr
115         120         125

Phe Thr Val Leu Glu Asn Leu Leu Val Leu Cys Val Ile Leu His Ser
130         135         140

Arg Ser Leu Arg Cys Arg Pro Ser Tyr His Phe Ile Gly Ser Leu Ala
145         150         155         160

Val Ala Asp Leu Leu Gly Ser Val Ile Phe Val Tyr Ser Phe Ile Asp
165         170         175

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Phe	His	Val	Phe	His	Arg	Lys	Asp	Ser	Arg	Asn	Val	Phe	Leu	Phe	Lys	
			180					185					190			
Leu	Gly	Gly	Val	Thr	Ala	Ser	Phe	Thr	Ala	Ser	Val	Gly	Ser	Leu	Phe	
		195					200					205				
Leu	Thr	Ala	Ile	Asp	Arg	Tyr	Ile	Ser	Ile	His	Arg	Pro	Leu	Ala	Tyr	
	210					215					220					
Lys	Arg	Ile	Val	Thr	Arg	Pro	Lys	Ala	Val	Val	Ala	Phe	Cys	Leu	Met	
225					230					235					240	
Trp	Thr	Ile	Ala	Ile	Val	Ile	Ala	Val	Leu	Pro	Leu	Leu	Gly	Trp	Asn	
				245					250					255		
Cys	Glu	Lys	Leu	Gln	Ser	Val	Cys	Ser	Asp	Ile	Phe	Pro	His	Ile	Asp	
			260					265					270			
Glu	Thr	Tyr	Leu	Met	Phe	Trp	Ile	Gly	Val	Thr	Ser	Val	Leu	Leu	Leu	
		275					280					285				
Phe	Ile	Val	Tyr	Ala	Tyr	Met	Tyr	Ile	Leu	Trp	Lys	Ala	His	Ser	His	
	290					295					300					
Ala	Val	Arg	Met	Ile	Gln	Arg	Gly	Thr	Gln	Lys	Ser	Ile	Ile	Ile	His	
305					310					315					320	
Thr	Ser	Glu	Asp	Gly	Lys	Val	Gln	Val	Thr	Arg	Pro	Asp	Gln	Ala	Arg	
				325					330					335		
Met	Asp	Ile	Arg	Leu	Ala	Lys	Thr	Leu	Val	Leu	Ile	Leu	Val	Val	Leu	
			340					345					350			
Ile	Ile	Cys	Trp	Gly	Pro	Leu	Leu	Ala	Ile	Met	Val	Tyr	Asp	Val	Phe	
		355					360					365				
Gly	Lys	Met	Asn	Lys	Leu	Ile	Lys	Thr	Val	Phe	Ala	Phe	Cys	Ser	Met	
	370					375					380					
Leu	Cys	Leu	Leu	Asn	Ser	Thr	Val	Asn	Pro	Ile	Ile	Tyr	Ala	Leu	Arg	
385					390					395					400	
Ser	Lys	Asp	Leu	Arg	His	Ala	Phe	Arg	Ser	Met	Phe	Pro	Ser	Cys	Glu	

Pro	Leu	Thr	Ser	Phe	Arg	Gly	Ser	Pro	Phe	Gln	Glu	Lys	Met	Thr	Ala	
	50					55					60					
Gly	Asp	Asn	Pro	Gln	Leu	Val	Pro	Ala	Asp	Gln	Val	Asn	Ile	Thr	Glu	
65					70					75					80	
Phe	Tyr	Asn	Lys	Ser	Leu	Ser	Ser	Phe	Lys	Glu	Asn	Glu	Glu	Asn	Ile	
				85					90					95		
Gln	Cys	Gly	Glu	Asn	Phe	Met	Asp	Ile	Glu	Cys	Phe	Met	Val	Leu	Asn	
			100					105					110			
Pro	Ser	Gln	Gln	Leu	Ala	Ile	Ala	Val	Leu	Ser	Leu	Thr	Leu	Gly	Thr	
		115					120					125				
Phe	Thr	Val	Leu	Glu	Asn	Leu	Leu	Val	Leu	Cys	Val	Ile	Leu	His	Ser	
	130					135					140					
Arg	Ser	Leu	Arg	Cys	Arg	Pro	Ser	Tyr	His	Phe	Ile	Gly	Ser	Leu	Ala	
145					150					155					160	
Val	Ala	Asp	Leu	Leu	Gly	Ser	Val	Ile	Phe	Val	Tyr	Ser	Phe	Ile	Asp	
				165					170					175		
Phe	His	Val	Phe	His	Arg	Lys	Asp	Ser	Arg	Asn	Val	Phe	Leu	Phe	Lys	
			180					185					190			
Leu	Gly	Gly	Val	Thr	Ala	Ser	Phe	Thr	Ala	Ser	Val	Gly	Ser	Leu	Phe	
		195					200					205				
Leu	Thr	Ala	Ile	Asp	Arg	Tyr	Ile	Ser	Ile	His	Arg	Pro	Leu	Ala	Tyr	
	210					215					220					
Lys	Arg	Ile	Val	Thr	Arg	Pro	Lys	Ala	Val	Val	Ala	Phe	Cys	Leu	Met	
225					230					235					240	
Trp	Thr	Ile	Ala	Ile	Val	Ile	Ala	Val	Leu	Pro	Leu	Leu	Gly	Trp	Asn	
				245					250					255		
Cys	Glu	Lys	Leu	Gln	Ser	Val	Cys	Ser	Asp	Ile	Phe	Pro	His	Ile	Asp	
			260					265					270			

Glu Thr Tyr Leu Met Phe Trp Ile Gly Val Thr Ser Val Leu Leu Leu
275 280 285

Phe Ile Val Tyr Ala Tyr Met Tyr Ile Leu Trp Lys Ala His Ser His
290 295 300

Ala Val Arg Met Ile Gln Arg Gly Thr Gln Lys Ser Ile Ile Ile His
305 310 315 320

Thr Ser Glu Asp Gly Lys Val Gln Val Thr Arg Pro Asp Gln Ala Arg
325 330 335

Met Asp Ile Arg Leu Ala Lys Thr Leu Val Leu Ile Leu Val Val Leu
340 345 350

Ile Ile Cys Trp Gly Pro Leu Leu Ala Ile Met Val Tyr Asp Val Phe
355 360 365

Gly Lys Met Asn Lys Leu Ile Lys Thr Val Phe Ala Phe Cys Ser Met
370 375 380

Leu Cys Leu Leu Asn Ser Thr Val Asn Pro Ile Ile Tyr Ala Leu Arg
385 390 395 400

Ser Lys Asp Leu Arg His Ala Phe Arg Ser Met Phe Pro Ser Cys Glu
405 410 415

Gly Thr Ala Gln Pro Leu Asp Asn Ser Met Gly Asp Ser Asp Cys Leu
420 425 430

His Lys His Ala Asn Asn Ala Ala Ser Val His Arg Ala Ala Glu Ser
435 440 445

Cys Ile Lys Ser Thr Val Lys Ile Ala Lys Val Thr Met Ser Val Ser
450 455 460

Thr Asp Thr Ser Ala Glu Ala Leu
465 470

<210> 11511

<211> 472

<212> PRT

<213> Homo sapiens


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<220>
<221> source
<223> /note="Payload ID: 2270"

<220>
<221> source
<223> /note="Gene Symbol: CNR1"

<220>
<221> source
<223> /note="Gene Name:
        cannabinoid receptor 1 (brain)"

<220>
<221> source
<223> /note="Uniprot ID: P21554"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000412192"

<400> 11511
Met Lys Ser Ile Leu Asp Gly Leu Ala Asp Thr Thr Phe Arg Thr Ile
1          5          10          15

Thr Thr Asp Leu Leu Tyr Val Gly Ser Asn Asp Ile Gln Tyr Glu Asp
          20          25          30

Ile Lys Gly Asp Met Ala Ser Lys Leu Gly Tyr Phe Pro Gln Lys Phe
          35          40          45

Pro Leu Thr Ser Phe Arg Gly Ser Pro Phe Gln Glu Lys Met Thr Ala
          50          55          60

Gly Asp Asn Pro Gln Leu Val Pro Ala Asp Gln Val Asn Ile Thr Glu
65          70          75          80

Phe Tyr Asn Lys Ser Leu Ser Ser Phe Lys Glu Asn Glu Glu Asn Ile
          85          90          95

Gln Cys Gly Glu Asn Phe Met Asp Ile Glu Cys Phe Met Val Leu Asn
          100          105          110

Pro Ser Gln Gln Leu Ala Ile Ala Val Leu Ser Leu Thr Leu Gly Thr
          115          120          125

Phe Thr Val Leu Glu Asn Leu Leu Val Leu Cys Val Ile Leu His Ser
130          135          140

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Arg	Ser	Leu	Arg	Cys	Arg	Pro	Ser	Tyr	His	Phe	Ile	Gly	Ser	Leu	Ala	145	150	155	160
Val	Ala	Asp	Leu	Leu	Gly	Ser	Val	Ile	Phe	Val	Tyr	Ser	Phe	Ile	Asp	165	170	175	
Phe	His	Val	Phe	His	Arg	Lys	Asp	Ser	Arg	Asn	Val	Phe	Leu	Phe	Lys	180	185	190	
Leu	Gly	Gly	Val	Thr	Ala	Ser	Phe	Thr	Ala	Ser	Val	Gly	Ser	Leu	Phe	195	200	205	
Leu	Thr	Ala	Ile	Asp	Arg	Tyr	Ile	Ser	Ile	His	Arg	Pro	Leu	Ala	Tyr	210	215	220	
Lys	Arg	Ile	Val	Thr	Arg	Pro	Lys	Ala	Val	Val	Ala	Phe	Cys	Leu	Met	225	230	235	240
Trp	Thr	Ile	Ala	Ile	Val	Ile	Ala	Val	Leu	Pro	Leu	Leu	Gly	Trp	Asn	245	250	255	
Cys	Glu	Lys	Leu	Gln	Ser	Val	Cys	Ser	Asp	Ile	Phe	Pro	His	Ile	Asp	260	265	270	
Glu	Thr	Tyr	Leu	Met	Phe	Trp	Ile	Gly	Val	Thr	Ser	Val	Leu	Leu	Leu	275	280	285	
Phe	Ile	Val	Tyr	Ala	Tyr	Met	Tyr	Ile	Leu	Trp	Lys	Ala	His	Ser	His	290	295	300	
Ala	Val	Arg	Met	Ile	Gln	Arg	Gly	Thr	Gln	Lys	Ser	Ile	Ile	Ile	His	305	310	315	320
Thr	Ser	Glu	Asp	Gly	Lys	Val	Gln	Val	Thr	Arg	Pro	Asp	Gln	Ala	Arg	325	330	335	
Met	Asp	Ile	Arg	Leu	Ala	Lys	Thr	Leu	Val	Leu	Ile	Leu	Val	Val	Leu	340	345	350	
Ile	Ile	Cys	Trp	Gly	Pro	Leu	Leu	Ala	Ile	Met	Val	Tyr	Asp	Val	Phe	355	360	365	

Gly Lys Met Asn Lys Leu Ile Lys Thr Val Phe Ala Phe Cys Ser Met
370 375 380

Leu Cys Leu Leu Asn Ser Thr Val Asn Pro Ile Ile Tyr Ala Leu Arg
385 390 395 400

Ser Lys Asp Leu Arg His Ala Phe Arg Ser Met Phe Pro Ser Cys Glu
405 410 415

Gly Thr Ala Gln Pro Leu Asp Asn Ser Met Gly Asp Ser Asp Cys Leu
420 425 430

His Lys His Ala Asn Asn Ala Ala Ser Val His Arg Ala Ala Glu Ser
435 440 445

Cys Ile Lys Ser Thr Val Lys Ile Ala Lys Val Thr Met Ser Val Ser
450 455 460

Thr Asp Thr Ser Ala Glu Ala Leu
465 470

<210> 11512
<211> 439
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<220>
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<220>
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<220>
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<223> /note="Gene Name:
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<220>
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<223> /note="Uniprot ID: P21554"

<220>
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<400> 11512
Met Lys Ser Ile Leu Asp Gly Leu Ala Asp Thr Thr Phe Arg Thr Ile
1 5 10 15

Thr	Thr	Asp	Leu	Leu	Gly	Ser	Pro	Phe	Gln	Glu	Lys	Met	Thr	Ala	Gly	
			20					25					30			
Asp	Asn	Pro	Gln	Leu	Val	Pro	Ala	Asp	Gln	Val	Asn	Ile	Thr	Glu	Phe	
		35					40					45				
Tyr	Asn	Lys	Ser	Leu	Ser	Ser	Phe	Lys	Glu	Asn	Glu	Glu	Asn	Ile	Gln	
	50					55					60					
Cys	Gly	Glu	Asn	Phe	Met	Asp	Ile	Glu	Cys	Phe	Met	Val	Leu	Asn	Pro	
65					70					75					80	
Ser	Gln	Gln	Leu	Ala	Ile	Ala	Val	Leu	Ser	Leu	Thr	Leu	Gly	Thr	Phe	
				85					90					95		
Thr	Val	Leu	Glu	Asn	Leu	Leu	Val	Leu	Cys	Val	Ile	Leu	His	Ser	Arg	
			100					105					110			
Ser	Leu	Arg	Cys	Arg	Pro	Ser	Tyr	His	Phe	Ile	Gly	Ser	Leu	Ala	Val	
		115					120					125				
Ala	Asp	Leu	Leu	Gly	Ser	Val	Ile	Phe	Val	Tyr	Ser	Phe	Ile	Asp	Phe	
	130					135					140					
His	Val	Phe	His	Arg	Lys	Asp	Ser	Arg	Asn	Val	Phe	Leu	Phe	Lys	Leu	
145					150					155					160	
Gly	Gly	Val	Thr	Ala	Ser	Phe	Thr	Ala	Ser	Val	Gly	Ser	Leu	Phe	Leu	
				165					170					175		
Thr	Ala	Ile	Asp	Arg	Tyr	Ile	Ser	Ile	His	Arg	Pro	Leu	Ala	Tyr	Lys	
			180					185					190			
Arg	Ile	Val	Thr	Arg	Pro	Lys	Ala	Val	Val	Ala	Phe	Cys	Leu	Met	Trp	
		195					200					205				
Thr	Ile	Ala	Ile	Val	Ile	Ala	Val	Leu	Pro	Leu	Leu	Gly	Trp	Asn	Cys	
	210					215					220					
Glu	Lys	Leu	Gln	Ser	Val	Cys	Ser	Asp	Ile	Phe	Pro	His	Ile	Asp	Glu	
225					230					235					240	

Thr Tyr Leu Met Phe Trp Ile Gly Val Thr Ser Val Leu Leu Leu Phe
245 250 255

Ile Val Tyr Ala Tyr Met Tyr Ile Leu Trp Lys Ala His Ser His Ala
260 265 270

Val Arg Met Ile Gln Arg Gly Thr Gln Lys Ser Ile Ile Ile His Thr
275 280 285

Ser Glu Asp Gly Lys Val Gln Val Thr Arg Pro Asp Gln Ala Arg Met
290 295 300

Asp Ile Arg Leu Ala Lys Thr Leu Val Leu Ile Leu Val Val Leu Ile
305 310 315 320

Ile Cys Trp Gly Pro Leu Leu Ala Ile Met Val Tyr Asp Val Phe Gly
325 330 335

Lys Met Asn Lys Leu Ile Lys Thr Val Phe Ala Phe Cys Ser Met Leu
340 345 350

Cys Leu Leu Asn Ser Thr Val Asn Pro Ile Ile Tyr Ala Leu Arg Ser
355 360 365

Lys Asp Leu Arg His Ala Phe Arg Ser Met Phe Pro Ser Cys Glu Gly
370 375 380

Thr Ala Gln Pro Leu Asp Asn Ser Met Gly Asp Ser Asp Cys Leu His
385 390 395 400

Lys His Ala Asn Asn Ala Ala Ser Val His Arg Ala Ala Glu Ser Cys
405 410 415

Ile Lys Ser Thr Val Lys Ile Ala Lys Val Thr Met Ser Val Ser Thr
420 425 430

Asp Thr Ser Ala Glu Ala Leu
435

<210> 11513

<211> 78

<212> PRT

<213> Homo sapiens

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<220>
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<220>
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<220>
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<223> /note="Gene Name:
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<220>
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Met Lys Ser Ile Leu Asp Gly Leu Ala Asp Thr Thr Phe Arg Thr Ile
1          5          10          15

Thr Thr Asp Leu Leu Tyr Val Gly Ser Asn Asp Ile Gln Tyr Glu Asp
          20          25          30

Ile Lys Gly Asp Met Ala Ser Lys Leu Gly Tyr Phe Pro Gln Lys Phe
          35          40          45

Pro Leu Thr Ser Phe Arg Gly Ser Pro Phe Gln Glu Lys Met Thr Ala
          50          55          60

Gly Asp Asn Pro Gln Leu Val Pro Ala Asp Gln Val Asn Ile
65          70          75

<210> 11514
<211> 472
<212> PRT
<213> Homo sapiens

<220>
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<220>
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<400> 11514

Met Lys Ser Ile Leu Asp Gly Leu Ala Asp Thr Thr Phe Arg Thr Ile
1 5 10 15

Thr Thr Asp Leu Leu Tyr Val Gly Ser Asn Asp Ile Gln Tyr Glu Asp
20 25 30

Ile Lys Gly Asp Met Ala Ser Lys Leu Gly Tyr Phe Pro Gln Lys Phe
35 40 45

Pro Leu Thr Ser Phe Arg Gly Ser Pro Phe Gln Glu Lys Met Thr Ala
50 55 60

Gly Asp Asn Pro Gln Leu Val Pro Ala Asp Gln Val Asn Ile Thr Glu
65 70 75 80

Phe Tyr Asn Lys Ser Leu Ser Ser Phe Lys Glu Asn Glu Glu Asn Ile
85 90 95

Gln Cys Gly Glu Asn Phe Met Asp Ile Glu Cys Phe Met Val Leu Asn
100 105 110

Pro Ser Gln Gln Leu Ala Ile Ala Val Leu Ser Leu Thr Leu Gly Thr
115 120 125

Phe Thr Val Leu Glu Asn Leu Leu Val Leu Cys Val Ile Leu His Ser
130 135 140

Arg Ser Leu Arg Cys Arg Pro Ser Tyr His Phe Ile Gly Ser Leu Ala
145 150 155 160

Val Ala Asp Leu Leu Gly Ser Val Ile Phe Val Tyr Ser Phe Ile Asp
165 170 175

Phe His Val Phe His Arg Lys Asp Ser Arg Asn Val Phe Leu Phe Lys
180 185 190

Leu Gly Gly Val Thr Ala Ser Phe Thr Ala Ser Val Gly Ser Leu Phe
195 200 205

Leu Thr Ala Ile Asp Arg Tyr Ile Ser Ile His Arg Pro Leu Ala Tyr
210 215 220

Lys Arg Ile Val Thr Arg Pro Lys Ala Val Val Ala Phe Cys Leu Met
225 230 235 240

Trp Thr Ile Ala Ile Val Ile Ala Val Leu Pro Leu Leu Gly Trp Asn
245 250 255

Cys Glu Lys Leu Gln Ser Val Cys Ser Asp Ile Phe Pro His Ile Asp
260 265 270

Glu Thr Tyr Leu Met Phe Trp Ile Gly Val Thr Ser Val Leu Leu Leu
275 280 285

Phe Ile Val Tyr Ala Tyr Met Tyr Ile Leu Trp Lys Ala His Ser His
290 295 300

Ala Val Arg Met Ile Gln Arg Gly Thr Gln Lys Ser Ile Ile Ile His
305 310 315 320

Thr Ser Glu Asp Gly Lys Val Gln Val Thr Arg Pro Asp Gln Ala Arg
325 330 335

Met Asp Ile Arg Leu Ala Lys Thr Leu Val Leu Ile Leu Val Val Leu
340 345 350

Ile Ile Cys Trp Gly Pro Leu Leu Ala Ile Met Val Tyr Asp Val Phe
355 360 365

Gly Lys Met Asn Lys Leu Ile Lys Thr Val Phe Ala Phe Cys Ser Met
370 375 380

Leu Cys Leu Leu Asn Ser Thr Val Asn Pro Ile Ile Tyr Ala Leu Arg
385 390 395 400

Ser Lys Asp Leu Arg His Ala Phe Arg Ser Met Phe Pro Ser Cys Glu
405 410 415

Gly Thr Ala Gln Pro Leu Asp Asn Ser Met Gly Asp Ser Asp Cys Leu

420

425

430

His Lys His Ala Asn Asn Ala Ala Ser Val His Arg Ala Ala Glu Ser
 435 440 445

Cys Ile Lys Ser Thr Val Lys Ile Ala Lys Val Thr Met Ser Val Ser
 450 455 460

Thr Asp Thr Ser Ala Glu Ala Leu
 465 470

<210> 11515

<211> 360

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2271"

<220>

<221> source

<223> /note="Gene Symbol: CNR2"

<220>

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<223> /note="Gene Name:
cannabinoid receptor 2 (macrophage) "

<220>

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<223> /note="Uniprot ID: P34972"

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<223> /note="ENSP ID: ENSP00000363596"

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Met Glu Glu Cys Trp Val Thr Glu Ile Ala Asn Gly Ser Lys Asp Gly
 1 5 10 15

Leu Asp Ser Asn Pro Met Lys Asp Tyr Met Ile Leu Ser Gly Pro Gln
 20 25 30

Lys Thr Ala Val Ala Val Leu Cys Thr Leu Leu Gly Leu Leu Ser Ala
 35 40 45

Leu Glu Asn Val Ala Val Leu Tyr Leu Ile Leu Ser Ser His Gln Leu
 50 55 60

25697

Arg	Arg	Lys	Pro	Ser	Tyr	Leu	Phe	Ile	Gly	Ser	Leu	Ala	Gly	Ala	Asp	65	70	75	80
Phe	Leu	Ala	Ser	Val	Val	Phe	Ala	Cys	Ser	Phe	Val	Asn	Phe	His	Val	85	90	95	
Phe	His	Gly	Val	Asp	Ser	Lys	Ala	Val	Phe	Leu	Leu	Lys	Ile	Gly	Ser	100	105	110	
Val	Thr	Met	Thr	Phe	Thr	Ala	Ser	Val	Gly	Ser	Leu	Leu	Leu	Thr	Ala	115	120	125	
Ile	Asp	Arg	Tyr	Leu	Cys	Leu	Arg	Tyr	Pro	Pro	Ser	Tyr	Lys	Ala	Leu	130	135	140	
Leu	Thr	Arg	Gly	Arg	Ala	Leu	Val	Thr	Leu	Gly	Ile	Met	Trp	Val	Leu	145	150	155	160
Ser	Ala	Leu	Val	Ser	Tyr	Leu	Pro	Leu	Met	Gly	Trp	Thr	Cys	Cys	Pro	165	170	175	
Arg	Pro	Cys	Ser	Glu	Leu	Phe	Pro	Leu	Ile	Pro	Asn	Asp	Tyr	Leu	Leu	180	185	190	
Ser	Trp	Leu	Leu	Phe	Ile	Ala	Phe	Leu	Phe	Ser	Gly	Ile	Ile	Tyr	Thr	195	200	205	
Tyr	Gly	His	Val	Leu	Trp	Lys	Ala	His	Gln	His	Val	Ala	Ser	Leu	Ser	210	215	220	
Gly	His	Gln	Asp	Arg	Gln	Val	Pro	Gly	Met	Ala	Arg	Met	Arg	Leu	Asp	225	230	235	240
Val	Arg	Leu	Ala	Lys	Thr	Leu	Gly	Leu	Val	Leu	Ala	Val	Leu	Leu	Ile	245	250	255	
Cys	Trp	Phe	Pro	Val	Leu	Ala	Leu	Met	Ala	His	Ser	Leu	Ala	Thr	Thr	260	265	270	
Leu	Ser	Asp	Gln	Val	Lys	Lys	Ala	Phe	Ala	Phe	Cys	Ser	Met	Leu	Cys	275	280	285	

Leu Ile Asn Ser Met Val Asn Pro Val Ile Tyr Ala Leu Arg Ser Gly
290 295 300

Glu Ile Arg Ser Ser Ala His His Cys Leu Ala His Trp Lys Lys Cys
305 310 315 320

Val Arg Gly Leu Gly Ser Glu Ala Lys Glu Glu Ala Pro Arg Ser Ser
325 330 335

Val Thr Glu Thr Glu Ala Asp Gly Lys Ile Thr Pro Trp Pro Asp Ser
340 345 350

Arg Asp Leu Asp Leu Ser Asp Cys
355 360

<210> 11516
<211> 164
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<213> Homo sapiens

<220>
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<223> /note="Payload ID: 2272"

<220>
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<220>
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<223> /note="Gene Name:
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<220>
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<223> /note="Uniprot ID: Q96F85"

<220>
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<223> /note="ENSP ID: ENSP00000263655"

<400> 11516
Met Gly Asp Leu Pro Gly Leu Val Arg Leu Ser Ile Ala Leu Arg Ile
1 5 10 15

Gln Pro Asn Asp Gly Pro Val Phe Tyr Lys Val Asp Gly Gln Arg Phe
20 25 30

Gly Gln Asn Arg Thr Ile Lys Leu Leu Thr Gly Ser Ser Tyr Lys Val
35 40 45

Glu Val Lys Ile Lys Pro Ser Thr Leu Gln Val Glu Asn Ile Ser Ile
50 55 60

Gly Gly Val Leu Val Pro Leu Glu Leu Lys Ser Lys Glu Pro Asp Gly
65 70 75 80

Asp Arg Val Val Tyr Thr Gly Thr Tyr Asp Thr Glu Gly Val Thr Pro
85 90 95

Thr Lys Ser Gly Glu Arg Gln Pro Ile Gln Ile Thr Met Pro Phe Thr
100 105 110

Asp Ile Gly Thr Phe Glu Thr Val Trp Gln Val Lys Phe Tyr Asn Tyr
115 120 125

His Lys Arg Asp His Cys Gln Trp Gly Ser Pro Phe Ser Val Ile Glu
130 135 140

Tyr Glu Cys Lys Pro Asn Glu Thr Arg Ser Leu Met Trp Val Asn Lys
145 150 155 160

Glu Ser Phe Leu

<210> 11517
<211> 137
<212> PRT
<213> Homo sapiens

<220>
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<220>
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<400> 11517

Met Gly Asp Leu Pro Gly Leu Val Arg Leu Ser Ile Ala Leu Arg Ile
 1 5 10 15
 Gln Pro Asn Asp Gly Pro Val Phe Tyr Lys Val Asp Gly Gln Arg Phe
 20 25 30
 Gly Gln Asn Arg Thr Ile Lys Leu Leu Thr Gly Ser Ser Tyr Lys Val
 35 40 45
 Glu Val Lys Ile Lys Pro Ser Thr Leu Gln Val Glu Asn Ile Ser Ile
 50 55 60
 Gly Gly Val Leu Val Pro Leu Glu Leu Lys Ser Lys Glu Pro Asp Gly
 65 70 75 80
 Asp Arg Val Val Tyr Thr Gly Thr Tyr Asp Thr Glu Gly Val Thr Pro
 85 90 95
 Thr Lys Ser Gly Glu Arg Gln Pro Ile Gln Ile Thr Met Pro Val Arg
 100 105 110
 Leu Ala Cys Gly Tyr Arg Ser Met Val Pro Trp Lys Met Glu Thr Thr
 115 120 125
 Glu Lys Lys Thr Ile Thr Ile Ser Leu
 130 135

<210> 11518

<211> 128

<212> PRT

<213> Homo sapiens

<220>

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<223> /note="Payload ID: 2272"

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<223> /note="Gene Name:
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<223> /note="Uniprot ID: Q96F85"

<220>
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 Met Gly Asp Leu Pro Gly Leu Val Arg Leu Ser Ile Ala Leu Arg Ile
 1 5 10 15

 Gln Pro Asn Asp Gly Pro Val Phe Tyr Lys Val Asp Gly Gln Arg Phe
 20 25 30

 Gly Gln Asn Arg Thr Ile Lys Leu Leu Thr Gly Ser Ser Tyr Lys Val
 35 40 45

 Glu Val Lys Ile Lys Pro Ser Thr Leu Gln Val Glu Asn Ile Ser Ile
 50 55 60

 Gly Gly Val Leu Val Pro Leu Glu Leu Lys Ser Lys Glu Pro Asp Gly
 65 70 75 80

 Asp Arg Val Val Tyr Thr Gly Thr Tyr Asp Thr Glu Gly Val Thr Pro
 85 90 95

 Thr Lys Ser Gly Glu Arg Gln Pro Ile Gln Ile Thr Met Pro Glu Cys
 100 105 110

 Leu Glu Gln Arg Pro Gln Glu Ile Ser Leu Thr Tyr Glu Cys Glu Glu
 115 120 125

 <210> 11519
 <211> 92
 <212> PRT
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 <220>
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 <220>
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 <400> 11519
 Met Asn Asp Tyr Lys Leu Glu Glu Asp Pro Val Thr Lys Glu Arg Thr
 1 5 10 15

 Phe Lys Arg Phe Ala Pro Arg Lys Gly Asp Lys Ile Tyr Gln Glu Phe
 20 25 30

 Lys Lys Leu Tyr Phe Tyr Ser Asp Ala Tyr Arg Pro Leu Lys Phe Ala
 35 40 45

 Cys Glu Thr Ile Ile Glu Glu Tyr Glu Asp Glu Ile Ser Ser Leu Ile
 50 55 60

 Ala Gln Glu Thr His Tyr Leu Ala Asp Lys Leu Cys Ser Glu Lys Ser
 65 70 75 80

 Asp Leu Cys Glu Thr Ser Ala Asn His Thr Glu Leu
 85 90

 <210> 11520
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 <220>
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 <220>
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<400> 11520
 Met Asn Asp Tyr Lys Leu Glu Glu Asp Pro Val Thr Lys Glu Arg Thr
 1 5 10 15

Phe Lys Arg Phe Ala Pro Arg Lys Gly Asp Lys Ile Tyr Gln Glu Phe
 20 25 30

Lys Lys Leu Tyr Phe Tyr Ser Asp Ala Tyr Arg Pro Leu Lys Phe Ala
 35 40 45

Cys Glu Thr Ile Ile Glu Glu Tyr Glu Asp Glu Ile Ser Ser Leu Ile
 50 55 60

Ala Gln Glu Thr His Tyr Leu Ala Asp Lys Leu Cys Ser Glu Lys Ser
 65 70 75 80

Asp Leu Cys Glu Thr Ser Ala Asn His Thr Glu Leu
 85 90

<210> 11521
 <211> 182
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<220>
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<220>
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 canopy FGF signaling regulator 2"

<220>
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 <223> /note="Uniprot ID: Q9Y2B0"

<220>
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 <223> /note="ENSP ID: ENSP00000273308"

<400> 11521
 Met Lys Gly Trp Gly Trp Leu Ala Leu Leu Leu Gly Ala Leu Leu Gly
 1 5 10 15

Thr	Ala	Trp	Ala	Arg	Arg	Ser	Gln	Asp	Leu	His	Cys	Gly	Ala	Cys	Arg			
			20					25					30					
Ala	Leu	Val	Asp	Glu	Leu	Glu	Trp	Glu	Ile	Ala	Gln	Val	Asp	Pro	Lys			
		35					40					45						
Lys	Thr	Ile	Gln	Met	Gly	Ser	Phe	Arg	Ile	Asn	Pro	Asp	Gly	Ser	Gln			
	50					55					60							
Ser	Val	Val	Glu	Val	Pro	Tyr	Ala	Arg	Ser	Glu	Ala	His	Leu	Thr	Glu			
65					70					75					80			
Leu	Leu	Glu	Glu	Ile	Cys	Asp	Arg	Met	Lys	Glu	Tyr	Gly	Glu	Gln	Ile			
				85					90					95				
Asp	Pro	Ser	Thr	His	Arg	Lys	Asn	Tyr	Val	Arg	Val	Val	Gly	Arg	Asn			
			100					105					110					
Gly	Glu	Ser	Ser	Glu	Leu	Asp	Leu	Gln	Gly	Ile	Arg	Ile	Asp	Ser	Asp			
		115					120					125						
Ile	Ser	Gly	Thr	Leu	Lys	Phe	Ala	Cys	Glu	Ser	Ile	Val	Glu	Glu	Tyr			
	130					135					140							
Glu	Asp	Glu	Leu	Ile	Glu	Phe	Phe	Ser	Arg	Glu	Ala	Asp	Asn	Val	Lys			
145					150					155					160			
Asp	Lys	Leu	Cys	Ser	Lys	Arg	Thr	Asp	Leu	Cys	Asp	His	Ala	Leu	His			
				165					170					175				
Ile	Ser	His	Asp	Glu	Leu													
			180															

<210> 11522

<211> 102

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<223> /note="Gene Name:
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<220>
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<400> 11522
Met Gly Ser Phe Arg Ile Asn Pro Asp Gly Ser Gln Ser Val Val Glu
1 5 10 15

Val Pro Tyr Ala Arg Ser Glu Ala His Leu Thr Glu Leu Leu Glu Glu
20 25 30

Ile Cys Asp Arg Met Lys Glu Tyr Gly Glu Gln Ile Asp Pro Ser Thr
35 40 45

His Arg Lys Asn Tyr Val Arg Val Val Gly Arg Asn Gly Glu Ser Ser
50 55 60

Glu Leu Asp Leu Gln Gly Ile Arg Ile Asp Ser Asp Ile Ser Gly Thr
65 70 75 80

Leu Lys Phe Ala Cys Glu Ser Ile Val Glu Glu Tyr Glu Asp Glu Leu
85 90 95

Ile Glu Phe Phe Ser Arg
100

<210> 11523
<211> 80
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<220>
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canopy FGF signaling regulator 2"

<220>

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 <400> 11523
 Lys Asn Tyr Val Arg Val Val Gly Arg Asn Gly Glu Ser Ser Glu Leu
 1 5 10 15

 Asp Leu Gln Gly Ile Arg Ile Asp Ser Asp Ile Ser Gly Thr Leu Lys
 20 25 30

 Phe Ala Cys Glu Ser Ile Val Glu Glu Tyr Glu Asp Glu Leu Ile Glu
 35 40 45

 Phe Phe Ser Arg Glu Ala Asp Asn Val Lys Asp Lys Leu Cys Ser Lys
 50 55 60

 Arg Thr Asp Leu Cys Asp His Ala Leu His Ile Ser His Asp Glu Leu
 65 70 75 80

 <210> 11524
 <211> 168
 <212> PRT
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 <220>
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 <223> /note="ENSP ID: ENSP00000448809"

 <400> 11524
 Met Lys Gly Trp Gly Trp Leu Ala Leu Leu Leu Gly Ala Leu Leu Gly
 1 5 10 15

 Thr Ala Trp Ala Arg Arg Ser Gln Asp Leu His Cys Gly Ala Cys Arg
 20 25 30

 Ala Leu Val Asp Glu Leu Glu Trp Glu Ile Ala Gln Val Asp Pro Lys
 35 40 45

Lys Thr Ile Gln Met Gly Ser Phe Arg Ile Asn Pro Asp Gly Ser Gln
50 55 60

Ser Val Val Glu Val Pro Tyr Ala Arg Ser Glu Ala His Leu Thr Glu
65 70 75 80

Leu Leu Glu Glu Ile Cys Asp Arg Met Lys Glu Tyr Gly Glu Gln Ile
85 90 95

Asp Pro Ser Thr His Arg Lys Asn Tyr Val Arg Val Val Gly Arg Asn
100 105 110

Gly Glu Ser Ser Glu Leu Asp Leu Gln Gly Ile Arg Ile Asp Ser Asp
115 120 125

Ile Ser Gly Thr Leu Lys Phe Ala Cys Glu Ser Ile Val Glu Glu Tyr
130 135 140

Glu Asp Glu Leu Ile Glu Phe Phe Ser Arg Glu Ala Asp Asn Val Lys
145 150 155 160

Asp Lys Leu Cys Ser Lys Arg Thr
165

<210> 11525
<211> 41
<212> PRT
<213> Homo sapiens

<220>
<221> source
<223> /note="Payload ID: 2274"

<220>
<221> source
<223> /note="Gene Symbol: CNPY2"

<220>
<221> source
<223> /note="Gene Name:
canopy FGF signaling regulator 2"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000449444"

<220>
 <221> MOD_RES
 <222> (1)..(1)
 <223> Any amino acid

<400> 11525
 Xaa Ala Cys Arg Ala Leu Val Asp Glu Leu Glu Trp Glu Ile Ala Gln
 1 5 10 15

 Val Asp Pro Lys Lys Thr Ile Gln Met Gly Ser Phe Arg Ile Asn Pro
 20 25 30

 Asp Gly Ser Gln Ser Val Val Glu Arg
 35 40

<210> 11526
 <211> 278
 <212> PRT
 <213> Homo sapiens

<220>
 <221> source
 <223> /note="Payload ID: 2275"

<220>
 <221> source
 <223> /note="Gene Symbol: CNPY3"

<220>
 <221> source
 <223> /note="Gene Name:
 canopy FGF signaling regulator 3"

<220>
 <221> source
 <223> /note="Uniprot ID: Q9BT09"

<220>
 <221> source
 <223> /note="ENSP ID: ENSP00000361926"

<400> 11526
 Met Asp Ser Met Pro Glu Pro Ala Ser Arg Cys Leu Leu Leu Leu Pro
 1 5 10 15

 Leu Leu Leu Leu Leu Leu Leu Leu Pro Ala Pro Glu Leu Gly Pro
 20 25 30

 Ser Gln Ala Gly Ala Glu Glu Asn Asp Trp Val Arg Leu Pro Ser Lys
 35 40 45

Cys	Glu	Val	Cys	Lys	Tyr	Val	Ala	Val	Glu	Leu	Lys	Ser	Ala	Phe	Glu	
50						55					60					
Glu	Thr	Gly	Lys	Thr	Lys	Glu	Val	Ile	Gly	Thr	Gly	Tyr	Gly	Ile	Leu	
65					70					75					80	
Asp	Gln	Lys	Ala	Ser	Gly	Val	Lys	Tyr	Thr	Lys	Ser	Asp	Leu	Arg	Leu	
				85					90					95		
Ile	Glu	Val	Thr	Glu	Thr	Ile	Cys	Lys	Arg	Leu	Leu	Asp	Tyr	Ser	Leu	
			100					105					110			
His	Lys	Glu	Arg	Thr	Gly	Ser	Asn	Arg	Phe	Ala	Lys	Gly	Met	Ser	Glu	
		115					120					125				
Thr	Phe	Glu	Thr	Leu	His	Asn	Leu	Val	His	Lys	Gly	Val	Lys	Val	Val	
	130					135					140					
Met	Asp	Ile	Pro	Tyr	Glu	Leu	Trp	Asn	Glu	Thr	Ser	Ala	Glu	Val	Ala	
145					150					155					160	
Asp	Leu	Lys	Lys	Gln	Cys	Asp	Val	Leu	Val	Glu	Glu	Phe	Glu	Glu	Val	
				165					170						175	
Ile	Glu	Asp	Trp	Tyr	Arg	Asn	His	Gln	Glu	Glu	Asp	Leu	Thr	Glu	Phe	
			180					185					190			
Leu	Cys	Ala	Asn	His	Val	Leu	Lys	Gly	Lys	Asp	Thr	Ser	Cys	Leu	Ala	
		195					200					205				
Glu	Gln	Trp	Ser	Gly	Lys	Lys	Gly	Asp	Thr	Ala	Ala	Leu	Gly	Gly	Lys	
	210					215					220					
Lys	Ser	Lys	Lys	Lys	Ser	Ser	Arg	Ala	Lys	Ala	Ala	Gly	Gly	Arg	Ser	
225					230					235					240	
Ser	Ser	Ser	Lys	Gln	Arg	Lys	Glu	Leu	Gly	Gly	Leu	Glu	Gly	Asp	Pro	
				245					250					255		
Ser	Pro	Glu	Glu	Asp	Glu	Gly	Ile	Gln	Lys	Ala	Ser	Pro	Leu	Thr	His	
		260						265					270			
Ser	Pro	Pro	Asp	Glu	Leu											

275

<210> 11527

<211> 143

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2275"

<220>

<221> source

<223> /note="Gene Symbol: CNPY3"

<220>

<221> source

<223> /note="Gene Name:
canopy FGF signaling regulator 3"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000377698"

<400> 11527

Met Asp Ser Met Pro Glu Pro Ala Ser Arg Cys Leu Leu Leu Leu Pro
1 5 10 15

Leu Leu Leu Leu Leu Leu Leu Leu Leu Pro Ala Pro Glu Leu Gly Pro
20 25 30

Ser Gln Ala Gly Ala Glu Glu Asn Asp Trp Val Arg Leu Pro Ser Lys
35 40 45

Cys Glu Val Cys Lys Tyr Val Ala Val Glu Leu Lys Ser Ala Phe Glu
50 55 60

Glu Thr Gly Lys Thr Lys Glu Val Ile Gly Thr Gly Tyr Gly Ile Leu
65 70 75 80

Asp Gln Lys Ala Ser Gly Val Lys Tyr Thr Lys Ser Asp Leu Arg Leu
85 90 95

Ile Glu Val Thr Glu Thr Ile Cys Lys Arg Leu Leu Ile Ile Ala Cys
100 105 110

Thr Arg Arg Gly Pro Ala Ala Ile Asp Leu Pro Arg Ala Cys Gln Arg
115 120 125

25711

Pro Leu Arg His Tyr Thr Thr Trp Tyr Thr Lys Gly Ser Arg Trp
 130 135 140

<210> 11528
 <211> 248
 <212> PRT
 <213> Homo sapiens

<220>
 <221> source
 <223> /note="Payload ID: 2276"

<220>
 <221> source
 <223> /note="Gene Symbol: CNPY4"

<220>
 <221> source
 <223> /note="Gene Name:
 canopy FGF signaling regulator 4"

<220>
 <221> source
 <223> /note="Uniprot ID: Q8N129"

<220>
 <221> source
 <223> /note="ENSP ID: ENSP00000262932"

<400> 11528
 Met Gly Pro Val Arg Leu Gly Ile Leu Leu Phe Leu Phe Leu Ala Val
 1 5 10 15

His Glu Ala Trp Ala Gly Met Leu Lys Glu Glu Asp Asp Asp Thr Glu
 20 25 30

Arg Leu Pro Ser Lys Cys Glu Val Cys Lys Leu Leu Ser Thr Glu Leu
 35 40 45

Gln Ala Glu Leu Ser Arg Thr Gly Arg Ser Arg Glu Val Leu Glu Leu
 50 55 60

Gly Gln Val Leu Asp Thr Gly Lys Arg Lys Arg His Val Pro Tyr Ser
 65 70 75 80

Val Ser Glu Thr Arg Leu Glu Glu Ala Leu Glu Asn Leu Cys Glu Arg
 85 90 95

Ile Leu Asp Tyr Ser Val His Ala Glu Arg Lys Gly Ser Leu Arg Tyr

100	105	110
Ala Lys Gly Gln Ser Gln Thr Met	Ala Thr Leu Lys Gly	Leu Val Gln
115	120	125
Lys Gly Val Lys Val Asp Leu Gly Ile Pro Leu Glu	Leu Trp Asp Glu	
130	135	140
Pro Ser Val Glu Val Thr Tyr Leu Lys Lys Gln Cys Glu Thr Met Leu		
145	150	155 160
Glu Glu Phe Glu Asp Ile Val Gly Asp Trp Tyr Phe His His Gln Glu		
165	170	175
Gln Pro Leu Gln Asn Phe Leu Cys Glu Gly His Val Leu Pro Ala Ala		
180	185	190
Glu Thr Ala Cys Leu Gln Glu Thr Trp Thr Gly Lys Glu Ile Thr Asp		
195	200	205
Gly Glu Glu Lys Thr Glu Gly Glu Glu Glu Gln Glu Glu Glu Glu		
210	215	220
Glu Glu Glu Glu Glu Gly Gly Asp Lys Met Thr Lys Thr Gly Ser His		
225	230	235 240
Pro Lys Leu Asp Arg Glu Asp Leu		
245		

<210> 11529

<211> 36

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2276"

<220>

<221> source

<223> /note="Gene Symbol: CNPY4"

<220>

<221> source

<223> /note="Gene Name:
canopy FGF signaling regulator 4"

<220>
 <221> source
 <223> /note="ENSP ID: ENSP00000488362"

 <400> 11529
 Met Ala Thr Leu Lys Gly Leu Val Gln Lys Gly Val Lys Val Asp Leu
 1 5 10 15

 Gly Ile Pro Leu Glu Leu Trp Asp Glu Pro Ser Val Glu Val Thr Tyr
 20 25 30

 Leu Lys Lys Gln
 35

 <210> 11530
 <211> 118
 <212> PRT
 <213> Homo sapiens

 <220>
 <221> source
 <223> /note="Payload ID: 2276"

 <220>
 <221> source
 <223> /note="Gene Symbol: CNPY4"

 <220>
 <221> source
 <223> /note="Gene Name:
 canopy FGF signaling regulator 4"

 <220>
 <221> source
 <223> /note="ENSP ID: ENSP00000488873"

 <220>
 <221> MOD_RES
 <222> (1)..(1)
 <223> Any amino acid

 <400> 11530
 Xaa Cys Lys Leu Leu Ser Thr Glu Leu Gln Ala Glu Leu Ser Arg Thr
 1 5 10 15

 Gly Arg Ser Arg Glu Val Leu Glu Leu Gly Gln Val Leu Asp Thr Gly
 20 25 30

 Lys Arg Lys Arg His Val Pro Tyr Ser Val Ser Glu Thr Arg Leu Glu
 35 40 45

Glu Ala Leu Glu Asn Leu Cys Glu Arg Ile Leu Asp Tyr Ser Val His
50 55 60

Ala Glu Arg Lys Gly Ser Leu Arg Tyr Ala Lys Gly Gln Ser Gln Thr
65 70 75 80

Met Ala Thr Leu Lys Gly Leu Val Gln Lys Gly Val Lys Val Asp Leu
85 90 95

Gly Ile Pro Leu Glu Leu Trp Asp Glu Pro Ser Val Glu Val Thr Tyr
100 105 110

Leu Lys Lys Gln Ser Gly
115

<210> 11531
<211> 835
<212> PRT
<213> Homo sapiens

<220>
<221> source
<223> /note="Payload ID: 2277"

<220>
<221> source
<223> /note="Gene Symbol: CMTR1"

<220>
<221> source
<223> /note="Gene Name:
cap methyltransferase 1"

<220>
<221> source
<223> /note="Uniprot ID: Q8N1G2"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000362550"

<400> 11531
Met Lys Arg Arg Thr Asp Pro Glu Cys Thr Ala Pro Ile Lys Lys Gln
1 5 10 15

Lys Lys Arg Val Ala Glu Leu Ala Leu Ser Leu Ser Ser Thr Ser Asp
20 25 30

Asp Glu Pro Pro Ser Ser Val Ser His Gly Ala Lys Ala Ser Thr Thr

35					40					45					
Ser	Leu	Ser	Gly	Ser	Asp	Ser	Glu	Thr	Glu	Gly	Lys	Gln	His	Ser	Ser
50						55					60				
Asp	Ser	Phe	Asp	Asp	Ala	Phe	Lys	Ala	Asp	Ser	Leu	Val	Glu	Gly	Thr
65					70					75					80
Ser	Ser	Arg	Tyr	Ser	Met	Tyr	Asn	Ser	Val	Ser	Gln	Lys	Leu	Met	Ala
				85					90					95	
Lys	Met	Gly	Phe	Arg	Glu	Gly	Glu	Gly	Leu	Gly	Lys	Tyr	Ser	Gln	Gly
			100					105						110	
Arg	Lys	Asp	Ile	Val	Glu	Ala	Ser	Ser	Gln	Lys	Gly	Arg	Arg	Gly	Leu
		115					120					125			
Gly	Leu	Thr	Leu	Arg	Gly	Phe	Asp	Gln	Glu	Leu	Asn	Val	Asp	Trp	Arg
	130					135					140				
Asp	Glu	Pro	Glu	Pro	Ser	Ala	Cys	Glu	Gln	Val	Ser	Trp	Phe	Pro	Glu
145					150					155					160
Cys	Thr	Thr	Glu	Ile	Pro	Asp	Thr	Gln	Glu	Met	Ser	Asp	Trp	Met	Val
				165					170					175	
Val	Gly	Lys	Arg	Lys	Met	Ile	Ile	Glu	Asp	Glu	Thr	Glu	Phe	Cys	Gly
			180					185					190		
Glu	Glu	Leu	Leu	His	Ser	Val	Leu	Gln	Cys	Lys	Ser	Val	Phe	Asp	Val
		195					200					205			
Leu	Asp	Gly	Glu	Glu	Met	Arg	Arg	Ala	Arg	Thr	Arg	Ala	Asn	Pro	Tyr
	210					215					220				
Glu	Met	Ile	Arg	Gly	Val	Phe	Phe	Leu	Asn	Arg	Ala	Ala	Met	Lys	Met
225					230					235					240
Ala	Asn	Met	Asp	Phe	Val	Phe	Asp	Arg	Met	Phe	Thr	Asn	Pro	Arg	Asp
				245					250					255	
Ser	Tyr	Gly	Lys	Pro	Leu	Val	Lys	Asp	Arg	Glu	Ala	Glu	Leu	Leu	Tyr
			260					265					270		

Phe	Ala	Asp	Val	Cys	Ala	Gly	Pro	Gly	Gly	Phe	Ser	Glu	Tyr	Val	Leu			
		275					280					285						
Trp	Arg	Lys	Lys	Trp	His	Ala	Lys	Gly	Phe	Gly	Met	Thr	Leu	Lys	Gly			
	290					295					300							
Pro	Asn	Asp	Phe	Lys	Leu	Glu	Asp	Phe	Tyr	Ser	Ala	Ser	Ser	Glu	Leu			
305					310					315					320			
Phe	Glu	Pro	Tyr	Tyr	Gly	Glu	Gly	Gly	Ile	Asp	Gly	Asp	Gly	Asp	Ile			
				325					330					335				
Thr	Arg	Pro	Glu	Asn	Ile	Ser	Ala	Phe	Arg	Asn	Phe	Val	Leu	Asp	Asn			
			340					345					350					
Thr	Asp	Arg	Lys	Gly	Val	His	Phe	Leu	Met	Ala	Asp	Gly	Gly	Phe	Ser			
		355					360					365						
Val	Glu	Gly	Gln	Glu	Asn	Leu	Gln	Glu	Ile	Leu	Ser	Lys	Gln	Leu	Leu			
	370					375					380							
Leu	Cys	Gln	Phe	Leu	Met	Ala	Leu	Ser	Ile	Val	Arg	Thr	Gly	Gly	His			
385					390					395					400			
Phe	Ile	Cys	Lys	Thr	Phe	Asp	Leu	Phe	Thr	Pro	Phe	Ser	Val	Gly	Leu			
				405					410					415				
Val	Tyr	Leu	Leu	Tyr	Cys	Cys	Phe	Glu	Arg	Val	Cys	Leu	Phe	Lys	Pro			
			420					425					430					
Ile	Thr	Ser	Arg	Pro	Ala	Asn	Ser	Glu	Arg	Tyr	Val	Val	Cys	Lys	Gly			
		435					440					445						
Leu	Lys	Val	Gly	Ile	Asp	Asp	Val	Arg	Asp	Tyr	Leu	Phe	Ala	Val	Asn			
	450					455					460							
Ile	Lys	Leu	Asn	Gln	Leu	Arg	Asn	Thr	Asp	Ser	Asp	Val	Asn	Leu	Val			
465					470					475					480			
Val	Pro	Leu	Glu	Val	Ile	Lys	Gly	Asp	His	Glu	Phe	Thr	Asp	Tyr	Met			
				485					490					495				

Ile	Arg	Ser	Asn	Glu	Ser	His	Cys	Ser	Leu	Gln	Ile	Lys	Ala	Leu	Ala		
			500					505					510				
Lys	Ile	His	Ala	Phe	Val	Gln	Asp	Thr	Thr	Leu	Ser	Glu	Pro	Arg	Gln		
		515					520					525					
Ala	Glu	Ile	Arg	Lys	Glu	Cys	Leu	Arg	Leu	Trp	Gly	Ile	Pro	Asp	Gln		
	530					535					540						
Ala	Arg	Val	Ala	Pro	Ser	Ser	Ser	Asp	Pro	Lys	Ser	Lys	Phe	Phe	Glu		
545					550					555					560		
Leu	Ile	Gln	Gly	Thr	Glu	Ile	Asp	Ile	Phe	Ser	Tyr	Lys	Pro	Thr	Leu		
				565					570					575			
Leu	Thr	Ser	Lys	Thr	Leu	Glu	Lys	Ile	Arg	Pro	Val	Phe	Asp	Tyr	Arg		
			580					585					590				
Cys	Met	Val	Ser	Gly	Ser	Glu	Gln	Lys	Phe	Leu	Ile	Gly	Leu	Gly	Lys		
		595					600					605					
Ser	Gln	Ile	Tyr	Thr	Trp	Asp	Gly	Arg	Gln	Ser	Asp	Arg	Trp	Ile	Lys		
	610					615					620						
Leu	Asp	Leu	Lys	Thr	Glu	Leu	Pro	Arg	Asp	Thr	Leu	Leu	Ser	Val	Glu		
625					630					635					640		
Ile	Val	His	Glu	Leu	Lys	Gly	Glu	Gly	Lys	Ala	Gln	Arg	Lys	Ile	Ser		
				645					650					655			
Ala	Ile	His	Ile	Leu	Asp	Val	Leu	Val	Leu	Asn	Gly	Thr	Asp	Val	Arg		
			660					665					670				
Glu	Gln	His	Phe	Asn	Gln	Arg	Ile	Gln	Leu	Ala	Glu	Lys	Phe	Val	Lys		
		675					680					685					
Ala	Val	Ser	Lys	Pro	Ser	Arg	Pro	Asp	Met	Asn	Pro	Ile	Arg	Val	Lys		
	690					695					700						
Glu	Val	Tyr	Arg	Leu	Glu	Glu	Met	Glu	Lys	Ile	Phe	Val	Arg	Leu	Glu		
705					710					715					720		

Met Lys Ile Ile Lys Gly Ser Ser Gly Thr Pro Lys Leu Ser Tyr Thr
725 730 735

Gly Arg Asp Asp Arg His Phe Val Pro Met Gly Leu Tyr Ile Val Arg
740 745 750

Thr Val Asn Glu Pro Trp Thr Met Gly Phe Ser Lys Ser Phe Lys Lys
755 760 765

Lys Phe Phe Tyr Asn Lys Lys Thr Lys Asp Ser Thr Phe Asp Leu Pro
770 775 780

Ala Asp Ser Ile Ala Pro Phe His Ile Cys Tyr Tyr Gly Arg Leu Phe
785 790 795 800

Trp Glu Trp Gly Asp Gly Ile Arg Val His Asp Ser Gln Lys Pro Gln
805 810 815

Asp Gln Asp Lys Leu Ser Lys Glu Asp Val Leu Ser Phe Ile Gln Met
820 825 830

His Arg Ala
835

<210> 11532
<211> 156
<212> PRT
<213> Homo sapiens

<220>
<221> source
<223> /note="Payload ID: 2277"

<220>
<221> source
<223> /note="Gene Symbol: CMTR1"

<220>
<221> source
<223> /note="Gene Name:
cap methyltransferase 1"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000393893"

<220>
<221> MOD_RES

<222> (1)..(1)
<223> Any amino acid

<400> 11532

Xaa Gly Lys Ala Gln Arg Lys Ile Ser Ala Ile His Ile Leu Asp Val
1 5 10 15

Leu Val Leu Asn Gly Thr Asp Val Arg Glu Gln His Phe Asn Gln Arg
20 25 30

Ile Gln Leu Ala Glu Lys Phe Val Lys Ala Val Ser Lys Pro Ser Arg
35 40 45

Pro Asp Met Asn Pro Ile Arg Val Lys Glu Val Tyr Arg Leu Glu Glu
50 55 60

Met Glu Lys Ile Phe Val Arg Leu Glu Met Lys Ile Ile Lys Gly Ser
65 70 75 80

Ser Gly Thr Pro Lys Leu Ser Tyr Thr Gly Arg Asp Asp Arg His Phe
85 90 95

Val Pro Met Gly Leu Tyr Ile Val Arg Thr Val Asn Glu Pro Trp Thr
100 105 110

Met Gly Phe Ser Lys Ser Phe Lys Lys Lys Phe Phe Tyr Asn Lys Lys
115 120 125

Thr Lys Asp Ser Thr Phe Asp Leu Pro Ala Asp Ser Ile Ala Pro Phe
130 135 140

His Leu Pro Ser Leu Ala Cys Leu Ser Lys Met Asp
145 150 155

<210> 11533

<211> 372

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2277"

<220>

<221> source

<223> /note="Gene Symbol: CMTR1"


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<220>
<221> source
<223> /note="Gene Name:
        cap methyltransferase 1"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000414233"

<400> 11533
Met Lys Arg Arg Thr Asp Pro Glu Cys Thr Ala Pro Ile Lys Lys Gln
1          5          10          15

Lys Lys Arg Val Ala Glu Leu Ala Leu Ser Leu Ser Ser Thr Ser Asp
          20          25          30

Asp Glu Pro Pro Ser Ser Val Ser His Gly Ala Lys Ala Ser Thr Thr
          35          40          45

Ser Leu Ser Gly Ser Asp Ser Glu Thr Glu Gly Lys Gln His Ser Ser
50          55          60

Asp Ser Phe Asp Asp Ala Phe Lys Ala Asp Ser Leu Val Glu Gly Thr
65          70          75          80

Ser Ser Arg Tyr Ser Met Tyr Asn Ser Val Ser Gln Lys Leu Met Ala
          85          90          95

Lys Met Gly Phe Arg Glu Gly Glu Gly Leu Gly Lys Tyr Ser Gln Gly
          100          105          110

Arg Lys Asp Ile Val Glu Ala Ser Ser Gln Lys Gly Arg Arg Gly Leu
          115          120          125

Gly Leu Thr Leu Arg Gly Phe Asp Gln Glu Leu Asn Val Asp Trp Arg
130          135          140

Asp Glu Pro Glu Pro Ser Ala Cys Glu Gln Val Ser Trp Phe Pro Glu
145          150          155          160

Cys Thr Thr Glu Ile Pro Asp Thr Gln Glu Met Ser Asp Trp Met Val
          165          170          175

Val Gly Lys Arg Lys Met Ile Ile Glu Asp Glu Thr Glu Phe Cys Gly
          180          185          190

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Glu Glu Leu Leu His Ser Val Leu Gln Cys Lys Lys Pro Leu Val Lys
195 200 205

Asp Arg Glu Ala Glu Leu Leu Tyr Phe Ala Asp Val Cys Ala Gly Pro
210 215 220

Gly Gly Phe Ser Glu Tyr Val Leu Trp Arg Lys Lys Trp His Ala Lys
225 230 235 240

Gly Phe Gly Met Thr Leu Lys Gly Pro Asn Asp Phe Lys Leu Glu Asp
245 250 255

Phe Tyr Ser Ala Ser Ser Glu Leu Phe Glu Pro Tyr Tyr Gly Glu Gly
260 265 270

Gly Ile Asp Gly Asp Gly Asp Ile Thr Arg Pro Glu Asn Ile Ser Ala
275 280 285

Phe Arg Asn Phe Val Leu Asp Asn Thr Asp Arg Lys Gly Val His Phe
290 295 300

Leu Met Ala Asp Gly Gly Phe Ser Val Glu Gly Gln Glu Asn Leu Gln
305 310 315 320

Glu Ile Leu Ser Lys Gln Leu Leu Leu Cys Gln Phe Leu Met Ala Leu
325 330 335

Ser Ile Val Arg Thr Gly Gly His Phe Ile Cys Lys Thr Phe Asp Leu
340 345 350

Phe Thr Pro Phe Ser Val Gly Leu Val Tyr Leu Leu Tyr Cys Cys Phe
355 360 365

Glu Arg Val Cys
370

<210> 11534

<211> 113

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2277"

<220>
<221> source
<223> /note="Gene Symbol: CMTR1"

<220>
<221> source
<223> /note="Gene Name:
cap methyltransferase 1"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000432114"

<220>
<221> MOD_RES
<222> (1)..(1)
<223> Any amino acid

<400> 11534
Xaa Gly Ser Glu Gln Lys Phe Leu Ile Gly Leu Gly Lys Ser Gln Ile
1 5 10 15

Tyr Thr Trp Asp Gly Arg Gln Ser Asp Arg Trp Ile Lys Leu Asp Leu
20 25 30

Lys Thr Glu Leu Pro Arg Asp Thr Leu Leu Ser Val Glu Ile Val His
35 40 45

Glu Leu Lys Gly Glu Gly Lys Ala Gln Arg Lys Ile Ser Ala Ile His
50 55 60

Ile Leu Asp Val Leu Val Leu Asn Gly Thr Asp Val Arg Glu Gln His
65 70 75 80

Phe Asn Gln Arg Ser Asp Leu Gly Pro Arg Val Gly Arg Val Gly Val
85 90 95

Gly Gln Gly Ser Leu Gly Gly Gln Arg Pro Pro Glu Val Trp Pro Leu
100 105 110

Ile

<210> 11535
<211> 770
<212> PRT
<213> Homo sapiens

<220>
<221> source
<223> /note="Payload ID: 2278"

<220>
<221> source
<223> /note="Gene Symbol: CMTR2"

<220>
<221> source
<223> /note="Gene Name:
cap methyltransferase 2"

<220>
<221> source
<223> /note="Uniprot ID: Q8IYT2"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000337512"

<400> 11535
Met Ser Lys Cys Arg Lys Thr Pro Val Gln Gln Leu Ala Ser Pro Ala
1 5 10 15

Ser Phe Ser Pro Asp Ile Leu Ala Asp Ile Phe Glu Leu Phe Ala Lys
20 25 30

Asn Phe Ser Tyr Gly Lys Pro Leu Asn Asn Glu Trp Gln Leu Pro Asp
35 40 45

Pro Ser Glu Ile Phe Thr Cys Asp His Thr Glu Leu Asn Ala Phe Leu
50 55 60

Asp Leu Lys Asn Ser Leu Asn Glu Val Lys Asn Leu Leu Ser Asp Lys
65 70 75 80

Lys Leu Asp Glu Trp His Glu His Thr Ala Phe Thr Asn Lys Ala Gly
85 90 95

Lys Ile Ile Ser His Val Arg Lys Ser Val Asn Ala Glu Leu Cys Thr
100 105 110

Gln Ala Trp Cys Lys Phe His Glu Ile Leu Cys Ser Phe Pro Leu Ile
115 120 125

Pro Gln Glu Ala Phe Gln Asn Gly Lys Leu Asn Ser Leu His Leu Cys
130 135 140

Glu	Ala	Pro	Gly	Ala	Phe	Ile	Ala	Ser	Leu	Asn	His	Tyr	Leu	Lys	Ser	145	150	155	160
His	Arg	Phe	Pro	Cys	His	Trp	Ser	Trp	Val	Ala	Asn	Thr	Leu	Asn	Pro	165	170	175	
Tyr	His	Glu	Ala	Asn	Asp	Asp	Leu	Met	Met	Ile	Met	Asp	Asp	Arg	Leu	180	185	190	
Ile	Ala	Asn	Thr	Leu	His	Trp	Trp	Tyr	Phe	Gly	Pro	Asp	Asn	Thr	Gly	195	200	205	
Asp	Ile	Met	Thr	Leu	Lys	Phe	Leu	Thr	Gly	Leu	Gln	Asn	Phe	Ile	Ser	210	215	220	
Ser	Met	Ala	Thr	Val	His	Leu	Val	Thr	Ala	Asp	Gly	Ser	Phe	Asp	Cys	225	230	235	240
Gln	Gly	Asn	Pro	Gly	Glu	Gln	Glu	Ala	Leu	Val	Ser	Ser	Leu	His	Tyr	245	250	255	
Cys	Glu	Val	Val	Thr	Ala	Leu	Thr	Thr	Leu	Gly	Asn	Gly	Gly	Ser	Phe	260	265	270	
Val	Leu	Lys	Met	Phe	Thr	Met	Phe	Glu	His	Cys	Ser	Ile	Asn	Leu	Met	275	280	285	
Tyr	Leu	Leu	Asn	Cys	Cys	Phe	Asp	Gln	Val	His	Val	Phe	Lys	Pro	Ala	290	295	300	
Thr	Ser	Lys	Ala	Gly	Asn	Ser	Glu	Val	Tyr	Val	Val	Cys	Leu	His	Tyr	305	310	315	320
Lys	Gly	Arg	Glu	Ala	Ile	His	Pro	Leu	Leu	Ser	Lys	Met	Thr	Leu	Asn	325	330	335	
Phe	Gly	Thr	Glu	Met	Lys	Arg	Lys	Ala	Leu	Phe	Pro	His	His	Val	Ile	340	345	350	
Pro	Asp	Ser	Phe	Leu	Lys	Arg	His	Glu	Glu	Cys	Cys	Val	Phe	Phe	His	355	360	365	

Lys	Tyr	Gln	Leu	Glu	Thr	Ile	Ser	Glu	Asn	Ile	Arg	Leu	Phe	Glu	Cys	
370						375					380					
Met	Gly	Lys	Ala	Glu	Gln	Glu	Lys	Leu	Asn	Asn	Leu	Arg	Asp	Cys	Ala	
385					390					395					400	
Ile	Gln	Tyr	Phe	Met	Gln	Lys	Phe	Gln	Leu	Lys	His	Leu	Ser	Arg	Asn	
				405					410					415		
Asn	Trp	Leu	Val	Lys	Lys	Ser	Ser	Ile	Gly	Cys	Ser	Thr	Asn	Thr	Lys	
			420					425					430			
Trp	Phe	Gly	Gln	Arg	Asn	Lys	Tyr	Phe	Lys	Thr	Tyr	Asn	Glu	Arg	Lys	
		435					440					445				
Met	Leu	Glu	Ala	Leu	Ser	Trp	Lys	Asp	Lys	Val	Ala	Lys	Gly	Tyr	Phe	
	450					455					460					
Asn	Ser	Trp	Ala	Glu	Glu	His	Gly	Val	Tyr	His	Pro	Gly	Gln	Ser	Ser	
465					470					475					480	
Ile	Leu	Glu	Gly	Thr	Ala	Ser	Asn	Leu	Glu	Cys	His	Leu	Trp	His	Ile	
				485					490					495		
Leu	Glu	Gly	Lys	Lys	Leu	Pro	Lys	Val	Lys	Cys	Ser	Pro	Phe	Cys	Asn	
			500					505					510			
Gly	Glu	Ile	Leu	Lys	Thr	Leu	Asn	Glu	Ala	Ile	Glu	Lys	Ser	Leu	Gly	
		515					520					525				
Gly	Ala	Phe	Asn	Leu	Asp	Ser	Lys	Phe	Arg	Pro	Lys	Gln	Gln	Tyr	Ser	
	530					535					540					
Cys	Ser	Cys	His	Val	Phe	Ser	Glu	Glu	Leu	Ile	Phe	Ser	Glu	Leu	Cys	
545					550					555					560	
Ser	Leu	Thr	Glu	Cys	Leu	Gln	Asp	Glu	Gln	Val	Val	Val	Pro	Ser	Asn	
				565					570					575		
Gln	Ile	Lys	Cys	Leu	Leu	Val	Gly	Phe	Ser	Thr	Leu	Arg	Asn	Ile	Lys	
			580					585					590			

Met His Ile Pro Leu Glu Val Arg Leu Leu Glu Ser Ala Glu Leu Thr
595 600 605

Thr Phe Ser Cys Ser Leu Leu His Asp Gly Asp Pro Thr Tyr Gln Arg
610 615 620

Leu Phe Leu Asp Cys Leu Leu His Ser Leu Arg Glu Leu His Thr Gly
625 630 635 640

Asp Val Met Ile Leu Pro Val Leu Ser Cys Phe Thr Arg Phe Met Ala
645 650 655

Gly Leu Ile Phe Val Leu His Ser Cys Phe Arg Phe Ile Thr Phe Val
660 665 670

Cys Pro Thr Ser Ser Asp Pro Leu Arg Thr Cys Ala Val Leu Leu Cys
675 680 685

Val Gly Tyr Gln Asp Leu Pro Asn Pro Val Phe Arg Tyr Leu Gln Ser
690 695 700

Val Asn Glu Leu Leu Ser Thr Leu Leu Asn Ser Asp Ser Pro Gln Gln
705 710 715 720

Val Leu Gln Phe Val Pro Met Glu Val Leu Leu Lys Gly Ala Leu Leu
725 730 735

Asp Phe Leu Trp Asp Leu Asn Ala Ala Ile Ala Lys Arg His Leu His
740 745 750

Phe Ile Ile Gln Arg Glu Arg Glu Glu Ile Ile Asn Ser Leu Gln Leu
755 760 765

Gln Asn
770

<210> 11536

<211> 770

<212> PRT

<213> Homo sapiens

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<223> /note="Payload ID: 2278"

<220>
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 cap methyltransferase 2"

<220>
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<220>
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 Met Ser Lys Cys Arg Lys Thr Pro Val Gln Gln Leu Ala Ser Pro Ala
 1 5 10 15

Ser Phe Ser Pro Asp Ile Leu Ala Asp Ile Phe Glu Leu Phe Ala Lys
 20 25 30

Asn Phe Ser Tyr Gly Lys Pro Leu Asn Asn Glu Trp Gln Leu Pro Asp
 35 40 45

Pro Ser Glu Ile Phe Thr Cys Asp His Thr Glu Leu Asn Ala Phe Leu
 50 55 60

Asp Leu Lys Asn Ser Leu Asn Glu Val Lys Asn Leu Leu Ser Asp Lys
 65 70 75 80

Lys Leu Asp Glu Trp His Glu His Thr Ala Phe Thr Asn Lys Ala Gly
 85 90 95

Lys Ile Ile Ser His Val Arg Lys Ser Val Asn Ala Glu Leu Cys Thr
 100 105 110

Gln Ala Trp Cys Lys Phe His Glu Ile Leu Cys Ser Phe Pro Leu Ile
 115 120 125

Pro Gln Glu Ala Phe Gln Asn Gly Lys Leu Asn Ser Leu His Leu Cys
 130 135 140

Glu Ala Pro Gly Ala Phe Ile Ala Ser Leu Asn His Tyr Leu Lys Ser
 145 150 155 160

His	Arg	Phe	Pro	Cys	His	Trp	Ser	Trp	Val	Ala	Asn	Thr	Leu	Asn	Pro	
				165					170					175		
Tyr	His	Glu	Ala	Asn	Asp	Asp	Leu	Met	Met	Ile	Met	Asp	Asp	Arg	Leu	
			180					185					190			
Ile	Ala	Asn	Thr	Leu	His	Trp	Trp	Tyr	Phe	Gly	Pro	Asp	Asn	Thr	Gly	
		195					200					205				
Asp	Ile	Met	Thr	Leu	Lys	Phe	Leu	Thr	Gly	Leu	Gln	Asn	Phe	Ile	Ser	
	210					215					220					
Ser	Met	Ala	Thr	Val	His	Leu	Val	Thr	Ala	Asp	Gly	Ser	Phe	Asp	Cys	
225					230					235					240	
Gln	Gly	Asn	Pro	Gly	Glu	Gln	Glu	Ala	Leu	Val	Ser	Ser	Leu	His	Tyr	
				245					250					255		
Cys	Glu	Val	Val	Thr	Ala	Leu	Thr	Thr	Leu	Gly	Asn	Gly	Gly	Ser	Phe	
			260					265					270			
Val	Leu	Lys	Met	Phe	Thr	Met	Phe	Glu	His	Cys	Ser	Ile	Asn	Leu	Met	
		275					280					285				
Tyr	Leu	Leu	Asn	Cys	Cys	Phe	Asp	Gln	Val	His	Val	Phe	Lys	Pro	Ala	
	290					295					300					
Thr	Ser	Lys	Ala	Gly	Asn	Ser	Glu	Val	Tyr	Val	Val	Cys	Leu	His	Tyr	
305					310					315					320	
Lys	Gly	Arg	Glu	Ala	Ile	His	Pro	Leu	Leu	Ser	Lys	Met	Thr	Leu	Asn	
				325					330					335		
Phe	Gly	Thr	Glu	Met	Lys	Arg	Lys	Ala	Leu	Phe	Pro	His	His	Val	Ile	
			340					345					350			
Pro	Asp	Ser	Phe	Leu	Lys	Arg	His	Glu	Glu	Cys	Cys	Val	Phe	Phe	His	
		355					360					365				
Lys	Tyr	Gln	Leu	Glu	Thr	Ile	Ser	Glu	Asn	Ile	Arg	Leu	Phe	Glu	Cys	
	370					375					380					

Met Gly Lys Ala Glu Gln Glu Lys Leu Asn Asn Leu Arg Asp Cys Ala
385 390 395 400

Ile Gln Tyr Phe Met Gln Lys Phe Gln Leu Lys His Leu Ser Arg Asn
405 410 415

Asn Trp Leu Val Lys Lys Ser Ser Ile Gly Cys Ser Thr Asn Thr Lys
420 425 430

Trp Phe Gly Gln Arg Asn Lys Tyr Phe Lys Thr Tyr Asn Glu Arg Lys
435 440 445

Met Leu Glu Ala Leu Ser Trp Lys Asp Lys Val Ala Lys Gly Tyr Phe
450 455 460

Asn Ser Trp Ala Glu Glu His Gly Val Tyr His Pro Gly Gln Ser Ser
465 470 475 480

Ile Leu Glu Gly Thr Ala Ser Asn Leu Glu Cys His Leu Trp His Ile
485 490 495

Leu Glu Gly Lys Lys Leu Pro Lys Val Lys Cys Ser Pro Phe Cys Asn
500 505 510

Gly Glu Ile Leu Lys Thr Leu Asn Glu Ala Ile Glu Lys Ser Leu Gly
515 520 525

Gly Ala Phe Asn Leu Asp Ser Lys Phe Arg Pro Lys Gln Gln Tyr Ser
530 535 540

Cys Ser Cys His Val Phe Ser Glu Glu Leu Ile Phe Ser Glu Leu Cys
545 550 555 560

Ser Leu Thr Glu Cys Leu Gln Asp Glu Gln Val Val Val Pro Ser Asn
565 570 575

Gln Ile Lys Cys Leu Leu Val Gly Phe Ser Thr Leu Arg Asn Ile Lys
580 585 590

Met His Ile Pro Leu Glu Val Arg Leu Leu Glu Ser Ala Glu Leu Thr
595 600 605

Thr Phe Ser Cys Ser Leu Leu His Asp Gly Asp Pro Thr Tyr Gln Arg

610		615		620
Leu Phe Leu Asp Cys	Leu Leu His Ser	Leu Arg Glu Leu His Thr	Gly	
625	630	635	640	
Asp Val Met Ile	Leu Pro Val Leu Ser	Cys Phe Thr Arg Phe Met	Ala	
	645	650	655	
Gly Leu Ile Phe Val	Leu His Ser Cys Phe Arg Phe	Ile Thr Phe Val		
	660	665	670	
Cys Pro Thr Ser Ser	Asp Pro Leu Arg Thr Cys Ala	Val Leu Leu Cys		
	675	680	685	
Val Gly Tyr Gln Asp	Leu Pro Asn Pro Val Phe Arg Tyr	Leu Gln Ser		
	690	695	700	
Val Asn Glu Leu Leu	Ser Thr Leu Leu Asn Ser Asp Ser Pro	Gln Gln		
705	710	715	720	
Val Leu Gln Phe Val	Pro Met Glu Val Leu Leu Lys Gly Ala	Leu Leu		
	725	730	735	
Asp Phe Leu Trp Asp	Leu Asn Ala Ala Ile Ala Lys Arg His	Leu His		
	740	745	750	
Phe Ile Ile Gln Arg	Glu Arg Glu Glu Ile Ile Asn Ser	Leu Gln Leu		
	755	760	765	
Gln Asn				
770				

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<210> 11537
<211> 105
<212> PRT
<213> Homo sapiens

<220>
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<223> /note="Payload ID: 2278"

<220>
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<221> source
<223> /note="Gene Name:
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<220>
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<400> 11537
Met Ser Lys Cys Arg Lys Thr Pro Val Gln Gln Leu Ala Ser Pro Ala
1          5          10          15

Ser Phe Ser Pro Asp Ile Leu Ala Asp Ile Phe Glu Leu Phe Ala Lys
          20          25          30

Asn Phe Ser Tyr Gly Lys Pro Leu Asn Asn Glu Trp Gln Leu Pro Asp
          35          40          45

Pro Ser Glu Ile Phe Thr Cys Asp His Thr Glu Leu Asn Ala Phe Leu
          50          55          60

Asp Leu Lys Asn Ser Leu Asn Glu Val Lys Asn Leu Leu Ser Asp Lys
65          70          75          80

Lys Leu Asp Glu Trp His Glu His Thr Ala Phe Thr Asn Lys Ala Gly
          85          90          95

Lys Ile Ile Ser His Val Arg Lys Ser
          100          105

<210> 11538
<211> 158
<212> PRT
<213> Homo sapiens

<220>
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<223> /note="Payload ID: 2278"

<220>
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<223> /note="ENSP ID: ENSP00000456036"

<400> 11538

Met Ser Lys Cys Arg Lys Thr Pro Val Gln Gln Leu Ala Ser Pro Ala
1 5 10 15

Ser Phe Ser Pro Asp Ile Leu Ala Asp Ile Phe Glu Leu Phe Ala Lys
20 25 30

Asn Phe Ser Tyr Gly Lys Pro Leu Asn Asn Glu Trp Gln Leu Pro Asp
35 40 45

Pro Ser Glu Ile Phe Thr Cys Asp His Thr Glu Leu Asn Ala Phe Leu
50 55 60

Asp Leu Lys Asn Ser Leu Asn Glu Val Lys Asn Leu Leu Ser Asp Lys
65 70 75 80

Lys Leu Asp Glu Trp His Glu His Thr Ala Phe Thr Asn Lys Ala Gly
85 90 95

Lys Ile Ile Ser His Val Arg Lys Ser Val Asn Ala Glu Leu Cys Thr
100 105 110

Gln Ala Trp Cys Lys Phe His Glu Ile Leu Cys Ser Phe Pro Leu Ile
115 120 125

Pro Gln Glu Ala Phe Gln Asn Gly Lys Leu Asn Ser Leu His Leu Cys
130 135 140

Glu Ala Pro Gly Ala Phe Ile Ala Ser Leu Asn His Tyr Leu
145 150 155

<210> 11539

<211> 132

<212> PRT

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<223> /note="Gene Symbol: CMTR2"

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<220>
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<223> /note="ENSP ID: ENSP00000456476"

<400> 11539
Met Ser Lys Cys Arg Lys Thr Pro Val Gln Gln Leu Ala Ser Pro Ala
1          5          10          15

Ser Phe Ser Pro Asp Ile Leu Ala Asp Ile Phe Glu Leu Phe Ala Lys
          20          25          30

Asn Phe Ser Tyr Gly Lys Pro Leu Asn Asn Glu Trp Gln Leu Pro Asp
          35          40          45

Pro Ser Glu Ile Phe Thr Cys Asp His Thr Glu Leu Asn Ala Phe Leu
          50          55          60

Asp Leu Lys Asn Ser Leu Asn Glu Val Lys Asn Leu Leu Ser Asp Lys
65          70          75          80

Lys Leu Asp Glu Trp His Glu His Thr Ala Phe Thr Asn Lys Ala Gly
          85          90          95

Lys Ile Ile Ser His Val Arg Lys Ser Val Asn Ala Glu Leu Cys Thr
          100          105          110

Gln Ala Trp Cys Lys Phe His Glu Ile Leu Cys Ser Phe Pro Leu Ile
          115          120          125

Pro Gln Glu Ala
          130

<210> 11540
<211> 159
<212> PRT
<213> Homo sapiens

<220>
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<220>
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<223> /note="Gene Symbol: CMTR2"

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<220>
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<223> /note="Gene Name:
        cap methyltransferase 2"

<220>
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<400> 11540
Met Ser Lys Cys Arg Lys Thr Pro Val Gln Gln Leu Ala Ser Pro Ala
1          5          10          15

Ser Phe Ser Pro Asp Ile Leu Ala Asp Ile Phe Glu Leu Phe Ala Lys
          20          25          30

Asn Phe Ser Tyr Gly Lys Pro Leu Asn Asn Glu Trp Gln Leu Pro Asp
          35          40          45

Pro Ser Glu Ile Phe Thr Cys Asp His Thr Glu Leu Asn Ala Phe Leu
          50          55          60

Asp Leu Lys Asn Ser Leu Asn Glu Val Lys Asn Leu Leu Ser Asp Lys
65          70          75          80

Lys Leu Asp Glu Trp His Glu His Thr Ala Phe Thr Asn Lys Ala Gly
          85          90          95

Lys Ile Ile Ser His Val Arg Lys Ser Val Asn Ala Glu Leu Cys Thr
          100          105          110

Gln Ala Trp Cys Lys Phe His Glu Ile Leu Cys Ser Phe Pro Leu Ile
          115          120          125

Pro Gln Glu Ala Phe Gln Asn Gly Lys Leu Asn Ser Leu His Leu Cys
          130          135          140

Glu Ala Pro Gly Ala Phe Ile Ala Ser Leu Asn His Tyr Leu Lys
145          150          155

<210> 11541
<211> 90
<212> PRT
<213> Homo sapiens

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<221> source
<223> /note="Payload ID: 2278"

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<220>
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<400> 11541
Met Ser Lys Cys Arg Lys Thr Pro Val Gln Gln Leu Ala Ser Pro Ala
1          5          10          15

Ser Phe Ser Pro Asp Ile Leu Ala Asp Ile Phe Glu Leu Phe Ala Lys
      20          25          30

Asn Phe Ser Tyr Gly Lys Pro Leu Asn Asn Glu Trp Gln Leu Pro Asp
      35          40          45

Pro Ser Glu Ile Phe Thr Cys Asp His Thr Glu Leu Asn Ala Phe Leu
      50          55          60

Asp Leu Lys Asn Ser Leu Asn Glu Val Lys Asn Leu Leu Ser Asp Lys
65          70          75          80

Lys Leu Asp Glu Trp His Glu His Thr Ala
      85          90

<210> 11542
<211> 340
<212> PRT
<213> Homo sapiens

<220>
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cap methyltransferase 2"

<220>

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<223> /note="ENSP ID: ENSP00000481621"

<400> 11542

Met Ser Lys Cys Arg Lys Thr Pro Val Gln Gln Leu Ala Ser Pro Ala
1 5 10 15

Ser Phe Ser Pro Asp Ile Leu Ala Asp Ile Phe Glu Leu Phe Ala Lys
20 25 30

Asn Phe Ser Tyr Gly Lys Pro Leu Asn Asn Glu Trp Gln Leu Pro Asp
35 40 45

Pro Ser Glu Ile Phe Thr Cys Asp His Thr Glu Leu Asn Ala Phe Leu
50 55 60

Asp Leu Lys Asn Ser Leu Asn Glu Val Lys Asn Leu Leu Ser Asp Lys
65 70 75 80

Lys Leu Asp Glu Trp His Glu His Thr Ala Phe Thr Asn Lys Ala Gly
85 90 95

Lys Ile Ile Ser His Val Arg Lys Ser Val Asn Ala Glu Leu Cys Thr
100 105 110

Gln Ala Trp Cys Lys Phe His Glu Ile Leu Cys Ser Phe Pro Leu Ile
115 120 125

Pro Gln Glu Ala Phe Gln Asn Gly Lys Leu Asn Ser Leu His Leu Cys
130 135 140

Glu Ala Pro Gly Ala Phe Ile Ala Ser Leu Asn His Tyr Leu Lys Ser
145 150 155 160

His Arg Phe Pro Cys His Trp Ser Trp Val Ala Asn Thr Leu Asn Pro
165 170 175

Tyr His Glu Ala Asn Asp Asp Leu Met Met Ile Met Asp Asp Arg Leu
180 185 190

Ile Ala Asn Thr Leu His Trp Trp Tyr Phe Gly Pro Asp Asn Thr Gly
195 200 205

25737

Asp Ile Met Thr Leu Lys Phe Leu Thr Gly Leu Gln Asn Phe Ile Ser
210 215 220

Ser Met Ala Thr Val His Leu Val Thr Ala Asp Gly Ser Phe Asp Cys
225 230 235 240

Gln Gly Asn Pro Gly Glu Gln Glu Ala Leu Val Ser Ser Leu His Tyr
245 250 255

Cys Glu Val Val Thr Ala Leu Thr Thr Leu Gly Asn Gly Gly Ser Phe
260 265 270

Val Leu Lys Met Phe Thr Met Phe Glu His Cys Ser Ile Asn Leu Met
275 280 285

Tyr Leu Leu Asn Cys Cys Phe Asp Gln Val His Val Phe Lys Pro Ala
290 295 300

Thr Ser Lys Ala Gly Asn Ser Glu Val Tyr Val Val Cys Leu His Tyr
305 310 315 320

Lys Gly Arg Glu Ala Ile His Pro Leu Leu Ser Lys Met Thr Leu Asn
325 330 335

Leu Gly Leu Lys
340

<210> 11543
<211> 770
<212> PRT
<213> Homo sapiens

<220>
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<220>
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<223> /note="Gene Name:
Cap methyltransferase 2"

<220>

<221> source
<223> /note="ENSP ID: ENSP00000489435"

<400> 11543

Met Ser Lys Cys Arg Lys Thr Pro Val Gln Gln Leu Ala Ser Pro Ala
1 5 10 15

Ser Phe Ser Pro Asp Ile Leu Ala Asp Ile Phe Glu Leu Phe Ala Lys
20 25 30

Asn Phe Ser Tyr Gly Lys Pro Leu Asn Asn Glu Trp Gln Leu Pro Asp
35 40 45

Pro Ser Glu Ile Phe Thr Cys Asp His Thr Glu Phe Asn Ala Phe Leu
50 55 60

Asp Leu Lys Asn Ser Leu Asn Glu Val Lys Asn Leu Leu Ser Asp Lys
65 70 75 80

Lys Leu Asp Glu Trp His Glu His Thr Ala Phe Thr Asn Lys Ala Gly
85 90 95

Lys Ile Ile Ser His Val Arg Lys Ser Val Asn Ala Glu Leu Cys Thr
100 105 110

Gln Ala Trp Cys Lys Phe His Glu Ile Leu Cys Ser Phe Pro Leu Ile
115 120 125

Pro Gln Glu Ala Phe Gln Asn Gly Lys Leu Asn Ser Leu His Leu Cys
130 135 140

Glu Ala Pro Gly Ala Phe Ile Ala Ser Leu Asn His Tyr Leu Lys Ser
145 150 155 160

His Arg Phe Pro Cys His Trp Ser Trp Val Ala Asn Thr Leu Asn Pro
165 170 175

Tyr His Glu Ala Asn Asp Asp Leu Met Met Ile Met Asp Asp Arg Leu
180 185 190

Ile Ala Asn Thr Leu His Trp Trp Tyr Phe Gly Pro Asp Asn Thr Gly
195 200 205

Asp Ile Met Thr Leu Lys Phe Leu Thr Gly Leu Gln Asn Phe Ile Ser

25739

210						215						220				
Ser	Met	Ala	Thr	Val	His	Leu	Val	Thr	Ala	Asp	Gly	Ser	Phe	Asp	Cys	
225					230					235					240	
Gln	Gly	Asn	Pro	Gly	Glu	Gln	Glu	Ala	Leu	Val	Ser	Ser	Leu	His	Tyr	
				245					250					255		
Cys	Glu	Val	Val	Thr	Ala	Leu	Thr	Thr	Leu	Gly	Asn	Gly	Gly	Ser	Phe	
			260					265					270			
Val	Leu	Lys	Met	Phe	Thr	Met	Phe	Glu	His	Cys	Ser	Ile	Asn	Leu	Met	
		275					280					285				
Tyr	Leu	Leu	Asn	Cys	Cys	Phe	Asp	Gln	Val	His	Val	Phe	Lys	Pro	Ala	
	290					295					300					
Thr	Ser	Lys	Ala	Gly	Asn	Ser	Glu	Val	Tyr	Val	Val	Cys	Leu	His	Tyr	
305					310					315					320	
Lys	Gly	Arg	Glu	Ala	Ile	His	Pro	Leu	Leu	Ser	Lys	Met	Thr	Leu	Asn	
				325					330					335		
Phe	Gly	Thr	Glu	Met	Lys	Arg	Lys	Ala	Leu	Phe	Pro	His	His	Val	Ile	
			340					345					350			
Pro	Asp	Ser	Phe	Leu	Lys	Arg	His	Glu	Glu	Cys	Cys	Val	Phe	Phe	His	
		355					360					365				
Lys	Tyr	Gln	Leu	Glu	Thr	Ile	Ser	Glu	Asn	Ile	Arg	Leu	Phe	Glu	Cys	
	370					375					380					
Met	Gly	Lys	Ala	Glu	Gln	Glu	Lys	Leu	Asn	Asn	Leu	Arg	Asp	Cys	Ala	
385					390					395					400	
Ile	Gln	Tyr	Phe	Met	Gln	Lys	Phe	Gln	Leu	Lys	His	Leu	Ser	Arg	Asn	
				405					410					415		
Asn	Trp	Leu	Val	Lys	Lys	Ser	Ser	Ile	Gly	Cys	Ser	Thr	Asn	Thr	Lys	
			420					425					430			
Trp	Phe	Gly	Gln	Arg	Asn	Lys	Tyr	Phe	Lys	Thr	Tyr	Asn	Glu	Arg	Lys	
		435					440					445				

Cys Pro Thr Ser Ser Asp Pro Leu Arg Thr Cys Ala Val Leu Leu Cys
675 680 685

Val Gly Tyr Gln Asp Leu Pro Asn Pro Val Phe Arg Tyr Leu Gln Ser
690 695 700

Val Asn Glu Leu Leu Ser Thr Leu Leu Asn Ser Asp Ser Pro Gln Gln
705 710 715 720

Val Leu Gln Phe Val Pro Met Glu Val Leu Leu Lys Gly Ala Leu Leu
725 730 735

Asp Phe Leu Trp Asp Leu Asn Ala Ala Ile Ala Lys Arg His Leu His
740 745 750

Phe Ile Ile Gln Arg Glu Arg Glu Glu Ile Ile Asn Ser Leu Gln Leu
755 760 765

Gln Asn
770

<210> 11544
<211> 474
<212> PRT
<213> Homo sapiens

<220>
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<223> /note="Gene Symbol: CAP1"

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<223> /note="Gene Name:
CAP, adenylate cyclase-associated protein 1 (yeast)"

<220>
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<223> /note="Uniprot ID: Q01518"

<220>
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<400> 11544
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Arg	Leu	Glu	Ala	Val	Ser	His	Thr	Ser	Asp	Met	His	Arg	Gly	Tyr	Ala	
			20					25					30			
Asp	Ser	Pro	Ser	Lys	Gly	Ala	Ala	Pro	Tyr	Val	Gln	Ala	Phe	Asp	Ser	
		35					40					45				
Leu	Leu	Ala	Gly	Pro	Val	Ala	Glu	Tyr	Leu	Lys	Ile	Ser	Lys	Glu	Ile	
	50					55					60					
Gly	Gly	Asp	Val	Gln	Lys	His	Ala	Glu	Met	Val	His	Thr	Gly	Leu	Lys	
65					70					75					80	
Leu	Glu	Arg	Ala	Leu	Leu	Val	Thr	Ala	Ser	Gln	Cys	Gln	Gln	Pro	Ala	
				85					90					95		
Glu	Asn	Lys	Leu	Ser	Asp	Leu	Leu	Ala	Pro	Ile	Ser	Glu	Gln	Ile	Lys	
			100					105					110			
Glu	Val	Ile	Thr	Phe	Arg	Glu	Lys	Asn	Arg	Gly	Ser	Lys	Leu	Phe	Asn	
		115					120					125				
His	Leu	Ser	Ala	Val	Ser	Glu	Ser	Ile	Gln	Ala	Leu	Gly	Trp	Val	Ala	
	130					135					140					
Met	Ala	Pro	Lys	Pro	Gly	Pro	Tyr	Val	Lys	Glu	Met	Asn	Asp	Ala	Ala	
145					150					155					160	
Met	Phe	Tyr	Thr	Asn	Arg	Val	Leu	Lys	Glu	Tyr	Lys	Asp	Val	Asp	Lys	
				165					170					175		
Lys	His	Val	Asp	Trp	Val	Lys	Ala	Tyr	Leu	Ser	Ile	Trp	Thr	Glu	Leu	
			180					185					190			
Gln	Ala	Tyr	Ile	Lys	Glu	Phe	His	Thr	Thr	Gly	Leu	Ala	Trp	Ser	Lys	
		195					200					205				
Thr	Gly	Pro	Val	Ala	Lys	Glu	Leu	Ser	Gly	Leu	Pro	Ser	Gly	Pro	Ser	
	210					215					220					
Ala	Gly	Ser	Cys	Pro	Pro	Pro	Pro	Pro	Pro	Cys	Pro	Pro	Pro	Pro	Pro	
225					230					235					240	

Val	Ser	Thr	Ile	Ser	Cys	Ser	Tyr	Glu	Ser	Ala	Ser	Arg	Ser	Ser	Leu			
				245					250					255				
Phe	Ala	Gln	Ile	Asn	Gln	Gly	Glu	Ser	Ile	Thr	His	Ala	Leu	Lys	His			
			260					265					270					
Val	Ser	Asp	Asp	Met	Lys	Thr	His	Lys	Asn	Pro	Ala	Leu	Lys	Ala	Gln			
		275					280					285						
Ser	Gly	Pro	Val	Arg	Ser	Gly	Pro	Lys	Pro	Phe	Ser	Ala	Pro	Lys	Pro			
	290					295					300							
Gln	Thr	Ser	Pro	Ser	Pro	Lys	Arg	Ala	Thr	Lys	Lys	Glu	Pro	Ala	Val			
305					310					315					320			
Leu	Glu	Leu	Glu	Gly	Lys	Lys	Trp	Arg	Val	Glu	Asn	Gln	Glu	Asn	Val			
				325					330					335				
Ser	Asn	Leu	Val	Ile	Glu	Asp	Thr	Glu	Leu	Lys	Gln	Val	Ala	Tyr	Ile			
			340					345					350					
Tyr	Lys	Cys	Val	Asn	Thr	Thr	Leu	Gln	Ile	Lys	Gly	Lys	Ile	Asn	Ser			
		355					360					365						
Ile	Thr	Val	Asp	Asn	Cys	Lys	Lys	Leu	Gly	Leu	Val	Phe	Asp	Asp	Val			
	370					375					380							
Val	Gly	Ile	Val	Glu	Ile	Ile	Asn	Ser	Lys	Asp	Val	Lys	Val	Gln	Val			
385					390					395					400			
Met	Gly	Lys	Val	Pro	Thr	Ile	Ser	Ile	Asn	Lys	Thr	Asp	Gly	Cys	His			
				405					410					415				
Ala	Tyr	Leu	Ser	Lys	Asn	Ser	Leu	Asp	Cys	Glu	Ile	Val	Ser	Ala	Lys			
			420					425					430					
Ser	Ser	Glu	Met	Asn	Val	Leu	Ile	Pro	Thr	Glu	Gly	Gly	Asp	Phe	Asn			
		435					440					445						
Glu	Phe	Pro	Val	Pro	Glu	Gln	Phe	Lys	Thr	Leu	Trp	Asn	Gly	Gln	Lys			
	450					455					460							

Leu Val Thr Thr Val Thr Glu Ile Ala Gly
465 470

<210> 11545

<211> 475

<212> PRT

<213> Homo sapiens

<220>

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<223> /note="Payload ID: 2279"

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<221> source

<223> /note="Gene Symbol: CAP1"

<220>

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<223> /note="Gene Name:
CAP, adenylate cyclase-associated protein 1 (yeast)"

<220>

<221> source

<223> /note="Uniprot ID: Q01518"

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<223> /note="ENSP ID: ENSP00000361878"

<400> 11545

Met Ala Asp Met Gln Asn Leu Val Glu Arg Leu Glu Arg Ala Val Gly
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Arg Leu Glu Ala Val Ser His Thr Ser Asp Met His Arg Gly Tyr Ala
20 25 30

Asp Ser Pro Ser Lys Ala Gly Ala Ala Pro Tyr Val Gln Ala Phe Asp
35 40 45

Ser Leu Leu Ala Gly Pro Val Ala Glu Tyr Leu Lys Ile Ser Lys Glu
50 55 60

Ile Gly Gly Asp Val Gln Lys His Ala Glu Met Val His Thr Gly Leu
65 70 75 80

Lys Leu Glu Arg Ala Leu Leu Val Thr Ala Ser Gln Cys Gln Gln Pro
85 90 95

Ala Glu Asn Lys Leu Ser Asp Leu Leu Ala Pro Ile Ser Glu Gln Ile

25745

Val Ser Asn Leu Val Ile Glu Asp Thr Glu Leu Lys Gln Val Ala Tyr
340 345 350

Ile Tyr Lys Cys Val Asn Thr Thr Leu Gln Ile Lys Gly Lys Ile Asn
355 360 365

Ser Ile Thr Val Asp Asn Cys Lys Lys Leu Gly Leu Val Phe Asp Asp
370 375 380

Val Val Gly Ile Val Glu Ile Ile Asn Ser Lys Asp Val Lys Val Gln
385 390 395 400

Val Met Gly Lys Val Pro Thr Ile Ser Ile Asn Lys Thr Asp Gly Cys
405 410 415

His Ala Tyr Leu Ser Lys Asn Ser Leu Asp Cys Glu Ile Val Ser Ala
420 425 430

Lys Ser Ser Glu Met Asn Val Leu Ile Pro Thr Glu Gly Gly Asp Phe
435 440 445

Asn Glu Phe Pro Val Pro Glu Gln Phe Lys Thr Leu Trp Asn Gly Gln
450 455 460

Lys Leu Val Thr Thr Val Thr Glu Ile Ala Gly
465 470 475

<210> 11546
<211> 475
<212> PRT
<213> Homo sapiens

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<220>
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<220>
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<223> /note="Gene Name:
CAP, adenylate cyclase-associated protein 1 (yeast)"

<220>

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<400> 11546

Met Ala Asp Met Gln Asn Leu Val Glu Arg Leu Glu Arg Ala Val Gly
1 5 10 15

Arg Leu Glu Ala Val Ser His Thr Ser Asp Met His Arg Gly Tyr Ala
20 25 30

Asp Ser Pro Ser Lys Ala Gly Ala Ala Pro Tyr Val Gln Ala Phe Asp
35 40 45

Ser Leu Leu Ala Gly Pro Val Ala Glu Tyr Leu Lys Ile Ser Lys Glu
50 55 60

Ile Gly Gly Asp Val Gln Lys His Ala Glu Met Val His Thr Gly Leu
65 70 75 80

Lys Leu Glu Arg Ala Leu Leu Val Thr Ala Ser Gln Cys Gln Gln Pro
85 90 95

Ala Glu Asn Lys Leu Ser Asp Leu Leu Ala Pro Ile Ser Glu Gln Ile
100 105 110

Lys Glu Val Ile Thr Phe Arg Glu Lys Asn Arg Gly Ser Lys Leu Phe
115 120 125

Asn His Leu Ser Ala Val Ser Glu Ser Ile Gln Ala Leu Gly Trp Val
130 135 140

Ala Met Ala Pro Lys Pro Gly Pro Tyr Val Lys Glu Met Asn Asp Ala
145 150 155 160

Ala Met Phe Tyr Thr Asn Arg Val Leu Lys Glu Tyr Lys Asp Val Asp
165 170 175

Lys Lys His Val Asp Trp Val Lys Ala Tyr Leu Ser Ile Trp Thr Glu
180 185 190

Leu Gln Ala Tyr Ile Lys Glu Phe His Thr Thr Gly Leu Ala Trp Ser

195							200						205			
Lys	Thr	Gly	Pro	Val	Ala	Lys	Glu	Leu	Ser	Gly	Leu	Pro	Ser	Gly	Pro	
210						215					220					
Ser	Ala	Gly	Ser	Cys	Pro	Pro	Pro	Pro	Pro	Pro	Cys	Pro	Pro	Pro	Pro	
225					230					235					240	
Pro	Val	Ser	Thr	Ile	Ser	Cys	Ser	Tyr	Glu	Ser	Ala	Ser	Arg	Ser	Ser	
				245					250					255		
Leu	Phe	Ala	Gln	Ile	Asn	Gln	Gly	Glu	Ser	Ile	Thr	His	Ala	Leu	Lys	
			260					265					270			
His	Val	Ser	Asp	Asp	Met	Lys	Thr	His	Lys	Asn	Pro	Ala	Leu	Lys	Ala	
		275					280					285				
Gln	Ser	Gly	Pro	Val	Arg	Ser	Gly	Pro	Lys	Pro	Phe	Ser	Ala	Pro	Lys	
290						295					300					
Pro	Gln	Thr	Ser	Pro	Ser	Pro	Lys	Arg	Ala	Thr	Lys	Lys	Glu	Pro	Ala	
305					310					315					320	
Val	Leu	Glu	Leu	Glu	Gly	Lys	Lys	Trp	Arg	Val	Glu	Asn	Gln	Glu	Asn	
				325					330					335		
Val	Ser	Asn	Leu	Val	Ile	Glu	Asp	Thr	Glu	Leu	Lys	Gln	Val	Ala	Tyr	
			340					345					350			
Ile	Tyr	Lys	Cys	Val	Asn	Thr	Thr	Leu	Gln	Ile	Lys	Gly	Lys	Ile	Asn	
		355					360					365				
Ser	Ile	Thr	Val	Asp	Asn	Cys	Lys	Lys	Leu	Gly	Leu	Val	Phe	Asp	Asp	
370						375					380					
Val	Val	Gly	Ile	Val	Glu	Ile	Ile	Asn	Ser	Lys	Asp	Val	Lys	Val	Gln	
385					390					395					400	
Val	Met	Gly	Lys	Val	Pro	Thr	Ile	Ser	Ile	Asn	Lys	Thr	Asp	Gly	Cys	
				405					410					415		
His	Ala	Tyr	Leu	Ser	Lys	Asn	Ser	Leu	Asp	Cys	Glu	Ile	Val	Ser	Ala	
			420					425					430			

Lys Ser Ser Glu Met Asn Val Leu Ile Pro Thr Glu Gly Gly Asp Phe
435 440 445

Asn Glu Phe Pro Val Pro Glu Gln Phe Lys Thr Leu Trp Asn Gly Gln
450 455 460

Lys Leu Val Thr Thr Val Thr Glu Ile Ala Gly
465 470 475

<210> 11547

<211> 474

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2279"

<220>

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<223> /note="Gene Symbol: CAP1"

<220>

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<223> /note="Gene Name:
CAP, adenylate cyclase-associated protein 1 (yeast)"

<220>

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<223> /note="Uniprot ID: Q01518"

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<223> /note="ENSP ID: ENSP00000361884"

<400> 11547

Met Ala Asp Met Gln Asn Leu Val Glu Arg Leu Glu Arg Ala Val Gly
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Arg Leu Glu Ala Val Ser His Thr Ser Asp Met His Arg Gly Tyr Ala
20 25 30

Asp Ser Pro Ser Lys Gly Ala Ala Pro Tyr Val Gln Ala Phe Asp Ser
35 40 45

Leu Leu Ala Gly Pro Val Ala Glu Tyr Leu Lys Ile Ser Lys Glu Ile
50 55 60

Gly	Gly	Asp	Val	Gln	Lys	His	Ala	Glu	Met	Val	His	Thr	Gly	Leu	Lys	
65					70					75					80	
Leu	Glu	Arg	Ala	Leu	Leu	Val	Thr	Ala	Ser	Gln	Cys	Gln	Gln	Pro	Ala	
				85					90					95		
Glu	Asn	Lys	Leu	Ser	Asp	Leu	Leu	Ala	Pro	Ile	Ser	Glu	Gln	Ile	Lys	
			100					105					110			
Glu	Val	Ile	Thr	Phe	Arg	Glu	Lys	Asn	Arg	Gly	Ser	Lys	Leu	Phe	Asn	
		115					120					125				
His	Leu	Ser	Ala	Val	Ser	Glu	Ser	Ile	Gln	Ala	Leu	Gly	Trp	Val	Ala	
	130					135						140				
Met	Ala	Pro	Lys	Pro	Gly	Pro	Tyr	Val	Lys	Glu	Met	Asn	Asp	Ala	Ala	
145					150					155					160	
Met	Phe	Tyr	Thr	Asn	Arg	Val	Leu	Lys	Glu	Tyr	Lys	Asp	Val	Asp	Lys	
				165					170					175		
Lys	His	Val	Asp	Trp	Val	Lys	Ala	Tyr	Leu	Ser	Ile	Trp	Thr	Glu	Leu	
			180					185					190			
Gln	Ala	Tyr	Ile	Lys	Glu	Phe	His	Thr	Thr	Gly	Leu	Ala	Trp	Ser	Lys	
		195					200					205				
Thr	Gly	Pro	Val	Ala	Lys	Glu	Leu	Ser	Gly	Leu	Pro	Ser	Gly	Pro	Ser	
	210					215					220					
Ala	Gly	Ser	Cys	Pro	Pro	Pro	Pro	Pro	Pro	Cys	Pro	Pro	Pro	Pro	Pro	
225					230					235					240	
Val	Ser	Thr	Ile	Ser	Cys	Ser	Tyr	Glu	Ser	Ala	Ser	Arg	Ser	Ser	Leu	
				245					250					255		
Phe	Ala	Gln	Ile	Asn	Gln	Gly	Glu	Ser	Ile	Thr	His	Ala	Leu	Lys	His	
			260					265					270			
Val	Ser	Asp	Asp	Met	Lys	Thr	His	Lys	Asn	Pro	Ala	Leu	Lys	Ala	Gln	
		275					280					285				
Ser	Gly	Pro	Val	Arg	Ser	Gly	Pro	Lys	Pro	Phe	Ser	Ala	Pro	Lys	Pro	

290		295		300
Gln Thr Ser Pro Ser Pro Lys Arg Ala Thr Lys Lys Glu Pro Ala Val				
305		310		315 320
Leu Glu Leu Glu Gly Lys Lys Trp Arg Val Glu Asn Gln Glu Asn Val				
		325		330 335
Ser Asn Leu Val Ile Glu Asp Thr Glu Leu Lys Gln Val Ala Tyr Ile				
		340		345 350
Tyr Lys Cys Val Asn Thr Thr Leu Gln Ile Lys Gly Lys Ile Asn Ser				
		355		360 365
Ile Thr Val Asp Asn Cys Lys Lys Leu Gly Leu Val Phe Asp Asp Val				
		370		375 380
Val Gly Ile Val Glu Ile Ile Asn Ser Lys Asp Val Lys Val Gln Val				
		385		390 395 400
Met Gly Lys Val Pro Thr Ile Ser Ile Asn Lys Thr Asp Gly Cys His				
		405		410 415
Ala Tyr Leu Ser Lys Asn Ser Leu Asp Cys Glu Ile Val Ser Ala Lys				
		420		425 430
Ser Ser Glu Met Asn Val Leu Ile Pro Thr Glu Gly Gly Asp Phe Asn				
		435		440 445
Glu Phe Pro Val Pro Glu Gln Phe Lys Thr Leu Trp Asn Gly Gln Lys				
		450		455 460
Leu Val Thr Thr Val Thr Glu Ile Ala Gly				
		465		470

<210> 11548

<211> 474

<212> PRT

<213> Homo sapiens

<220>

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<223> /note="Payload ID: 2279"

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<221> source
<223> /note="Gene Symbol: CAP1"

<220>
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<223> /note="Gene Name:
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<220>
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<223> /note="Uniprot ID: Q01518"

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<223> /note="ENSP ID: ENSP00000361888"

<400> 11548
Met Ala Asp Met Gln Asn Leu Val Glu Arg Leu Glu Arg Ala Val Gly
1          5          10          15

Arg Leu Glu Ala Val Ser His Thr Ser Asp Met His Arg Gly Tyr Ala
          20          25          30

Asp Ser Pro Ser Lys Gly Ala Ala Pro Tyr Val Gln Ala Phe Asp Ser
          35          40          45

Leu Leu Ala Gly Pro Val Ala Glu Tyr Leu Lys Ile Ser Lys Glu Ile
          50          55          60

Gly Gly Asp Val Gln Lys His Ala Glu Met Val His Thr Gly Leu Lys
65          70          75          80

Leu Glu Arg Ala Leu Leu Val Thr Ala Ser Gln Cys Gln Gln Pro Ala
          85          90          95

Glu Asn Lys Leu Ser Asp Leu Leu Ala Pro Ile Ser Glu Gln Ile Lys
          100          105          110

Glu Val Ile Thr Phe Arg Glu Lys Asn Arg Gly Ser Lys Leu Phe Asn
          115          120          125

His Leu Ser Ala Val Ser Glu Ser Ile Gln Ala Leu Gly Trp Val Ala
          130          135          140

Met Ala Pro Lys Pro Gly Pro Tyr Val Lys Glu Met Asn Asp Ala Ala
145          150          155          160

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Met	Phe	Tyr	Thr	Asn	Arg	Val	Leu	Lys	Glu	Tyr	Lys	Asp	Val	Asp	Lys	165	170	175
Lys	His	Val	Asp	Trp	Val	Lys	Ala	Tyr	Leu	Ser	Ile	Trp	Thr	Glu	Leu	180	185	190
Gln	Ala	Tyr	Ile	Lys	Glu	Phe	His	Thr	Thr	Gly	Leu	Ala	Trp	Ser	Lys	195	200	205
Thr	Gly	Pro	Val	Ala	Lys	Glu	Leu	Ser	Gly	Leu	Pro	Ser	Gly	Pro	Ser	210	215	220
Ala	Gly	Ser	Cys	Pro	Pro	Pro	Pro	Pro	Pro	Cys	Pro	Pro	Pro	Pro	Pro	225	230	235
Val	Ser	Thr	Ile	Ser	Cys	Ser	Tyr	Glu	Ser	Ala	Ser	Arg	Ser	Ser	Leu	245	250	255
Phe	Ala	Gln	Ile	Asn	Gln	Gly	Glu	Ser	Ile	Thr	His	Ala	Leu	Lys	His	260	265	270
Val	Ser	Asp	Asp	Met	Lys	Thr	His	Lys	Asn	Pro	Ala	Leu	Lys	Ala	Gln	275	280	285
Ser	Gly	Pro	Val	Arg	Ser	Gly	Pro	Lys	Pro	Phe	Ser	Ala	Pro	Lys	Pro	290	295	300
Gln	Thr	Ser	Pro	Ser	Pro	Lys	Arg	Ala	Thr	Lys	Lys	Glu	Pro	Ala	Val	305	310	315
Leu	Glu	Leu	Glu	Gly	Lys	Lys	Trp	Arg	Val	Glu	Asn	Gln	Glu	Asn	Val	325	330	335
Ser	Asn	Leu	Val	Ile	Glu	Asp	Thr	Glu	Leu	Lys	Gln	Val	Ala	Tyr	Ile	340	345	350
Tyr	Lys	Cys	Val	Asn	Thr	Thr	Leu	Gln	Ile	Lys	Gly	Lys	Ile	Asn	Ser	355	360	365
Ile	Thr	Val	Asp	Asn	Cys	Lys	Lys	Leu	Gly	Leu	Val	Phe	Asp	Asp	Val	370	375	380
Val	Gly	Ile	Val	Glu	Ile	Ile	Asn	Ser	Lys	Asp	Val	Lys	Val	Gln	Val			

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<210> 11549
<211> 475
<212> PRT
<213> Homo sapiens
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      CAP, adenylate cyclase-associated protein 1 (yeast)"
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Met Ala Asp Met Gln Asn Leu Val Glu Arg Leu Glu Arg Ala Val Gly
1          5          10          15
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Arg Leu Glu Ala Val Ser His Thr Ser Asp Met His Arg Gly Tyr Ala
20 25 30

Asp	Ser	Pro	Ser	Lys	Ala	Gly	Ala	Ala	Pro	Tyr	Val	Gln	Ala	Phe	Asp			
		35					40					45						
Ser	Leu	Leu	Ala	Gly	Pro	Val	Ala	Glu	Tyr	Leu	Lys	Ile	Ser	Lys	Glu			
	50					55					60							
Ile	Gly	Gly	Asp	Val	Gln	Lys	His	Ala	Glu	Met	Val	His	Thr	Gly	Leu			
65					70					75					80			
Lys	Leu	Glu	Arg	Ala	Leu	Leu	Val	Thr	Ala	Ser	Gln	Cys	Gln	Gln	Pro			
				85					90					95				
Ala	Glu	Asn	Lys	Leu	Ser	Asp	Leu	Leu	Ala	Pro	Ile	Ser	Glu	Gln	Ile			
			100					105					110					
Lys	Glu	Val	Ile	Thr	Phe	Arg	Glu	Lys	Asn	Arg	Gly	Ser	Lys	Leu	Phe			
		115					120					125						
Asn	His	Leu	Ser	Ala	Val	Ser	Glu	Ser	Ile	Gln	Ala	Leu	Gly	Trp	Val			
	130					135					140							
Ala	Met	Ala	Pro	Lys	Pro	Gly	Pro	Tyr	Val	Lys	Glu	Met	Asn	Asp	Ala			
145					150					155					160			
Ala	Met	Phe	Tyr	Thr	Asn	Arg	Val	Leu	Lys	Glu	Tyr	Lys	Asp	Val	Asp			
				165					170					175				
Lys	Lys	His	Val	Asp	Trp	Val	Lys	Ala	Tyr	Leu	Ser	Ile	Trp	Thr	Glu			
			180					185					190					
Leu	Gln	Ala	Tyr	Ile	Lys	Glu	Phe	His	Thr	Thr	Gly	Leu	Ala	Trp	Ser			
		195					200					205						
Lys	Thr	Gly	Pro	Val	Ala	Lys	Glu	Leu	Ser	Gly	Leu	Pro	Ser	Gly	Pro			
	210					215					220							
Ser	Ala	Gly	Ser	Cys	Pro	Pro	Pro	Pro	Pro	Pro	Cys	Pro	Pro	Pro	Pro			
225					230					235					240			
Pro	Val	Ser	Thr	Ile	Ser	Cys	Ser	Tyr	Glu	Ser	Ala	Ser	Arg	Ser	Ser			
				245					250					255				

Leu Phe Ala Gln Ile Asn Gln Gly Glu Ser Ile Thr His Ala Leu Lys
 260 265 270
 His Val Ser Asp Asp Met Lys Thr His Lys Asn Pro Ala Leu Lys Ala
 275 280 285
 Gln Ser Gly Pro Val Arg Ser Gly Pro Lys Pro Phe Ser Ala Pro Lys
 290 295 300
 Pro Gln Thr Ser Pro Ser Pro Lys Arg Ala Thr Lys Lys Glu Pro Ala
 305 310 315 320
 Val Leu Glu Leu Glu Gly Lys Lys Trp Arg Val Glu Asn Gln Glu Asn
 325 330 335
 Val Ser Asn Leu Val Ile Glu Asp Thr Glu Leu Lys Gln Val Ala Tyr
 340 345 350
 Ile Tyr Lys Cys Val Asn Thr Thr Leu Gln Ile Lys Gly Lys Ile Asn
 355 360 365
 Ser Ile Thr Val Asp Asn Cys Lys Lys Leu Gly Leu Val Phe Asp Asp
 370 375 380
 Val Val Gly Ile Val Glu Ile Ile Asn Ser Lys Asp Val Lys Val Gln
 385 390 395 400
 Val Met Gly Lys Val Pro Thr Ile Ser Ile Asn Lys Thr Asp Gly Cys
 405 410 415
 His Ala Tyr Leu Ser Lys Asn Ser Leu Asp Cys Glu Ile Val Ser Ala
 420 425 430
 Lys Ser Ser Glu Met Asn Val Leu Ile Pro Thr Glu Gly Gly Asp Phe
 435 440 445
 Asn Glu Phe Pro Val Pro Glu Gln Phe Lys Thr Leu Trp Asn Gly Gln
 450 455 460
 Lys Leu Val Thr Thr Val Thr Glu Ile Ala Gly
 465 470 475

<210> 11550

<211> 58
 <212> PRT
 <213> Homo sapiens

 <220>
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 <220>
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 <223> /note="Gene Name:
 CAP, adenylate cyclase-associated protein 1 (yeast)"

 <220>
 <221> source
 <223> /note="ENSP ID: ENSP00000389974"

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 Met Ala Asp Met Gln Asn Leu Val Glu Arg Leu Glu Arg Ala Val Gly
 1 5 10 15

 Arg Leu Glu Ala Val Ser His Thr Ser Asp Met His Arg Gly Tyr Ala
 20 25 30

 Asp Ser Pro Ser Lys Ala Gly Ala Ala Pro Tyr Val Gln Ala Phe Asp
 35 40 45

 Ser Leu Leu Ala Gly Pro Val Ala Glu Tyr
 50 55

 <210> 11551
 <211> 174
 <212> PRT
 <213> Homo sapiens

 <220>
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 <220>
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 <223> /note="Gene Name:
 CAP, adenylate cyclase-associated protein 1 (yeast)"

 <220>

<221> source
<223> /note="ENSP ID: ENSP00000398475"

<400> 11551

Met Ala Asp Met Gln Asn Leu Val Glu Arg Leu Glu Arg Ala Val Gly
1 5 10 15

Arg Leu Glu Ala Val Ser His Thr Ser Asp Met His Arg Gly Tyr Ala
20 25 30

Asp Ser Pro Ser Lys Ala Gly Ala Ala Pro Tyr Val Gln Ala Phe Asp
35 40 45

Ser Leu Leu Ala Gly Pro Val Ala Glu Tyr Leu Lys Ile Ser Lys Glu
50 55 60

Ile Gly Gly Asp Val Gln Lys His Ala Glu Met Val His Thr Gly Leu
65 70 75 80

Lys Leu Glu Arg Ala Leu Leu Val Thr Ala Ser Gln Cys Gln Gln Pro
85 90 95

Ala Glu Asn Lys Leu Ser Asp Leu Leu Ala Pro Ile Ser Glu Gln Ile
100 105 110

Lys Glu Val Ile Thr Phe Arg Glu Lys Asn Arg Gly Ser Lys Leu Phe
115 120 125

Asn His Leu Ser Ala Val Ser Glu Ser Ile Gln Ala Leu Gly Trp Val
130 135 140

Ala Met Ala Pro Lys Pro Gly Pro Tyr Val Lys Glu Met Asn Asp Ala
145 150 155 160

Ala Met Phe Tyr Thr Asn Arg Val Leu Lys Glu Tyr Lys Asp
165 170

<210> 11552

<211> 145

<212> PRT

<213> Homo sapiens

<220>

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<223> /note="Payload ID: 2279"

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<220>
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<223> /note="Gene Name:
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<220>
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<223> /note="ENSP ID: ENSP00000398877"

<400> 11552
Met Ala Asp Met Gln Asn Leu Val Glu Arg Leu Glu Arg Ala Val Gly
1          5          10          15

Arg Leu Glu Ala Val Ser His Thr Ser Asp Met His Arg Gly Tyr Ala
          20          25          30

Asp Ser Pro Ser Lys Ala Gly Ala Ala Pro Tyr Val Gln Ala Tyr Ile
          35          40          45

Lys Glu Phe His Thr Thr Gly Leu Ala Trp Ser Lys Thr Gly Pro Val
50          55          60

Ala Lys Glu Leu Ser Gly Leu Pro Ser Gly Pro Ser Ala Gly Ser Cys
65          70          75          80

Pro Pro Pro Pro Pro Pro Cys Pro Pro Pro Pro Pro Val Ser Thr Ile
          85          90          95

Ser Cys Ser Tyr Glu Ser Ala Ser Arg Ser Ser Leu Phe Ala Gln Ile
          100          105          110

Asn Gln Gly Glu Ser Ile Thr His Ala Leu Lys His Val Ser Asp Asp
          115          120          125

Met Lys Thr His Lys Asn Pro Ala Leu Lys Ala Gln Ser Gly Pro Val
          130          135          140

Arg
145

<210> 11553
<211> 176
<212> PRT

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<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2279"

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<223> /note="Gene Name:
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<220>

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<223> /note="ENSP ID: ENSP00000400943"

<400> 11553

Met Ala Asp Met Gln Asn Leu Val Glu Arg Leu Glu Arg Ala Val Gly
1 5 10 15

Arg Leu Glu Ala Val Ser His Thr Ser Asp Met His Arg Gly Tyr Ala
20 25 30

Asp Ser Pro Ser Lys Ala Gly Ala Ala Pro Tyr Val Gln Ala Phe Asp
35 40 45

Ser Leu Leu Ala Gly Pro Val Ala Glu Tyr Leu Lys Ile Ser Lys Glu
50 55 60

Ile Gly Gly Asp Val Gln Lys His Ala Glu Met Val His Thr Gly Leu
65 70 75 80

Lys Leu Glu Arg Ala Leu Leu Val Thr Ala Ser Gln Cys Gln Gln Pro
85 90 95

Ala Glu Asn Lys Leu Ser Asp Leu Leu Ala Pro Ile Ser Glu Gln Ile
100 105 110

Lys Glu Val Ile Thr Phe Arg Glu Lys Asn Arg Gly Ser Lys Leu Phe
115 120 125

Asn His Leu Ser Ala Val Ser Glu Ser Ile Gln Ala Leu Gly Trp Val
130 135 140

Ala Met Ala Pro Lys Pro Gly Pro Tyr Val Lys Glu Met Asn Asp Ala

145		150		155		160									
Ala	Met	Phe	Tyr	Thr	Asn	Arg	Val	Leu	Lys	Glu	Tyr	Lys	Asp	Val	Asp
				165					170					175	

<210> 11554
 <211> 203
 <212> PRT
 <213> Homo sapiens

<220>
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<220>
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<220>
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<400> 11554
 Met Ala Asp Met Gln Asn Leu Val Glu Arg Leu Glu Arg Ala Val Gly
 1 5 10 15

Arg Leu Glu Ala Val Ser His Thr Ser Asp Met His Arg Gly Tyr Ala
 20 25 30

Asp Ser Pro Ser Lys Ala Gly Ala Ala Pro Tyr Val Gln Ala Phe Asp
 35 40 45

Ser Leu Leu Ala Gly Pro Val Ala Glu Tyr Leu Lys Ile Ser Lys Glu
 50 55 60

Ile Gly Gly Asp Val Gln Lys His Ala Glu Met Val His Thr Gly Leu
 65 70 75 80

Lys Leu Glu Arg Ala Leu Leu Val Thr Ala Ser Gln Cys Gln Gln Pro
 85 90 95

Ala Glu Asn Lys Leu Ser Asp Leu Leu Ala Pro Ile Ser Glu Gln Ile
 100 105 110

Lys Glu Val Ile Thr Phe Arg Glu Lys Asn Arg Gly Ser Lys Leu Phe
115 120 125

Asn His Leu Ser Ala Val Ser Glu Ser Ile Gln Ala Leu Gly Trp Val
130 135 140

Ala Met Ala Pro Lys Pro Gly Pro Tyr Val Lys Glu Met Asn Asp Ala
145 150 155 160

Ala Met Phe Tyr Thr Asn Arg Val Leu Lys Glu Tyr Lys Asp Val Asp
165 170 175

Lys Lys His Val Asp Trp Val Lys Ala Tyr Leu Ser Ile Trp Thr Glu
180 185 190

Leu Gln Ala Tyr Ile Lys Glu Phe His Thr Thr
195 200

<210> 11555
<211> 208
<212> PRT
<213> Homo sapiens

<220>
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<220>
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<220>
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<223> /note="Gene Name:
CAP, adenylate cyclase-associated protein 1 (yeast)"

<220>
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<223> /note="ENSP ID: ENSP00000408561"

<400> 11555
Met Ala Asp Met Gln Asn Leu Val Glu Arg Leu Glu Arg Ala Val Gly
1 5 10 15

Arg Leu Glu Ala Val Ser His Thr Ser Asp Met His Arg Gly Tyr Ala
20 25 30

Asp Ser Pro Ser Lys Ala Gly Ala Ala Pro Tyr Val Gln Ala Phe Asp

35					40					45					
Ser	Leu	Leu	Ala	Gly	Pro	Val	Ala	Glu	Tyr	Leu	Lys	Ile	Ser	Lys	Glu
50						55					60				
Ile	Gly	Gly	Asp	Val	Gln	Lys	His	Ala	Glu	Met	Val	His	Thr	Gly	Leu
65					70					75					80
Lys	Leu	Glu	Arg	Ala	Leu	Leu	Val	Thr	Ala	Ser	Gln	Cys	Gln	Gln	Pro
				85					90					95	
Ala	Glu	Asn	Lys	Leu	Ser	Asp	Leu	Leu	Ala	Pro	Ile	Ser	Glu	Gln	Ile
			100					105					110		
Lys	Glu	Val	Ile	Thr	Phe	Arg	Glu	Lys	Asn	Arg	Gly	Ser	Lys	Leu	Phe
		115					120					125			
Asn	His	Leu	Ser	Ala	Val	Ser	Glu	Ser	Ile	Gln	Ala	Leu	Gly	Trp	Val
130						135					140				
Ala	Met	Ala	Pro	Lys	Pro	Gly	Pro	Tyr	Val	Lys	Glu	Met	Asn	Asp	Ala
145					150					155					160
Ala	Met	Phe	Tyr	Thr	Asn	Arg	Val	Leu	Lys	Glu	Tyr	Lys	Asp	Val	Asp
				165					170					175	
Lys	Lys	His	Val	Asp	Trp	Val	Lys	Ala	Tyr	Leu	Ser	Ile	Trp	Thr	Glu
			180					185					190		
Leu	Gln	Ala	Tyr	Ile	Lys	Glu	Phe	His	Thr	Thr	Gly	Leu	Ala	Trp	Ser
		195					200					205			

<210> 11556

<211> 179

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2279"

<220>

<221> source

<223> /note="Gene Symbol: CAP1"

<220>

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<221> source
<223> /note="Gene Name:
      CAP, adenylate cyclase-associated protein 1 (yeast)"

<220>
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<223> /note="ENSP ID: ENSP00000410586"

<400> 11556
Met Ala Asp Met Gln Asn Leu Val Glu Arg Leu Glu Arg Ala Val Gly
1          5          10          15

Arg Leu Glu Ala Val Ser His Thr Ser Asp Met His Arg Gly Tyr Ala
20          25          30

Asp Ser Pro Ser Lys Ala Gly Ala Ala Pro Tyr Val Gln Ala Phe Asp
35          40          45

Ser Leu Leu Ala Gly Pro Val Ala Glu Tyr Leu Lys Ile Ser Lys Glu
50          55          60

Ile Gly Gly Asp Val Gln Lys His Ala Glu Met Val His Thr Gly Leu
65          70          75          80

Lys Leu Glu Arg Ala Leu Leu Val Thr Ala Ser Gln Cys Gln Gln Pro
85          90          95

Ala Glu Asn Lys Leu Ser Asp Leu Leu Ala Pro Ile Ser Glu Gln Ile
100         105         110

Lys Glu Val Ile Thr Phe Arg Glu Lys Asn Arg Gly Ser Lys Leu Phe
115         120         125

Asn His Leu Ser Ala Val Ser Glu Ser Ile Gln Ala Leu Gly Trp Val
130         135         140

Ala Met Ala Pro Lys Pro Gly Pro Tyr Val Lys Glu Met Asn Asp Ala
145         150         155         160

Ala Met Phe Tyr Thr Asn Arg Val Leu Lys Glu Tyr Lys Asp Val Asp
165         170         175

Lys Lys His

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<210> 11557
<211> 262
<212> PRT
<213> Homo sapiens

<220>
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<223> /note="Payload ID: 2279"

<220>
<221> source
<223> /note="Gene Symbol: CAP1"

<220>
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<223> /note="Gene Name:
      CAP, adenylate cyclase-associated protein 1 (yeast)"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000412859"

<400> 11557
Met Ala Asp Met Gln Asn Leu Val Glu Arg Leu Glu Arg Ala Val Gly
 1              5              10              15

Arg Leu Glu Ala Val Ser His Thr Ser Asp Met His Arg Gly Tyr Ala
      20              25              30

Asp Ser Pro Ser Lys Gly Ala Ala Pro Tyr Val Gln Ala Phe Asp Ser
      35              40              45

Leu Leu Ala Gly Pro Val Ala Glu Tyr Leu Lys Ile Ser Lys Glu Ile
      50              55              60

Gly Gly Asp Val Gln Lys His Ala Glu Met Val His Thr Gly Leu Lys
65              70              75              80

Leu Glu Arg Ala Leu Leu Val Thr Ala Ser Gln Cys Gln Gln Pro Ala
      85              90              95

Glu Asn Lys Leu Ser Asp Leu Leu Ala Pro Ile Ser Glu Gln Ile Lys
      100             105             110

Glu Val Ile Thr Phe Arg Glu Lys Asn Arg Gly Ser Lys Leu Phe Asn
      115             120             125

His Leu Ser Ala Val Ser Glu Ser Ile Gln Ala Leu Gly Trp Val Ala
      130             135             140

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Met Ala Pro Lys Pro Gly Pro Tyr Val Lys Glu Met Asn Asp Ala Ala
145 150 155 160

Met Phe Tyr Thr Asn Arg Val Leu Lys Glu Tyr Lys Asp Val Asp Lys
165 170 175

Lys His Val Asp Trp Val Lys Ala Tyr Leu Ser Ile Trp Thr Glu Leu
180 185 190

Gln Ala Tyr Ile Lys Glu Phe His Thr Thr Gly Leu Ala Trp Ser Lys
195 200 205

Thr Gly Pro Val Ala Lys Glu Leu Ser Gly Leu Pro Ser Gly Pro Ser
210 215 220

Ala Gly Ser Cys Pro Pro Pro Pro Pro Cys Pro Pro Pro Pro Pro
225 230 235 240

Val Ser Thr Ile Ser Cys Ser Tyr Glu Ser Ala Ser Arg Ser Ser Leu
245 250 255

Phe Ala Gln Ile Asn Gln
260

<210> 11558
<211> 201
<212> PRT
<213> Homo sapiens

<220>
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<223> /note="Payload ID: 2279"

<220>
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<220>
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<223> /note="Gene Name:
CAP, adenylate cyclase-associated protein 1 (yeast)"

<220>
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<223> /note="ENSP ID: ENSP00000413383"

<400> 11558

Met	Ala	Asp	Met	Gln	Asn	Leu	Val	Glu	Arg	Leu	Glu	Arg	Ala	Val	Gly			
1				5					10					15				
Arg	Leu	Glu	Ala	Val	Ser	His	Thr	Ser	Asp	Met	His	Arg	Gly	Tyr	Ala			
			20					25					30					
Asp	Ser	Pro	Ser	Lys	Ala	Gly	Ala	Ala	Pro	Tyr	Val	Gln	Ala	Phe	Asp			
		35					40					45						
Ser	Leu	Leu	Ala	Gly	Pro	Val	Ala	Glu	Tyr	Leu	Lys	Ile	Ser	Lys	Glu			
	50					55					60							
Ile	Gly	Gly	Asp	Val	Gln	Lys	His	Ala	Glu	Met	Val	His	Thr	Gly	Leu			
65					70					75					80			
Lys	Leu	Glu	Arg	Ala	Leu	Leu	Val	Thr	Ala	Ser	Gln	Cys	Gln	Gln	Pro			
				85					90					95				
Ala	Glu	Asn	Lys	Leu	Ser	Asp	Leu	Leu	Ala	Pro	Ile	Ser	Glu	Gln	Ile			
			100					105					110					
Lys	Glu	Val	Ile	Thr	Phe	Arg	Glu	Lys	Asn	Arg	Gly	Ser	Lys	Leu	Phe			
		115					120					125						
Asn	His	Leu	Ser	Ala	Val	Ser	Glu	Ser	Ile	Gln	Ala	Leu	Gly	Trp	Val			
	130					135					140							
Ala	Met	Ala	Pro	Lys	Pro	Gly	Pro	Tyr	Val	Lys	Glu	Met	Asn	Asp	Ala			
145					150					155					160			
Ala	Met	Phe	Tyr	Thr	Asn	Arg	Val	Leu	Lys	Glu	Tyr	Lys	Asp	Val	Asp			
				165					170					175				
Lys	Lys	His	Val	Asp	Trp	Val	Lys	Ala	Tyr	Leu	Ser	Ile	Trp	Thr	Glu			
			180					185					190					
Leu	Gln	Ala	Tyr	Ile	Lys	Glu	Phe	His										
		195					200											

<210> 11559

<211> 215

<212> PRT

<213> Homo sapiens


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<220>
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<223> /note="Payload ID: 2279"

<220>
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<223> /note="Gene Symbol: CAP1"

<220>
<221> source
<223> /note="Gene Name:
      CAP, adenylate cyclase-associated protein 1 (yeast)"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000413656"

<400> 11559
Met Ala Asp Met Gln Asn Leu Val Glu Arg Leu Glu Arg Ala Val Gly
1          5          10          15

Arg Leu Glu Ala Val Ser His Thr Ser Asp Met His Arg Gly Tyr Ala
          20          25          30

Asp Ser Pro Ser Lys Ala Gly Ala Ala Pro Tyr Val Gln Ala Phe Asp
          35          40          45

Ser Leu Leu Ala Gly Pro Val Ala Glu Tyr Leu Lys Ile Ser Lys Glu
          50          55          60

Ile Gly Gly Asp Val Gln Lys His Ala Glu Met Val His Thr Gly Leu
65          70          75          80

Lys Leu Glu Arg Ala Leu Leu Val Thr Ala Ser Gln Cys Gln Gln Pro
          85          90          95

Ala Glu Asn Lys Leu Ser Asp Leu Leu Ala Pro Ile Ser Glu Gln Ile
          100          105          110

Lys Glu Val Ile Thr Phe Arg Glu Lys Asn Arg Gly Ser Lys Leu Phe
          115          120          125

Asn His Leu Ser Ala Val Ser Glu Ser Ile Gln Ala Leu Gly Trp Val
          130          135          140

Ala Met Ala Pro Lys Pro Gly Pro Tyr Val Lys Glu Met Asn Asp Ala
145          150          155          160

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Ala Met Phe Tyr Thr Asn Arg Val Leu Lys Glu Tyr Lys Asp Val Asp
165 170 175

Lys Lys His Val Asp Trp Val Lys Ala Tyr Leu Ser Ile Trp Thr Glu
180 185 190

Leu Gln Ala Tyr Ile Lys Glu Phe His Thr Thr Gly Leu Ala Trp Ser
195 200 205

Lys Thr Gly Pro Val Ala Lys
210 215

<210> 11560

<211> 477

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2280"

<220>

<221> source

<223> /note="Gene Symbol: CAP2"

<220>

<221> source

<223> /note="Gene Name:
CAP, adenylate cyclase-associated protein, 2 (yeast)"

<220>

<221> source

<223> /note="Uniprot ID: P40123"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000229922"

<400> 11560

Met Ala Asn Met Gln Gly Leu Val Glu Arg Leu Glu Arg Ala Val Ser
1 5 10 15

Arg Leu Glu Ser Leu Ser Ala Glu Ser His Arg Pro Pro Gly Asn Cys
20 25 30

Gly Glu Val Asn Gly Val Ile Ala Gly Val Ala Pro Ser Val Glu Ala
35 40 45

Phe Asp Lys Leu Met Asp Ser Met Val Ala Glu Phe Leu Lys Asn Ser

25770

50					55					60					
Arg 65	Ile	Leu	Ala	Gly	Asp 70	Val	Glu	Thr	His	Ala 75	Glu	Met	Val	His	Ser 80
Ala	Phe	Gln	Ala	Gln 85	Arg	Ala	Phe	Leu	Leu 90	Met	Ala	Ser	Gln	Tyr 95	Gln
Gln	Pro	His	Glu 100	Asn	Asp	Val	Ala	Ala 105	Leu	Leu	Lys	Pro	Ile	Ser	Glu 110
Lys	Ile	Gln 115	Glu	Ile	Gln	Thr	Phe 120	Arg	Glu	Arg	Asn 125	Arg	Gly	Ser	Asn
Met 130	Phe	Asn	His	Leu	Ser	Ala 135	Val	Ser	Glu	Ser	Ile 140	Pro	Ala	Leu	Gly
Trp 145	Ile	Ala	Val	Ser	Pro 150	Lys	Pro	Gly	Pro	Tyr 155	Val	Lys	Glu	Met	Asn 160
Asp	Ala	Ala	Thr	Phe 165	Tyr	Thr	Asn	Arg	Val 170	Leu	Lys	Asp	Tyr	Lys 175	His
Ser	Asp	Leu	Arg 180	His	Val	Asp	Trp	Val 185	Lys	Ser	Tyr	Leu	Asn 190	Ile	Trp
Ser	Glu	Leu 195	Gln	Ala	Tyr	Ile	Lys 200	Glu	His	His	Thr	Thr 205	Gly	Leu	Thr
Trp 210	Ser	Lys	Thr	Gly	Pro	Val 215	Ala	Ser	Thr	Val	Ser 220	Ala	Phe	Ser	Val
Leu 225	Ser	Ser	Gly	Pro	Gly 230	Leu	Pro	Pro	Pro	Pro 235	Pro	Pro	Leu	Pro	Pro 240
Pro	Gly	Pro	Pro	Pro 245	Leu	Phe	Glu	Asn	Glu 250	Gly	Lys	Lys	Glu	Glu 255	Ser
Ser	Pro	Ser	Arg 260	Ser	Ala	Leu	Phe 265	Ala	Gln	Leu	Asn	Gln	Gly 270	Glu	Ala
Ile	Thr	Lys 275	Gly	Leu	Arg	His	Val 280	Thr	Asp	Asp	Gln	Lys 285	Thr	Tyr	Lys

Asn Pro Ser Leu Arg Ala Gln Gly Gly Gln Thr Gln Ser Pro Thr Lys
290 295 300

Ser His Thr Pro Ser Pro Thr Ser Pro Lys Ser Tyr Pro Ser Gln Lys
305 310 315 320

His Ala Pro Val Leu Glu Leu Glu Gly Lys Lys Trp Arg Val Glu Tyr
325 330 335

Gln Glu Asp Arg Asn Asp Leu Val Ile Ser Glu Thr Glu Leu Lys Gln
340 345 350

Val Ala Tyr Ile Phe Lys Cys Glu Lys Ser Thr Ile Gln Ile Lys Gly
355 360 365

Lys Val Asn Ser Ile Ile Ile Asp Asn Cys Lys Lys Leu Gly Leu Val
370 375 380

Phe Asp Asn Val Val Gly Ile Val Glu Val Ile Asn Ser Gln Asp Ile
385 390 395 400

Gln Ile Gln Val Met Gly Arg Val Pro Thr Ile Ser Ile Asn Lys Thr
405 410 415

Glu Gly Cys His Ile Tyr Leu Ser Glu Asp Ala Leu Asp Cys Glu Ile
420 425 430

Val Ser Ala Lys Ser Ser Glu Met Asn Ile Leu Ile Pro Gln Asp Gly
435 440 445

Asp Tyr Arg Glu Phe Pro Ile Pro Glu Gln Phe Lys Thr Ala Trp Asp
450 455 460

Gly Ser Lys Leu Ile Thr Glu Pro Ala Glu Ile Met Ala
465 470 475

<210> 11561

<211> 451

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2280"

<220>

<221> source

<223> /note="Gene Symbol: CAP2"

<220>

<221> source

<223> /note="Gene Name:
CAP, adenylate cyclase-associated protein, 2 (yeast)"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000368275"

<400> 11561

Met Ala Asn Met Gln Gly Leu Val Glu Arg Leu Glu Arg Ala Val Ser
1 5 10 15

Arg Leu Glu Ser Leu Ser Ala Glu Ser His Arg Pro Pro Gly Asn Cys
20 25 30

Gly Glu Val Asn Gly Val Ile Ala Gly Val Ala Pro Ser Val Glu Ala
35 40 45

Phe Asp Lys Leu Met Asp Ser Met Val Ala Glu Phe Leu Lys Asn Ser
50 55 60

Arg Ile Leu Ala Gly Asp Val Glu Thr His Asn Asp Val Ala Ala Leu
65 70 75 80

Leu Lys Pro Ile Ser Glu Lys Ile Gln Glu Ile Gln Thr Phe Arg Glu
85 90 95

Arg Asn Arg Gly Ser Asn Met Phe Asn His Leu Ser Ala Val Ser Glu
100 105 110

Ser Ile Pro Ala Leu Gly Trp Ile Ala Val Ser Pro Lys Pro Gly Pro
115 120 125

Tyr Val Lys Glu Met Asn Asp Ala Ala Thr Phe Tyr Thr Asn Arg Val
130 135 140

Leu Lys Asp Tyr Lys His Ser Asp Leu Arg His Val Asp Trp Val Lys
145 150 155 160

Ser Tyr Leu Asn Ile Trp Ser Glu Leu Gln Ala Tyr Ile Lys Glu His

165

170

175

His Thr Thr Gly Leu Thr Trp Ser Lys Thr Gly Pro Val Ala Ser Thr
180 185 190

Val Ser Ala Phe Ser Val Leu Ser Ser Gly Pro Gly Leu Pro Pro Pro
195 200 205

Pro Pro Pro Leu Pro Pro Pro Gly Pro Pro Pro Leu Phe Glu Asn Glu
210 215 220

Gly Lys Lys Glu Glu Ser Ser Pro Ser Arg Ser Ala Leu Phe Ala Gln
225 230 235 240

Leu Asn Gln Gly Glu Ala Ile Thr Lys Gly Leu Arg His Val Thr Asp
245 250 255

Asp Gln Lys Thr Tyr Lys Asn Pro Ser Leu Arg Ala Gln Gly Gly Gln
260 265 270

Thr Gln Ser Pro Thr Lys Ser His Thr Pro Ser Pro Thr Ser Pro Lys
275 280 285

Ser Tyr Pro Ser Gln Lys His Ala Pro Val Leu Glu Leu Glu Gly Lys
290 295 300

Lys Trp Arg Val Glu Tyr Gln Glu Asp Arg Asn Asp Leu Val Ile Ser
305 310 315 320

Glu Thr Glu Leu Lys Gln Val Ala Tyr Ile Phe Lys Cys Glu Lys Ser
325 330 335

Thr Ile Gln Ile Lys Gly Lys Val Asn Ser Ile Ile Ile Asp Asn Cys
340 345 350

Lys Lys Leu Gly Leu Val Phe Asp Asn Val Val Gly Ile Val Glu Val
355 360 365

Ile Asn Ser Gln Asp Ile Gln Ile Gln Val Met Gly Arg Val Pro Thr
370 375 380

Ile Ser Ile Asn Lys Thr Glu Gly Cys His Ile Tyr Leu Ser Glu Asp
385 390 395 400

25774

Ala Leu Asp Cys Glu Ile Val Ser Ala Lys Ser Ser Glu Met Asn Ile
405 410 415

Leu Ile Pro Gln Asp Gly Asp Tyr Arg Glu Phe Pro Ile Pro Glu Gln
420 425 430

Phe Lys Thr Ala Trp Asp Gly Ser Lys Leu Ile Thr Glu Pro Ala Glu
435 440 445

Ile Met Ala
450

<210> 11562
<211> 217
<212> PRT
<213> Homo sapiens

<220>
<221> source
<223> /note="Payload ID: 2280"

<220>
<221> source
<223> /note="Gene Symbol: CAP2"

<220>
<221> source
<223> /note="Gene Name:
CAP, adenylate cyclase-associated protein, 2 (yeast)"

<220>
<221> source
<223> /note="Uniprot ID: P40123"

<220>
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<400> 11562
Met Ala Asn Met Gln Gly Leu Val Glu Arg Leu Glu Arg Ala Val Ser
1 5 10 15

Arg Leu Glu Ser Leu Ser Ala Glu Ser His Arg Pro Pro Gly Asn Cys
20 25 30

Gly Glu Val Asn Gly Val Ile Ala Gly Val Ala Pro Ser Val Glu Ala
35 40 45

Phe Asp Lys Leu Met Asp Ser Met Val Ala Glu Phe Leu Lys Asn Ser
 50 55 60
 Arg Ile Leu Ala Gly Asp Val Glu Thr His Glu Tyr Gln Glu Asp Arg
 65 70 75 80
 Asn Asp Leu Val Ile Ser Glu Thr Glu Leu Lys Gln Val Ala Tyr Ile
 85 90 95
 Phe Lys Cys Glu Lys Ser Thr Ile Gln Ile Lys Gly Lys Val Asn Ser
 100 105 110
 Ile Ile Ile Asp Asn Cys Lys Lys Leu Gly Leu Val Phe Asp Asn Val
 115 120 125
 Val Gly Ile Val Glu Val Ile Asn Ser Gln Asp Ile Gln Ile Gln Val
 130 135 140
 Met Gly Arg Val Pro Thr Ile Ser Ile Asn Lys Thr Glu Gly Cys His
 145 150 155 160
 Ile Tyr Leu Ser Glu Asp Ala Leu Asp Cys Glu Ile Val Ser Ala Lys
 165 170 175
 Ser Ser Glu Met Asn Ile Leu Ile Pro Gln Asp Gly Asp Tyr Arg Glu
 180 185 190
 Phe Pro Ile Pro Glu Gln Phe Lys Thr Ala Trp Asp Gly Ser Lys Leu
 195 200 205
 Ile Thr Glu Pro Ala Glu Ile Met Ala
 210 215

<210> 11563

<211> 365

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2280"

<220>

<221> source

<223> /note="Gene Symbol: CAP2"


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<220>
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<223> /note="Gene Name:
        CAP, adenylate cyclase-associated protein, 2 (yeast)"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000417705"

<400> 11563
Met Ala Asn Met Gln Gly Leu Val Glu Arg Leu Glu Arg Ala Val Ser
1          5          10          15

Arg Leu Glu Ser Leu Ser Ala Glu Ser His Arg Pro Pro Gly Asn Cys
          20          25          30

Gly Glu Val Asn Gly Val Ile Ala Gly Val Ala Pro Ser Val Glu Ala
          35          40          45

Phe Asp Lys Leu Met Asp Ser Met Val Ala Glu Phe Leu Lys Asn Ser
          50          55          60

Arg Ile Leu Ala Gly Asp Val Glu Thr His Ala Glu Met Val His Ser
65          70          75          80

Ala Phe Gln Ala Gln Arg Ala Phe Leu Leu Met Ala Ser Gln Tyr Gln
          85          90          95

Gln Pro His Glu Gly Pro Val Ala Ser Thr Val Ser Ala Phe Ser Val
          100          105          110

Leu Ser Ser Gly Pro Gly Leu Pro Pro Pro Pro Pro Leu Pro Pro
          115          120          125

Pro Gly Pro Pro Pro Leu Phe Glu Asn Glu Gly Lys Lys Glu Glu Ser
          130          135          140

Ser Pro Ser Arg Ser Ala Leu Phe Ala Gln Leu Asn Gln Gly Glu Ala
145          150          155          160

Ile Thr Lys Gly Leu Arg His Val Thr Asp Asp Gln Lys Thr Tyr Lys
          165          170          175

Asn Pro Ser Leu Arg Ala Gln Gly Gly Gln Thr Gln Ser Pro Thr Lys
          180          185          190

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Ser His Thr Pro Ser Pro Thr Ser Pro Lys Ser Tyr Pro Ser Gln Lys
195 200 205

His Ala Pro Val Leu Glu Leu Glu Gly Lys Lys Trp Arg Val Glu Tyr
210 215 220

Gln Glu Asp Arg Asn Asp Leu Val Ile Ser Glu Thr Glu Leu Lys Gln
225 230 235 240

Val Ala Tyr Ile Phe Lys Cys Glu Lys Ser Thr Ile Gln Ile Lys Gly
245 250 255

Lys Val Asn Ser Ile Ile Ile Asp Asn Cys Lys Lys Leu Gly Leu Val
260 265 270

Phe Asp Asn Val Val Gly Ile Val Glu Val Ile Asn Ser Gln Asp Ile
275 280 285

Gln Ile Gln Val Met Gly Arg Val Pro Thr Ile Ser Ile Asn Lys Thr
290 295 300

Glu Gly Cys His Ile Tyr Leu Ser Glu Asp Ala Leu Asp Cys Glu Ile
305 310 315 320

Val Ser Ala Lys Ser Ser Glu Met Asn Ile Leu Ile Pro Gln Asp Gly
325 330 335

Asp Tyr Arg Glu Phe Pro Ile Pro Glu Gln Phe Lys Thr Ala Trp Asp
340 345 350

Gly Ser Lys Leu Ile Thr Glu Pro Ala Glu Ile Met Ala
355 360 365

<210> 11564

<211> 413

<212> PRT

<213> Homo sapiens

<220>

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<223> /note="Payload ID: 2280"

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<223> /note="Gene Symbol: CAP2"

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<220>
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<223> /note="Gene Name:
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<220>
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<223> /note="Uniprot ID: P40123"

<220>
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<400> 11564
Met Ala Asn Met Gln Gly Leu Val Glu Arg Leu Glu Arg Ala Val Ser
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Arg Leu Glu Ser Leu Ser Ala Glu Ser His Arg Pro Pro Gly Asn Cys
          20          25          30

Gly Glu Val Asn Gly Val Ile Ala Gly Val Ala Pro Ser Val Glu Ala
          35          40          45

Phe Asp Lys Leu Met Asp Ser Met Val Ala Glu Phe Leu Lys Asn Ser
          50          55          60

Arg Ile Leu Ala Gly Asp Val Glu Thr His Ala Glu Met Val His Ser
65          70          75          80

Ala Phe Gln Ala Gln Arg Ala Phe Leu Leu Met Ala Ser Gln Tyr Gln
          85          90          95

Gln Pro His Glu Asn Asp Val Ala Ala Leu Leu Lys Pro Ile Ser Glu
          100          105          110

Lys Ile Gln Glu Ile Gln Thr Phe Arg Glu Arg Asn Arg Gly Ser Asn
          115          120          125

Met Phe Asn His Leu Ser Ala Val Ser Glu Ser Ile Pro Ala Leu Gly
          130          135          140

Trp Ile Ala Val Gly Pro Val Ala Ser Thr Val Ser Ala Phe Ser Val
145          150          155          160

Leu Ser Ser Gly Pro Gly Leu Pro Pro Pro Pro Pro Pro Leu Pro Pro
          165          170          175

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Pro	Gly	Pro	Pro	Pro	Leu	Phe	Glu	Asn	Glu	Gly	Lys	Lys	Glu	Glu	Ser	
			180					185					190			
Ser	Pro	Ser	Arg	Ser	Ala	Leu	Phe	Ala	Gln	Leu	Asn	Gln	Gly	Glu	Ala	
		195					200					205				
Ile	Thr	Lys	Gly	Leu	Arg	His	Val	Thr	Asp	Asp	Gln	Lys	Thr	Tyr	Lys	
	210					215					220					
Asn	Pro	Ser	Leu	Arg	Ala	Gln	Gly	Gly	Gln	Thr	Gln	Ser	Pro	Thr	Lys	
225					230					235					240	
Ser	His	Thr	Pro	Ser	Pro	Thr	Ser	Pro	Lys	Ser	Tyr	Pro	Ser	Gln	Lys	
				245					250					255		
His	Ala	Pro	Val	Leu	Glu	Leu	Glu	Gly	Lys	Lys	Trp	Arg	Val	Glu	Tyr	
			260					265					270			
Gln	Glu	Asp	Arg	Asn	Asp	Leu	Val	Ile	Ser	Glu	Thr	Glu	Leu	Lys	Gln	
		275					280					285				
Val	Ala	Tyr	Ile	Phe	Lys	Cys	Glu	Lys	Ser	Thr	Ile	Gln	Ile	Lys	Gly	
	290					295					300					
Lys	Val	Asn	Ser	Ile	Ile	Ile	Asp	Asn	Cys	Lys	Lys	Leu	Gly	Leu	Val	
305					310				315						320	
Phe	Asp	Asn	Val	Val	Gly	Ile	Val	Glu	Val	Ile	Asn	Ser	Gln	Asp	Ile	
				325					330					335		
Gln	Ile	Gln	Val	Met	Gly	Arg	Val	Pro	Thr	Ile	Ser	Ile	Asn	Lys	Thr	
			340					345					350			
Glu	Gly	Cys	His	Ile	Tyr	Leu	Ser	Glu	Asp	Ala	Leu	Asp	Cys	Glu	Ile	
		355					360					365				
Val	Ser	Ala	Lys	Ser	Ser	Glu	Met	Asn	Ile	Leu	Ile	Pro	Gln	Asp	Gly	
	370					375					380					
Asp	Tyr	Arg	Glu	Phe	Pro	Ile	Pro	Glu	Gln	Phe	Lys	Thr	Ala	Trp	Asp	
385					390					395					400	

Gly Ser Lys Leu Ile Thr Glu Pro Ala Glu Ile Met Ala
405 410

<210> 11565

<211> 104

<212> PRT

<213> Homo sapiens

<220>

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<223> /note="Payload ID: 2280"

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<223> /note="Gene Symbol: CAP2"

<220>

<221> source

<223> /note="Gene Name:
CAP, adenylate cyclase-associated protein, 2 (yeast)"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000419906"

<400> 11565

Met Ala Asn Met Gln Gly Leu Val Glu Arg Leu Glu Arg Ala Val Ser
1 5 10 15

Arg Leu Glu Ser Leu Ser Ala Glu Ser His Arg Pro Pro Gly Asn Cys
20 25 30

Gly Glu Val Asn Gly Val Ile Ala Gly Val Ala Pro Ser Val Glu Ala
35 40 45

Phe Asp Lys Leu Met Asp Ser Met Val Ala Glu Phe Leu Lys Asn Ser
50 55 60

Arg Ile Leu Ala Gly Asp Val Glu Thr His Ala Glu Met Val His Ser
65 70 75 80

Ala Phe Gln Ala Gln Arg Ala Phe Leu Leu Met Ala Ser Gln Tyr Gln
85 90 95

Gln Pro His Glu Ala Asn Lys Phe
100

<210> 11566

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<211> 194
<212> PRT
<213> Homo sapiens

<220>
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<223> /note="Payload ID: 2280"

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<220>
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<220>
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<223> /note="ENSP ID: ENSP00000420615"

<400> 11566
Met Ala Asn Met Gln Gly Leu Val Glu Arg Leu Glu Arg Ala Val Ser
1          5          10          15

Arg Leu Glu Ser Leu Ser Ala Glu Ser His Arg Pro Pro Gly Asn Cys
          20          25          30

Gly Glu Val Asn Gly Val Ile Ala Gly Val Ala Pro Ser Val Glu Ala
          35          40          45

Phe Asp Lys Leu Met Asp Ser Met Val Ala Glu Phe Leu Lys Asn Ser
          50          55          60

Arg Ile Leu Ala Gly Asp Val Glu Thr His Asn Asp Val Ala Ala Leu
65          70          75          80

Leu Lys Pro Ile Ser Glu Lys Ile Gln Glu Ile Gln Thr Phe Arg Glu
          85          90          95

Arg Asn Arg Gly Ser Asn Met Phe Asn His Leu Ser Ala Val Ser Glu
          100          105          110

Ser Ile Pro Ala Leu Gly Trp Ile Ala Val Ser Pro Lys Pro Gly Pro
          115          120          125

Tyr Val Lys Glu Met Asn Asp Ala Ala Thr Phe Tyr Thr Asn Arg Val
130          135          140

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Leu Lys Asp Tyr Lys His Ser Asp Leu Arg His Val Asp Trp Val Lys
145 150 155 160

Ser Tyr Leu Asn Ile Trp Ser Glu Leu Gln Ala Tyr Ile Lys Glu His
165 170 175

His Thr Thr Gly Leu Thr Trp Ser Lys Thr Asn Glu Lys Arg Arg Arg
180 185 190

Gln Arg

<210> 11567
<211> 394
<212> PRT
<213> Homo sapiens

<220>
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CAP, adenylate cyclase-associated protein, 2 (yeast)"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000482279"

<400> 11567
Met Ala Asn Met Gln Gly Leu Val Glu Arg Leu Glu Arg Ala Val Ser
1 5 10 15

Arg Leu Glu Ser Leu Ser Ala Glu Ser His Arg Pro Pro Gly Asn Cys
20 25 30

Gly Glu Val Asn Gly Val Ile Ala Gly Val Ala Pro Ser Val Glu Ala
35 40 45

Phe Asp Lys Leu Met Asp Ser Met Val Ala Glu Phe Leu Lys Asn Ser
50 55 60

Arg Ile Leu Ala Gly Asp Val Glu Thr His Ala Glu Met Val His Ser

65					70						75					80
Ala	Phe	Gln	Ala	Gln	Arg	Ala	Phe	Leu	Leu	Met	Ala	Ser	Gln	Tyr	Gln	
				85					90					95		
Gln	Pro	His	Glu	Asn	Asp	Val	Ala	Ala	Leu	Leu	Lys	Pro	Ile	Ser	Glu	
			100					105					110			
Lys	Ile	Gln	Glu	Ile	Gln	Thr	Phe	Arg	Glu	Arg	Asn	Arg	Gly	Ser	Asn	
		115					120					125				
Met	Phe	Asn	His	Leu	Ser	Ala	Val	Ser	Glu	Ser	Ile	Pro	Ala	Leu	Gly	
	130					135					140					
Trp	Ile	Ala	Val	Ser	Pro	Lys	Pro	Pro	Pro	Leu	Pro	Pro	Pro	Gly	Pro	
145					150					155					160	
Pro	Pro	Leu	Phe	Glu	Asn	Glu	Gly	Lys	Lys	Glu	Glu	Ser	Ser	Pro	Ser	
				165					170					175		
Arg	Ser	Ala	Leu	Phe	Ala	Gln	Leu	Asn	Gln	Gly	Glu	Ala	Ile	Thr	Lys	
			180					185					190			
Gly	Leu	Arg	His	Val	Thr	Asp	Asp	Gln	Lys	Thr	Tyr	Lys	Asn	Pro	Ser	
		195					200					205				
Leu	Arg	Ala	Gln	Gly	Gly	Gln	Thr	Gln	Ser	Pro	Thr	Lys	Ser	His	Thr	
	210					215					220					
Pro	Ser	Pro	Thr	Ser	Pro	Lys	Ser	Tyr	Pro	Ser	Gln	Lys	His	Ala	Pro	
225					230					235					240	
Val	Leu	Glu	Leu	Glu	Gly	Lys	Lys	Trp	Arg	Val	Glu	Tyr	Gln	Glu	Asp	
				245					250					255		
Arg	Asn	Asp	Leu	Val	Ile	Ser	Glu	Thr	Glu	Leu	Lys	Gln	Val	Ala	Tyr	
			260					265					270			
Ile	Phe	Lys	Cys	Glu	Lys	Ser	Thr	Ile	Gln	Ile	Lys	Gly	Lys	Val	Asn	
		275					280					285				
Ser	Ile	Ile	Ile	Asp	Asn	Cys	Lys	Lys	Leu	Gly	Leu	Val	Phe	Asp	Asn	
	290					295					300					

Val Val Gly Ile Val Glu Val Ile Asn Ser Gln Asp Ile Gln Ile Gln
305 310 315 320

Val Met Gly Arg Val Pro Thr Ile Ser Ile Asn Lys Thr Glu Gly Cys
325 330 335

His Ile Tyr Leu Ser Glu Asp Ala Leu Asp Cys Glu Ile Val Ser Ala
340 345 350

Lys Ser Ser Glu Met Asn Ile Leu Ile Pro Gln Asp Gly Asp Tyr Arg
355 360 365

Glu Phe Pro Ile Pro Glu Gln Phe Lys Thr Ala Trp Asp Gly Ser Lys
370 375 380

Leu Ile Thr Glu Pro Ala Glu Ile Met Ala
385 390

<210> 11568
<211> 394
<212> PRT
<213> Homo sapiens

<220>
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<220>
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<223> /note="Gene Name:
CAP, adenylate cyclase-associated protein, 2 (yeast)"

<220>
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<223> /note="ENSP ID: ENSP00000483435"

<400> 11568
Met Ala Asn Met Gln Gly Leu Val Glu Arg Leu Glu Arg Ala Val Ser
1 5 10 15

Arg Leu Glu Ser Leu Ser Ala Glu Ser His Arg Pro Pro Gly Asn Cys
20 25 30

Gly	Glu	Val	Asn	Gly	Val	Ile	Ala	Gly	Val	Ala	Pro	Ser	Val	Glu	Ala	
		35					40					45				
Phe	Asp	Lys	Leu	Met	Asp	Ser	Met	Val	Ala	Glu	Phe	Leu	Lys	Asn	Ser	
	50					55					60					
Arg	Ile	Leu	Ala	Gly	Asp	Val	Glu	Thr	His	Ala	Glu	Met	Val	His	Ser	
65					70					75					80	
Ala	Phe	Gln	Ala	Gln	Arg	Ala	Phe	Leu	Leu	Met	Ala	Ser	Gln	Tyr	Gln	
				85					90					95		
Gln	Pro	His	Glu	Asn	Asp	Val	Ala	Ala	Leu	Leu	Lys	Pro	Ile	Ser	Glu	
			100					105					110			
Lys	Ile	Gln	Glu	Ile	Gln	Thr	Phe	Arg	Glu	Arg	Asn	Arg	Gly	Ser	Asn	
		115					120					125				
Met	Phe	Asn	His	Leu	Ser	Ala	Val	Ser	Glu	Ser	Ile	Pro	Ala	Leu	Gly	
	130					135					140					
Trp	Ile	Ala	Val	Pro	Pro	Pro	Pro	Pro	Pro	Leu	Pro	Pro	Pro	Gly	Pro	
145					150					155					160	
Pro	Pro	Leu	Phe	Glu	Asn	Glu	Gly	Lys	Lys	Glu	Glu	Ser	Ser	Pro	Ser	
				165					170					175		
Arg	Ser	Ala	Leu	Phe	Ala	Gln	Leu	Asn	Gln	Gly	Glu	Ala	Ile	Thr	Lys	
			180					185					190			
Gly	Leu	Arg	His	Val	Thr	Asp	Asp	Gln	Lys	Thr	Tyr	Lys	Asn	Pro	Ser	
		195					200					205				
Leu	Arg	Ala	Gln	Gly	Gly	Gln	Thr	Gln	Ser	Pro	Thr	Lys	Ser	His	Thr	
	210					215					220					
Pro	Ser	Pro	Thr	Ser	Pro	Lys	Ser	Tyr	Pro	Ser	Gln	Lys	His	Ala	Pro	
225					230					235					240	
Val	Leu	Glu	Leu	Glu	Gly	Lys	Lys	Trp	Arg	Val	Glu	Tyr	Gln	Glu	Asp	
				245					250					255		
Arg	Asn	Asp	Leu	Val	Ile	Ser	Glu	Thr	Glu	Leu	Lys	Gln	Val	Ala	Tyr	

<220>
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 <223> /note="ENSP ID: ENSP00000303585"

<400> 11569

Met	Ser	Met	Leu	Lys	Pro	Ser	Gly	Leu	Lys	Ala	Pro	Thr	Lys	Ile	Leu
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Lys	Pro	Gly	Ser	Thr	Ala	Leu	Lys	Thr	Pro	Thr	Ala	Val	Val	Ala	Pro
			20					25					30		
Val	Glu	Lys	Thr	Ile	Ser	Ser	Glu	Lys	Ala	Ser	Ser	Thr	Pro	Ser	Ser
		35					40					45			
Glu	Thr	Gln	Glu	Glu	Phe	Val	Asp	Asp	Phe	Arg	Val	Gly	Glu	Arg	Val
	50					55					60				
Trp	Val	Asn	Gly	Asn	Lys	Pro	Gly	Phe	Ile	Gln	Phe	Leu	Gly	Glu	Thr
65					70					75					80
Gln	Phe	Ala	Pro	Gly	Gln	Trp	Ala	Gly	Ile	Val	Leu	Asp	Glu	Pro	Ile
				85					90					95	
Gly	Lys	Asn	Asp	Gly	Ser	Val	Ala	Gly	Val	Arg	Tyr	Phe	Gln	Cys	Glu
			100					105					110		
Pro	Leu	Lys	Gly	Ile	Phe	Thr	Arg	Pro	Ser	Lys	Leu	Thr	Arg	Lys	Val
		115					120					125			
Gln	Ala	Glu	Asp	Glu	Ala	Asn	Gly	Leu	Gln	Thr	Thr	Pro	Ala	Ser	Arg
	130					135					140				
Ala	Thr	Ser	Pro	Leu	Cys	Thr	Ser	Thr	Ala	Ser	Met	Val	Ser	Ser	Ser
145					150					155					160
Pro	Ser	Thr	Pro	Ser	Asn	Ile	Pro	Gln	Lys	Pro	Ser	Gln	Pro	Ala	Ala
				165					170					175	
Lys	Glu	Pro	Ser	Ala	Thr	Pro	Pro	Ile	Ser	Asn	Leu	Thr	Lys	Thr	Ala
			180					185					190		
Ser	Glu	Ser	Ile	Ser	Asn	Leu	Ser	Glu	Ala	Gly	Ser	Ile	Lys	Lys	Gly
		195					200					205			

Glu	Arg	Glu	Leu	Lys	Ile	Gly	Asp	Arg	Val	Leu	Val	Gly	Gly	Thr	Lys
210						215					220				
Ala	Gly	Val	Val	Arg	Phe	Leu	Gly	Glu	Thr	Asp	Phe	Ala	Lys	Gly	Glu
225					230					235					240
Trp	Cys	Gly	Val	Glu	Leu	Asp	Glu	Pro	Leu	Gly	Lys	Asn	Asp	Gly	Ala
				245					250					255	
Val	Ala	Gly	Thr	Arg	Tyr	Phe	Gln	Cys	Gln	Pro	Lys	Tyr	Gly	Leu	Phe
			260					265					270		
Ala	Pro	Val	His	Lys	Val	Thr	Lys	Ile	Gly	Phe	Pro	Ser	Thr	Thr	Pro
		275					280					285			
Ala	Lys	Ala	Lys	Ala	Asn	Ala	Val	Arg	Arg	Val	Met	Ala	Thr	Thr	Ser
	290					295					300				
Ala	Ser	Leu	Lys	Arg	Ser	Pro	Ser	Ala	Ser	Ser	Leu	Ser	Ser	Met	Ser
305					310					315					320
Ser	Val	Ala	Ser	Ser	Val	Ser	Ser	Arg	Pro	Ser	Arg	Thr	Gly	Leu	Leu
				325					330					335	
Thr	Glu	Thr	Ser	Ser	Arg	Tyr	Ala	Arg	Lys	Ile	Ser	Gly	Thr	Thr	Ala
			340					345					350		
Leu	Gln	Glu	Ala	Leu	Lys	Glu	Lys	Gln	Gln	His	Ile	Glu	Gln	Leu	Leu
		355					360					365			
Ala	Glu	Arg	Asp	Leu	Glu	Arg	Ala	Glu	Val	Ala	Lys	Ala	Thr	Ser	His
	370					375					380				
Val	Gly	Glu	Ile	Glu	Gln	Glu	Leu	Ala	Leu	Ala	Arg	Asp	Gly	His	Asp
385					390					395					400
Gln	His	Val	Leu	Glu	Leu	Glu	Ala	Lys	Met	Asp	Gln	Leu	Arg	Thr	Met
				405					410					415	
Val	Glu	Ala	Ala	Asp	Arg	Glu	Lys	Val	Glu	Leu	Leu	Asn	Gln	Leu	Glu
			420					425					430		
Glu	Glu	Lys	Arg	Lys	Val	Glu	Asp	Leu	Gln	Phe	Arg	Val	Glu	Glu	Glu

435		440		445											
Ser	Ile	Thr	Lys	Gly	Asp	Leu	Glu	Thr	Gln	Thr	Lys	Leu	Glu	His	Ala
450						455					460				
Arg	Ile	Lys	Glu	Leu	Glu	Gln	Ser	Leu	Leu	Phe	Glu	Lys	Thr	Lys	Ala
465					470					475					480
Asp	Lys	Leu	Gln	Arg	Glu	Leu	Glu	Asp	Thr	Arg	Val	Ala	Thr	Val	Ser
				485					490					495	
Glu	Lys	Ser	Arg	Ile	Met	Glu	Leu	Glu	Lys	Asp	Leu	Ala	Leu	Arg	Val
			500					505					510		
Gln	Glu	Val	Ala	Glu	Leu	Arg	Arg	Arg	Leu	Glu	Ser	Asn	Lys	Pro	Ala
		515					520					525			
Gly	Asp	Val	Asp	Met	Ser	Leu	Ser	Leu	Leu	Gln	Glu	Ile	Ser	Ser	Leu
	530					535					540				
Gln	Glu	Lys	Leu	Glu	Val	Thr	Arg	Thr	Asp	His	Gln	Arg	Glu	Ile	Thr
545					550					555					560
Ser	Leu	Lys	Glu	His	Phe	Gly	Ala	Arg	Glu	Glu	Thr	His	Gln	Lys	Glu
				565					570					575	
Ile	Lys	Ala	Leu	Tyr	Thr	Ala	Thr	Glu	Lys	Leu	Ser	Lys	Glu	Asn	Glu
			580					585					590		
Ser	Leu	Lys	Ser	Lys	Leu	Glu	His	Ala	Asn	Lys	Glu	Asn	Ser	Asp	Val
		595					600					605			
Ile	Ala	Leu	Trp	Lys	Ser	Lys	Leu	Glu	Thr	Ala	Ile	Ala	Ser	His	Gln
610						615					620				
Gln	Ala	Met	Glu	Glu	Leu	Lys	Val	Ser	Phe	Ser	Lys	Gly	Leu	Gly	Thr
625					630					635					640
Glu	Thr	Ala	Glu	Phe	Ala	Glu	Leu	Lys	Thr	Gln	Ile	Glu	Lys	Met	Arg
				645					650					655	
Leu	Asp	Tyr	Gln	His	Glu	Ile	Glu	Asn	Leu	Gln	Asn	Gln	Gln	Asp	Ser
			660					665					670		

Glu	Arg	Ala	Ala	His	Ala	Lys	Glu	Met	Glu	Ala	Leu	Arg	Ala	Lys	Leu			
		675					680					685						
Met	Lys	Val	Ile	Lys	Glu	Lys	Glu	Asn	Ser	Leu	Glu	Ala	Ile	Arg	Ser			
	690					695					700							
Lys	Leu	Asp	Lys	Ala	Glu	Asp	Gln	His	Leu	Val	Glu	Met	Glu	Asp	Thr			
705					710					715					720			
Leu	Asn	Lys	Leu	Gln	Glu	Ala	Glu	Ile	Lys	Val	Lys	Glu	Leu	Glu	Val			
				725					730					735				
Leu	Gln	Ala	Lys	Cys	Asn	Glu	Gln	Thr	Lys	Val	Ile	Asp	Asn	Phe	Thr			
			740					745					750					
Ser	Gln	Leu	Lys	Ala	Thr	Glu	Glu	Lys	Leu	Leu	Asp	Leu	Asp	Ala	Leu			
		755					760					765						
Arg	Lys	Ala	Ser	Ser	Glu	Gly	Lys	Ser	Glu	Met	Lys	Lys	Leu	Arg	Gln			
	770					775					780							
Gln	Leu	Glu	Ala	Ala	Glu	Lys	Gln	Ile	Lys	His	Leu	Glu	Ile	Glu	Lys			
785					790					795					800			
Asn	Ala	Glu	Ser	Ser	Lys	Ala	Ser	Ser	Ile	Thr	Arg	Glu	Leu	Gln	Gly			
				805					810					815				
Arg	Glu	Leu	Lys	Leu	Thr	Asn	Leu	Gln	Glu	Asn	Leu	Ser	Glu	Val	Ser			
			820					825					830					
Gln	Val	Lys	Glu	Thr	Leu	Glu	Lys	Glu	Leu	Gln	Ile	Leu	Lys	Glu	Lys			
		835					840					845						
Phe	Ala	Glu	Ala	Ser	Glu	Glu	Ala	Val	Ser	Val	Gln	Arg	Ser	Met	Gln			
	850					855					860							
Glu	Thr	Val	Asn	Lys	Leu	His	Gln	Lys	Glu	Glu	Gln	Phe	Asn	Met	Leu			
865					870					875					880			
Ser	Ser	Asp	Leu	Glu	Lys	Leu	Arg	Glu	Asn	Leu	Ala	Asp	Met	Glu	Ala			
				885					890					895				

Lys Phe Arg Glu Lys Asp Glu Arg Glu Glu Gln Leu Ile Lys Ala Lys
900 905 910

Glu Lys Leu Glu Asn Asp Ile Ala Glu Ile Met Lys Met Ser Gly Asp
915 920 925

Asn Ser Ser Gln Leu Thr Lys Met Asn Asp Glu Leu Arg Leu Lys Glu
930 935 940

Arg Asp Val Glu Glu Leu Gln Leu Lys Leu Thr Lys Ala Asn Glu Asn
945 950 955 960

Ala Ser Phe Leu Gln Lys Ser Ile Glu Asp Met Thr Val Lys Ala Glu
965 970 975

Gln Ser Gln Gln Glu Ala Ala Lys Lys His Glu Glu Glu Lys Lys Glu
980 985 990

Leu Glu Arg Lys Leu Ser Asp Leu Glu Lys Lys Met Glu Thr Ser
His
995 1000 1005

Asn Gln Cys Gln Glu Leu Lys Ala Arg Tyr Glu Arg Ala Thr Ser
1010 1015 1020

Glu Thr Lys Thr Lys His Glu Glu Ile Leu Gln Asn Leu Gln Lys
1025 1030 1035

Thr Leu Leu Asp Thr Glu Asp Lys Leu Lys Gly Ala Arg Glu Glu
1040 1045 1050

Asn Ser Gly Leu Leu Gln Glu Leu Glu Glu Leu Arg Lys Gln Ala
1055 1060 1065

Asp Lys Ala Lys Ala Ala Gln Thr Ala Glu Asp Ala Met Gln Ile
1070 1075 1080

Met Glu Gln Met Thr Lys Glu Lys Thr Glu Thr Leu Ala Ser Leu
1085 1090 1095

Glu Asp Thr Lys Gln Thr Asn Ala Lys Leu Gln Asn Glu Leu Asp
1100 1105 1110

Thr	Leu	Lys	Glu	Asn	Asn	Leu	Lys	Asn	Val	Glu	Glu	Leu	Asn	Lys
	1115					1120					1125			
Ser	Lys	Glu	Leu	Leu	Thr	Val	Glu	Asn	Gln	Lys	Met	Glu	Glu	Phe
	1130					1135					1140			
Arg	Lys	Glu	Ile	Glu	Thr	Leu	Lys	Gln	Ala	Ala	Ala	Gln	Lys	Ser
	1145					1150					1155			
Gln	Gln	Leu	Ser	Ala	Leu	Gln	Glu	Glu	Asn	Val	Lys	Leu	Ala	Glu
	1160					1165					1170			
Glu	Leu	Gly	Arg	Ser	Arg	Asp	Glu	Val	Thr	Ser	His	Gln	Lys	Leu
	1175					1180					1185			
Glu	Glu	Glu	Arg	Ser	Val	Leu	Asn	Asn	Gln	Leu	Leu	Glu	Met	Lys
	1190					1195					1200			
Lys	Arg	Glu	Ser	Lys	Phe	Ile	Lys	Asp	Ala	Asp	Glu	Glu	Lys	Ala
	1205					1210					1215			
Ser	Leu	Gln	Lys	Ser	Ile	Ser	Ile	Thr	Ser	Ala	Leu	Leu	Thr	Glu
	1220					1225					1230			
Lys	Asp	Ala	Glu	Leu	Glu	Lys	Leu	Arg	Asn	Glu	Val	Thr	Val	Leu
	1235					1240					1245			
Arg	Gly	Glu	Asn	Ala	Ser	Ala	Lys	Ser	Leu	His	Ser	Val	Val	Gln
	1250					1255					1260			
Thr	Leu	Glu	Ser	Asp	Lys	Val	Lys	Leu	Glu	Leu	Lys	Val	Lys	Asn
	1265					1270					1275			
Leu	Glu	Leu	Gln	Leu	Lys	Glu	Asn	Lys	Arg	Gln	Leu	Ser	Ser	Ser
	1280					1285					1290			
Ser	Gly	Asn	Thr	Asp	Thr	Gln	Ala	Asp	Glu	Asp	Glu	Arg	Ala	Gln
	1295					1300					1305			
Glu	Ser	Gln	Ile	Asp	Phe	Leu	Asn	Ser	Val	Ile	Val	Asp	Leu	Gln
	1310					1315					1320			

Arg Lys Asn Gln Asp Leu Lys Met Lys Val Glu Met Met Ser Glu
 1325 1330 1335

Ala Ala Leu Asn Gly Asn Gly Asp Asp Leu Asn Asn Tyr Asp Ser
 1340 1345 1350

Asp Asp Gln Glu Lys Gln Ser Lys Lys Lys Pro Arg Leu Phe Cys
 1355 1360 1365

Asp Ile Cys Asp Cys Phe Asp Leu His Asp Thr Glu Asp Cys Pro
 1370 1375 1380

Thr Gln Ala Gln Met Ser Glu Asp Pro Pro His Ser Thr His His
 1385 1390 1395

Gly Ser Arg Gly Glu Glu Arg Pro Tyr Cys Glu Ile Cys Glu Met
 1400 1405 1410

Phe Gly His Trp Ala Thr Asn Cys Asn Asp Asp Glu Thr Phe
 1415 1420 1425

<210> 11570

<211> 1427

<212> PRT

<213> Homo sapiens

<220>

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 CAP-GLY domain containing linker protein 1"

<220>

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<223> /note="Uniprot ID: P30622"

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<400> 11570

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Lys	Pro	Gly	Ser	Thr	Ala	Leu	Lys	Thr	Pro	Thr	Ala	Val	Val	Ala	Pro			
			20					25					30					
Val	Glu	Lys	Thr	Ile	Ser	Ser	Glu	Lys	Ala	Ser	Ser	Thr	Pro	Ser	Ser			
		35					40					45						
Glu	Thr	Gln	Glu	Glu	Phe	Val	Asp	Asp	Phe	Arg	Val	Gly	Glu	Arg	Val			
	50					55					60							
Trp	Val	Asn	Gly	Asn	Lys	Pro	Gly	Phe	Ile	Gln	Phe	Leu	Gly	Glu	Thr			
65					70					75					80			
Gln	Phe	Ala	Pro	Gly	Gln	Trp	Ala	Gly	Ile	Val	Leu	Asp	Glu	Pro	Ile			
				85					90					95				
Gly	Lys	Asn	Asp	Gly	Ser	Val	Ala	Gly	Val	Arg	Tyr	Phe	Gln	Cys	Glu			
			100					105					110					
Pro	Leu	Lys	Gly	Ile	Phe	Thr	Arg	Pro	Ser	Lys	Leu	Thr	Arg	Lys	Val			
		115					120					125						
Gln	Ala	Glu	Asp	Glu	Ala	Asn	Gly	Leu	Gln	Thr	Thr	Pro	Ala	Ser	Arg			
	130					135					140							
Ala	Thr	Ser	Pro	Leu	Cys	Thr	Ser	Thr	Ala	Ser	Met	Val	Ser	Ser	Ser			
145					150					155					160			
Pro	Ser	Thr	Pro	Ser	Asn	Ile	Pro	Gln	Lys	Pro	Ser	Gln	Pro	Ala	Ala			
				165					170					175				
Lys	Glu	Pro	Ser	Ala	Thr	Pro	Pro	Ile	Ser	Asn	Leu	Thr	Lys	Thr	Ala			
			180					185					190					
Ser	Glu	Ser	Ile	Ser	Asn	Leu	Ser	Glu	Ala	Gly	Ser	Ile	Lys	Lys	Gly			
		195					200					205						
Glu	Arg	Glu	Leu	Lys	Ile	Gly	Asp	Arg	Val	Leu	Val	Gly	Gly	Thr	Lys			
	210					215					220							
Ala	Gly	Val	Val	Arg	Phe	Leu	Gly	Glu	Thr	Asp	Phe	Ala	Lys	Gly	Glu			
225					230					235					240			

Trp	Cys	Gly	Val	Glu	Leu	Asp	Glu	Pro	Leu	Gly	Lys	Asn	Asp	Gly	Ala	
				245					250					255		
Val	Ala	Gly	Thr	Arg	Tyr	Phe	Gln	Cys	Gln	Pro	Lys	Tyr	Gly	Leu	Phe	
			260					265					270			
Ala	Pro	Val	His	Lys	Val	Thr	Lys	Ile	Gly	Phe	Pro	Ser	Thr	Thr	Pro	
		275					280					285				
Ala	Lys	Ala	Lys	Ala	Asn	Ala	Val	Arg	Arg	Val	Met	Ala	Thr	Thr	Ser	
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Ala	Ser	Leu	Lys	Arg	Ser	Pro	Ser	Ala	Ser	Ser	Leu	Ser	Ser	Met	Ser	
305					310					315					320	
Ser	Val	Ala	Ser	Ser	Val	Ser	Ser	Arg	Pro	Ser	Arg	Thr	Gly	Leu	Leu	
				325					330					335		
Thr	Glu	Thr	Ser	Ser	Arg	Tyr	Ala	Arg	Lys	Ile	Ser	Gly	Thr	Thr	Ala	
			340					345					350			
Leu	Gln	Glu	Ala	Leu	Lys	Glu	Lys	Gln	Gln	His	Ile	Glu	Gln	Leu	Leu	
		355					360					365				
Ala	Glu	Arg	Asp	Leu	Glu	Arg	Ala	Glu	Val	Ala	Lys	Ala	Thr	Ser	His	
	370					375					380					
Val	Gly	Glu	Ile	Glu	Gln	Glu	Leu	Ala	Leu	Ala	Arg	Asp	Gly	His	Asp	
385					390					395					400	
Gln	His	Val	Leu	Glu	Leu	Glu	Ala	Lys	Met	Asp	Gln	Leu	Arg	Thr	Met	
				405					410					415		
Val	Glu	Ala	Ala	Asp	Arg	Glu	Lys	Val	Glu	Leu	Leu	Asn	Gln	Leu	Glu	
			420					425					430			
Glu	Glu	Lys	Arg	Lys	Val	Glu	Asp	Leu	Gln	Phe	Arg	Val	Glu	Glu	Glu	
		435					440					445				
Ser	Ile	Thr	Lys	Gly	Asp	Leu	Glu	Thr	Gln	Thr	Lys	Leu	Glu	His	Ala	
	450					455					460					

Arg Ile Lys Glu Leu Glu Gln Ser Leu Leu Phe Glu Lys Thr Lys Ala
465 470 475 480

Asp Lys Leu Gln Arg Glu Leu Glu Asp Thr Arg Val Ala Thr Val Ser
485 490 495

Glu Lys Ser Arg Ile Met Glu Leu Glu Lys Asp Leu Ala Leu Arg Val
500 505 510

Gln Glu Val Ala Glu Leu Arg Arg Arg Leu Glu Ser Asn Lys Pro Ala
515 520 525

Gly Asp Val Asp Met Ser Leu Ser Leu Leu Gln Glu Ile Ser Ser Leu
530 535 540

Gln Glu Lys Leu Glu Val Thr Arg Thr Asp His Gln Arg Glu Ile Thr
545 550 555 560

Ser Leu Lys Glu His Phe Gly Ala Arg Glu Glu Thr His Gln Lys Glu
565 570 575

Ile Lys Ala Leu Tyr Thr Ala Thr Glu Lys Leu Ser Lys Glu Asn Glu
580 585 590

Ser Leu Lys Ser Lys Leu Glu His Ala Asn Lys Glu Asn Ser Asp Val
595 600 605

Ile Ala Leu Trp Lys Ser Lys Leu Glu Thr Ala Ile Ala Ser His Gln
610 615 620

Gln Ala Met Glu Glu Leu Lys Val Ser Phe Ser Lys Gly Leu Gly Thr
625 630 635 640

Glu Thr Ala Glu Phe Ala Glu Leu Lys Thr Gln Ile Glu Lys Met Arg
645 650 655

Leu Asp Tyr Gln His Glu Ile Glu Asn Leu Gln Asn Gln Gln Asp Ser
660 665 670

Glu Arg Ala Ala His Ala Lys Glu Met Glu Ala Leu Arg Ala Lys Leu
675 680 685

Met Lys Val Ile Lys Glu Lys Glu Asn Ser Leu Glu Ala Ile Arg Ser

690																
Lys	Leu	Asp	Lys	Ala	Glu	Asp	Gln	His	Leu	Val	Glu	Met	Glu	Asp	Thr	
705					710					715					720	
Leu	Asn	Lys	Leu	Gln	Glu	Ala	Glu	Ile	Lys	Val	Lys	Glu	Leu	Glu	Val	
				725					730					735		
Leu	Gln	Ala	Lys	Cys	Asn	Glu	Gln	Thr	Lys	Val	Ile	Asp	Asn	Phe	Thr	
			740					745					750			
Ser	Gln	Leu	Lys	Ala	Thr	Glu	Glu	Lys	Leu	Leu	Asp	Leu	Asp	Ala	Leu	
		755					760					765				
Arg	Lys	Ala	Ser	Ser	Glu	Gly	Lys	Ser	Glu	Met	Lys	Lys	Leu	Arg	Gln	
	770					775					780					
Gln	Leu	Glu	Ala	Ala	Glu	Lys	Gln	Ile	Lys	His	Leu	Glu	Ile	Glu	Lys	
785					790					795					800	
Asn	Ala	Glu	Ser	Ser	Lys	Ala	Ser	Ser	Ile	Thr	Arg	Glu	Leu	Gln	Gly	
				805					810					815		
Arg	Glu	Leu	Lys	Leu	Thr	Asn	Leu	Gln	Glu	Asn	Leu	Ser	Glu	Val	Ser	
			820					825					830			
Gln	Val	Lys	Glu	Thr	Leu	Glu	Lys	Glu	Leu	Gln	Ile	Leu	Lys	Glu	Lys	
		835					840					845				
Phe	Ala	Glu	Ala	Ser	Glu	Glu	Ala	Val	Ser	Val	Gln	Arg	Ser	Met	Gln	
	850					855					860					
Glu	Thr	Val	Asn	Lys	Leu	His	Gln	Lys	Glu	Glu	Gln	Phe	Asn	Met	Leu	
865					870					875					880	
Ser	Ser	Asp	Leu	Glu	Lys	Leu	Arg	Glu	Asn	Leu	Ala	Asp	Met	Glu	Ala	
				885					890					895		
Lys	Phe	Arg	Glu	Lys	Asp	Glu	Arg	Glu	Glu	Gln	Leu	Ile	Lys	Ala	Lys	
			900					905					910			
Glu	Lys	Leu	Glu	Asn	Asp	Ile	Ala	Glu	Ile	Met	Lys	Met	Ser	Gly	Asp	
		915					920					925				

Asn Ser Ser Gln Leu Thr Lys Met Asn Asp Glu Leu Arg Leu Lys Glu
 930 935 940

Arg Asp Val Glu Glu Leu Gln Leu Lys Leu Thr Lys Ala Asn Glu Asn
 945 950 955 960

Ala Ser Phe Leu Gln Lys Ser Ile Glu Asp Met Thr Val Lys Ala Glu
 965 970 975

Gln Ser Gln Gln Glu Ala Ala Lys Lys His Glu Glu Glu Lys Lys Glu
 980 985 990

Leu Glu Arg Lys Leu Ser Asp Leu Glu Lys Lys Met Glu Thr Ser
 His
 995 1000 1005

Asn Gln Cys Gln Glu Leu Lys Ala Arg Tyr Glu Arg Ala Thr Ser
 1010 1015 1020

Glu Thr Lys Thr Lys His Glu Glu Ile Leu Gln Asn Leu Gln Lys
 1025 1030 1035

Thr Leu Leu Asp Thr Glu Asp Lys Leu Lys Gly Ala Arg Glu Glu
 1040 1045 1050

Asn Ser Gly Leu Leu Gln Glu Leu Glu Glu Leu Arg Lys Gln Ala
 1055 1060 1065

Asp Lys Ala Lys Ala Ala Gln Thr Ala Glu Asp Ala Met Gln Ile
 1070 1075 1080

Met Glu Gln Met Thr Lys Glu Lys Thr Glu Thr Leu Ala Ser Leu
 1085 1090 1095

Glu Asp Thr Lys Gln Thr Asn Ala Lys Leu Gln Asn Glu Leu Asp
 1100 1105 1110

Thr Leu Lys Glu Asn Asn Leu Lys Asn Val Glu Glu Leu Asn Lys
 1115 1120 1125

Ser Lys Glu Leu Leu Thr Val Glu Asn Gln Lys Met Glu Glu Phe
 1130 1135 1140

Arg	Lys	Glu	Ile	Glu	Thr	Leu	Lys	Gln	Ala	Ala	Ala	Gln	Lys	Ser
	1145					1150					1155			
Gln	Gln	Leu	Ser	Ala	Leu	Gln	Glu	Glu	Asn	Val	Lys	Leu	Ala	Glu
	1160					1165					1170			
Glu	Leu	Gly	Arg	Ser	Arg	Asp	Glu	Val	Thr	Ser	His	Gln	Lys	Leu
	1175					1180					1185			
Glu	Glu	Glu	Arg	Ser	Val	Leu	Asn	Asn	Gln	Leu	Leu	Glu	Met	Lys
	1190					1195					1200			
Lys	Arg	Glu	Ser	Lys	Phe	Ile	Lys	Asp	Ala	Asp	Glu	Glu	Lys	Ala
	1205					1210					1215			
Ser	Leu	Gln	Lys	Ser	Ile	Ser	Ile	Thr	Ser	Ala	Leu	Leu	Thr	Glu
	1220					1225					1230			
Lys	Asp	Ala	Glu	Leu	Glu	Lys	Leu	Arg	Asn	Glu	Val	Thr	Val	Leu
	1235					1240					1245			
Arg	Gly	Glu	Asn	Ala	Ser	Ala	Lys	Ser	Leu	His	Ser	Val	Val	Gln
	1250					1255					1260			
Thr	Leu	Glu	Ser	Asp	Lys	Val	Lys	Leu	Glu	Leu	Lys	Val	Lys	Asn
	1265					1270					1275			
Leu	Glu	Leu	Gln	Leu	Lys	Glu	Asn	Lys	Arg	Gln	Leu	Ser	Ser	Ser
	1280					1285					1290			
Ser	Gly	Asn	Thr	Asp	Thr	Gln	Ala	Asp	Glu	Asp	Glu	Arg	Ala	Gln
	1295					1300					1305			
Glu	Ser	Gln	Ile	Asp	Phe	Leu	Asn	Ser	Val	Ile	Val	Asp	Leu	Gln
	1310					1315					1320			
Arg	Lys	Asn	Gln	Asp	Leu	Lys	Met	Lys	Val	Glu	Met	Met	Ser	Glu
	1325					1330					1335			
Ala	Ala	Leu	Asn	Gly	Asn	Gly	Asp	Asp	Leu	Asn	Asn	Tyr	Asp	Ser
	1340					1345					1350			

Asp Asp Gln Glu Lys Gln Ser Lys Lys Lys Pro Arg Leu Phe Cys
1355 1360 1365

Asp Ile Cys Asp Cys Phe Asp Leu His Asp Thr Glu Asp Cys Pro
1370 1375 1380

Thr Gln Ala Gln Met Ser Glu Asp Pro Pro His Ser Thr His His
1385 1390 1395

Gly Ser Arg Gly Glu Glu Arg Pro Tyr Cys Glu Ile Cys Glu Met
1400 1405 1410

Phe Gly His Trp Ala Thr Asn Cys Asn Asp Asp Glu Thr Phe
1415 1420 1425

<210> 11571
<211> 1316
<212> PRT
<213> Homo sapiens

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<223> /note="Gene Symbol: CLIP1"

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<223> /note="Gene Name:
CAP-GLY domain containing linker protein 1"

<220>
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Lys Pro Gly Ser Thr Ala Leu Lys Thr Pro Thr Ala Val Val Ala Pro
20 25 30

Val Glu Lys Thr Ile Ser Ser Glu Lys Ala Ser Ser Thr Pro Ser Ser
35 40 45

Glu Thr Gln Glu Glu Phe Val Asp Asp Phe Arg Val Gly Glu Arg Val
25801

50						55										60
Trp	Val	Asn	Gly	Asn	Lys	Pro	Gly	Phe	Ile	Gln	Phe	Leu	Gly	Glu	Thr	
65					70					75					80	
Gln	Phe	Ala	Pro	Gly	Gln	Trp	Ala	Gly	Ile	Val	Leu	Asp	Glu	Pro	Ile	
				85					90					95		
Gly	Lys	Asn	Asp	Gly	Ser	Val	Ala	Gly	Val	Arg	Tyr	Phe	Gln	Cys	Glu	
			100					105					110			
Pro	Leu	Lys	Gly	Ile	Phe	Thr	Arg	Pro	Ser	Lys	Leu	Thr	Arg	Lys	Val	
		115					120					125				
Gln	Ala	Glu	Asp	Glu	Ala	Asn	Gly	Leu	Gln	Thr	Thr	Pro	Ala	Ser	Arg	
	130					135					140					
Ala	Thr	Ser	Pro	Leu	Cys	Thr	Ser	Thr	Ala	Ser	Met	Val	Ser	Ser	Ser	
145					150					155						
Pro	Ser	Thr	Pro	Ser	Asn	Ile	Pro	Gln	Lys	Pro	Ser	Gln	Pro	Ala	Ala	
				165					170					175		
Lys	Glu	Pro	Ser	Ala	Thr	Pro	Pro	Ile	Ser	Asn	Leu	Thr	Lys	Thr	Ala	
			180					185					190			
Ser	Glu	Ser	Ile	Ser	Asn	Leu	Ser	Glu	Ala	Gly	Ser	Ile	Lys	Lys	Gly	
		195					200					205				
Glu	Arg	Glu	Leu	Lys	Ile	Gly	Asp	Arg	Val	Leu	Val	Gly	Gly	Thr	Lys	
	210					215					220					
Ala	Gly	Val	Val	Arg	Phe	Leu	Gly	Glu	Thr	Asp	Phe	Ala	Lys	Gly	Glu	
225					230					235						
Trp	Cys	Gly	Val	Glu	Leu	Asp	Glu	Pro	Leu	Gly	Lys	Asn	Asp	Gly	Ala	
				245					250					255		
Val	Ala	Gly	Thr	Arg	Tyr	Phe	Gln	Cys	Gln	Pro	Lys	Tyr	Gly	Leu	Phe	
			260					265					270			
Ala	Pro	Val	His	Lys	Val	Thr	Lys	Ile	Gly	Phe	Pro	Ser	Thr	Thr	Pro	
		275					280					285				

Leu Glu Val Thr Arg Thr Asp His Gln Arg Glu Ile Thr Ser Leu Lys
 515 520 525

Glu His Phe Gly Ala Arg Glu Glu Thr His Gln Lys Glu Ile Lys Ala
 530 535 540

Leu Tyr Thr Ala Thr Glu Lys Leu Ser Lys Glu Asn Glu Ser Leu Lys
 545 550 555 560

Ser Lys Leu Glu His Ala Asn Lys Glu Asn Ser Asp Val Ile Ala Leu
 565 570 575

Trp Lys Ser Lys Leu Glu Thr Ala Ile Ala Ser His Gln Gln Ala Met
 580 585 590

Glu Glu Leu Lys Val Ser Phe Ser Lys Gly Leu Gly Thr Glu Thr Ala
 595 600 605

Glu Phe Ala Glu Leu Lys Thr Gln Ile Glu Lys Met Arg Leu Asp Tyr
 610 615 620

Gln His Glu Ile Glu Asn Leu Gln Asn Gln Gln Asp Ser Glu Arg Ala
 625 630 635 640

Ala His Ala Lys Glu Met Glu Ala Leu Arg Ala Lys Leu Met Lys Val
 645 650 655

Ile Lys Glu Lys Glu Asn Ser Leu Glu Ala Ile Arg Ser Lys Leu Asp
 660 665 670

Lys Ala Glu Asp Gln His Leu Val Glu Met Glu Asp Thr Leu Asn Lys
 675 680 685

Leu Gln Glu Ala Glu Ile Lys Ala Ser Ser Ile Thr Arg Glu Leu Gln
 690 695 700

Gly Arg Glu Leu Lys Leu Thr Asn Leu Gln Glu Asn Leu Ser Glu Val
 705 710 715 720

Ser Gln Val Lys Glu Thr Leu Glu Lys Glu Leu Gln Ile Leu Lys Glu
 725 730 735

Lys Phe Ala Glu Ala Ser Glu Glu Ala Val Ser Val Gln Arg Ser Met
 740 745 750
 Gln Glu Thr Val Asn Lys Leu His Gln Lys Glu Glu Gln Phe Asn Met
 755 760 765
 Leu Ser Ser Asp Leu Glu Lys Leu Arg Glu Asn Leu Ala Asp Met Glu
 770 775 780
 Ala Lys Phe Arg Glu Lys Asp Glu Arg Glu Glu Gln Leu Ile Lys Ala
 785 790 795 800
 Lys Glu Lys Leu Glu Asn Asp Ile Ala Glu Ile Met Lys Met Ser Gly
 805 810 815
 Asp Asn Ser Ser Gln Leu Thr Lys Met Asn Asp Glu Leu Arg Leu Lys
 820 825 830
 Glu Arg Asp Val Glu Glu Leu Gln Leu Lys Leu Thr Lys Ala Asn Glu
 835 840 845
 Asn Ala Ser Phe Leu Gln Lys Ser Ile Glu Asp Met Thr Val Lys Ala
 850 855 860
 Glu Gln Ser Gln Gln Glu Ala Ala Lys Lys His Glu Glu Glu Lys Lys
 865 870 875 880
 Glu Leu Glu Arg Lys Leu Ser Asp Leu Glu Lys Lys Met Glu Thr Ser
 885 890 895
 His Asn Gln Cys Gln Glu Leu Lys Ala Arg Tyr Glu Arg Ala Thr Ser
 900 905 910
 Glu Thr Lys Thr Lys His Glu Glu Ile Leu Gln Asn Leu Gln Lys Thr
 915 920 925
 Leu Leu Asp Thr Glu Asp Lys Leu Lys Gly Ala Arg Glu Glu Asn Ser
 930 935 940
 Gly Leu Leu Gln Glu Leu Glu Glu Leu Arg Lys Gln Ala Asp Lys Ala
 945 950 955 960
 Lys Ala Ala Gln Thr Ala Glu Asp Ala Met Gln Ile Met Glu Gln Met

25805

965

970

975

Thr Lys Glu Lys Thr Glu Thr Leu Ala Ser Leu Glu Asp Thr Lys Gln
 980 985 990

Thr Asn Ala Lys Leu Gln Asn Glu Leu Asp Thr Leu Lys Glu Asn
 Asn
 995 1000 1005

Leu Lys Asn Val Glu Glu Leu Asn Lys Ser Lys Glu Leu Leu Thr
 1010 1015 1020

Val Glu Asn Gln Lys Met Glu Glu Phe Arg Lys Glu Ile Glu Thr
 1025 1030 1035

Leu Lys Gln Ala Ala Ala Gln Lys Ser Gln Gln Leu Ser Ala Leu
 1040 1045 1050

Gln Glu Glu Asn Val Lys Leu Ala Glu Glu Leu Gly Arg Ser Arg
 1055 1060 1065

Asp Glu Val Thr Ser His Gln Lys Leu Glu Glu Glu Arg Ser Val
 1070 1075 1080

Leu Asn Asn Gln Leu Leu Glu Met Lys Lys Arg Glu Ser Lys Phe
 1085 1090 1095

Ile Lys Asp Ala Asp Glu Glu Lys Ala Ser Leu Gln Lys Ser Ile
 1100 1105 1110

Ser Ile Thr Ser Ala Leu Leu Thr Glu Lys Asp Ala Glu Leu Glu
 1115 1120 1125

Lys Leu Arg Asn Glu Val Thr Val Leu Arg Gly Glu Asn Ala Ser
 1130 1135 1140

Ala Lys Ser Leu His Ser Val Val Gln Thr Leu Glu Ser Asp Lys
 1145 1150 1155

Val Lys Leu Glu Leu Lys Val Lys Asn Leu Glu Leu Gln Leu Lys
 1160 1165 1170

Glu Asn Lys Arg Gln Leu Ser Ser Ser Ser Gly Asn Thr Asp Thr

25806

1175		1180		1185
Gln Ala Asp Glu Asp Glu Arg Ala Gln Glu Ser Gln Ile Asp Phe				
1190		1195		1200
Leu Asn Ser Val Ile Val Asp Leu Gln Arg Lys Asn Gln Asp Leu				
1205		1210		1215
Lys Met Lys Val Glu Met Met Ser Glu Ala Ala Leu Asn Gly Asn				
1220		1225		1230
Gly Asp Asp Leu Asn Asn Tyr Asp Ser Asp Asp Gln Glu Lys Gln				
1235		1240		1245
Ser Lys Lys Lys Pro Arg Leu Phe Cys Asp Ile Cys Asp Cys Phe				
1250		1255		1260
Asp Leu His Asp Thr Glu Asp Cys Pro Thr Gln Ala Gln Met Ser				
1265		1270		1275
Glu Asp Pro Pro His Ser Thr His His Gly Ser Arg Gly Glu Glu				
1280		1285		1290
Arg Pro Tyr Cys Glu Ile Cys Glu Met Phe Gly His Trp Ala Thr				
1295		1300		1305
Asn Cys Asn Asp Asp Glu Thr Phe				
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<210> 11572

<211> 117

<212> PRT

<213> Homo sapiens

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<223> /note="Payload ID: 2281"

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<223> /note="Gene Symbol: CLIP1"

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<223> /note="Gene Name:
CAP-GLY domain containing linker protein 1"

<220>
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 Gln Asp Leu Lys Met Lys Val Glu Met Met Ser Glu Ala Ala Leu Asn
 20 25 30

 Gly Asn Gly Asp Asp Leu Asn Asn Tyr Asp Ser Asp Asp Gln Glu Lys
 35 40 45

 Gln Ser Lys Lys Lys Pro Arg Leu Phe Cys Asp Ile Cys Asp Cys Phe
 50 55 60

 Asp Leu His Asp Thr Glu Asp Cys Pro Thr Gln Ala Gln Met Ser Glu
 65 70 75 80

 Asp Pro Pro His Ser Thr His His Gly Ser Arg Gly Glu Glu Arg Pro
 85 90 95

 Tyr Cys Glu Ile Cys Glu Met Phe Gly His Trp Ala Thr Asn Cys Asn
 100 105 110

 Asp Asp Glu Thr Phe
 115

<210> 11573
 <211> 803
 <212> PRT
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<220>
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 CAP-GLY domain containing linker protein 1"

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<400> 11573

Met Ser Met Leu Lys Pro Ser Gly Leu Lys Ala Pro Thr Lys Ile Leu
1 5 10 15

Lys Pro Gly Ser Thr Ala Leu Lys Thr Pro Thr Ala Val Val Ala Pro
20 25 30

Val Glu Lys Thr Ile Ser Ser Glu Lys Ala Ser Ser Thr Pro Ser Ser
35 40 45

Glu Thr Gln Glu Glu Phe Val Asp Asp Phe Arg Val Gly Glu Arg Val
50 55 60

Trp Val Asn Gly Asn Lys Pro Gly Phe Ile Gln Phe Leu Gly Glu Thr
65 70 75 80

Gln Phe Ala Pro Gly Gln Trp Ala Gly Ile Val Leu Asp Glu Pro Ile
85 90 95

Gly Lys Asn Asp Gly Ser Val Ala Gly Val Arg Tyr Phe Gln Cys Glu
100 105 110

Pro Leu Lys Gly Ile Phe Thr Arg Pro Ser Lys Leu Thr Arg Lys Val
115 120 125

Gln Ala Glu Asp Glu Ala Asn Gly Leu Gln Thr Thr Pro Ala Ser Arg
130 135 140

Ala Thr Ser Pro Leu Cys Thr Ser Thr Ala Ser Met Val Ser Ser Ser
145 150 155 160

Pro Ser Thr Pro Ser Asn Ile Pro Gln Lys Pro Ser Gln Pro Ala Ala
165 170 175

Lys Glu Pro Ser Ala Thr Pro Pro Ile Ser Asn Leu Thr Lys Thr Ala
180 185 190

Ser Glu Ser Ile Ser Asn Leu Ser Glu Ala Gly Ser Ile Lys Lys Gly
195 200 205

Glu Arg Glu Leu Lys Ile Gly Asp Arg Val Leu Val Gly Gly Thr Lys
210 215 220

Ala	Gly	Val	Val	Arg	Phe	Leu	Gly	Glu	Thr	Asp	Phe	Ala	Lys	Gly	Glu	225	230	235	240
Trp	Cys	Gly	Val	Glu	Leu	Asp	Glu	Pro	Leu	Gly	Lys	Asn	Asp	Gly	Ala	245	250	255	
Val	Ala	Gly	Thr	Arg	Tyr	Phe	Gln	Cys	Gln	Pro	Lys	Tyr	Gly	Leu	Phe	260	265	270	
Ala	Pro	Val	His	Lys	Val	Thr	Lys	Ile	Gly	Phe	Pro	Ser	Thr	Thr	Pro	275	280	285	
Ala	Lys	Ala	Lys	Ala	Asn	Ala	Val	Arg	Arg	Val	Met	Ala	Thr	Thr	Ser	290	295	300	
Ala	Ser	Leu	Lys	Arg	Ser	Pro	Ser	Ala	Ser	Ser	Leu	Ser	Ser	Met	Ser	305	310	315	320
Ser	Val	Ala	Ser	Ser	Val	Ser	Ser	Arg	Pro	Ser	Arg	Thr	Gly	Leu	His	325	330	335	
Val	Leu	Glu	Leu	Glu	Ala	Lys	Met	Asp	Gln	Leu	Arg	Thr	Met	Val	Glu	340	345	350	
Ala	Ala	Asp	Arg	Glu	Lys	Val	Glu	Leu	Leu	Asn	Gln	Leu	Glu	Glu	Glu	355	360	365	
Lys	Arg	Lys	Val	Glu	Asp	Leu	Gln	Phe	Arg	Val	Glu	Glu	Glu	Ser	Ile	370	375	380	
Thr	Lys	Gly	Asp	Leu	Glu	Thr	Gln	Thr	Lys	Leu	Glu	His	Ala	Arg	Ile	385	390	395	400
Lys	Glu	Leu	Glu	Gln	Ser	Leu	Leu	Phe	Glu	Lys	Thr	Lys	Ala	Asp	Lys	405	410	415	
Leu	Gln	Arg	Glu	Leu	Glu	Asp	Thr	Arg	Val	Ala	Thr	Val	Ser	Glu	Lys	420	425	430	
Ser	Arg	Ile	Met	Glu	Leu	Glu	Lys	Asp	Leu	Ala	Leu	Arg	Val	Gln	Glu	435	440	445	

Val	Ala	Glu	Leu	Arg	Arg	Arg	Leu	Glu	Ser	Asn	Lys	Pro	Ala	Gly	Asp
450						455					460				
Val	Asp	Met	Ser	Leu	Ser	Leu	Leu	Gln	Glu	Ile	Ser	Ser	Leu	Gln	Glu
465					470					475					480
Lys	Leu	Glu	Val	Thr	Arg	Thr	Asp	His	Gln	Arg	Glu	Ile	Thr	Ser	Leu
				485					490					495	
Lys	Glu	His	Phe	Gly	Ala	Arg	Glu	Glu	Thr	His	Gln	Lys	Glu	Ile	Lys
			500					505					510		
Ala	Leu	Tyr	Thr	Ala	Thr	Glu	Lys	Leu	Ser	Lys	Glu	Asn	Glu	Ser	Leu
		515					520					525			
Lys	Ser	Lys	Leu	Glu	His	Ala	Asn	Lys	Glu	Asn	Ser	Asp	Val	Ile	Ala
	530					535					540				
Leu	Trp	Lys	Ser	Lys	Leu	Glu	Thr	Ala	Ile	Ala	Ser	His	Gln	Gln	Ala
545					550					555					560
Met	Glu	Glu	Leu	Lys	Val	Ser	Phe	Ser	Lys	Gly	Leu	Gly	Thr	Glu	Thr
				565					570					575	
Ala	Glu	Phe	Ala	Glu	Leu	Lys	Thr	Gln	Ile	Glu	Lys	Met	Arg	Leu	Asp
			580					585					590		
Tyr	Gln	His	Glu	Ile	Glu	Asn	Leu	Gln	Asn	Gln	Gln	Asp	Ser	Glu	Arg
		595					600					605			
Ala	Ala	His	Ala	Lys	Glu	Met	Glu	Ala	Leu	Arg	Ala	Lys	Leu	Met	Lys
	610					615					620				
Val	Ile	Lys	Glu	Lys	Glu	Asn	Ser	Leu	Glu	Ala	Ile	Arg	Ser	Lys	Leu
625					630					635					640
Asp	Lys	Ala	Glu	Asp	Gln	His	Leu	Val	Glu	Met	Glu	Asp	Thr	Leu	Asn
				645					650					655	
Lys	Leu	Gln	Glu	Ala	Glu	Ile	Lys	Ala	Ser	Ser	Ile	Thr	Arg	Glu	Leu
			660					665					670		

Gln Gly Arg Glu Leu Lys Leu Thr Asn Leu Gln Glu Asn Leu Ser Glu
675 680 685

Val Ser Gln Val Lys Glu Thr Leu Glu Lys Glu Leu Gln Ile Leu Lys
690 695 700

Glu Lys Phe Ala Glu Ala Ser Glu Glu Ala Val Ser Val Gln Arg Ser
705 710 715 720

Met Gln Glu Thr Val Asn Lys Leu His Gln Lys Glu Glu Gln Phe Asn
725 730 735

Met Leu Ser Ser Asp Leu Glu Lys Leu Arg Glu Asn Leu Ala Asp Met
740 745 750

Glu Ala Lys Phe Arg Glu Lys Asp Glu Arg Glu Glu Gln Leu Ile Lys
755 760 765

Ala Lys Glu Lys Leu Glu Asn Asp Ile Ala Glu Ile Met Lys Met Ser
770 775 780

Gly Asp Asn Ser Ser Gln Leu Thr Lys Met Asn Asp Glu Leu Arg Leu
785 790 795 800

Lys Glu Arg

<210> 11574
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CAP-GLY domain containing linker protein 1"

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<400> 11574

Met Ala Thr Thr Ser Ala Ser Leu Lys Arg Ser Pro Ser Ala Ser Ser
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Leu Ser Ser Met Ser Ser Val Ala Ser Ser Val Ser Ser Arg Pro Ser
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Arg Thr Gly Leu Leu Thr Glu Thr Ser Ser Arg Tyr Ala Arg Lys Ile
35 40 45

Ser Gly Thr Thr Ala Leu Gln Glu Ala Leu Lys Glu Lys Gln Gln His
50 55 60

Ile Glu Gln Leu Leu Ala Glu Arg Asp Leu Glu Arg Ala Glu Val Ala
65 70 75 80

Lys Ala Thr Ser His Val Gly Glu Ile Glu Gln Glu Leu Ala Leu Ala
85 90 95

Arg Asp Gly His Asp Gln His Val Leu Glu Leu Glu Ala Lys Met Asp
100 105 110

Gln Leu Arg Thr Met Val Glu Ala Ala Asp Arg Glu Lys Val Glu Leu
115 120 125

Leu Asn Gln Leu Glu Glu Glu Lys Arg Lys Val Glu Asp Leu Gln Phe
130 135 140

Arg Val Glu Glu Glu Ser Ile Thr Lys Gly Asp Leu Glu Thr Gln Thr
145 150 155 160

Lys Leu Glu His Ala Arg Ile Lys Glu Leu Glu Gln Ser Leu Leu Phe
165 170 175

Glu Lys Thr Lys Ala Asp Lys Leu Gln Arg Glu Leu Glu Asp Thr Arg
180 185 190

Val Ala Thr Val Ser Glu Lys Ser Arg Ile Met Glu Leu Glu Lys Asp
195 200 205

Leu Ala Leu Arg Val Gln Glu Val Ala Glu Leu Arg Arg Arg Leu Glu
210 215 220

Ser	Asn	Lys	Pro	Ala	Gly	Asp	Val	Asp	Met	Ser	Leu	Ser	Leu	Leu	Gln			
225					230					235					240			
Glu	Ile	Ser	Ser	Leu	Gln	Glu	Lys	Leu	Glu	Val	Thr	Arg	Thr	Asp	His			
				245					250					255				
Gln	Arg	Glu	Ile	Thr	Ser	Leu	Lys	Glu	His	Phe	Gly	Ala	Arg	Glu	Glu			
			260					265					270					
Thr	His	Gln	Lys	Glu	Ile	Lys	Ala	Leu	Tyr	Thr	Ala	Thr	Glu	Lys	Leu			
		275					280					285						
Ser	Lys	Glu	Asn	Glu	Ser	Leu	Lys	Ser	Lys	Leu	Glu	His	Ala	Asn	Lys			
	290					295					300							
Glu	Asn	Ser	Asp	Val	Ile	Ala	Leu	Trp	Lys	Ser	Lys	Leu	Glu	Thr	Ala			
305					310					315					320			
Ile	Ala	Ser	His	Gln	Gln	Ala	Met	Glu	Glu	Leu	Lys	Val	Ser	Phe	Ser			
				325					330					335				
Lys	Gly	Leu	Gly	Thr	Glu	Thr	Ala	Glu	Phe	Ala	Glu	Leu	Lys	Thr	Gln			
			340					345					350					
Ile	Glu	Lys	Met	Arg	Leu	Asp	Tyr	Gln	His	Glu	Ile	Glu	Asn	Leu	Gln			
		355					360					365						
Asn	Gln	Gln	Asp	Ser	Glu	Arg	Ala	Ala	His	Ala	Lys	Glu	Met	Glu	Ala			
	370					375					380							
Leu	Arg	Ala	Lys	Leu	Met	Lys	Val	Ile	Lys	Glu	Lys	Glu	Asn	Ser	Leu			
385					390					395					400			
Glu	Ala	Ile	Arg	Ser	Lys	Leu	Asp	Lys	Ala	Glu	Asp	Gln	His	Leu	Val			
				405					410					415				
Glu	Met	Glu	Asp	Thr	Leu	Asn	Lys	Leu	Gln	Glu	Ala	Glu	Ile	Lys	Lys			
			420					425					430					
Glu	Lys	Phe	Ala	Glu	Ala	Ser	Glu	Glu	Ala	Val	Ser	Val	Gln	Arg	Ser			
	435						440					445						

Met Gln Glu Thr Val Asn Lys Leu His Gln Lys Glu Glu Gln Phe Asn
450 455 460

Met Leu Ser Ser Asp Leu Glu Lys Leu Arg Glu Asn Leu Ala Asp Met
465 470 475 480

Glu Ala Lys Phe Arg Glu Lys Asp Glu Arg Glu Glu Gln Leu Ile Lys
485 490 495

Ala Lys Glu Lys Leu Glu Asn Asp Ile Ala Glu Ile Met Lys Met Ser
500 505 510

Gly Asp Asn Ser Ser Gln Leu Thr Lys Met Asn Asp Glu Leu Arg Leu
515 520 525

Lys Glu Arg Asp Val Glu Glu Leu Gln Leu Lys Leu Thr Lys Ala Asn
530 535 540

Glu Asn Ala Ser Phe Leu Gln Lys Ser Ile Glu Asp Met Thr Val Lys
545 550 555 560

Ala Glu Gln Ser Gln Gln Glu Ala Ala Lys Lys His Glu Glu Glu Lys
565 570 575

Lys Glu Leu Glu Arg Lys Leu Ser Asp Leu Glu Lys Lys Met Glu Thr
580 585 590

Ser His Asn Gln Cys Gln Glu Leu Lys Ala Arg Tyr Glu Arg Ala Thr
595 600 605

Ser Glu Thr Lys Thr Lys His Glu Glu Ile Leu Gln Asn Leu Gln Lys
610 615 620

Thr Leu Leu Asp Thr Glu Asp Lys Leu Lys Gly Ala Arg Glu Glu Asn
625 630 635 640

Ser Gly Leu Leu Gln Glu Leu Glu Glu Leu Arg Lys Gln Ala Asp Lys
645 650 655

Ala Lys Ala Ala Gln Thr Ala Glu Asp Ala Met Gln Ile Met Glu Gln
660 665 670

Met Thr Lys Glu Lys Thr Glu Thr Leu Ala Ser Leu Glu Asp Thr Lys

675					680					685					
Gln	Thr	Asn	Ala	Lys	Leu	Gln	Asn	Glu	Leu	Asp	Thr	Leu	Lys	Glu	Asn
	690					695					700				
Asn	Leu	Lys	Asn	Val	Glu	Glu	Leu	Asn	Lys	Ser	Lys	Glu	Leu	Leu	Thr
705					710					715					720
Val	Glu	Asn	Gln	Lys	Met	Glu	Glu	Phe	Arg	Lys	Glu	Ile	Glu	Thr	Leu
				725					730					735	
Lys	Gln	Ala	Ala	Ala	Gln	Lys	Ser	Gln	Gln	Leu	Ser	Ala	Leu	Gln	Glu
			740					745					750		
Glu	Asn	Val	Lys	Leu	Ala	Glu	Glu	Leu	Gly	Arg	Ser	Arg	Asp	Glu	Val
		755					760					765			
Thr	Ser	His	Gln	Lys	Leu	Glu	Glu	Glu	Arg	Ser	Val	Leu	Asn	Asn	Gln
	770					775					780				
Leu	Leu	Glu	Met	Lys	Lys	Arg	Glu	Ser	Lys	Phe	Ile	Lys	Asp	Ala	Asp
785					790					795					800
Glu	Glu	Lys	Ala	Ser	Leu	Gln	Lys	Ser	Ile	Ser	Ile	Thr	Ser	Ala	Leu
				805					810					815	
Leu	Thr	Glu	Lys	Asp	Ala	Glu	Leu	Glu	Lys	Leu	Arg	Asn	Glu	Val	Thr
			820					825					830		
Val	Leu	Arg	Gly	Glu	Asn	Ala	Ser	Ala	Lys	Ser	Leu	His	Ser	Val	Val
		835					840					845			
Gln	Thr	Leu	Glu	Ser	Asp	Lys	Val	Lys	Leu	Glu	Leu	Lys	Val	Lys	Asn
	850					855					860				
Leu	Glu	Leu	Gln	Leu	Lys	Glu	Asn	Lys	Arg	Gln	Leu	Ser	Ser	Ser	Ser
865					870					875					880
Gly	Asn	Thr	Asp	Thr	Gln	Ala	Asp	Glu	Asp	Glu	Arg	Ala	Gln	Glu	Ser
				885					890					895	
Gln	Ile	Asp	Phe	Leu	Asn	Ser	Val	Ile	Val	Asp	Leu	Gln	Arg	Lys	Asn
			900					905					910		

Gln Asp Leu Lys Met Lys Val Glu Met Met Ser Glu Ala Ala Leu Asn
 915 920 925

Gly Asn Gly Asp Asp Leu Asn Asn Tyr Asp Ser Asp Asp Gln Glu Lys
 930 935 940

Gln Ser Lys Lys Lys Pro Arg Leu Phe Cys Asp Ile Cys Asp Cys Phe
 945 950 955 960

Asp Leu His Asp Thr Glu Asp Cys Pro Thr Gln Ala Gln Met Ser Glu
 965 970 975

Asp Pro Pro His Ser Thr His His Gly Ser Arg Gly Glu Glu Arg Pro
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Tyr Cys Glu Ile Cys Glu Met Phe Gly His Trp Ala Thr Asn Cys
 Asn
 995 1000 1005

Asp Asp Glu Thr Phe
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<210> 11575
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 CAP-GLY domain containing linker protein 1"

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<400> 11575

Met Ser Met Leu Lys Pro Ser Gly Leu Lys Ala Pro Thr Lys Ile Leu
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Lys Pro Gly Ser Thr Ala Leu Lys Thr Pro Thr Ala Val Val Ala Pro
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Val Glu Lys Thr Ile Ser Ser Glu Lys Ala Ser Ser Thr Pro Ser Ser
35 40 45

Glu Thr Gln Glu Glu Phe Val Asp Asp Phe Arg Val Gly Glu Arg Val
50 55 60

Trp Val Asn Gly Asn Lys Pro Gly Phe Ile Gln Phe Leu Gly Glu Thr
65 70 75 80

Gln Phe Ala Pro Gly Gln Trp Ala Gly Ile Val Leu Asp Glu Pro Ile
85 90 95

Gly Lys Asn Asp Gly Ser Val Ala Gly Val Arg Tyr Phe Gln Cys Glu
100 105 110

Pro Leu Lys Gly Ile Phe Thr Arg Pro Ser Lys Leu Thr Arg Lys Val
115 120 125

Gln Ala Glu Asp Glu Ala Asn Gly Leu Gln Thr Thr Pro Ala Ser Arg
130 135 140

Ala Thr Ser Pro Leu Cys Thr Ser Thr Ala Ser Met Val Ser Ser Ser
145 150 155 160

Pro Ser Thr Pro Ser Asn Ile Pro Gln Lys Pro Ser Gln Pro Ala Ala
165 170 175

Lys Glu Pro Ser Ala Thr Pro Pro Ile Ser Asn Leu Thr Lys Thr Ala
180 185 190

Ser Glu Ser Ile Ser Asn Leu Ser Glu Ala Gly Ser Ile Lys Lys Gly
195 200 205

Glu Arg Glu Leu Lys Ile Gly Asp Arg Val Leu Val Gly Gly Thr Lys
210 215 220

Ala	Gly	Val	Val	Arg	Phe	Leu	Gly	Glu	Thr	Asp	Phe	Ala	Lys	Gly	Glu	225	230	235									240
Trp	Cys	Gly	Val	Glu	Leu	Asp	Glu	Pro	Leu	Gly	Lys	Asn	Asp	Gly	Ala		245	250								255	
Val	Ala	Gly	Thr	Arg	Tyr	Phe	Gln	Cys	Gln	Pro	Lys	Tyr	Gly	Leu	Phe		260	265							270		
Ala	Pro	Val	His	Lys	Val	Thr	Lys	Ile	Gly	Phe	Pro	Ser	Thr	Thr	Pro		275	280							285		
Ala	Lys	Ala	Lys	Ala	Asn	Ala	Val	Arg	Arg	Val	Met	Ala	Thr	Thr	Ser		290	295							300		
Ala	Ser	Leu	Lys	Arg	Ser	Pro	Ser	Ala	Ser	Ser	Leu	Ser	Ser	Met	Ser	305		310							315	320	
Ser	Val	Ala	Ser	Ser	Val	Ser	Ser	Arg	Pro	Ser	Arg	Thr	Gly	Leu	Leu			325							330	335	
Thr	Glu	Thr	Ser	Ser	Arg	Tyr	Ala	Arg	Lys	Ile	Ser	Gly	Thr	Thr	Ala		340	345							350		
Leu	Gln	Glu	Ala	Leu	Lys	Glu	Lys	Gln	Gln	His	Ile	Glu	Gln	Leu	Leu		355	360							365		
Ala	Glu	Arg	Asp	Leu	Glu	Arg	Ala	Glu	Val	Ala	Lys	Ala	Thr	Ser	His		370	375							380		
Val	Gly	Glu	Ile	Glu	Gln	Glu	Leu	Ala	Leu	Ala	Arg	Asp	Gly	His	Asp	385		390							395	400	
Gln	His	Val	Leu	Glu	Leu	Glu	Ala	Lys	Met	Asp	Gln	Leu	Arg	Thr	Met			405							410	415	
Val	Glu	Ala	Ala	Asp	Arg	Glu	Lys	Val	Glu	Leu	Leu	Asn	Gln	Leu	Glu		420	425							430		
Glu	Glu	Lys	Arg	Lys	Val	Glu	Asp	Leu	Gln	Phe	Arg	Val	Glu	Glu	Glu		435	440							445		
Ser	Ile	Thr	Lys	Gly	Asp	Leu	Glu	Gln	Lys	Ser	Gln	Ile	Ser	Glu	Asp												

450																
Pro	Glu	Asn	Thr	Gln	Thr	Lys	Leu	Glu	His	Ala	Arg	Ile	Lys	Glu	Leu	
465					470					475					480	
Glu	Gln	Ser	Leu	Leu	Phe	Glu	Lys	Thr	Lys	Ala	Asp	Lys	Leu	Gln	Arg	
				485					490					495		
Glu	Leu	Glu	Asp	Thr	Arg	Val	Ala	Thr	Val	Ser	Glu	Lys	Ser	Arg	Ile	
			500					505					510			
Met	Glu	Leu	Glu	Lys	Asp	Leu	Ala	Leu	Arg	Val	Gln	Glu	Val	Ala	Glu	
		515					520					525				
Leu	Arg	Arg	Arg	Leu	Glu	Ser	Asn	Lys	Pro	Ala	Gly	Asp	Val	Asp	Met	
	530					535					540					
Ser	Leu	Ser	Leu	Leu	Gln	Glu	Ile	Ser	Ser	Leu	Gln	Glu	Lys	Leu	Glu	
545					550					555					560	
Val	Thr	Arg	Thr	Asp	His	Gln	Arg	Glu	Ile	Thr	Ser	Leu	Lys	Glu	His	
				565					570					575		
Phe	Gly	Ala	Arg	Glu	Glu	Thr	His	Gln	Lys	Glu	Ile	Lys	Ala	Leu	Tyr	
			580					585					590			
Thr	Ala	Thr	Glu	Lys	Leu	Ser	Lys	Glu	Asn	Glu	Ser	Leu	Lys	Ser	Lys	
		595					600					605				
Leu	Glu	His	Ala	Asn	Lys	Glu	Asn	Ser	Asp	Val	Ile	Ala	Leu	Trp	Lys	
	610					615					620					
Ser	Lys	Leu	Glu	Thr	Ala	Ile	Ala	Ser	His	Gln	Gln	Ala	Met	Glu	Glu	
625					630					635				640		
Leu	Lys	Val	Ser	Phe	Ser	Lys	Gly	Leu	Gly	Thr	Glu	Thr	Ala	Glu	Phe	
				645					650					655		
Ala	Glu	Leu	Lys	Thr	Gln	Ile	Glu	Lys	Met	Arg	Leu	Asp	Tyr	Gln	His	
			660					665					670			
Glu	Ile	Glu	Asn	Leu	Gln	Asn	Gln	Gln	Asp	Ser	Glu	Arg	Ala	Ala	His	
		675					680					685				

Ala	Lys	Glu	Met	Glu	Ala	Leu	Arg	Ala	Lys	Leu	Met	Lys	Val	Ile	Lys	690	695	700
Glu	Lys	Glu	Asn	Ser	Leu	Glu	Ala	Ile	Arg	Ser	Lys	Leu	Asp	Lys	Ala	705	710	715
Glu	Asp	Gln	His	Leu	Val	Glu	Met	Glu	Asp	Thr	Leu	Asn	Lys	Leu	Gln	725	730	735
Glu	Ala	Glu	Ile	Lys	Val	Lys	Glu	Leu	Glu	Val	Leu	Gln	Ala	Lys	Cys	740	745	750
Asn	Glu	Gln	Thr	Lys	Val	Ile	Asp	Asn	Phe	Thr	Ser	Gln	Leu	Lys	Ala	755	760	765
Thr	Glu	Glu	Lys	Leu	Leu	Asp	Leu	Asp	Ala	Leu	Arg	Lys	Ala	Ser	Ser	770	775	780
Glu	Gly	Lys	Ser	Glu	Met	Lys	Lys	Leu	Arg	Gln	Gln	Leu	Glu	Ala	Ala	785	790	795
Glu	Lys	Gln	Ile	Lys	His	Leu	Glu	Ile	Glu	Lys	Asn	Ala	Glu	Ser	Ser	805	810	815
Lys	Ala	Ser	Ser	Ile	Thr	Arg	Glu	Leu	Gln	Gly	Arg	Glu	Leu	Lys	Leu	820	825	830
Thr	Asn	Leu	Gln	Glu	Asn	Leu	Ser	Glu	Val	Ser	Gln	Val	Lys	Glu	Thr	835	840	845
Leu	Glu	Lys	Glu	Leu	Gln	Ile	Leu	Lys	Glu	Lys	Phe	Ala	Glu	Ala	Ser	850	855	860
Glu	Glu	Ala	Val	Ser	Val	Gln	Arg	Ser	Met	Gln	Glu	Thr	Val	Asn	Lys	865	870	875
Leu	His	Gln	Lys	Glu	Glu	Gln	Phe	Asn	Met	Leu	Ser	Ser	Asp	Leu	Glu	885	890	895
Lys	Leu	Arg	Glu	Asn	Leu	Ala	Asp	Met	Glu	Ala	Lys	Phe	Arg	Glu	Lys	900	905	910

Asp Glu Arg Glu Glu Gln Leu Ile Lys Ala Lys Glu Lys Leu Glu Asn
915 920 925

Asp Ile Ala Glu Ile Met Lys Met Ser Gly Asp Asn Ser Ser Gln Leu
930 935 940

Thr Lys Met Asn Asp Glu Leu Arg Leu Lys Glu Arg Asp Val Glu Glu
945 950 955 960

Leu Gln Leu Lys Leu Thr Lys Ala Asn Glu Asn Ala Ser Phe Leu Gln
965 970 975

Lys Ser Ile Glu Asp Met Thr Val Lys Ala Glu Gln Ser Gln Gln Glu
980 985 990

Ala Ala Lys Lys His Glu Glu Glu Lys Lys Glu Leu Glu Arg Lys
Leu 995 1000 1005

Ser Asp Leu Glu Lys Lys Met Glu Thr Ser His Asn Gln Cys Gln
1010 1015 1020

Glu Leu Lys Ala Arg Tyr Glu Arg Ala Thr Ser Glu Thr Lys Thr
1025 1030 1035

Lys His Glu Glu Ile Leu Gln Asn Leu Gln Lys Thr Leu Leu Asp
1040 1045 1050

Thr Glu Asp Lys Leu Lys Gly Ala Arg Glu Glu Asn Ser Gly Leu
1055 1060 1065

Leu Gln Glu Leu Glu Glu Leu Arg Lys Gln Ala Asp Lys Ala Lys
1070 1075 1080

Ala Ala Gln Thr Ala Glu Asp Ala Met Gln Ile Met Glu Gln Met
1085 1090 1095

Thr Lys Glu Lys Thr Glu Thr Leu Ala Ser Leu Glu Asp Thr Lys
1100 1105 1110

Gln Thr Asn Ala Lys Leu Gln Asn Glu Leu Asp Thr Leu Lys Glu
1115 1120 1125

Asn	Asn	Leu	Lys	Asn	Val	Glu	Glu	Leu	Asn	Lys	Ser	Lys	Glu	Leu
	1130					1135					1140			
Leu	Thr	Val	Glu	Asn	Gln	Lys	Met	Glu	Glu	Phe	Arg	Lys	Glu	Ile
	1145					1150					1155			
Glu	Thr	Leu	Lys	Gln	Ala	Ala	Ala	Gln	Lys	Ser	Gln	Gln	Leu	Ser
	1160					1165					1170			
Ala	Leu	Gln	Glu	Glu	Asn	Val	Lys	Leu	Ala	Glu	Glu	Leu	Gly	Arg
	1175					1180					1185			
Ser	Arg	Asp	Glu	Val	Thr	Ser	His	Gln	Lys	Leu	Glu	Glu	Glu	Arg
	1190					1195					1200			
Ser	Val	Leu	Asn	Asn	Gln	Leu	Leu	Glu	Met	Lys	Lys	Arg	Glu	Ser
	1205					1210					1215			
Lys	Phe	Ile	Lys	Asp	Ala	Asp	Glu	Glu	Lys	Ala	Ser	Leu	Gln	Lys
	1220					1225					1230			
Ser	Ile	Ser	Ile	Thr	Ser	Ala	Leu	Leu	Thr	Glu	Lys	Asp	Ala	Glu
	1235					1240					1245			
Leu	Glu	Lys	Leu	Arg	Asn	Glu	Val	Thr	Val	Leu	Arg	Gly	Glu	Asn
	1250					1255					1260			
Ala	Ser	Ala	Lys	Ser	Leu	His	Ser	Val	Val	Gln	Thr	Leu	Glu	Ser
	1265					1270					1275			
Asp	Lys	Val	Lys	Leu	Glu	Leu	Lys	Val	Lys	Asn	Leu	Glu	Leu	Gln
	1280					1285					1290			
Leu	Lys	Glu	Asn	Lys	Arg	Gln	Leu	Ser	Ser	Ser	Ser	Gly	Asn	Thr
	1295					1300					1305			
Asp	Thr	Gln	Ala	Asp	Glu	Asp	Glu	Arg	Ala	Gln	Glu	Ser	Gln	Ile
	1310					1315					1320			
Asp	Phe	Leu	Asn	Ser	Val	Ile	Val	Asp	Leu	Gln	Arg	Lys	Asn	Gln
	1325					1330					1335			

Asp Leu Lys Met Lys Val Glu Met Met Ser Glu Ala Ala Leu Asn
1340 1345 1350

Gly Asn Gly Asp Asp Leu Asn Asn Tyr Asp Ser Asp Asp Gln Glu
1355 1360 1365

Lys Gln Ser Lys Lys Lys Pro Arg Leu Phe Cys Asp Ile Cys Asp
1370 1375 1380

Cys Phe Asp Leu His Asp Thr Glu Asp Cys Pro Thr Gln Ala Gln
1385 1390 1395

Met Ser Glu Asp Pro Pro His Ser Thr His His Gly Ser Arg Gly
1400 1405 1410

Glu Glu Arg Pro Tyr Cys Glu Ile Cys Glu Met Phe Gly His Trp
1415 1420 1425

Ala Thr Asn Cys Asn Asp Asp Glu Thr Phe
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<210> 11576
<211> 108
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<220>
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Lys Pro Gly Ser Thr Ala Leu Lys Thr Pro Thr Ala Val Val Ala Pro
20 25 30

Val Glu Lys Thr Ile Ser Ser Glu Lys Ala Ser Ser Thr Pro Ser Ser
 35 40 45

Glu Thr Gln Glu Glu Phe Val Asp Asp Phe Arg Val Gly Glu Arg Val
 50 55 60

Trp Val Asn Gly Asn Lys Pro Gly Phe Ile Gln Phe Leu Gly Glu Thr
 65 70 75 80

Gln Phe Ala Pro Gly Gln Trp Ala Gly Ile Val Leu Asp Glu Pro Ile
 85 90 95

Gly Lys Asn Asp Gly Ser Val Ala Gly Val Arg Tyr
 100 105

<210> 11577
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 1 5 10 15

Lys Pro Gly Ser Thr Ala Leu Lys Thr Pro Thr Ala Val Val Ala Pro
 20 25 30

Val Glu Lys Thr Ile Ser Ser Glu Lys Ala Ser Ser Thr Pro Ser Ser
 35 40 45

Glu	Thr	Gln	Glu	Glu	Phe	Val	Asp	Asp	Phe	Arg	Val	Gly	Glu	Arg	Val				
50						55					60								
Trp	Val	Asn	Gly	Asn	Lys	Pro	Gly	Phe	Ile	Gln	Phe	Leu	Gly	Glu	Thr				
65					70					75					80				
Gln	Phe	Ala	Pro	Gly	Gln	Trp	Ala	Gly	Ile	Val	Leu	Asp	Glu	Pro	Ile				
				85					90					95					
Gly	Lys	Asn	Asp	Gly	Ser	Val	Ala	Gly	Val	Arg	Tyr	Phe	Gln	Cys	Glu				
			100					105					110						
Pro	Leu	Lys	Gly	Ile	Phe	Thr	Arg	Pro	Ser	Lys	Leu	Thr	Arg	Lys	Val				
		115					120					125							
Gln	Ala	Glu	Asp	Glu	Ala	Asn	Gly	Leu	Gln	Thr	Thr	Pro	Ala	Ser	Arg				
130						135					140								
Ala	Thr	Ser	Pro	Leu	Cys	Thr	Ser	Thr	Ala	Ser	Met	Val	Ser	Ser	Ser				
145					150					155					160				
Pro	Ser	Thr	Pro	Ser	Asn	Ile	Pro	Gln	Lys	Pro	Ser	Gln	Pro	Ala	Ala				
				165					170					175					
Lys	Glu	Pro	Ser	Ala	Thr	Pro	Pro	Ile	Ser	Asn	Leu	Thr	Lys	Thr	Ala				
			180					185					190						
Ser	Glu	Ser	Ile	Ser	Asn	Leu	Ser	Glu	Ala	Gly	Ser	Ile	Lys	Lys	Gly				
		195					200					205							
Glu	Arg	Glu	Leu	Lys	Ile	Gly	Asp	Arg	Val	Leu	Val	Gly	Gly	Thr	Lys				
210						215					220								
Ala	Gly	Val	Val	Arg	Phe	Leu	Gly	Glu	Thr	Asp	Phe	Ala	Lys	Gly	Glu				
225					230					235					240				
Trp	Cys	Gly	Val	Glu	Leu	Asp	Glu	Pro	Leu	Gly	Lys	Asn	Asp	Gly	Ala				
				245					250					255					
Val	Ala	Gly	Thr	Arg	Tyr	Phe	Gln	Cys	Gln	Pro	Lys	Tyr	Gly	Leu	Phe				
			260					265					270						
Ala	Pro	Val	His	Lys	Val	Thr	Lys	Ile	Gly	Phe	Pro	Ser	Thr	Thr	Pro				

275		280		285
Ala Lys Ala Lys Ala Asn Ala Val Arg Arg Val Met Ala Thr Thr Ser				
290		295		300
Ala Ser Leu Lys Arg Ser Pro Ser Ala Ser Ser Leu Ser Ser Met Ser				
305		310		315
Ser Val Ala Ser Ser Val Ser Ser Arg Pro Ser Arg Thr Gly Leu His				
		325		330
Val Leu Glu Leu Glu Ala Lys Met Asp Gln Leu Arg Thr Met Val Glu				
		340		345
Ala Ala Asp Arg Glu Lys Val Glu Leu Leu Asn Gln Leu Glu Glu Glu				
		355		360
Lys Arg Lys Val Glu Asp Leu Gln Phe Arg Val Glu Glu Glu Ser Ile				
		370		375
Thr Lys Gly Asp Leu Glu Gln Lys Ser Gln Ile Ser Glu Asp Pro Glu				
385		390		395
Asn Val Arg Gly His Leu Thr Val Trp Ile Phe Pro Leu Leu Thr Lys				
		405		410
Ile Asp His Arg Leu Lys Cys Leu Leu Ile Tyr Ser				
		420		425

<210> 11578

<211> 83

<212> PRT

<213> Homo sapiens

<220>

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<220>
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 Met Ser Met Leu Lys Pro Ser Gly Leu Lys Ala Pro Thr Lys Ile Leu
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 Lys Pro Gly Ser Thr Ala Leu Lys Thr Pro Thr Ala Val Val Ala Pro
 20 25 30

 Val Glu Lys Thr Ile Ser Ser Glu Lys Ala Ser Ser Thr Pro Ser Ser
 35 40 45

 Glu Thr Gln Glu Glu Phe Val Asp Asp Phe Arg Val Gly Glu Arg Val
 50 55 60

 Trp Val Asn Gly Asn Lys Pro Gly Phe Ile Gln Phe Leu Gly Glu Thr
 65 70 75 80

 Gln Phe Ala

<210> 11579
 <211> 1392
 <212> PRT
 <213> Homo sapiens

<220>
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<400> 11579
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Lys	Pro	Gly	Ser	Thr	Ala	Leu	Lys	Thr	Pro	Thr	Ala	Val	Val	Ala	Pro		
			20					25					30				
Val	Glu	Lys	Thr	Ile	Ser	Ser	Glu	Lys	Ala	Ser	Ser	Thr	Pro	Ser	Ser		
		35					40					45					
Glu	Thr	Gln	Glu	Glu	Phe	Val	Asp	Asp	Phe	Arg	Val	Gly	Glu	Arg	Val		
	50					55					60						
Trp	Val	Asn	Gly	Asn	Lys	Pro	Gly	Phe	Ile	Gln	Phe	Leu	Gly	Glu	Thr		
65					70					75					80		
Gln	Phe	Ala	Pro	Gly	Gln	Trp	Ala	Gly	Ile	Val	Leu	Asp	Glu	Pro	Ile		
				85					90					95			
Gly	Lys	Asn	Asp	Gly	Ser	Val	Ala	Gly	Val	Arg	Tyr	Phe	Gln	Cys	Glu		
			100					105					110				
Pro	Leu	Lys	Gly	Ile	Phe	Thr	Arg	Pro	Ser	Lys	Leu	Thr	Arg	Lys	Val		
		115					120					125					
Gln	Ala	Glu	Asp	Glu	Ala	Asn	Gly	Leu	Gln	Thr	Thr	Pro	Ala	Ser	Arg		
	130					135					140						
Ala	Thr	Ser	Pro	Leu	Cys	Thr	Ser	Thr	Ala	Ser	Met	Val	Ser	Ser	Ser		
145					150					155					160		
Pro	Ser	Thr	Pro	Ser	Asn	Ile	Pro	Gln	Lys	Pro	Ser	Gln	Pro	Ala	Ala		
				165					170					175			
Lys	Glu	Pro	Ser	Ala	Thr	Pro	Pro	Ile	Ser	Asn	Leu	Thr	Lys	Thr	Ala		
			180					185					190				
Ser	Glu	Ser	Ile	Ser	Asn	Leu	Ser	Glu	Ala	Gly	Ser	Ile	Lys	Lys	Gly		
		195					200					205					
Glu	Arg	Glu	Leu	Lys	Ile	Gly	Asp	Arg	Val	Leu	Val	Gly	Gly	Thr	Lys		
	210					215					220						
Ala	Gly	Val	Val	Arg	Phe	Leu	Gly	Glu	Thr	Asp	Phe	Ala	Lys	Gly	Glu		
225					230					235					240		

Trp	Cys	Gly	Val	Glu	Leu	Asp	Glu	Pro	Leu	Gly	Lys	Asn	Asp	Gly	Ala	
				245					250					255		
Val	Ala	Gly	Thr	Arg	Tyr	Phe	Gln	Cys	Gln	Pro	Lys	Tyr	Gly	Leu	Phe	
			260					265					270			
Ala	Pro	Val	His	Lys	Val	Thr	Lys	Ile	Gly	Phe	Pro	Ser	Thr	Thr	Pro	
		275					280					285				
Ala	Lys	Ala	Lys	Ala	Asn	Ala	Val	Arg	Arg	Val	Met	Ala	Thr	Thr	Ser	
	290					295					300					
Ala	Ser	Leu	Lys	Arg	Ser	Pro	Ser	Ala	Ser	Ser	Leu	Ser	Ser	Met	Ser	
305					310					315					320	
Ser	Val	Ala	Ser	Ser	Val	Ser	Ser	Arg	Pro	Ser	Arg	Thr	Gly	Leu	Leu	
				325					330					335		
Thr	Glu	Thr	Ser	Ser	Arg	Tyr	Ala	Arg	Lys	Ile	Ser	Gly	Thr	Thr	Ala	
			340					345					350			
Leu	Gln	Glu	Ala	Leu	Lys	Glu	Lys	Gln	Gln	His	Ile	Glu	Gln	Leu	Leu	
		355					360					365				
Ala	Glu	Arg	Asp	Leu	Glu	Arg	Ala	Glu	Val	Ala	Lys	Ala	Thr	Ser	His	
	370					375					380					
Val	Gly	Glu	Ile	Glu	Gln	Glu	Leu	Ala	Leu	Ala	Arg	Asp	Gly	His	Asp	
385					390					395					400	
Gln	His	Val	Leu	Glu	Leu	Glu	Ala	Lys	Met	Asp	Gln	Leu	Arg	Thr	Met	
				405					410					415		
Val	Glu	Ala	Ala	Asp	Arg	Glu	Lys	Val	Glu	Leu	Leu	Asn	Gln	Leu	Glu	
			420					425					430			
Glu	Glu	Lys	Arg	Lys	Val	Glu	Asp	Leu	Gln	Phe	Arg	Val	Glu	Glu	Glu	
		435					440					445				
Ser	Ile	Thr	Lys	Gly	Asp	Leu	Glu	Val	Ala	Thr	Val	Ser	Glu	Lys	Ser	
	450					455					460					

Arg	Ile	Met	Glu	Leu	Glu	Lys	Asp	Leu	Ala	Leu	Arg	Val	Gln	Glu	Val	465	470	475			480
Ala	Glu	Leu	Arg	Arg	Arg	Leu	Glu	Ser	Asn	Lys	Pro	Ala	Gly	Asp	Val		485	490			495
Asp	Met	Ser	Leu	Ser	Leu	Leu	Gln	Glu	Ile	Ser	Ser	Leu	Gln	Glu	Lys		500	505			510
Leu	Glu	Val	Thr	Arg	Thr	Asp	His	Gln	Arg	Glu	Ile	Thr	Ser	Leu	Lys		515	520			525
Glu	His	Phe	Gly	Ala	Arg	Glu	Glu	Thr	His	Gln	Lys	Glu	Ile	Lys	Ala		530	535			540
Leu	Tyr	Thr	Ala	Thr	Glu	Lys	Leu	Ser	Lys	Glu	Asn	Glu	Ser	Leu	Lys		545	550			555
Ser	Lys	Leu	Glu	His	Ala	Asn	Lys	Glu	Asn	Ser	Asp	Val	Ile	Ala	Leu		565	570			575
Trp	Lys	Ser	Lys	Leu	Glu	Thr	Ala	Ile	Ala	Ser	His	Gln	Gln	Ala	Met		580	585			590
Glu	Glu	Leu	Lys	Val	Ser	Phe	Ser	Lys	Gly	Leu	Gly	Thr	Glu	Thr	Ala		595	600			605
Glu	Phe	Ala	Glu	Leu	Lys	Thr	Gln	Ile	Glu	Lys	Met	Arg	Leu	Asp	Tyr		610	615			620
Gln	His	Glu	Ile	Glu	Asn	Leu	Gln	Asn	Gln	Gln	Asp	Ser	Glu	Arg	Ala		625	630			635
Ala	His	Ala	Lys	Glu	Met	Glu	Ala	Leu	Arg	Ala	Lys	Leu	Met	Lys	Val		645	650			655
Ile	Lys	Glu	Lys	Glu	Asn	Ser	Leu	Glu	Ala	Ile	Arg	Ser	Lys	Leu	Asp		660	665			670
Lys	Ala	Glu	Asp	Gln	His	Leu	Val	Glu	Met	Glu	Asp	Thr	Leu	Asn	Lys		675	680			685

Leu Gln Glu Ala Glu Ile Lys Val Lys Glu Leu Glu Val Leu Gln Ala
690 695 700

Lys Cys Asn Glu Gln Thr Lys Val Ile Asp Asn Phe Thr Ser Gln Leu
705 710 715 720

Lys Ala Thr Glu Glu Lys Leu Leu Asp Leu Asp Ala Leu Arg Lys Ala
725 730 735

Ser Ser Glu Gly Lys Ser Glu Met Lys Lys Leu Arg Gln Gln Leu Glu
740 745 750

Ala Ala Glu Lys Gln Ile Lys His Leu Glu Ile Glu Lys Asn Ala Glu
755 760 765

Ser Ser Lys Ala Ser Ser Ile Thr Arg Glu Leu Gln Gly Arg Glu Leu
770 775 780

Lys Leu Thr Asn Leu Gln Glu Asn Leu Ser Glu Val Ser Gln Val Lys
785 790 795 800

Glu Thr Leu Glu Lys Glu Leu Gln Ile Leu Lys Glu Lys Phe Ala Glu
805 810 815

Ala Ser Glu Glu Ala Val Ser Val Gln Arg Ser Met Gln Glu Thr Val
820 825 830

Asn Lys Leu His Gln Lys Glu Glu Gln Phe Asn Met Leu Ser Ser Asp
835 840 845

Leu Glu Lys Leu Arg Glu Asn Leu Ala Asp Met Glu Ala Lys Phe Arg
850 855 860

Glu Lys Asp Glu Arg Glu Glu Gln Leu Ile Lys Ala Lys Glu Lys Leu
865 870 875 880

Glu Asn Asp Ile Ala Glu Ile Met Lys Met Ser Gly Asp Asn Ser Ser
885 890 895

Gln Leu Thr Lys Met Asn Asp Glu Leu Arg Leu Lys Glu Arg Asp Val
900 905 910

Glu Glu Leu Gln Leu Lys Leu Thr Lys Ala Asn Glu Asn Ala Ser Phe

915

920

925

Leu Gln Lys Ser Ile Glu Asp Met Thr Val Lys Ala Glu Gln Ser Gln
 930 935 940

Gln Glu Ala Ala Lys Lys His Glu Glu Glu Lys Lys Glu Leu Glu Arg
 945 950 955 960

Lys Leu Ser Asp Leu Glu Lys Lys Met Glu Thr Ser His Asn Gln Cys
 965 970 975

Gln Glu Leu Lys Ala Arg Tyr Glu Arg Ala Thr Ser Glu Thr Lys Thr
 980 985 990

Lys His Glu Glu Ile Leu Gln Asn Leu Gln Lys Thr Leu Leu Asp
 Thr 995 1000 1005

Glu Asp Lys Leu Lys Gly Ala Arg Glu Glu Asn Ser Gly Leu Leu
 1010 1015 1020

Gln Glu Leu Glu Glu Leu Arg Lys Gln Ala Asp Lys Ala Lys Ala
 1025 1030 1035

Ala Gln Thr Ala Glu Asp Ala Met Gln Ile Met Glu Gln Met Thr
 1040 1045 1050

Lys Glu Lys Thr Glu Thr Leu Ala Ser Leu Glu Asp Thr Lys Gln
 1055 1060 1065

Thr Asn Ala Lys Leu Gln Asn Glu Leu Asp Thr Leu Lys Glu Asn
 1070 1075 1080

Asn Leu Lys Asn Val Glu Glu Leu Asn Lys Ser Lys Glu Leu Leu
 1085 1090 1095

Thr Val Glu Asn Gln Lys Met Glu Glu Phe Arg Lys Glu Ile Glu
 1100 1105 1110

Thr Leu Lys Gln Ala Ala Ala Gln Lys Ser Gln Gln Leu Ser Ala
 1115 1120 1125

Leu Gln Glu Glu Asn Val Lys Leu Ala Glu Glu Leu Gly Arg Ser

25833

1130						1135						1140			
Arg	Asp	Glu	Val	Thr	Ser	His	Gln	Lys	Leu	Glu	Glu	Glu	Arg	Ser	
	1145					1150					1155				
Val	Leu	Asn	Asn	Gln	Leu	Leu	Glu	Met	Lys	Lys	Arg	Glu	Ser	Lys	
	1160					1165					1170				
Phe	Ile	Lys	Asp	Ala	Asp	Glu	Glu	Lys	Ala	Ser	Leu	Gln	Lys	Ser	
	1175					1180					1185				
Ile	Ser	Ile	Thr	Ser	Ala	Leu	Leu	Thr	Glu	Lys	Asp	Ala	Glu	Leu	
	1190					1195					1200				
Glu	Lys	Leu	Arg	Asn	Glu	Val	Thr	Val	Leu	Arg	Gly	Glu	Asn	Ala	
	1205					1210					1215				
Ser	Ala	Lys	Ser	Leu	His	Ser	Val	Val	Gln	Thr	Leu	Glu	Ser	Asp	
	1220					1225					1230				
Lys	Val	Lys	Leu	Glu	Leu	Lys	Val	Lys	Asn	Leu	Glu	Leu	Gln	Leu	
	1235					1240					1245				
Lys	Glu	Asn	Lys	Arg	Gln	Leu	Ser	Ser	Ser	Ser	Gly	Asn	Thr	Asp	
	1250					1255					1260				
Thr	Gln	Ala	Asp	Glu	Asp	Glu	Arg	Ala	Gln	Glu	Ser	Gln	Ile	Asp	
	1265					1270					1275				
Phe	Leu	Asn	Ser	Val	Ile	Val	Asp	Leu	Gln	Arg	Lys	Asn	Gln	Asp	
	1280					1285					1290				
Leu	Lys	Met	Lys	Val	Glu	Met	Met	Ser	Glu	Ala	Ala	Leu	Asn	Gly	
	1295					1300					1305				
Asn	Gly	Asp	Asp	Leu	Asn	Asn	Tyr	Asp	Ser	Asp	Asp	Gln	Glu	Lys	
	1310					1315					1320				
Gln	Ser	Lys	Lys	Lys	Pro	Arg	Leu	Phe	Cys	Asp	Ile	Cys	Asp	Cys	
	1325					1330					1335				
Phe	Asp	Leu	His	Asp	Thr	Glu	Asp	Cys	Pro	Thr	Gln	Ala	Gln	Met	
	1340					1345					1350				

Ser Glu Asp Pro Pro His Ser Thr His His Gly Ser Arg Gly Glu
 1355 1360 1365

Glu Arg Pro Tyr Cys Glu Ile Cys Glu Met Phe Gly His Trp Ala
 1370 1375 1380

Thr Asn Cys Asn Asp Asp Glu Thr Phe
 1385 1390

<210> 11580
 <211> 350
 <212> PRT
 <213> Homo sapiens

<220>
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<220>
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<220>
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<220>
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Lys Pro Gly Ser Thr Ala Leu Lys Thr Pro Thr Ala Val Val Ala Pro
 20 25 30

Val Glu Lys Thr Ile Ser Ser Glu Lys Ala Ser Ser Thr Pro Ser Ser
 35 40 45

Glu Thr Gln Glu Glu Phe Val Asp Asp Phe Arg Val Gly Glu Arg Val
 50 55 60

Trp Val Asn Gly Asn Lys Pro Gly Phe Ile Gln Phe Leu Gly Glu Thr
 65 70 75 80

Gln	Phe	Ala	Pro	Gly 85	Gln	Trp	Ala	Gly	Ile 90	Val	Leu	Asp	Glu	Pro 95	Ile
Gly	Lys	Asn	Asp 100	Gly	Ser	Val	Ala	Gly 105	Val	Arg	Tyr	Phe	Gln 110	Cys	Glu
Pro	Leu	Lys 115	Gly	Ile	Phe	Thr	Arg 120	Pro	Ser	Lys	Leu	Thr 125	Arg	Lys	Val
Gln	Ala 130	Glu	Asp	Glu	Ala	Asn 135	Gly	Leu	Gln	Thr	Thr 140	Pro	Ala	Ser	Arg
Ala 145	Thr	Ser	Pro	Leu	Cys 150	Thr	Ser	Thr	Ala	Ser 155	Met	Val	Ser	Ser	Ser 160
Pro	Ser	Thr	Pro	Ser 165	Asn	Ile	Pro	Gln	Lys 170	Pro	Ser	Gln	Pro	Ala 175	Ala
Lys	Glu	Pro	Ser 180	Ala	Thr	Pro	Pro	Ile 185	Ser	Asn	Leu	Thr	Lys 190	Thr	Ala
Ser	Glu	Ser 195	Ile	Ser	Asn	Leu	Ser 200	Glu	Ala	Gly	Ser	Ile 205	Lys	Lys	Gly
Glu	Arg 210	Glu	Leu	Lys	Ile	Gly 215	Asp	Arg	Val	Leu	Val 220	Gly	Gly	Thr	Lys
Ala 225	Gly	Val	Val	Arg	Phe 230	Leu	Gly	Glu	Thr	Asp 235	Phe	Ala	Lys	Gly	Glu 240
Trp	Cys	Gly	Val	Glu 245	Leu	Asp	Glu	Pro	Leu 250	Gly	Lys	Asn	Asp	Gly 255	Ala
Val	Ala	Gly	Thr 260	Arg	Tyr	Phe	Gln	Cys 265	Gln	Pro	Lys	Tyr	Gly 270	Leu	Phe
Ala	Pro	Val 275	His	Lys	Val	Thr	Lys 280	Ile	Gly	Phe	Pro	Ser 285	Thr	Thr	Pro
Ala	Lys 290	Ala	Lys	Ala	Asn	Ala 295	Val	Arg	Arg	Val	Met 300	Ala	Thr	Thr	Ser
Ala	Ser	Leu	Lys	Arg	Ser	Pro	Ser	Ala	Ser	Ser	Leu	Ser	Ser	Met	Ser

305 310 315 320

Ser Val Ala Ser Ser Val Ser Ser Arg Pro Ser Arg Thr Gly Leu Val
 325 330 335

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<210> 11581
<211> 1438
<212> PRT
<213> Homo sapiens
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<220>
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<223> /note="Gene Symbol: CLIP1"
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Val Glu Lys Thr Ile Ser Ser Glu Lys Ala Ser Ser Thr Pro Ser Ser
35 40 45

Trp Val Asn Gly Asn Lys Pro Gly Phe Ile Gln Phe Leu Gly Glu Thr
65 70 75 80

Gln	Phe	Ala	Pro	Gly	Gln	Trp	Ala	Gly	Ile	Val	Leu	Asp	Glu	Pro	Ile	
				85					90					95		
Gly	Lys	Asn	Asp	Gly	Ser	Val	Ala	Gly	Val	Arg	Tyr	Phe	Gln	Cys	Glu	
			100					105					110			
Pro	Leu	Lys	Gly	Ile	Phe	Thr	Arg	Pro	Ser	Lys	Leu	Thr	Arg	Lys	Val	
		115					120					125				
Gln	Ala	Glu	Asp	Glu	Ala	Asn	Gly	Leu	Gln	Thr	Thr	Pro	Ala	Ser	Arg	
	130					135					140					
Ala	Thr	Ser	Pro	Leu	Cys	Thr	Ser	Thr	Ala	Ser	Met	Val	Ser	Ser	Ser	
145					150					155					160	
Pro	Ser	Thr	Pro	Ser	Asn	Ile	Pro	Gln	Lys	Pro	Ser	Gln	Pro	Ala	Ala	
				165					170					175		
Lys	Glu	Pro	Ser	Ala	Thr	Pro	Pro	Ile	Ser	Asn	Leu	Thr	Lys	Thr	Ala	
			180					185					190			
Ser	Glu	Ser	Ile	Ser	Asn	Leu	Ser	Glu	Ala	Gly	Ser	Ile	Lys	Lys	Gly	
		195					200					205				
Glu	Arg	Glu	Leu	Lys	Ile	Gly	Asp	Arg	Val	Leu	Val	Gly	Gly	Thr	Lys	
	210					215					220					
Ala	Gly	Val	Val	Arg	Phe	Leu	Gly	Glu	Thr	Asp	Phe	Ala	Lys	Gly	Glu	
225					230					235					240	
Trp	Cys	Gly	Val	Glu	Leu	Asp	Glu	Pro	Leu	Gly	Lys	Asn	Asp	Gly	Ala	
				245					250					255		
Val	Ala	Gly	Thr	Arg	Tyr	Phe	Gln	Cys	Gln	Pro	Lys	Tyr	Gly	Leu	Phe	
			260					265					270			
Ala	Pro	Val	His	Lys	Val	Thr	Lys	Ile	Gly	Phe	Pro	Ser	Thr	Thr	Pro	
		275					280					285				
Ala	Lys	Ala	Lys	Ala	Asn	Ala	Val	Arg	Arg	Val	Met	Ala	Thr	Thr	Ser	
	290					295					300					

Ala	Ser	Leu	Lys	Arg	Ser	Pro	Ser	Ala	Ser	Ser	Leu	Ser	Ser	Met	Ser	305	310	315	320
Ser	Val	Ala	Ser	Ser	Val	Ser	Ser	Arg	Pro	Ser	Arg	Thr	Gly	Leu	Leu		325	330	335
Thr	Glu	Thr	Ser	Ser	Arg	Tyr	Ala	Arg	Lys	Ile	Ser	Gly	Thr	Thr	Ala		340	345	350
Leu	Gln	Glu	Ala	Leu	Lys	Glu	Lys	Gln	Gln	His	Ile	Glu	Gln	Leu	Leu		355	360	365
Ala	Glu	Arg	Asp	Leu	Glu	Arg	Ala	Glu	Val	Ala	Lys	Ala	Thr	Ser	His		370	375	380
Val	Gly	Glu	Ile	Glu	Gln	Glu	Leu	Ala	Leu	Ala	Arg	Asp	Gly	His	Asp		385	390	395
Gln	His	Val	Leu	Glu	Leu	Glu	Ala	Lys	Met	Asp	Gln	Leu	Arg	Thr	Met		405	410	415
Val	Glu	Ala	Ala	Asp	Arg	Glu	Lys	Val	Glu	Leu	Leu	Asn	Gln	Leu	Glu		420	425	430
Glu	Glu	Lys	Arg	Lys	Val	Glu	Asp	Leu	Gln	Phe	Arg	Val	Glu	Glu	Glu		435	440	445
Ser	Ile	Thr	Lys	Gly	Asp	Leu	Glu	Gln	Lys	Ser	Gln	Ile	Ser	Glu	Asp		450	455	460
Pro	Glu	Asn	Thr	Gln	Thr	Lys	Leu	Glu	His	Ala	Arg	Ile	Lys	Glu	Leu		465	470	475
Glu	Gln	Ser	Leu	Leu	Phe	Glu	Lys	Thr	Lys	Ala	Asp	Lys	Leu	Gln	Arg		485	490	495
Glu	Leu	Glu	Asp	Thr	Arg	Val	Ala	Thr	Val	Ser	Glu	Lys	Ser	Arg	Ile		500	505	510
Met	Glu	Leu	Glu	Lys	Asp	Leu	Ala	Leu	Arg	Val	Gln	Glu	Val	Ala	Glu		515	520	525
Leu	Arg	Arg	Arg	Leu	Glu	Ser	Asn	Lys	Pro	Ala	Gly	Asp	Val	Asp	Met				

530						535						540				
Ser	Leu	Ser	Leu	Leu	Gln	Glu	Ile	Ser	Ser	Leu	Gln	Glu	Lys	Leu	Glu	
545					550					555					560	
Val	Thr	Arg	Thr	Asp	His	Gln	Arg	Glu	Ile	Thr	Ser	Leu	Lys	Glu	His	
				565					570					575		
Phe	Gly	Ala	Arg	Glu	Glu	Thr	His	Gln	Lys	Glu	Ile	Lys	Ala	Leu	Tyr	
			580					585					590			
Thr	Ala	Thr	Glu	Lys	Leu	Ser	Lys	Glu	Asn	Glu	Ser	Leu	Lys	Ser	Lys	
		595					600					605				
Leu	Glu	His	Ala	Asn	Lys	Glu	Asn	Ser	Asp	Val	Ile	Ala	Leu	Trp	Lys	
	610					615					620					
Ser	Lys	Leu	Glu	Thr	Ala	Ile	Ala	Ser	His	Gln	Gln	Ala	Met	Glu	Glu	
625					630					635					640	
Leu	Lys	Val	Ser	Phe	Ser	Lys	Gly	Leu	Gly	Thr	Glu	Thr	Ala	Glu	Phe	
				645					650					655		
Ala	Glu	Leu	Lys	Thr	Gln	Ile	Glu	Lys	Met	Arg	Leu	Asp	Tyr	Gln	His	
			660					665					670			
Glu	Ile	Glu	Asn	Leu	Gln	Asn	Gln	Gln	Asp	Ser	Glu	Arg	Ala	Ala	His	
		675					680					685				
Ala	Lys	Glu	Met	Glu	Ala	Leu	Arg	Ala	Lys	Leu	Met	Lys	Val	Ile	Lys	
	690					695					700					
Glu	Lys	Glu	Asn	Ser	Leu	Glu	Ala	Ile	Arg	Ser	Lys	Leu	Asp	Lys	Ala	
705					710					715					720	
Glu	Asp	Gln	His	Leu	Val	Glu	Met	Glu	Asp	Thr	Leu	Asn	Lys	Leu	Gln	
				725					730					735		
Glu	Ala	Glu	Ile	Lys	Val	Lys	Glu	Leu	Glu	Val	Leu	Gln	Ala	Lys	Cys	
			740					745					750			
Asn	Glu	Gln	Thr	Lys	Val	Ile	Asp	Asn	Phe	Thr	Ser	Gln	Leu	Lys	Ala	
		755					760					765				

Thr	Glu	Glu	Lys	Leu	Leu	Asp	Leu	Asp	Ala	Leu	Arg	Lys	Ala	Ser	Ser		
	770					775					780						
Glu	Gly	Lys	Ser	Glu	Met	Lys	Lys	Leu	Arg	Gln	Gln	Leu	Glu	Ala	Ala		
785					790					795					800		
Glu	Lys	Gln	Ile	Lys	His	Leu	Glu	Ile	Glu	Lys	Asn	Ala	Glu	Ser	Ser		
				805					810					815			
Lys	Ala	Ser	Ser	Ile	Thr	Arg	Glu	Leu	Gln	Gly	Arg	Glu	Leu	Lys	Leu		
			820					825					830				
Thr	Asn	Leu	Gln	Glu	Asn	Leu	Ser	Glu	Val	Ser	Gln	Val	Lys	Glu	Thr		
		835					840					845					
Leu	Glu	Lys	Glu	Leu	Gln	Ile	Leu	Lys	Glu	Lys	Phe	Ala	Glu	Ala	Ser		
	850					855					860						
Glu	Glu	Ala	Val	Ser	Val	Gln	Arg	Ser	Met	Gln	Glu	Thr	Val	Asn	Lys		
865					870					875					880		
Leu	His	Gln	Lys	Glu	Glu	Gln	Phe	Asn	Met	Leu	Ser	Ser	Asp	Leu	Glu		
				885					890					895			
Lys	Leu	Arg	Glu	Asn	Leu	Ala	Asp	Met	Glu	Ala	Lys	Phe	Arg	Glu	Lys		
			900					905					910				
Asp	Glu	Arg	Glu	Glu	Gln	Leu	Ile	Lys	Ala	Lys	Glu	Lys	Leu	Glu	Asn		
		915					920					925					
Asp	Ile	Ala	Glu	Ile	Met	Lys	Met	Ser	Gly	Asp	Asn	Ser	Ser	Gln	Leu		
	930					935					940						
Thr	Lys	Met	Asn	Asp	Glu	Leu	Arg	Leu	Lys	Glu	Arg	Asp	Val	Glu	Glu		
945					950					955					960		
Leu	Gln	Leu	Lys	Leu	Thr	Lys	Ala	Asn	Glu	Asn	Ala	Ser	Phe	Leu	Gln		
				965					970					975			
Lys	Ser	Ile	Glu	Asp	Met	Thr	Val	Lys	Ala	Glu	Gln	Ser	Gln	Gln	Glu		
			980					985					990				

Ala	Ala	Lys	Lys	His	Glu	Glu	Glu	Lys	Lys	Glu	Leu	Glu	Arg	Lys	
Leu															
		995					1000					1005			
Ser	Asp	Leu	Glu	Lys	Lys	Met	Glu	Thr	Ser	His	Asn	Gln	Cys	Gln	
	1010					1015					1020				
Glu	Leu	Lys	Ala	Arg	Tyr	Glu	Arg	Ala	Thr	Ser	Glu	Thr	Lys	Thr	
	1025					1030					1035				
Lys	His	Glu	Glu	Ile	Leu	Gln	Asn	Leu	Gln	Lys	Thr	Leu	Leu	Asp	
	1040					1045					1050				
Thr	Glu	Asp	Lys	Leu	Lys	Gly	Ala	Arg	Glu	Glu	Asn	Ser	Gly	Leu	
	1055					1060					1065				
Leu	Gln	Glu	Leu	Glu	Glu	Leu	Arg	Lys	Gln	Ala	Asp	Lys	Ala	Lys	
	1070					1075					1080				
Ala	Ala	Gln	Thr	Ala	Glu	Asp	Ala	Met	Gln	Ile	Met	Glu	Gln	Met	
	1085					1090					1095				
Thr	Lys	Glu	Lys	Thr	Glu	Thr	Leu	Ala	Ser	Leu	Glu	Asp	Thr	Lys	
	1100					1105					1110				
Gln	Thr	Asn	Ala	Lys	Leu	Gln	Asn	Glu	Leu	Asp	Thr	Leu	Lys	Glu	
	1115					1120					1125				
Asn	Asn	Leu	Lys	Asn	Val	Glu	Glu	Leu	Asn	Lys	Ser	Lys	Glu	Leu	
	1130					1135					1140				
Leu	Thr	Val	Glu	Asn	Gln	Lys	Met	Glu	Glu	Phe	Arg	Lys	Glu	Ile	
	1145					1150					1155				
Glu	Thr	Leu	Lys	Gln	Ala	Ala	Ala	Gln	Lys	Ser	Gln	Gln	Leu	Ser	
	1160					1165					1170				
Ala	Leu	Gln	Glu	Glu	Asn	Val	Lys	Leu	Ala	Glu	Glu	Leu	Gly	Arg	
	1175					1180					1185				
Ser	Arg	Asp	Glu	Val	Thr	Ser	His	Gln	Lys	Leu	Glu	Glu	Glu	Arg	
	1190					1195					1200				

Ser	Val	Leu	Asn	Asn	Gln	Leu	Leu	Glu	Met	Lys	Lys	Arg	Glu	Ser
	1205					1210					1215			
Lys	Phe	Ile	Lys	Asp	Ala	Asp	Glu	Glu	Lys	Ala	Ser	Leu	Gln	Lys
	1220					1225					1230			
Ser	Ile	Ser	Ile	Thr	Ser	Ala	Leu	Leu	Thr	Glu	Lys	Asp	Ala	Glu
	1235					1240					1245			
Leu	Glu	Lys	Leu	Arg	Asn	Glu	Val	Thr	Val	Leu	Arg	Gly	Glu	Asn
	1250					1255					1260			
Ala	Ser	Ala	Lys	Ser	Leu	His	Ser	Val	Val	Gln	Thr	Leu	Glu	Ser
	1265					1270					1275			
Asp	Lys	Val	Lys	Leu	Glu	Leu	Lys	Val	Lys	Asn	Leu	Glu	Leu	Gln
	1280					1285					1290			
Leu	Lys	Glu	Asn	Lys	Arg	Gln	Leu	Ser	Ser	Ser	Ser	Gly	Asn	Thr
	1295					1300					1305			
Asp	Thr	Gln	Ala	Asp	Glu	Asp	Glu	Arg	Ala	Gln	Glu	Ser	Gln	Ile
	1310					1315					1320			
Asp	Phe	Leu	Asn	Ser	Val	Ile	Val	Asp	Leu	Gln	Arg	Lys	Asn	Gln
	1325					1330					1335			
Asp	Leu	Lys	Met	Lys	Val	Glu	Met	Met	Ser	Glu	Ala	Ala	Leu	Asn
	1340					1345					1350			
Gly	Asn	Gly	Asp	Asp	Leu	Asn	Asn	Tyr	Asp	Ser	Asp	Asp	Gln	Glu
	1355					1360					1365			
Lys	Gln	Ser	Lys	Lys	Lys	Pro	Arg	Leu	Phe	Cys	Asp	Ile	Cys	Asp
	1370					1375					1380			
Cys	Phe	Asp	Leu	His	Asp	Thr	Glu	Asp	Cys	Pro	Thr	Gln	Ala	Gln
	1385					1390					1395			
Met	Ser	Glu	Asp	Pro	Pro	His	Ser	Thr	His	His	Gly	Ser	Arg	Gly
	1400					1405					1410			

Glu Glu Arg Pro Tyr Cys Glu Ile Cys Glu Met Phe Gly His Trp
1415 1420 1425

Ala Thr Asn Cys Asn Asp Asp Glu Thr Phe
1430 1435

<210> 11582

<211> 1046

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2282"

<220>

<221> source

<223> /note="Gene Symbol: CLIP2"

<220>

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<223> /note="Gene Name:
CAP-GLY domain containing linker protein 2"

<220>

<221> source

<223> /note="Uniprot ID: Q9UDT6"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000223398"

<400> 11582

Met Gln Lys Pro Ser Gly Leu Lys Pro Pro Gly Arg Gly Gly Lys His
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Ser Ser Pro Met Gly Arg Thr Ser Thr Gly Ser Ala Ser Ser Ser Ala
20 25 30

Ala Val Ala Ala Ser Ser Lys Glu Gly Ser Pro Leu His Lys Gln Ser
35 40 45

Ser Gly Pro Ser Ser Ser Pro Ala Ala Ala Ala Ala Pro Glu Lys Pro
50 55 60

Gly Pro Lys Ala Ala Glu Val Gly Asp Asp Phe Leu Gly Asp Phe Val
65 70 75 80

Val Gly Glu Arg Val Trp Val Asn Gly Val Lys Pro Gly Val Val Gln
85 90 95

Tyr	Leu	Gly	Glu	Thr	Gln	Phe	Ala	Pro	Gly	Gln	Trp	Ala	Gly	Val	Val		
			100					105					110				
Leu	Asp	Asp	Pro	Val	Gly	Lys	Asn	Asp	Gly	Ala	Val	Gly	Gly	Val	Arg		
		115					120					125					
Tyr	Phe	Glu	Cys	Pro	Ala	Leu	Gln	Gly	Ile	Phe	Thr	Arg	Pro	Ser	Lys		
	130					135					140						
Leu	Thr	Arg	Gln	Pro	Thr	Ala	Glu	Gly	Ser	Gly	Ser	Asp	Ala	His	Ser		
145					150					155					160		
Val	Glu	Ser	Leu	Thr	Ala	Gln	Asn	Leu	Ser	Leu	His	Ser	Gly	Thr	Ala		
				165					170					175			
Thr	Pro	Pro	Leu	Thr	Ser	Arg	Val	Ile	Pro	Leu	Arg	Glu	Ser	Val	Leu		
			180					185					190				
Asn	Ser	Ser	Val	Lys	Thr	Gly	Asn	Glu	Ser	Gly	Ser	Asn	Leu	Ser	Asp		
		195					200					205					
Ser	Gly	Ser	Val	Lys	Arg	Gly	Glu	Lys	Asp	Leu	Arg	Leu	Gly	Asp	Arg		
	210					215					220						
Val	Leu	Val	Gly	Gly	Thr	Lys	Thr	Gly	Val	Val	Arg	Tyr	Val	Gly	Glu		
225					230					235					240		
Thr	Asp	Phe	Ala	Lys	Gly	Glu	Trp	Cys	Gly	Val	Glu	Leu	Asp	Glu	Pro		
				245					250					255			
Leu	Gly	Lys	Asn	Asp	Gly	Ala	Val	Ala	Gly	Thr	Arg	Tyr	Phe	Gln	Cys		
			260					265					270				
Pro	Pro	Lys	Phe	Gly	Leu	Phe	Ala	Pro	Ile	His	Lys	Val	Ile	Arg	Ile		
		275					280					285					
Gly	Phe	Pro	Ser	Thr	Ser	Pro	Ala	Lys	Ala	Lys	Lys	Thr	Lys	Arg	Met		
	290					295					300						
Ala	Met	Gly	Val	Ser	Ala	Leu	Thr	His	Ser	Pro	Ser	Ser	Ser	Ser	Ile		
305					310					315					320		

Ser	Ser	Val	Ser	Ser	Val	Ala	Ser	Ser	Val	Gly	Gly	Arg	Pro	Ser	Arg	
				325					330					335		
Ser	Gly	Leu	Leu	Thr	Glu	Thr	Ser	Ser	Arg	Tyr	Ala	Arg	Lys	Ile	Ser	
		340					345						350			
Gly	Thr	Thr	Ala	Leu	Gln	Glu	Ala	Leu	Lys	Glu	Lys	Gln	Gln	His	Ile	
		355					360					365				
Glu	Gln	Leu	Leu	Ala	Glu	Arg	Asp	Leu	Glu	Arg	Ala	Glu	Val	Ala	Lys	
	370					375					380					
Ala	Thr	Ser	His	Ile	Cys	Glu	Val	Glu	Lys	Glu	Ile	Ala	Leu	Leu	Lys	
385					390					395					400	
Ala	Gln	His	Glu	Gln	Tyr	Val	Ala	Glu	Ala	Glu	Glu	Lys	Leu	Gln	Arg	
				405					410					415		
Ala	Arg	Leu	Leu	Val	Glu	Ser	Val	Arg	Lys	Glu	Lys	Val	Asp	Leu	Ser	
			420					425					430			
Asn	Gln	Leu	Glu	Glu	Glu	Arg	Arg	Lys	Val	Glu	Asp	Leu	Gln	Phe	Arg	
		435					440					445				
Val	Glu	Glu	Glu	Ser	Ile	Thr	Lys	Gly	Asp	Leu	Glu	Thr	Gln	Thr	Gln	
	450					455					460					
Leu	Glu	His	Ala	Arg	Ile	Gly	Glu	Leu	Glu	Gln	Ser	Leu	Leu	Leu	Glu	
465					470					475					480	
Lys	Ala	Gln	Ala	Glu	Arg	Leu	Leu	Arg	Glu	Leu	Ala	Asp	Asn	Arg	Leu	
				485					490					495		
Thr	Thr	Val	Ala	Glu	Lys	Ser	Arg	Val	Leu	Gln	Leu	Glu	Glu	Glu	Leu	
			500					505					510			
Thr	Leu	Arg	Arg	Gly	Glu	Ile	Glu	Glu	Leu	Gln	Gln	Cys	Leu	Leu	His	
		515					520					525				
Ser	Gly	Pro	Pro	Pro	Pro	Asp	His	Pro	Asp	Ala	Ala	Glu	Ile	Leu	Arg	
	530					535					540					

Leu Arg Glu Arg Leu Leu Ser Ala Ser Lys Glu His Gln Arg Glu Ser
 545 550 555 560

Gly Val Leu Arg Asp Lys Tyr Glu Lys Ala Leu Lys Ala Tyr Gln Ala
 565 570 575

Glu Val Asp Lys Leu Arg Ala Ala Asn Glu Lys Tyr Ala Gln Glu Val
 580 585 590

Ala Gly Leu Lys Asp Lys Val Gln Gln Ala Thr Ser Glu Asn Met Gly
 595 600 605

Leu Met Asp Asn Trp Lys Ser Lys Leu Asp Ser Leu Ala Ser Asp His
 610 615 620

Gln Lys Ser Leu Glu Asp Leu Lys Ala Thr Leu Asn Ser Gly Pro Gly
 625 630 635 640

Ala Gln Gln Lys Glu Ile Gly Glu Leu Lys Ala Val Met Glu Gly Ile
 645 650 655

Lys Met Glu His Gln Leu Glu Leu Gly Asn Leu Gln Ala Lys His Asp
 660 665 670

Leu Glu Thr Ala Met His Val Lys Glu Lys Glu Ala Leu Arg Glu Lys
 675 680 685

Leu Gln Glu Ala Gln Glu Glu Leu Ala Gly Leu Gln Arg His Trp Arg
 690 695 700

Ala Gln Leu Glu Val Gln Ala Ser Gln His Arg Leu Glu Leu Gln Glu
 705 710 715 720

Ala Gln Asp Gln Arg Arg Asp Ala Glu Leu Arg Val His Glu Leu Glu
 725 730 735

Lys Leu Asp Val Glu Tyr Arg Gly Gln Ala Gln Ala Ile Glu Phe Leu
 740 745 750

Lys Glu Gln Ile Ser Leu Ala Glu Lys Lys Met Leu Asp Tyr Glu Arg
 755 760 765

Leu Gln Arg Ala Glu Ala Gln Gly Lys Gln Glu Val Glu Ser Leu Arg

770						775										780
Glu	Lys	Leu	Leu	Val	Ala	Glu	Asn	Arg	Leu	Gln	Ala	Val	Glu	Ala	Leu	
785					790					795					800	
Cys	Ser	Ser	Gln	His	Thr	His	Met	Ile	Glu	Ser	Asn	Asp	Ile	Ser	Glu	
				805					810					815		
Glu	Thr	Ile	Arg	Thr	Lys	Glu	Thr	Val	Glu	Gly	Leu	Gln	Asp	Lys	Leu	
			820					825					830			
Asn	Lys	Arg	Asp	Lys	Glu	Val	Thr	Ala	Leu	Thr	Ser	Gln	Thr	Glu	Met	
		835					840					845				
Leu	Arg	Ala	Gln	Val	Ser	Ala	Leu	Glu	Ser	Lys	Cys	Lys	Ser	Gly	Glu	
	850					855					860					
Lys	Lys	Val	Asp	Ala	Leu	Leu	Lys	Glu	Lys	Arg	Arg	Leu	Glu	Ala	Glu	
865					870					875					880	
Leu	Glu	Thr	Val	Ser	Arg	Lys	Thr	His	Asp	Ala	Ser	Gly	Gln	Leu	Val	
				885					890					895		
Leu	Ile	Ser	Gln	Glu	Leu	Leu	Arg	Lys	Glu	Arg	Ser	Leu	Asn	Glu	Leu	
			900					905					910			
Arg	Val	Leu	Leu	Leu	Glu	Ala	Asn	Arg	His	Ser	Pro	Gly	Pro	Glu	Arg	
		915					920					925				
Asp	Leu	Ser	Arg	Glu	Val	His	Lys	Ala	Glu	Trp	Arg	Ile	Lys	Glu	Gln	
	930					935					940					
Lys	Leu	Lys	Asp	Asp	Ile	Arg	Gly	Leu	Arg	Glu	Lys	Leu	Thr	Gly	Leu	
945					950					955					960	
Asp	Lys	Glu	Lys	Ser	Leu	Ser	Asp	Gln	Arg	Arg	Tyr	Ser	Leu	Ile	Asp	
				965					970					975		
Arg	Ser	Ser	Ala	Pro	Glu	Leu	Leu	Arg	Leu	Gln	His	Gln	Leu	Met	Ser	
			980					985					990			
Thr	Glu	Asp	Ala	Leu	Arg	Asp	Ala	Leu	Asp	Gln	Ala	Gln	Gln	Val		
Glu																

995

1000

1005

Lys Leu Met Glu Ala Met Arg Ser Cys Pro Asp Lys Ala Gln Thr
 1010 1015 1020

Ile Gly Asn Ser Gly Ser Ala Asn Gly Ile His Gln Gln Asp Lys
 1025 1030 1035

Ala Gln Lys Gln Glu Asp Lys His
 1040 1045

<210> 11583

<211> 1011

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2282"

<220>

<221> source

<223> /note="Gene Symbol: CLIP2"

<220>

<221> source

<223> /note="Gene Name:
 CAP-GLY domain containing linker protein 2"

<220>

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<223> /note="Uniprot ID: Q9UDT6"

<220>

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<223> /note="ENSP ID: ENSP00000355151"

<400> 11583

Met Gln Lys Pro Ser Gly Leu Lys Pro Pro Gly Arg Gly Gly Lys His
 1 5 10 15

Ser Ser Pro Met Gly Arg Thr Ser Thr Gly Ser Ala Ser Ser Ser Ala
 20 25 30

Ala Val Ala Ala Ser Ser Lys Glu Gly Ser Pro Leu His Lys Gln Ser
 35 40 45

Ser Gly Pro Ser Ser Ser Pro Ala Ala Ala Ala Ala Pro Glu Lys Pro
 50 55 60

Gly	Pro	Lys	Ala	Ala	Glu	Val	Gly	Asp	Asp	Phe	Leu	Gly	Asp	Phe	Val	
65					70					75					80	
Val	Gly	Glu	Arg	Val	Trp	Val	Asn	Gly	Val	Lys	Pro	Gly	Val	Val	Gln	
				85					90					95		
Tyr	Leu	Gly	Glu	Thr	Gln	Phe	Ala	Pro	Gly	Gln	Trp	Ala	Gly	Val	Val	
			100					105					110			
Leu	Asp	Asp	Pro	Val	Gly	Lys	Asn	Asp	Gly	Ala	Val	Gly	Gly	Val	Arg	
		115					120					125				
Tyr	Phe	Glu	Cys	Pro	Ala	Leu	Gln	Gly	Ile	Phe	Thr	Arg	Pro	Ser	Lys	
	130					135					140					
Leu	Thr	Arg	Gln	Pro	Thr	Ala	Glu	Gly	Ser	Gly	Ser	Asp	Ala	His	Ser	
145					150					155					160	
Val	Glu	Ser	Leu	Thr	Ala	Gln	Asn	Leu	Ser	Leu	His	Ser	Gly	Thr	Ala	
				165					170					175		
Thr	Pro	Pro	Leu	Thr	Ser	Arg	Val	Ile	Pro	Leu	Arg	Glu	Ser	Val	Leu	
			180					185					190			
Asn	Ser	Ser	Val	Lys	Thr	Gly	Asn	Glu	Ser	Gly	Ser	Asn	Leu	Ser	Asp	
		195					200					205				
Ser	Gly	Ser	Val	Lys	Arg	Gly	Glu	Lys	Asp	Leu	Arg	Leu	Gly	Asp	Arg	
	210					215					220					
Val	Leu	Val	Gly	Gly	Thr	Lys	Thr	Gly	Val	Val	Arg	Tyr	Val	Gly	Glu	
225					230					235					240	
Thr	Asp	Phe	Ala	Lys	Gly	Glu	Trp	Cys	Gly	Val	Glu	Leu	Asp	Glu	Pro	
				245					250					255		
Leu	Gly	Lys	Asn	Asp	Gly	Ala	Val	Ala	Gly	Thr	Arg	Tyr	Phe	Gln	Cys	
			260					265					270			
Pro	Pro	Lys	Phe	Gly	Leu	Phe	Ala	Pro	Ile	His	Lys	Val	Ile	Arg	Ile	
		275					280					285				

Gly	Phe	Pro	Ser	Thr	Ser	Pro	Ala	Lys	Ala	Lys	Lys	Thr	Lys	Arg	Met			
290						295					300							
Ala	Met	Gly	Val	Ser	Ala	Leu	Thr	His	Ser	Pro	Ser	Ser	Ser	Ser	Ile			
305					310					315					320			
Ser	Ser	Val	Ser	Ser	Val	Ala	Ser	Ser	Val	Gly	Gly	Arg	Pro	Ser	Arg			
				325					330					335				
Ser	Gly	Leu	Leu	Thr	Glu	Thr	Ser	Ser	Arg	Tyr	Ala	Arg	Lys	Ile	Ser			
			340				345						350					
Gly	Thr	Thr	Ala	Leu	Gln	Glu	Ala	Leu	Lys	Glu	Lys	Gln	Gln	His	Ile			
		355					360					365						
Glu	Gln	Leu	Leu	Ala	Glu	Arg	Asp	Leu	Glu	Arg	Ala	Glu	Val	Ala	Lys			
	370					375					380							
Ala	Thr	Ser	His	Ile	Cys	Glu	Val	Glu	Lys	Glu	Ile	Ala	Leu	Leu	Lys			
385					390					395					400			
Ala	Gln	His	Glu	Gln	Tyr	Val	Ala	Glu	Ala	Glu	Glu	Lys	Leu	Gln	Arg			
				405					410					415				
Ala	Arg	Leu	Leu	Val	Glu	Ser	Val	Arg	Lys	Glu	Lys	Val	Asp	Leu	Ser			
			420					425					430					
Asn	Gln	Leu	Glu	Glu	Glu	Arg	Arg	Lys	Val	Glu	Asp	Leu	Gln	Phe	Arg			
		435					440					445						
Val	Glu	Glu	Glu	Ser	Ile	Thr	Lys	Gly	Asp	Leu	Glu	Leu	Thr	Thr	Val			
	450					455					460							
Ala	Glu	Lys	Ser	Arg	Val	Leu	Gln	Leu	Glu	Glu	Glu	Leu	Thr	Leu	Arg			
465					470					475					480			
Arg	Gly	Glu	Ile	Glu	Glu	Leu	Gln	Gln	Cys	Leu	Leu	His	Ser	Gly	Pro			
				485					490					495				
Pro	Pro	Pro	Asp	His	Pro	Asp	Ala	Ala	Glu	Ile	Leu	Arg	Leu	Arg	Glu			
			500					505					510					
Arg	Leu	Leu	Ser	Ala	Ser	Lys	Glu	His	Gln	Arg	Glu	Ser	Gly	Val	Leu			

515					520					525					
Arg	Asp	Lys	Tyr	Glu	Lys	Ala	Leu	Lys	Ala	Tyr	Gln	Ala	Glu	Val	Asp
	530					535					540				
Lys	Leu	Arg	Ala	Ala	Asn	Glu	Lys	Tyr	Ala	Gln	Glu	Val	Ala	Gly	Leu
545					550					555					560
Lys	Asp	Lys	Val	Gln	Gln	Ala	Thr	Ser	Glu	Asn	Met	Gly	Leu	Met	Asp
				565					570					575	
Asn	Trp	Lys	Ser	Lys	Leu	Asp	Ser	Leu	Ala	Ser	Asp	His	Gln	Lys	Ser
			580					585					590		
Leu	Glu	Asp	Leu	Lys	Ala	Thr	Leu	Asn	Ser	Gly	Pro	Gly	Ala	Gln	Gln
		595					600					605			
Lys	Glu	Ile	Gly	Glu	Leu	Lys	Ala	Val	Met	Glu	Gly	Ile	Lys	Met	Glu
	610					615					620				
His	Gln	Leu	Glu	Leu	Gly	Asn	Leu	Gln	Ala	Lys	His	Asp	Leu	Glu	Thr
625					630					635					640
Ala	Met	His	Val	Lys	Glu	Lys	Glu	Ala	Leu	Arg	Glu	Lys	Leu	Gln	Glu
				645					650					655	
Ala	Gln	Glu	Glu	Leu	Ala	Gly	Leu	Gln	Arg	His	Trp	Arg	Ala	Gln	Leu
			660					665					670		
Glu	Val	Gln	Ala	Ser	Gln	His	Arg	Leu	Glu	Leu	Gln	Glu	Ala	Gln	Asp
		675					680					685			
Gln	Arg	Arg	Asp	Ala	Glu	Leu	Arg	Val	His	Glu	Leu	Glu	Lys	Leu	Asp
	690					695					700				
Val	Glu	Tyr	Arg	Gly	Gln	Ala	Gln	Ala	Ile	Glu	Phe	Leu	Lys	Glu	Gln
705				710						715					720
Ile	Ser	Leu	Ala	Glu	Lys	Lys	Met	Leu	Asp	Tyr	Glu	Arg	Leu	Gln	Arg
				725					730					735	
Ala	Glu	Ala	Gln	Gly	Lys	Gln	Glu	Val	Glu	Ser	Leu	Arg	Glu	Lys	Leu
			740				745						750		

Leu	Val	Ala	Glu	Asn	Arg	Leu	Gln	Ala	Val	Glu	Ala	Leu	Cys	Ser	Ser		
		755					760					765					
Gln	His	Thr	His	Met	Ile	Glu	Ser	Asn	Asp	Ile	Ser	Glu	Glu	Thr	Ile		
	770					775					780						
Arg	Thr	Lys	Glu	Thr	Val	Glu	Gly	Leu	Gln	Asp	Lys	Leu	Asn	Lys	Arg		
785					790					795					800		
Asp	Lys	Glu	Val	Thr	Ala	Leu	Thr	Ser	Gln	Thr	Glu	Met	Leu	Arg	Ala		
				805					810					815			
Gln	Val	Ser	Ala	Leu	Glu	Ser	Lys	Cys	Lys	Ser	Gly	Glu	Lys	Lys	Val		
			820					825					830				
Asp	Ala	Leu	Leu	Lys	Glu	Lys	Arg	Arg	Leu	Glu	Ala	Glu	Leu	Glu	Thr		
		835					840					845					
Val	Ser	Arg	Lys	Thr	His	Asp	Ala	Ser	Gly	Gln	Leu	Val	Leu	Ile	Ser		
	850					855					860						
Gln	Glu	Leu	Leu	Arg	Lys	Glu	Arg	Ser	Leu	Asn	Glu	Leu	Arg	Val	Leu		
865					870					875							
Leu	Leu	Glu	Ala	Asn	Arg	His	Ser	Pro	Gly	Pro	Glu	Arg	Asp	Leu	Ser		
				885					890					895			
Arg	Glu	Val	His	Lys	Ala	Glu	Trp	Arg	Ile	Lys	Glu	Gln	Lys	Leu	Lys		
			900					905					910				
Asp	Asp	Ile	Arg	Gly	Leu	Arg	Glu	Lys	Leu	Thr	Gly	Leu	Asp	Lys	Glu		
		915					920					925					
Lys	Ser	Leu	Ser	Asp	Gln	Arg	Arg	Tyr	Ser	Leu	Ile	Asp	Arg	Ser	Ser		
	930					935					940						
Ala	Pro	Glu	Leu	Leu	Arg	Leu	Gln	His	Gln	Leu	Met	Ser	Thr	Glu	Asp		
945					950					955					960		
Ala	Leu	Arg	Asp	Ala	Leu	Asp	Gln	Ala	Gln	Gln	Val	Glu	Lys	Leu	Met		
				965					970					975			

Glu Ala Met Arg Ser Cys Pro Asp Lys Ala Gln Thr Ile Gly Asn Ser
980 985 990

Gly Ser Ala Asn Gly Ile His Gln Gln Asp Lys Ala Gln Lys Gln
Glu
995 1000 1005

Asp Lys His
1010

<210> 11584
<211> 1046
<212> PRT
<213> Homo sapiens

<220>
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<223> /note="Payload ID: 2282"

<220>
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<223> /note="Gene Symbol: CLIP2"

<220>
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<223> /note="Gene Name:
CAP-GLY domain containing linker protein 2"

<220>
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<220>
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<223> /note="ENSP ID: ENSP00000378500"

<400> 11584
Met Gln Lys Pro Ser Gly Leu Lys Pro Pro Gly Arg Gly Gly Lys His
1 5 10 15

Ser Ser Pro Met Gly Arg Thr Ser Thr Gly Ser Ala Ser Ser Ser Ala
20 25 30

Ala Val Ala Ala Ser Ser Lys Glu Gly Ser Pro Leu His Lys Gln Ser
35 40 45

Ser Gly Pro Ser Ser Ser Pro Ala Ala Ala Ala Ala Pro Glu Lys Pro
50 55 60

Gly Pro Lys Ala Ala Glu Val Gly Asp Asp Phe Leu Gly Asp Phe Val
65 70 75 80

Val Gly Glu Arg Val Trp Val Asn Gly Val Lys Pro Gly Val Val Gln
85 90 95

Tyr Leu Gly Glu Thr Gln Phe Ala Pro Gly Gln Trp Ala Gly Val Val
100 105 110

Leu Asp Asp Pro Val Gly Lys Asn Asp Gly Ala Val Gly Gly Val Arg
115 120 125

Tyr Phe Glu Cys Pro Ala Leu Gln Gly Ile Phe Thr Arg Pro Ser Lys
130 135 140

Leu Thr Arg Gln Pro Thr Ala Glu Gly Ser Gly Ser Asp Ala His Ser
145 150 155 160

Val Glu Ser Leu Thr Ala Gln Asn Leu Ser Leu His Ser Gly Thr Ala
165 170 175

Thr Pro Pro Leu Thr Ser Arg Val Ile Pro Leu Arg Glu Ser Val Leu
180 185 190

Asn Ser Ser Val Lys Thr Gly Asn Glu Ser Gly Ser Asn Leu Ser Asp
195 200 205

Ser Gly Ser Val Lys Arg Gly Glu Lys Asp Leu Arg Leu Gly Asp Arg
210 215 220

Val Leu Val Gly Gly Thr Lys Thr Gly Val Val Arg Tyr Val Gly Glu
225 230 235 240

Thr Asp Phe Ala Lys Gly Glu Trp Cys Gly Val Glu Leu Asp Glu Pro
245 250 255

Leu Gly Lys Asn Asp Gly Ala Val Ala Gly Thr Arg Tyr Phe Gln Cys
260 265 270

Pro Pro Lys Phe Gly Leu Phe Ala Pro Ile His Lys Val Ile Arg Ile
275 280 285

Gly Phe Pro Ser Thr Ser Pro Ala Lys Ala Lys Lys Thr Lys Arg Met

25855

290						295										300
Ala	Met	Gly	Val	Ser	Ala	Leu	Thr	His	Ser	Pro	Ser	Ser	Ser	Ser	Ile	
305					310					315					320	
Ser	Ser	Val	Ser	Ser	Val	Ala	Ser	Ser	Val	Gly	Gly	Arg	Pro	Ser	Arg	
				325					330					335		
Ser	Gly	Leu	Leu	Thr	Glu	Thr	Ser	Ser	Arg	Tyr	Ala	Arg	Lys	Ile	Ser	
			340					345					350			
Gly	Thr	Thr	Ala	Leu	Gln	Glu	Ala	Leu	Lys	Glu	Lys	Gln	Gln	His	Ile	
		355					360					365				
Glu	Gln	Leu	Leu	Ala	Glu	Arg	Asp	Leu	Glu	Arg	Ala	Glu	Val	Ala	Lys	
	370					375					380					
Ala	Thr	Ser	His	Ile	Cys	Glu	Val	Glu	Lys	Glu	Ile	Ala	Leu	Leu	Lys	
385					390					395					400	
Ala	Gln	His	Glu	Gln	Tyr	Val	Ala	Glu	Ala	Glu	Glu	Lys	Leu	Gln	Arg	
				405					410					415		
Ala	Arg	Leu	Leu	Val	Glu	Ser	Val	Arg	Lys	Glu	Lys	Val	Asp	Leu	Ser	
			420					425					430			
Asn	Gln	Leu	Glu	Glu	Glu	Arg	Arg	Lys	Val	Glu	Asp	Leu	Gln	Phe	Arg	
		435					440					445				
Val	Glu	Glu	Glu	Ser	Ile	Thr	Lys	Gly	Asp	Leu	Glu	Thr	Gln	Thr	Gln	
	450					455					460					
Leu	Glu	His	Ala	Arg	Ile	Gly	Glu	Leu	Glu	Gln	Ser	Leu	Leu	Leu	Glu	
465					470					475					480	
Lys	Ala	Gln	Ala	Glu	Arg	Leu	Leu	Arg	Glu	Leu	Ala	Asp	Asn	Arg	Leu	
				485					490					495		
Thr	Thr	Val	Ala	Glu	Lys	Ser	Arg	Val	Leu	Gln	Leu	Glu	Glu	Glu	Leu	
			500					505					510			
Thr	Leu	Arg	Arg	Gly	Glu	Ile	Glu	Glu	Leu	Gln	Gln	Cys	Leu	Leu	His	
		515					520					525				

Ser	Gly	Pro	Pro	Pro	Pro	Asp	His	Pro	Asp	Ala	Ala	Glu	Ile	Leu	Arg	
	530					535						540				
Leu	Arg	Glu	Arg	Leu	Leu	Ser	Ala	Ser	Lys	Glu	His	Gln	Arg	Glu	Ser	
545					550					555					560	
Gly	Val	Leu	Arg	Asp	Lys	Tyr	Glu	Lys	Ala	Leu	Lys	Ala	Tyr	Gln	Ala	
				565					570					575		
Glu	Val	Asp	Lys	Leu	Arg	Ala	Ala	Asn	Glu	Lys	Tyr	Ala	Gln	Glu	Val	
			580					585					590			
Ala	Gly	Leu	Lys	Asp	Lys	Val	Gln	Gln	Ala	Thr	Ser	Glu	Asn	Met	Gly	
		595					600					605				
Leu	Met	Asp	Asn	Trp	Lys	Ser	Lys	Leu	Asp	Ser	Leu	Ala	Ser	Asp	His	
	610					615					620					
Gln	Lys	Ser	Leu	Glu	Asp	Leu	Lys	Ala	Thr	Leu	Asn	Ser	Gly	Pro	Gly	
625					630					635					640	
Ala	Gln	Gln	Lys	Glu	Ile	Gly	Glu	Leu	Lys	Ala	Val	Met	Glu	Gly	Ile	
				645					650					655		
Lys	Met	Glu	His	Gln	Leu	Glu	Leu	Gly	Asn	Leu	Gln	Ala	Lys	His	Asp	
			660					665					670			
Leu	Glu	Thr	Ala	Met	His	Val	Lys	Glu	Lys	Glu	Ala	Leu	Arg	Glu	Lys	
		675					680					685				
Leu	Gln	Glu	Ala	Gln	Glu	Glu	Leu	Ala	Gly	Leu	Gln	Arg	His	Trp	Arg	
	690					695					700					
Ala	Gln	Leu	Glu	Val	Gln	Ala	Ser	Gln	His	Arg	Leu	Glu	Leu	Gln	Glu	
705					710					715					720	
Ala	Gln	Asp	Gln	Arg	Arg	Asp	Ala	Glu	Leu	Arg	Val	His	Glu	Leu	Glu	
				725					730					735		
Lys	Leu	Asp	Val	Glu	Tyr	Arg	Gly	Gln	Ala	Gln	Ala	Ile	Glu	Phe	Leu	
			740					745					750			

Lys	Glu	Gln	Ile	Ser	Leu	Ala	Glu	Lys	Lys	Met	Leu	Asp	Tyr	Glu	Arg	755	760	765
Leu	Gln	Arg	Ala	Glu	Ala	Gln	Gly	Lys	Gln	Glu	Val	Glu	Ser	Leu	Arg	770	775	780
Glu	Lys	Leu	Leu	Val	Ala	Glu	Asn	Arg	Leu	Gln	Ala	Val	Glu	Ala	Leu	785	790	795
Cys	Ser	Ser	Gln	His	Thr	His	Met	Ile	Glu	Ser	Asn	Asp	Ile	Ser	Glu	805	810	815
Glu	Thr	Ile	Arg	Thr	Lys	Glu	Thr	Val	Glu	Gly	Leu	Gln	Asp	Lys	Leu	820	825	830
Asn	Lys	Arg	Asp	Lys	Glu	Val	Thr	Ala	Leu	Thr	Ser	Gln	Thr	Glu	Met	835	840	845
Leu	Arg	Ala	Gln	Val	Ser	Ala	Leu	Glu	Ser	Lys	Cys	Lys	Ser	Gly	Glu	850	855	860
Lys	Lys	Val	Asp	Ala	Leu	Leu	Lys	Glu	Lys	Arg	Arg	Leu	Glu	Ala	Glu	865	870	875
Leu	Glu	Thr	Val	Ser	Arg	Lys	Thr	His	Asp	Ala	Ser	Gly	Gln	Leu	Val	885	890	895
Leu	Ile	Ser	Gln	Glu	Leu	Leu	Arg	Lys	Glu	Arg	Ser	Leu	Asn	Glu	Leu	900	905	910
Arg	Val	Leu	Leu	Leu	Glu	Ala	Asn	Arg	His	Ser	Pro	Gly	Pro	Glu	Arg	915	920	925
Asp	Leu	Ser	Arg	Glu	Val	His	Lys	Ala	Glu	Trp	Arg	Ile	Lys	Glu	Gln	930	935	940
Lys	Leu	Lys	Asp	Asp	Ile	Arg	Gly	Leu	Arg	Glu	Lys	Leu	Thr	Gly	Leu	945	950	955
Asp	Lys	Glu	Lys	Ser	Leu	Ser	Asp	Gln	Arg	Arg	Tyr	Ser	Leu	Ile	Asp	965	970	975

Arg Ser Ser Ala Pro Glu Leu Leu Arg Leu Gln His Gln Leu Met Ser
 980 985 990

Thr Glu Asp Ala Leu Arg Asp Ala Leu Asp Gln Ala Gln Gln Val
 Glu
 995 1000 1005

Lys Leu Met Glu Ala Met Arg Ser Cys Pro Asp Lys Ala Gln Thr
 1010 1015 1020

Ile Gly Asn Ser Gly Ser Ala Asn Gly Ile His Gln Gln Asp Lys
 1025 1030 1035

Ala Gln Lys Gln Glu Asp Lys His
 1040 1045

<210> 11585
 <211> 187
 <212> PRT
 <213> Homo sapiens

<220>
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 <223> /note="Payload ID: 2282"

<220>
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 <223> /note="Gene Symbol: CLIP2"

<220>
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 <223> /note="Gene Name:
 CAP-GLY domain containing linker protein 2"

<220>
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<220>
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 <222> (1)..(1)
 <223> Any amino acid

<400> 11585
 Xaa Tyr Glu Arg Leu Gln Arg Ala Glu Ala Gln Gly Lys Gln Glu Val
 1 5 10 15

Glu Ser Leu Arg Glu Lys Leu Leu Val Ala Glu Asn Arg Leu Gln Ala
 20 25 30

Val Glu Ala Leu Cys Ser Ser Gln His Thr His Met Ile Glu Ser Asn
35 40 45
Asp Ile Ser Glu Glu Thr Ile Arg Thr Lys Glu Thr Val Glu Gly Ala
50 55 60
Val Leu Ala Ser Leu Tyr Pro Leu Ser Arg Asn Ile Leu Cys Arg Pro
65 70 75 80
Ala Gly Gln Ala Glu Gln Glu Gly Gln Arg Gly Asp Ser Leu Asp Leu
85 90 95
Pro Asp Arg Asp Ala Gln Gly Pro Thr Leu Glu Ser Lys Cys Lys Ser
100 105 110
Gly Glu Lys Lys Val Asp Ala Leu Leu Lys Glu Lys Arg Arg Leu Glu
115 120 125
Ala Glu Leu Glu Thr Val Ser Arg Lys Thr His Asp Ala Ser Gly Gln
130 135 140
Leu Val Leu Ile Ser Gln Glu Leu Leu Arg Lys Glu Arg Ser Leu Asn
145 150 155 160
Glu Leu Arg Val Leu Leu Leu Glu Ala Asn Arg His Ser Pro Gly Pro
165 170 175
Glu Arg Asp Leu Ser Arg Glu Val His Lys Ala
180 185

<210> 11586

<211> 28

<212> PRT

<213> Homo sapiens

<220>

<221> source

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<223> /note="Gene Symbol: CLIP2"

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<223> /note="Gene Name:

CAP-GLY domain containing linker protein 2"

<220>
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<220>
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<222> (1)..(1)
<223> Any amino acid

<400> 11586
Xaa Asp Ala Leu Asp Gln Ala Gln Gln Val Glu Lys Leu Met Glu Ala
1 5 10 15

Met Arg Ser Cys Pro Asp Lys Ala Gln Asp Lys His
20 25

<210> 11587
<211> 547
<212> PRT
<213> Homo sapiens

<220>
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<220>
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<223> /note="Gene Symbol: CLIP3"

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CAP-GLY domain containing linker protein 3"

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<223> /note="Uniprot ID: Q96DZ5"

<220>
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<223> /note="ENSP ID: ENSP00000353732"

<400> 11587
Met Thr Lys Thr Asp Pro Ala Pro Met Ala Pro Pro Pro Arg Gly Glu
1 5 10 15

Glu Glu Glu Glu Glu Glu Glu Asp Glu Pro Val Pro Glu Ala Pro Ser
20 25 30

Pro Thr Gln Glu Arg Arg Gln Lys Pro Val Val His Pro Ser Ala Pro

35					40					45					
Ala	Pro	Leu	Pro	Lys	Asp	Tyr	Ala	Phe	Thr	Phe	Phe	Asp	Pro	Asn	Asp
	50					55					60				
Pro	Ala	Cys	Gln	Glu	Ile	Leu	Phe	Asp	Pro	Gln	Thr	Thr	Ile	Pro	Glu
65					70					75					80
Leu	Phe	Ala	Ile	Val	Arg	Gln	Trp	Val	Pro	Gln	Val	Gln	His	Lys	Ile
				85					90					95	
Asp	Val	Ile	Gly	Asn	Glu	Ile	Leu	Arg	Arg	Gly	Cys	His	Val	Asn	Asp
			100					105					110		
Arg	Asp	Gly	Leu	Thr	Asp	Met	Thr	Leu	Leu	His	Tyr	Ala	Cys	Lys	Ala
		115					120					125			
Gly	Ala	His	Gly	Val	Gly	Asp	Pro	Ala	Ala	Ala	Val	Arg	Leu	Ser	Gln
	130					135					140				
Gln	Leu	Leu	Ala	Leu	Gly	Ala	Asp	Val	Thr	Leu	Arg	Ser	Arg	Trp	Thr
145					150					155					160
Asn	Met	Asn	Ala	Leu	His	Tyr	Ala	Ala	Tyr	Phe	Asp	Val	Pro	Asp	Leu
				165					170					175	
Val	Arg	Val	Leu	Leu	Lys	Gly	Ala	Arg	Pro	Arg	Val	Val	Asn	Ser	Thr
			180					185					190		
Cys	Ser	Asp	Phe	Asn	His	Gly	Ser	Ala	Leu	His	Ile	Ala	Ala	Ser	Ser
		195					200					205			
Leu	Cys	Leu	Gly	Ala	Ala	Lys	Cys	Leu	Leu	Glu	His	Gly	Ala	Asn	Pro
	210					215					220				
Ala	Leu	Arg	Asn	Arg	Lys	Gly	Gln	Val	Pro	Ala	Glu	Val	Val	Pro	Asp
225					230					235					240
Pro	Met	Asp	Met	Ser	Leu	Asp	Lys	Ala	Glu	Ala	Ala	Leu	Val	Ala	Lys
				245					250					255	
Glu	Leu	Arg	Thr	Leu	Leu	Glu	Glu	Ala	Val	Pro	Leu	Ser	Cys	Ala	Leu
			260				265						270		

Gly Ala Lys Lys Val His Gln Val Thr Met Thr Gln Pro Lys Arg Thr
500 505 510

Phe Thr Thr Val Arg Thr Pro Lys Asp Ile Ala Ser Glu Asn Ser Ile
515 520 525

Ser Arg Leu Leu Phe Cys Cys Trp Phe Pro Trp Met Leu Arg Ala Glu
530 535 540

Met Gln Ser
545

<210> 11588
<211> 133
<212> PRT
<213> Homo sapiens

<220>
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<220>
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<220>
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CAP-GLY domain containing linker protein 3"

<220>
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<400> 11588
Met Thr Lys Thr Asp Pro Ala Pro Met Ala Pro Pro Pro Arg Gly Glu
1 5 10 15

Glu Glu Glu Glu Glu Glu Glu Asp Glu Pro Val Pro Glu Ala Pro Ser
20 25 30

Pro Thr Gln Glu Arg Arg Gln Lys Pro Val Val His Pro Ser Ala Pro
35 40 45

Ala Pro Leu Pro Lys Asp Tyr Ala Phe Thr Phe Phe Asp Pro Asn Asp
50 55 60

Pro Ala Cys Gln Glu Ile Leu Phe Asp Pro Gln Thr Thr Ile Pro Glu

Ala	Pro	Leu	Pro	Lys	Asp	Tyr	Ala	Phe	Thr	Phe	Phe	Asp	Pro	Asn	Asp			
	50					55					60							
Pro	Ala	Cys	Gln	Glu	Ile	Leu	Phe	Asp	Pro	Gln	Thr	Thr	Ile	Pro	Glu			
65					70					75					80			
Leu	Phe	Ala	Ile	Val	Arg	Gln	Trp	Val	Pro	Gln	Val	Gln	His	Lys	Ile			
				85					90					95				
Asp	Val	Ile	Gly	Asn	Glu	Ile	Leu	Arg	Arg	Gly	Cys	His	Val	Asn	Asp			
			100					105					110					
Arg	Asp	Gly	Leu	Thr	Asp	Met	Thr	Leu	Leu	His	Tyr	Ala	Cys	Lys	Ala			
		115					120					125						
Gly	Ala	His	Gly	Val	Gly	Asp	Pro	Ala	Ala	Ala	Val	Arg	Leu	Ser	Gln			
	130					135					140							
Gln	Leu	Leu	Ala	Leu	Gly	Ala	Asp	Val	Thr	Leu	Arg	Ser	Arg	Trp	Thr			
145					150					155					160			
Asn	Met	Asn	Ala	Leu	His	Tyr	Ala	Ala	Tyr	Phe	Asp	Val	Pro	Asp	Leu			
				165					170					175				
Val	Arg	Val	Leu	Leu	Lys	Gly	Ala	Arg	Pro	Arg	Val	Val	Asn	Ser	Thr			
			180					185					190					
Cys	Ser	Asp	Phe	Asn	His	Gly	Ser	Ala	Leu	His	Ile	Ala	Ala	Ser	Ser			
		195					200					205						
Leu	Cys	Leu	Gly	Ala	Ala	Lys	Cys	Leu	Leu	Glu	His	Gly	Ala	Asn	Pro			
	210					215					220							
Ala	Leu	Arg	Asn	Arg	Lys	Gly	Gln	Val	Pro	Ala	Glu	Val	Val	Pro	Asp			
225					230					235					240			
Pro	Met	Asp	Met	Ser	Leu	Asp	Lys	Ala	Glu	Ala	Ala	Leu	Val	Ala	Lys			
				245					250					255				
Glu	Leu	Arg	Thr	Leu	Leu	Glu	Glu	Ala	Val	Pro	Leu	Ser	Cys	Ala	Leu			
			260					265					270					

Pro Lys Val Thr Leu Pro Asn Tyr Asp Asn Val Pro Gly Asn Leu Met
 275 280 285

Leu Ser Ala Leu Gly Leu Arg Leu Gly Asp Arg Val Leu Leu Asp Gly
 290 295 300

Gln Lys Thr Gly Thr Leu Arg Phe Cys Gly Thr Thr Glu Phe Ala Ser
 305 310 315 320

Gly Gln Trp Val Gly Val Glu Leu Asp Glu Pro Glu Gly Lys Asn Asp
 325 330 335

Gly Ser Val Gly Gly Val Arg Tyr Phe Ile Cys Pro Pro Lys Gln Gly
 340 345 350

Leu Phe Ala Ser Val Ser Lys Ile Ser Lys Ala Val Asp Ala Pro Pro
 355 360 365

Ser Ser Val Thr Ser Thr Pro Arg Thr Pro Arg Met Asp Phe Ser Arg
 370 375 380

Val Thr Gly Lys Gly Arg Arg Glu His Lys Gly Lys Lys Lys Thr Pro
 385 390 395 400

Ser Ser Pro Ser Leu Gly Ser Leu Gln Gln Arg Asp Gly Ala Lys Ala
 405 410 415

Glu Val Gly Asp Gln Val Leu Val Ala Gly Gln Lys Gln Gly Ile Val
 420 425 430

Arg Phe Tyr Gly Lys Thr Asp Phe Ala Pro Gly Tyr Trp Tyr Gly Ile
 435 440 445

Glu Leu Asp Gln Pro Thr Gly Lys His Asp Gly Ser Val Phe Gly Val
 450 455 460

Arg Tyr Phe Thr Cys Pro Pro Arg His Gly Val Phe Ala Pro Ala Ser
 465 470 475 480

Arg Ile Gln Arg Ile Gly Gly Ser Thr Asp Ser Pro Gly Asp Ser Val
 485 490 495

Gly Ala Lys Lys Val His Gln Val Thr Met Thr Gln Pro Lys Arg Thr

500					505					510					
Phe	Thr	Thr	Val	Arg	Thr	Pro	Lys	Asp	Ile	Ala	Ser	Glu	Asn	Ser	Ile
515						520						525			
Ser	Arg	Leu	Leu	Phe	Cys	Cys	Trp	Phe	Pro	Trp	Met	Leu	Arg	Ala	Glu
530						535				540					
Met	Gln	Ser													
545															

Leu Phe Ala Ile Val Arg Gln Trp Val Pro Gln Val Gln His Lys Ile
85 90 95

Asp Val Ile Gly Asn Glu Ile Leu Arg Arg Gly Cys His Val Asn Asp
100 105 110

Arg Asp Gly Leu Thr Asp Met Thr Leu Leu His Tyr Ala Cys Lys Ala
115 120 125

Gly Ala His Gly Val
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<210> 11591
<211> 705
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<220>
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CAP-GLY domain containing linker protein family, member
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Phe Gly Arg Tyr Pro Phe Ile Phe Ser Ala Ser Asp Thr Pro Val Ile
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Phe Ser Ile Ser Ala Ala Pro Met Pro Ser Asp Cys Glu Phe Ser Phe
35 40 45

Phe	Asp	Pro	Asn	Asp	Ala	Ser	Cys	Gln	Glu	Ile	Leu	Phe	Asp	Pro	Lys
50						55					60				
Thr	Ser	Val	Ser	Glu	Leu	Phe	Ala	Ile	Leu	Arg	Gln	Trp	Val	Pro	Gln
65					70					75					80
Val	Gln	Gln	Asn	Ile	Asp	Ile	Ile	Gly	Asn	Glu	Ile	Leu	Lys	Arg	Gly
				85					90					95	
Cys	Asn	Val	Asn	Asp	Arg	Asp	Gly	Leu	Thr	Asp	Met	Thr	Leu	Leu	His
			100					105					110		
Tyr	Thr	Cys	Lys	Ser	Gly	Ala	His	Gly	Ile	Gly	Asp	Val	Glu	Thr	Ala
		115					120					125			
Val	Lys	Phe	Ala	Thr	Gln	Leu	Ile	Asp	Leu	Gly	Ala	Asp	Ile	Ser	Leu
	130					135					140				
Arg	Ser	Arg	Trp	Thr	Asn	Met	Asn	Ala	Leu	His	Tyr	Ala	Ala	Tyr	Phe
145					150					155					160
Asp	Val	Pro	Glu	Leu	Ile	Arg	Val	Ile	Leu	Lys	Thr	Ser	Lys	Pro	Lys
				165					170					175	
Asp	Val	Asp	Ala	Thr	Cys	Ser	Asp	Phe	Asn	Phe	Gly	Thr	Ala	Leu	His
			180					185					190		
Ile	Ala	Ala	Tyr	Asn	Leu	Cys	Ala	Gly	Ala	Val	Lys	Cys	Leu	Leu	Glu
		195					200					205			
Gln	Gly	Ala	Asn	Pro	Ala	Phe	Arg	Asn	Asp	Lys	Gly	Gln	Ile	Pro	Ala
	210					215					220				
Asp	Val	Val	Pro	Asp	Pro	Val	Asp	Met	Pro	Leu	Glu	Met	Ala	Asp	Ala
225					230					235					240
Ala	Ala	Thr	Ala	Lys	Glu	Ile	Lys	Gln	Met	Leu	Leu	Asp	Ala	Val	Pro
				245					250					255	
Leu	Ser	Cys	Asn	Ile	Ser	Lys	Ala	Met	Leu	Pro	Asn	Tyr	Asp	His	Val
			260					265					270		
Thr	Gly	Lys	Ala	Met	Leu	Thr	Ser	Leu	Gly	Leu	Lys	Leu	Gly	Asp	Arg

275						280						285					
Val	Val	Ile	Ala	Gly	Gln	Lys	Val	Gly	Thr	Leu	Arg	Phe	Cys	Gly	Thr		
	290					295					300						
Thr	Glu	Phe	Ala	Ser	Gly	Gln	Trp	Ala	Gly	Ile	Glu	Leu	Asp	Glu	Pro		
305					310					315					320		
Glu	Gly	Lys	Asn	Asn	Gly	Ser	Val	Gly	Lys	Val	Gln	Tyr	Phe	Lys	Cys		
				325					330					335			
Ala	Pro	Lys	Tyr	Gly	Ile	Phe	Ala	Pro	Leu	Ser	Lys	Ile	Ser	Lys	Ala		
			340					345					350				
Lys	Gly	Arg	Arg	Lys	Asn	Ile	Thr	His	Thr	Pro	Ser	Thr	Lys	Ala	Ala		
		355					360					365					
Val	Pro	Leu	Ile	Arg	Ser	Gln	Lys	Ile	Asp	Val	Ala	His	Val	Thr	Ser		
	370					375					380						
Lys	Val	Asn	Thr	Gly	Leu	Met	Thr	Ser	Lys	Lys	Asp	Ser	Ala	Ser	Glu		
385					390					395					400		
Ser	Thr	Leu	Ser	Leu	Pro	Pro	Gly	Glu	Glu	Leu	Lys	Thr	Val	Thr	Glu		
				405					410					415			
Lys	Asp	Val	Ala	Leu	Leu	Gly	Ser	Val	Ser	Ser	Cys	Ser	Ser	Thr	Ser		
			420					425					430				
Ser	Leu	Glu	His	Arg	Gln	Ser	Tyr	Pro	Lys	Lys	Gln	Asn	Ala	Ile	Ser		
		435					440					445					
Ser	Asn	Lys	Lys	Thr	Met	Ser	Lys	Ser	Pro	Ser	Leu	Ser	Ser	Arg	Ala		
	450					455					460						
Ser	Ala	Gly	Leu	Asn	Ser	Ser	Ala	Thr	Ser	Thr	Ala	Asn	Asn	Ser	Arg		
465					470					475					480		
Cys	Glu	Gly	Glu	Leu	Arg	Leu	Gly	Glu	Arg	Val	Leu	Val	Val	Gly	Gln		
				485					490					495			
Arg	Leu	Gly	Thr	Ile	Arg	Phe	Phe	Gly	Thr	Thr	Asn	Phe	Ala	Pro	Gly		
			500					505					510				

Tyr Trp Tyr Gly Ile Glu Leu Glu Lys Pro His Gly Lys Asn Asp Gly
515 520 525

Ser Val Gly Gly Val Gln Tyr Phe Ser Cys Ser Pro Arg Tyr Gly Ile
530 535 540

Phe Ala Pro Pro Ser Arg Val Gln Arg Val Thr Asp Ser Leu Asp Thr
545 550 555 560

Leu Ser Glu Ile Ser Ser Asn Lys Gln Asn His Ser Tyr Pro Gly Phe
565 570 575

Arg Arg Ser Phe Ser Thr Thr Ser Ala Ser Ser Gln Lys Glu Ile Asn
580 585 590

Arg Arg Asn Ala Phe Ser Lys Ser Lys Ala Ala Leu Arg Arg Ser Trp
595 600 605

Ser Ser Thr Pro Thr Ala Gly Gly Ile Glu Gly Ser Val Lys Leu His
610 615 620

Glu Gly Ser Gln Val Leu Leu Thr Ser Ser Asn Glu Met Gly Thr Val
625 630 635 640

Arg Tyr Val Gly Pro Thr Asp Phe Ala Ser Gly Ile Trp Leu Gly Leu
645 650 655

Glu Leu Arg Ser Ala Lys Gly Lys Asn Asp Gly Ser Val Gly Asp Lys
660 665 670

Arg Tyr Phe Thr Cys Lys Pro Asn His Gly Val Leu Val Arg Pro Ser
675 680 685

Arg Val Thr Tyr Arg Gly Ile Asn Gly Ser Lys Leu Val Asp Glu Asn
690 695 700

Cys
705

<210> 11592
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<213> Homo sapiens

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<223> /note="Payload ID: 2284"

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CAP-GLY domain containing linker protein family, member
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<400> 11592

Met Thr Ile Glu Asp Leu Pro Asp Phe Pro Leu Glu Gly Asn Pro Leu
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Phe Gly Arg Tyr Pro Phe Ile Phe Ser Ala Ser Asp Thr Pro Val Ile
20 25 30

Phe Ser Ile Ser Ala Ala Pro Met Pro Ser Asp Cys Glu Phe Ser Phe
35 40 45

Phe Asp Pro Asn Asp Ala Ser Cys Gln Glu Ile Leu Phe Asp Pro Lys
50 55 60

Thr Ser Val Ser Glu Leu Phe Ala Ile Leu Arg Gln Trp Val Pro Gln
65 70 75 80

Val Gln Gln Asn Ile Asp Ile Ile Gly Asn Glu Ile Leu Lys Arg Gly
85 90 95

Cys Asn Val Asn Asp Arg Asp Gly Leu Thr Asp Met Thr Leu Leu His
100 105 110

Tyr Thr Cys Lys Ser Gly Ala His Gly Ile Gly Asp Val Glu Thr Ala
115 120 125

Val	Lys	Phe	Ala	Thr	Gln	Leu	Ile	Asp	Leu	Gly	Ala	Asp	Ile	Ser	Leu	130	135	140
Arg	Ser	Arg	Trp	Thr	Asn	Met	Asn	Ala	Leu	His	Tyr	Ala	Ala	Tyr	Phe	145	150	155
Asp	Val	Pro	Glu	Leu	Ile	Arg	Val	Ile	Leu	Lys	Thr	Ser	Lys	Pro	Lys	165	170	175
Asp	Val	Asp	Ala	Thr	Cys	Ser	Asp	Phe	Asn	Phe	Gly	Thr	Ala	Leu	His	180	185	190
Ile	Ala	Ala	Tyr	Asn	Leu	Cys	Ala	Gly	Ala	Val	Lys	Cys	Leu	Leu	Glu	195	200	205
Gln	Gly	Ala	Asn	Pro	Ala	Phe	Arg	Asn	Asp	Lys	Gly	Gln	Ile	Pro	Ala	210	215	220
Asp	Val	Val	Pro	Asp	Pro	Val	Asp	Met	Pro	Leu	Glu	Met	Ala	Asp	Ala	225	230	235
Ala	Ala	Thr	Ala	Lys	Glu	Ile	Lys	Gln	Met	Leu	Leu	Asp	Ala	Val	Pro	245	250	255
Leu	Ser	Cys	Asn	Ile	Ser	Lys	Ala	Met	Leu	Pro	Asn	Tyr	Asp	His	Val	260	265	270
Thr	Gly	Lys	Ala	Met	Leu	Thr	Ser	Leu	Gly	Leu	Lys	Leu	Gly	Asp	Arg	275	280	285
Val	Val	Ile	Ala	Gly	Gln	Lys	Val	Gly	Thr	Leu	Arg	Phe	Cys	Gly	Thr	290	295	300
Thr	Glu	Phe	Ala	Ser	Gly	Gln	Trp	Ala	Gly	Ile	Glu	Leu	Asp	Glu	Pro	305	310	315
Glu	Gly	Lys	Asn	Asn	Gly	Ser	Val	Gly	Lys	Val	Gln	Tyr	Phe	Lys	Cys	325	330	335
Ala	Pro	Lys	Tyr	Gly	Ile	Phe	Ala	Pro	Leu	Ser	Lys	Ile	Ser	Lys	Ala	340	345	350
Lys	Gly	Arg	Arg	Lys	Asn	Ile	Thr	His	Thr	Pro	Ser	Thr	Lys	Ala	Ala			

355					360					365					
Val	Pro	Leu	Ile	Arg	Ser	Gln	Lys	Ile	Asp	Val	Ala	His	Val	Thr	Ser
370					375					380					
Lys	Val	Asn	Thr	Gly	Leu	Met	Thr	Ser	Lys	Lys	Asp	Ser	Ala	Ser	Glu
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Ser	Thr	Leu	Ser	Leu	Pro	Pro	Gly	Glu	Glu	Leu	Lys	Thr	Val	Thr	Glu
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Lys	Asp	Val	Ala	Leu	Leu	Gly	Ser	Val	Ser	Ser	Cys	Ser	Ser	Thr	Ser
			420					425						430	
Ser	Leu	Glu	His	Arg	Gln	Ser	Tyr	Pro	Lys	Lys	Gln	Asn	Ala	Ile	Ser
		435					440					445			
Ser	Asn	Lys	Lys	Thr	Met	Ser	Lys	Ser	Pro	Ser	Leu	Ser	Ser	Arg	Ala
	450					455					460				
Ser	Ala	Gly	Leu	Asn	Ser	Ser	Ala	Thr	Ser	Thr	Ala	Asn	Asn	Ser	Arg
465						470					475				480
Cys	Glu	Gly	Glu	Leu	Arg	Leu	Gly	Glu	Arg	Val	Leu	Val	Val	Gly	Gln
				485					490					495	
Arg	Leu	Gly	Thr	Ile	Arg	Phe	Phe	Gly	Thr	Thr	Asn	Phe	Ala	Pro	Gly
			500					505					510		
Tyr	Trp	Tyr	Gly	Ile	Glu	Leu	Glu	Lys	Pro	His	Gly	Lys	Asn	Asp	Gly
		515					520					525			
Ser	Val	Gly	Gly	Val	Gln	Tyr	Phe	Ser	Cys	Ser	Pro	Arg	Tyr	Gly	Ile
						535					540				
Phe	Ala	Pro	Pro	Ser	Arg	Val	Gln	Arg	Val	Thr	Asp	Ser	Leu	Asp	Thr
545						550					555				560
Leu	Ser	Glu	Ile	Ser	Ser	Asn	Lys	Gln	Asn	His	Ser	Tyr	Pro	Gly	Phe
				565					570					575	
Arg	Arg	Ser	Phe	Ser	Thr	Thr	Ser	Ala	Ser	Ser	Gln	Lys	Glu	Ile	Asn
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Arg Arg Asn Ala Phe Ser Lys
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<210> 11593
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<220>
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CAP-GLY domain containing linker protein family, member
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Asp Val Glu Thr Ala Val Lys Phe Ala Thr Gln Leu Ile Asp Leu Gly
20 25 30

Ala Asp Ile Ser Leu Arg Ser Arg Trp Thr Asn Met Asn Ala Leu His
35 40 45

Tyr Ala Ala Tyr Phe Asp Val Pro Glu Leu Ile Arg Val Ile Leu Lys
50 55 60

Thr Ser Lys Pro Lys Asp Val Asp Ala Thr Cys Ser Asp Phe Asn Phe
65 70 75 80

Gly Thr Ala Leu His Ile Ala Ala Tyr Asn Leu Cys Ala Gly Ala Val
85 90 95

Lys Cys Leu Leu Glu Gln Gly Ala Asn Pro Ala Phe Arg Asn Asp Lys
100 105 110

Gly	Gln	Ile	Pro	Ala	Asp	Val	Val	Pro	Asp	Pro	Val	Asp	Met	Pro	Leu			
		115					120					125						
Glu	Met	Ala	Asp	Ala	Ala	Ala	Thr	Ala	Lys	Glu	Ile	Lys	Gln	Met	Leu			
	130					135					140							
Leu	Asp	Ala	Val	Pro	Leu	Ser	Cys	Asn	Ile	Ser	Lys	Ala	Met	Leu	Pro			
145					150					155					160			
Asn	Tyr	Asp	His	Val	Thr	Gly	Lys	Ala	Met	Leu	Thr	Ser	Leu	Gly	Leu			
				165					170					175				
Lys	Leu	Gly	Asp	Arg	Val	Val	Ile	Ala	Gly	Gln	Lys	Val	Gly	Thr	Leu			
			180					185					190					
Arg	Phe	Cys	Gly	Thr	Thr	Glu	Phe	Ala	Ser	Gly	Gln	Trp	Ala	Gly	Ile			
		195					200					205						
Glu	Leu	Asp	Glu	Pro	Glu	Gly	Lys	Asn	Asn	Gly	Ser	Val	Gly	Lys	Val			
	210					215					220							
Gln	Tyr	Phe	Lys	Cys	Ala	Pro	Lys	Tyr	Gly	Ile	Phe	Ala	Pro	Leu	Ser			
225					230					235					240			
Lys	Ile	Ser	Lys	Ala	Lys	Gly	Arg	Arg	Lys	Asn	Ile	Thr	His	Thr	Pro			
				245					250					255				
Ser	Thr	Lys	Ala	Ala	Val	Pro	Leu	Ile	Arg	Ser	Gln	Lys	Ile	Asp	Val			
			260					265					270					
Ala	His	Val	Thr	Ser	Lys	Val	Asn	Thr	Gly	Leu	Met	Thr	Ser	Lys	Lys			
		275					280					285						
Asp	Ser	Ala	Ser	Glu	Ser	Thr	Leu	Ser	Leu	Pro	Pro	Gly	Glu	Glu	Leu			
	290					295				300								
Lys	Thr	Val	Thr	Glu	Lys	Asp	Val	Ala	Leu	Leu	Gly	Ser	Val	Ser	Ser			
305					310					315					320			
Cys	Ser	Ser	Thr	Ser	Ser	Leu	Glu	His	Arg	Gln	Ser	Tyr	Pro	Lys	Lys			
				325					330					335				

Gln Asn Ala Ile Ser Ser Asn Lys Lys Thr Met Ser Lys Ser Pro Ser
 340 345 350

Leu Ser Ser Arg Ala Ser Ala Gly Leu Asn Ser Ser Ala Thr Ser Thr
 355 360 365

Ala Asn Asn Ser Arg Cys Glu Gly Glu Leu Arg Leu Gly Glu Arg Val
 370 375 380

Leu Val Val Gly Gln Arg Leu Gly Thr Ile Arg Phe Phe Gly Thr Thr
 385 390 395 400

Asn Phe Ala Pro Gly Tyr Trp Tyr Gly Ile Glu Leu Glu Lys Pro His
 405 410 415

Gly Lys Asn Asp Gly Ser Val Gly Gly Val Gln Tyr Phe Ser Cys Ser
 420 425 430

Pro Arg Tyr Gly Ile Phe Ala Pro Pro Ser Arg Val Gln Arg Val Thr
 435 440 445

Asp Ser Leu Asp Thr Leu Ser Glu Ile Ser Ser Asn Lys Gln Asn His
 450 455 460

Ser Tyr Pro Gly Phe Arg Arg Ser Phe Ser Thr Thr Ser Ala Ser Ser
 465 470 475 480

Gln Lys Glu Ile Asn Arg Arg Asn Ala Phe Ser Lys Ser Lys Ala Ala
 485 490 495

Leu Arg Arg Ser Trp Ser Ser Thr Pro Thr Ala Gly Gly Ile Glu Gly
 500 505 510

Ser Val Lys Leu His Glu Gly Ser Gln Val Leu Leu Thr Ser Ser Asn
 515 520 525

Glu Met Gly Thr Val Ser Met Phe Arg Ile Thr Gly Met Leu Val Leu
 530 535 540

Leu Phe His Ala Thr Thr Gln Glu Pro Ser Ala Ala Met Lys Leu Ala
 545 550 555 560

Lys Ser Asn Cys Val Phe Phe Arg Asp Ser Phe

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<210> 11594
<211> 705
<212> PRT
<213> Homo sapiens

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CAP-GLY domain containing linker protein family, member
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Phe Gly Arg Tyr Pro Phe Ile Phe Ser Ala Ser Asp Thr Pro Val Ile
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Phe Ser Ile Ser Ala Ala Pro Met Pro Ser Asp Cys Glu Phe Ser Phe
          35          40          45

Phe Asp Pro Asn Asp Ala Ser Cys Gln Glu Ile Leu Phe Asp Pro Lys
          50          55          60

Thr Ser Val Ser Glu Leu Phe Ala Ile Leu Arg Gln Trp Val Pro Gln
65          70          75          80

Val Gln Gln Asn Ile Asp Ile Ile Gly Asn Glu Ile Leu Lys Arg Gly
          85          90          95

Cys Asn Val Asn Asp Arg Asp Gly Leu Thr Asp Met Thr Leu Leu His
          100          105          110

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Tyr	Thr	Cys	Lys	Ser	Gly	Ala	His	Gly	Ile	Gly	Asp	Val	Glu	Thr	Ala		
		115					120					125					
Val	Lys	Phe	Ala	Thr	Gln	Leu	Ile	Asp	Leu	Gly	Ala	Asp	Ile	Ser	Leu		
	130					135					140						
Arg	Ser	Arg	Trp	Thr	Asn	Met	Asn	Ala	Leu	His	Tyr	Ala	Ala	Tyr	Phe		
145					150					155					160		
Asp	Val	Pro	Glu	Leu	Ile	Arg	Val	Ile	Leu	Lys	Thr	Ser	Lys	Pro	Lys		
				165					170					175			
Asp	Val	Asp	Ala	Thr	Cys	Ser	Asp	Phe	Asn	Phe	Gly	Thr	Ala	Leu	His		
			180					185					190				
Ile	Ala	Ala	Tyr	Asn	Leu	Cys	Ala	Gly	Ala	Val	Lys	Cys	Leu	Leu	Glu		
		195					200					205					
Gln	Gly	Ala	Asn	Pro	Ala	Phe	Arg	Asn	Asp	Lys	Gly	Gln	Ile	Pro	Ala		
	210					215					220						
Asp	Val	Val	Pro	Asp	Pro	Val	Asp	Met	Pro	Leu	Glu	Met	Ala	Asp	Ala		
225					230					235					240		
Ala	Ala	Thr	Ala	Lys	Glu	Ile	Lys	Gln	Met	Leu	Leu	Asp	Ala	Val	Pro		
				245					250					255			
Leu	Ser	Cys	Asn	Ile	Ser	Lys	Ala	Met	Leu	Pro	Asn	Tyr	Asp	His	Val		
			260					265					270				
Thr	Gly	Lys	Ala	Met	Leu	Thr	Ser	Leu	Gly	Leu	Lys	Leu	Gly	Asp	Arg		
		275					280					285					
Val	Val	Ile	Ala	Gly	Gln	Lys	Val	Gly	Thr	Leu	Arg	Phe	Cys	Gly	Thr		
	290					295					300						
Thr	Glu	Phe	Ala	Ser	Gly	Gln	Trp	Ala	Gly	Ile	Glu	Leu	Asp	Glu	Pro		
305					310					315					320		
Glu	Gly	Lys	Asn	Asn	Gly	Ser	Val	Gly	Lys	Val	Gln	Tyr	Phe	Lys	Cys		
				325					330					335			

Ala Pro Lys Tyr Gly Ile Phe Ala Pro Leu Ser Lys Ile Ser Lys Ala
 340 345 350

Lys Gly Arg Arg Lys Asn Ile Thr His Thr Pro Ser Thr Lys Ala Ala
 355 360 365

Val Pro Leu Ile Arg Ser Gln Lys Ile Asp Val Ala His Val Thr Ser
 370 375 380

Lys Val Asn Thr Gly Leu Met Thr Ser Lys Lys Asp Ser Ala Ser Glu
 385 390 395 400

Ser Thr Leu Ser Leu Pro Pro Gly Glu Glu Leu Lys Thr Val Thr Glu
 405 410 415

Lys Asp Val Ala Leu Leu Gly Ser Val Ser Ser Cys Ser Ser Thr Ser
 420 425 430

Ser Leu Glu His Arg Gln Ser Tyr Pro Lys Lys Gln Asn Ala Ile Ser
 435 440 445

Ser Asn Lys Lys Thr Met Ser Lys Ser Pro Ser Leu Ser Ser Arg Ala
 450 455 460

Ser Ala Gly Leu Asn Ser Ser Ala Thr Ser Thr Ala Asn Asn Ser Arg
 465 470 475 480

Cys Glu Gly Glu Leu Arg Leu Gly Glu Arg Val Leu Val Val Gly Gln
 485 490 495

Arg Leu Gly Thr Ile Arg Phe Phe Gly Thr Thr Asn Phe Ala Pro Gly
 500 505 510

Tyr Trp Tyr Gly Ile Glu Leu Glu Lys Pro His Gly Lys Asn Asp Gly
 515 520 525

Ser Val Gly Gly Val Gln Tyr Phe Ser Cys Ser Pro Arg Tyr Gly Ile
 530 535 540

Phe Ala Pro Pro Ser Arg Val Gln Arg Val Thr Asp Ser Leu Asp Thr
 545 550 555 560

Leu Ser Glu Ile Ser Ser Asn Lys Gln Asn His Ser Tyr Pro Gly Phe
565 570 575

Arg Arg Ser Phe Ser Thr Thr Ser Ala Ser Ser Gln Lys Glu Ile Asn
580 585 590

Arg Arg Asn Ala Phe Ser Lys Ser Lys Ala Ala Leu Arg Arg Ser Trp
595 600 605

Ser Ser Thr Pro Thr Ala Gly Gly Ile Glu Gly Ser Val Lys Leu His
610 615 620

Glu Gly Ser Gln Val Leu Leu Thr Ser Ser Asn Glu Met Gly Thr Val
625 630 635 640

Arg Tyr Val Gly Pro Thr Asp Phe Ala Ser Gly Ile Trp Leu Gly Leu
645 650 655

Glu Leu Arg Ser Ala Lys Gly Lys Asn Asp Gly Ser Val Gly Asp Lys
660 665 670

Arg Tyr Phe Thr Cys Lys Pro Asn His Gly Val Leu Val Arg Pro Ser
675 680 685

Arg Val Thr Tyr Arg Gly Ile Asn Gly Ser Lys Leu Val Asp Glu Asn
690 695 700

Cys
705

<210> 11595
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20 25 30

Ala Asp Ile Ser Leu Arg Ser Arg Trp Thr Asn Met Asn Ala Leu His
35 40 45

Tyr Ala Ala Tyr Phe Asp Val Pro Glu Leu Ile Arg Val Ile Leu Lys
50 55 60

Thr Ser Lys Pro Lys Asp Val Asp Ala Thr Cys Ser Asp Phe Asn Phe
65 70 75 80

Gly Thr Ala Leu His Ile Ala Ala Tyr Asn Leu Cys Ala
85 90

<210> 11596

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<223> /note="ENSP ID: ENSP00000393354"

<400> 11596

Met Thr Ile Glu Asp Leu Pro Asp Phe Pro Leu Glu Gly Asn Pro Leu
1 5 10 15

Phe	Gly	Arg	Tyr	Pro	Phe	Ile	Phe	Ser	Ala	Ser	Asp	Thr	Pro	Val	Ile	
			20					25					30			
Phe	Ser	Ile	Ser	Ala	Ala	Pro	Met	Pro	Ser	Asp	Cys	Glu	Phe	Ser	Phe	
		35					40					45				
Phe	Asp	Pro	Asn	Asp	Ala	Ser	Cys	Gln	Glu	Ile	Leu	Phe	Asp	Pro	Lys	
	50					55					60					
Thr	Ser	Val	Ser	Glu	Leu	Phe	Ala	Ile	Leu	Arg	Gln	Trp	Val	Pro	Gln	
65					70					75					80	
Val	Gln	Gln	Asn	Ile	Asp	Ile	Ile	Gly	Asn	Glu	Ile	Leu	Lys	Arg	Gly	
				85					90					95		
Cys	Asn	Val	Asn	Asp	Arg	Asp	Gly	Leu	Thr	Asp	Met	Thr	Leu	Leu	His	
			100					105					110			
Tyr	Thr	Cys	Lys	Ser	Gly	Ala	His	Gly	Ile	Gly	Asp	Val	Glu	Thr	Ala	
		115					120					125				
Val	Lys	Phe	Ala	Thr	Gln	Leu	Ile	Asp	Leu	Gly	Ala	Asp	Ile	Ser	Leu	
	130					135					140					
Arg	Ser	Arg	Trp	Thr	Asn	Met	Asn	Ala	Leu	His	Tyr	Ala	Ala	Tyr	Phe	
145					150					155					160	
Asp	Val	Pro	Glu	Leu	Ile	Arg	Val	Ile	Leu	Lys	Thr	Ser	Lys	Pro	Lys	
				165					170					175		
Asp	Val	Asp	Ala	Thr	Cys	Ser	Asp	Phe	Asn	Phe	Gly	Thr	Ala	Leu	His	
			180					185					190			
Ile	Ala	Ala	Tyr	Asn	Leu	Cys	Ala	Gly	Ala	Val	Lys	Cys	Leu	Leu	Glu	
		195					200					205				
Gln	Gly	Ala	Asn	Pro	Ala											
	210															

<210> 11597
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<213> Homo sapiens

<220>

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<223> /note="Payload ID: 2284"

<220>

<221> source

<223> /note="Gene Symbol: CLIP4"

<220>

<221> source

<223> /note="Gene Name:
CAP-GLY domain containing linker protein family, member
4"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000399029"

<400> 11597

Met Thr Ile Glu Asp Leu Pro Asp Phe Pro Leu Glu Gly Asn Pro Leu
1 5 10 15

Phe Gly Arg Tyr Pro Phe Ile Phe Ser Ala Ser Asp Thr Pro Val Ile
20 25 30

Phe Ser Ile Ser Ala Ala Pro Met Pro Ser Asp Cys Glu Phe Ser Phe
35 40 45

Phe Asp Pro Asn Asp Ala Ser Cys Gln Glu Ile Leu Phe Asp Pro Lys
50 55 60

Thr Ser Val Ser Glu Leu Phe Ala Ile Leu Arg Gln Trp Val Pro Gln
65 70 75 80

Val Gln Gln Asn Ile Asp Ile Ile Gly Asn Glu Val Met Trp Lys Gln
85 90 95

Leu

<210> 11598

<211> 495

<212> PRT

<213> Homo sapiens

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25885

<220>
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CAP-GLY domain containing linker protein family, member
4"

<220>
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<223> /note="ENSP ID: ENSP00000414417"

<400> 11598
Met Thr Ile Glu Asp Leu Pro Asp Phe Pro Leu Glu Gly Asn Pro Leu
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Phe Gly Arg Tyr Pro Phe Ile Phe Ser Ala Ser Asp Thr Pro Val Ile
20 25 30

Phe Ser Ile Ser Ala Ala Pro Met Pro Ser Asp Cys Glu Phe Ser Phe
35 40 45

Phe Asp Pro Asn Asp Ala Ser Cys Gln Glu Ile Leu Phe Asp Pro Lys
50 55 60

Thr Ser Val Ser Glu Leu Phe Ala Ile Leu Arg Gln Trp Val Pro Gln
65 70 75 80

Val Gln Gln Asn Ile Asp Ile Ile Gly Asn Glu Ile Leu Lys Arg Gly
85 90 95

Cys Asn Val Asn Asp Arg Asp Gly Leu Thr Asp Met Thr Leu Leu His
100 105 110

Tyr Thr Cys Lys Ser Gly Ala His Gly Ile Gly Asp Val Glu Thr Ala
115 120 125

Val Lys Phe Ala Thr Gln Leu Ile Asp Leu Gly Ala Asp Ile Ser Leu
130 135 140

Arg Ser Arg Trp Thr Asn Met Asn Ala Leu His Tyr Ala Ala Tyr Phe
145 150 155 160

Asp Val Pro Glu Leu Ile Arg Val Ile Leu Lys Thr Ser Lys Pro Lys

165								170				175			
Asp	Val	Asp	Ala	Thr	Cys	Ser	Asp	Phe	Asn	Phe	Gly	Thr	Ala	Leu	His
			180					185					190		
Ile	Ala	Ala	Tyr	Asn	Leu	Cys	Ala	Gly	Ala	Val	Lys	Cys	Leu	Leu	Glu
		195					200					205			
Gln	Gly	Ala	Asn	Pro	Ala	Phe	Arg	Asn	Asp	Lys	Gly	Gln	Ile	Pro	Ala
	210					215					220				
Asp	Val	Val	Pro	Asp	Pro	Val	Asp	Met	Pro	Leu	Glu	Met	Ala	Asp	Ala
225					230					235					240
Ala	Ala	Thr	Ala	Lys	Glu	Ile	Lys	Gln	Met	Leu	Leu	Asp	Ala	Val	Pro
				245					250					255	
Leu	Ser	Cys	Asn	Ile	Ser	Lys	Ala	Met	Leu	Pro	Asn	Tyr	Asp	His	Val
			260					265					270		
Thr	Gly	Lys	Ala	Met	Leu	Thr	Ser	Leu	Gly	Leu	Lys	Leu	Gly	Asp	Arg
		275					280					285			
Val	Val	Ile	Ala	Gly	Gln	Lys	Val	Gly	Thr	Leu	Arg	Phe	Cys	Gly	Thr
	290					295					300				
Thr	Glu	Phe	Ala	Ser	Gly	Gln	Trp	Ala	Gly	Ile	Glu	Leu	Asp	Glu	Pro
305					310					315					320
Glu	Gly	Lys	Asn	Asn	Gly	Ser	Val	Gly	Lys	Val	Gln	Tyr	Phe	Lys	Cys
				325					330					335	
Ala	Pro	Lys	Tyr	Gly	Ile	Phe	Ala	Pro	Leu	Ser	Lys	Ile	Ser	Lys	Ala
			340					345					350		
Lys	Gly	Arg	Arg	Lys	Asn	Ile	Thr	His	Thr	Pro	Ser	Thr	Lys	Ala	Ala
		355					360					365			
Val	Pro	Leu	Ile	Arg	Ser	Gln	Lys	Ile	Asp	Val	Ala	His	Val	Thr	Ser
	370					375					380				
Lys	Val	Asn	Thr	Gly	Leu	Met	Thr	Ser	Lys	Lys	Asp	Ser	Ala	Ser	Glu
385					390					395					400

Ser Thr Leu Ser Leu Pro Pro Gly Glu Glu Leu Lys Thr Val Thr Glu
405 410 415

Lys Asp Val Ala Leu Leu Gly Ser Val Ser Ser Cys Ser Ser Thr Ser
420 425 430

Ser Leu Glu His Arg Gln Ser Tyr Pro Lys Lys Gln Asn Ala Ile Ser
435 440 445

Ser Asn Lys Lys Thr Met Ser Lys Ser Pro Ser Leu Ser Ser Arg Ala
450 455 460

Ser Ala Gly Ile Tyr Gly Phe Phe Asn Gln Ala Phe Leu Val Phe Phe
465 470 475 480

Ile Leu Val Cys Leu Phe Glu Phe Leu Ser Asn Ile Tyr Ser Lys
485 490 495

<210> 11599

<211> 1606

<212> PRT

<213> Homo sapiens

<220>

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<223> /note="Payload ID: 2285"

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<221> source

<223> /note="Gene Symbol: CIC"

<220>

<221> source

<223> /note="Gene Name:
capicua transcriptional repressor"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000160740"

<400> 11599

Met Tyr Ser Ala His Arg Pro Leu Met Pro Ala Ser Ser Ala Ala Ser
1 5 10 15

Arg Gly Leu Gly Met Phe Val Trp Thr Asn Val Glu Pro Arg Ser Val
20 25 30

Ala	Val	Phe	Pro	Trp	His	Ser	Leu	Val	Pro	Phe	Leu	Ala	Pro	Ser	Gln
		35					40				45				
Pro	Asp	Pro	Ser	Val	Gln	Pro	Ser	Glu	Ala	Gln	Gln	Pro	Ala	Ser	His
	50					55					60				
Pro	Val	Ala	Ser	Asn	Gln	Ser	Lys	Glu	Pro	Ala	Glu	Ser	Ala	Ala	Val
65					70					75					80
Ala	His	Glu	Arg	Pro	Pro	Gly	Gly	Thr	Gly	Ser	Ala	Asp	Pro	Glu	Arg
				85					90					95	
Pro	Pro	Gly	Ala	Thr	Cys	Pro	Glu	Ser	Pro	Gly	Pro	Gly	Pro	Pro	His
			100					105					110		
Pro	Leu	Gly	Val	Val	Glu	Ser	Gly	Lys	Gly	Pro	Pro	Pro	Thr	Thr	Glu
		115					120					125			
Glu	Glu	Ala	Ser	Gly	Pro	Pro	Gly	Glu	Pro	Arg	Leu	Asp	Ser	Glu	Thr
	130					135					140				
Glu	Ser	Asp	His	Asp	Asp	Ala	Phe	Leu	Ser	Ile	Met	Ser	Pro	Glu	Ile
145					150					155					160
Gln	Leu	Pro	Leu	Pro	Pro	Gly	Lys	Arg	Arg	Thr	Gln	Ser	Leu	Ser	Ala
				165					170					175	
Leu	Pro	Lys	Glu	Arg	Asp	Ser	Ser	Ser	Glu	Lys	Asp	Gly	Arg	Ser	Pro
			180					185					190		
Asn	Lys	Arg	Glu	Lys	Asp	His	Ile	Arg	Arg	Pro	Met	Asn	Ala	Phe	Met
		195					200					205			
Ile	Phe	Ser	Lys	Arg	His	Arg	Ala	Leu	Val	His	Gln	Arg	His	Pro	Asn
	210					215					220				
Gln	Asp	Asn	Arg	Thr	Val	Ser	Lys	Ile	Leu	Gly	Glu	Trp	Trp	Tyr	Ala
225					230					235					240
Leu	Gly	Pro	Lys	Glu	Lys	Gln	Lys	Tyr	His	Asp	Leu	Ala	Phe	Gln	Val
				245					250					255	
Lys	Glu	Ala	His	Phe	Lys	Ala	His	Pro	Asp	Trp	Lys	Trp	Cys	Asn	Lys

260								265				270			
Asp	Arg	Lys	Lys	Ser	Ser	Ser	Glu	Ala	Lys	Pro	Thr	Ser	Leu	Gly	Leu
		275					280					285			
Ala	Gly	Gly	His	Lys	Glu	Thr	Arg	Glu	Arg	Ser	Met	Ser	Glu	Thr	Gly
	290					295					300				
Thr	Ala	Ala	Ala	Pro	Gly	Val	Ser	Ser	Glu	Leu	Leu	Ser	Val	Ala	Ala
305					310					315					320
Gln	Thr	Leu	Leu	Ser	Ser	Asp	Thr	Lys	Ala	Pro	Gly	Ser	Ser	Ser	Cys
				325					330					335	
Gly	Ala	Glu	Arg	Leu	His	Thr	Val	Gly	Gly	Pro	Gly	Ser	Ala	Arg	Pro
			340					345					350		
Arg	Ala	Phe	Ser	His	Ser	Gly	Val	His	Ser	Leu	Asp	Gly	Gly	Glu	Val
		355					360					365			
Asp	Ser	Gln	Ala	Leu	Gln	Glu	Leu	Thr	Gln	Met	Val	Ser	Gly	Pro	Ala
	370					375					380				
Ser	Tyr	Ser	Gly	Pro	Lys	Pro	Ser	Thr	Gln	Tyr	Gly	Ala	Pro	Gly	Pro
385					390					395					400
Phe	Ala	Ala	Pro	Gly	Glu	Gly	Gly	Ala	Leu	Ala	Ala	Thr	Gly	Arg	Pro
				405					410					415	
Pro	Leu	Leu	Pro	Thr	Arg	Ala	Ser	Arg	Ser	Gln	Arg	Ala	Ala	Ser	Glu
			420					425					430		
Asp	Met	Thr	Ser	Asp	Glu	Glu	Arg	Met	Val	Ile	Cys	Glu	Glu	Glu	Gly
		435					440					445			
Asp	Asp	Asp	Val	Ile	Ala	Asp	Asp	Gly	Phe	Gly	Thr	Thr	Asp	Ile	Asp
	450					455					460				
Leu	Lys	Cys	Lys	Glu	Arg	Val	Thr	Asp	Ser	Glu	Ser	Gly	Asp	Ser	Ser
465					470					475					480
Gly	Glu	Asp	Pro	Glu	Gly	Asn	Lys	Gly	Phe	Gly	Arg	Lys	Val	Phe	Ser
				485					490					495	

Pro	Val	Ile	Arg	Ser	Ser	Phe	Thr	His	Cys	Arg	Pro	Pro	Leu	Asp	Pro	
			500					505					510			
Glu	Pro	Pro	Gly	Pro	Pro	Asp	Pro	Pro	Val	Ala	Phe	Gly	Lys	Gly	Tyr	
		515					520					525				
Gly	Ser	Ala	Pro	Ser	Ser	Ser	Ala	Ser	Ser	Pro	Ala	Ser	Ser	Ser	Ala	
	530					535					540					
Ser	Ala	Ala	Thr	Ser	Phe	Ser	Leu	Gly	Ser	Gly	Thr	Phe	Lys	Ala	Gln	
545					550					555					560	
Glu	Ser	Gly	Gln	Gly	Ser	Thr	Ala	Gly	Pro	Leu	Arg	Pro	Pro	Pro	Pro	
				565					570					575		
Gly	Ala	Gly	Gly	Pro	Ala	Thr	Pro	Ser	Lys	Ala	Thr	Arg	Phe	Leu	Pro	
			580					585					590			
Met	Asp	Pro	Ala	Thr	Phe	Arg	Arg	Lys	Arg	Pro	Glu	Ser	Val	Gly	Gly	
		595					600					605				
Leu	Glu	Pro	Pro	Gly	Pro	Ser	Val	Ile	Ala	Ala	Pro	Pro	Ser	Gly	Gly	
	610					615					620					
Gly	Asn	Ile	Leu	Gln	Thr	Leu	Val	Leu	Pro	Pro	Asn	Lys	Glu	Glu	Gln	
625					630					635					640	
Glu	Gly	Gly	Gly	Ala	Arg	Val	Pro	Ser	Ala	Pro	Ala	Pro	Ser	Leu	Ala	
				645					650					655		
Tyr	Gly	Ala	Pro	Ala	Ala	Pro	Leu	Ser	Arg	Pro	Ala	Ala	Thr	Met	Val	
			660					665					670			
Thr	Asn	Val	Val	Arg	Pro	Val	Ser	Ser	Thr	Pro	Val	Pro	Ile	Ala	Ser	
		675					680					685				
Lys	Pro	Phe	Pro	Thr	Ser	Gly	Arg	Ala	Glu	Ala	Ser	Pro	Asn	Asp	Thr	
	690					695					700					
Ala	Gly	Ala	Arg	Thr	Glu	Met	Gly	Thr	Gly	Ser	Arg	Val	Pro	Gly	Gly	
705					710					715					720	

Ser	Pro	Leu	Gly	Val	Ser	Leu	Val	Tyr	Ser	Asp	Lys	Lys	Ser	Ala	Ala	
				725					730					735		
Ala	Thr	Ser	Pro	Ala	Pro	His	Leu	Val	Ala	Gly	Pro	Leu	Leu	Gly	Thr	
			740					745					750			
Val	Gly	Lys	Ala	Pro	Ala	Thr	Val	Thr	Asn	Leu	Leu	Val	Gly	Thr	Pro	
		755					760					765				
Gly	Tyr	Gly	Ala	Pro	Ala	Pro	Pro	Ala	Val	Gln	Phe	Ile	Ala	Gln	Gly	
	770					775					780					
Ala	Pro	Gly	Gly	Gly	Thr	Thr	Ala	Gly	Ser	Gly	Ala	Gly	Ala	Gly	Ser	
	785				790					795					800	
Gly	Pro	Asn	Gly	Pro	Val	Pro	Leu	Gly	Ile	Leu	Gln	Pro	Gly	Ala	Leu	
				805					810					815		
Gly	Lys	Ala	Gly	Gly	Ile	Thr	Gln	Val	Gln	Tyr	Ile	Leu	Pro	Thr	Leu	
			820					825					830			
Pro	Gln	Gln	Leu	Gln	Val	Ala	Pro	Ala	Pro	Ala	Pro	Ala	Pro	Gly	Thr	
		835					840					845				
Lys	Ala	Ala	Ala	Pro	Ser	Gly	Pro	Ala	Pro	Thr	Thr	Ser	Ile	Arg	Phe	
	850					855					860					
Thr	Leu	Pro	Pro	Gly	Thr	Ser	Thr	Asn	Gly	Lys	Val	Leu	Ala	Ala	Thr	
	865				870					875					880	
Ala	Pro	Thr	Pro	Gly	Ile	Pro	Ile	Leu	Gln	Ser	Val	Pro	Ser	Ala	Pro	
				885					890					895		
Pro	Pro	Lys	Ala	Gln	Ser	Val	Ser	Pro	Val	Gln	Ala	Pro	Pro	Pro	Gly	
			900					905					910			
Gly	Ser	Ala	Gln	Leu	Leu	Pro	Gly	Lys	Val	Leu	Val	Pro	Leu	Ala	Ala	
		915					920					925				
Pro	Ser	Met	Ser	Val	Arg	Gly	Gly	Gly	Ala	Gly	Gln	Pro	Leu	Pro	Leu	
	930					935					940					

Val Ser Pro Pro Phe Ser Val Pro Val Gln Asn Gly Ala Gln Pro Pro
 945 950 955 960

Ser Lys Ile Ile Gln Leu Thr Pro Val Pro Val Ser Thr Pro Ser Gly
 965 970 975

Leu Val Pro Pro Leu Ser Pro Ala Thr Leu Pro Gly Pro Thr Ser Gln
 980 985 990

Pro Gln Lys Val Leu Leu Pro Ser Ser Thr Arg Ile Thr Tyr Val
 Gln 995 1000 1005

Ser Ala Gly Gly His Ala Leu Pro Leu Gly Thr Ser Pro Ala Ser
 1010 1015 1020

Ser Gln Ala Gly Thr Val Thr Ser Tyr Gly Pro Thr Ser Ser Val
 1025 1030 1035

Ala Leu Gly Phe Thr Ser Leu Gly Pro Ser Gly Pro Ala Phe Val
 1040 1045 1050

Gln Pro Leu Leu Ser Gly Gln Ala Pro Leu Leu Ala Pro Gly Gln
 1055 1060 1065

Val Gly Val Ser Pro Val Pro Ser Pro Gln Leu Pro Pro Ala Cys
 1070 1075 1080

Ala Ala Pro Gly Gly Pro Val Ile Thr Ala Phe Tyr Ser Gly Ser
 1085 1090 1095

Pro Ala Pro Thr Ser Ser Ala Pro Leu Ala Gln Pro Ser Gln Ala
 1100 1105 1110

Pro Pro Ser Leu Val Tyr Thr Val Ala Thr Ser Thr Thr Pro Pro
 1115 1120 1125

Ala Ala Thr Ile Leu Pro Lys Gly Pro Pro Ala Pro Ala Thr Ala
 1130 1135 1140

Thr Pro Ala Pro Thr Ser Pro Phe Pro Ser Ala Thr Gly Ser Met
 1145 1150 1155

Thr	Tyr	Ser	Leu	Val	Ala	Pro	Lys	Ala	Gln	Arg	Pro	Ser	Pro	Lys
	1160					1165					1170			
Ala	Pro	Gln	Lys	Val	Lys	Ala	Ala	Ile	Ala	Ser	Ile	Pro	Val	Gly
	1175					1180					1185			
Ser	Phe	Glu	Ala	Gly	Ala	Ser	Gly	Arg	Pro	Gly	Pro	Ala	Pro	Arg
	1190					1195					1200			
Gln	Pro	Leu	Glu	Pro	Gly	Pro	Val	Arg	Glu	Pro	Thr	Ala	Pro	Glu
	1205					1210					1215			
Ser	Glu	Leu	Glu	Gly	Gln	Pro	Thr	Pro	Pro	Ala	Pro	Pro	Pro	Leu
	1220					1225					1230			
Pro	Glu	Thr	Trp	Thr	Pro	Thr	Ala	Arg	Ser	Ser	Pro	Pro	Leu	Pro
	1235					1240					1245			
Pro	Pro	Ala	Glu	Glu	Arg	Thr	Ser	Ala	Lys	Gly	Pro	Glu	Thr	Met
	1250					1255					1260			
Ala	Ser	Lys	Phe	Pro	Ser	Ser	Ser	Ser	Asp	Trp	Arg	Val	Pro	Gly
	1265					1270					1275			
Gln	Gly	Leu	Glu	Asn	Arg	Gly	Glu	Pro	Pro	Thr	Pro	Pro	Ser	Pro
	1280					1285					1290			
Ala	Pro	Ala	Pro	Ala	Val	Ala	Pro	Gly	Gly	Ser	Ser	Glu	Ser	Ser
	1295					1300					1305			
Ser	Gly	Arg	Ala	Ala	Gly	Asp	Thr	Pro	Glu	Arg	Lys	Glu	Ala	Ala
	1310					1315					1320			
Gly	Thr	Gly	Lys	Lys	Val	Lys	Val	Arg	Pro	Pro	Pro	Leu	Lys	Lys
	1325					1330					1335			
Thr	Phe	Asp	Ser	Val	Asp	Asn	Arg	Val	Leu	Ser	Glu	Val	Asp	Phe
	1340					1345					1350			
Glu	Glu	Arg	Phe	Ala	Glu	Leu	Pro	Glu	Phe	Arg	Pro	Glu	Glu	Val
	1355					1360					1365			
Leu	Pro	Ser	Pro	Thr	Leu	Gln	Ser	Leu	Ala	Thr	Ser	Pro	Arg	Ala

1370														
Ile	Leu	Gly	Ser	Tyr	Arg	Lys	Lys	Arg	Lys	Asn	Ser	Thr	Asp	Leu
	1385					1390					1395			
Asp	Ser	Ala	Pro	Glu	Asp	Pro	Thr	Ser	Pro	Lys	Arg	Lys	Met	Arg
	1400					1405					1410			
Arg	Arg	Ser	Ser	Cys	Ser	Ser	Glu	Pro	Asn	Thr	Pro	Lys	Ser	Ala
	1415					1420					1425			
Lys	Cys	Glu	Gly	Asp	Ile	Phe	Thr	Phe	Asp	Arg	Thr	Gly	Thr	Glu
	1430					1435					1440			
Ala	Glu	Asp	Val	Leu	Gly	Glu	Leu	Glu	Tyr	Asp	Lys	Val	Pro	Tyr
	1445					1450					1455			
Ser	Ser	Leu	Arg	Arg	Thr	Leu	Asp	Gln	Arg	Arg	Ala	Leu	Val	Met
	1460					1465					1470			
Gln	Leu	Phe	Gln	Asp	His	Gly	Phe	Phe	Pro	Ser	Ala	Gln	Ala	Thr
	1475					1480					1485			
Ala	Ala	Phe	Gln	Ala	Arg	Tyr	Ala	Asp	Ile	Phe	Pro	Ser	Lys	Val
	1490					1495					1500			
Cys	Leu	Gln	Leu	Lys	Ile	Arg	Glu	Val	Arg	Gln	Lys	Ile	Met	Gln
	1505					1510					1515			
Ala	Ala	Thr	Pro	Thr	Glu	Gln	Pro	Pro	Gly	Ala	Glu	Ala	Pro	Leu
	1520					1525					1530			
Pro	Val	Pro	Pro	Pro	Thr	Gly	Thr	Ala	Ala	Ala	Pro	Ala	Pro	Thr
	1535					1540					1545			
Pro	Ser	Pro	Ala	Gly	Gly	Pro	Asp	Pro	Thr	Ser	Pro	Ser	Ser	Asp
	1550					1555					1560			
Ser	Gly	Thr	Ala	Gln	Ala	Ala	Pro	Pro	Leu	Pro	Pro	Pro	Pro	Glu
	1565					1570					1575			
Ser	Gly	Pro	Gly	Gln	Pro	Gly	Trp	Glu	Gly	Ala	Pro	Gln	Pro	Ser
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Pro Pro Pro Pro Gly Pro Ser Thr Ala Ala Thr Gly Arg
 1595 1600 1605

<210> 11600

<211> 309

<212> PRT

<213> Homo sapiens

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<221> source

<223> /note="Payload ID: 2285"

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<221> source

<223> /note="Gene Symbol: CIC"

<220>

<221> source

<223> /note="Gene Name:
 capicua transcriptional repressor"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000458543"

<400> 11600

Ser Ser Ser Ser Asp Trp Arg Val Pro Gly Gln Gly Leu Glu Asn Arg
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Gly Glu Pro Pro Thr Pro Pro Ser Pro Ala Pro Ala Pro Ala Val Ala
 20 25 30

Pro Gly Gly Ser Ser Glu Ser Ser Ser Gly Arg Ala Ala Gly Asp Thr
 35 40 45

Pro Glu Arg Lys Glu Ala Ala Gly Thr Gly Lys Lys Val Lys Val Arg
 50 55 60

Pro Pro Pro Leu Lys Lys Thr Phe Asp Ser Val Asp Lys Val Leu Ser
 65 70 75 80

Glu Val Asp Phe Glu Glu Arg Phe Ala Glu Leu Pro Glu Phe Arg Pro
 85 90 95

Glu Glu Val Leu Pro Ser Pro Thr Leu Gln Ser Leu Ala Thr Ser Pro
 100 105 110

Arg Ala Ile Leu Gly Ser Tyr Arg Lys Lys Arg Lys Asn Ser Thr Asp
 115 120 125

Leu Asp Ser Ala Pro Glu Asp Pro Thr Ser Pro Lys Arg Lys Met Arg
 130 135 140

Arg Arg Ser Ser Cys Ser Ser Glu Pro Asn Thr Pro Lys Ser Ala Lys
 145 150 155 160

Cys Glu Gly Asp Ile Phe Thr Phe Asp Arg Thr Glu Ala Glu Asp Val
 165 170 175

Leu Gly Glu Leu Glu Tyr Asp Lys Val Pro Tyr Ser Ser Leu Arg Arg
 180 185 190

Thr Leu Asp Gln Arg Arg Ala Leu Val Met Gln Leu Phe Gln Asp His
 195 200 205

Gly Phe Phe Pro Ser Ala Gln Ala Thr Ala Ala Phe Gln Ala Arg Tyr
 210 215 220

Ala Asp Ile Phe Pro Ser Lys Val Cys Leu Gln Leu Lys Ile Arg Glu
 225 230 235 240

Val Arg Gln Lys Ile Met Gln Ala Ala Thr Pro Thr Glu Gln Pro Pro
 245 250 255

Gly Ala Glu Ala Pro Leu Pro Val Pro Pro Pro Thr Gly Thr Ala Ala
 260 265 270

Ala Pro Ala Pro Thr Pro Ser Pro Ala Gly Gly Pro Asp Pro Thr Ser
 275 280 285

Pro Ser Ser Asp Ser Gly Thr Ala Gln Ala Ala Pro Pro Leu Pro Pro
 290 295 300

Pro Pro Glu Ser Gly
 305

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<212> PRT

<213> Homo sapiens

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<220>
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<220>
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<223> /note="Gene Symbol: CIC"

<220>
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<223> /note="Gene Name:
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<220>
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<223> /note="Uniprot ID: Q96RK0"

<220>
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<223> /note="ENSP ID: ENSP00000458663"

<400> 11601
Met Tyr Ser Ala His Arg Pro Leu Met Pro Ala Ser Ser Ala Ala Ser
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Arg Gly Leu Gly Met Phe Val Trp Thr Asn Val Glu Pro Arg Ser Val
                20              25              30

Ala Val Phe Pro Trp His Ser Leu Val Pro Phe Leu Ala Pro Ser Gln
        35              40              45

Pro Asp Pro Ser Val Gln Pro Ser Glu Ala Gln Gln Pro Ala Ser His
        50              55              60

Pro Val Ala Ser Asn Gln Ser Lys Glu Pro Ala Glu Ser Ala Ala Val
65              70              75              80

Ala His Glu Arg Pro Pro Gly Gly Thr Gly Ser Ala Asp Pro Glu Arg
                85              90              95

Pro Pro Gly Ala Thr Cys Pro Glu Ser Pro Gly Pro Gly Pro Pro His
                100              105              110

Pro Leu Gly Val Val Glu Ser Gly Lys Gly Pro Pro Pro Thr Thr Glu
        115              120              125

Glu Glu Ala Ser Gly Pro Pro Gly Glu Pro Arg Leu Asp Ser Glu Thr
        130              135              140

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Glu	Ser	Asp	His	Asp	Asp	Ala	Phe	Leu	Ser	Ile	Met	Ser	Pro	Glu	Ile	145	150	155	160
Gln	Leu	Pro	Leu	Pro	Pro	Gly	Lys	Arg	Arg	Thr	Gln	Ser	Leu	Ser	Ala	165	170	175	
Leu	Pro	Lys	Glu	Arg	Asp	Ser	Ser	Ser	Glu	Lys	Asp	Gly	Arg	Ser	Pro	180	185	190	
Asn	Lys	Arg	Glu	Lys	Asp	His	Ile	Arg	Arg	Pro	Met	Asn	Ala	Phe	Met	195	200	205	
Ile	Phe	Ser	Lys	Arg	His	Arg	Ala	Leu	Val	His	Gln	Arg	His	Pro	Asn	210	215	220	
Gln	Asp	Asn	Arg	Thr	Val	Ser	Lys	Ile	Leu	Gly	Glu	Trp	Trp	Tyr	Ala	225	230	235	240
Leu	Gly	Pro	Lys	Glu	Lys	Gln	Lys	Tyr	His	Asp	Leu	Ala	Phe	Gln	Val	245	250	255	
Lys	Glu	Ala	His	Phe	Lys	Ala	His	Pro	Asp	Trp	Lys	Trp	Cys	Asn	Lys	260	265	270	
Asp	Arg	Lys	Lys	Ser	Ser	Ser	Glu	Ala	Lys	Pro	Thr	Ser	Leu	Gly	Leu	275	280	285	
Ala	Gly	Gly	His	Lys	Glu	Thr	Arg	Glu	Arg	Ser	Met	Ser	Glu	Thr	Gly	290	295	300	
Thr	Ala	Ala	Ala	Pro	Gly	Val	Ser	Ser	Glu	Leu	Leu	Ser	Val	Ala	Ala	305	310	315	320
Gln	Thr	Leu	Leu	Ser	Ser	Asp	Thr	Lys	Ala	Pro	Gly	Ser	Ser	Ser	Cys	325	330	335	
Gly	Ala	Glu	Arg	Leu	His	Thr	Val	Gly	Gly	Pro	Gly	Ser	Ala	Arg	Pro	340	345	350	
Arg	Ala	Phe	Ser	His	Ser	Gly	Val	His	Ser	Leu	Asp	Gly	Gly	Glu	Val	355	360	365	

Asp Ser Gln Ala Leu Gln Glu Leu Thr Gln Met Val Ser Gly Pro Ala
370 375 380

Ser Tyr Ser Gly Pro Lys Pro Ser Thr Gln Tyr Gly Ala Pro Gly Pro
385 390 395 400

Phe Ala Ala Pro Gly Glu Gly Gly Ala Leu Ala Ala Thr Gly Arg Pro
405 410 415

Pro Leu Leu Pro Thr Arg Ala Ser Arg Ser Gln Arg Ala Ala Ser Glu
420 425 430

Asp Met Thr Ser Asp Glu Glu Arg Met Val Ile Cys Glu Glu Glu Gly
435 440 445

Asp Asp Asp Val Ile Ala Asp Asp Gly Phe Gly Thr Thr Asp Ile Asp
450 455 460

Leu Lys Cys Lys Glu Arg Val Thr Asp Ser Glu Ser Gly Asp Ser Ser
465 470 475 480

Gly Glu Asp Pro Gly Asn Lys Gly Phe Gly Arg Lys Val Phe Ser
485 490 495

Pro Val Ile Arg Ser Ser Phe Thr His Cys Arg Pro Pro Leu Asp Pro
500 505 510

Glu Pro Pro Gly Pro Pro Asp Pro Pro Val Ala Phe Gly Lys Gly Tyr
515 520 525

Gly Ser Ala Pro Ser Ser Ser Ala Ser Ser Pro Ala Ser Ser Ser Ala
530 535 540

Ser Ala Ala Thr Ser Phe Ser Leu Gly Ser Gly Thr Phe Lys Ala Gln
545 550 555 560

Glu Ser Gly Gln Gly Ser Thr Ala Gly Pro Leu Arg Pro Pro Pro Pro
565 570 575

Gly Ala Gly Gly Pro Ala Thr Pro Ser Lys Ala Thr Arg Phe Leu Pro
580 585 590

Met Asp Pro Ala Thr Phe Arg Arg Lys Arg Pro Glu Ser Val Gly Gly

595																
Leu	Glu	Pro	Pro	Gly	Pro	Ser	Val	Ile	Ala	Ala	Pro	Pro	Ser	Gly	Gly	
610						615					620					
Gly	Asn	Ile	Leu	Gln	Thr	Leu	Val	Leu	Pro	Pro	Asn	Lys	Glu	Glu	Gln	
625					630					635					640	
Glu	Gly	Gly	Gly	Ala	Arg	Val	Pro	Ser	Ala	Pro	Ala	Pro	Ser	Leu	Ala	
				645					650					655		
Tyr	Gly	Ala	Pro	Ala	Ala	Pro	Leu	Ser	Arg	Pro	Ala	Ala	Thr	Met	Val	
			660					665					670			
Thr	Asn	Val	Val	Arg	Pro	Val	Ser	Ser	Thr	Pro	Val	Pro	Ile	Ala	Ser	
		675					680					685				
Lys	Pro	Phe	Pro	Thr	Ser	Gly	Arg	Ala	Glu	Ala	Ser	Pro	Asn	Asp	Thr	
	690					695					700					
Ala	Gly	Ala	Arg	Thr	Glu	Met	Gly	Thr	Gly	Ser	Arg	Val	Pro	Gly	Gly	
705					710					715					720	
Ser	Pro	Leu	Gly	Val	Ser	Leu	Val	Tyr	Ser	Asp	Lys	Lys	Ser	Ala	Ala	
				725					730					735		
Ala	Thr	Ser	Pro	Ala	Pro	His	Leu	Val	Ala	Gly	Pro	Leu	Leu	Gly	Thr	
			740					745					750			
Val	Gly	Lys	Ala	Pro	Ala	Thr	Val	Thr	Asn	Leu	Leu	Val	Gly	Thr	Pro	
		755					760					765				
Gly	Tyr	Gly	Ala	Pro	Ala	Pro	Pro	Ala	Val	Gln	Phe	Ile	Ala	Gln	Gly	
	770					775					780					
Ala	Pro	Gly	Gly	Gly	Thr	Thr	Ala	Gly	Ser	Gly	Ala	Gly	Ala	Gly	Ser	
785					790					795					800	
Gly	Pro	Asn	Gly	Pro	Val	Pro	Leu	Gly	Ile	Leu	Gln	Pro	Gly	Ala	Leu	
				805					810					815		
Gly	Lys	Ala	Gly	Gly	Ile	Thr	Gln	Val	Gln	Tyr	Ile	Leu	Pro	Thr	Leu	
			820				825						830			

Pro Gln Gln Leu Gln Val Ala Pro Ala Pro Ala Pro Ala Pro Gly Thr
835 840 845

Lys Ala Ala Ala Pro Ser Gly Pro Ala Pro Thr Thr Ser Ile Arg Phe
850 855 860

Thr Leu Pro Pro Gly Thr Ser Thr Asn Gly Lys Val Leu Ala Ala Thr
865 870 875 880

Ala Pro Thr Pro Gly Ile Pro Ile Leu Gln Ser Val Pro Ser Ala Pro
885 890 895

Pro Pro Lys Ala Gln Ser Val Ser Pro Val Gln Ala Pro Pro Pro Gly
900 905 910

Gly Ser Ala Gln Leu Leu Pro Gly Lys Val Leu Val Pro Leu Ala Ala
915 920 925

Pro Ser Met Ser Val Arg Gly Gly Gly Ala Gly Gln Pro Leu Pro Leu
930 935 940

Val Ser Pro Pro Phe Ser Val Pro Val Gln Asn Gly Ala Gln Pro Pro
945 950 955 960

Ser Lys Ile Ile Gln Leu Thr Pro Val Pro Val Ser Thr Pro Ser Gly
965 970 975

Leu Val Pro Pro Leu Ser Pro Ala Thr Leu Pro Gly Pro Thr Ser Gln
980 985 990

Pro Gln Lys Val Leu Leu Pro Ser Ser Thr Arg Ile Thr Tyr Val
Gln 995 1000 1005

Ser Ala Gly Gly His Ala Leu Pro Leu Gly Thr Ser Pro Ala Ser
1010 1015 1020

Ser Gln Ala Gly Thr Val Thr Ser Tyr Gly Pro Thr Ser Ser Val
1025 1030 1035

Ala Leu Gly Phe Thr Ser Leu Gly Pro Ser Gly Pro Ala Phe Val
1040 1045 1050

Gln	Pro	Leu	Leu	Ser	Ala	Gly	Gln	Ala	Pro	Leu	Leu	Ala	Pro	Gly
1055						1060					1065			
Gln	Val	Gly	Val	Ser	Pro	Val	Pro	Ser	Pro	Gln	Leu	Pro	Pro	Ala
1070						1075					1080			
Cys	Ala	Ala	Pro	Gly	Gly	Pro	Val	Ile	Thr	Ala	Phe	Tyr	Ser	Gly
1085						1090					1095			
Ser	Pro	Ala	Pro	Thr	Ser	Ser	Ala	Pro	Leu	Ala	Gln	Pro	Ser	Gln
1100						1105					1110			
Ala	Pro	Pro	Ser	Leu	Val	Tyr	Thr	Val	Ala	Thr	Ser	Thr	Thr	Pro
1115						1120					1125			
Pro	Ala	Ala	Thr	Ile	Leu	Pro	Lys	Gly	Pro	Pro	Ala	Pro	Ala	Thr
1130						1135					1140			
Ala	Thr	Pro	Ala	Pro	Thr	Ser	Pro	Phe	Pro	Ser	Ala	Thr	Ala	Gly
1145						1150					1155			
Ser	Met	Thr	Tyr	Ser	Leu	Val	Ala	Pro	Lys	Ala	Gln	Arg	Pro	Ser
1160						1165					1170			
Pro	Lys	Ala	Pro	Gln	Lys	Val	Lys	Ala	Ala	Ile	Ala	Ser	Ile	Pro
1175						1180					1185			
Val	Gly	Ser	Phe	Glu	Ala	Gly	Ala	Ser	Gly	Arg	Pro	Gly	Pro	Ala
1190						1195					1200			
Pro	Arg	Gln	Pro	Leu	Glu	Pro	Gly	Pro	Val	Arg	Glu	Pro	Thr	Ala
1205						1210					1215			
Pro	Glu	Ser	Glu	Leu	Glu	Gly	Gln	Pro	Thr	Pro	Pro	Ala	Pro	Pro
1220						1225					1230			
Pro	Leu	Pro	Glu	Thr	Trp	Thr	Pro	Thr	Ala	Arg	Ser	Ser	Pro	Pro
1235						1240					1245			
Leu	Pro	Pro	Pro	Ala	Glu	Glu	Arg	Thr	Ser	Ala	Lys	Gly	Pro	Glu
1250						1255					1260			

Thr	Met	Ala	Ser	Lys	Phe	Pro	Ser	Ser	Ser	Ser	Asp	Trp	Arg	Val
	1265					1270					1275			
Pro	Gly	Gln	Gly	Leu	Glu	Asn	Arg	Gly	Glu	Pro	Pro	Thr	Pro	Pro
	1280					1285					1290			
Ser	Pro	Ala	Pro	Ala	Pro	Ala	Val	Ala	Pro	Gly	Gly	Ser	Ser	Glu
	1295					1300					1305			
Ser	Ser	Ser	Gly	Arg	Ala	Ala	Gly	Asp	Thr	Pro	Glu	Arg	Lys	Glu
	1310					1315					1320			
Ala	Ala	Gly	Thr	Gly	Lys	Lys	Val	Lys	Val	Arg	Pro	Pro	Pro	Leu
	1325					1330					1335			
Lys	Lys	Thr	Phe	Asp	Ser	Val	Asp	Asn	Arg	Val	Leu	Ser	Glu	Val
	1340					1345					1350			
Asp	Phe	Glu	Glu	Arg	Phe	Ala	Glu	Leu	Pro	Glu	Phe	Arg	Pro	Glu
	1355					1360					1365			
Glu	Val	Leu	Pro	Ser	Pro	Thr	Leu	Gln	Ser	Leu	Ala	Thr	Ser	Pro
	1370					1375					1380			
Arg	Ala	Ile	Leu	Gly	Ser	Tyr	Arg	Lys	Lys	Arg	Lys	Asn	Ser	Thr
	1385					1390					1395			
Asp	Leu	Asp	Ser	Ala	Pro	Glu	Asp	Pro	Thr	Ser	Pro	Lys	Arg	Lys
	1400					1405					1410			
Met	Arg	Arg	Arg	Ser	Ser	Cys	Ser	Ser	Glu	Pro	Asn	Thr	Pro	Lys
	1415					1420					1425			
Ser	Ala	Lys	Cys	Glu	Gly	Asp	Ile	Phe	Thr	Phe	Asp	Arg	Thr	Gly
	1430					1435					1440			
Thr	Glu	Ala	Glu	Asp	Val	Leu	Gly	Glu	Leu	Glu	Tyr	Asp	Lys	Val
	1445					1450					1455			
Pro	Tyr	Ser	Ser	Leu	Arg	Arg	Thr	Leu	Asp	Gln	Arg	Arg	Ala	Leu
	1460					1465					1470			

Val	Met	Gln	Leu	Phe	Gln	Asp	His	Gly	Phe	Phe	Pro	Ser	Ala	Gln
	1475					1480					1485			
Ala	Thr	Ala	Ala	Phe	Gln	Ala	Arg	Tyr	Ala	Asp	Ile	Phe	Pro	Ser
	1490					1495					1500			
Lys	Val	Cys	Leu	Gln	Leu	Lys	Ile	Arg	Glu	Val	Arg	Gln	Lys	Ile
	1505					1510					1515			
Met	Gln	Ala	Ala	Thr	Pro	Thr	Glu	Gln	Pro	Pro	Gly	Ala	Glu	Ala
	1520					1525					1530			
Pro	Leu	Pro	Val	Pro	Pro	Pro	Thr	Gly	Thr	Ala	Ala	Ala	Pro	Ala
	1535					1540					1545			
Pro	Thr	Pro	Ser	Pro	Ala	Gly	Gly	Pro	Asp	Pro	Thr	Ser	Pro	Ser
	1550					1555					1560			
Ser	Asp	Ser	Gly	Thr	Ala	Gln	Ala	Ala	Pro	Pro	Leu	Pro	Pro	Pro
	1565					1570					1575			
Pro	Glu	Ser	Gly	Pro	Gly	Gln	Pro	Gly	Trp	Glu	Gly	Ala	Pro	Gln
	1580					1585					1590			
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<211> 320

<212> PRT

<213> Homo sapiens

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<221> source

<223> /note="Payload ID: 2285"

<220>

<221> source

<223> /note="Gene Symbol: CIC"

<220>

<221> source

<223> /note="Gene Name:
capicua transcriptional repressor"

<220>

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<223> /note="ENSP ID: ENSP00000459011"

<220>
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 <222> (1)..(1)
 <223> Any amino acid

<400> 11602

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Pro Gly Gly Ser Ser Glu Ser Ser Ser Gly Arg Ala Ala Gly Asp Thr
 20 25 30

Pro Glu Arg Lys Glu Ala Ala Gly Thr Gly Lys Lys Val Lys Val Arg
 35 40 45

Pro Pro Pro Leu Lys Lys Thr Phe Asp Ser Val Asp Asn Arg Val Leu
 50 55 60

Ser Glu Val Asp Phe Glu Glu Arg Phe Ala Glu Leu Pro Glu Phe Arg
 65 70 75 80

Pro Glu Glu Val Leu Pro Ser Pro Thr Leu Gln Ser Leu Ala Thr Ser
 85 90 95

Pro Arg Ala Ile Leu Gly Ser Tyr Arg Lys Lys Arg Lys Asn Ser Thr
 100 105 110

Asp Leu Asp Ser Ala Pro Glu Asp Pro Thr Ser Pro Lys Arg Lys Met
 115 120 125

Arg Arg Arg Ser Ser Cys Ser Ser Glu Pro Asn Thr Pro Lys Ser Ala
 130 135 140

Lys Cys Glu Gly Asp Ile Phe Thr Phe Asp Arg Thr Glu Ala Glu Asp
 145 150 155 160

Val Leu Gly Glu Leu Glu Tyr Asp Lys Val Pro Tyr Ser Ser Leu Arg
 165 170 175

Arg Thr Leu Asp Gln Arg Arg Ala Leu Val Met Gln Leu Phe Gln Asp
 180 185 190

His Gly Phe Phe Pro Ser Ala Gln Ala Thr Ala Ala Phe Gln Ala Arg

25906

195		200		205											
Tyr	Ala	Asp	Ile	Phe	Pro	Ser	Lys	Val	Cys	Leu	Gln	Leu	Lys	Ile	Arg
210						215					220				
Glu	Val	Arg	Gln	Lys	Ile	Met	Gln	Ala	Ala	Thr	Pro	Thr	Glu	Gln	Pro
225					230					235					240
Pro	Gly	Ala	Glu	Ala	Pro	Leu	Pro	Val	Pro	Pro	Pro	Thr	Gly	Thr	Ala
				245					250					255	
Ala	Ala	Pro	Ala	Pro	Thr	Pro	Ser	Pro	Ala	Gly	Gly	Pro	Asp	Pro	Thr
			260					265					270		
Ser	Pro	Ser	Ser	Asp	Ser	Gly	Thr	Ala	Gln	Ala	Ala	Pro	Pro	Leu	Pro
		275					280					285			
Pro	Pro	Pro	Glu	Ser	Gly	Pro	Gly	Gln	Pro	Gly	Trp	Glu	Gly	Ala	Pro
	290					295					300				
Gln	Pro	Ser	Pro	Pro	Pro	Pro	Gly	Pro	Ser	Thr	Ala	Ala	Thr	Gly	Arg
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 <211> 144
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<220>
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<400> 11603
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Gly Ser Lys Ser Pro Pro Ala Thr Arg Ala Lys Ala Leu Arg Arg Arg
20 25 30

Gly Ala Gly Glu Gly Asp Lys Pro Glu Glu Glu Asp Asp Glu Ala Gln
35 40 45

Gln Pro Gln Pro Gln Ser Gly Pro Glu Glu Ala Glu Glu Gly Glu Glu
50 55 60

Glu Glu Ala Glu Arg Gly Pro Gly Ala Glu Gly Pro Pro Leu Glu Leu
65 70 75 80

His Pro Gly Asp Pro Ala Pro Gly Pro Ala Glu Asp Pro Lys Gly Asp
85 90 95

Gly Glu Ala Gly Arg Trp Glu Pro Ser Leu Ser Arg Lys Thr Ala Thr
100 105 110

Phe Lys Ser Arg Ala Pro Lys Lys Lys Tyr Val Glu Glu His Gly Ala
115 120 125

Gly Ser Ser Gly Val Ala Gly Ala Pro Glu Glu Arg Val Arg Thr Pro
130 135 140

<210> 11604

<211> 2514

<212> PRT

<213> Homo sapiens

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<223> /note="Gene Name:
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<220>

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<223> /note="ENSP ID: ENSP00000459719"

<400> 11604

Met Lys Pro Met Lys Lys Ala Cys Thr Gly Leu Ser Gly Pro Gly Ser

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			20					25					30				
Gly	Ala	Gly	Glu	Gly	Asp	Lys	Pro	Glu	Glu	Glu	Asp	Asp	Glu	Ala	Gln		
		35					40				45						
Gln	Pro	Gln	Pro	Gln	Ser	Gly	Pro	Glu	Glu	Ala	Glu	Glu	Gly	Glu	Glu		
	50					55					60						
Glu	Glu	Ala	Glu	Arg	Gly	Pro	Gly	Ala	Glu	Gly	Pro	Pro	Leu	Glu	Leu		
65					70					75					80		
His	Pro	Gly	Asp	Pro	Ala	Pro	Gly	Pro	Ala	Glu	Asp	Pro	Lys	Gly	Asp		
				85					90					95			
Gly	Glu	Ala	Gly	Arg	Trp	Glu	Pro	Ser	Leu	Ser	Arg	Lys	Thr	Ala	Thr		
			100					105					110				
Phe	Lys	Ser	Arg	Ala	Pro	Lys	Lys	Lys	Tyr	Val	Glu	Glu	His	Gly	Ala		
		115					120					125					
Gly	Ser	Ser	Gly	Val	Ala	Gly	Ala	Pro	Glu	Glu	Arg	Val	Arg	Thr	Pro		
	130					135					140						
Glu	Glu	Ala	Ser	Gly	Leu	Gly	Val	Pro	Pro	Arg	Pro	Pro	Thr	Ser	Thr		
145					150					155					160		
Arg	Ser	Ser	Ser	Thr	Asp	Thr	Ala	Ser	Glu	His	Ser	Ala	Asp	Leu	Glu		
				165					170					175			
Asp	Glu	Pro	Ala	Glu	Ala	Cys	Gly	Pro	Gly	Pro	Trp	Pro	Pro	Gly	Ser		
			180					185					190				
Thr	Ser	Gly	Ser	Tyr	Asp	Leu	Arg	Gln	Leu	Arg	Ser	Gln	Arg	Val	Leu		
		195					200					205					
Ala	Arg	Arg	Gly	Asp	Gly	Leu	Phe	Leu	Pro	Ala	Val	Val	Arg	Gln	Val		
	210					215					220						
Arg	Arg	Ser	Gln	Asp	Leu	Gly	Val	Gln	Phe	Pro	Gly	Asp	Arg	Ala	Leu		
225					230					235					240		

Thr	Phe	Tyr	Glu	Gly	Val	Pro	Gly	Ala	Gly	Val	Asp	Val	Val	Leu	Asp
				245					250					255	
Ala	Thr	Pro	Pro	Pro	Gly	Ala	Leu	Val	Val	Gly	Thr	Ala	Val	Cys	Thr
			260					265					270		
Cys	Val	Glu	Pro	Gly	Val	Ala	Ala	Tyr	Arg	Glu	Gly	Val	Val	Val	Glu
		275					280					285			
Val	Ala	Thr	Lys	Pro	Ala	Ala	Tyr	Lys	Val	Arg	Leu	Ser	Pro	Gly	Pro
	290					295					300				
Ser	Ser	Gln	Pro	Gly	Leu	Pro	Gly	Ser	Leu	Pro	Gln	Pro	Pro	Gln	Pro
305					310					315					320
Leu	His	Arg	Glu	Pro	Glu	Glu	Ala	Val	Trp	Val	Ala	Arg	Ser	Ser	Leu
				325					330					335	
Arg	Leu	Leu	Arg	Pro	Pro	Trp	Glu	Pro	Glu	Thr	Met	Leu	Arg	Lys	Pro
			340					345					350		
Pro	Thr	Gly	Pro	Glu	Glu	Glu	Gln	Ala	Glu	Pro	Gly	Ala	Thr	Leu	Pro
		355					360					365			
Pro	Cys	Pro	Ala	Ala	Leu	Asp	Pro	Lys	Gln	Pro	Glu	Asp	Ala	Glu	Val
	370					375					380				
Ser	Lys	Ile	Ser	Phe	Gly	Gly	Asn	Leu	Gly	Thr	His	Cys	Glu	Glu	Gly
385					390					395					400
Glu	Glu	Lys	His	Pro	Pro	Ala	Leu	Gly	Thr	Pro	Ala	Leu	Leu	Pro	Leu
				405					410					415	
Pro	Pro	Pro	Gln	Leu	Leu	Ser	Pro	Pro	Pro	Lys	Ser	Pro	Ala	Phe	Val
			420					425					430		
Gly	Pro	Gly	Arg	Pro	Gly	Glu	Gln	Pro	Ser	Pro	Cys	Gln	Glu	Gly	Ser
		435					440					445			
Gln	Gly	Gly	Ser	Arg	Ser	Ser	Ser	Val	Ala	Ser	Leu	Glu	Lys	Gly	Thr
	450					455					460				

Ala	Pro	Ala	Ala	Arg	Ala	Arg	Thr	Pro	Leu	Thr	Ala	Ala	Gln	Gln	Lys	465	470	475	480
Tyr	Lys	Lys	Gly	Asp	Val	Val	Cys	Thr	Pro	Ser	Gly	Ile	Arg	Lys	Lys	485	490	495	
Phe	Asn	Gly	Lys	Gln	Trp	Arg	Arg	Leu	Cys	Ser	Arg	Asp	Gly	Cys	Met	500	505	510	
Lys	Glu	Ser	Gln	Arg	Arg	Gly	Tyr	Cys	Ser	Arg	His	Leu	Ser	Met	Arg	515	520	525	
Thr	Lys	Glu	Met	Glu	Gly	Leu	Ala	Asp	Ser	Gly	Pro	Gly	Gly	Ala	Gly	530	535	540	
Arg	Pro	Ala	Ala	Val	Ala	Ala	Arg	Glu	Gly	Ser	Thr	Glu	Phe	Asp	Trp	545	550	555	560
Gly	Asp	Glu	Thr	Ser	Arg	Asp	Ser	Glu	Ala	Ser	Ser	Val	Ala	Ala	Arg	565	570	575	
Gly	Asp	Ser	Arg	Pro	Arg	Leu	Val	Ala	Pro	Ala	Asp	Leu	Ser	Arg	Phe	580	585	590	
Glu	Phe	Asp	Glu	Cys	Glu	Ala	Ala	Val	Met	Leu	Val	Ser	Leu	Gly	Ser	595	600	605	
Ser	Arg	Ser	Gly	Thr	Pro	Ser	Phe	Ser	Pro	Val	Ser	Thr	Gln	Ser	Pro	610	615	620	
Phe	Ser	Pro	Ala	Pro	Ser	Pro	Ser	Pro	Ser	Pro	Leu	Phe	Gly	Phe	Arg	625	630	635	640
Pro	Ala	Asn	Phe	Ser	Pro	Ile	Asn	Ala	Ser	Pro	Val	Ile	Gln	Arg	Thr	645	650	655	
Ala	Val	Arg	Ser	Arg	His	Leu	Ser	Ala	Ser	Thr	Pro	Lys	Ala	Gly	Val	660	665	670	
Leu	Thr	Pro	Pro	Asp	Leu	Gly	Pro	His	Pro	Pro	Pro	Pro	Ala	Pro	Arg	675	680	685	

Glu 690	Arg	His	Ser	Ser	Gly	Ile 695	Leu	Pro	Thr	Phe	Gln 700	Thr	Asn	Leu	Thr
Phe 705	Thr	Val	Pro	Ile	Ser 710	Pro	Gly	Arg	Arg	Lys 715	Thr	Glu	Leu	Leu	Pro 720
His	Pro	Gly	Ala	Leu 725	Gly	Ala	Pro	Gly	Ala 730	Gly	Gly	Gly	Gly	Ala 735	Ala
Pro	Asp	Phe	Pro 740	Lys	Ser	Asp	Ser	Leu 745	Asp	Ser	Gly	Val	Asp 750	Ser	Val
Ser	His	Thr 755	Pro	Thr	Pro	Ser	Thr 760	Pro	Ala	Gly	Phe	Arg 765	Ala	Val	Ser
Pro 770	Ala	Val	Pro	Phe	Ser	Arg 775	Ser	Arg	Gln	Pro	Ser 780	Pro	Leu	Leu	Leu
Leu 785	Pro	Pro	Pro	Ala	Gly 790	Leu	Thr	Ser	Asp	Pro 795	Gly	Pro	Ser	Val	Arg 800
Arg	Val	Pro	Ala	Val 805	Gln	Arg	Asp	Ser	Pro 810	Val	Ile	Val	Arg	Asn 815	Pro
Asp	Val	Pro	Leu 820	Pro	Ser	Lys	Phe	Pro 825	Gly	Glu	Val	Gly	Thr 830	Ala	Gly
Glu	Val	Arg 835	Ala	Gly	Gly	Pro	Gly 840	Arg	Gly	Cys	Arg	Glu 845	Thr	Pro	Val
Pro 850	Pro	Gly	Val	Ala	Ser	Gly 855	Lys	Pro	Gly	Leu	Pro 860	Pro	Pro	Leu	Pro
Ala 865	Pro	Val	Pro	Ile	Thr 870	Val	Pro	Pro	Ala	Ala 875	Pro	Thr	Ala	Val	Ala 880
Gln	Pro	Met	Pro	Ala 885	Phe	Gly	Leu	Ala	Ser 890	Ser	Pro	Phe	Gln	Pro 895	Val
Ala	Phe	His	Pro 900	Ser	Pro	Ala	Ala	Leu 905	Leu	Pro	Val	Leu	Val 910	Pro	Ser
Ser	Tyr	Thr	Ser	His	Pro	Ala	Pro	Lys	Lys	Glu	Val	Ile	Met	Gly	Arg

915		920		925
Pro Gly Thr Val Trp Thr Asn Val Glu Pro Arg Ser Val Ala Val Phe				
930		935		940
Pro Trp His Ser Leu Val Pro Phe Leu Ala Pro Ser Gln Pro Asp Pro				
945		950		955
				960
Ser Val Gln Pro Ser Glu Ala Gln Gln Pro Ala Ser His Pro Val Ala				
		965		970
				975
Ser Asn Gln Ser Lys Glu Pro Ala Glu Ser Ala Ala Val Ala His Glu				
		980		985
				990
Arg Pro Pro Gly Gly Thr Gly Ser Ala Asp Pro Glu Arg Pro Pro				
Gly				
	995		1000	1005
Ala Thr Cys Pro Glu Ser Pro Gly Pro Gly Pro Pro His Pro Leu				
1010		1015		1020
Gly Val Val Glu Ser Gly Lys Gly Pro Pro Pro Thr Thr Glu Glu				
1025		1030		1035
Glu Ala Ser Gly Pro Pro Gly Glu Pro Arg Leu Asp Ser Glu Thr				
1040		1045		1050
Glu Ser Asp His Asp Asp Ala Phe Leu Ser Ile Met Ser Pro Glu				
1055		1060		1065
Ile Gln Leu Pro Leu Pro Pro Gly Lys Arg Arg Thr Gln Ser Leu				
1070		1075		1080
Ser Ala Leu Pro Lys Glu Arg Asp Ser Ser Ser Glu Lys Asp Gly				
1085		1090		1095
Arg Ser Pro Asn Lys Arg Glu Lys Asp His Ile Arg Arg Pro Met				
1100		1105		1110
Asn Ala Phe Met Ile Phe Ser Lys Arg His Arg Ala Leu Val His				
1115		1120		1125
Gln Arg His Pro Asn Gln Asp Asn Arg Thr Val Ser Lys Ile Leu				

1130						1135						1140			
Gly	Glu	Trp	Trp	Tyr	Ala	Leu	Gly	Pro	Lys	Glu	Lys	Gln	Lys	Tyr	
1145						1150					1155				
His	Asp	Leu	Ala	Phe	Gln	Val	Lys	Glu	Ala	His	Phe	Lys	Ala	His	
1160						1165					1170				
Pro	Asp	Trp	Lys	Trp	Cys	Asn	Lys	Asp	Arg	Lys	Lys	Ser	Ser	Ser	
1175						1180					1185				
Glu	Ala	Lys	Pro	Thr	Ser	Leu	Gly	Leu	Ala	Gly	Gly	His	Lys	Glu	
1190						1195					1200				
Thr	Arg	Glu	Arg	Ser	Met	Ser	Glu	Thr	Gly	Thr	Ala	Ala	Ala	Pro	
1205						1210					1215				
Gly	Val	Ser	Ser	Glu	Leu	Leu	Ser	Val	Ala	Ala	Gln	Thr	Leu	Leu	
1220						1225					1230				
Ser	Ser	Asp	Thr	Lys	Ala	Pro	Gly	Ser	Ser	Ser	Cys	Gly	Ala	Glu	
1235						1240					1245				
Arg	Leu	His	Thr	Val	Gly	Gly	Pro	Gly	Ser	Ala	Arg	Pro	Arg	Ala	
1250						1255					1260				
Phe	Ser	His	Ser	Gly	Val	His	Ser	Leu	Asp	Gly	Gly	Glu	Val	Asp	
1265						1270					1275				
Ser	Gln	Ala	Leu	Gln	Glu	Leu	Thr	Gln	Met	Val	Ser	Gly	Pro	Ala	
1280						1285					1290				
Ser	Tyr	Ser	Gly	Pro	Lys	Pro	Ser	Thr	Gln	Tyr	Gly	Ala	Pro	Gly	
1295						1300					1305				
Pro	Phe	Ala	Ala	Pro	Gly	Glu	Gly	Gly	Ala	Leu	Ala	Ala	Thr	Gly	
1310						1315					1320				
Arg	Pro	Pro	Leu	Leu	Pro	Thr	Arg	Ala	Ser	Arg	Ser	Gln	Arg	Ala	
1325						1330					1335				
Ala	Ser	Glu	Asp	Met	Thr	Ser	Asp	Glu	Glu	Arg	Met	Val	Ile	Cys	
1340						1345					1350				

Glu	Glu	Glu	Gly	Asp	Asp	Asp	Val	Ile	Ala	Asp	Asp	Gly	Phe	Gly
1355						1360					1365			
Thr	Thr	Asp	Ile	Asp	Leu	Lys	Cys	Lys	Glu	Arg	Val	Thr	Asp	Ser
1370						1375					1380			
Glu	Ser	Gly	Asp	Ser	Ser	Gly	Glu	Asp	Pro	Glu	Gly	Asn	Lys	Gly
1385						1390					1395			
Phe	Gly	Arg	Lys	Val	Phe	Ser	Pro	Val	Ile	Arg	Ser	Ser	Phe	Thr
1400						1405					1410			
His	Cys	Arg	Pro	Pro	Leu	Asp	Pro	Glu	Pro	Pro	Gly	Pro	Pro	Asp
1415						1420					1425			
Pro	Pro	Val	Ala	Phe	Gly	Lys	Gly	Tyr	Gly	Ser	Ala	Pro	Ser	Ser
1430						1435					1440			
Ser	Ala	Ser	Ser	Pro	Ala	Ser	Ser	Ser	Ala	Ser	Ala	Ala	Thr	Ser
1445						1450					1455			
Phe	Ser	Leu	Gly	Ser	Gly	Thr	Phe	Lys	Ala	Gln	Glu	Ser	Gly	Gln
1460						1465					1470			
Gly	Ser	Thr	Ala	Gly	Pro	Leu	Arg	Pro	Pro	Pro	Pro	Gly	Ala	Gly
1475						1480					1485			
Gly	Pro	Ala	Thr	Pro	Ser	Lys	Ala	Thr	Arg	Phe	Leu	Pro	Met	Asp
1490						1495					1500			
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1505						1510					1515			
Glu	Pro	Pro	Gly	Pro	Ser	Val	Ile	Ala	Ala	Pro	Pro	Ser	Gly	Gly
1520						1525					1530			
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1535						1540					1545			
Gln	Glu	Gly	Gly	Gly	Ala	Arg	Val	Pro	Ser	Ala	Pro	Ala	Pro	Ser
1550						1555					1560			

Leu	Ala	Tyr	Gly	Ala	Pro	Ala	Ala	Pro	Leu	Ser	Arg	Pro	Ala	Ala
1565						1570					1575			
Thr	Met	Val	Thr	Asn	Val	Val	Arg	Pro	Val	Ser	Ser	Thr	Pro	Val
1580						1585					1590			
Pro	Ile	Ala	Ser	Lys	Pro	Phe	Pro	Thr	Ser	Gly	Arg	Ala	Glu	Ala
1595						1600					1605			
Ser	Pro	Asn	Asp	Thr	Ala	Gly	Ala	Arg	Thr	Glu	Met	Gly	Thr	Gly
1610						1615					1620			
Ser	Arg	Val	Pro	Gly	Gly	Ser	Pro	Leu	Gly	Val	Ser	Leu	Val	Tyr
1625						1630					1635			
Ser	Asp	Lys	Lys	Ser	Ala	Ala	Ala	Thr	Ser	Pro	Ala	Pro	His	Leu
1640						1645					1650			
Val	Ala	Gly	Pro	Leu	Leu	Gly	Thr	Val	Gly	Lys	Ala	Pro	Ala	Thr
1655						1660					1665			
Val	Thr	Asn	Leu	Leu	Val	Gly	Thr	Pro	Gly	Tyr	Gly	Ala	Pro	Ala
1670						1675					1680			
Pro	Pro	Ala	Val	Gln	Phe	Ile	Ala	Gln	Gly	Ala	Pro	Gly	Gly	Gly
1685						1690					1695			
Thr	Thr	Ala	Gly	Ser	Gly	Ala	Gly	Ala	Gly	Ser	Gly	Pro	Asn	Gly
1700						1705					1710			
Pro	Val	Pro	Leu	Gly	Ile	Leu	Gln	Pro	Gly	Ala	Leu	Gly	Lys	Ala
1715						1720					1725			
Gly	Gly	Ile	Thr	Gln	Val	Gln	Tyr	Ile	Leu	Pro	Thr	Leu	Pro	Gln
1730						1735					1740			
Gln	Leu	Gln	Val	Ala	Pro	Ala	Pro	Ala	Pro	Ala	Pro	Gly	Thr	Lys
1745						1750					1755			
Ala	Ala	Ala	Pro	Ser	Gly	Pro	Ala	Pro	Thr	Thr	Ser	Ile	Arg	Phe
1760						1765					1770			

Thr	Leu	Pro	Pro	Gly	Thr	Ser	Thr	Asn	Gly	Lys	Val	Leu	Ala	Ala
1775						1780					1785			
Thr	Ala	Pro	Thr	Pro	Gly	Ile	Pro	Ile	Leu	Gln	Ser	Val	Pro	Ser
1790						1795					1800			
Ala	Pro	Pro	Pro	Lys	Ala	Gln	Ser	Val	Ser	Pro	Val	Gln	Ala	Pro
1805						1810					1815			
Pro	Pro	Gly	Gly	Ser	Ala	Gln	Leu	Leu	Pro	Gly	Lys	Val	Leu	Val
1820						1825					1830			
Pro	Leu	Ala	Ala	Pro	Ser	Met	Ser	Val	Arg	Gly	Gly	Gly	Ala	Gly
1835						1840					1845			
Gln	Pro	Leu	Pro	Leu	Val	Ser	Pro	Pro	Phe	Ser	Val	Pro	Val	Gln
1850						1855					1860			
Asn	Gly	Ala	Gln	Pro	Pro	Ser	Lys	Ile	Ile	Gln	Leu	Thr	Pro	Val
1865						1870					1875			
Pro	Val	Ser	Thr	Pro	Ser	Gly	Leu	Val	Pro	Pro	Leu	Ser	Pro	Ala
1880						1885					1890			
Thr	Leu	Pro	Gly	Pro	Thr	Ser	Gln	Pro	Gln	Lys	Val	Leu	Leu	Pro
1895						1900					1905			
Ser	Ser	Thr	Arg	Ile	Thr	Tyr	Val	Gln	Ser	Ala	Gly	Gly	His	Ala
1910						1915					1920			
Leu	Pro	Leu	Gly	Thr	Ser	Pro	Ala	Ser	Ser	Gln	Ala	Gly	Thr	Val
1925						1930					1935			
Thr	Ser	Tyr	Gly	Pro	Thr	Ser	Ser	Val	Ala	Leu	Gly	Phe	Thr	Ser
1940						1945					1950			
Leu	Gly	Pro	Ser	Gly	Pro	Ala	Phe	Val	Gln	Pro	Leu	Leu	Ser	Gly
1955						1960					1965			
Gln	Ala	Pro	Leu	Leu	Ala	Pro	Gly	Gln	Val	Gly	Val	Ser	Pro	Val
1970						1975					1980			
Pro	Ser	Pro	Gln	Leu	Pro	Pro	Ala	Cys	Ala	Ala	Pro	Gly	Gly	Pro

1985	1990	1995
Val Ile Thr Ala Phe Tyr Ser Gly Ser Pro Ala Pro Thr Ser Ser 2000 2005 2010		
Ala Pro Leu Ala Gln Pro Ser Gln Ala Pro Pro Ser Leu Val Tyr 2015 2020 2025		
Thr Val Ala Thr Ser Thr Thr Pro Pro Ala Ala Thr Ile Leu Pro 2030 2035 2040		
Lys Gly Pro Pro Ala Pro Ala Thr Ala Thr Pro Ala Pro Thr Ser 2045 2050 2055		
Pro Phe Pro Ser Ala Thr Gly Ser Met Thr Tyr Ser Leu Val Ala 2060 2065 2070		
Pro Lys Ala Gln Arg Pro Ser Pro Lys Ala Pro Gln Lys Val Lys 2075 2080 2085		
Ala Ala Ile Ala Ser Ile Pro Val Gly Ser Phe Glu Ala Gly Ala 2090 2095 2100		
Ser Gly Arg Pro Gly Pro Ala Pro Arg Gln Pro Leu Glu Pro Gly 2105 2110 2115		
Pro Val Arg Glu Pro Thr Ala Pro Glu Ser Glu Leu Glu Gly Gln 2120 2125 2130		
Pro Thr Pro Pro Ala Pro Pro Pro Leu Pro Glu Thr Trp Thr Pro 2135 2140 2145		
Thr Ala Arg Ser Ser Pro Pro Leu Pro Pro Pro Ala Glu Glu Arg 2150 2155 2160		
Thr Ser Ala Lys Gly Pro Glu Thr Met Ala Ser Lys Phe Pro Ser 2165 2170 2175		
Ser Ser Ser Asp Trp Arg Val Pro Gly Gln Gly Leu Glu Asn Arg 2180 2185 2190		
Gly Glu Pro Pro Thr Pro Pro Ser Pro Ala Pro Ala Pro Ala Val 2195 2200 2205		

Ala	Pro	Gly	Gly	Ser	Ser	Glu	Ser	Ser	Ser	Gly	Arg	Ala	Ala	Gly
2210						2215					2220			
Asp	Thr	Pro	Glu	Arg	Lys	Glu	Ala	Ala	Gly	Thr	Gly	Lys	Lys	Val
2225						2230					2235			
Lys	Val	Arg	Pro	Pro	Pro	Leu	Lys	Lys	Thr	Phe	Asp	Ser	Val	Asp
2240						2245					2250			
Lys	Val	Leu	Ser	Glu	Val	Asp	Phe	Glu	Glu	Arg	Phe	Ala	Glu	Leu
2255						2260					2265			
Pro	Glu	Phe	Arg	Pro	Glu	Glu	Val	Leu	Pro	Ser	Pro	Thr	Leu	Gln
2270						2275					2280			
Ser	Leu	Ala	Thr	Ser	Pro	Arg	Ala	Ile	Leu	Gly	Ser	Tyr	Arg	Lys
2285						2290					2295			
Lys	Arg	Lys	Asn	Ser	Thr	Asp	Leu	Asp	Ser	Ala	Pro	Glu	Asp	Pro
2300						2305					2310			
Thr	Ser	Pro	Lys	Arg	Lys	Met	Arg	Arg	Arg	Ser	Ser	Cys	Ser	Ser
2315						2320					2325			
Glu	Pro	Asn	Thr	Pro	Lys	Ser	Ala	Lys	Cys	Glu	Gly	Asp	Ile	Phe
2330						2335					2340			
Thr	Phe	Asp	Arg	Thr	Gly	Thr	Glu	Ala	Glu	Asp	Val	Leu	Gly	Glu
2345						2350					2355			
Leu	Glu	Tyr	Asp	Lys	Val	Pro	Tyr	Ser	Ser	Leu	Arg	Arg	Thr	Leu
2360						2365					2370			
Asp	Gln	Arg	Arg	Ala	Leu	Val	Met	Gln	Leu	Phe	Gln	Asp	His	Gly
2375						2380					2385			
Phe	Phe	Pro	Ser	Ala	Gln	Ala	Thr	Ala	Ala	Phe	Gln	Ala	Arg	Tyr
2390						2395					2400			
Ala	Asp	Ile	Phe	Pro	Ser	Lys	Val	Cys	Leu	Gln	Leu	Lys	Ile	Arg
2405						2410					2415			

Glu Val Arg Gln Lys Ile Met Gln Ala Ala Thr Pro Thr Glu Gln
2420 2425 2430

Pro Pro Gly Ala Glu Ala Pro Leu Pro Val Pro Pro Pro Thr Gly
2435 2440 2445

Thr Ala Ala Ala Pro Ala Pro Thr Pro Ser Pro Ala Gly Gly Pro
2450 2455 2460

Asp Pro Thr Ser Pro Ser Ser Asp Ser Gly Thr Ala Gln Ala Ala
2465 2470 2475

Pro Pro Leu Pro Pro Pro Pro Glu Ser Gly Pro Gly Gln Pro Gly
2480 2485 2490

Trp Glu Gly Ala Pro Gln Pro Ser Pro Pro Pro Pro Gly Pro Ser
2495 2500 2505

Thr Ala Ala Thr Gly Arg
2510

<210> 11605
<211> 144
<212> PRT
<213> Homo sapiens

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<223> /note="Payload ID: 2285"

<220>
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<223> /note="Gene Symbol: CIC"

<220>
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<223> /note="Gene Name:
capicua transcriptional repressor"

<220>
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<223> /note="ENSP ID: ENSP00000460230"

<400> 11605
Pro Glu Arg Lys Glu Ala Ala Gly Thr Gly Lys Lys Val Lys Val Arg
1 5 10 15

Pro Pro Pro Leu Lys Lys Thr Phe Asp Ser Val Asp Asn Arg Val Leu
25920

20										25					30														
Ser	Glu	Val	Asp	Phe	Glu	Glu	Arg	Phe	Ala	Glu	Leu	Pro	Glu	Phe	Arg														
		35					40					45																	
Pro	Glu	Glu	Val	Leu	Pro	Ser	Pro	Thr	Leu	Gln	Ser	Leu	Ala	Thr	Ser														
	50					55					60																		
Pro	Arg	Ala	Ile	Leu	Gly	Ser	Tyr	Arg	Lys	Lys	Arg	Lys	Asn	Ser	Thr														
65					70					75					80														
Asp	Leu	Asp	Ser	Ala	Pro	Glu	Asp	Pro	Thr	Ser	Pro	Lys	Arg	Lys	Met														
				85					90					95															
Arg	Arg	Arg	Ser	Ser	Cys	Ser	Ser	Glu	Pro	Asn	Thr	Pro	Lys	Ser	Ala														
			100					105					110																
Lys	Cys	Glu	Gly	Asp	Ile	Phe	Thr	Phe	Asp	Arg	Thr	Ala	Leu	Pro	Cys														
		115					120					125																	
Cys	Leu	Cys	Pro	Ala	Gln	Val	Gln	Lys	Pro	Arg	Thr	Cys	Leu	Gly	Ser														
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<210> 11606

<211> 286

<212> PRT

<213> Homo sapiens

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<223> /note="Gene Symbol: CAPZA1"

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<223> /note="Gene Name:
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<220>

<221> source

<223> /note="Uniprot ID: P52907"

<220>

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<223> /note="ENSP ID: ENSP00000263168"

<400> 11606

Met Ala Asp Phe Asp Asp Arg Val Ser Asp Glu Glu Lys Val Arg Ile
1 5 10 15

Ala Ala Lys Phe Ile Thr His Ala Pro Pro Gly Glu Phe Asn Glu Val
20 25 30

Phe Asn Asp Val Arg Leu Leu Leu Asn Asn Asp Asn Leu Leu Arg Glu
35 40 45

Gly Ala Ala His Ala Phe Ala Gln Tyr Asn Met Asp Gln Phe Thr Pro
50 55 60

Val Lys Ile Glu Gly Tyr Glu Asp Gln Val Leu Ile Thr Glu His Gly
65 70 75 80

Asp Leu Gly Asn Ser Arg Phe Leu Asp Pro Arg Asn Lys Ile Ser Phe
85 90 95

Lys Phe Asp His Leu Arg Lys Glu Ala Ser Asp Pro Gln Pro Glu Glu
100 105 110

Ala Asp Gly Gly Leu Lys Ser Trp Arg Glu Ser Cys Asp Ser Ala Leu
115 120 125

Arg Ala Tyr Val Lys Asp His Tyr Ser Asn Gly Phe Cys Thr Val Tyr
130 135 140

Ala Lys Thr Ile Asp Gly Gln Gln Thr Ile Ile Ala Cys Ile Glu Ser
145 150 155 160

His Gln Phe Gln Pro Lys Asn Phe Trp Asn Gly Arg Trp Arg Ser Glu
165 170 175

Trp Lys Phe Thr Ile Thr Pro Pro Thr Ala Gln Val Val Gly Val Leu
180 185 190

Lys Ile Gln Val His Tyr Tyr Glu Asp Gly Asn Val Gln Leu Val Ser
195 200 205

His Lys Asp Val Gln Asp Ser Leu Thr Val Ser Asn Glu Ala Gln Thr
210 215 220

Ala Lys Glu Phe Ile Lys Ile Ile Glu Asn Ala Glu Asn Glu Tyr Gln
 225 230 235 240

Thr Ala Ile Ser Glu Asn Tyr Gln Thr Met Ser Asp Thr Thr Phe Lys
 245 250 255

Ala Leu Arg Arg Gln Leu Pro Val Thr Arg Thr Lys Ile Asp Trp Asn
 260 265 270

Lys Ile Leu Ser Tyr Lys Ile Gly Lys Glu Met Gln Asn Ala
 275 280 285

<210> 11607

<211> 286

<212> PRT

<213> Homo sapiens

<220>

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<223> /note="Payload ID: 2287"

<220>

<221> source

<223> /note="Gene Symbol: CAPZA2"

<220>

<221> source

<223> /note="Gene Name:
 capping protein (actin filament) muscle Z-line, alpha 2"

<220>

<221> source

<223> /note="Uniprot ID: P47755"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000354947"

<400> 11607

Met Ala Asp Leu Glu Glu Gln Leu Ser Asp Glu Glu Lys Val Arg Ile
 1 5 10 15

Ala Ala Lys Phe Ile Ile His Ala Pro Pro Gly Glu Phe Asn Glu Val
 20 25 30

Phe Asn Asp Val Arg Leu Leu Leu Asn Asn Asp Asn Leu Leu Arg Glu
 35 40 45

Gly Ala Ala His Ala Phe Ala Gln Tyr Asn Leu Asp Gln Phe Thr Pro
 50 55 60

Val	Lys	Ile	Glu	Gly	Tyr	Glu	Asp	Gln	Val	Leu	Ile	Thr	Glu	His	Gly	
65					70					75					80	
Asp	Leu	Gly	Asn	Gly	Lys	Phe	Leu	Asp	Pro	Lys	Asn	Arg	Ile	Cys	Phe	
				85					90					95		
Lys	Phe	Asp	His	Leu	Arg	Lys	Glu	Ala	Thr	Asp	Pro	Arg	Pro	Cys	Glu	
			100					105					110			
Val	Glu	Asn	Ala	Val	Glu	Ser	Trp	Arg	Thr	Ser	Val	Glu	Thr	Ala	Leu	
		115					120					125				
Arg	Ala	Tyr	Val	Lys	Glu	His	Tyr	Pro	Asn	Gly	Val	Cys	Thr	Val	Tyr	
	130					135					140					
Gly	Lys	Lys	Ile	Asp	Gly	Gln	Gln	Thr	Ile	Ile	Ala	Cys	Ile	Glu	Ser	
145					150					155					160	
His	Gln	Phe	Gln	Ala	Lys	Asn	Phe	Trp	Asn	Gly	Arg	Trp	Arg	Ser	Glu	
				165					170					175		
Trp	Lys	Phe	Thr	Ile	Thr	Pro	Ser	Thr	Thr	Gln	Val	Val	Gly	Ile	Leu	
			180					185					190			
Lys	Ile	Gln	Val	His	Tyr	Tyr	Glu	Asp	Gly	Asn	Val	Gln	Leu	Val	Ser	
		195					200					205				
His	Lys	Asp	Ile	Gln	Asp	Ser	Leu	Thr	Val	Ser	Asn	Glu	Val	Gln	Thr	
	210					215					220					
Ala	Lys	Glu	Phe	Ile	Lys	Ile	Val	Glu	Ala	Ala	Glu	Asn	Glu	Tyr	Gln	
225					230					235					240	
Thr	Ala	Ile	Ser	Glu	Asn	Tyr	Gln	Thr	Met	Ser	Asp	Thr	Thr	Phe	Lys	
				245					250					255		
Ala	Leu	Arg	Arg	Gln	Leu	Pro	Val	Thr	Arg	Thr	Lys	Ile	Asp	Trp	Asn	
			260					265					270			
Lys	Ile	Leu	Ser	Tyr	Lys	Ile	Gly	Lys	Glu	Met	Gln	Asn	Ala			
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<210> 11608
<211> 174
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<220>
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<220>
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<223> /note="Gene Name:
        capping protein (actin filament) muscle Z-line, alpha 2"

<220>
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<223> /note="ENSP ID: ENSP00000395395"

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Met Ala Asp Leu Glu Gln Leu Ser Asp Glu Glu Lys Val Arg Ile
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Ala Ala Lys Phe Ile Ile His Ala Pro Pro Gly Glu Phe Asn Glu Val
20          25          30

Phe Asn Asp Val Arg Leu Leu Leu Asn Asn Asp Asn Leu Leu Arg Glu
35          40          45

Gly Ala Ala His Ala Phe Ala Gln Tyr Asn Leu Asp Gln Phe Thr Pro
50          55          60

Val Lys Ile Glu Gly Tyr Glu Asp Gln Val Leu Ile Thr Glu His Gly
65          70          75          80

Asp Leu Gly Asn Gly Lys Phe Leu Asp Pro Lys Asn Arg Ile Cys Phe
85          90          95

Lys Phe Asp His Leu Arg Lys Glu Ala Thr Asp Pro Arg Pro Cys Glu
100         105         110

Val Glu Asn Ala Val Glu Ser Trp Arg Thr Ser Val Glu Thr Ala Leu
115         120         125

Arg Ala Tyr Val Lys Glu His Tyr Pro Asn Gly Val Cys Thr Val Tyr

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130 135 140

Gly Lys Lys Ile Asp Gly Gln Gln Thr Ile Ile Ala Cys Ile Glu Ser
 145 150 155 160

His Gln Phe Gln Ala Lys Asn Phe Cys Cys Cys Phe Tyr Phe
 165 170

<210> 11609
 <211> 37
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 <213> Homo sapiens

<220>
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<220>
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 <223> /note="Gene Name:
 capping protein (actin filament) muscle Z-line, alpha 2"

<220>
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 <223> /note="ENSP ID: ENSP00000408150"

<400> 11609
 Met Ala Asp Leu Glu Glu Gln Leu Ser Asp Glu Glu Lys Thr Lys Ser
 1 5 10 15

Val Leu His Phe Glu Asp Phe Glu Ser Arg Gly Pro Gly Lys Leu Ala
 20 25 30

Asn Phe Phe Leu Lys
 35

<210> 11610
 <211> 34
 <212> PRT
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<220>
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<220>
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<223> /note="Gene Symbol: CAPZA2"

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<223> /note="Gene Name:
capping protein (actin filament) muscle Z-line, alpha 2"

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<223> /note="ENSP ID: ENSP00000418262"

<400> 11610

Met Pro Leu Leu Glu Asn Leu Met Arg Phe Ser Met Met Phe Gly Tyr
1 5 10 15

Cys Leu Ile Met Thr Ile Phe Ser Gly Lys Glu Gln Pro Met His Leu
20 25 30

His Ser

<210> 11611

<211> 146

<212> PRT

<213> Homo sapiens

<220>

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<223> /note="Payload ID: 2287"

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<223> /note="Gene Name:
capping protein (actin filament) muscle Z-line, alpha 2"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000419484"

<400> 11611

Met Ala Asp Leu Glu Glu Gln Leu Ser Asp Glu Glu Lys Val Arg Ile
1 5 10 15

Ala Ala Lys Phe Ile Ile His Ala Pro Pro Gly Glu Phe Asn Glu Val
20 25 30

Phe Asn Asp Val Arg Leu Leu Leu Asn Asn Asp Asn Leu Leu Arg Glu
35 40 45

25927

Gly Ala Ala His Ala Phe Ala Gln Tyr Asn Leu Asp Gln Phe Thr Pro
50 55 60

Val Lys Ile Glu Gly Tyr Glu Asp Gln Val Leu Ile Thr Glu His Gly
65 70 75 80

Asp Leu Gly Asn Gly Lys Phe Leu Asp Pro Lys Asn Arg Ile Cys Phe
85 90 95

Lys Phe Asp His Leu Arg Lys Glu Ala Thr Asp Pro Arg Pro Cys Glu
100 105 110

Val Glu Asn Ala Val Glu Ser Trp Arg Thr Ser Val Glu Thr Ala Leu
115 120 125

Arg Ala Tyr Val Lys Glu His Tyr Pro Asn Gly Val Cys Thr Val Ser
130 135 140

His Gln
145

<210> 11612
<211> 34
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<213> Homo sapiens

<220>
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<223> /note="Payload ID: 2287"

<220>
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<223> /note="Gene Symbol: CAPZA2"

<220>
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<223> /note="Gene Name:
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<220>
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<223> /note="ENSP ID: ENSP00000420640"

<400> 11612
Met Pro Leu Leu Glu Asn Leu Met Arg Phe Ser Met Met Phe Gly Tyr
1 5 10 15

Cys Leu Ile Met Thr Ile Phe Ser Gly Lys Glu Gln Pro Met His Leu
20 25 30

His Ser

<210> 11613
<211> 174
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<213> Homo sapiens

<220>
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<220>
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<223> /note="Gene Name:
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<220>
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<400> 11613
Met Ile Asp Val Arg Tyr Gln Ile Asp Asn Lys Lys Met Val Arg Ile
1 5 10 15

Ala Ala Lys Phe Ile Ile His Ala Pro Pro Gly Glu Phe Asn Glu Val
20 25 30

Phe Asn Asp Val Arg Leu Leu Leu Asn Asn Asp Asn Leu Leu Arg Glu
35 40 45

Gly Ala Ala His Ala Phe Ala Gln Tyr Asn Leu Asp Gln Phe Thr Pro
50 55 60

Val Lys Ile Glu Gly Tyr Glu Asp Gln Val Leu Ile Thr Glu His Gly
65 70 75 80

Asp Leu Gly Asn Gly Lys Phe Leu Asp Pro Lys Asn Arg Ile Cys Phe
85 90 95

Lys Phe Asp His Leu Arg Lys Glu Ala Thr Asp Pro Arg Pro Cys Glu
100 105 110

Val Glu Asn Ala Val Glu Ser Trp Arg Thr Ser Val Glu Thr Ala Leu
115 120 125

Arg Ala Tyr Val Lys Glu His Tyr Pro Asn Gly Val Cys Thr Val Tyr
130 135 140

Gly Lys Lys Ile Asp Gly Gln Gln Thr Ile Ile Ala Cys Ile Glu Ser
145 150 155 160

His Gln Phe Gln Ala Lys Asn Phe Cys Cys Cys Phe Tyr Phe
165 170

<210> 11614
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<223> /note="Gene Symbol: CAPZA3"

<220>
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<223> /note="Gene Name:
capping protein (actin filament) muscle Z-line, alpha 3"

<220>
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<220>
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<400> 11614
Met Thr Leu Ser Val Leu Ser Arg Lys Asp Lys Glu Arg Val Ile Arg
1 5 10 15

Arg Leu Leu Leu Gln Ala Pro Pro Gly Glu Phe Val Asn Ala Phe Asp
20 25 30

Asp Leu Cys Leu Leu Ile Arg Asp Glu Lys Leu Met His His Gln Gly
35 40 45

Glu	Cys	Ala	Gly	His	Gln	His	Cys	Gln	Lys	Tyr	Ser	Val	Pro	Leu	Cys	
	50					55					60					
Ile	Asp	Gly	Asn	Pro	Val	Leu	Leu	Ser	His	His	Asn	Val	Met	Gly	Asp	
65					70					75					80	
Tyr	Arg	Phe	Phe	Asp	His	Gln	Ser	Lys	Leu	Ser	Phe	Lys	Tyr	Asp	Leu	
				85					90					95		
Leu	Gln	Asn	Gln	Leu	Lys	Asp	Ile	Gln	Ser	His	Gly	Ile	Ile	Gln	Asn	
			100					105					110			
Glu	Ala	Glu	Tyr	Leu	Arg	Val	Val	Leu	Leu	Cys	Ala	Leu	Lys	Leu	Tyr	
		115					120					125				
Val	Asn	Asp	His	Tyr	Pro	Lys	Gly	Asn	Cys	Asn	Met	Leu	Arg	Lys	Thr	
	130					135					140					
Val	Lys	Ser	Lys	Glu	Tyr	Leu	Ile	Ala	Cys	Ile	Glu	Asp	His	Asn	Tyr	
145					150					155					160	
Glu	Thr	Gly	Glu	Cys	Trp	Asn	Gly	Leu	Trp	Lys	Ser	Lys	Trp	Ile	Phe	
				165					170					175		
Gln	Val	Asn	Pro	Phe	Leu	Thr	Gln	Val	Thr	Gly	Arg	Ile	Phe	Val	Gln	
			180					185					190			
Ala	His	Phe	Phe	Arg	Cys	Val	Asn	Leu	His	Ile	Glu	Ile	Ser	Lys	Asp	
		195					200					205				
Leu	Lys	Glu	Ser	Leu	Glu	Ile	Val	Asn	Gln	Ala	Gln	Leu	Ala	Leu	Ser	
	210					215					220					
Phe	Ala	Arg	Leu	Val	Glu	Glu	Gln	Glu	Asn	Lys	Phe	Gln	Ala	Ala	Val	
225					230					235					240	
Leu	Glu	Glu	Leu	Gln	Glu	Leu	Ser	Asn	Glu	Ala	Leu	Arg	Lys	Ile	Leu	
				245					250					255		
Arg	Arg	Asp	Leu	Pro	Val	Thr	Arg	Thr	Leu	Ile	Asp	Trp	His	Arg	Ile	
			260					265					270			
Leu	Ser	Asp	Leu	Asn	Leu	Val	Met	Tyr	Pro	Lys	Leu	Gly	Tyr	Val	Ile	

275

280

285

Tyr Ser Arg Ser Val Leu Cys Asn Trp Ile Ile
 290 295

<210> 11615

<211> 272

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2289"

<220>

<221> source

<223> /note="Gene Symbol: CAPZB"

<220>

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<223> /note="Gene Name:
 capping protein (actin filament) muscle Z-line, beta"

<220>

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<223> /note="Uniprot ID: P47756"

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<223> /note="ENSP ID: ENSP00000264202"

<400> 11615

Met Ser Asp Gln Gln Leu Asp Cys Ala Leu Asp Leu Met Arg Arg Leu
 1 5 10 15

Pro Pro Gln Gln Ile Glu Lys Asn Leu Ser Asp Leu Ile Asp Leu Val
 20 25 30

Pro Ser Leu Cys Glu Asp Leu Leu Ser Ser Val Asp Gln Pro Leu Lys
 35 40 45

Ile Ala Arg Asp Lys Val Val Gly Lys Asp Tyr Leu Leu Cys Asp Tyr
 50 55 60

Asn Arg Asp Gly Asp Ser Tyr Arg Ser Pro Trp Ser Asn Lys Tyr Asp
 65 70 75 80

Pro Pro Leu Glu Asp Gly Ala Met Pro Ser Ala Arg Leu Arg Lys Leu
 85 90 95

25932

Glu Val Glu Ala Asn Asn Ala Phe Asp Gln Tyr Arg Asp Leu Tyr Phe
100 105 110

Glu Gly Gly Val Ser Ser Val Tyr Leu Trp Asp Leu Asp His Gly Phe
115 120 125

Ala Gly Val Ile Leu Ile Lys Lys Ala Gly Asp Gly Ser Lys Lys Ile
130 135 140

Lys Gly Cys Trp Asp Ser Ile His Val Val Glu Val Gln Glu Lys Ser
145 150 155 160

Ser Gly Arg Thr Ala His Tyr Lys Leu Thr Ser Thr Val Met Leu Trp
165 170 175

Leu Gln Thr Asn Lys Ser Gly Ser Gly Thr Met Asn Leu Gly Gly Ser
180 185 190

Leu Thr Arg Gln Met Glu Lys Asp Glu Thr Val Ser Asp Cys Ser Pro
195 200 205

His Ile Ala Asn Ile Gly Arg Leu Val Glu Asp Met Glu Asn Lys Ile
210 215 220

Arg Ser Thr Leu Asn Glu Ile Tyr Phe Gly Lys Thr Lys Asp Ile Val
225 230 235 240

Asn Gly Leu Arg Ser Val Gln Thr Phe Ala Asp Lys Ser Lys Gln Glu
245 250 255

Ala Leu Lys Asn Asp Leu Val Glu Ala Leu Lys Arg Lys Gln Gln Cys
260 265 270

<210> 11616

<211> 260

<212> PRT

<213> Homo sapiens

<220>

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<223> /note="Payload ID: 2289"

<220>

<221> source

<223> /note="Gene Symbol: CAPZB"

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<220>
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<220>
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<223> /note="ENSP ID: ENSP00000264203"

<400> 11616
Met Pro Arg Gln Phe Gln Asp Thr Gly Phe Ser Arg Pro Gly Leu Gly
1          5          10          15

Gln Pro Arg Arg Cys Asp Pro Glu Pro Arg Lys Ser Asp Gln Gln Leu
          20          25          30

Asp Cys Ala Leu Asp Leu Met Arg Arg Leu Pro Pro Gln Gln Ile Glu
          35          40          45

Lys Asn Leu Ser Asp Leu Ile Asp Leu Val Pro Ser Leu Cys Glu Asp
          50          55          60

Leu Leu Ser Ser Val Asp Gln Pro Leu Lys Ile Ala Arg Asp Lys Val
65          70          75          80

Val Gly Lys Asp Tyr Leu Leu Cys Asp Tyr Asn Arg Asp Gly Asp Ser
          85          90          95

Tyr Arg Ser Pro Trp Ser Asn Lys Tyr Asp Pro Pro Leu Glu Asp Gly
          100          105          110

Ala Met Pro Ser Ala Arg Leu Arg Lys Leu Glu Val Glu Ala Asn Asn
          115          120          125

Ala Phe Asp Gln Tyr Arg Asp Leu Tyr Phe Glu Gly Gly Val Ser Ser
          130          135          140

Val Tyr Leu Trp Asp Leu Asp His Gly Phe Ala Gly Val Ile Leu Ile
145          150          155          160

Lys Lys Ala Gly Asp Gly Ser Lys Lys Ile Lys Gly Cys Trp Asp Ser
          165          170          175

Ile His Val Val Glu Val Gln Glu Lys Ser Ser Gly Arg Thr Ala His
          180          185          190

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Tyr Lys Leu Thr Ser Thr Val Met Leu Trp Leu Gln Thr Asn Lys Ser
195 200 205

Gly Ser Gly Thr Met Asn Leu Gly Gly Ser Leu Thr Arg Gln Met Glu
210 215 220

Lys Asp Glu Thr Val Ser Asp Cys Ser Pro His Ile Ala Asn Ile Gly
225 230 235 240

Arg Leu Val Glu Val Cys Ala Asp Phe Cys Arg Gln Ile Lys Thr Arg
245 250 255

Ser Ser Glu Glu
260

<210> 11617
<211> 277
<212> PRT
<213> Homo sapiens

<220>
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<223> /note="Payload ID: 2289"

<220>
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<223> /note="Gene Symbol: CAPZB"

<220>
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<223> /note="Gene Name:
capping protein (actin filament) muscle Z-line, beta"

<220>
<221> source
<223> /note="Uniprot ID: P47756"

<220>
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<223> /note="ENSP ID: ENSP00000364284"

<400> 11617
Met Ser Asp Gln Gln Leu Asp Cys Ala Leu Asp Leu Met Arg Arg Leu
1 5 10 15

Pro Pro Gln Gln Ile Glu Lys Asn Leu Ser Asp Leu Ile Asp Leu Val
20 25 30

Pro	Ser	Leu	Cys	Glu	Asp	Leu	Leu	Ser	Ser	Val	Asp	Gln	Pro	Leu	Lys	
		35					40					45				
Ile	Ala	Arg	Asp	Lys	Val	Val	Gly	Lys	Asp	Tyr	Leu	Leu	Cys	Asp	Tyr	
	50					55					60					
Asn	Arg	Asp	Gly	Asp	Ser	Tyr	Arg	Ser	Pro	Trp	Ser	Asn	Lys	Tyr	Asp	
65					70					75					80	
Pro	Pro	Leu	Glu	Asp	Gly	Ala	Met	Pro	Ser	Ala	Arg	Leu	Arg	Lys	Leu	
				85					90					95		
Glu	Val	Glu	Ala	Asn	Asn	Ala	Phe	Asp	Gln	Tyr	Arg	Asp	Leu	Tyr	Phe	
			100					105					110			
Glu	Gly	Gly	Val	Ser	Ser	Val	Tyr	Leu	Trp	Asp	Leu	Asp	His	Gly	Phe	
		115					120					125				
Ala	Gly	Val	Ile	Leu	Ile	Lys	Lys	Ala	Gly	Asp	Gly	Ser	Lys	Lys	Ile	
	130					135					140					
Lys	Gly	Cys	Trp	Asp	Ser	Ile	His	Val	Val	Glu	Val	Gln	Glu	Lys	Ser	
145					150					155					160	
Ser	Gly	Arg	Thr	Ala	His	Tyr	Lys	Leu	Thr	Ser	Thr	Val	Met	Leu	Trp	
				165					170					175		
Leu	Gln	Thr	Asn	Lys	Ser	Gly	Ser	Gly	Thr	Met	Asn	Leu	Gly	Gly	Ser	
			180					185					190			
Leu	Thr	Arg	Gln	Met	Glu	Lys	Asp	Glu	Thr	Val	Ser	Asp	Cys	Ser	Pro	
		195					200					205				
His	Ile	Ala	Asn	Ile	Gly	Arg	Leu	Val	Glu	Asp	Met	Glu	Asn	Lys	Ile	
	210					215					220					
Arg	Ser	Thr	Leu	Asn	Glu	Ile	Tyr	Phe	Gly	Lys	Thr	Lys	Asp	Ile	Val	
225					230					235					240	
Asn	Gly	Leu	Arg	Ser	Ile	Asp	Ala	Ile	Pro	Asp	Asn	Gln	Lys	Phe	Lys	
				245					250					255		
Gln	Leu	Gln	Arg	Glu	Leu	Ser	Gln	Val	Leu	Thr	Gln	Arg	Gln	Ile	Tyr	

260

265

270

Ile Gln Pro Asp Asn
275

<210> 11618

<211> 260

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2289"

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<221> source

<223> /note="Gene Symbol: CAPZB"

<220>

<221> source

<223> /note="Gene Name:
capping protein (actin filament) muscle Z-line, beta"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000364286"

<400> 11618

Met Arg Arg Leu Pro Pro Gln Gln Ile Glu Lys Asn Leu Ser Asp Leu
1 5 10 15

Ile Asp Leu Val Pro Ser Leu Cys Glu Asp Leu Leu Ser Ser Val Asp
20 25 30

Gln Pro Leu Lys Ile Ala Arg Asp Lys Val Val Gly Lys Asp Tyr Leu
35 40 45

Leu Cys Asp Tyr Asn Arg Asp Gly Asp Ser Tyr Arg Ser Pro Trp Ser
50 55 60

Asn Lys Tyr Asp Pro Pro Leu Glu Asp Gly Ala Met Pro Ser Ala Arg
65 70 75 80

Leu Arg Lys Leu Glu Val Glu Ala Asn Asn Ala Phe Asp Gln Tyr Arg
85 90 95

Asp Leu Tyr Phe Glu Gly Gly Val Ser Ser Val Tyr Leu Trp Asp Leu
100 105 110

25937

Asp His Gly Phe Ala Gly Val Ile Leu Ile Lys Lys Ala Gly Asp Gly
115 120 125

Ser Lys Lys Ile Lys Gly Cys Trp Asp Ser Ile His Val Val Glu Val
130 135 140

Gln Glu Lys Ser Ser Gly Arg Thr Ala His Tyr Lys Leu Thr Ser Thr
145 150 155 160

Val Met Leu Trp Leu Gln Thr Asn Lys Ser Gly Ser Gly Thr Met Asn
165 170 175

Leu Gly Gly Ser Leu Thr Arg Gln Met Glu Lys Asp Glu Thr Val Ser
180 185 190

Asp Cys Ser Pro His Ile Ala Asn Ile Gly Arg Leu Val Glu Asp Met
195 200 205

Glu Asn Lys Ile Arg Ser Thr Leu Asn Glu Ile Tyr Phe Gly Lys Thr
210 215 220

Lys Asp Ile Val Asn Gly Leu Arg Ser Val Gln Thr Phe Ala Asp Lys
225 230 235 240

Ser Lys Gln Glu Ala Leu Lys Asn Asp Leu Val Glu Ala Leu Lys Arg
245 250 255

Lys Gln Gln Cys
260

<210> 11619
<211> 301
<212> PRT
<213> Homo sapiens

<220>
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<223> /note="Payload ID: 2289"

<220>
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<220>
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<223> /note="Gene Name:

capping protein (actin filament) muscle Z-line, beta"

<220>

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<223> /note="ENSP ID: ENSP00000401010"

<400> 11619

Met His Pro Ser Arg Arg Ser Leu Pro Phe Pro Leu Asn Cys Gln Leu
1 5 10 15

Ala Arg Val Gly Thr Ala Asp Tyr Gly Ser Pro Ser Asp Gln Ser Asp
20 25 30

Gln Gln Leu Asp Cys Ala Leu Asp Leu Met Arg Arg Leu Pro Pro Gln
35 40 45

Gln Ile Glu Lys Asn Leu Ser Asp Leu Ile Asp Leu Val Pro Ser Leu
50 55 60

Cys Glu Asp Leu Leu Ser Ser Val Asp Gln Pro Leu Lys Ile Ala Arg
65 70 75 80

Asp Lys Val Val Gly Lys Asp Tyr Leu Leu Cys Asp Tyr Asn Arg Asp
85 90 95

Gly Asp Ser Tyr Arg Ser Pro Trp Ser Asn Lys Tyr Asp Pro Pro Leu
100 105 110

Glu Asp Gly Ala Met Pro Ser Ala Arg Leu Arg Lys Leu Glu Val Glu
115 120 125

Ala Asn Asn Ala Phe Asp Gln Tyr Arg Asp Leu Tyr Phe Glu Gly Gly
130 135 140

Val Ser Ser Val Tyr Leu Trp Asp Leu Asp His Gly Phe Ala Gly Val
145 150 155 160

Ile Leu Ile Lys Lys Ala Gly Asp Gly Ser Lys Lys Ile Lys Gly Cys
165 170 175

Trp Asp Ser Ile His Val Val Glu Val Gln Glu Lys Ser Ser Gly Arg
180 185 190

Thr Ala His Tyr Lys Leu Thr Ser Thr Val Met Leu Trp Leu Gln Thr
195 200 205

25939

Asn Lys Ser Gly Ser Gly Thr Met Asn Leu Gly Gly Ser Leu Thr Arg
 210 215 220

Gln Met Glu Lys Asp Glu Thr Val Ser Asp Cys Ser Pro His Ile Ala
 225 230 235 240

Asn Ile Gly Arg Leu Val Glu Asp Met Glu Asn Lys Ile Arg Ser Thr
 245 250 255

Leu Asn Glu Ile Tyr Phe Gly Lys Thr Lys Asp Ile Val Asn Gly Leu
 260 265 270

Arg Ser Val Gln Thr Phe Ala Asp Lys Ser Lys Gln Glu Ala Leu Lys
 275 280 285

Asn Asp Leu Val Glu Ala Leu Lys Arg Lys Gln Gln Cys
 290 295 300

<210> 11620
 <211> 348
 <212> PRT
 <213> Homo sapiens

<220>
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 <223> /note="Payload ID: 2290"

<220>
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 <223> /note="Gene Symbol: CAPG"

<220>
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 <223> /note="Gene Name:
 capping protein (actin filament), gelsolin-like"

<220>
 <221> source
 <223> /note="Uniprot ID: P40121"

<220>
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<400> 11620
 Met Tyr Thr Ala Ile Pro Gln Ser Gly Ser Pro Phe Pro Gly Ser Val
 1 5 10 15

Gln	Asp	Pro	Gly 20	Leu	His	Val	Trp	Arg 25	Val	Glu	Lys	Leu	Lys 30	Pro	Val
Pro	Val	Ala 35	Gln	Glu	Asn	Gln	Gly 40	Val	Phe	Phe	Ser	Gly 45	Asp	Ser	Tyr
Leu	Val 50	Leu	His	Asn	Gly	Pro 55	Glu	Glu	Val	Ser	His 60	Leu	His	Leu	Trp
Ile 65	Gly	Gln	Gln	Ser	Ser 70	Arg	Asp	Glu	Gln	Gly 75	Ala	Cys	Ala	Val	Leu 80
Ala	Val	His	Leu	Asn 85	Thr	Leu	Leu	Gly	Glu 90	Arg	Pro	Val	Gln	His 95	Arg
Glu	Val	Gln	Gly 100	Asn	Glu	Ser	Asp	Leu 105	Phe	Met	Ser	Tyr	Phe 110	Pro	Arg
Gly	Leu	Lys 115	Tyr	Gln	Glu	Gly	Gly 120	Val	Glu	Ser	Ala	Phe 125	His	Lys	Thr
Ser	Thr 130	Gly	Ala	Pro	Ala	Ala 135	Ile	Lys	Lys	Leu	Tyr 140	Gln	Val	Lys	Gly
Lys 145	Lys	Asn	Ile	Arg	Ala 150	Thr	Glu	Arg	Ala	Leu 155	Asn	Trp	Asp	Ser	Phe 160
Asn	Thr	Gly	Asp	Cys 165	Phe	Ile	Leu	Asp	Leu 170	Gly	Gln	Asn	Ile	Phe 175	Ala
Trp	Cys	Gly	Gly 180	Lys	Ser	Asn	Ile	Leu 185	Glu	Arg	Asn	Lys	Ala 190	Arg	Asp
Leu	Ala	Leu 195	Ala	Ile	Arg	Asp	Ser 200	Glu	Arg	Gln	Gly	Lys 205	Ala	Gln	Val
Glu	Ile 210	Val	Thr	Asp	Gly	Glu 215	Glu	Pro	Ala	Glu	Met 220	Ile	Gln	Val	Leu
Gly 225	Pro	Lys	Pro	Ala	Leu 230	Lys	Glu	Gly	Asn	Pro 235	Glu	Glu	Asp	Leu	Thr 240
Ala	Asp	Lys	Ala	Asn	Ala	Gln	Ala	Ala	Ala	Leu	Tyr	Lys	Val	Ser	Asp

Ala Asp Lys Ala Asn Ala Gln Ala Ala Ala Leu Tyr Lys Val Ser Asp
245 250 255

Ala Thr Gly Gln Met Asn Leu Thr Lys Val Ala Asp Ser Ser Pro Phe
260 265 270

Ala Leu Glu Leu Leu Ile Ser Asp Asp Cys Phe Val Leu Asp Asn Gly
275 280 285

Leu Cys Gly Lys Ile Tyr Ile Trp Lys Gly Arg Lys Ala Asn Glu Lys
290 295 300

Glu Arg Gln Ala Ala Leu Gln Val Ala Glu Gly Phe Ile Ser Arg Met
305 310 315 320

Gln Tyr Ala Pro Asn Thr Gln Val Glu Ile Leu Pro Gln Gly His Glu
325 330 335

Ser Pro Ile Phe Lys Gln Phe Phe Lys Asp Trp Lys
340 345

<210> 11622
<211> 218
<212> PRT
<213> Homo sapiens

<220>
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<223> /note="Payload ID: 2290"

<220>
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<223> /note="Gene Symbol: CAPG"

<220>
<221> source
<223> /note="Gene Name:
capping protein (actin filament), gelsolin-like"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000386596"

<400> 11622
Met Tyr Thr Ala Ile Pro Gln Ser Gly Ser Pro Phe Pro Gly Ser Val
1 5 10 15

Gln Asp Pro Gly Leu His Val Trp Arg Val Glu Lys Leu Lys Pro Val
20 25 30

Pro	Val	Ala	Gln	Glu	Asn	Gln	Gly	Val	Phe	Phe	Ser	Gly	Asp	Ser	Tyr			
		35					40					45						
Leu	Val	Leu	His	Asn	Gly	Pro	Glu	Glu	Val	Ser	His	Leu	His	Leu	Trp			
	50					55					60							
Ile	Gly	Gln	Gln	Ser	Ser	Arg	Asp	Glu	Gln	Gly	Ala	Cys	Ala	Val	Leu			
65					70					75					80			
Ala	Val	His	Leu	Asn	Thr	Leu	Leu	Gly	Glu	Arg	Pro	Val	Gln	His	Arg			
				85					90					95				
Glu	Val	Gln	Gly	Asn	Glu	Ser	Asp	Leu	Phe	Met	Ser	Tyr	Phe	Pro	Arg			
			100					105					110					
Gly	Leu	Lys	Tyr	Gln	Glu	Gly	Gly	Val	Glu	Ser	Ala	Phe	His	Lys	Thr			
		115					120					125						
Ser	Thr	Gly	Ala	Pro	Ala	Ala	Ile	Lys	Lys	Leu	Tyr	Gln	Val	Lys	Gly			
	130					135					140							
Lys	Lys	Asn	Ile	Arg	Ala	Thr	Glu	Arg	Ala	Leu	Asn	Trp	Asp	Ser	Phe			
145					150					155					160			
Asn	Thr	Gly	Asp	Cys	Phe	Ile	Leu	Asp	Leu	Gly	Gln	Asn	Ile	Phe	Ala			
				165					170					175				
Trp	Cys	Gly	Gly	Lys	Ser	Asn	Ile	Leu	Glu	Arg	Asn	Lys	Ala	Arg	Asp			
			180					185					190					
Leu	Ala	Leu	Ala	Ile	Arg	Asp	Ser	Glu	Arg	Gln	Gly	Lys	Ala	Gln	Val			
		195					200					205						
Glu	Ile	Val	Thr	Asp	Gly	Glu	Glu	Pro	Ala									
	210					215												

<210> 11623

<211> 348

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2290"

<220>

<221> source

<223> /note="Gene Symbol: CAPG"

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<223> /note="Gene Name:
capping protein (actin filament), gelsolin-like"

<220>

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<223> /note="Uniprot ID: P40121"

<220>

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<223> /note="ENSP ID: ENSP00000386965"

<400> 11623

Met Tyr Thr Ala Ile Pro Gln Ser Gly Ser Pro Phe Pro Gly Ser Val
1 5 10 15

Gln Asp Pro Gly Leu His Val Trp Arg Val Glu Lys Leu Lys Pro Val
20 25 30

Pro Val Ala Gln Glu Asn Gln Gly Val Phe Phe Ser Gly Asp Ser Tyr
35 40 45

Leu Val Leu His Asn Gly Pro Glu Glu Val Ser His Leu His Leu Trp
50 55 60

Ile Gly Gln Gln Ser Ser Arg Asp Glu Gln Gly Ala Cys Ala Val Leu
65 70 75 80

Ala Val His Leu Asn Thr Leu Leu Gly Glu Arg Pro Val Gln His Arg
85 90 95

Glu Val Gln Gly Asn Glu Ser Asp Leu Phe Met Ser Tyr Phe Pro Arg
100 105 110

Gly Leu Lys Tyr Gln Glu Gly Gly Val Glu Ser Ala Phe His Lys Thr
115 120 125

Ser Thr Gly Ala Pro Ala Ala Ile Lys Lys Leu Tyr Gln Val Lys Gly
130 135 140

Lys Lys Asn Ile Arg Ala Thr Glu Arg Ala Leu Asn Trp Asp Ser Phe

145		150		155		160
Asn Thr Gly Asp Cys Phe Ile Leu Asp Leu Gly Gln Asn Ile Phe Ala						
		165		170		175
Trp Cys Gly Gly Lys Ser Asn Ile Leu Glu Arg Asn Lys Ala Arg Asp						
		180		185		190
Leu Ala Leu Ala Ile Arg Asp Ser Glu Arg Gln Gly Lys Ala Gln Val						
		195		200		205
Glu Ile Val Thr Asp Gly Glu Glu Pro Ala Glu Met Ile Gln Val Leu						
		210		215		220
Gly Pro Lys Pro Ala Leu Lys Glu Gly Asn Pro Glu Glu Asp Leu Thr						
		225		230		240
Ala Asp Lys Ala Asn Ala Gln Ala Ala Ala Leu Tyr Lys Val Ser Asp						
		245		250		255
Ala Thr Gly Gln Met Asn Leu Thr Lys Val Ala Asp Ser Ser Pro Phe						
		260		265		270
Ala Leu Glu Leu Leu Ile Ser Asp Asp Cys Phe Val Leu Asp Asn Gly						
		275		280		285
Leu Cys Gly Lys Ile Tyr Ile Trp Lys Gly Arg Lys Ala Asn Glu Lys						
		290		295		300
Glu Arg Gln Ala Ala Leu Gln Val Ala Glu Gly Phe Ile Ser Arg Met						
		305		310		315
Gln Tyr Ala Pro Asn Thr Gln Val Glu Ile Leu Pro Gln Gly His Glu						
		325		330		335
Ser Pro Ile Phe Lys Gln Phe Phe Lys Asp Trp Lys						
		340		345		

<210> 11624

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<223> /note="Gene Name:
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Met Tyr Thr Ala Ile Pro Gln Ser Gly Ser Pro Phe Pro Gly Ser Val
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Gln Asp Pro Gly Leu His Val Trp Arg Val Glu Lys Leu Lys Pro Val
          20          25          30

Pro Val Ala Gln Glu Asn Gln Gly Val Phe Phe Ser Gly Asp Ser Tyr
          35          40          45

Leu Val Leu His Asn Gly Pro Glu Glu Val Ser His Leu His Leu Trp
          50          55          60

Ile Gly Gln Gln Ser Ser Arg Asp Glu Gln Gly Ala Cys Ala Val Leu
65          70          75          80

Ala Val His Leu Asn Thr Leu Leu Gly Glu Arg Pro Val Gln His Arg
          85          90          95

Glu Val Gln Gly Asn Glu Ser Asp Leu Phe Met Ser Tyr Phe Pro Arg
          100          105          110

Gly Leu Lys Tyr Gln Glu Gly Gly Val Glu Ser Ala Phe His Lys Thr
          115          120          125

Ser Thr Gly Ala Pro Ala Ala Ile Lys Lys Leu Tyr Gln Val Lys Gly
          130          135          140

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Lys Lys Asn Ile Arg Ala Thr Glu Arg Ala Leu Asn Trp Asp Ser Phe
145 150 155 160

Asn Thr Gly Asp Cys Phe Ile Leu Asp Leu Gly Gln Asn Ile Phe Ala
165 170 175

Trp Cys Gly Gly Lys Ser Asn Ile Leu Glu Arg Asn Lys Ala Arg Asp
180 185 190

Leu Ala Leu Ala Ile Arg Asp Ser Glu Arg Gln Gly Lys Ala Gln Val
195 200 205

Leu Gly Pro Lys Pro Ala Leu Lys Glu Gly Asn Pro Glu Glu Asp Leu
210 215 220

Thr Ala Asp Lys Ala Asn Ala Gln Ala Ala Ala Leu Tyr Lys Val Ser
225 230 235 240

Asp Ala Thr Gly Gln Met Asn Leu Thr Lys Val Ala Asp Ser Ser Pro
245 250 255

Phe Ala Leu Glu Leu Leu Ile Ser Asp Asp Cys Phe Val Leu Asp Asn
260 265 270

Gly Leu Cys Gly Lys Ile Tyr Ile Trp Lys Gly Arg Lys Ala Asn Glu
275 280 285

Lys Glu Arg Gln Ala Ala Leu Gln Val Ala Glu Gly Phe Ile Ser Arg
290 295 300

Met Gln Tyr Ala Pro Asn Thr Gln Val Glu Ile Leu Pro Gln Gly His
305 310 315 320

Glu Ser Pro Ile Phe Lys Gln Phe Phe Lys Asp Trp Lys
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Met Tyr Thr Ala Ile Pro Gln Ser Gly Ser Pro Phe Pro Gly Ser Val
 1 5 10 15

Gln Asp Pro Gly Leu His Val Trp Arg Val Glu Lys Leu Lys Pro Val
 20 25 30

Pro Val Ala Gln Glu Asn Gln Gly Val Phe Phe Ser Gly Asp Ser Tyr
 35 40 45

Leu Val Leu His Asn Gly Pro Glu Glu Val Ser His Leu His Leu Trp
 50 55 60

Ile Gly Gln Gln Ser Ser Arg Asp Glu Gln Gly Ala Cys Ala Val Leu
 65 70 75 80

Ala Val His Leu Asn Thr Leu Leu Gly Glu Arg Pro Val Gln His Arg
 85 90 95

Glu Val Gln Gly Asn Glu Ser Asp Leu Phe Met Ser Tyr Phe Pro Arg
 100 105 110

Gly Leu Lys Tyr Gln Glu Gly Gly Val Glu Ser Ala Phe His Lys Thr
 115 120 125

Ser Thr Gly Ala Pro Ala Ala Ile Lys Lys Leu Tyr Gln Val Lys Gly
 130 135 140

Lys Lys Asn Ile Arg Ala Thr Glu Arg Ala Leu Asn Trp Asp Ser Phe
 145 150 155 160

Asn Thr Gly Asp Cys Phe Ile Leu Asp Leu Gly Gln Asn Ile Phe Ala
 165 170 175

Trp Cys Gly Gly Lys Ser Asn Ile Leu Glu Arg Asn Lys Ala Arg Asp
180 185 190

Leu Ala Leu Ala Ile Arg Asp Ser Glu Arg Gln Gly Lys Ala Gln Val
195 200 205

Glu Ile Val Thr Asp Gly Glu Glu Pro Ala Glu Met Ile Gln Val Leu
210 215 220

Gly Pro Lys Pro Ala Leu Lys Glu Gly Asn Pro Glu Glu Asp Leu Thr
225 230 235 240

Ala Asp Lys Ala Asn Ala Gln Ala Ala Ala Leu Tyr Lys
245 250

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Leu Thr Ala Asp Lys Ala Asn Ala Gln Ala Ala Ala Leu Tyr Lys Met
1 5 10 15

Asn Leu Thr Lys Val Ala Asp Ser Ser Pro Phe Ala Leu Glu Leu Leu
20 25 30

Ile Ser Asp Asp Cys Phe Val Leu Asp Asn Gly Leu Cys Gly Lys Ile
35 40 45

Tyr Ile Trp Lys Gly Arg Lys Ala Asn Glu Lys Glu Arg Gln Ala Ala
25951

50 55 60
 Leu Gln Val Ala Glu Gly Phe Ile Ser Arg Met Gln Tyr Ala Pro Asn
 65 70 75 80
 Thr Gln Val Glu Ile Leu Pro Gln Gly His Glu Ser Pro Ile Phe Lys
 85 90 95
 Gln Phe Phe Lys Asp Trp Lys
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<210> 11627
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 <212> PRT
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 Met Tyr Thr Ala Ile Pro Gln Ser Gly Ser Pro Phe Pro Gly Ser Val
 1 5 10 15

Gln Asp Pro Gly Leu His Val Trp Arg Val Glu Lys Leu Lys Pro Val
 20 25 30

Pro Val Ala Gln Glu Asn Gln Gly Val Phe Phe Ser Gly Asp Ser Tyr
 35 40 45

Leu Val Leu His Asn Gly Pro Glu Glu Val Ser His Leu His Leu Trp
 50 55 60

Ile Gly Gln Gln Ser Ser Arg Asp Glu Gln Gly Ala Cys Ala Val Leu
 65 70 75 80

Ala	Val	His	Leu	Asn	Thr	Leu	Leu	Gly	Glu	Arg	Pro	Val	Gln	His	Arg		
				85					90					95			
Glu	Val	Gln	Gly	Asn	Glu	Ser	Asp	Leu	Phe	Met	Ser	Tyr	Phe	Pro	Arg		
			100					105					110				
Gly	Leu	Lys	Tyr	Gln	Glu	Gly	Gly	Val	Glu	Ser	Ala	Phe	His	Lys	Thr		
		115					120					125					
Ser	Thr	Gly	Ala	Pro	Ala	Ala	Ile	Lys	Lys	Leu	Tyr	Gln	Val	Lys	Gly		
	130					135					140						
Lys	Lys	Asn	Ile	Arg	Ala	Thr	Glu	Arg	Ala	Leu	Asn	Trp	Asp	Ser	Phe		
145					150					155					160		
Asn	Thr	Gly	Asp	Cys	Phe	Ile	Leu	Asp	Leu	Gly	Gln	Asn	Ile	Phe	Ala		
				165					170					175			
Trp	Cys	Gly	Gly	Lys	Ser	Asn	Ile	Leu	Glu	Arg	Asn	Lys	Ala	Arg	Asp		
			180					185					190				
Leu	Ala	Leu	Ala	Ile	Arg	Asp	Ser	Glu	Arg	Gln	Gly	Lys	Ala	Gln	Val		
		195					200					205					
Glu	Ile	Val	Thr	Asp	Gly	Glu	Glu	Pro	Ala	Glu	Met	Ile	Gln	Val	Leu		
	210					215					220						
Gly	Pro	Lys	Pro	Ala	Leu	Lys	Glu	Gly	Asn	Pro	Glu	Glu	Asp	Leu	Thr		
225					230					235					240		
Ala	Asp	Lys	Ala	Asn	Ala	Gln	Ala	Ala	Ala	Leu	Tyr	Lys					
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Met Tyr Thr Ala Ile Pro Gln Ser Gly Ser Pro Phe Pro Gly Ser Val
1          5          10          15

Gln Asp Pro Gly Leu His Val Trp Arg Val Glu Lys Leu Lys Pro Val
          20          25          30

Pro Val Ala Gln Glu Asn Gln Gly Val Phe Phe Ser Gly Asp Ser Tyr
          35          40          45

Leu Val Leu His Asn Gly Pro Glu Glu Val Ser His Leu His Leu Trp
50          55          60

Ile Gly Gln Gln Ser Ser Arg Asp Glu Gln Gly Ala Cys Ala Val Leu
65          70          75          80

Ala Val His Leu Asn Thr Leu Leu Gly Glu Arg Pro Val Gln His Arg
          85          90          95

Glu Val Gln Gly Asn Glu Ser Asp Leu Phe Met Ser Tyr Phe Pro Arg
          100          105          110

Gly Leu Lys Tyr Gln Glu Gly Gly Val Glu Ser Ala Phe His Lys Thr
          115          120          125

Ser Thr Gly Ala Pro Ala Ala Ile Lys Lys Leu Tyr Gln Val Lys Gly
          130          135          140

Lys Lys Asn Ile Arg Ala Thr Glu Arg Ala Leu Asn Trp Asp Ser Phe
145          150          155          160

Asn Thr Gly Asp Cys Phe Ile Leu Asp Leu Gly Gln Asn Ile Phe Ala
          165          170          175

Trp Cys Gly Gly Lys Ser Asn Ile Leu Glu Arg Asn Lys Ala Arg Asp
          180          185          190

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Leu Ala Leu Ala Ile Arg Asp Ser Glu Arg Gln Gly Lys Ala Gln Val
195 200 205

Glu Ile Val Thr Asp Gly Glu Glu Pro Ala Glu Met Ile Gln Val Leu
210 215 220

Gly Pro Lys Pro Ala Leu Lys Glu Gly Asn Pro Glu Glu Asp Leu Thr
225 230 235 240

Ala Asp Lys Ala Asn Ala Gln Ala Ala Ala Leu Tyr Lys
245 250

<210> 11629
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<220>
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Met Glu Val Gln Val Ser Gln Ala Ser Leu Gly Phe Glu Leu Thr Ser
1 5 10 15

Val Glu Lys Ser Leu Arg Glu Trp Ser Arg Leu Ser Arg Glu Val Ile
20 25 30

Ala Trp Leu Cys Pro Ser Ser Pro Asn Phe Ile Leu Asn Phe Pro Pro
35 40 45

Pro	Pro	Ser	Ala	Ser	Ser	Val	Ser	Met	Val	Gln	Leu	Phe	Ser	Ser	Pro
	50					55					60				
Phe	Gly	Tyr	Gln	Ser	Pro	Ser	Gly	His	Ser	Glu	Glu	Glu	Arg	Glu	Gly
65					70					75					80
Asn	Met	Lys	Ser	Ala	Lys	Pro	Gln	Val	Asn	His	Ser	Gln	His	Gly	Glu
				85					90					95	
Ser	Gln	Arg	Ala	Leu	Ser	Pro	Leu	Gln	Ser	Thr	Leu	Ser	Ser	Ala	Ala
			100					105					110		
Ser	Pro	Ser	Gln	Ala	Tyr	Glu	Thr	Tyr	Ile	Glu	Asn	Gly	Leu	Ile	Cys
		115					120					125			
Leu	Lys	His	Lys	Ile	Arg	Asn	Ile	Glu	Lys	Lys	Lys	Leu	Lys	Leu	Glu
	130					135					140				
Asp	Tyr	Lys	Asp	Arg	Leu	Lys	Ser	Gly	Glu	His	Leu	Asn	Pro	Asp	Gln
145					150					155					160
Leu	Glu	Ala	Val	Glu	Lys	Tyr	Glu	Glu	Val	Leu	His	Asn	Leu	Glu	Phe
				165					170					175	
Ala	Lys	Glu	Leu	Gln	Lys	Thr	Phe	Ser	Gly	Leu	Ser	Leu	Asp	Leu	Leu
			180					185					190		
Lys	Ala	Gln	Lys	Lys	Ala	Gln	Arg	Arg	Glu	His	Met	Leu	Lys	Leu	Glu
		195					200					205			
Ala	Glu	Lys	Lys	Lys	Leu	Arg	Thr	Ile	Leu	Gln	Val	Gln	Tyr	Val	Leu
	210					215					220				
Gln	Asn	Leu	Thr	Gln	Glu	His	Val	Gln	Lys	Asp	Phe	Lys	Gly	Gly	Leu
225					230					235					240
Asn	Gly	Ala	Val	Tyr	Leu	Pro	Ser	Lys	Glu	Leu	Asp	Tyr	Leu	Ile	Lys
				245					250					255	
Phe	Ser	Lys	Leu	Thr	Cys	Pro	Glu	Arg	Asn	Glu	Ser	Leu	Ser	Val	Glu
			260					265					270		
Asp	Gln	Met	Glu	Gln	Ser	Ser	Leu	Tyr	Phe	Trp	Asp	Leu	Leu	Glu	Gly

275						280						285					
Ser	Glu	Lys	Ala	Val	Val	Gly	Thr	Thr	Tyr	Lys	His	Leu	Lys	Asp	Leu		
290						295					300						
Leu	Ser	Lys	Leu	Leu	Asn	Ser	Gly	Tyr	Phe	Glu	Ser	Ile	Pro	Val	Pro		
305					310					315					320		
Lys	Asn	Ala	Lys	Glu	Lys	Glu	Val	Pro	Leu	Glu	Glu	Glu	Met	Leu	Ile		
				325					330					335			
Gln	Ser	Glu	Lys	Lys	Thr	Gln	Leu	Ser	Lys	Thr	Glu	Ser	Val	Lys	Glu		
			340					345					350				
Ser	Glu	Ser	Leu	Met	Glu	Phe	Ala	Gln	Pro	Glu	Ile	Gln	Pro	Gln	Glu		
		355					360					365					
Phe	Leu	Asn	Arg	Arg	Tyr	Met	Thr	Glu	Val	Asp	Tyr	Ser	Asn	Lys	Gln		
370						375					380						
Gly	Glu	Glu	Gln	Pro	Trp	Glu	Ala	Asp	Tyr	Ala	Arg	Lys	Pro	Asn	Leu		
385					390					395					400		
Pro	Lys	Arg	Trp	Asp	Met	Leu	Thr	Glu	Pro	Asp	Gly	Gln	Glu	Lys	Lys		
				405					410					415			
Gln	Glu	Ser	Phe	Lys	Ser	Trp	Glu	Ala	Ser	Gly	Lys	His	Gln	Glu	Val		
			420					425					430				
Ser	Lys	Pro	Ala	Val	Ser	Leu	Glu	Gln	Arg	Lys	Gln	Asp	Thr	Ser	Lys		
		435					440					445					
Leu	Arg	Ser	Thr	Leu	Pro	Glu	Glu	Gln	Lys	Lys	Gln	Glu	Ile	Ser	Lys		
450						455					460						
Ser	Lys	Pro	Ser	Pro	Ser	Gln	Trp	Lys	Gln	Asp	Thr	Pro	Lys	Ser	Lys		
465					470					475					480		
Ala	Gly	Tyr	Val	Gln	Glu	Glu	Gln	Lys	Lys	Gln	Glu	Thr	Pro	Lys	Leu		
				485					490						495		
Trp	Pro	Val	Gln	Leu	Gln	Lys	Glu	Gln	Asp	Pro	Lys	Lys	Gln	Thr	Pro		
			500					505					510				

Lys	Ser	Trp	Thr	Pro	Ser	Met	Gln	Ser	Glu	Gln	Asn	Thr	Thr	Lys	Ser	515	520	525
Trp	Thr	Thr	Pro	Met	Cys	Glu	Glu	Gln	Asp	Ser	Lys	Gln	Pro	Glu	Thr	530	535	540
Pro	Lys	Ser	Trp	Glu	Asn	Asn	Val	Glu	Ser	Gln	Lys	His	Ser	Leu	Thr	545	550	555
Ser	Gln	Ser	Gln	Ile	Ser	Pro	Lys	Ser	Trp	Gly	Val	Ala	Thr	Ala	Ser	565	570	575
Leu	Ile	Pro	Asn	Asp	Gln	Leu	Leu	Pro	Arg	Lys	Leu	Asn	Thr	Glu	Pro	580	585	590
Lys	Asp	Val	Pro	Lys	Pro	Val	His	Gln	Pro	Val	Gly	Ser	Ser	Ser	Thr	595	600	605
Leu	Pro	Lys	Asp	Pro	Val	Leu	Arg	Lys	Glu	Lys	Leu	Gln	Asp	Leu	Met	610	615	620
Thr	Gln	Ile	Gln	Gly	Thr	Cys	Asn	Phe	Met	Gln	Glu	Ser	Val	Leu	Asp	625	630	635
Phe	Asp	Lys	Pro	Ser	Ser	Ala	Ile	Pro	Thr	Ser	Gln	Pro	Pro	Ser	Ala	645	650	655
Thr	Pro	Gly	Ser	Pro	Val	Ala	Ser	Lys	Glu	Gln	Asn	Leu	Ser	Ser	Gln	660	665	670
Ser	Asp	Phe	Leu	Gln	Glu	Pro	Leu	Gln	Ala	Thr	Ser	Ser	Pro	Val	Thr	675	680	685
Cys	Ser	Ser	Asn	Ala	Cys	Leu	Val	Thr	Thr	Asp	Gln	Ala	Ser	Ser	Gly	690	695	700
Ser	Glu	Thr	Glu	Phe	Met	Thr	Ser	Glu	Thr	Pro	Glu	Val	Phe	Asn	Val	705	710	715
Asn	Ala	Pro	Leu	Pro	Pro	Arg	Lys	Glu	Gln	Glu	Ile	Lys	Glu	Ser	Pro	725	730	735

Tyr	Ser	Pro	Gly	Tyr	Asn	Gln	Ser	Phe	Thr	Thr	Ala	Ser	Thr	Gln	Thr		
			740					745					750				
Pro	Pro	Gln	Cys	Gln	Leu	Pro	Ser	Ile	His	Val	Glu	Gln	Thr	Val	His		
		755					760					765					
Ser	Gln	Glu	Thr	Ala	Asn	Tyr	His	Pro	Asp	Gly	Thr	Ile	Gln	Val	Ser		
	770					775					780						
Asn	Gly	Ser	Leu	Ala	Phe	Tyr	Pro	Ala	Gln	Thr	Asn	Val	Phe	Pro	Arg		
785					790					795					800		
Pro	Thr	Gln	Pro	Phe	Val	Asn	Ser	Arg	Gly	Ser	Val	Arg	Gly	Cys	Thr		
				805					810					815			
Arg	Gly	Gly	Arg	Leu	Ile	Thr	Asn	Ser	Tyr	Arg	Ser	Pro	Gly	Gly	Tyr		
			820					825					830				
Lys	Gly	Phe	Asp	Thr	Tyr	Arg	Gly	Leu	Pro	Ser	Ile	Ser	Asn	Gly	Asn		
		835					840					845					
Tyr	Ser	Gln	Leu	Gln	Phe	Gln	Ala	Arg	Glu	Tyr	Ser	Gly	Ala	Pro	Tyr		
	850					855					860						
Ser	Gln	Arg	Asp	Asn	Phe	Gln	Gln	Cys	Tyr	Lys	Arg	Gly	Gly	Thr	Ser		
865					870					875					880		
Gly	Gly	Pro	Arg	Ala	Asn	Ser	Arg	Ala	Gly	Trp	Ser	Asp	Ser	Ser	Gln		
				885					890					895			
Val	Ser	Ser	Pro	Glu	Arg	Asp	Asn	Glu	Thr	Phe	Asn	Ser	Gly	Asp	Ser		
			900					905					910				
Gly	Gln	Gly	Asp	Ser	Arg	Ser	Met	Thr	Pro	Val	Asp	Val	Pro	Val	Thr		
		915					920					925					
Asn	Pro	Ala	Ala	Thr	Ile	Leu	Pro	Val	His	Val	Tyr	Pro	Leu	Pro	Gln		
	930					935					940						
Gln	Met	Arg	Val	Ala	Phe	Ser	Ala	Ala	Arg	Thr	Ser	Asn	Leu	Ala	Pro		
945					950					955					960		

Gly Thr Leu Asp Gln Pro Ile Val Phe Asp Leu Leu Leu Asn Asn Leu
965 970 975

Gly Glu Thr Phe Asp Leu Gln Leu Gly Arg Phe Asn Cys Pro Val Asn
980 985 990

Gly Thr Tyr Val Phe Ile Phe His Met Leu Lys Leu Ala Val Asn
Val
995 1000 1005

Pro Leu Tyr Val Asn Leu Met Lys Asn Glu Glu Val Leu Val Ser
1010 1015 1020

Ala Tyr Ala Asn Asp Gly Ala Pro Asp His Glu Thr Ala Ser Asn
1025 1030 1035

His Ala Ile Leu Gln Leu Phe Gln Gly Asp Gln Ile Trp Leu Arg
1040 1045 1050

Leu His Arg Gly Ala Ile Tyr Gly Ser Ser Trp Lys Tyr Ser Thr
1055 1060 1065

Phe Ser Gly Tyr Leu Leu Tyr Gln Asp
1070 1075

<210> 11630
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<223> /note="Uniprot ID: Q6IMN6"

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<223> /note="ENSP ID: ENSP00000379150"

<400> 11630

Met Glu Val Gln Val Ser Gln Ala Ser Leu Gly Phe Glu Leu Thr Ser
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Val Glu Lys Ser Leu Arg Glu Trp Ser Arg Leu Ser Arg Glu Val Ile
20 25 30

Ala Trp Leu Cys Pro Ser Ser Pro Asn Phe Ile Leu Asn Phe Pro Pro
35 40 45

Pro Pro Ser Ala Ser Ser Val Ser Met Val Gln Leu Phe Ser Ser Pro
50 55 60

Phe Gly Tyr Gln Ser Pro Ser Gly His Ser Glu Glu Glu Arg Glu Gly
65 70 75 80

Asn Met Lys Ser Ala Lys Pro Gln Val Asn His Ser Gln His Gly Glu
85 90 95

Ser Gln Arg Ala Leu Ser Pro Leu Gln Ser Thr Leu Ser Ser Ala Ala
100 105 110

Ser Pro Ser Gln Ala Tyr Glu Thr Tyr Ile Glu Asn Gly Leu Ile Cys
115 120 125

Leu Lys His Lys Ile Arg Asn Ile Glu Lys Lys Lys Leu Lys Leu Glu
130 135 140

Asp Tyr Lys Asp Arg Leu Lys Ser Gly Glu His Leu Asn Pro Asp Gln
145 150 155 160

Leu Glu Ala Val Glu Lys Tyr Glu Glu Val Leu His Asn Leu Glu Phe
165 170 175

Ala Lys Glu Leu Gln Lys Thr Phe Ser Gly Leu Ser Leu Asp Leu Leu
180 185 190

Lys Ala Gln Lys Lys Ala Gln Arg Arg Glu His Met Leu Lys Leu Glu
195 200 205

Ala Glu Lys Lys Lys Leu Arg Thr Ile Leu Gln Val Gln Tyr Val Leu
210 215 220

Gln	Asn	Leu	Thr	Gln	Glu	His	Val	Gln	Lys	Asp	Phe	Lys	Gly	Gly	Leu	
225					230					235					240	
Asn	Gly	Ala	Val	Tyr	Leu	Pro	Ser	Lys	Glu	Leu	Asp	Tyr	Leu	Ile	Lys	
				245					250					255		
Phe	Ser	Lys	Leu	Thr	Cys	Pro	Glu	Arg	Asn	Glu	Ser	Leu	Ser	Val	Glu	
			260					265					270			
Asp	Gln	Met	Glu	Gln	Ser	Ser	Leu	Tyr	Phe	Trp	Asp	Leu	Leu	Glu	Gly	
		275					280					285				
Ser	Glu	Lys	Ala	Val	Val	Gly	Thr	Thr	Tyr	Lys	His	Leu	Lys	Asp	Leu	
	290					295					300					
Leu	Ser	Lys	Leu	Leu	Asn	Ser	Gly	Tyr	Phe	Glu	Ser	Ile	Pro	Val	Pro	
305					310					315					320	
Lys	Asn	Ala	Lys	Glu	Lys	Glu	Val	Pro	Leu	Glu	Glu	Glu	Met	Leu	Ile	
				325					330					335		
Gln	Ser	Glu	Lys	Lys	Thr	Gln	Leu	Ser	Lys	Thr	Glu	Ser	Val	Lys	Glu	
			340					345					350			
Ser	Glu	Ser	Leu	Met	Glu	Phe	Ala	Gln	Pro	Glu	Ile	Gln	Pro	Gln	Glu	
		355					360					365				
Phe	Leu	Asn	Arg	Arg	Tyr	Met	Thr	Glu	Val	Asp	Tyr	Ser	Asn	Lys	Gln	
	370					375					380					
Gly	Glu	Glu	Gln	Pro	Trp	Glu	Ala	Asp	Tyr	Ala	Arg	Lys	Pro	Asn	Leu	
385					390					395					400	
Pro	Lys	Arg	Trp	Asp	Met	Leu	Thr	Glu	Pro	Asp	Gly	Gln	Glu	Lys	Lys	
				405					410					415		
Gln	Glu	Ser	Phe	Lys	Ser	Trp	Glu	Ala	Ser	Gly	Lys	His	Gln	Glu	Val	
			420					425					430			
Ser	Lys	Pro	Ala	Val	Ser	Leu	Glu	Gln	Arg	Lys	Gln	Asp	Thr	Ser	Lys	
		435					440					445				

Leu	Arg	Ser	Thr	Leu	Pro	Glu	Glu	Gln	Lys	Lys	Gln	Glu	Ile	Ser	Lys	450	455	460
Ser	Lys	Pro	Ser	Pro	Ser	Gln	Trp	Lys	Gln	Asp	Thr	Pro	Lys	Ser	Lys	465	470	475
Ala	Gly	Tyr	Val	Gln	Glu	Glu	Gln	Lys	Lys	Gln	Glu	Thr	Pro	Lys	Leu	485	490	495
Trp	Pro	Val	Gln	Leu	Gln	Lys	Glu	Gln	Asp	Pro	Lys	Lys	Gln	Thr	Pro	500	505	510
Lys	Ser	Trp	Thr	Pro	Ser	Met	Gln	Ser	Glu	Gln	Asn	Thr	Thr	Lys	Ser	515	520	525
Trp	Thr	Thr	Pro	Met	Cys	Glu	Glu	Gln	Asp	Ser	Lys	Gln	Pro	Glu	Thr	530	535	540
Pro	Lys	Ser	Trp	Glu	Asn	Asn	Val	Glu	Ser	Gln	Lys	His	Ser	Leu	Thr	545	550	555
Ser	Gln	Ser	Gln	Ile	Ser	Pro	Lys	Ser	Trp	Gly	Val	Ala	Thr	Ala	Ser	565	570	575
Leu	Ile	Pro	Asn	Asp	Gln	Leu	Leu	Pro	Arg	Lys	Leu	Asn	Thr	Glu	Pro	580	585	590
Lys	Asp	Val	Pro	Lys	Pro	Val	His	Gln	Pro	Val	Gly	Ser	Ser	Ser	Thr	595	600	605
Leu	Pro	Lys	Asp	Pro	Val	Leu	Arg	Lys	Glu	Lys	Leu	Gln	Asp	Leu	Met	610	615	620
Thr	Gln	Ile	Gln	Gly	Thr	Cys	Asn	Phe	Met	Gln	Glu	Ser	Val	Leu	Asp	625	630	635
Phe	Asp	Lys	Pro	Ser	Ser	Ala	Ile	Pro	Thr	Ser	Gln	Pro	Pro	Ser	Ala	645	650	655
Thr	Pro	Gly	Ser	Pro	Val	Ala	Ser	Lys	Glu	Gln	Asn	Leu	Ser	Ser	Gln	660	665	670

Ser Asp Phe Leu Gln Glu Pro Leu Gln Ala Ala Ile Pro Pro Gly Lys
675 680 685

Gln Pro Ser Ser Leu Ala Ser Pro Asn Pro Pro Met Ala Lys Gly Ser
690 695 700

Glu Gln Gly Phe Gln Ser Pro Pro Ala Ser Ser Ser Ser Val Thr Ile
705 710 715 720

Asn Thr Ala Pro Phe Gln Ala Met Gln Thr Val Phe Asn Val Asn Ala
725 730 735

Pro Leu Pro Pro Arg Lys Glu Gln Glu Ile Lys Glu Ser Pro Tyr Ser
740 745 750

Pro Gly Tyr Asn Gln Ser Phe Thr Thr Ala Ser Thr Gln Thr Pro Pro
755 760 765

Gln Cys Gln Leu Pro Ser Ile His Val Glu Gln Thr Val His Ser Gln
770 775 780

Glu Thr Ala Gln Thr Asn Val Phe Pro Arg Pro Thr Gln Pro Phe Val
785 790 795 800

Asn Ser Arg Gly Ser Val Arg Gly Cys Thr Arg Gly Gly Arg Leu Ile
805 810 815

Thr Asn Ser Tyr Arg Ser Pro Gly Gly Tyr Lys Gly Phe Asp Thr Tyr
820 825 830

Arg Gly Leu Pro Ser Ile Ser Asn Gly Asn Tyr Ser Gln Leu Gln Phe
835 840 845

Gln Ala Arg Glu Tyr Ser Gly Ala Pro Tyr Ser Gln Arg Asp Asn Phe
850 855 860

Gln Gln Cys Tyr Lys Arg Gly Gly Thr Ser Gly Gly Pro Arg Ala Asn
865 870 875 880

Ser Arg Ala Asn Cys Phe Ile Met Arg Asn Ser Leu Leu Leu Ile Lys
885 890 895

Gln Gln Gly Gly Val Ile Leu Leu Arg

900

905

<210> 11631

<211> 960

<212> PRT

<213> Homo sapiens

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<220>

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caprin family member 2"

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<223> /note="Uniprot ID: Q6IMN6"

<220>

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<223> /note="ENSP ID: ENSP00000391479"

<400> 11631

Met	Glu	Val	Gln	Val	Ser	Gln	Ala	Ser	Leu	Gly	Phe	Glu	Leu	Thr	Ser
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Val	Glu	Lys	Ser	Leu	Arg	Glu	Trp	Ser	Arg	Leu	Ser	Arg	Glu	Val	Ile
			20					25					30		

Ala	Trp	Leu	Cys	Pro	Ser	Ser	Pro	Asn	Phe	Ile	Leu	Asn	Phe	Pro	Pro
		35					40					45			

Pro	Pro	Ser	Ala	Ser	Ser	Val	Ser	Met	Val	Gln	Leu	Phe	Ser	Ser	Pro
	50					55					60				

Phe	Gly	Tyr	Gln	Ser	Pro	Ser	Gly	His	Ser	Glu	Glu	Glu	Arg	Glu	Gly
65					70					75					80

Asn	Met	Lys	Ser	Ala	Lys	Pro	Gln	Val	Asn	His	Ser	Gln	His	Gly	Glu
				85					90					95	

Ser	Gln	Arg	Ala	Leu	Ser	Pro	Leu	Gln	Ser	Thr	Leu	Ser	Ser	Ala	Ala
			100					105						110	

25965

Ser	Pro	Ser	Gln	Ala	Tyr	Glu	Thr	Tyr	Ile	Glu	Asn	Gly	Leu	Ile	Cys	
		115					120					125				
Leu	Lys	His	Lys	Ile	Arg	Asn	Ile	Glu	Lys	Lys	Lys	Leu	Lys	Leu	Glu	
	130					135					140					
Asp	Tyr	Lys	Asp	Arg	Leu	Lys	Ser	Gly	Glu	His	Leu	Asn	Pro	Asp	Gln	
145					150					155					160	
Leu	Glu	Ala	Val	Glu	Lys	Tyr	Glu	Glu	Val	Leu	His	Asn	Leu	Glu	Phe	
				165					170					175		
Ala	Lys	Glu	Leu	Gln	Lys	Thr	Phe	Ser	Gly	Leu	Ser	Leu	Asp	Leu	Leu	
			180					185					190			
Lys	Ala	Gln	Lys	Lys	Ala	Gln	Arg	Arg	Glu	His	Met	Leu	Lys	Leu	Glu	
		195					200					205				
Ala	Glu	Lys	Lys	Lys	Leu	Arg	Thr	Ile	Leu	Gln	Val	Gln	Tyr	Val	Leu	
	210					215					220					
Gln	Asn	Leu	Thr	Gln	Glu	His	Val	Gln	Lys	Asp	Phe	Lys	Gly	Gly	Leu	
225					230					235					240	
Asn	Gly	Ala	Val	Tyr	Leu	Pro	Ser	Lys	Glu	Leu	Asp	Tyr	Leu	Ile	Lys	
				245					250					255		
Phe	Ser	Lys	Leu	Thr	Cys	Pro	Glu	Arg	Asn	Glu	Ser	Leu	Ser	Val	Glu	
			260					265					270			
Asp	Gln	Met	Glu	Gln	Ser	Ser	Leu	Tyr	Phe	Trp	Asp	Leu	Leu	Glu	Gly	
		275					280					285				
Ser	Glu	Lys	Ala	Val	Val	Gly	Thr	Thr	Tyr	Lys	His	Leu	Lys	Asp	Leu	
	290					295					300					
Leu	Ser	Lys	Leu	Leu	Asn	Ser	Gly	Tyr	Phe	Glu	Ser	Ile	Pro	Val	Pro	
305					310					315					320	
Lys	Asn	Ala	Lys	Glu	Lys	Glu	Val	Pro	Leu	Glu	Glu	Glu	Met	Leu	Ile	
				325					330					335		

Gln	Ser	Glu	Lys	Lys	Thr	Gln	Leu	Ser	Lys	Thr	Glu	Ser	Val	Lys	Glu			
			340					345					350					
Ser	Glu	Ser	Leu	Met	Glu	Phe	Ala	Gln	Pro	Glu	Ile	Gln	Pro	Gln	Glu			
		355					360					365						
Phe	Leu	Asn	Arg	Arg	Tyr	Met	Thr	Glu	Val	Asp	Tyr	Ser	Asn	Lys	Gln			
	370					375					380							
Gly	Glu	Glu	Gln	Pro	Trp	Glu	Ala	Asp	Tyr	Ala	Arg	Lys	Pro	Asn	Leu			
385					390					395					400			
Pro	Lys	Arg	Trp	Asp	Met	Leu	Thr	Glu	Pro	Asp	Gly	Gln	Glu	Lys	Lys			
				405					410					415				
Gln	Glu	Ser	Phe	Lys	Ser	Trp	Glu	Ala	Ser	Gly	Lys	His	Gln	Glu	Val			
			420					425					430					
Ser	Lys	Pro	Ala	Val	Ser	Leu	Glu	Gln	Arg	Lys	Gln	Asp	Thr	Ser	Lys			
		435					440					445						
Leu	Arg	Ser	Thr	Leu	Pro	Glu	Glu	Gln	Lys	Lys	Gln	Glu	Ile	Ser	Lys			
	450					455					460							
Ser	Lys	Pro	Ser	Pro	Ser	Gln	Trp	Lys	Gln	Asp	Thr	Pro	Lys	Ser	Lys			
465					470					475					480			
Ala	Gly	Tyr	Val	Gln	Glu	Glu	Gln	Lys	Lys	Gln	Glu	Thr	Pro	Lys	Leu			
				485					490					495				
Trp	Pro	Val	Gln	Leu	Gln	Lys	Glu	Gln	Asp	Pro	Lys	Lys	Gln	Thr	Pro			
			500					505					510					
Lys	Ser	Trp	Thr	Pro	Ser	Met	Gln	Ser	Glu	Gln	Asn	Thr	Thr	Lys	Ser			
		515					520					525						
Trp	Thr	Thr	Pro	Met	Cys	Glu	Glu	Gln	Asp	Ser	Lys	Gln	Pro	Glu	Thr			
	530					535					540							
Pro	Lys	Ser	Trp	Glu	Asn	Asn	Val	Glu	Ser	Gln	Lys	His	Ser	Leu	Thr			
545					550					555					560			
Ser	Gln	Ser	Gln	Ile	Ser	Pro	Lys	Ser	Trp	Gly	Val	Ala	Thr	Ala	Ser			

565

570

575

Leu Ile Pro Asn Asp Gln Leu Leu Pro Arg Lys Leu Asn Thr Glu Pro
580 585 590

Lys Asp Val Pro Lys Pro Val His Gln Pro Val Gly Ser Ser Ser Thr
595 600 605

Leu Pro Lys Asp Pro Val Leu Arg Lys Glu Lys Leu Gln Asp Leu Met
610 615 620

Thr Gln Ile Gln Gly Thr Cys Asn Phe Met Gln Glu Ser Val Leu Asp
625 630 635 640

Phe Asp Lys Pro Ser Ser Ala Ile Pro Thr Ser Gln Pro Pro Ser Ala
645 650 655

Thr Pro Gly Ser Pro Val Ala Ser Lys Glu Gln Asn Leu Ser Ser Gln
660 665 670

Ser Asp Phe Leu Gln Glu Pro Leu Gln Ala Thr Ser Ser Pro Val Thr
675 680 685

Cys Ser Ser Asn Ala Cys Leu Val Thr Thr Asp Gln Ala Ser Ser Gly
690 695 700

Ser Glu Thr Glu Phe Met Thr Ser Glu Thr Pro Glu Ala Ala Ile Pro
705 710 715 720

Pro Gly Lys Gln Pro Ser Ser Leu Ala Ser Pro Asn Pro Pro Met Ala
725 730 735

Lys Gly Ser Glu Gln Gly Phe Gln Ser Pro Pro Ala Ser Ser Ser Ser
740 745 750

Val Thr Ile Asn Thr Ala Pro Phe Gln Ala Met Gln Thr Val Phe Asn
755 760 765

Val Asn Ala Pro Leu Pro Pro Arg Lys Glu Gln Glu Ile Lys Glu Ser
770 775 780

Pro Tyr Ser Pro Gly Tyr Asn Gln Ser Phe Thr Thr Ala Ser Thr Gln
785 790 795 800

25968

Thr Pro Pro Gln Cys Gln Leu Pro Ser Ile His Val Glu Gln Thr Val
805 810 815

His Ser Gln Glu Thr Ala Asn Tyr His Pro Asp Gly Thr Ile Gln Val
820 825 830

Ser Asn Gly Ser Leu Ala Phe Tyr Pro Ala Gln Thr Asn Val Phe Pro
835 840 845

Arg Pro Thr Gln Pro Phe Val Asn Ser Arg Gly Ser Val Arg Gly Cys
850 855 860

Thr Arg Gly Gly Arg Leu Ile Thr Asn Ser Tyr Arg Ser Pro Gly Gly
865 870 875 880

Tyr Lys Gly Phe Asp Thr Tyr Arg Gly Leu Pro Ser Ile Ser Asn Gly
885 890 895

Asn Tyr Ser Gln Leu Gln Phe Gln Ala Arg Glu Tyr Ser Gly Ala Pro
900 905 910

Tyr Ser Gln Arg Asp Asn Phe Gln Gln Cys Tyr Lys Arg Gly Gly Thr
915 920 925

Ser Gly Gly Pro Arg Ala Asn Ser Arg Ala Asn Cys Phe Ile Met Arg
930 935 940

Asn Ser Leu Leu Leu Ile Lys Gln Gln Gly Gly Val Ile Leu Leu Arg
945 950 955 960

<210> 11632

<211> 278

<212> PRT

<213> Homo sapiens

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caprin family member 2"

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<223> /note="Uniprot ID: Q6IMN6"

<220>

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<400> 11632

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Val Glu Lys Ser Leu Arg Glu Trp Ser Arg Leu Ser Arg Glu Val Ile
20 25 30

Ala Trp Leu Cys Pro Ser Ser Pro Asn Phe Ile Leu Asn Phe Pro Pro
35 40 45

Pro Pro Ser Ala Ser Ser Val Ser Met Val Gln Leu Phe Ser Ser Pro
50 55 60

Phe Gly Tyr Gln Ser Pro Ser Gly His Ser Glu Glu Glu Arg Glu Gly
65 70 75 80

Asn Met Lys Ser Ala Lys Pro Gln Val Asn His Ser Gln His Gly Glu
85 90 95

Ser Gln Arg Ala Leu Ser Pro Leu Gln Ser Thr Leu Ser Ser Ala Ala
100 105 110

Ser Pro Ser Gln Ala Tyr Glu Thr Tyr Ile Glu Asn Gly Leu Ile Cys
115 120 125

Leu Lys His Lys Ile Arg Asn Ile Glu Lys Lys Lys Leu Lys Leu Glu
130 135 140

Asp Tyr Lys Asp Arg Leu Lys Ser Gly Glu His Leu Asn Pro Asp Gln
145 150 155 160

Leu Glu Ala Val Glu Lys Tyr Glu Glu Val Leu His Asn Leu Glu Phe
165 170 175

Ala Lys Glu Leu Gln Lys Thr Phe Ser Gly Leu Ser Leu Asp Leu Leu

Glu	Gly	Ser	Glu	Lys	Ala	Val	Val	Gly	Thr	Thr	Tyr	Lys	His	Leu	Lys	
		35					40					45				
Asp	Leu	Leu	Ser	Lys	Leu	Leu	Asn	Ser	Gly	Tyr	Phe	Glu	Ser	Ile	Pro	
	50					55					60					
Val	Pro	Lys	Asn	Ala	Lys	Glu	Lys	Glu	Val	Pro	Leu	Glu	Glu	Glu	Met	
65					70					75					80	
Leu	Ile	Gln	Ser	Glu	Lys	Lys	Thr	Gln	Leu	Ser	Lys	Thr	Glu	Ser	Val	
				85					90					95		
Lys	Glu	Ser	Glu	Ser	Leu	Met	Glu	Phe	Ala	Gln	Pro	Glu	Ile	Gln	Pro	
			100					105					110			
Gln	Glu	Phe	Leu	Asn	Arg	Arg	Tyr	Met	Thr	Glu	Val	Asp	Tyr	Ser	Asn	
		115					120					125				
Lys	Gln	Gly	Glu	Glu	Gln	Pro	Trp	Glu	Ala	Asp	Tyr	Ala	Arg	Lys	Pro	
	130					135					140					
Asn	Leu	Pro	Lys	Arg	Trp	Asp	Met	Leu	Thr	Glu	Pro	Asp	Gly	Gln	Glu	
145					150					155					160	
Lys	Lys	Gln	Glu	Ser	Phe	Lys	Ser	Trp	Glu	Ala	Ser	Gly	Lys	His	Gln	
				165					170					175		
Glu	Val	Ser	Lys	Pro	Ala	Val	Ser	Leu	Glu	Gln	Arg	Lys	Gln	Asp	Thr	
			180					185					190			
Ser	Lys	Leu	Arg	Ser	Thr	Leu	Pro	Glu	Glu	Gln	Lys	Lys	Gln	Glu	Ile	
		195					200					205				
Ser	Lys	Ser	Lys	Pro	Ser	Pro	Ser	Gln	Trp	Lys	Gln	Asp	Thr	Pro	Lys	
	210					215					220					
Ser	Lys	Ala	Gly	Tyr	Val	Gln	Glu	Glu	Gln	Lys	Lys	Gln	Glu	Thr	Pro	
225					230					235					240	
Lys	Leu	Trp	Pro	Val	Gln	Leu	Gln	Lys	Glu	Gln	Asp	Pro	Lys	Lys	Gln	
				245					250					255		

Thr	Pro	Lys	Ser	Trp	Thr	Pro	Ser	Met	Gln	Ser	Glu	Gln	Asn	Thr	Thr		
			260					265					270				
Lys	Ser	Trp	Thr	Thr	Pro	Met	Cys	Glu	Glu	Gln	Asp	Ser	Lys	Gln	Pro		
		275					280					285					
Glu	Thr	Pro	Lys	Ser	Trp	Glu	Asn	Asn	Val	Glu	Ser	Gln	Lys	His	Ser		
	290					295					300						
Leu	Thr	Ser	Gln	Ser	Gln	Ile	Ser	Pro	Lys	Ser	Trp	Gly	Val	Ala	Thr		
305					310					315					320		
Ala	Ser	Leu	Ile	Pro	Asn	Asp	Gln	Leu	Leu	Pro	Arg	Lys	Leu	Asn	Thr		
				325					330					335			
Glu	Pro	Lys	Asp	Val	Pro	Lys	Pro	Val	His	Gln	Pro	Val	Gly	Ser	Ser		
			340					345					350				
Ser	Thr	Leu	Pro	Lys	Asp	Pro	Val	Leu	Arg	Lys	Glu	Lys	Leu	Gln	Asp		
		355					360					365					
Leu	Met	Thr	Gln	Ile	Gln	Gly	Thr	Cys	Asn	Phe	Met	Gln	Glu	Ser	Val		
	370					375					380						
Leu	Asp	Phe	Asp	Lys	Pro	Ser	Ser	Ala	Ile	Pro	Thr	Ser	Gln	Pro	Pro		
385					390					395					400		
Ser	Ala	Thr	Pro	Gly	Ser	Pro	Val	Ala	Ser	Lys	Glu	Gln	Asn	Leu	Ser		
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Ser	Gln	Ser	Asp	Phe	Leu	Gln	Glu	Pro	Leu	Gln	Ala	Thr	Ser	Ser	Pro		
			420					425					430				
Val	Thr	Cys	Ser	Ser	Asn	Ala	Cys	Leu	Val	Thr	Thr	Asp	Gln	Ala	Ser		
		435					440					445					
Ser	Gly	Ser	Glu	Thr	Glu	Phe	Met	Thr	Ser	Glu	Thr	Pro	Glu	Ala	Ala		
	450					455					460						
Ile	Pro	Pro	Gly	Lys	Gln	Pro	Ser	Ser	Leu	Ala	Ser	Pro	Asn	Pro	Pro		
465					470					475					480		
Met	Ala	Lys	Gly	Ser	Glu	Gln	Gly	Phe	Gln	Ser	Pro	Pro	Ala	Ser	Ser		

485

490

495

Ser Ser Val Thr Ile Asn Thr Ala Pro Phe Gln Ala Met Gln Thr Val
500 505 510

Phe Asn Val Asn Ala Pro Leu Pro Pro Arg Lys Glu Gln Glu Ile Lys
515 520 525

Glu Ser Pro Tyr Ser Pro Gly Tyr Asn Gln Ser Phe Thr Thr Ala Ser
530 535 540

Thr Gln Thr Pro Pro Gln Cys Gln Leu Pro Ser Ile His Val Glu Gln
545 550 555 560

Thr Val His Ser Gln Glu Thr Ala Asn Tyr His Pro Asp Gly Thr Ile
565 570 575

Gln Val Ser Asn Gly Ser Leu Ala Phe Tyr Pro Ala Gln Thr Asn Val
580 585 590

Phe Pro Arg Pro Thr Gln Pro Phe Val Asn Ser Arg Gly Ser Val Arg
595 600 605

Gly Cys Thr Arg Gly Gly Arg Leu Ile Thr Asn Ser Tyr Arg Ser Pro
610 615 620

Gly Gly Tyr Lys Gly Phe Asp Thr Tyr Arg Gly Leu Pro Ser Ile Ser
625 630 635 640

Asn Gly Asn Tyr Ser Gln Leu Gln Phe Gln Ala Arg Glu Tyr Ser Gly
645 650 655

Ala Pro Tyr Ser Gln Arg Cys Leu Glu Thr Ser Glu Pro Leu Trp Leu
660 665 670

Leu Gly Lys Ala Arg Ile Ile Ser Ser Ser Val Ile Ser Glu Glu Gly
675 680 685

His Leu Val Val His Glu Gln Ile Arg Glu Gln Gly Gly Val Ile Leu
690 695 700

Leu Arg
705

25974

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<210> 11634
<211> 702
<212> PRT
<213> Homo sapiens

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        caprin family member 2"

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Gln Arg Ala Leu Ser Pro Leu Gln Ser Thr Leu Ser Ser Ala Ala Ser
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Pro Ser Gln Ala Tyr Glu Thr Tyr Ile Glu Asn Gly Leu Ile Cys Leu
          35          40          45

Lys His Lys Ile Arg Asn Ile Glu Lys Lys Lys Leu Lys Leu Glu Asp
          50          55          60

Tyr Lys Asp Arg Leu Lys Ser Gly Glu His Leu Asn Pro Asp Gln Leu
65          70          75          80

Glu Ala Val Glu Lys Tyr Glu Glu Val Leu His Asn Leu Glu Phe Ala
          85          90          95

Lys Glu Leu Gln Lys Thr Phe Ser Gly Leu Ser Leu Asp Leu Leu Lys
          100          105          110

Ala Gln Lys Lys Ala Gln Arg Arg Glu His Met Leu Lys Leu Glu Ala
          115          120          125

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Glu	Lys	Lys	Lys	Leu	Arg	Thr	Ile	Leu	Gln	Val	Gln	Tyr	Val	Leu	Gln			
	130					135					140							
Asn	Leu	Thr	Gln	Glu	His	Val	Gln	Lys	Asp	Phe	Lys	Gly	Gly	Leu	Asn			
145					150					155					160			
Gly	Ala	Val	Tyr	Leu	Pro	Ser	Lys	Glu	Leu	Asp	Tyr	Leu	Ile	Lys	Phe			
				165					170					175				
Ser	Lys	Leu	Thr	Cys	Pro	Glu	Arg	Asn	Glu	Ser	Leu	Ser	Val	Glu	Asp			
			180					185					190					
Gln	Met	Glu	Gln	Ser	Ser	Leu	Tyr	Phe	Trp	Asp	Leu	Leu	Glu	Gly	Ser			
		195					200					205						
Glu	Lys	Ala	Val	Val	Gly	Thr	Thr	Tyr	Lys	His	Leu	Lys	Asp	Leu	Leu			
	210					215					220							
Ser	Lys	Leu	Leu	Asn	Ser	Gly	Tyr	Phe	Glu	Ser	Ile	Pro	Val	Pro	Lys			
225					230					235					240			
Asn	Ala	Lys	Glu	Lys	Glu	Val	Pro	Leu	Glu	Glu	Glu	Met	Leu	Ile	Gln			
				245					250					255				
Ser	Glu	Lys	Lys	Thr	Gln	Leu	Ser	Lys	Thr	Glu	Ser	Val	Lys	Glu	Ser			
			260					265					270					
Glu	Ser	Leu	Met	Glu	Phe	Ala	Gln	Pro	Glu	Ile	Gln	Pro	Gln	Glu	Phe			
		275					280					285						
Leu	Asn	Arg	Arg	Tyr	Met	Thr	Glu	Val	Asp	Tyr	Ser	Asn	Lys	Gln	Gly			
	290					295					300							
Glu	Glu	Gln	Pro	Trp	Glu	Ala	Asp	Tyr	Ala	Arg	Lys	Pro	Asn	Leu	Pro			
305					310					315					320			
Lys	Arg	Trp	Asp	Met	Leu	Thr	Glu	Pro	Asp	Gly	Gln	Glu	Lys	Lys	Gln			
				325					330					335				
Glu	Ser	Phe	Lys	Ser	Trp	Glu	Ala	Ser	Gly	Lys	His	Gln	Glu	Val	Ser			
			340					345					350					
Lys	Pro	Ala	Val	Ser	Leu	Glu	Gln	Arg	Lys	Gln	Asp	Thr	Ser	Lys	Leu			

355								360								365
Arg	Ser	Thr	Leu	Pro	Glu	Glu	Gln	Lys	Lys	Gln	Glu	Ile	Ser	Lys	Ser	
	370					375					380					
Lys	Pro	Ser	Pro	Ser	Gln	Trp	Lys	Gln	Asp	Thr	Pro	Lys	Ser	Lys	Ala	
385					390					395					400	
Gly	Tyr	Val	Gln	Glu	Glu	Gln	Lys	Lys	Gln	Glu	Thr	Pro	Lys	Leu	Trp	
				405					410					415		
Pro	Val	Gln	Leu	Gln	Lys	Glu	Gln	Asp	Pro	Lys	Lys	Gln	Thr	Pro	Lys	
			420					425					430			
Ser	Trp	Thr	Pro	Ser	Met	Gln	Ser	Glu	Gln	Asn	Thr	Thr	Lys	Ser	Trp	
		435					440					445				
Thr	Thr	Pro	Met	Cys	Glu	Glu	Gln	Asp	Ser	Lys	Gln	Pro	Glu	Thr	Pro	
	450					455					460					
Lys	Ser	Trp	Glu	Asn	Asn	Val	Glu	Ser	Gln	Lys	His	Ser	Leu	Thr	Ser	
465					470					475					480	
Gln	Ser	Gln	Ile	Ser	Pro	Lys	Ser	Trp	Gly	Val	Ala	Thr	Ala	Ser	Leu	
				485					490					495		
Ile	Pro	Asn	Asp	Gln	Leu	Leu	Pro	Arg	Lys	Leu	Asn	Thr	Glu	Pro	Lys	
			500					505					510			
Asp	Val	Pro	Lys	Pro	Val	His	Gln	Pro	Val	Gly	Ser	Ser	Ser	Thr	Leu	
		515					520					525				
Pro	Lys	Asp	Pro	Val	Leu	Arg	Lys	Glu	Lys	Leu	Gln	Asp	Leu	Met	Thr	
	530					535					540					
Gln	Ile	Gln	Gly	Thr	Cys	Asn	Phe	Met	Gln	Glu	Ser	Val	Leu	Asp	Phe	
545					550					555					560	
Asp	Lys	Pro	Ser	Ser	Ala	Ile	Pro	Thr	Ser	Gln	Pro	Pro	Ser	Ala	Thr	
				565					570					575		
Pro	Gly	Ser	Pro	Val	Ala	Ser	Lys	Glu	Gln	Asn	Leu	Ser	Ser	Gln	Ser	
			580					585					590			

Asp Phe Leu Gln Glu Pro Leu Gln Ala Thr Ser Ser Pro Val Thr Cys
595 600 605

Ser Ser Asn Ala Cys Leu Val Thr Thr Asp Gln Ala Ser Ser Gly Ser
610 615 620

Glu Thr Glu Phe Met Thr Ser Glu Thr Pro Glu Ala Ala Ile Pro Pro
625 630 635 640

Gly Lys Gln Pro Ser Ser Leu Ala Ser Pro Asn Pro Pro Met Ala Lys
645 650 655

Gly Ser Glu Gln Gly Phe Gln Ser Pro Pro Ala Ser Ser Ser Ser Val
660 665 670

Thr Ile Asn Thr Ala Pro Phe Gln Ala Met Gln Thr Val Phe Asn Val
675 680 685

Asn Ala Pro Leu Pro Pro Arg Lys Glu Gln Glu Ile Lys Glu
690 695 700

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<400> 11635
Met Leu Lys Leu Glu Ala Glu Lys Lys Lys Leu Arg Thr Ile Leu Gln
1 5 10 15

Val Gln Tyr Val Leu Gln Asn Leu Thr Gln Glu His Val Gln Lys Asp
20 25 30

Phe Lys Gly Gly Leu Asn Gly Ala Val Tyr Leu Pro Ser Lys Glu Leu
35 40 45

Asp Tyr Leu Ile Lys Phe Ser Lys Leu Thr Cys Pro Glu Arg Asn Glu
50 55 60

Ser Leu Ser Val
65

<210> 11636
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<220>
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<400> 11636
Met Lys Ser Ala Lys Pro Gln Val Asn His Ser Gln His Gly Glu Ser
1 5 10 15

Gln Arg Ala Leu Ser Pro Leu Gln Ser Thr Leu Ser Ser Ala Ala Ser
20 25 30

Pro Ser Gln Ala Tyr Glu Thr Tyr Ile Glu Asn Gly Leu Ile Cys Leu
35 40 45

Lys His Lys Ile Arg Asn Ile Glu Lys Lys Lys Leu Lys Leu Glu Asp
50 55 60

Tyr Lys Asp Arg Leu Lys Ser Gly Glu His Leu Asn Pro Asp Gln Leu
65 70 75 80

Glu Ala Val Glu Lys Tyr Glu Glu Val Leu His Asn Leu Glu Phe Ala
85 90 95

Lys Glu Leu Gln Lys Thr Phe Ser Gly Leu Ser Leu Asp Leu Leu Lys
100 105 110

Ala Gln Lys Lys Ala Gln Arg
115

<210> 11637
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Met Lys Ser Ala Lys Pro Gln Val Asn His Ser Gln His Gly Glu Ser
1 5 10 15

Gln Arg Ala Leu Ser Pro Leu Gln Ser Thr Leu Ser Ser Ala Ala Ser
20 25 30

Pro Ser Gln Ala Tyr Glu Thr Tyr Ile Glu Asn Gly Leu Ile Cys Leu
35 40 45

Lys His Lys Ile Arg Asn Ile Glu Lys Lys Lys Leu Lys Leu Glu Asp
50 55 60

Tyr Lys Asp Arg Leu Lys Ser Gly Glu His Leu Asn Pro Asp Gln Leu
65 70 75 80

Glu Ala Val Glu Lys Tyr Glu Glu Val Leu His Asn Leu Glu Phe Ala
85 90 95

Lys Glu Leu Gln Lys Thr Phe Ser Gly Leu Ser Leu Asp Leu Leu Lys
100 105 110

Ala Gln Lys Lys Ala Gln Arg Arg Glu His Met Leu Lys Leu
115 120 125

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<400> 11638

Xaa Cys Pro Ser Ser Pro Asn Phe Ile Leu Asn Phe Pro Pro Pro Pro
1 5 10 15

Ser Ala Ser Ser Val Ser Met Val Gln Leu Phe Ser Ser Pro Phe Gly
20 25 30

Tyr Gln Ser Pro Ser Gly His Ser Glu Glu Glu Arg Glu Gly Asn Met
35 40 45

Lys Ser Ala Lys Pro Gln Val Asn His Ser Gln His Gly Glu Ser Gln
50 55 60

Arg Ala Leu Ser Pro Leu Gln Ser Thr Leu Ser Ser Ala Ala Ser Pro
65 70 75 80

Ser Gln Ala Tyr Glu Thr Tyr Ile Glu Asn Gly Leu Ile Cys Leu Lys
85 90 95

His Lys Ile Arg Asn Ile Glu Lys Lys Lys Leu Lys Leu Glu Asp Tyr
100 105 110

Lys Asp Arg Leu Lys Ser Gly Glu His Leu Asn Pro Asp Gln Leu Glu
115 120 125

Ala Val Glu Lys Tyr Glu Glu Val Leu His Asn Leu Glu Phe Ala Lys
130 135 140

Glu Leu Gln Lys Thr Phe Ser Gly Leu Ser Leu Asp Val Thr Thr Lys
145 150 155 160

Ser Ala Lys Glu Gly Pro Glu Lys Gly Ala His Ala Lys Thr
165 170

<210> 11639

<211> 186

<212> PRT

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<223> /note="ENSP ID: ENSP00000443353"

<400> 11639

Met Lys Ser Ala Lys Pro Gln Val Asn His Ser Gln His Gly Glu Ser
1 5 10 15

Gln Arg Ala Leu Ser Pro Leu Gln Ser Thr Leu Ser Ser Ala Ala Ser
20 25 30

Pro Ser Gln Ala Tyr Glu Thr Tyr Ile Glu Asn Gly Leu Ile Cys Leu
35 40 45

Lys His Lys Ile Arg Asn Ile Glu Lys Lys Lys Leu Lys Leu Glu Asp
50 55 60

Tyr Lys Asp Arg Leu Lys Ser Gly Glu His Leu Asn Pro Asp Gln Leu
65 70 75 80

Glu Ala Val Glu Lys Tyr Glu Glu Val Leu His Asn Leu Glu Phe Ala
85 90 95

Lys Glu Leu Gln Lys Thr Phe Ser Gly Leu Ser Leu Asp Leu Leu Lys
100 105 110

Ala Gln Lys Lys Ala Gln Arg Arg Glu His Met Leu Lys Leu Glu Ala
115 120 125

Glu Lys Lys Lys Leu Arg Thr Ile Leu Gln Val Gln Tyr Val Leu Gln
130 135 140

Asn Leu Thr Gln Glu His Val Gln Lys Asp Phe Lys Gly Gly Leu Asn
145 150 155 160

Gly Ala Val Tyr Leu Pro Ser Lys Glu Leu Asp Tyr Leu Ile Lys Phe
165 170 175

Ser Lys Leu Thr Cys Pro Glu Arg Asn Glu
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<210> 11640

<211> 84

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<220>

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<400> 11640

Met Leu Lys Leu Glu Ala Glu Lys Lys Lys Leu Arg Thr Ile Leu Gln
1 5 10 15

Val Gln Tyr Val Leu Gln Asn Leu Thr Gln Glu His Val Gln Lys Asp
20 25 30

Phe Lys Gly Gly Leu Asn Gly Ala Val Tyr Leu Pro Ser Lys Glu Leu
35 40 45

Asp Tyr Leu Ile Lys Phe Ser Lys Leu Thr Cys Pro Glu Arg Asn Glu
50 55 60

Ser Leu Ser Val Glu Asp Gln Met Glu Gln Ser Ser Leu Tyr Phe Trp
65 70 75 80

Asp Leu Leu Glu

<210> 11641

<211> 135

<212> PRT

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<223> /note="ENSP ID: ENSP00000449139"

<400> 11641

Glu Asp Tyr Lys Asp Arg Leu Lys Ser Gly Glu His Leu Asn Pro Asp
1 5 10 15

Gln Leu Glu Ala Val Glu Lys Tyr Glu Glu Val Leu His Asn Leu Glu
 20 25 30

Phe Ala Lys Glu Leu Gln Lys Thr Phe Ser Gly Leu Ser Leu Asp Leu
 35 40 45

Leu Lys Ala Gln Lys Lys Ala Gln Arg Arg Glu His Met Leu Lys Leu
 50 55 60

Glu Ala Glu Lys Lys Lys Leu Arg Thr Ile Leu Gln Val Gln Tyr Val
 65 70 75 80

Leu Gln Asn Leu Thr Gln Glu His Val Gln Lys Asp Phe Lys Gly Gly
 85 90 95

Leu Asn Gly Ala Val Tyr Leu Pro Ser Lys Glu Leu Asp Tyr Leu Ile
 100 105 110

Lys Phe Ser Lys Leu Thr Cys Pro Glu Arg Asn Glu Ser Leu Arg Gln
 115 120 125

Thr Leu Glu Gly Ser Thr Val
 130 135

<210> 11642
 <211> 1500
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<220>
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<220>
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<220>
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<220>

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<400> 11642

Met Thr Arg Ile Leu Thr Ala Phe Lys Val Val Arg Thr Leu Lys Thr
1 5 10 15

Gly Phe Gly Phe Thr Asn Val Thr Ala His Gln Lys Trp Lys Phe Ser
20 25 30

Arg Pro Gly Ile Arg Leu Leu Ser Val Lys Ala Gln Thr Ala His Ile
35 40 45

Val Leu Glu Asp Gly Thr Lys Met Lys Gly Tyr Ser Phe Gly His Pro
50 55 60

Ser Ser Val Ala Gly Glu Val Val Phe Asn Thr Gly Leu Gly Gly Tyr
65 70 75 80

Pro Glu Ala Ile Thr Asp Pro Ala Tyr Lys Gly Gln Ile Leu Thr Met
85 90 95

Ala Asn Pro Ile Ile Gly Asn Gly Gly Ala Pro Asp Thr Thr Ala Leu
100 105 110

Asp Glu Leu Gly Leu Ser Lys Tyr Leu Glu Ser Asn Gly Ile Lys Val
115 120 125

Ser Gly Leu Leu Val Leu Asp Tyr Ser Lys Asp Tyr Asn His Trp Leu
130 135 140

Ala Thr Lys Ser Leu Gly Gln Trp Leu Gln Glu Glu Lys Val Pro Ala
145 150 155 160

Ile Tyr Gly Val Asp Thr Arg Met Leu Thr Lys Ile Ile Arg Asp Lys
165 170 175

Gly Thr Met Leu Gly Lys Ile Glu Phe Glu Gly Gln Pro Val Asp Phe
180 185 190

Val Asp Pro Asn Lys Gln Asn Leu Ile Ala Glu Val Ser Thr Lys Asp
195 200 205

Val Lys Val Tyr Gly Lys Gly Asn Pro Thr Lys Val Val Ala Val Asp

210						215						220				
Cys	Gly	Ile	Lys	Asn	Asn	Val	Ile	Arg	Leu	Leu	Val	Lys	Arg	Gly	Ala	
225					230					235					240	
Glu	Val	His	Leu	Val	Pro	Trp	Asn	His	Asp	Phe	Thr	Lys	Met	Glu	Tyr	
				245					250					255		
Asp	Gly	Ile	Leu	Ile	Ala	Gly	Gly	Pro	Gly	Asn	Pro	Ala	Leu	Ala	Glu	
			260					265					270			
Pro	Leu	Ile	Gln	Asn	Val	Arg	Lys	Ile	Leu	Glu	Ser	Asp	Arg	Lys	Glu	
		275					280					285				
Pro	Leu	Phe	Gly	Ile	Ser	Thr	Gly	Asn	Leu	Ile	Thr	Gly	Leu	Ala	Ala	
	290					295					300					
Gly	Ala	Lys	Thr	Tyr	Lys	Met	Ser	Met	Ala	Asn	Arg	Gly	Gln	Asn	Gln	
305					310					315					320	
Pro	Val	Leu	Asn	Ile	Thr	Asn	Lys	Gln	Ala	Phe	Ile	Thr	Ala	Gln	Asn	
				325					330					335		
His	Gly	Tyr	Ala	Leu	Asp	Asn	Thr	Leu	Pro	Ala	Gly	Trp	Lys	Pro	Leu	
			340					345					350			
Phe	Val	Asn	Val	Asn	Asp	Gln	Thr	Asn	Glu	Gly	Ile	Met	His	Glu	Ser	
		355					360					365				
Lys	Pro	Phe	Phe	Ala	Val	Gln	Phe	His	Pro	Glu	Val	Thr	Pro	Gly	Pro	
	370					375					380					
Ile	Asp	Thr	Glu	Tyr	Leu	Phe	Asp	Ser	Phe	Phe	Ser	Leu	Ile	Lys	Lys	
385					390					395					400	
Gly	Lys	Ala	Thr	Thr	Ile	Thr	Ser	Val	Leu	Pro	Lys	Pro	Ala	Leu	Val	
				405					410					415		
Ala	Ser	Arg	Val	Glu	Val	Ser	Lys	Val	Leu	Ile	Leu	Gly	Ser	Gly	Gly	
			420					425					430			
Leu	Ser	Ile	Gly	Gln	Ala	Gly	Glu	Phe	Asp	Tyr	Ser	Gly	Ser	Gln	Ala	
		435					440					445				

Val	Lys	Ala	Met	Lys	Glu	Glu	Asn	Val	Lys	Thr	Val	Leu	Met	Asn	Pro
450						455					460				
Asn	Ile	Ala	Ser	Val	Gln	Thr	Asn	Glu	Val	Gly	Leu	Lys	Gln	Ala	Asp
465					470					475					480
Thr	Val	Tyr	Phe	Leu	Pro	Ile	Thr	Pro	Gln	Phe	Val	Thr	Glu	Val	Ile
				485					490					495	
Lys	Ala	Glu	Gln	Pro	Asp	Gly	Leu	Ile	Leu	Gly	Met	Gly	Gly	Gln	Thr
			500					505					510		
Ala	Leu	Asn	Cys	Gly	Val	Glu	Leu	Phe	Lys	Arg	Gly	Val	Leu	Lys	Glu
		515					520					525			
Tyr	Gly	Val	Lys	Val	Leu	Gly	Thr	Ser	Val	Glu	Ser	Ile	Met	Ala	Thr
	530					535					540				
Glu	Asp	Arg	Gln	Leu	Phe	Ser	Asp	Lys	Leu	Asn	Glu	Ile	Asn	Glu	Lys
545					550					555					560
Ile	Ala	Pro	Ser	Phe	Ala	Val	Glu	Ser	Ile	Glu	Asp	Ala	Leu	Lys	Ala
				565					570					575	
Ala	Asp	Thr	Ile	Gly	Tyr	Pro	Val	Met	Ile	Arg	Ser	Ala	Tyr	Ala	Leu
			580					585					590		
Gly	Gly	Leu	Gly	Ser	Gly	Ile	Cys	Pro	Asn	Arg	Glu	Thr	Leu	Met	Asp
		595					600					605			
Leu	Ser	Thr	Lys	Ala	Phe	Ala	Met	Thr	Asn	Gln	Ile	Leu	Val	Glu	Lys
	610					615					620				
Ser	Val	Thr	Gly	Trp	Lys	Glu	Ile	Glu	Tyr	Glu	Val	Val	Arg	Asp	Ala
625					630					635					640
Asp	Asp	Asn	Cys	Val	Thr	Val	Cys	Asn	Met	Glu	Asn	Val	Asp	Ala	Met
				645					650					655	
Gly	Val	His	Thr	Gly	Asp	Ser	Val	Val	Val	Ala	Pro	Ala	Gln	Thr	Leu
			660					665					670		

Glu	Ser	Met	Thr	Glu	Glu	Thr	Leu	Lys	Arg	Ala	Lys	Glu	Ile	Gly	Phe
			900					905					910		
Ser	Asp	Lys	Gln	Ile	Ser	Lys	Cys	Leu	Gly	Leu	Thr	Glu	Ala	Gln	Thr
		915					920					925			
Arg	Glu	Leu	Arg	Leu	Lys	Lys	Asn	Ile	His	Pro	Trp	Val	Lys	Gln	Ile
	930					935					940				
Asp	Thr	Leu	Ala	Ala	Glu	Tyr	Pro	Ser	Val	Thr	Asn	Tyr	Leu	Tyr	Val
945					950					955					960
Thr	Tyr	Asn	Gly	Gln	Glu	His	Asp	Val	Asn	Phe	Asp	Asp	His	Gly	Met
				965					970					975	
Met	Val	Leu	Gly	Cys	Gly	Pro	Tyr	His	Ile	Gly	Ser	Ser	Val	Glu	Phe
			980					985					990		
Asp	Trp	Cys	Ala	Val	Ser	Ser	Ile	Arg	Thr	Leu	Arg	Gln	Leu	Gly	
Lys															
		995						1000					1005		
Lys	Thr	Val	Val	Val	Asn	Cys	Asn	Pro	Glu	Thr	Val	Ser	Thr	Asp	
	1010					1015					1020				
Phe	Asp	Glu	Cys	Asp	Lys	Leu	Tyr	Phe	Glu	Glu	Leu	Ser	Leu	Glu	
	1025					1030					1035				
Arg	Ile	Leu	Asp	Ile	Tyr	His	Gln	Glu	Ala	Cys	Gly	Gly	Cys	Ile	
	1040					1045					1050				
Ile	Ser	Val	Gly	Gly	Gln	Ile	Pro	Asn	Asn	Leu	Ala	Val	Pro	Leu	
	1055					1060					1065				
Tyr	Lys	Asn	Gly	Val	Lys	Ile	Met	Gly	Thr	Ser	Pro	Leu	Gln	Ile	
	1070					1075					1080				
Asp	Arg	Ala	Glu	Asp	Arg	Ser	Ile	Phe	Ser	Ala	Val	Leu	Asp	Glu	
	1085					1090					1095				
Leu	Lys	Val	Ala	Gln	Ala	Pro	Trp	Lys	Ala	Val	Asn	Thr	Leu	Asn	
	1100					1105					1110				

Glu	Ala	Leu	Glu	Phe	Ala	Lys	Ser	Val	Asp	Tyr	Pro	Cys	Leu	Leu
1115						1120					1125			
Arg	Pro	Ser	Tyr	Val	Leu	Ser	Gly	Ser	Ala	Met	Asn	Val	Val	Phe
1130						1135					1140			
Ser	Glu	Asp	Glu	Met	Lys	Lys	Phe	Leu	Glu	Glu	Ala	Thr	Arg	Val
1145						1150					1155			
Ser	Gln	Glu	His	Pro	Val	Val	Leu	Thr	Lys	Phe	Val	Glu	Gly	Ala
1160						1165					1170			
Arg	Glu	Val	Glu	Met	Asp	Ala	Val	Gly	Lys	Asp	Gly	Arg	Val	Ile
1175						1180					1185			
Ser	His	Ala	Ile	Ser	Glu	His	Val	Glu	Asp	Ala	Gly	Val	His	Ser
1190						1195					1200			
Gly	Asp	Ala	Thr	Leu	Met	Leu	Pro	Thr	Gln	Thr	Ile	Ser	Gln	Gly
1205						1210					1215			
Ala	Ile	Glu	Lys	Val	Lys	Asp	Ala	Thr	Arg	Lys	Ile	Ala	Lys	Ala
1220						1225					1230			
Phe	Ala	Ile	Ser	Gly	Pro	Phe	Asn	Val	Gln	Phe	Leu	Val	Lys	Gly
1235						1240					1245			
Asn	Asp	Val	Leu	Val	Ile	Glu	Cys	Asn	Leu	Arg	Ala	Ser	Arg	Ser
1250						1255					1260			
Phe	Pro	Phe	Val	Ser	Lys	Thr	Leu	Gly	Val	Asp	Phe	Ile	Asp	Val
1265						1270					1275			
Ala	Thr	Lys	Val	Met	Ile	Gly	Glu	Asn	Val	Asp	Glu	Lys	His	Leu
1280						1285					1290			
Pro	Thr	Leu	Asp	His	Pro	Ile	Ile	Pro	Ala	Asp	Tyr	Val	Ala	Ile
1295						1300					1305			
Lys	Ala	Pro	Met	Phe	Ser	Trp	Pro	Arg	Leu	Arg	Asp	Ala	Asp	Pro
1310						1315					1320			
Ile	Leu	Arg	Cys	Glu	Met	Ala	Ser	Thr	Gly	Glu	Val	Ala	Cys	Phe

1325		1330		1335										
Gly	Glu	Gly	Ile	His	Thr	Ala	Phe	Leu	Lys	Ala	Met	Leu	Ser	Thr
1340						1345					1350			
Gly	Phe	Lys	Ile	Pro	Gln	Lys	Gly	Ile	Leu	Ile	Gly	Ile	Gln	Gln
1355						1360					1365			
Ser	Phe	Arg	Pro	Arg	Phe	Leu	Gly	Val	Ala	Glu	Gln	Leu	His	Asn
1370						1375					1380			
Glu	Gly	Phe	Lys	Leu	Phe	Ala	Thr	Glu	Ala	Thr	Ser	Asp	Trp	Leu
1385						1390					1395			
Asn	Ala	Asn	Asn	Val	Pro	Ala	Thr	Pro	Val	Ala	Trp	Pro	Ser	Gln
1400						1405					1410			
Glu	Gly	Gln	Asn	Pro	Ser	Leu	Ser	Ser	Ile	Arg	Lys	Leu	Ile	Arg
1415						1420					1425			
Asp	Gly	Ser	Ile	Asp	Leu	Val	Ile	Asn	Leu	Pro	Asn	Asn	Asn	Thr
1430						1435					1440			
Lys	Phe	Val	His	Asp	Asn	Tyr	Val	Ile	Arg	Arg	Thr	Ala	Val	Asp
1445						1450					1455			
Ser	Gly	Ile	Pro	Leu	Leu	Thr	Asn	Phe	Gln	Val	Thr	Lys	Leu	Phe
1460						1465					1470			
Ala	Glu	Ala	Val	Gln	Lys	Ser	Arg	Lys	Val	Asp	Ser	Lys	Ser	Leu
1475						1480					1485			
Phe	His	Tyr	Arg	Gln	Tyr	Ser	Ala	Gly	Lys	Ala	Ala			
1490						1495					1500			

<210> 11643

<211> 121

<212> PRT

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<220>

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<223> /note="Payload ID: 2292"

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<221> source
<223> /note="Gene Symbol: CPS1"

<220>
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<220>
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<400> 11643
Met Thr Arg Ile Leu Thr Ala Phe Lys Val Val Arg Thr Leu Lys Thr
1          5          10          15

Gly Phe Gly Phe Thr Asn Val Thr Ala His Gln Lys Trp Lys Phe Ser
          20          25          30

Arg Pro Gly Ile Arg Leu Leu Ser Val Lys Ala Gln Thr Ala His Ile
          35          40          45

Val Leu Glu Asp Gly Thr Lys Met Lys Gly Tyr Ser Phe Gly His Pro
          50          55          60

Ser Ser Val Ala Gly Glu Val Val Phe Asn Thr Gly Leu Gly Gly Tyr
65          70          75          80

Pro Glu Ala Ile Thr Asp Pro Ala Tyr Lys Gly Gln Ile Leu Thr Met
          85          90          95

Ala Asn Pro Ile Ile Gly Asn Gly Gly Ala Pro Asp Thr Thr Ala Leu
          100          105          110

Asp Glu Leu Gly Leu Ser Lys Tyr Leu
          115          120

<210> 11644
<211> 1506
<212> PRT
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<220>
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<220>
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<220>
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 <223> /note="Uniprot ID: P31327"

<220>
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 <223> /note="ENSP ID: ENSP00000402608"

<400> 11644
 Met Pro Gln Ile Ile Lys Met Thr Arg Ile Leu Thr Ala Phe Lys Val
 1 5 10 15

Val Arg Thr Leu Lys Thr Gly Phe Gly Phe Thr Asn Val Thr Ala His
 20 25 30

Gln Lys Trp Lys Phe Ser Arg Pro Gly Ile Arg Leu Leu Ser Val Lys
 35 40 45

Ala Gln Thr Ala His Ile Val Leu Glu Asp Gly Thr Lys Met Lys Gly
 50 55 60

Tyr Ser Phe Gly His Pro Ser Ser Val Ala Gly Glu Val Val Phe Asn
 65 70 75 80

Thr Gly Leu Gly Gly Tyr Pro Glu Ala Ile Thr Asp Pro Ala Tyr Lys
 85 90 95

Gly Gln Ile Leu Thr Met Ala Asn Pro Ile Ile Gly Asn Gly Gly Ala
 100 105 110

Pro Asp Thr Thr Ala Leu Asp Glu Leu Gly Leu Ser Lys Tyr Leu Glu
 115 120 125

Ser Asn Gly Ile Lys Val Ser Gly Leu Leu Val Leu Asp Tyr Ser Lys
 130 135 140

Asp Tyr Asn His Trp Leu Ala Thr Lys Ser Leu Gly Gln Trp Leu Gln
 145 150 155 160

Glu Glu Lys Val Pro Ala Ile Tyr Gly Val Asp Thr Arg Met Leu Thr
 165 170 175

Lys	Ile	Ile	Arg	Asp	Lys	Gly	Thr	Met	Leu	Gly	Lys	Ile	Glu	Phe	Glu	
			180					185					190			
Gly	Gln	Pro	Val	Asp	Phe	Val	Asp	Pro	Asn	Lys	Gln	Asn	Leu	Ile	Ala	
		195					200					205				
Glu	Val	Ser	Thr	Lys	Asp	Val	Lys	Val	Tyr	Gly	Lys	Gly	Asn	Pro	Thr	
	210					215					220					
Lys	Val	Val	Ala	Val	Asp	Cys	Gly	Ile	Lys	Asn	Asn	Val	Ile	Arg	Leu	
225					230					235					240	
Leu	Val	Lys	Arg	Gly	Ala	Glu	Val	His	Leu	Val	Pro	Trp	Asn	His	Asp	
				245					250					255		
Phe	Thr	Lys	Met	Glu	Tyr	Asp	Gly	Ile	Leu	Ile	Ala	Gly	Gly	Pro	Gly	
			260					265					270			
Asn	Pro	Ala	Leu	Ala	Glu	Pro	Leu	Ile	Gln	Asn	Val	Arg	Lys	Ile	Leu	
		275					280					285				
Glu	Ser	Asp	Arg	Lys	Glu	Pro	Leu	Phe	Gly	Ile	Ser	Thr	Gly	Asn	Leu	
	290					295					300					
Ile	Thr	Gly	Leu	Ala	Ala	Gly	Ala	Lys	Thr	Tyr	Lys	Met	Ser	Met	Ala	
305					310					315					320	
Asn	Arg	Gly	Gln	Asn	Gln	Pro	Val	Leu	Asn	Ile	Thr	Asn	Lys	Gln	Ala	
				325					330					335		
Phe	Ile	Thr	Ala	Gln	Asn	His	Gly	Tyr	Ala	Leu	Asp	Asn	Thr	Leu	Pro	
			340					345					350			
Ala	Gly	Trp	Lys	Pro	Leu	Phe	Val	Asn	Val	Asn	Asp	Gln	Thr	Asn	Glu	
		355					360					365				
Gly	Ile	Met	His	Glu	Ser	Lys	Pro	Phe	Phe	Ala	Val	Gln	Phe	His	Pro	
	370					375					380					
Glu	Val	Thr	Pro	Gly	Pro	Ile	Asp	Thr	Glu	Tyr	Leu	Phe	Asp	Ser	Phe	
385					390					395					400	

Phe	Ser	Leu	Ile	Lys	Lys	Gly	Lys	Ala	Thr	Thr	Ile	Thr	Ser	Val	Leu		
				405					410					415			
Pro	Lys	Pro	Ala	Leu	Val	Ala	Ser	Arg	Val	Glu	Val	Ser	Lys	Val	Leu		
			420					425					430				
Ile	Leu	Gly	Ser	Gly	Gly	Leu	Ser	Ile	Gly	Gln	Ala	Gly	Glu	Phe	Asp		
		435					440					445					
Tyr	Ser	Gly	Ser	Gln	Ala	Val	Lys	Ala	Met	Lys	Glu	Glu	Asn	Val	Lys		
	450					455					460						
Thr	Val	Leu	Met	Asn	Pro	Asn	Ile	Ala	Ser	Val	Gln	Thr	Asn	Glu	Val		
465					470					475					480		
Gly	Leu	Lys	Gln	Ala	Asp	Thr	Val	Tyr	Phe	Leu	Pro	Ile	Thr	Pro	Gln		
				485					490					495			
Phe	Val	Thr	Glu	Val	Ile	Lys	Ala	Glu	Gln	Pro	Asp	Gly	Leu	Ile	Leu		
			500					505					510				
Gly	Met	Gly	Gly	Gln	Thr	Ala	Leu	Asn	Cys	Gly	Val	Glu	Leu	Phe	Lys		
		515					520					525					
Arg	Gly	Val	Leu	Lys	Glu	Tyr	Gly	Val	Lys	Val	Leu	Gly	Thr	Ser	Val		
	530					535					540						
Glu	Ser	Ile	Met	Ala	Thr	Glu	Asp	Arg	Gln	Leu	Phe	Ser	Asp	Lys	Leu		
545					550					555					560		
Asn	Glu	Ile	Asn	Glu	Lys	Ile	Ala	Pro	Ser	Phe	Ala	Val	Glu	Ser	Ile		
				565					570					575			
Glu	Asp	Ala	Leu	Lys	Ala	Ala	Asp	Thr	Ile	Gly	Tyr	Pro	Val	Met	Ile		
			580					585					590				
Arg	Ser	Ala	Tyr	Ala	Leu	Gly	Gly	Leu	Gly	Ser	Gly	Ile	Cys	Pro	Asn		
		595					600					605					
Arg	Glu	Thr	Leu	Met	Asp	Leu	Ser	Thr	Lys	Ala	Phe	Ala	Met	Thr	Asn		
	610					615					620						

Gln	Ile	Leu	Val	Glu	Lys	Ser	Val	Thr	Gly	Trp	Lys	Glu	Ile	Glu	Tyr	625	630	635	640
Glu	Val	Val	Arg	Asp	Ala	Asp	Asp	Asn	Cys	Val	Thr	Val	Cys	Asn	Met	645	650	655	
Glu	Asn	Val	Asp	Ala	Met	Gly	Val	His	Thr	Gly	Asp	Ser	Val	Val	Val	660	665	670	
Ala	Pro	Ala	Gln	Thr	Leu	Ser	Asn	Ala	Glu	Phe	Gln	Met	Leu	Arg	Arg	675	680	685	
Thr	Ser	Ile	Asn	Val	Val	Arg	His	Leu	Gly	Ile	Val	Gly	Glu	Cys	Asn	690	695	700	
Ile	Gln	Phe	Ala	Leu	His	Pro	Thr	Ser	Met	Glu	Tyr	Cys	Ile	Ile	Glu	705	710	715	720
Val	Asn	Ala	Arg	Leu	Ser	Arg	Ser	Ser	Ala	Leu	Ala	Ser	Lys	Ala	Thr	725	730	735	
Gly	Tyr	Pro	Leu	Ala	Phe	Ile	Ala	Ala	Lys	Ile	Ala	Leu	Gly	Ile	Pro	740	745	750	
Leu	Pro	Glu	Ile	Lys	Asn	Val	Val	Ser	Gly	Lys	Thr	Ser	Ala	Cys	Phe	755	760	765	
Glu	Pro	Ser	Leu	Asp	Tyr	Met	Val	Thr	Lys	Ile	Pro	Arg	Trp	Asp	Leu	770	775	780	
Asp	Arg	Phe	His	Gly	Thr	Ser	Ser	Arg	Ile	Gly	Ser	Ser	Met	Lys	Ser	785	790	795	800
Val	Gly	Glu	Val	Met	Ala	Ile	Gly	Arg	Thr	Phe	Glu	Glu	Ser	Phe	Gln	805	810	815	
Lys	Ala	Leu	Arg	Met	Cys	His	Pro	Ser	Ile	Glu	Gly	Phe	Thr	Pro	Arg	820	825	830	
Leu	Pro	Met	Asn	Lys	Glu	Trp	Pro	Ser	Asn	Leu	Asp	Leu	Arg	Lys	Glu	835	840	845	
Leu	Ser	Glu	Pro	Ser	Ser	Thr	Arg	Ile	Tyr	Ala	Ile	Ala	Lys	Ala	Ile				

850		855		860
Asp 865	Asp Asn Met Ser Leu	Asp Glu Ile Glu Lys Leu Thr Tyr Ile Asp 880		
		870		
Lys Trp Phe Leu Tyr Lys Met Arg Asp Ile Leu Asn Met Glu Lys Thr 895		885		890
Leu Lys Gly Leu Asn Ser Glu Ser Met Thr Glu Glu Thr Leu Lys Arg 910		900		905
Ala Lys Glu Ile Gly Phe Ser Asp Lys Gln Ile Ser Lys Cys Leu Gly 925		915		920
Leu Thr Glu Ala Gln Thr Arg Glu Leu Arg Leu Lys Lys Asn Ile His 940		930		935
Pro Trp Val Lys Gln Ile Asp Thr Leu Ala Ala Glu Tyr Pro Ser Val 960		945		950
Thr Asn Tyr Leu Tyr Val Thr Tyr Asn Gly Gln Glu His Asp Val Asn 975		965		970
Phe Asp Asp His Gly Met Met Val Leu Gly Cys Gly Pro Tyr His Ile 990		980		985
Gly Ser Ser Val Glu Phe Asp Trp Cys Ala Val Ser Ser Ile Arg 1005		995		1000
Thr				
Leu Arg Gln Leu Gly Lys Lys Thr Val Val Val Asn Cys Asn Pro 1020		1010		1015
Glu Thr Val Ser Thr Asp Phe Asp Glu Cys Asp Lys Leu Tyr Phe 1035		1025		1030
Glu Glu Leu Ser Leu Glu Arg Ile Leu Asp Ile Tyr His Gln Glu 1050		1040		1045
Ala Cys Gly Gly Cys Ile Ile Ser Val Gly Gly Gln Ile Pro Asn 1065		1055		1060
Asn Leu Ala Val Pro Leu Tyr Lys Asn Gly Val Lys Ile Met Gly				

1070					1075					1080				
Thr	Ser	Pro	Leu	Gln	Ile	Asp	Arg	Ala	Glu	Asp	Arg	Ser	Ile	Phe
	1085					1090					1095			
Ser	Ala	Val	Leu	Asp	Glu	Leu	Lys	Val	Ala	Gln	Ala	Pro	Trp	Lys
	1100					1105					1110			
Ala	Val	Asn	Thr	Leu	Asn	Glu	Ala	Leu	Glu	Phe	Ala	Lys	Ser	Val
	1115					1120					1125			
Asp	Tyr	Pro	Cys	Leu	Leu	Arg	Pro	Ser	Tyr	Val	Leu	Ser	Gly	Ser
	1130					1135					1140			
Ala	Met	Asn	Val	Val	Phe	Ser	Glu	Asp	Glu	Met	Lys	Lys	Phe	Leu
	1145					1150					1155			
Glu	Glu	Ala	Thr	Arg	Val	Ser	Gln	Glu	His	Pro	Val	Val	Leu	Thr
	1160					1165					1170			
Lys	Phe	Val	Glu	Gly	Ala	Arg	Glu	Val	Glu	Met	Asp	Ala	Val	Gly
	1175					1180					1185			
Lys	Asp	Gly	Arg	Val	Ile	Ser	His	Ala	Ile	Ser	Glu	His	Val	Glu
	1190					1195					1200			
Asp	Ala	Gly	Val	His	Ser	Gly	Asp	Ala	Thr	Leu	Met	Leu	Pro	Thr
	1205					1210					1215			
Gln	Thr	Ile	Ser	Gln	Gly	Ala	Ile	Glu	Lys	Val	Lys	Asp	Ala	Thr
	1220					1225					1230			
Arg	Lys	Ile	Ala	Lys	Ala	Phe	Ala	Ile	Ser	Gly	Pro	Phe	Asn	Val
	1235					1240					1245			
Gln	Phe	Leu	Val	Lys	Gly	Asn	Asp	Val	Leu	Val	Ile	Glu	Cys	Asn
	1250					1255					1260			
Leu	Arg	Ala	Ser	Arg	Ser	Phe	Pro	Phe	Val	Ser	Lys	Thr	Leu	Gly
	1265					1270					1275			
Val	Asp	Phe	Ile	Asp	Val	Ala	Thr	Lys	Val	Met	Ile	Gly	Glu	Asn
	1280					1285					1290			

Val	Asp	Glu	Lys	His	Leu	Pro	Thr	Leu	Asp	His	Pro	Ile	Ile	Pro
	1295					1300					1305			
Ala	Asp	Tyr	Val	Ala	Ile	Lys	Ala	Pro	Met	Phe	Ser	Trp	Pro	Arg
	1310					1315					1320			
Leu	Arg	Asp	Ala	Asp	Pro	Ile	Leu	Arg	Cys	Glu	Met	Ala	Ser	Thr
	1325					1330					1335			
Gly	Glu	Val	Ala	Cys	Phe	Gly	Glu	Gly	Ile	His	Thr	Ala	Phe	Leu
	1340					1345					1350			
Lys	Ala	Met	Leu	Ser	Thr	Gly	Phe	Lys	Ile	Pro	Gln	Lys	Gly	Ile
	1355					1360					1365			
Leu	Ile	Gly	Ile	Gln	Gln	Ser	Phe	Arg	Pro	Arg	Phe	Leu	Gly	Val
	1370					1375					1380			
Ala	Glu	Gln	Leu	His	Asn	Glu	Gly	Phe	Lys	Leu	Phe	Ala	Thr	Glu
	1385					1390					1395			
Ala	Thr	Ser	Asp	Trp	Leu	Asn	Ala	Asn	Asn	Val	Pro	Ala	Thr	Pro
	1400					1405					1410			
Val	Ala	Trp	Pro	Ser	Gln	Glu	Gly	Gln	Asn	Pro	Ser	Leu	Ser	Ser
	1415					1420					1425			
Ile	Arg	Lys	Leu	Ile	Arg	Asp	Gly	Ser	Ile	Asp	Leu	Val	Ile	Asn
	1430					1435					1440			
Leu	Pro	Asn	Asn	Asn	Thr	Lys	Phe	Val	His	Asp	Asn	Tyr	Val	Ile
	1445					1450					1455			
Arg	Arg	Thr	Ala	Val	Asp	Ser	Gly	Ile	Pro	Leu	Leu	Thr	Asn	Phe
	1460					1465					1470			
Gln	Val	Thr	Lys	Leu	Phe	Ala	Glu	Ala	Val	Gln	Lys	Ser	Arg	Lys
	1475					1480					1485			
Val	Asp	Ser	Lys	Ser	Leu	Phe	His	Tyr	Arg	Gln	Tyr	Ser	Ala	Gly
	1490					1495					1500			

Lys Ala Ala
1505

<210> 11645
<211> 1049
<212> PRT
<213> Homo sapiens

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<220>
<221> source
<223> /note="Gene Symbol: CPS1"

<220>
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<223> /note="Gene Name:
carbamoyl-phosphate synthase 1, mitochondrial"

<220>
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<223> /note="Uniprot ID: P31327"

<220>
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<400> 11645
Met Lys Glu Glu Asn Val Lys Thr Val Leu Met Asn Pro Asn Ile Ala
1 5 10 15

Ser Val Gln Thr Asn Glu Val Gly Leu Lys Gln Ala Asp Thr Val Tyr
20 25 30

Phe Leu Pro Ile Thr Pro Gln Phe Val Thr Glu Val Ile Lys Ala Glu
35 40 45

Gln Pro Asp Gly Leu Ile Leu Gly Met Gly Gly Gln Thr Ala Leu Asn
50 55 60

Cys Gly Val Glu Leu Phe Lys Arg Gly Val Leu Lys Glu Tyr Gly Val
65 70 75 80

Lys Val Leu Gly Thr Ser Val Glu Ser Ile Met Ala Thr Glu Asp Arg
85 90 95

Gln Leu Phe Ser Asp Lys Leu Asn Glu Ile Asn Glu Lys Ile Ala Pro

26001

Ile	Gly	Ser	Ser	Met	Lys	Ser	Val	Gly	Glu	Val	Met	Ala	Ile	Gly	Arg	
			340					345					350			
Thr	Phe	Glu	Glu	Ser	Phe	Gln	Lys	Ala	Leu	Arg	Met	Cys	His	Pro	Ser	
		355					360					365				
Ile	Glu	Gly	Phe	Thr	Pro	Arg	Leu	Pro	Met	Asn	Lys	Glu	Trp	Pro	Ser	
	370					375					380					
Asn	Leu	Asp	Leu	Arg	Lys	Glu	Leu	Ser	Glu	Pro	Ser	Ser	Thr	Arg	Ile	
385					390					395					400	
Tyr	Ala	Ile	Ala	Lys	Ala	Ile	Asp	Asp	Asn	Met	Ser	Leu	Asp	Glu	Ile	
				405					410					415		
Glu	Lys	Leu	Thr	Tyr	Ile	Asp	Lys	Trp	Phe	Leu	Tyr	Lys	Met	Arg	Asp	
			420					425					430			
Ile	Leu	Asn	Met	Glu	Lys	Thr	Leu	Lys	Gly	Leu	Asn	Ser	Glu	Ser	Met	
		435					440					445				
Thr	Glu	Glu	Thr	Leu	Lys	Arg	Ala	Lys	Glu	Ile	Gly	Phe	Ser	Asp	Lys	
	450					455					460					
Gln	Ile	Ser	Lys	Cys	Leu	Gly	Leu	Thr	Glu	Ala	Gln	Thr	Arg	Glu	Leu	
465					470					475					480	
Arg	Leu	Lys	Lys	Asn	Ile	His	Pro	Trp	Val	Lys	Gln	Ile	Asp	Thr	Leu	
				485					490					495		
Ala	Ala	Glu	Tyr	Pro	Ser	Val	Thr	Asn	Tyr	Leu	Tyr	Val	Thr	Tyr	Asn	
			500					505					510			
Gly	Gln	Glu	His	Asp	Val	Asn	Phe	Asp	Asp	His	Gly	Met	Met	Val	Leu	
		515					520					525				
Gly	Cys	Gly	Pro	Tyr	His	Ile	Gly	Ser	Ser	Val	Glu	Phe	Asp	Trp	Cys	
	530					535					540					
Ala	Val	Ser	Ser	Ile	Arg	Thr	Leu	Arg	Gln	Leu	Gly	Lys	Lys	Thr	Val	
545					550					555					560	

Val	Val	Asn	Cys	Asn	Pro	Glu	Thr	Val	Ser	Thr	Asp	Phe	Asp	Glu	Cys
				565					570					575	
Asp	Lys	Leu	Tyr	Phe	Glu	Glu	Leu	Ser	Leu	Glu	Arg	Ile	Leu	Asp	Ile
			580					585					590		
Tyr	His	Gln	Glu	Ala	Cys	Gly	Gly	Cys	Ile	Ile	Ser	Val	Gly	Gly	Gln
		595					600					605			
Ile	Pro	Asn	Asn	Leu	Ala	Val	Pro	Leu	Tyr	Lys	Asn	Gly	Val	Lys	Ile
	610					615					620				
Met	Gly	Thr	Ser	Pro	Leu	Gln	Ile	Asp	Arg	Ala	Glu	Asp	Arg	Ser	Ile
625					630					635					640
Phe	Ser	Ala	Val	Leu	Asp	Glu	Leu	Lys	Val	Ala	Gln	Ala	Pro	Trp	Lys
				645					650					655	
Ala	Val	Asn	Thr	Leu	Asn	Glu	Ala	Leu	Glu	Phe	Ala	Lys	Ser	Val	Asp
			660					665					670		
Tyr	Pro	Cys	Leu	Leu	Arg	Pro	Ser	Tyr	Val	Leu	Ser	Gly	Ser	Ala	Met
		675					680					685			
Asn	Val	Val	Phe	Ser	Glu	Asp	Glu	Met	Lys	Lys	Phe	Leu	Glu	Glu	Ala
	690					695					700				
Thr	Arg	Val	Ser	Gln	Glu	His	Pro	Val	Val	Leu	Thr	Lys	Phe	Val	Glu
705					710					715					720
Gly	Ala	Arg	Glu	Val	Glu	Met	Asp	Ala	Val	Gly	Lys	Asp	Gly	Arg	Val
				725					730					735	
Ile	Ser	His	Ala	Ile	Ser	Glu	His	Val	Glu	Asp	Ala	Gly	Val	His	Ser
			740					745					750		
Gly	Asp	Ala	Thr	Leu	Met	Leu	Pro	Thr	Gln	Thr	Ile	Ser	Gln	Gly	Ala
		755					760					765			
Ile	Glu	Lys	Val	Lys	Asp	Ala	Thr	Arg	Lys	Ile	Ala	Lys	Ala	Phe	Ala
	770					775					780				

Ile Ser Gly Pro Phe Asn Val Gln Phe Leu Val Lys Gly Asn Asp Val
785 790 795 800

Leu Val Ile Glu Cys Asn Leu Arg Ala Ser Arg Ser Phe Pro Phe Val
805 810 815

Ser Lys Thr Leu Gly Val Asp Phe Ile Asp Val Ala Thr Lys Val Met
820 825 830

Ile Gly Glu Asn Val Asp Glu Lys His Leu Pro Thr Leu Asp His Pro
835 840 845

Ile Ile Pro Ala Asp Tyr Val Ala Ile Lys Ala Pro Met Phe Ser Trp
850 855 860

Pro Arg Leu Arg Asp Ala Asp Pro Ile Leu Arg Cys Glu Met Ala Ser
865 870 875 880

Thr Gly Glu Val Ala Cys Phe Gly Glu Gly Ile His Thr Ala Phe Leu
885 890 895

Lys Ala Met Leu Ser Thr Gly Phe Lys Ile Pro Gln Lys Gly Ile Leu
900 905 910

Ile Gly Ile Gln Gln Ser Phe Arg Pro Arg Phe Leu Gly Val Ala Glu
915 920 925

Gln Leu His Asn Glu Gly Phe Lys Leu Phe Ala Thr Glu Ala Thr Ser
930 935 940

Asp Trp Leu Asn Ala Asn Asn Val Pro Ala Thr Pro Val Ala Trp Pro
945 950 955 960

Ser Gln Glu Gly Gln Asn Pro Ser Leu Ser Ser Ile Arg Lys Leu Ile
965 970 975

Arg Asp Gly Ser Ile Asp Leu Val Ile Asn Leu Pro Asn Asn Asn Thr
980 985 990

Lys Phe Val His Asp Asn Tyr Val Ile Arg Arg Thr Ala Val Asp
Ser
995 1000 1005

Gly Ile Pro Leu Leu Thr Asn Phe Gln Val Thr Lys Leu Phe Ala
 1010 1015 1020

Glu Ala Val Gln Lys Ser Arg Lys Val Asp Ser Lys Ser Leu Phe
 1025 1030 1035

His Tyr Arg Gln Tyr Ser Ala Gly Lys Ala Ala
 1040 1045

<210> 11646

<211> 157

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2292"

<220>

<221> source

<223> /note="Gene Symbol: CPS1"

<220>

<221> source

<223> /note="Gene Name:
 carbamoyl-phosphate synthase 1, mitochondrial"

<220>

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<223> /note="ENSP ID: ENSP00000430644"

<400> 11646

Met Pro Gln Ile Ile Lys Met Thr Arg Ile Leu Thr Ala Phe Lys Val
 1 5 10 15

Val Arg Thr Leu Lys Thr Gly Phe Gly Phe Thr Asn Val Thr Ala His
 20 25 30

Gln Lys Trp Lys Phe Ser Arg Pro Gly Ile Arg Leu Leu Ser Val Lys
 35 40 45

Ala Gln Thr Ala His Ile Val Leu Glu Asp Gly Thr Lys Met Lys Gly
 50 55 60

Tyr Ser Phe Gly His Pro Ser Ser Val Ala Gly Glu Val Val Phe Asn
 65 70 75 80

Thr Gly Leu Gly Gly Tyr Pro Glu Ala Ile Thr Asp Pro Ala Tyr Lys
 85 90 95

Gly Gln Ile Leu Thr Met Ala Asn Pro Ile Ile Gly Asn Gly Gly Ala
100 105 110

Pro Asp Thr Thr Ala Leu Asp Glu Leu Gly Leu Ser Lys Tyr Leu Glu
115 120 125

Ser Asn Gly Ile Lys Val Ser Gly Leu Leu Val Leu Asp Tyr Ser Lys
130 135 140

Asp Tyr Asn His Trp Leu Ala Thr Lys Ser Leu Gly Gln
145 150 155

<210> 11647
<211> 121
<212> PRT
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<220>
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carbamoyl-phosphate synthase 1, mitochondrial"

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<400> 11647
Met Thr Arg Ile Leu Thr Ala Phe Lys Val Val Arg Thr Leu Lys Thr
1 5 10 15

Gly Phe Gly Phe Thr Asn Val Thr Ala His Gln Lys Trp Lys Phe Ser
20 25 30

Arg Pro Gly Ile Arg Leu Leu Ser Val Lys Ala Gln Thr Ala His Ile
35 40 45

Val Leu Glu Asp Gly Thr Lys Met Lys Gly Tyr Ser Phe Gly His Pro
50 55 60

Ser Ser Val Ala Gly Glu Val Val Phe Asn Thr Gly Leu Gly Gly Tyr
65 70 75 80

Pro Glu Ala Ile Thr Asp Pro Ala Tyr Lys Gly Gln Ile Leu Thr Met
85 90 95

Ala Asn Pro Ile Ile Gly Asn Gly Gly Ala Pro Asp Thr Thr Ala Leu
100 105 110

Asp Glu Leu Gly Leu Ser Lys Tyr Leu
115 120

<210> 11648
<211> 513
<212> PRT
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<220>
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carbamoyl-phosphate synthase 1, mitochondrial"

<220>
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<400> 11648
Met Thr Arg Ile Leu Thr Ala Phe Lys Val Val Arg Thr Leu Lys Thr
1 5 10 15

Gly Phe Gly Phe Thr Asn Val Thr Ala His Gln Lys Trp Lys Phe Ser
20 25 30

Arg Pro Gly Ile Arg Leu Leu Ser Val Lys Ala Gln Thr Ala His Ile
35 40 45

Val Leu Glu Asp Gly Thr Lys Met Lys Gly Tyr Ser Phe Gly His Pro
50 55 60

Ser Ser Val Ala Gly Glu Val Val Phe Asn Thr Gly Leu Gly Gly Tyr
65 70 75 80

Pro	Glu	Ala	Ile	Thr	Asp	Pro	Ala	Tyr	Lys	Gly	Gln	Ile	Leu	Thr	Met	
				85					90					95		
Ala	Asn	Pro	Ile	Ile	Gly	Asn	Gly	Gly	Ala	Pro	Asp	Thr	Thr	Ala	Leu	
			100					105					110			
Asp	Glu	Leu	Gly	Leu	Ser	Lys	Tyr	Leu	Glu	Ser	Asn	Gly	Ile	Lys	Val	
		115					120					125				
Ser	Gly	Leu	Leu	Val	Leu	Asp	Tyr	Ser	Lys	Asp	Tyr	Asn	His	Trp	Leu	
	130					135					140					
Ala	Thr	Lys	Ser	Leu	Gly	Gln	Trp	Leu	Gln	Glu	Glu	Lys	Val	Pro	Ala	
145					150					155					160	
Ile	Tyr	Gly	Val	Asp	Thr	Arg	Met	Leu	Thr	Lys	Ile	Ile	Arg	Asp	Lys	
				165					170					175		
Gly	Thr	Met	Leu	Gly	Lys	Ile	Glu	Phe	Glu	Gly	Gln	Pro	Val	Asp	Phe	
			180					185					190			
Val	Asp	Pro	Asn	Lys	Gln	Asn	Leu	Ile	Ala	Glu	Val	Ser	Thr	Lys	Asp	
		195					200					205				
Val	Lys	Val	Tyr	Gly	Lys	Gly	Asn	Pro	Thr	Lys	Val	Val	Ala	Val	Asp	
	210					215					220					
Cys	Gly	Ile	Lys	Asn	Asn	Val	Ile	Arg	Leu	Leu	Val	Lys	Arg	Gly	Ala	
225					230					235					240	
Glu	Val	His	Leu	Val	Pro	Trp	Asn	His	Asp	Phe	Thr	Lys	Met	Glu	Tyr	
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His Gly Tyr Ala Leu Asp Asn Thr Leu Pro Ala Gly Trp Lys Pro Leu
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Phe Val Asn Val Asn Asp Gln Thr Asn Glu Gly Ile Met His Glu Ser
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Lys Pro Phe Phe Ala Val Gln Phe His Pro Glu Val Thr Pro Gly Pro
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Ile Asp Thr Glu Tyr Leu Phe Asp Ser Phe Phe Ser Leu Ile Lys Lys
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Gly Lys Ala Thr Thr Ile Thr Ser Val Leu Pro Lys Pro Ala Leu Val
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Leu Ser Ile Gly Gln Ala Gly Glu Phe Asp Tyr Ser Gly Ser Gln Ala
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Val Lys Ala Met Lys Glu Glu Asn Val Lys Thr Val Leu Met Asn Pro
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Asn Ile Ala Ser Val Gln Thr Asn Glu Val Gly Leu Lys Gln Ala Asp
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Thr Val Tyr Phe Leu Pro Ile Thr Pro Gln Phe Val Thr Glu Val Ile
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Ile Leu Val Leu Thr Tyr Pro Leu Ile Gly Asn Tyr Gly Ile Pro Pro
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Asp Glu Met Asp Glu Phe Gly Leu Cys Lys Trp Phe Glu Ser Ser Gly
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Ile His Val Ala Ala Leu Val Val Gly Glu Cys Cys Pro Thr Pro Ser
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His Trp Ser Ala Thr Arg Thr Leu His Glu Trp Leu Gln Gln His Gly
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Lys	Val	Tyr	Phe	Leu	Pro	Ile	Thr	Pro	His	Tyr	Val	Thr	Gln	Val	Ile	
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Leu Trp Ala Gly Tyr Ser Val Asp Arg Leu Tyr Glu Leu Thr Arg Ile
820 825 830

Asp Arg Trp Phe Leu His Arg Met Lys Arg Ile Ile Ala His Ala Gln
835 840 845

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Cys Pro Ala Val Lys Gln Ile Asp Thr Val Ala Ala Glu Trp Pro Ala
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Pro 1895	Val	Pro	Arg	Gln	Ala	Ser 1900	Pro	Gln	Asn	Leu	Gly 1905	Thr	Pro	Gly
Leu 1910	Leu	His	Pro	Gln	Thr	Ser 1915	Pro	Leu	Leu	His	Ser 1920	Leu	Val	Gly
Gln 1925	His	Ile	Leu	Ser	Val	Gln 1930	Gln	Phe	Thr	Lys	Asp 1935	Gln	Met	Ser
His 1940	Leu	Phe	Asn	Val	Ala	His 1945	Thr	Leu	Arg	Met	Met 1950	Val	Gln	Lys
Glu 1955	Arg	Ser	Leu	Asp	Ile	Leu 1960	Lys	Gly	Lys	Val	Met 1965	Ala	Ser	Met
Phe 1970	Tyr	Glu	Val	Ser	Thr	Arg 1975	Thr	Ser	Ser	Ser	Phe 1980	Ala	Ala	Ala
Met 1985	Ala	Arg	Leu	Gly	Gly	Ala 1990	Val	Leu	Ser	Phe	Ser 1995	Glu	Ala	Thr
Ser 2000	Ser	Val	Gln	Lys	Gly	Glu 2005	Ser	Leu	Ala	Asp	Ser 2010	Val	Gln	Thr
Met 2015	Ser	Cys	Tyr	Ala	Asp	Val 2020	Val	Val	Leu	Arg	His 2025	Pro	Gln	Pro
Gly 2030	Ala	Val	Glu	Leu	Ala	Ala 2035	Lys	His	Cys	Arg	Arg 2040	Pro	Val	Ile
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Asp 2060	Ile	Phe	Thr	Ile	Arg	Glu 2065	Glu	Leu	Gly	Thr	Val 2070	Asn	Gly	Met
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 Val Ala Ser Arg Gly Thr Lys Gln Glu Glu Phe Glu Ser Ile Glu
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 Glu Ala Leu Pro Asp Thr Asp Val Leu Tyr Met Thr Arg Ile Gln
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Ile Leu Val Leu Thr Tyr Pro Leu Ile Gly Asn Tyr Gly Ile Pro Pro
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Asp Glu Met Asp Glu Phe Gly Leu Cys Lys Trp Phe Glu Ser Ser Gly
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Ile His Val Ala Ala Leu Val Val Gly Glu Cys Cys Pro Thr Pro Ser
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His Trp Ser Ala Thr Arg Thr Leu His Glu Trp Leu Gln Gln His Gly
100 105 110

Ile Pro Gly Leu Gln Gly Val Asp Thr Arg Glu Leu Thr Lys Lys Leu
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Arg Glu Gln Gly Ser Leu Leu Gly Lys Leu Val Gln Asn Gly Thr Glu
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Pro Ser Ser Leu Pro Phe Leu Asp Pro Asn Ala Arg Pro Leu Val Pro
145 150 155 160

Glu Val Ser Ile Lys Thr Pro Arg Val Phe Asn Thr Gly Gly Ala Pro
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Arg Ile Leu Ala Leu Asp Cys Gly Leu Lys Tyr Asn Gln Ile Arg Cys
180 185 190

Leu Cys Gln Arg Gly Ala Glu Val Thr Val Val Pro Trp Asp His Ala

26022

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Ser	Glu	Pro	Asn	Pro	Arg	Pro	Val	Phe	Gly	Ile	Cys	Leu	Gly	His	Gln	
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Leu	Leu	Ala	Leu	Ala	Ile	Gly	Ala	Lys	Thr	Tyr	Lys	Met	Arg	Tyr	Gly	
			260					265					270			
Asn	Arg	Gly	His	Asn	Gln	Pro	Cys	Leu	Leu	Val	Gly	Ser	Gly	Arg	Cys	
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Phe	Leu	Thr	Ser	Gln	Asn	His	Gly	Phe	Ala	Val	Glu	Thr	Asp	Ser	Leu	
	290					295					300					
Pro	Ala	Asp	Trp	Ala	Pro	Leu	Phe	Thr	Asn	Ala	Asn	Asp	Gly	Ser	Asn	
305					310					315					320	
Glu	Gly	Ile	Val	His	Asn	Ser	Leu	Pro	Phe	Phe	Ser	Val	Gln	Phe	His	
				325					330					335		
Pro	Glu	His	Gln	Ala	Gly	Pro	Ser	Asp	Met	Glu	Leu	Leu	Phe	Asp	Ile	
			340					345					350			
Phe	Leu	Glu	Thr	Val	Lys	Glu	Ala	Thr	Ala	Gly	Asn	Pro	Gly	Gly	Gln	
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Thr	Val	Arg	Glu	Arg	Leu	Thr	Glu	Arg	Leu	Cys	Pro	Pro	Gly	Ile	Pro	
	370					375					380					
Thr	Pro	Gly	Ser	Gly	Leu	Pro	Pro	Pro	Arg	Lys	Val	Leu	Ile	Leu	Gly	
385					390					395					400	
Ser	Gly	Gly	Leu	Ser	Ile	Gly	Gln	Ala	Gly	Glu	Phe	Asp	Tyr	Ser	Gly	
				405					410					415		
Ser	Gln	Ala	Ile	Lys	Ala	Leu	Lys	Glu	Glu	Asn	Ile	Gln	Thr	Leu	Leu	
			420					425					430			

Ile	Asn	Pro	Asn	Ile	Ala	Thr	Val	Gln	Thr	Ser	Gln	Gly	Leu	Ala	Asp
		435					440					445			
Lys	Val	Tyr	Phe	Leu	Pro	Ile	Thr	Pro	His	Tyr	Val	Thr	Gln	Val	Ile
	450					455					460				
Arg	Asn	Glu	Arg	Pro	Asp	Gly	Val	Leu	Leu	Thr	Phe	Gly	Gly	Gln	Thr
465					470					475					480
Ala	Leu	Asn	Cys	Gly	Val	Glu	Leu	Thr	Lys	Ala	Gly	Val	Leu	Ala	Arg
				485					490					495	
Tyr	Gly	Val	Arg	Val	Leu	Gly	Thr	Pro	Val	Glu	Thr	Ile	Glu	Leu	Thr
			500					505					510		
Glu	Asp	Arg	Arg	Ala	Phe	Ala	Ala	Arg	Met	Ala	Glu	Ile	Gly	Glu	His
		515					520					525			
Val	Ala	Pro	Ser	Glu	Ala	Ala	Asn	Ser	Leu	Glu	Gln	Ala	Gln	Ala	Ala
	530					535					540				
Ala	Glu	Arg	Leu	Gly	Tyr	Pro	Val	Leu	Val	Arg	Ala	Ala	Phe	Ala	Leu
545					550					555					560
Gly	Gly	Leu	Gly	Ser	Gly	Phe	Ala	Ser	Asn	Arg	Glu	Glu	Leu	Ser	Ala
				565					570					575	
Leu	Val	Ala	Pro	Ala	Phe	Ala	His	Thr	Ser	Gln	Val	Leu	Val	Asp	Lys
			580					585					590		
Ser	Leu	Lys	Gly	Trp	Lys	Glu	Ile	Glu	Tyr	Glu	Val	Val	Arg	Asp	Ala
		595					600					605			
Tyr	Gly	Asn	Cys	Val	Thr	Tyr	Tyr	Ile	Ile	Glu	Val	Asn	Ala	Arg	Leu
	610					615					620				
Ser	Arg	Ser	Ser	Ala	Leu	Ala	Ser	Lys	Ala	Thr	Gly	Tyr	Pro	Leu	Ala
625					630					635					640
Tyr	Val	Ala	Ala	Lys	Leu	Ala	Leu	Gly	Ile	Pro	Leu	Pro	Glu	Leu	Arg
				645					650					655	

Asn	Ser	Val	Thr	Gly	Gly	Thr	Ala	Ala	Phe	Glu	Pro	Ser	Val	Asp	Tyr	
			660					665					670			
Cys	Val	Val	Lys	Ile	Pro	Arg	Trp	Asp	Leu	Ser	Lys	Phe	Leu	Arg	Val	
		675					680					685				
Ser	Thr	Lys	Ile	Gly	Ser	Cys	Met	Lys	Ser	Val	Gly	Glu	Val	Met	Gly	
	690					695					700					
Ile	Gly	Arg	Ser	Phe	Glu	Glu	Ala	Phe	Gln	Lys	Ala	Leu	Arg	Met	Val	
705					710					715					720	
Asp	Glu	Asn	Cys	Val	Gly	Phe	Asp	His	Thr	Val	Lys	Pro	Val	Ser	Asp	
				725					730					735		
Met	Glu	Leu	Glu	Thr	Pro	Thr	Asp	Lys	Arg	Ile	Phe	Val	Val	Ala	Ala	
			740					745					750			
Ala	Leu	Trp	Ala	Gly	Tyr	Ser	Val	Asp	Arg	Leu	Tyr	Glu	Leu	Thr	Arg	
		755					760					765				
Ile	Asp	Arg	Trp	Phe	Leu	His	Arg	Met	Lys	Arg	Ile	Ile	Ala	His	Ala	
	770					775					780					
Gln	Leu	Leu	Glu	Gln	His	Arg	Gly	Gln	Pro	Leu	Pro	Pro	Asp	Leu	Leu	
785					790					795					800	
Gln	Gln	Ala	Lys	Cys	Leu	Gly	Phe	Ser	Asp	Lys	Gln	Ile	Ala	Leu	Ala	
				805					810					815		
Val	Leu	Ser	Thr	Glu	Leu	Ala	Val	Arg	Lys	Leu	Arg	Gln	Glu	Leu	Gly	
			820					825					830			
Ile	Cys	Pro	Ala	Val	Lys	Gln	Ile	Asp	Thr	Val	Ala	Ala	Glu	Trp	Pro	
		835					840					845				
Ala	Gln	Thr	Asn	Tyr	Leu	Tyr	Leu	Thr	Tyr	Trp	Gly	Thr	Thr	His	Asp	
	850					855					860					
Leu	Thr	Phe	Arg	Thr	Pro	His	Val	Leu	Val	Leu	Gly	Ser	Gly	Val	Tyr	
865					870					875					880	

Arg Ile Gly Ser Ser Val Glu Phe Asp Trp Cys Ala Val Gly Cys Ile
885 890 895

Gln Gln Leu Arg Lys Met Gly Tyr Lys Thr Ile Met Val Asn Tyr Asn
900 905 910

Pro Glu Thr Val Ser Thr Asp Tyr Asp Met Cys Asp Arg Leu Tyr Phe
915 920 925

Asp Glu Ile Ser Phe Glu Val Val Met Asp Ile Tyr Glu Leu Glu Asn
930 935 940

Pro Glu Gly Val Ile Leu Ser Met Gly Gly Gln Leu Pro Asn Asn Met
945 950 955 960

Ala Met Ala Leu His Arg Gln Gln Cys Arg Val Leu Gly Thr Ser Pro
965 970 975

Glu Ala Ile Asp Ser Ala Glu Asn Arg Phe Lys Phe Ser Arg Leu Leu
980 985 990

Asp Thr Ile Gly Ile Ser Gln Pro Gln Trp Arg Glu Leu Ser Asp
Leu 995 1000 1005

Glu Ser Ala Arg Gln Phe Cys Gln Thr Val Gly Tyr Pro Cys Val
1010 1015 1020

Val Arg Pro Ser Tyr Val Leu Ser Gly Ala Ala Met Asn Val Ala
1025 1030 1035

Tyr Thr Asp Gly Asp Leu Glu Arg Phe Leu Ser Ser Ala Ala Ala
1040 1045 1050

Val Ser Lys Glu His Pro Val Val Ile Ser Lys Phe Ile Gln Glu
1055 1060 1065

Ala Lys Glu Ile Asp Val Asp Ala Val Ala Ser Asp Gly Val Val
1070 1075 1080

Ala Ala Ile Ala Ile Ser Glu His Val Glu Asn Ala Gly Val His
1085 1090 1095

Ser	Gly	Asp	Ala	Thr	Leu	Val	Thr	Pro	Pro	Gln	Asp	Ile	Thr	Ala
1100						1105					1110			
Lys	Thr	Leu	Glu	Arg	Ile	Lys	Ala	Ile	Val	His	Ala	Val	Gly	Gln
1115						1120					1125			
Glu	Leu	Gln	Val	Thr	Gly	Pro	Phe	Asn	Leu	Gln	Leu	Ile	Ala	Lys
1130						1135					1140			
Asp	Asp	Gln	Leu	Lys	Val	Ile	Glu	Cys	Asn	Val	Arg	Val	Ser	Arg
1145						1150					1155			
Ser	Phe	Pro	Phe	Val	Ser	Lys	Thr	Leu	Gly	Val	Asp	Leu	Val	Ala
1160						1165					1170			
Leu	Ala	Thr	Arg	Val	Ile	Met	Gly	Glu	Glu	Val	Glu	Pro	Val	Gly
1175						1180					1185			
Leu	Met	Thr	Gly	Ser	Gly	Val	Val	Gly	Val	Lys	Val	Pro	Gln	Phe
1190						1195					1200			
Ser	Phe	Ser	Arg	Leu	Ala	Gly	Ala	Asp	Val	Val	Leu	Gly	Val	Glu
1205						1210					1215			
Met	Thr	Ser	Thr	Gly	Glu	Val	Ala	Gly	Phe	Gly	Glu	Ser	Arg	Cys
1220						1225					1230			
Glu	Ala	Tyr	Leu	Lys	Ala	Met	Leu	Ser	Thr	Gly	Phe	Lys	Ile	Pro
1235						1240					1245			
Lys	Lys	Asn	Ile	Leu	Leu	Thr	Ile	Gly	Ser	Tyr	Lys	Asn	Lys	Ser
1250						1255					1260			
Glu	Leu	Leu	Pro	Thr	Val	Arg	Leu	Leu	Glu	Ser	Leu	Gly	Tyr	Ser
1265						1270					1275			
Leu	Tyr	Ala	Ser	Leu	Gly	Thr	Ala	Asp	Phe	Tyr	Thr	Glu	His	Gly
1280						1285					1290			
Val	Lys	Val	Thr	Ala	Val	Asp	Trp	His	Phe	Glu	Glu	Ala	Val	Asp
1295						1300					1305			
Gly	Glu	Cys	Pro	Pro	Gln	Arg	Ser	Ile	Leu	Glu	Gln	Leu	Ala	Glu

1310						1315						1320			
Lys	Asn	Phe	Glu	Leu	Val	Ile	Asn	Leu	Ser	Met	Arg	Gly	Ala	Gly	
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Gly	Arg	Arg	Leu	Ser	Ser	Phe	Val	Thr	Lys	Gly	Tyr	Arg	Thr	Arg	
	1340					1345					1350				
Arg	Leu	Ala	Ala	Asp	Phe	Ser	Val	Pro	Leu	Ile	Ile	Asp	Ile	Lys	
	1355					1360					1365				
Cys	Thr	Lys	Leu	Phe	Val	Glu	Ala	Leu	Gly	Gln	Ile	Gly	Pro	Ala	
	1370					1375					1380				
Pro	Pro	Leu	Lys	Val	His	Val	Asp	Cys	Met	Thr	Ser	Gln	Lys	Leu	
	1385					1390					1395				
Val	Arg	Leu	Pro	Gly	Leu	Ile	Asp	Val	His	Val	His	Leu	Arg	Glu	
	1400					1405					1410				
Pro	Gly	Gly	Thr	His	Lys	Glu	Asp	Phe	Ala	Ser	Gly	Thr	Ala	Ala	
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Ala	Leu	Ala	Gly	Gly	Ile	Thr	Met	Val	Cys	Ala	Met	Pro	Asn	Thr	
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Arg	Pro	Pro	Ile	Ile	Asp	Ala	Pro	Ala	Leu	Ala	Leu	Ala	Gln	Lys	
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Leu	Ala	Glu	Ala	Gly	Ala	Arg	Cys	Asp	Phe	Ala	Leu	Phe	Leu	Gly	
	1460					1465					1470				
Ala	Ser	Ser	Glu	Asn	Ala	Gly	Thr	Leu	Gly	Thr	Val	Ala	Gly	Ser	
	1475					1480					1485				
Ala	Ala	Gly	Leu	Lys	Leu	Tyr	Leu	Asn	Glu	Thr	Phe	Ser	Glu	Leu	
	1490					1495					1500				
Arg	Leu	Asp	Ser	Val	Val	Gln	Trp	Met	Glu	His	Phe	Glu	Thr	Trp	
	1505					1510					1515				
Pro	Ser	His	Leu	Pro	Ile	Val	Ala	His	Ala	Glu	Gln	Gln	Thr	Val	
	1520					1525					1530				

Ala	Ala	Val	Leu	Met	Val	Ala	Gln	Leu	Thr	Gln	Arg	Ser	Val	His
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Ile	Cys	His	Val	Ala	Arg	Lys	Glu	Glu	Ile	Leu	Leu	Ile	Lys	Ala
1550						1555					1560			
Ala	Lys	Ala	Arg	Gly	Leu	Pro	Val	Thr	Cys	Glu	Val	Ala	Pro	His
1565						1570					1575			
His	Leu	Phe	Leu	Ser	His	Asp	Asp	Leu	Glu	Arg	Leu	Gly	Pro	Gly
1580						1585					1590			
Lys	Gly	Glu	Val	Arg	Pro	Glu	Leu	Gly	Ser	Arg	Gln	Asp	Val	Glu
1595						1600					1605			
Ala	Leu	Trp	Glu	Asn	Met	Ala	Val	Ile	Asp	Cys	Phe	Ala	Ser	Asp
1610						1615					1620			
His	Ala	Pro	His	Thr	Leu	Glu	Glu	Lys	Cys	Gly	Ser	Arg	Pro	Pro
1625						1630					1635			
Pro	Gly	Phe	Pro	Gly	Leu	Glu	Thr	Met	Leu	Pro	Leu	Leu	Leu	Thr
1640						1645					1650			
Ala	Val	Ser	Glu	Gly	Arg	Leu	Ser	Leu	Asp	Asp	Leu	Leu	Gln	Arg
1655						1660					1665			
Leu	His	His	Asn	Pro	Arg	Arg	Ile	Phe	His	Leu	Pro	Pro	Gln	Glu
1670						1675					1680			
Asp	Thr	Tyr	Val	Glu	Val	Asp	Leu	Glu	His	Glu	Trp	Thr	Ile	Pro
1685						1690					1695			
Ser	His	Met	Pro	Phe	Ser	Lys	Ala	His	Trp	Thr	Pro	Phe	Glu	Gly
1700						1705					1710			
Gln	Lys	Val	Lys	Gly	Thr	Val	Arg	Arg	Val	Val	Leu	Arg	Gly	Glu
1715						1720					1725			
Val	Ala	Tyr	Ile	Asp	Gly	Gln	Val	Leu	Val	Pro	Pro	Gly	Tyr	Gly
1730						1735					1740			

Gln	Asp	Val	Arg	Lys	Trp	Pro	Gln	Gly	Ala	Val	Pro	Gln	Leu	Pro
1745						1750					1755			
Pro	Ser	Ala	Pro	Ala	Thr	Ser	Glu	Met	Thr	Thr	Thr	Pro	Glu	Arg
1760						1765					1770			
Pro	Arg	Arg	Gly	Ile	Pro	Gly	Leu	Pro	Asp	Gly	Arg	Phe	His	Leu
1775						1780					1785			
Pro	Pro	Arg	Ile	His	Arg	Ala	Ser	Asp	Pro	Gly	Leu	Pro	Ala	Glu
1790						1795					1800			
Glu	Pro	Lys	Glu	Lys	Ser	Ser	Arg	Lys	Val	Ala	Glu	Pro	Glu	Leu
1805						1810					1815			
Met	Gly	Thr	Pro	Asp	Gly	Thr	Cys	Tyr	Pro	Pro	Pro	Pro	Val	Pro
1820						1825					1830			
Arg	Gln	Ala	Ser	Pro	Gln	Asn	Leu	Gly	Thr	Pro	Gly	Leu	Leu	His
1835						1840					1845			
Pro	Gln	Thr	Ser	Pro	Leu	Leu	His	Ser	Leu	Val	Gly	Gln	His	Ile
1850						1855					1860			
Leu	Ser	Val	Gln	Gln	Phe	Thr	Lys	Asp	Gln	Met	Ser	His	Leu	Phe
1865						1870					1875			
Asn	Val	Ala	His	Thr	Leu	Arg	Met	Met	Val	Gln	Lys	Glu	Arg	Ser
1880						1885					1890			
Leu	Asp	Ile	Leu	Lys	Gly	Lys	Val	Met	Ala	Ser	Met	Phe	Tyr	Glu
1895						1900					1905			
Val	Ser	Thr	Arg	Thr	Ser	Ser	Ser	Phe	Ala	Ala	Ala	Met	Ala	Arg
1910						1915					1920			
Leu	Gly	Gly	Ala	Val	Leu	Ser	Phe	Ser	Glu	Ala	Thr	Ser	Ser	Val
1925						1930					1935			
Gln	Lys	Gly	Glu	Ser	Leu	Ala	Asp	Ser	Val	Gln	Thr	Met	Ser	Cys
1940						1945					1950			

Tyr	Ala	Asp	Val	Val	Val	Leu	Arg	His	Pro	Gln	Pro	Gly	Ala	Val
1955						1960					1965			
Glu	Leu	Ala	Ala	Lys	His	Cys	Arg	Arg	Pro	Val	Ile	Asn	Ala	Gly
1970						1975					1980			
Asp	Gly	Val	Gly	Glu	His	Pro	Thr	Gln	Ala	Leu	Leu	Asp	Ile	Phe
1985						1990					1995			
Thr	Ile	Arg	Glu	Glu	Leu	Gly	Thr	Val	Asn	Gly	Met	Thr	Ile	Thr
2000						2005					2010			
Met	Val	Gly	Asp	Leu	Lys	His	Gly	Arg	Thr	Val	His	Ser	Leu	Ala
2015						2020					2025			
Cys	Leu	Leu	Thr	Gln	Tyr	Arg	Val	Ser	Leu	Arg	Tyr	Val	Ala	Pro
2030						2035					2040			
Pro	Ser	Leu	Arg	Met	Pro	Pro	Thr	Val	Arg	Ala	Phe	Val	Ala	Ser
2045						2050					2055			
Arg	Gly	Thr	Lys	Gln	Glu	Glu	Phe	Glu	Ser	Ile	Glu	Glu	Ala	Leu
2060						2065					2070			
Pro	Asp	Thr	Asp	Val	Leu	Tyr	Met	Thr	Arg	Ile	Gln	Lys	Glu	Arg
2075						2080					2085			
Phe	Gly	Ser	Thr	Gln	Glu	Tyr	Glu	Ala	Cys	Phe	Gly	Gln	Phe	Ile
2090						2095					2100			
Leu	Thr	Pro	His	Ile	Met	Thr	Arg	Ala	Lys	Lys	Lys	Met	Val	Val
2105						2110					2115			
Met	His	Pro	Met	Pro	Arg	Val	Asn	Glu	Ile	Ser	Val	Glu	Val	Asp
2120						2125					2130			
Ser	Asp	Pro	Arg	Ala	Ala	Tyr	Phe	Arg	Gln	Ala	Glu	Asn	Gly	Met
2135						2140					2145			
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<220>
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transcarbamylase,
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20          25          30

Gln Glu Asp Thr Tyr Val Glu Val Asp Leu Glu His Glu Trp Thr Ile
35          40          45

Pro Ser His Met Pro Phe Ser Lys Ala His Trp Thr Pro Phe Glu Gly
50          55          60

Gln Lys Val Lys Gly Thr Val Arg Arg Val Val Leu Arg Gly Glu Val
65          70          75          80

Ala Tyr Ile Asp Gly Gln Val Leu Val Pro Pro Gly Tyr Gly Gln Asp
85          90          95

Val Arg Lys Trp Pro Gln Gly Ala Val Pro Gln Leu Pro Pro Ser Ala
100         105         110

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Pro Ala Thr Ser Glu Met Thr Thr Thr Pro Glu Arg Pro Arg Arg Gly
115 120 125

Ile Pro Gly Leu Pro Asp Gly Arg Phe His Leu Pro Pro Arg Ile His
130 135 140

Arg Ala Ser Asp Pro Gly Leu Pro Ala Val Phe Leu Arg Pro Gly Ala
145 150 155 160

Gly Ile Pro Arg Gly Ser Arg Ala Trp Ala Glu Glu Pro Lys Glu Lys
165 170 175

Ser Ser Arg Lys Val Ala Glu Pro Glu Leu Met Gly Thr Pro Asp Gly
180 185 190

Thr Cys Tyr Pro Pro Pro Pro Val Pro Arg Gln Ala Ser Pro Gln Asn
195 200 205

Leu Gly Thr Pro Gly Leu Leu His Pro Gln Thr Ser Pro Leu Leu His
210 215 220

Ser Leu Val Gly Gln His Ile Leu Ser Val Gln Gln Phe Thr Lys Asp
225 230 235 240

Gln Met Ser His Leu Phe Asn Val Ala His Thr Leu Arg Met Met Val
245 250 255

Gln Lys Glu Arg Ser Leu Asp Ile Leu Lys Gly Lys Val Met Ala Ser
260 265 270

Met Phe Tyr Glu Val Ser Thr
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<210> 11652

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20          25          30

Ala Thr Ser Ser Val Gln Lys Gly Glu Ser Leu Ala Asp Ser Val Gln
35          40          45

Thr Met Ser Cys Tyr Ala Asp Val Val Val Leu Arg His Pro Gln Pro
50          55          60

Gly Ala Val Glu Leu Ala Ala Lys His Cys Arg Arg Pro Val Ile Asn
65          70          75          80

Ala Gly Asp Gly Val Gly Glu His Pro Thr Gln Ala Leu Leu Asp Ile
85          90          95

Phe Thr Ile Arg Glu Glu Leu Gly Thr Val Asn Gly Met Thr Ile Thr
100         105         110

Met Val Gly Asp Leu Lys His Gly Arg Thr Val His Ser Leu Ala Cys
115         120         125

Leu Leu Thr Gln Tyr Arg Val Ser Leu Arg Tyr Val Ala Pro Pro Ser
130         135         140

Leu Arg Met Pro Pro Thr Val Arg Ala Phe Val Ala Ser Arg Gly Thr
145         150         155         160

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Lys Gln Val Arg Pro Ser Gln Pro Cys Leu Glu Ala Met Glu Met Trp
165 170 175

Val Gly Gln Ser Glu Pro Ser Ala Ala Ser Thr Met Ala Leu Leu Thr
180 185 190

Leu Gln Glu Glu Phe Glu Ser Ile Glu Glu Ala Leu Pro Asp Thr Asp
195 200 205

Val Leu Tyr Met Thr Arg Ile Gln Lys Glu Arg Phe Gly Ser Thr Gln
210 215 220

Glu Tyr Glu Ala Cys Phe Gly Gln Phe Ile Leu Thr Pro His Ile Met
225 230 235 240

Thr Arg Ala Lys Lys Lys Met Val Val Met His Pro Met Pro Arg Val
245 250 255

Asn Glu Ile Ser Val Glu Val Asp Ser Asp Pro Arg Ala Ala Tyr Phe
260 265 270

Arg Gln Ala Glu Asn Gly Met Tyr Ile Arg Met Ala Leu Leu Ala Thr
275 280 285

Val Leu Gly Arg Phe
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<210> 11653

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transcarbamylase,
and dihydroorotase"

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 20 25 30

Asn Phe Glu Leu Val Ile Asn Leu Ser Met Arg Gly Ala Gly Gly Arg
 35 40 45

Arg Leu Ser Ser Phe Val Thr Lys Gly Tyr Arg Thr Arg Arg Leu Ala
 50 55 60

Ala Asp Phe Ser Val Pro Leu Ile Ile Asp Ile Lys Cys Thr Lys Leu
 65 70 75 80

Phe Val Glu Leu Thr Ala Phe His Leu Gln Ala Leu Gly Gln Ile Gly
 85 90 95

Pro Ala Pro Pro Leu Lys Val His Val Asp Cys Met Thr Ser Gln Lys
 100 105 110

Leu Val Arg Leu Pro Gly Leu Ile Asp Val His Val His Leu Arg Glu
 115 120 125

Pro Gly Gly Thr His Lys Glu Asp Phe Ala Ser Gly Thr Ala Ala Ala
 130 135 140

Leu Ala Gly Gly Ile Thr Met Val Cys Ala Met Pro Asn Thr Arg Pro
 145 150 155 160

Pro Ile Ile Asp Ala Pro Ala Leu Ala Leu Ala Gln Lys Leu Ala Glu
 165 170 175

Ala Gly Ala Arg Cys Asp Phe Ala Leu Phe Leu Gly Ala Ser Ser Glu

180	185	190
Asn Ala Gly Thr Leu Gly Thr Val Ala Gly Ser Ala Ala Gly Leu Lys		
195	200	205
Leu Tyr Leu Asn Glu Thr Phe Ser Glu Leu Arg Leu Asp Ser Val Val		
210	215	220
Gln Trp Met Glu His Phe Glu Thr Trp Pro Ser His Leu Pro Ile Val		
225	230	235
Ala His Ala Glu Gln Gln Thr Val Ala Ala Val Leu Met Val Ala Gln		
245	250	255
Leu Thr Gln Arg Ser Val His Ile Cys His Val Ala Arg		
260	265	

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 carbohydrate (chondroitin 4) sulfotransferase 11"

<220>
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 <223> /note="Uniprot ID: Q9NPF2"

<220>
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<400> 11654
Met Lys Pro Ala Leu Leu Glu Val Met Arg Met Asn Arg Ile Cys Arg
1 5 10 15

Met Val Leu Ala Thr Cys Leu Gly Ser Phe Ile Leu Val Ile Phe Tyr
20 25 30

Glu His Trp Gln Thr Val Tyr Ser Leu Cys His Pro Cys His Ile His
260 265 270

Tyr Asp Leu Val Gly Lys Tyr Glu Thr Leu Glu Glu Asp Ser Asn Tyr
275 280 285

Val Leu Gln Leu Ala Gly Val Gly Ser Tyr Leu Lys Phe Pro Thr Tyr
290 295 300

Ala Lys Ser Thr Arg Thr Thr Asp Glu Met Thr Thr Glu Phe Phe Gln
305 310 315 320

Asn Ile Ser Ser Glu His Gln Thr Gln Leu Tyr Glu Val Tyr Lys Leu
325 330 335

Asp Phe Leu Met Phe Asn Tyr Ser Val Pro Ser Tyr Leu Lys Leu Glu
340 345 350

<210> 11655

<211> 72

<212> PRT

<213> Homo sapiens

<220>

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<223> /note="Payload ID: 2294"

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<223> /note="Gene Symbol: CHST11"

<220>

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<223> /note="Gene Name:
carbohydrate (chondroitin 4) sulfotransferase 11"

<220>

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<223> /note="ENSP ID: ENSP00000448678"

<400> 11655

Met Lys Pro Ala Leu Leu Glu Val Met Arg Met Asn Arg Ile Cys Arg
1 5 10 15

Met Val Leu Ala Thr Cys Leu Gly Ser Phe Ile Leu Val Ile Phe Tyr
20 25 30

Phe Gln Ile Met Arg Arg Asn Pro Phe Gly Val Asp Ile Cys Cys Arg
35 40 45

26039

Lys Gly Ser Arg Ser Pro Leu Gln Glu Leu Tyr Asn Pro Ile Gln Val
50 55 60

Ser Phe Lys His Ser Val Ser Met
65 70

<210> 11656
<211> 77
<212> PRT
<213> Homo sapiens

<220>
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<220>
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carbohydrate (chondroitin 4) sulfotransferase 11"

<220>
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<223> /note="ENSP ID: ENSP00000449093"

<400> 11656
Met Lys Pro Ala Leu Leu Glu Val Met Arg Met Asn Arg Ile Cys Arg
1 5 10 15

Met Val Leu Ala Thr Cys Leu Gly Ser Phe Ile Leu Val Ile Phe Tyr
20 25 30

Phe Gln Ser Met Leu His Pro Val Met Arg Arg Asn Pro Phe Gly Val
35 40 45

Asp Ile Cys Cys Arg Lys Gly Ser Arg Ser Pro Leu Gln Glu Leu Tyr
50 55 60

Asn Pro Ile Gln Val Ser Phe Lys His Ser Val Ser Met
65 70 75

<210> 11657
<211> 158
<212> PRT
<213> Homo sapiens


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<220>
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<220>
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<223> /note="Gene Name:
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<220>
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<400> 11657
Met Arg Arg Asn Pro Phe Gly Val Asp Ile Cys Cys Arg Lys Gly Ser
1          5          10          15

Arg Ser Pro Leu Gln Glu Leu Tyr Asn Pro Ile Gln Leu Glu Leu Ser
          20          25          30

Asn Thr Ala Val Leu His Gln Met Arg Arg Asp Gln Val Thr Asp Thr
          35          40          45

Cys Arg Ala Asn Ser Ala Thr Ser Arg Lys Arg Arg Val Leu Thr Pro
          50          55          60

Asn Asp Leu Lys His Leu Val Val Asp Glu Asp His Glu Leu Ile Tyr
65          70          75          80

Cys Tyr Val Pro Lys Val Ala Cys Thr Asn Trp Lys Arg Leu Met Met
          85          90          95

Val Leu Thr Gly Arg Gly Lys Tyr Ser Asp Pro Met Glu Ile Pro Ala
          100          105          110

Asn Glu Ala His Val Ser Ala Asn Leu Lys Thr Leu Asn Gln Tyr Ser
          115          120          125

Ile Pro Glu Ile Asn His Arg Leu Lys Ser Tyr Met Lys Phe Leu Phe
          130          135          140

Val Arg Glu Pro Phe Glu Arg Leu Val Ser Ala Tyr Arg Asn
145          150          155

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<210> 11658
<211> 347
<212> PRT
<213> Homo sapiens

<220>
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<223> /note="Gene Name:
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<220>
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<223> /note="Uniprot ID: Q9NPF2"

<220>
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<400> 11658
Met Lys Pro Ala Leu Leu Glu Val Met Arg Met Asn Arg Ile Cys Arg
1          5          10          15

Met Val Leu Ala Thr Cys Leu Gly Ser Phe Ile Leu Val Ile Phe Tyr
          20          25          30

Phe Gln Ile Met Arg Arg Asn Pro Phe Gly Val Asp Ile Cys Cys Arg
          35          40          45

Lys Gly Ser Arg Ser Pro Leu Gln Glu Leu Tyr Asn Pro Ile Gln Leu
          50          55          60

Glu Leu Ser Asn Thr Ala Val Leu His Gln Met Arg Arg Asp Gln Val
65          70          75          80

Thr Asp Thr Cys Arg Ala Asn Ser Ala Thr Ser Arg Lys Arg Arg Val
          85          90          95

Leu Thr Pro Asn Asp Leu Lys His Leu Val Val Asp Glu Asp His Glu
          100          105          110

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Leu Ile Tyr Cys Tyr Val Pro Lys Val Ala Cys Thr Asn Trp Lys Arg
115 120 125

Leu Met Met Val Leu Thr Gly Arg Gly Lys Tyr Ser Asp Pro Met Glu
130 135 140

Ile Pro Ala Asn Glu Ala His Val Ser Ala Asn Leu Lys Thr Leu Asn
145 150 155 160

Gln Tyr Ser Ile Pro Glu Ile Asn His Arg Leu Lys Ser Tyr Met Lys
165 170 175

Phe Leu Phe Val Arg Glu Pro Phe Glu Arg Leu Val Ser Ala Tyr Arg
180 185 190

Asn Lys Phe Thr Gln Lys Tyr Asn Ile Ser Phe His Lys Arg Tyr Gly
195 200 205

Thr Lys Ile Ile Lys Arg Gln Arg Lys Asn Ala Thr Gln Glu Ala Leu
210 215 220

Arg Lys Gly Asp Asp Val Lys Phe Glu Glu Phe Val Ala Tyr Leu Ile
225 230 235 240

Asp Pro His Thr Gln Arg Glu Glu Pro Phe Asn Glu His Trp Gln Thr
245 250 255

Val Tyr Ser Leu Cys His Pro Cys His Ile His Tyr Asp Leu Val Gly
260 265 270

Lys Tyr Glu Thr Leu Glu Glu Asp Ser Asn Tyr Val Leu Gln Leu Ala
275 280 285

Gly Val Gly Ser Tyr Leu Lys Phe Pro Thr Tyr Ala Lys Ser Thr Arg
290 295 300

Thr Thr Asp Glu Met Thr Thr Glu Phe Phe Gln Asn Ile Ser Ser Glu
305 310 315 320

His Gln Thr Gln Leu Tyr Glu Val Tyr Lys Leu Asp Phe Leu Met Phe
325 330 335

Asn Tyr Ser Val Pro Ser Tyr Leu Lys Leu Glu

<210> 11659

<211> 414

<212> PRT

<213> Homo sapiens

<220>

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<223> /note="Payload ID: 2295"

<220>

<221> source

<223> /note="Gene Symbol: CHST12"

<220>

<221> source

<223> /note="Gene Name:
carbohydrate (chondroitin 4) sulfotransferase 12"

<220>

<221> source

<223> /note="Uniprot ID: Q9NRB3"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000258711"

<400> 11659

Met Thr Lys Ala Arg Leu Phe Arg Leu Trp Leu Val Leu Gly Ser Val
1 5 10 15

Phe Met Ile Leu Leu Ile Ile Val Tyr Trp Asp Ser Ala Gly Ala Ala
20 25 30

His Phe Tyr Leu His Thr Ser Phe Ser Arg Pro His Thr Gly Pro Pro
35 40 45

Leu Pro Thr Pro Gly Pro Asp Arg Asp Arg Glu Leu Thr Ala Asp Ser
50 55 60

Asp Val Asp Glu Phe Leu Asp Lys Phe Leu Ser Ala Gly Val Lys Gln
65 70 75 80

Ser Asp Leu Pro Arg Lys Glu Thr Glu Gln Pro Pro Ala Pro Gly Ser
85 90 95

Met Glu Glu Ser Val Arg Gly Tyr Asp Trp Ser Pro Arg Asp Ala Arg
100 105 110

Arg	Ser	Pro	Asp	Gln	Gly	Arg	Gln	Gln	Ala	Glu	Arg	Arg	Ser	Val	Leu			
		115					120					125						
Arg	Gly	Phe	Cys	Ala	Asn	Ser	Ser	Leu	Ala	Phe	Pro	Thr	Lys	Glu	Arg			
	130					135					140							
Ala	Phe	Asp	Asp	Ile	Pro	Asn	Ser	Glu	Leu	Ser	His	Leu	Ile	Val	Asp			
145					150					155					160			
Asp	Arg	His	Gly	Ala	Ile	Tyr	Cys	Tyr	Val	Pro	Lys	Val	Ala	Cys	Thr			
				165					170					175				
Asn	Trp	Lys	Arg	Val	Met	Ile	Val	Leu	Ser	Gly	Ser	Leu	Leu	His	Arg			
			180					185					190					
Gly	Ala	Pro	Tyr	Arg	Asp	Pro	Leu	Arg	Ile	Pro	Arg	Glu	His	Val	His			
		195					200					205						
Asn	Ala	Ser	Ala	His	Leu	Thr	Phe	Asn	Lys	Phe	Trp	Arg	Arg	Tyr	Gly			
	210					215					220							
Lys	Leu	Ser	Arg	His	Leu	Met	Lys	Val	Lys	Leu	Lys	Lys	Tyr	Thr	Lys			
225					230					235					240			
Phe	Leu	Phe	Val	Arg	Asp	Pro	Phe	Val	Arg	Leu	Ile	Ser	Ala	Phe	Arg			
				245					250					255				
Ser	Lys	Phe	Glu	Leu	Glu	Asn	Glu	Glu	Phe	Tyr	Arg	Lys	Phe	Ala	Val			
			260					265					270					
Pro	Met	Leu	Arg	Leu	Tyr	Ala	Asn	His	Thr	Ser	Leu	Pro	Ala	Ser	Ala			
		275					280					285						
Arg	Glu	Ala	Phe	Arg	Ala	Gly	Leu	Lys	Val	Ser	Phe	Ala	Asn	Phe	Ile			
	290					295					300							
Gln	Tyr	Leu	Leu	Asp	Pro	His	Thr	Glu	Lys	Leu	Ala	Pro	Phe	Asn	Glu			
305					310					315					320			
His	Trp	Arg	Gln	Val	Tyr	Arg	Leu	Cys	His	Pro	Cys	Gln	Ile	Asp	Tyr			
			325						330					335				

Asp Phe Val Gly Lys Leu Glu Thr Leu Asp Glu Asp Ala Ala Gln Leu
340 345 350

Leu Gln Leu Leu Gln Val Asp Arg Gln Leu Arg Phe Pro Pro Ser Tyr
355 360 365

Arg Asn Arg Thr Ala Ser Ser Trp Glu Glu Asp Trp Phe Ala Lys Ile
370 375 380

Pro Leu Ala Trp Arg Gln Gln Leu Tyr Lys Leu Tyr Glu Ala Asp Phe
385 390 395 400

Val Leu Phe Gly Tyr Pro Lys Pro Glu Asn Leu Leu Arg Asp
405 410

<210> 11660
<211> 245
<212> PRT
<213> Homo sapiens

<220>
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<223> /note="Payload ID: 2295"

<220>
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<220>
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<223> /note="Gene Name:
carbohydrate (chondroitin 4) sulfotransferase 12"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000411207"

<400> 11660
Met Thr Lys Ala Arg Leu Phe Arg Leu Trp Leu Val Leu Gly Ser Val
1 5 10 15

Phe Met Ile Leu Leu Ile Ile Val Tyr Trp Asp Ser Ala Gly Ala Ala
20 25 30

His Phe Tyr Leu His Thr Ser Phe Ser Arg Pro His Thr Gly Pro Pro
35 40 45

Leu Pro Thr Pro Gly Pro Asp Arg Asp Arg Glu Leu Thr Ala Asp Ser
50 55 60

Asp Val Asp Glu Phe Leu Asp Lys Phe Leu Ser Ala Gly Val Lys Gln
65 70 75 80

Ser Asp Leu Pro Arg Lys Glu Thr Glu Gln Pro Pro Ala Pro Gly Ser
85 90 95

Met Glu Glu Ser Val Arg Gly Tyr Asp Trp Ser Pro Arg Asp Ala Arg
100 105 110

Arg Ser Pro Asp Gln Gly Arg Gln Gln Ala Glu Arg Arg Ser Val Leu
115 120 125

Arg Gly Phe Cys Ala Asn Ser Ser Leu Ala Phe Pro Thr Lys Glu Arg
130 135 140

Ala Phe Asp Asp Ile Pro Asn Ser Glu Leu Ser His Leu Ile Val Asp
145 150 155 160

Asp Arg His Gly Ala Ile Tyr Cys Tyr Val Pro Lys Val Ala Cys Thr
165 170 175

Asn Trp Lys Arg Val Met Ile Val Leu Ser Gly Ser Leu Leu His Arg
180 185 190

Gly Ala Pro Tyr Arg Asp Pro Leu Arg Ile Pro Arg Glu His Val His
195 200 205

Asn Ala Ser Ala His Leu Thr Phe Asn Lys Phe Trp Arg Arg Tyr Gly
210 215 220

Lys Leu Ser Arg His Leu Met Lys Val Lys Leu Lys Lys Tyr Thr Lys
225 230 235 240

Phe Leu Phe Val Arg
245

<210> 11661

<211> 414

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2295"

<220>

<221> source

<223> /note="Gene Symbol: CHST12"

<220>

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<223> /note="Gene Name:
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<220>

<221> source

<223> /note="Uniprot ID: Q9NRB3"

<220>

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<223> /note="ENSP ID: ENSP00000481912"

<400> 11661

Met Thr Lys Ala Arg Leu Phe Arg Leu Trp Leu Val Leu Gly Ser Val
1 5 10 15

Phe Met Ile Leu Leu Ile Ile Val Tyr Trp Asp Ser Ala Gly Ala Ala
20 25 30

His Phe Tyr Leu His Thr Ser Phe Ser Arg Pro His Thr Gly Pro Pro
35 40 45

Leu Pro Thr Pro Gly Pro Asp Arg Asp Arg Glu Leu Thr Ala Asp Ser
50 55 60

Asp Val Asp Glu Phe Leu Asp Lys Phe Leu Ser Ala Gly Val Lys Gln
65 70 75 80

Ser Asp Leu Pro Arg Lys Glu Thr Glu Gln Pro Pro Ala Pro Gly Ser
85 90 95

Met Glu Glu Ser Val Arg Gly Tyr Asp Trp Ser Pro Arg Asp Ala Arg
100 105 110

Arg Ser Pro Asp Gln Gly Arg Gln Gln Ala Glu Arg Arg Ser Val Leu
115 120 125

Arg Gly Phe Cys Ala Asn Ser Ser Leu Ala Phe Pro Thr Lys Glu Arg
130 135 140

Ala Phe Asp Asp Ile Pro Asn Ser Glu Leu Ser His Leu Ile Val Asp

145					150					155				160			
Asp	Arg	His	Gly	Ala	Ile	Tyr	Cys	Tyr	Val	Pro	Lys	Val	Ala	Cys	Thr		
				165					170					175			
Asn	Trp	Lys	Arg	Val	Met	Ile	Val	Leu	Ser	Gly	Ser	Leu	Leu	His	Arg		
			180					185					190				
Gly	Ala	Pro	Tyr	Arg	Asp	Pro	Leu	Arg	Ile	Pro	Arg	Glu	His	Val	His		
		195					200					205					
Asn	Ala	Ser	Ala	His	Leu	Thr	Phe	Asn	Lys	Phe	Trp	Arg	Arg	Tyr	Gly		
	210					215					220						
Lys	Leu	Ser	Arg	His	Leu	Met	Lys	Val	Lys	Leu	Lys	Lys	Tyr	Thr	Lys		
225					230					235					240		
Phe	Leu	Phe	Val	Arg	Asp	Pro	Phe	Val	Arg	Leu	Ile	Ser	Ala	Phe	Arg		
				245					250					255			
Ser	Lys	Phe	Glu	Leu	Glu	Asn	Glu	Glu	Phe	Tyr	Arg	Lys	Phe	Ala	Val		
			260					265					270				
Pro	Met	Leu	Arg	Leu	Tyr	Ala	Asn	His	Thr	Ser	Leu	Pro	Ala	Ser	Ala		
		275					280					285					
Arg	Glu	Ala	Phe	Arg	Ala	Gly	Leu	Lys	Val	Ser	Phe	Ala	Asn	Phe	Ile		
	290					295					300						
Gln	Tyr	Leu	Leu	Asp	Pro	His	Thr	Glu	Lys	Leu	Ala	Pro	Phe	Asn	Glu		
305					310					315					320		
His	Trp	Arg	Gln	Val	Tyr	Arg	Leu	Cys	His	Pro	Cys	Gln	Ile	Asp	Tyr		
				325					330					335			
Asp	Phe	Val	Gly	Lys	Leu	Glu	Thr	Leu	Asp	Glu	Asp	Ala	Ala	Gln	Leu		
			340					345					350				
Leu	Gln	Leu	Leu	Gln	Val	Asp	Arg	Gln	Leu	Arg	Phe	Pro	Pro	Ser	Tyr		
		355					360					365					
Arg	Asn	Arg	Thr	Ala	Ser	Ser	Trp	Glu	Glu	Asp	Trp	Phe	Ala	Lys	Ile		
	370					375					380						

Pro Leu Ala Trp Arg Gln Gln Leu Tyr Lys Leu Tyr Glu Ala Asp Phe
385 390 395 400

Val Leu Phe Gly Tyr Pro Lys Pro Glu Asn Leu Leu Arg Asp
405 410

<210> 11662
<211> 341
<212> PRT
<213> Homo sapiens

<220>
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<223> /note="Payload ID: 2296"

<220>
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<223> /note="Gene Symbol: CHST13"

<220>
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<223> /note="Gene Name:
carbohydrate (chondroitin 4) sulfotransferase 13"

<220>
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<223> /note="Uniprot ID: Q8NET6"

<220>
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<223> /note="ENSP ID: ENSP00000317404"

<400> 11662
Met Gly Arg Arg Cys Cys Arg Arg Arg Val Leu Ala Ala Ala Cys Leu
1 5 10 15

Gly Ala Ala Leu Leu Leu Leu Cys Ala Ala Pro Arg Ser Leu Arg Pro
20 25 30

Ala Phe Gly Asn Arg Ala Leu Gly Ser Ser Trp Leu Gly Gly Glu Lys
35 40 45

Arg Ser Pro Leu Gln Lys Leu Tyr Asp Leu Asp Gln Asp Pro Arg Ser
50 55 60

Thr Leu Ala Lys Val His Arg Gln Arg Arg Asp Leu Leu Asn Ser Ala
65 70 75 80

Cys	Ser	Arg	His	Ser	Arg	Arg	Gln	Arg	Leu	Leu	Gln	Pro	Glu	Asp	Leu	
				85					90					95		
Arg	His	Val	Leu	Val	Asp	Asp	Ala	His	Gly	Leu	Leu	Tyr	Cys	Tyr	Val	
			100					105					110			
Pro	Lys	Val	Ala	Cys	Thr	Asn	Trp	Lys	Arg	Val	Leu	Leu	Ala	Leu	Ser	
		115					120					125				
Gly	Gln	Ala	Arg	Gly	Asp	Pro	Arg	Ala	Ile	Ser	Ala	Gln	Glu	Ala	His	
	130					135					140					
Ala	Pro	Gly	Arg	Leu	Pro	Ser	Leu	Ala	Asp	Phe	Ser	Pro	Ala	Glu	Ile	
145					150					155					160	
Asn	Arg	Arg	Leu	Arg	Ala	Tyr	Leu	Ala	Phe	Leu	Phe	Val	Arg	Glu	Pro	
				165					170					175		
Phe	Glu	Arg	Leu	Ala	Ser	Ala	Tyr	Arg	Asn	Lys	Leu	Ala	Arg	Pro	Tyr	
			180					185					190			
Ser	Ala	Ala	Phe	Gln	Arg	Arg	Tyr	Gly	Ala	Arg	Ile	Val	Gln	Arg	Leu	
		195					200					205				
Arg	Pro	Arg	Ala	Leu	Pro	Asp	Ala	Arg	Ala	Arg	Gly	His	Asp	Val	Arg	
	210					215					220					
Phe	Ala	Glu	Phe	Leu	Ala	Tyr	Leu	Leu	Asp	Pro	Arg	Thr	Arg	Arg	Glu	
225					230					235					240	
Glu	Pro	Phe	Asn	Glu	His	Trp	Glu	Arg	Ala	His	Ala	Leu	Cys	His	Pro	
				245					250					255		
Cys	Arg	Leu	Arg	Tyr	Asp	Val	Val	Gly	Lys	Phe	Glu	Thr	Leu	Ala	Glu	
			260					265					270			
Asp	Ala	Ala	Phe	Val	Leu	Gly	Leu	Ala	Gly	Ala	Ser	Asp	Leu	Ser	Phe	
		275					280					285				
Pro	Gly	Pro	Pro	Arg	Pro	Arg	Gly	Ala	Ala	Ala	Ser	Arg	Asp	Leu	Ala	
	290					295					300					
Ala	Arg	Leu	Phe	Arg	Asp	Ile	Ser	Pro	Phe	Tyr	Gln	Arg	Arg	Leu	Phe	

305 310 315 320
 Asp Leu Tyr Lys Met Asp Phe Leu Leu Phe Asn Tyr Ser Ala Pro Ser
 325 330 335

 Tyr Leu Arg Leu Leu
 340

 <210> 11663
 <211> 225
 <212> PRT
 <213> Homo sapiens

 <220>
 <221> source
 <223> /note="Payload ID: 2296"

 <220>
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 <223> /note="Gene Symbol: CHST13"

 <220>
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 <223> /note="Gene Name:
 carbohydrate (chondroitin 4) sulfotransferase 13"

 <220>
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 <223> /note="ENSP ID: ENSP00000478416"

 <400> 11663
 Met Gly Arg Arg Cys Cys Arg Arg Arg Val Leu Ala Ala Ala Cys Leu
 1 5 10 15

 Gly Ala Ala Leu Leu Leu Leu Cys Ala Ala Pro Arg Ser Leu Arg Pro
 20 25 30

 Ala Phe Gly Asn Arg Ala Leu Gly Ser Ser Trp Leu Gly Gly Glu Lys
 35 40 45

 Arg Ser Pro Leu Gln Lys Leu Tyr Asp Leu Asp Gln Asp Pro Arg Ser
 50 55 60

 Thr Leu Ala Lys Val His Arg Gln Arg Arg Asp Leu Leu Asn Ser Ala
 65 70 75 80

 Cys Ser Arg His Ser Arg Arg Gln Arg Leu Leu Gln Pro Glu Asp Leu
 85 90 95

Arg His Val Leu Val Asp Asp Ala His Gly Leu Leu Tyr Cys Tyr Val
 100 105 110
 Pro Lys Val Ala Cys Thr Asn Trp Lys Arg Val Leu Leu Ala Leu Ser
 115 120 125
 Gly Gln Ala Arg Gly Asp Pro Arg Ala Ile Ser Ala Gln Glu Ala His
 130 135 140
 Ala Pro Gly Arg Leu Pro Ser Leu Ala Asp Phe Ser Pro Ala Glu Ile
 145 150 155 160
 Asn Arg Arg Leu Arg Ala Tyr Leu Ala Phe Leu Phe Val Arg Glu Pro
 165 170 175
 Phe Glu Arg Leu Ala Ser Ala Tyr Arg Asn Lys Leu Ala Arg Pro Arg
 180 185 190
 Ser Ala Thr Arg Val Ala Ser Ala Thr Thr Ser Trp Ala Ser Ser Arg
 195 200 205
 Arg Trp Arg Arg Thr Arg Pro Ser Cys Trp Ala Trp Arg Ala His Pro
 210 215 220

Thr
 225

<210> 11664
 <211> 479
 <212> PRT
 <213> Homo sapiens

<220>
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 <223> /note="Payload ID: 2297"

<220>
 <221> source
 <223> /note="Gene Symbol: CHST3"

<220>
 <221> source
 <223> /note="Gene Name:
 carbohydrate (chondroitin 6) sulfotransferase 3"

<220>
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<223> /note="Uniprot ID: Q7LGC8"

<220>

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<223> /note="ENSP ID: ENSP00000362207"

<400> 11664

Met Glu Lys Gly Leu Thr Leu Pro Gln Asp Cys Arg Asp Phe Val His
1 5 10 15

Ser Leu Lys Met Arg Ser Lys Tyr Ala Leu Phe Leu Val Phe Val Val
20 25 30

Ile Val Phe Val Phe Ile Glu Lys Glu Asn Lys Ile Ile Ser Arg Val
35 40 45

Ser Asp Lys Leu Lys Gln Ile Pro Gln Ala Leu Ala Asp Ala Asn Ser
50 55 60

Thr Asp Pro Ala Leu Ile Leu Ala Glu Asn Ala Ser Leu Leu Ser Leu
65 70 75 80

Ser Glu Leu Asp Ser Ala Phe Ser Gln Leu Gln Ser Arg Leu Arg Asn
85 90 95

Leu Ser Leu Gln Leu Gly Val Glu Pro Ala Met Glu Ala Ala Gly Glu
100 105 110

Glu Glu Glu Glu Gln Arg Lys Glu Glu Glu Pro Pro Arg Pro Ala Val
115 120 125

Ala Gly Pro Arg Arg His Val Leu Leu Met Ala Thr Thr Arg Thr Gly
130 135 140

Ser Ser Phe Val Gly Glu Phe Phe Asn Gln Gln Gly Asn Ile Phe Tyr
145 150 155 160

Leu Phe Glu Pro Leu Trp His Ile Glu Arg Thr Val Ser Phe Glu Pro
165 170 175

Gly Gly Ala Asn Ala Ala Gly Ser Ala Leu Val Tyr Arg Asp Val Leu
180 185 190

Lys Gln Leu Phe Leu Cys Asp Leu Tyr Val Leu Glu His Phe Ile Thr
195 200 205

26054

Pro	Leu	Pro	Glu	Asp	His	Leu	Thr	Gln	Phe	Met	Phe	Arg	Arg	Gly	Ser
210						215					220				
Ser	Arg	Ser	Leu	Cys	Glu	Asp	Pro	Val	Cys	Thr	Pro	Phe	Val	Lys	Lys
225					230					235					240
Val	Phe	Glu	Lys	Tyr	His	Cys	Lys	Asn	Arg	Arg	Cys	Gly	Pro	Leu	Asn
				245					250					255	
Val	Thr	Leu	Ala	Ala	Glu	Ala	Cys	Arg	Arg	Lys	Glu	His	Met	Ala	Leu
			260					265					270		
Lys	Ala	Val	Arg	Ile	Arg	Gln	Leu	Glu	Phe	Leu	Gln	Pro	Leu	Ala	Glu
		275					280					285			
Asp	Pro	Arg	Leu	Asp	Leu	Arg	Val	Ile	Gln	Leu	Val	Arg	Asp	Pro	Arg
	290					295					300				
Ala	Val	Leu	Ala	Ser	Arg	Met	Val	Ala	Phe	Ala	Gly	Lys	Tyr	Lys	Thr
305					310					315					320
Trp	Lys	Lys	Trp	Leu	Asp	Asp	Glu	Gly	Gln	Asp	Gly	Leu	Arg	Glu	Glu
				325					330					335	
Glu	Val	Gln	Arg	Leu	Arg	Gly	Asn	Cys	Glu	Ser	Ile	Arg	Leu	Ser	Ala
			340					345					350		
Glu	Leu	Gly	Leu	Arg	Gln	Pro	Ala	Trp	Leu	Arg	Gly	Arg	Tyr	Met	Leu
		355					360					365			
Val	Arg	Tyr	Glu	Asp	Val	Ala	Arg	Gly	Pro	Leu	Gln	Lys	Ala	Arg	Glu
	370					375					380				
Met	Tyr	Arg	Phe	Ala	Gly	Ile	Pro	Leu	Thr	Pro	Gln	Val	Glu	Asp	Trp
385					390					395					400
Ile	Gln	Lys	Asn	Thr	Gln	Ala	Ala	His	Asp	Gly	Ser	Gly	Ile	Tyr	Ser
				405					410					415	
Thr	Gln	Lys	Asn	Ser	Ser	Glu	Gln	Phe	Glu	Lys	Trp	Arg	Phe	Ser	Met
			420					425					430		

Pro Phe Lys Leu Ala Gln Val Val Gln Ala Ala Cys Gly Pro Ala Met
435 440 445

Arg Leu Phe Gly Tyr Lys Leu Ala Arg Asp Ala Ala Ala Leu Thr Asn
450 455 460

Arg Ser Val Ser Leu Leu Glu Glu Arg Gly Thr Phe Trp Val Thr
465 470 475

<210> 11665
<211> 411
<212> PRT
<213> Homo sapiens

<220>
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<223> /note="Payload ID: 2298"

<220>
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<223> /note="Gene Symbol: CHST1"

<220>
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<223> /note="Gene Name:
carbohydrate (keratan sulfate Gal-6) sulfotransferase 1"

<220>
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<223> /note="Uniprot ID: O43916"

<220>
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<223> /note="ENSP ID: ENSP00000309270"

<400> 11665
Met Gln Cys Ser Trp Lys Ala Val Leu Leu Leu Ala Leu Ala Ser Ile
1 5 10 15

Ala Ile Gln Tyr Thr Ala Ile Arg Thr Phe Thr Ala Lys Ser Phe His
20 25 30

Thr Cys Pro Gly Leu Ala Glu Ala Gly Leu Ala Glu Arg Leu Cys Glu
35 40 45

Glu Ser Pro Thr Phe Ala Tyr Asn Leu Ser Arg Lys Thr His Ile Leu
50 55 60

Ile Leu Ala Thr Thr Arg Ser Gly Ser Ser Phe Val Gly Gln Leu Phe
26056

65						70						75						80
Asn	Gln	His	Leu	Asp	Val	Phe	Tyr	Leu	Phe	Glu	Pro	Leu	Tyr	His	Val			
				85					90					95				
Gln	Asn	Thr	Leu	Ile	Pro	Arg	Phe	Thr	Gln	Gly	Lys	Ser	Pro	Ala	Asp			
			100					105					110					
Arg	Arg	Val	Met	Leu	Gly	Ala	Ser	Arg	Asp	Leu	Leu	Arg	Ser	Leu	Tyr			
		115					120					125						
Asp	Cys	Asp	Leu	Tyr	Phe	Leu	Glu	Asn	Tyr	Ile	Lys	Pro	Pro	Pro	Val			
	130					135					140							
Asn	His	Thr	Thr	Asp	Arg	Ile	Phe	Arg	Arg	Gly	Ala	Ser	Arg	Val	Leu			
145					150					155					160			
Cys	Ser	Arg	Pro	Val	Cys	Asp	Pro	Pro	Gly	Pro	Ala	Asp	Leu	Val	Leu			
				165					170					175				
Glu	Glu	Gly	Asp	Cys	Val	Arg	Lys	Cys	Gly	Leu	Leu	Asn	Leu	Thr	Val			
			180					185					190					
Ala	Ala	Glu	Ala	Cys	Arg	Glu	Arg	Ser	His	Val	Ala	Ile	Lys	Thr	Val			
		195					200					205						
Arg	Val	Pro	Glu	Val	Asn	Asp	Leu	Arg	Ala	Leu	Val	Glu	Asp	Pro	Arg			
	210					215					220							
Leu	Asn	Leu	Lys	Val	Ile	Gln	Leu	Val	Arg	Asp	Pro	Arg	Gly	Ile	Leu			
225					230					235					240			
Ala	Ser	Arg	Ser	Glu	Thr	Phe	Arg	Asp	Thr	Tyr	Arg	Leu	Trp	Arg	Leu			
				245					250					255				
Trp	Tyr	Gly	Thr	Gly	Arg	Lys	Pro	Tyr	Asn	Leu	Asp	Val	Thr	Gln	Leu			
			260					265					270					
Thr	Thr	Val	Cys	Glu	Asp	Phe	Ser	Asn	Ser	Val	Ser	Thr	Gly	Leu	Met			
		275					280					285						
Arg	Pro	Pro	Trp	Leu	Lys	Gly	Lys	Tyr	Met	Leu	Val	Arg	Tyr	Glu	Asp			
	290					295					300							

Leu Ala Arg Asn Pro Met Lys Lys Thr Glu Glu Ile Tyr Gly Phe Leu
305 310 315 320

Gly Ile Pro Leu Asp Ser His Val Ala Arg Trp Ile Gln Asn Asn Thr
325 330 335

Arg Gly Asp Pro Thr Leu Gly Lys His Lys Tyr Gly Thr Val Arg Asn
340 345 350

Ser Ala Ala Thr Ala Glu Lys Trp Arg Phe Arg Leu Ser Tyr Asp Ile
355 360 365

Val Ala Phe Ala Gln Asn Ala Cys Gln Gln Val Leu Ala Gln Leu Gly
370 375 380

Tyr Lys Ile Ala Ala Ser Glu Glu Glu Leu Lys Asn Pro Ser Val Ser
385 390 395 400

Leu Val Glu Glu Arg Asp Phe Arg Pro Phe Ser
405 410

<210> 11666
<211> 376
<212> PRT
<213> Homo sapiens

<220>
<221> source
<223> /note="Payload ID: 2299"

<220>
<221> source
<223> /note="Gene Symbol: CHST14"

<220>
<221> source
<223> /note="Gene Name:
carbohydrate (N-acetylgalactosamine
4-0) sulfotransferase 14"

<220>
<221> source
<223> /note="Uniprot ID: Q8NCH0"

<220>
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<223> /note="ENSP ID: ENSP00000307297"

<400> 11666

Met Phe Pro Arg Pro Leu Thr Pro Leu Ala Ala Pro Asn Gly Ala Glu
1 5 10 15

Pro Leu Gly Arg Ala Leu Arg Arg Ala Pro Leu Gly Arg Ala Arg Ala
20 25 30

Gly Leu Gly Gly Pro Pro Leu Leu Leu Pro Ser Met Leu Met Phe Ala
35 40 45

Val Ile Val Ala Ser Ser Gly Leu Leu Leu Met Ile Glu Arg Gly Ile
50 55 60

Leu Ala Glu Met Lys Pro Leu Pro Leu His Pro Pro Gly Arg Glu Gly
65 70 75 80

Thr Ala Trp Arg Gly Lys Ala Pro Lys Pro Gly Gly Leu Ser Leu Arg
85 90 95

Ala Gly Asp Ala Asp Leu Gln Val Arg Gln Asp Val Arg Asn Arg Thr
100 105 110

Leu Arg Ala Val Cys Gly Gln Pro Gly Met Pro Arg Asp Pro Trp Asp
115 120 125

Leu Pro Val Gly Gln Arg Arg Thr Leu Leu Arg His Ile Leu Val Ser
130 135 140

Asp Arg Tyr Arg Phe Leu Tyr Cys Tyr Val Pro Lys Val Ala Cys Ser
145 150 155 160

Asn Trp Lys Arg Val Met Lys Val Leu Ala Gly Val Leu Asp Ser Val
165 170 175

Asp Val Arg Leu Lys Met Asp His Arg Ser Asp Leu Val Phe Leu Ala
180 185 190

Asp Leu Arg Pro Glu Glu Ile Arg Tyr Arg Leu Gln His Tyr Phe Lys
195 200 205

Phe Leu Phe Val Arg Glu Pro Leu Glu Arg Leu Leu Ser Ala Tyr Arg
210 215 220

Asn Lys Phe Gly Glu Ile Arg Glu Tyr Gln Gln Arg Tyr Gly Ala Glu
225 230 235 240

Ile Val Arg Arg Tyr Arg Ala Gly Ala Gly Pro Ser Pro Ala Gly Asp
245 250 255

Asp Val Thr Phe Pro Glu Phe Leu Arg Tyr Leu Val Asp Glu Asp Pro
260 265 270

Glu Arg Met Asn Glu His Trp Met Pro Val Tyr His Leu Cys Gln Pro
275 280 285

Cys Ala Val His Tyr Asp Phe Val Gly Ser Tyr Glu Arg Leu Glu Ala
290 295 300

Asp Ala Asn Gln Val Leu Glu Trp Val Arg Ala Pro Pro His Val Arg
305 310 315 320

Phe Pro Ala Arg Gln Ala Trp Tyr Arg Pro Ala Ser Pro Glu Ser Leu
325 330 335

His Tyr His Leu Cys Ser Ala Pro Arg Ala Leu Leu Gln Asp Val Leu
340 345 350

Pro Lys Tyr Ile Leu Asp Phe Ser Leu Phe Ala Tyr Pro Leu Pro Asn
355 360 365

Val Thr Lys Glu Ala Cys Gln Gln
370 375

<210> 11667
<211> 351
<212> PRT
<213> Homo sapiens

<220>
<221> source
<223> /note="Payload ID: 2299"

<220>
<221> source
<223> /note="Gene Symbol: CHST14"

<220>
<221> source
<223> /note="Gene Name:
carbohydrate (N-acetylgalactosamine

4-0) sulfotransferase 14"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000453882"

<400> 11667

Met Phe Pro Arg Pro Leu Thr Pro Leu Ala Ala Pro Asn Gly Ala Glu
1 5 10 15

Pro Leu Gly Arg Ala Leu Arg Arg Ala Pro Leu Gly Arg Ala Arg Ala
20 25 30

Gly Leu Gly Gly Pro Pro Leu Leu Leu Pro Ser Met Leu Met Phe Ala
35 40 45

Val Ile Val Ala Ser Ser Gly Leu Leu Leu Met Ile Glu Arg Gly Ile
50 55 60

Leu Ala Glu Met Lys Pro Leu Pro Leu His Pro Pro Gly Arg Glu Gly
65 70 75 80

Thr Ala Trp Arg Gly Lys Ala Pro Lys Pro Gly Gly Leu Ser Leu Arg
85 90 95

Ala Gly Asp Ala Asp Leu Gln Val Arg Gln Asp Val Arg Asn Arg Thr
100 105 110

Leu Arg Ala Val Cys Gly Gln Pro Gly Met Pro Arg Asp Pro Trp Asp
115 120 125

Leu Pro Val Gly Gln Arg Arg Thr Leu Leu Arg His Ile Leu Val Leu
130 135 140

Ala Gly Val Leu Asp Ser Val Asp Val Arg Leu Lys Met Asp His Arg
145 150 155 160

Ser Asp Leu Val Phe Leu Ala Asp Leu Arg Pro Glu Glu Ile Arg Tyr
165 170 175

Arg Leu Gln His Tyr Phe Lys Phe Leu Phe Val Arg Glu Pro Leu Glu
180 185 190

Arg Leu Leu Ser Ala Tyr Arg Asn Lys Phe Gly Glu Ile Arg Glu Tyr
195 200 205

Gln Gln Arg Tyr Gly Ala Glu Ile Val Arg Arg Tyr Arg Ala Gly Ala
 210 215 220

Gly Pro Ser Pro Ala Gly Asp Asp Val Thr Phe Pro Glu Phe Leu Arg
 225 230 235 240

Tyr Leu Val Asp Glu Asp Pro Glu Arg Met Asn Glu His Trp Met Pro
 245 250 255

Val Tyr His Leu Cys Gln Pro Cys Ala Val His Tyr Asp Phe Val Gly
 260 265 270

Ser Tyr Glu Arg Leu Glu Ala Asp Ala Asn Gln Val Leu Glu Trp Val
 275 280 285

Arg Ala Pro Pro His Val Arg Phe Pro Ala Arg Gln Ala Trp Tyr Arg
 290 295 300

Pro Ala Ser Pro Glu Ser Leu His Tyr His Leu Cys Ser Ala Pro Arg
 305 310 315 320

Ala Leu Leu Gln Asp Val Leu Pro Lys Tyr Ile Leu Asp Phe Ser Leu
 325 330 335

Phe Ala Tyr Pro Leu Pro Asn Val Thr Lys Glu Ala Cys Gln Gln
 340 345 350

<210> 11668
 <211> 424
 <212> PRT
 <213> Homo sapiens

<220>
 <221> source
 <223> /note="Payload ID: 2300"

<220>
 <221> source
 <223> /note="Gene Symbol: CHST8"

<220>
 <221> source
 <223> /note="Gene Name:
 carbohydrate (N-acetylgalactosamine
 4-0) sulfotransferase 8"

<220>
 <221> source
 <223> /note="Uniprot ID: Q9H2A9"

<220>
 <221> source
 <223> /note="ENSP ID: ENSP00000262622"

<400> 11668

Met Thr Leu Arg Pro Gly Thr Met Arg Leu Ala Cys Met Phe Ser Ser
 1 5 10 15

Ile Leu Leu Phe Gly Ala Ala Gly Leu Leu Leu Phe Ile Ser Leu Gln
 20 25 30

Asp Pro Thr Glu Leu Ala Pro Gln Gln Val Pro Gly Ile Lys Phe Asn
 35 40 45

Ile Arg Pro Arg Gln Pro His His Asp Leu Pro Pro Gly Gly Ser Gln
 50 55 60

Asp Gly Asp Leu Lys Glu Pro Thr Glu Arg Val Thr Arg Asp Leu Ser
 65 70 75 80

Ser Gly Ala Pro Arg Gly Arg Asn Leu Pro Ala Pro Asp Gln Pro Gln
 85 90 95

Pro Pro Leu Gln Arg Gly Thr Arg Leu Arg Leu Arg Gln Arg Arg Arg
 100 105 110

Arg Leu Leu Ile Lys Lys Met Pro Ala Ala Ala Thr Ile Pro Ala Asn
 115 120 125

Ser Ser Asp Ala Pro Phe Ile Arg Pro Gly Pro Gly Thr Leu Asp Gly
 130 135 140

Arg Trp Val Ser Leu His Arg Ser Gln Gln Glu Arg Lys Arg Val Met
 145 150 155 160

Gln Glu Ala Cys Ala Lys Tyr Arg Ala Ser Ser Ser Arg Arg Ala Val
 165 170 175

Thr Pro Arg His Val Ser Arg Ile Phe Val Glu Asp Arg His Arg Val
 180 185 190

Leu Tyr Cys Glu Val Pro Lys Ala Gly Cys Ser Asn Trp Lys Arg Val
195 200 205

Leu Met Val Leu Ala Gly Leu Ala Ser Ser Thr Ala Asp Ile Gln His
210 215 220

Asn Thr Val His Tyr Gly Ser Ala Leu Lys Arg Leu Asp Thr Phe Asp
225 230 235 240

Arg Gln Gly Ile Leu His Arg Leu Ser Thr Tyr Thr Lys Met Leu Phe
245 250 255

Val Arg Glu Pro Phe Glu Arg Leu Val Ser Ala Phe Arg Asp Lys Phe
260 265 270

Glu His Pro Asn Ser Tyr Tyr His Pro Val Phe Gly Lys Ala Ile Leu
275 280 285

Ala Arg Tyr Arg Ala Asn Ala Ser Arg Glu Ala Leu Arg Thr Gly Ser
290 295 300

Gly Val Arg Phe Pro Glu Phe Val Gln Tyr Leu Leu Asp Val His Arg
305 310 315 320

Pro Val Gly Met Asp Ile His Trp Asp His Val Ser Arg Leu Cys Ser
325 330 335

Pro Cys Leu Ile Asp Tyr Asp Phe Val Gly Lys Phe Glu Ser Met Glu
340 345 350

Asp Asp Ala Asn Phe Phe Leu Ser Leu Ile Arg Ala Pro Arg Asn Leu
355 360 365

Thr Phe Pro Arg Phe Lys Asp Arg His Ser Gln Glu Ala Arg Thr Thr
370 375 380

Ala Arg Ile Ala His Gln Tyr Phe Ala Gln Leu Ser Ala Leu Gln Arg
385 390 395 400

Gln Arg Thr Tyr Asp Phe Tyr Tyr Met Asp Tyr Leu Met Phe Asn Tyr
405 410 415

Ser Lys Pro Phe Ala Asp Leu Tyr

<210> 11669

<211> 424

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2300"

<220>

<221> source

<223> /note="Gene Symbol: CHST8"

<220>

<221> source

<223> /note="Gene Name:
carbohydrate (N-acetylgalactosamine
4-0) sulfotransferase 8"

<220>

<221> source

<223> /note="Uniprot ID: Q9H2A9"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000392604"

<400> 11669

Met Thr Leu Arg Pro Gly Thr Met Arg Leu Ala Cys Met Phe Ser Ser
1 5 10 15

Ile Leu Leu Phe Gly Ala Ala Gly Leu Leu Leu Phe Ile Ser Leu Gln
20 25 30

Asp Pro Thr Glu Leu Ala Pro Gln Gln Val Pro Gly Ile Lys Phe Asn
35 40 45

Ile Arg Pro Arg Gln Pro His His Asp Leu Pro Pro Gly Gly Ser Gln
50 55 60

Asp Gly Asp Leu Lys Glu Pro Thr Glu Arg Val Thr Arg Asp Leu Ser
65 70 75 80

Ser Gly Ala Pro Arg Gly Arg Asn Leu Pro Ala Pro Asp Gln Pro Gln
85 90 95

Pro Pro Leu Gln Arg Gly Thr Arg Leu Arg Leu Arg Gln Arg Arg Arg
100 105 110

Arg	Leu	Leu	Ile	Lys	Lys	Met	Pro	Ala	Ala	Ala	Thr	Ile	Pro	Ala	Asn
		115					120					125			
Ser	Ser	Asp	Ala	Pro	Phe	Ile	Arg	Pro	Gly	Pro	Gly	Thr	Leu	Asp	Gly
	130					135					140				
Arg	Trp	Val	Ser	Leu	His	Arg	Ser	Gln	Gln	Glu	Arg	Lys	Arg	Val	Met
145					150					155					160
Gln	Glu	Ala	Cys	Ala	Lys	Tyr	Arg	Ala	Ser	Ser	Ser	Arg	Arg	Ala	Val
				165					170					175	
Thr	Pro	Arg	His	Val	Ser	Arg	Ile	Phe	Val	Glu	Asp	Arg	His	Arg	Val
			180					185					190		
Leu	Tyr	Cys	Glu	Val	Pro	Lys	Ala	Gly	Cys	Ser	Asn	Trp	Lys	Arg	Val
		195					200					205			
Leu	Met	Val	Leu	Ala	Gly	Leu	Ala	Ser	Ser	Thr	Ala	Asp	Ile	Gln	His
	210					215					220				
Asn	Thr	Val	His	Tyr	Gly	Ser	Ala	Leu	Lys	Arg	Leu	Asp	Thr	Phe	Asp
225					230					235					240
Arg	Gln	Gly	Ile	Leu	His	Arg	Leu	Ser	Thr	Tyr	Thr	Lys	Met	Leu	Phe
				245					250					255	
Val	Arg	Glu	Pro	Phe	Glu	Arg	Leu	Val	Ser	Ala	Phe	Arg	Asp	Lys	Phe
			260					265					270		
Glu	His	Pro	Asn	Ser	Tyr	Tyr	His	Pro	Val	Phe	Gly	Lys	Ala	Ile	Leu
		275					280					285			
Ala	Arg	Tyr	Arg	Ala	Asn	Ala	Ser	Arg	Glu	Ala	Leu	Arg	Thr	Gly	Ser
	290					295					300				
Gly	Val	Arg	Phe	Pro	Glu	Phe	Val	Gln	Tyr	Leu	Leu	Asp	Val	His	Arg
305					310					315					320
Pro	Val	Gly	Met	Asp	Ile	His	Trp	Asp	His	Val	Ser	Arg	Leu	Cys	Ser
				325					330					335	

Pro Cys Leu Ile Asp Tyr Asp Phe Val Gly Lys Phe Glu Ser Met Glu
340 345 350

Asp Asp Ala Asn Phe Phe Leu Ser Leu Ile Arg Ala Pro Arg Asn Leu
355 360 365

Thr Phe Pro Arg Phe Lys Asp Arg His Ser Gln Glu Ala Arg Thr Thr
370 375 380

Ala Arg Ile Ala His Gln Tyr Phe Ala Gln Leu Ser Ala Leu Gln Arg
385 390 395 400

Gln Arg Thr Tyr Asp Phe Tyr Tyr Met Asp Tyr Leu Met Phe Asn Tyr
405 410 415

Ser Lys Pro Phe Ala Asp Leu Tyr
420

<210> 11670

<211> 424

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2300"

<220>

<221> source

<223> /note="Gene Symbol: CHST8"

<220>

<221> source

<223> /note="Gene Name:
carbohydrate (N-acetylgalactosamine
4-0) sulfotransferase 8"

<220>

<221> source

<223> /note="Uniprot ID: Q9H2A9"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000393879"

<400> 11670

Met Thr Leu Arg Pro Gly Thr Met Arg Leu Ala Cys Met Phe Ser Ser
1 5 10 15

Ile	Leu	Leu	Phe	Gly	Ala	Ala	Gly	Leu	Leu	Leu	Phe	Ile	Ser	Leu	Gln			
			20					25					30					
Asp	Pro	Thr	Glu	Leu	Ala	Pro	Gln	Gln	Val	Pro	Gly	Ile	Lys	Phe	Asn			
		35					40					45						
Ile	Arg	Pro	Arg	Gln	Pro	His	His	Asp	Leu	Pro	Pro	Gly	Gly	Ser	Gln			
	50					55					60							
Asp	Gly	Asp	Leu	Lys	Glu	Pro	Thr	Glu	Arg	Val	Thr	Arg	Asp	Leu	Ser			
65					70					75					80			
Ser	Gly	Ala	Pro	Arg	Gly	Arg	Asn	Leu	Pro	Ala	Pro	Asp	Gln	Pro	Gln			
				85					90					95				
Pro	Pro	Leu	Gln	Arg	Gly	Thr	Arg	Leu	Arg	Leu	Arg	Gln	Arg	Arg	Arg			
			100					105					110					
Arg	Leu	Leu	Ile	Lys	Lys	Met	Pro	Ala	Ala	Ala	Thr	Ile	Pro	Ala	Asn			
		115					120					125						
Ser	Ser	Asp	Ala	Pro	Phe	Ile	Arg	Pro	Gly	Pro	Gly	Thr	Leu	Asp	Gly			
	130					135					140							
Arg	Trp	Val	Ser	Leu	His	Arg	Ser	Gln	Gln	Glu	Arg	Lys	Arg	Val	Met			
145					150					155					160			
Gln	Glu	Ala	Cys	Ala	Lys	Tyr	Arg	Ala	Ser	Ser	Ser	Arg	Arg	Ala	Val			
				165					170					175				
Thr	Pro	Arg	His	Val	Ser	Arg	Ile	Phe	Val	Glu	Asp	Arg	His	Arg	Val			
			180					185					190					
Leu	Tyr	Cys	Glu	Val	Pro	Lys	Ala	Gly	Cys	Ser	Asn	Trp	Lys	Arg	Val			
		195					200					205						
Leu	Met	Val	Leu	Ala	Gly	Leu	Ala	Ser	Ser	Thr	Ala	Asp	Ile	Gln	His			
	210					215					220							
Asn	Thr	Val	His	Tyr	Gly	Ser	Ala	Leu	Lys	Arg	Leu	Asp	Thr	Phe	Asp			
225					230					235					240			
Arg	Gln	Gly	Ile	Leu	His	Arg	Leu	Ser	Thr	Tyr	Thr	Lys	Met	Leu	Phe			

<221> source
<223> /note="Gene Symbol: CHST8"

<220>
<221> source
<223> /note="Gene Name:
carbohydrate (N-acetylgalactosamine
4-0) sulfotransferase 8"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000467012"

<400> 11671

Met Thr Leu Arg Pro Gly Thr Met Arg Leu Ala Cys Met Phe Ser Ser
1 5 10 15

Ile Leu Leu Phe Gly Ala Ala Gly Leu Leu Leu Phe Ile Ser Leu Gln
20 25 30

Asp Pro Thr Glu Leu Ala Pro Gln Gln Val Pro Gly Ile Lys Phe Asn
35 40 45

Ile Arg Pro Arg Gln Pro His His Asp Leu Pro Pro Gly Gly Ser Gln
50 55 60

Asp Gly Asp Leu Lys Glu Pro Thr Glu Arg Val Thr Arg Asp Leu Ser
65 70 75 80

Ser Gly Ala Pro Arg Gly Arg Asn Leu Pro Ala Pro Asp Gln Pro Gln
85 90 95

Pro Pro Leu Gln Arg Gly Thr Arg Leu Arg Leu Arg Gln Arg Arg Arg
100 105 110

Arg Leu Leu Ile Lys Lys Met Pro Ala Ala Ala Thr Ile Pro Ala Asn
115 120 125

Ser Ser Asp Ala Pro Phe Ile Arg Pro Gly Pro Gly Thr Leu Asp Gly
130 135 140

Arg Trp Val Ser Leu His Arg Ser Gln Gln Glu Arg Lys Arg Val Met
145 150 155 160

Gln Glu Ala Cys Ala Lys Tyr Arg Ala Ser Ser Ser Arg Arg Ala Val
165 170 175

Thr Pro

<210> 11672

<211> 358

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2301"

<220>

<221> source

<223> /note="Gene Symbol: CHST9"

<220>

<221> source

<223> /note="Gene Name:
carbohydrate (N-acetylgalactosamine
4-0) sulfotransferase 9"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000284224"

<400> 11672

Met Pro Glu Asp Val Arg Glu Lys Lys Glu Asn Leu Leu Leu Asn Ser
1 5 10 15

Glu Arg Ser Thr Arg Leu Leu Thr Lys Thr Ser His Ser Gln Gly Gly
20 25 30

Asp Gln Ala Leu Ser Lys Ser Thr Gly Ser Pro Thr Glu Lys Leu Ile
35 40 45

Glu Lys Arg Gln Gly Ala Lys Thr Val Phe Asn Lys Phe Ser Asn Met
50 55 60

Asn Trp Pro Val Asp Ile His Pro Leu Asn Lys Ser Leu Val Lys Asp
65 70 75 80

Asn Lys Trp Lys Lys Thr Glu Glu Thr Gln Glu Lys Arg Arg Ser Phe
85 90 95

Leu Gln Glu Phe Cys Lys Lys Tyr Gly Gly Val Ser His His Gln Ser
100 105 110

His	Leu	Phe	His	Thr	Val	Ser	Arg	Ile	Tyr	Val	Glu	Asp	Lys	His	Lys	
		115					120					125				
Ile	Leu	Tyr	Cys	Glu	Val	Pro	Lys	Ala	Gly	Cys	Ser	Asn	Trp	Lys	Arg	
	130					135					140					
Ile	Leu	Met	Val	Leu	Asn	Gly	Leu	Ala	Ser	Ser	Ala	Tyr	Asn	Ile	Ser	
145					150					155					160	
His	Asn	Ala	Val	His	Tyr	Gly	Lys	His	Leu	Lys	Lys	Leu	Asp	Ser	Phe	
				165					170					175		
Asp	Leu	Lys	Gly	Ile	Tyr	Thr	Arg	Leu	Asn	Thr	Tyr	Thr	Lys	Ala	Val	
			180					185					190			
Phe	Val	Arg	Asp	Pro	Met	Glu	Arg	Leu	Val	Ser	Ala	Phe	Arg	Asp	Lys	
		195					200					205				
Phe	Glu	His	Pro	Asn	Ser	Tyr	Tyr	His	Pro	Val	Phe	Gly	Lys	Ala	Ile	
	210					215					220					
Ile	Lys	Lys	Tyr	Arg	Pro	Asn	Ala	Cys	Glu	Glu	Ala	Leu	Ile	Asn	Gly	
225					230					235					240	
Ser	Gly	Val	Lys	Phe	Lys	Glu	Phe	Ile	His	Tyr	Leu	Leu	Asp	Ser	His	
				245					250					255		
Arg	Pro	Val	Gly	Met	Asp	Ile	His	Trp	Glu	Lys	Val	Ser	Lys	Leu	Cys	
			260					265					270			
Tyr	Pro	Cys	Leu	Ile	Asn	Tyr	Asp	Phe	Val	Gly	Lys	Phe	Glu	Thr	Leu	
		275					280					285				
Glu	Glu	Asp	Ala	Asn	Tyr	Phe	Leu	Gln	Met	Ile	Gly	Ala	Pro	Lys	Glu	
	290					295					300					
Leu	Lys	Phe	Pro	Asn	Phe	Lys	Asp	Arg	His	Ser	Ser	Asp	Glu	Arg	Thr	
305					310					315					320	
Asn	Ala	Gln	Val	Val	Arg	Gln	Tyr	Leu	Lys	Asp	Leu	Thr	Arg	Thr	Glu	
				325					330					335		
Arg	Gln	Leu	Ile	Tyr	Asp	Phe	Tyr	Tyr	Leu	Asp	Tyr	Leu	Met	Phe	Asn	

340

345

350

Tyr Thr Thr Pro Phe Leu
355

<210> 11673

<211> 443

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2301"

<220>

<221> source

<223> /note="Gene Symbol: CHST9"

<220>

<221> source

<223> /note="Gene Name:
carbohydrate (N-acetylgalactosamine
4-0) sulfotransferase 9"

<220>

<221> source

<223> /note="Uniprot ID: Q7L1S5"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000462852"

<400> 11673

Met Gln Pro Ser Glu Met Val Met Asn Pro Lys Gln Val Phe Leu Ser
1 5 10 15

Val Leu Ile Phe Gly Val Ala Gly Leu Leu Leu Phe Met Tyr Leu Gln
20 25 30

Val Trp Ile Glu Glu Gln His Thr Gly Arg Val Glu Lys Arg Arg Glu
35 40 45

Gln Lys Val Thr Ser Gly Trp Gly Pro Val Lys Tyr Leu Arg Pro Val
50 55 60

Pro Arg Ile Met Ser Thr Glu Lys Ile Gln Glu His Ile Thr Asn Gln
65 70 75 80

Asn Pro Lys Phe His Met Pro Glu Asp Val Arg Glu Lys Lys Glu Asn
85 90 95

26073

Leu	Leu	Leu	Asn	Ser	Glu	Arg	Ser	Thr	Arg	Leu	Leu	Thr	Lys	Thr	Ser	
			100					105					110			
His	Ser	Gln	Gly	Gly	Asp	Gln	Ala	Leu	Ser	Lys	Ser	Thr	Gly	Ser	Pro	
		115					120					125				
Thr	Glu	Lys	Leu	Ile	Glu	Lys	Arg	Gln	Gly	Ala	Lys	Thr	Val	Phe	Asn	
	130					135					140					
Lys	Phe	Ser	Asn	Met	Asn	Trp	Pro	Val	Asp	Ile	His	Pro	Leu	Asn	Lys	
145					150					155					160	
Ser	Leu	Val	Lys	Asp	Asn	Lys	Trp	Lys	Lys	Thr	Glu	Glu	Thr	Gln	Glu	
				165					170					175		
Lys	Arg	Arg	Ser	Phe	Leu	Gln	Glu	Phe	Cys	Lys	Lys	Tyr	Gly	Gly	Val	
			180					185					190			
Ser	His	His	Gln	Ser	His	Leu	Phe	His	Thr	Val	Ser	Arg	Ile	Tyr	Val	
		195					200					205				
Glu	Asp	Lys	His	Lys	Ile	Leu	Tyr	Cys	Glu	Val	Pro	Lys	Ala	Gly	Cys	
	210					215					220					
Ser	Asn	Trp	Lys	Arg	Ile	Leu	Met	Val	Leu	Asn	Gly	Leu	Ala	Ser	Ser	
225					230					235					240	
Ala	Tyr	Asn	Ile	Ser	His	Asn	Ala	Val	His	Tyr	Gly	Lys	His	Leu	Lys	
				245					250					255		
Lys	Leu	Asp	Ser	Phe	Asp	Leu	Lys	Gly	Ile	Tyr	Thr	Arg	Leu	Asn	Thr	
			260					265					270			
Tyr	Thr	Lys	Ala	Val	Phe	Val	Arg	Asp	Pro	Met	Glu	Arg	Leu	Val	Ser	
		275					280					285				
Ala	Phe	Arg	Asp	Lys	Phe	Glu	His	Pro	Asn	Ser	Tyr	Tyr	His	Pro	Val	
	290					295					300					
Phe	Gly	Lys	Ala	Ile	Ile	Lys	Lys	Tyr	Arg	Pro	Asn	Ala	Cys	Glu	Glu	
305					310					315					320	

Ala Leu Ile Asn Gly Ser Gly Val Lys Phe Lys Glu Phe Ile His Tyr
325 330 335

Leu Leu Asp Ser His Arg Pro Val Gly Met Asp Ile His Trp Glu Lys
340 345 350

Val Ser Lys Leu Cys Tyr Pro Cys Leu Ile Asn Tyr Asp Phe Val Gly
355 360 365

Lys Phe Glu Thr Leu Glu Glu Asp Ala Asn Tyr Phe Leu Gln Met Ile
370 375 380

Gly Ala Pro Lys Glu Leu Lys Phe Pro Asn Phe Lys Asp Arg His Ser
385 390 395 400

Ser Asp Glu Arg Thr Asn Ala Gln Val Val Arg Gln Tyr Leu Lys Asp
405 410 415

Leu Thr Arg Thr Glu Arg Gln Leu Ile Tyr Asp Phe Tyr Tyr Leu Asp
420 425 430

Tyr Leu Met Phe Asn Tyr Thr Thr Pro Phe Leu
435 440

<210> 11674
<211> 74
<212> PRT
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<220>
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<223> /note="Payload ID: 2301"

<220>
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<220>
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<223> /note="Gene Name:
carbohydrate (N-acetylgalactosamine
4-0) sulfotransferase 9"

<220>
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<223> /note="Uniprot ID: Q7L1S5"

<220>

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<400> 11674
Met Gln Pro Ser Glu Met Val Met Asn Pro Lys Gln Val Phe Leu Ser
1 5 10 15

Val Leu Ile Phe Gly Val Ala Gly Leu Leu Leu Phe Met Tyr Leu Gln
20 25 30

Val Trp Ile Glu Glu Gln His Thr Gly Arg Val Glu Lys Arg Arg Glu
35 40 45

Gln Lys Val Thr Ser Gly Trp Gly Pro Val Lys Tyr Leu Arg Pro Val
50 55 60

Pro Arg Ile Lys Pro Gln Val Ser His Ala
65 70

<210> 11675
<211> 443
<212> PRT
<213> Homo sapiens

<220>
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<220>
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carbohydrate (N-acetylgalactosamine
4-0) sulfotransferase 9"

<220>
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<220>
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<400> 11675
Met Gln Pro Ser Glu Met Val Met Asn Pro Lys Gln Val Phe Leu Ser
1 5 10 15

Val Leu Ile Phe Gly Val Ala Gly Leu Leu Leu Phe Met Tyr Leu Gln

20					25					30					
Val	Trp	Ile	Glu	Glu	Gln	His	Thr	Gly	Arg	Val	Glu	Lys	Arg	Arg	Glu
		35					40					45			
Gln	Lys	Val	Thr	Ser	Gly	Trp	Gly	Pro	Val	Lys	Tyr	Leu	Arg	Pro	Val
	50					55					60				
Pro	Arg	Ile	Met	Ser	Thr	Glu	Lys	Ile	Gln	Glu	His	Ile	Thr	Asn	Gln
65					70					75					80
Asn	Pro	Lys	Phe	His	Met	Pro	Glu	Asp	Val	Arg	Glu	Lys	Lys	Glu	Asn
				85					90					95	
Leu	Leu	Leu	Asn	Ser	Glu	Arg	Ser	Thr	Arg	Leu	Leu	Thr	Lys	Thr	Ser
			100					105					110		
His	Ser	Gln	Gly	Gly	Asp	Gln	Ala	Leu	Ser	Lys	Ser	Thr	Gly	Ser	Pro
		115					120					125			
Thr	Glu	Lys	Leu	Ile	Glu	Lys	Arg	Gln	Gly	Ala	Lys	Thr	Val	Phe	Asn
	130					135					140				
Lys	Phe	Ser	Asn	Met	Asn	Trp	Pro	Val	Asp	Ile	His	Pro	Leu	Asn	Lys
145					150					155					160
Ser	Leu	Val	Lys	Asp	Asn	Lys	Trp	Lys	Lys	Thr	Glu	Glu	Thr	Gln	Glu
				165					170					175	
Lys	Arg	Arg	Ser	Phe	Leu	Gln	Glu	Phe	Cys	Lys	Lys	Tyr	Gly	Gly	Val
			180					185					190		
Ser	His	His	Gln	Ser	His	Leu	Phe	His	Thr	Val	Ser	Arg	Ile	Tyr	Val
		195					200					205			
Glu	Asp	Lys	His	Lys	Ile	Leu	Tyr	Cys	Glu	Val	Pro	Lys	Ala	Gly	Cys
	210					215					220				
Ser	Asn	Trp	Lys	Arg	Ile	Leu	Met	Val	Leu	Asn	Gly	Leu	Ala	Ser	Ser
225					230					235					240
Ala	Tyr	Asn	Ile	Ser	His	Asn	Ala	Val	His	Tyr	Gly	Lys	His	Leu	Lys
				245					250					255	

Lys Leu Asp Ser Phe Asp Leu Lys Gly Ile Tyr Thr Arg Leu Asn Thr
 260 265 270
 Tyr Thr Lys Ala Val Phe Val Arg Asp Pro Met Glu Arg Leu Val Ser
 275 280 285
 Ala Phe Arg Asp Lys Phe Glu His Pro Asn Ser Tyr Tyr His Pro Val
 290 295 300
 Phe Gly Lys Ala Ile Ile Lys Lys Tyr Arg Pro Asn Ala Cys Glu Glu
 305 310 315 320
 Ala Leu Ile Asn Gly Ser Gly Val Lys Phe Lys Glu Phe Ile His Tyr
 325 330 335
 Leu Leu Asp Ser His Arg Pro Val Gly Met Asp Ile His Trp Glu Lys
 340 345 350
 Val Ser Lys Leu Cys Tyr Pro Cys Leu Ile Asn Tyr Asp Phe Val Gly
 355 360 365
 Lys Phe Glu Thr Leu Glu Glu Asp Ala Asn Tyr Phe Leu Gln Met Ile
 370 375 380
 Gly Ala Pro Lys Glu Leu Lys Phe Pro Asn Phe Lys Asp Arg His Ser
 385 390 395 400
 Ser Asp Glu Arg Thr Asn Ala Gln Val Val Arg Gln Tyr Leu Lys Asp
 405 410 415
 Leu Thr Arg Thr Glu Arg Gln Leu Ile Tyr Asp Phe Tyr Tyr Leu Asp
 420 425 430
 Tyr Leu Met Phe Asn Tyr Thr Thr Pro Phe Leu
 435 440

<210> 11676
 <211> 561
 <212> PRT
 <213> Homo sapiens

<220>
 <221> source

<223> /note="Payload ID: 2302"

<220>

<221> source

<223> /note="Gene Symbol: CHST15"

<220>

<221> source

<223> /note="Gene Name:
carbohydrate (N-acetylgalactosamine
4-sulfate 6-O) sulfotransferase 15"

<220>

<221> source

<223> /note="Uniprot ID: Q7LFX5"

<220>

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<223> /note="ENSP ID: ENSP00000333947"

<400> 11676

Met Arg His Cys Ile Asn Cys Cys Ile Gln Leu Leu Pro Asp Gly Ala
1 5 10 15

His Lys Gln Gln Val Asn Cys Gln Gly Gly Pro His His Gly His Gln
20 25 30

Ala Cys Pro Thr Cys Lys Gly Glu Asn Lys Ile Leu Phe Arg Val Asp
35 40 45

Ser Lys Gln Met Asn Leu Leu Ala Val Leu Glu Val Arg Thr Glu Gly
50 55 60

Asn Glu Asn Trp Gly Gly Phe Leu Arg Phe Lys Lys Gly Lys Arg Cys
65 70 75 80

Ser Leu Val Phe Gly Leu Ile Ile Met Thr Leu Val Met Ala Ser Tyr
85 90 95

Ile Leu Ser Gly Ala His Gln Glu Leu Leu Ile Ser Ser Pro Phe His
100 105 110

Tyr Gly Gly Phe Pro Ser Asn Pro Ser Leu Met Asp Ser Glu Asn Pro
115 120 125

Ser Asp Thr Lys Glu His His His Gln Ser Ser Val Asn Asn Ile Ser
130 135 140

Tyr Met Lys Asp Tyr Pro Ser Ile Lys Leu Ile Ile Asn Ser Ile Thr
 145 150 155 160

Thr Arg Ile Glu Phe Thr Thr Arg Gln Leu Pro Asp Leu Glu Asp Leu
 165 170 175

Lys Lys Gln Glu Leu His Met Phe Ser Val Ile Pro Asn Lys Phe Leu
 180 185 190

Pro Asn Ser Lys Ser Pro Cys Trp Tyr Glu Glu Phe Ser Gly Gln Asn
 195 200 205

Thr Thr Asp Pro Tyr Leu Thr Asn Ser Tyr Val Leu Tyr Ser Lys Arg
 210 215 220

Phe Arg Ser Thr Phe Asp Ala Leu Arg Lys Ala Phe Trp Gly His Leu
 225 230 235 240

Ala His Ala His Gly Lys His Phe Arg Leu Arg Cys Leu Pro His Phe
 245 250 255

Tyr Ile Ile Gly Gln Pro Lys Cys Gly Thr Thr Asp Leu Tyr Asp Arg
 260 265 270

Leu Arg Leu His Pro Glu Val Lys Phe Ser Ala Ile Lys Glu Pro His
 275 280 285

Trp Trp Thr Arg Lys Arg Phe Gly Ile Val Arg Leu Arg Asp Gly Leu
 290 295 300

Arg Asp Arg Tyr Pro Val Glu Asp Tyr Leu Asp Leu Phe Asp Leu Ala
 305 310 315 320

Ala His Gln Ile His Gln Gly Leu Gln Ala Ser Ser Ala Lys Glu Gln
 325 330 335

Ser Lys Met Asn Thr Ile Ile Ile Gly Glu Ala Ser Ala Ser Thr Met
 340 345 350

Trp Asp Asn Asn Ala Trp Thr Phe Phe Tyr Asp Asn Ser Thr Asp Gly
 355 360 365

Glu Pro Pro Phe Leu Thr Gln Asp Phe Ile His Ala Phe Gln Pro Asn

370						375						380				
Ala	Arg	Leu	Ile	Val	Met	Leu	Arg	Asp	Pro	Val	Glu	Arg	Leu	Tyr	Ser	
385					390					395					400	
Asp	Tyr	Leu	Tyr	Phe	Ala	Ser	Ser	Asn	Lys	Ser	Ala	Asp	Asp	Phe	His	
				405					410					415		
Glu	Lys	Val	Thr	Glu	Ala	Leu	Gln	Leu	Phe	Glu	Asn	Cys	Met	Leu	Asp	
			420					425					430			
Tyr	Ser	Leu	Arg	Ala	Cys	Val	Tyr	Asn	Asn	Thr	Leu	Asn	Asn	Ala	Met	
		435					440					445				
Pro	Val	Arg	Leu	Gln	Val	Gly	Leu	Tyr	Ala	Val	Tyr	Leu	Leu	Asp	Trp	
	450					455					460					
Leu	Ser	Val	Phe	Asp	Lys	Gln	Gln	Phe	Leu	Ile	Leu	Arg	Leu	Glu	Asp	
465					470					475					480	
His	Ala	Ser	Asn	Val	Lys	Tyr	Thr	Met	His	Lys	Val	Phe	Gln	Phe	Leu	
				485					490					495		
Asn	Leu	Gly	Pro	Leu	Ser	Glu	Lys	Gln	Glu	Ala	Leu	Met	Thr	Lys	Ser	
			500					505					510			
Pro	Ala	Ser	Asn	Ala	Arg	Arg	Pro	Glu	Asp	Arg	Asn	Leu	Gly	Pro	Met	
		515					520					525				
Trp	Pro	Ile	Thr	Gln	Lys	Ile	Leu	Arg	Asp	Phe	Tyr	Arg	Pro	Phe	Asn	
	530					535					540					
Ala	Arg	Leu	Ala	Gln	Val	Leu	Ala	Asp	Glu	Ala	Phe	Ala	Trp	Lys	Thr	
545					550					555					560	

Thr

<210> 11677

<211> 561

<212> PRT

<213> Homo sapiens

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<221> source
<223> /note="Payload ID: 2302"

<220>
<221> source
<223> /note="Gene Symbol: CHST15"

<220>
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<223> /note="Gene Name:
      carbohydrate (N-acetylgalactosamine
      4-sulfate 6-O) sulfotransferase 15"

<220>
<221> source
<223> /note="Uniprot ID: Q7LFX5"

<220>
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<223> /note="ENSP ID: ENSP00000402394"

<400> 11677
Met Arg His Cys Ile Asn Cys Cys Ile Gln Leu Leu Pro Asp Gly Ala
1                               5                10                15

His Lys Gln Gln Val Asn Cys Gln Gly Gly Pro His His Gly His Gln
                20                25                30

Ala Cys Pro Thr Cys Lys Gly Glu Asn Lys Ile Leu Phe Arg Val Asp
          35                40                45

Ser Lys Gln Met Asn Leu Leu Ala Val Leu Glu Val Arg Thr Glu Gly
          50                55                60

Asn Glu Asn Trp Gly Gly Phe Leu Arg Phe Lys Lys Gly Lys Arg Cys
65                70                75                80

Ser Leu Val Phe Gly Leu Ile Ile Met Thr Leu Val Met Ala Ser Tyr
          85                90                95

Ile Leu Ser Gly Ala His Gln Glu Leu Leu Ile Ser Ser Pro Phe His
          100                105                110

Tyr Gly Gly Phe Pro Ser Asn Pro Ser Leu Met Asp Ser Glu Asn Pro
          115                120                125

Ser Asp Thr Lys Glu His His His Gln Ser Ser Val Asn Asn Ile Ser
          130                135                140

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Tyr	Met	Lys	Asp	Tyr	Pro	Ser	Ile	Lys	Leu	Ile	Ile	Asn	Ser	Ile	Thr	145	150	155	160
Thr	Arg	Ile	Glu	Phe	Thr	Thr	Arg	Gln	Leu	Pro	Asp	Leu	Glu	Asp	Leu	165	170	175	
Lys	Lys	Gln	Glu	Leu	His	Met	Phe	Ser	Val	Ile	Pro	Asn	Lys	Phe	Leu	180	185	190	
Pro	Asn	Ser	Lys	Ser	Pro	Cys	Trp	Tyr	Glu	Glu	Phe	Ser	Gly	Gln	Asn	195	200	205	
Thr	Thr	Asp	Pro	Tyr	Leu	Thr	Asn	Ser	Tyr	Val	Leu	Tyr	Ser	Lys	Arg	210	215	220	
Phe	Arg	Ser	Thr	Phe	Asp	Ala	Leu	Arg	Lys	Ala	Phe	Trp	Gly	His	Leu	225	230	235	240
Ala	His	Ala	His	Gly	Lys	His	Phe	Arg	Leu	Arg	Cys	Leu	Pro	His	Phe	245	250	255	
Tyr	Ile	Ile	Gly	Gln	Pro	Lys	Cys	Gly	Thr	Thr	Asp	Leu	Tyr	Asp	Arg	260	265	270	
Leu	Arg	Leu	His	Pro	Glu	Val	Lys	Phe	Ser	Ala	Ile	Lys	Glu	Pro	His	275	280	285	
Trp	Trp	Thr	Arg	Lys	Arg	Phe	Gly	Ile	Val	Arg	Leu	Arg	Asp	Gly	Leu	290	295	300	
Arg	Asp	Arg	Tyr	Pro	Val	Glu	Asp	Tyr	Leu	Asp	Leu	Phe	Asp	Leu	Ala	305	310	315	320
Ala	His	Gln	Ile	His	Gln	Gly	Leu	Gln	Ala	Ser	Ser	Ala	Lys	Glu	Gln	325	330	335	
Ser	Lys	Met	Asn	Thr	Ile	Ile	Ile	Gly	Glu	Ala	Ser	Ala	Ser	Thr	Met	340	345	350	
Trp	Asp	Asn	Asn	Ala	Trp	Thr	Phe	Phe	Tyr	Asp	Asn	Ser	Thr	Asp	Gly	355	360	365	

Glu Pro Pro Phe Leu Thr Gln Asp Phe Ile His Ala Phe Gln Pro Asn
 370 375 380

Ala Arg Leu Ile Val Met Leu Arg Asp Pro Val Glu Arg Leu Tyr Ser
 385 390 395 400

Asp Tyr Leu Tyr Phe Ala Ser Ser Asn Lys Ser Ala Asp Asp Phe His
 405 410 415

Glu Lys Val Thr Glu Ala Leu Gln Leu Phe Glu Asn Cys Met Leu Asp
 420 425 430

Tyr Ser Leu Arg Ala Cys Val Tyr Asn Asn Thr Leu Asn Asn Ala Met
 435 440 445

Pro Val Arg Leu Gln Val Gly Leu Tyr Ala Val Tyr Leu Leu Asp Trp
 450 455 460

Leu Ser Val Phe Asp Lys Gln Gln Phe Leu Ile Leu Arg Leu Glu Asp
 465 470 475 480

His Ala Ser Asn Val Lys Tyr Thr Met His Lys Val Phe Gln Phe Leu
 485 490 495

Asn Leu Gly Pro Leu Ser Glu Lys Gln Glu Ala Leu Met Thr Lys Ser
 500 505 510

Pro Ala Ser Asn Ala Arg Arg Pro Glu Asp Arg Asn Leu Gly Pro Met
 515 520 525

Trp Pro Ile Thr Gln Lys Ile Leu Arg Asp Phe Tyr Arg Pro Phe Asn
 530 535 540

Ala Arg Leu Ala Gln Val Leu Ala Asp Glu Ala Phe Ala Trp Lys Thr
 545 550 555 560

Thr

<210> 11678

<211> 506

<212> PRT

<213> Homo sapiens

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<223> /note="Payload ID: 2302"

<220>
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<223> /note="Gene Symbol: CHST15"

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<223> /note="Gene Name:
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        4-sulfate 6-O) sulfotransferase 15"

<220>
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<223> /note="Uniprot ID: Q7LFX5"

<220>
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<400> 11678
Met Arg His Cys Ile Asn Cys Cys Ile Gln Leu Leu Pro Asp Gly Ala
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His Lys Gln Gln Val Asn Cys Gln Gly Gly Pro His His Gly His Gln
                               20                               25                               30

Ala Cys Pro Thr Cys Lys Gly Glu Asn Lys Ile Leu Phe Arg Val Asp
                               35                               40                               45

Ser Lys Gln Met Asn Leu Leu Ala Val Leu Glu Val Arg Thr Glu Gly
                               50                               55                               60

Asn Glu Asn Trp Gly Gly Phe Leu Arg Phe Lys Lys Gly Lys Arg Cys
65                               70                               75                               80

Ser Leu Val Phe Gly Leu Ile Ile Met Thr Leu Val Met Ala Ser Tyr
                               85                               90                               95

Ile Leu Ser Gly Ala His Gln Glu Leu Leu Ile Ser Ser Pro Phe His
                               100                              105                              110

Tyr Gly Gly Phe Pro Ser Asn Pro Ser Leu Met Asp Ser Glu Asn Pro
                               115                              120                              125

Ser Asp Thr Lys Glu His His His Gln Ser Ser Val Asn Asn Ile Ser
130                              135                              140

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Tyr	Met	Lys	Asp	Tyr	Pro	Ser	Ile	Lys	Leu	Ile	Ile	Asn	Ser	Ile	Thr	145	150	155	160
Thr	Arg	Ile	Glu	Phe	Thr	Thr	Arg	Gln	Leu	Pro	Asp	Leu	Glu	Asp	Leu	165	170	175	
Lys	Lys	Gln	Glu	Leu	His	Met	Phe	Ser	Val	Ile	Pro	Asn	Lys	Phe	Leu	180	185	190	
Pro	Asn	Ser	Lys	Ser	Pro	Cys	Trp	Tyr	Glu	Glu	Phe	Ser	Gly	Gln	Asn	195	200	205	
Thr	Thr	Asp	Pro	Tyr	Leu	Thr	Asn	Ser	Tyr	Val	Leu	Tyr	Ser	Lys	Arg	210	215	220	
Phe	Arg	Ser	Thr	Phe	Asp	Ala	Leu	Arg	Lys	Ala	Phe	Trp	Gly	His	Leu	225	230	235	240
Ala	His	Ala	His	Gly	Lys	His	Phe	Arg	Leu	Arg	Cys	Leu	Pro	His	Phe	245	250	255	
Tyr	Ile	Ile	Gly	Gln	Pro	Lys	Cys	Gly	Thr	Thr	Asp	Leu	Tyr	Asp	Arg	260	265	270	
Leu	Arg	Leu	His	Pro	Glu	Val	Lys	Phe	Ser	Ala	Ile	Lys	Glu	Pro	His	275	280	285	
Trp	Trp	Thr	Arg	Lys	Arg	Phe	Gly	Ile	Val	Arg	Leu	Arg	Asp	Gly	Leu	290	295	300	
Arg	Asp	Arg	Tyr	Pro	Val	Glu	Asp	Tyr	Leu	Asp	Leu	Phe	Asp	Leu	Ala	305	310	315	320
Ala	His	Gln	Ile	His	Gln	Gly	Leu	Gln	Ala	Ser	Ser	Ala	Lys	Glu	Gln	325	330	335	
Ser	Lys	Met	Asn	Thr	Ile	Ile	Ile	Gly	Glu	Ala	Ser	Ala	Ser	Thr	Met	340	345	350	
Trp	Asp	Asn	Asn	Ala	Trp	Thr	Phe	Phe	Tyr	Asp	Asn	Ser	Thr	Asp	Gly	355	360	365	

Glu Pro Pro Phe Leu Thr Gln Asp Phe Ile His Ala Phe Gln Pro Asn
370 375 380

Ala Arg Leu Ile Val Met Leu Arg Asp Pro Val Glu Arg Leu Tyr Ser
385 390 395 400

Asp Tyr Leu Tyr Phe Ala Ser Ser Asn Lys Ser Ala Asp Asp Phe His
405 410 415

Glu Lys Val Thr Glu Ala Leu Gln Leu Phe Glu Asn Cys Met Leu Asp
420 425 430

Tyr Ser Leu Arg Ala Cys Val Tyr Asn Asn Thr Leu Asn Asn Ala Met
435 440 445

Pro Val Cys Thr Pro Pro Pro Arg Thr Pro Arg Ala Gly Pro Trp Gln
450 455 460

Lys Glu Leu Val Cys Cys Tyr Tyr Ala Ser Gly Ile Val Gly Leu Arg
465 470 475 480

Phe Ser Ile Gly Thr Glu Arg Ser Val Leu Met Cys Lys Cys Cys Ser
485 490 495

Pro Leu Phe Met Asp Val Lys Ala Glu Asn
500 505

<210> 11679
<211> 66
<212> PRT
<213> Homo sapiens

<220>
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<220>
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<223> /note="Gene Symbol: CHST15"

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<223> /note="Gene Name:
carbohydrate (N-acetylgalactosamine
4-sulfate 6-O) sulfotransferase 15"

<220>

<221> source
 <223> /note="ENSP ID: ENSP00000487014"

 <400> 11679
 Met Arg His Cys Ile Asn Cys Cys Ile Gln Leu Leu Pro Asp Gly Ala
 1 5 10 15

 His Lys Gln Gln Val Asn Cys Gln Gly Gly Pro His His Gly His Gln
 20 25 30

 Ala Cys Pro Thr Cys Lys Gly Glu Asn Lys Ile Leu Phe Arg Val Asp
 35 40 45

 Ser Lys Gln Met Asn Leu Leu Ala Val Leu Glu Val Arg Thr Glu Gly
 50 55 60

 Asn Glu
 65

<210> 11680
 <211> 386
 <212> PRT
 <213> Homo sapiens

<220>
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<220>
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 <223> /note="Gene Symbol: CHST4"

<220>
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 <223> /note="Gene Name:
 carbohydrate (N-acetylglucosamine 6-O) sulfotransferase
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<220>
 <221> source
 <223> /note="Uniprot ID: Q8NCG5"

<220>
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 <223> /note="ENSP ID: ENSP00000341206"

<400> 11680
 Met Leu Leu Pro Lys Lys Met Lys Leu Leu Leu Phe Leu Val Ser Gln
 1 5 10 15

Met Ala Ile Leu Ala Leu Phe Phe His Met Tyr Ser His Asn Ile Ser

20					25					30					
Ser	Leu	Ser	Met	Lys	Ala	Gln	Pro	Glu	Arg	Met	His	Val	Leu	Val	Leu
		35					40					45			
Ser	Ser	Trp	Arg	Ser	Gly	Ser	Ser	Phe	Val	Gly	Gln	Leu	Phe	Gly	Gln
	50					55					60				
His	Pro	Asp	Val	Phe	Tyr	Leu	Met	Glu	Pro	Ala	Trp	His	Val	Trp	Met
65					70					75					80
Thr	Phe	Lys	Gln	Ser	Thr	Ala	Trp	Met	Leu	His	Met	Ala	Val	Arg	Asp
				85					90					95	
Leu	Ile	Arg	Ala	Val	Phe	Leu	Cys	Asp	Met	Ser	Val	Phe	Asp	Ala	Tyr
			100					105					110		
Met	Glu	Pro	Gly	Pro	Arg	Arg	Gln	Ser	Ser	Leu	Phe	Gln	Trp	Glu	Asn
		115					120					125			
Ser	Arg	Ala	Leu	Cys	Ser	Ala	Pro	Ala	Cys	Asp	Ile	Ile	Pro	Gln	Asp
	130					135					140				
Glu	Ile	Ile	Pro	Arg	Ala	His	Cys	Arg	Leu	Leu	Cys	Ser	Gln	Gln	Pro
145					150					155					160
Phe	Glu	Val	Val	Glu	Lys	Ala	Cys	Arg	Ser	Tyr	Ser	His	Val	Val	Leu
				165					170					175	
Lys	Glu	Val	Arg	Phe	Phe	Asn	Leu	Gln	Ser	Leu	Tyr	Pro	Leu	Leu	Lys
			180					185					190		
Asp	Pro	Ser	Leu	Asn	Leu	His	Ile	Val	His	Leu	Val	Arg	Asp	Pro	Arg
		195					200					205			
Ala	Val	Phe	Arg	Ser	Arg	Glu	Arg	Thr	Lys	Gly	Asp	Leu	Met	Ile	Asp
	210					215					220				
Ser	Arg	Ile	Val	Met	Gly	Gln	His	Glu	Gln	Lys	Leu	Lys	Lys	Glu	Asp
225					230					235					240
Gln	Pro	Tyr	Tyr	Val	Met	Gln	Val	Ile	Cys	Gln	Ser	Gln	Leu	Glu	Ile
				245					250					255	

Tyr Lys Thr Ile Gln Ser Leu Pro Lys Ala Leu Gln Glu Arg Tyr Leu
260 265 270

Leu Val Arg Tyr Glu Asp Leu Ala Arg Ala Pro Val Ala Gln Thr Ser
275 280 285

Arg Met Tyr Glu Phe Val Gly Leu Glu Phe Leu Pro His Leu Gln Thr
290 295 300

Trp Val His Asn Ile Thr Arg Gly Lys Gly Met Gly Asp His Ala Phe
305 310 315 320

His Thr Asn Ala Arg Asp Ala Leu Asn Val Ser Gln Ala Trp Arg Trp
325 330 335

Ser Leu Pro Tyr Glu Lys Val Ser Arg Leu Gln Lys Ala Cys Gly Asp
340 345 350

Ala Met Asn Leu Leu Gly Tyr Arg His Val Arg Ser Glu Gln Glu Gln
355 360 365

Arg Asn Leu Leu Leu Asp Leu Leu Ser Thr Trp Thr Val Pro Glu Gln
370 375 380

Ile His
385

<210> 11681
<211> 386
<212> PRT
<213> Homo sapiens

<220>
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<223> /note="Payload ID: 2303"

<220>
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<223> /note="Gene Symbol: CHST4"

<220>
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<223> /note="Gene Name:
carbohydrate (N-acetylglucosamine 6-O) sulfotransferase
4"

<220>
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 <223> /note="Uniprot ID: Q8NCG5"

<220>
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 <223> /note="ENSP ID: ENSP00000441204"

<400> 11681

Met Leu Leu Pro Lys Lys Met Lys Leu Leu Leu Phe Leu Val Ser Gln
 1 5 10 15

Met Ala Ile Leu Ala Leu Phe Phe His Met Tyr Ser His Asn Ile Ser
 20 25 30

Ser Leu Ser Met Lys Ala Gln Pro Glu Arg Met His Val Leu Val Leu
 35 40 45

Ser Ser Trp Arg Ser Gly Ser Ser Phe Val Gly Gln Leu Phe Gly Gln
 50 55 60

His Pro Asp Val Phe Tyr Leu Met Glu Pro Ala Trp His Val Trp Met
 65 70 75 80

Thr Phe Lys Gln Ser Thr Ala Trp Met Leu His Met Ala Val Arg Asp
 85 90 95

Leu Ile Arg Ala Val Phe Leu Cys Asp Met Ser Val Phe Asp Ala Tyr
 100 105 110

Met Glu Pro Gly Pro Arg Arg Gln Ser Ser Leu Phe Gln Trp Glu Asn
 115 120 125

Ser Arg Ala Leu Cys Ser Ala Pro Ala Cys Asp Ile Ile Pro Gln Asp
 130 135 140

Glu Ile Ile Pro Arg Ala His Cys Arg Leu Leu Cys Ser Gln Gln Pro
 145 150 155 160

Phe Glu Val Val Glu Lys Ala Cys Arg Ser Tyr Ser His Val Val Leu
 165 170 175

Lys Glu Val Arg Phe Phe Asn Leu Gln Ser Leu Tyr Pro Leu Leu Lys
 180 185 190

Asp Pro Ser Leu Asn Leu His Ile Val His Leu Val Arg Asp Pro Arg
195 200 205

Ala Val Phe Arg Ser Arg Glu Arg Thr Lys Gly Asp Leu Met Ile Asp
210 215 220

Ser Arg Ile Val Met Gly Gln His Glu Gln Lys Leu Lys Lys Glu Asp
225 230 235 240

Gln Pro Tyr Tyr Val Met Gln Val Ile Cys Gln Ser Gln Leu Glu Ile
245 250 255

Tyr Lys Thr Ile Gln Ser Leu Pro Lys Ala Leu Gln Glu Arg Tyr Leu
260 265 270

Leu Val Arg Tyr Glu Asp Leu Ala Arg Ala Pro Val Ala Gln Thr Ser
275 280 285

Arg Met Tyr Glu Phe Val Gly Leu Glu Phe Leu Pro His Leu Gln Thr
290 295 300

Trp Val His Asn Ile Thr Arg Gly Lys Gly Met Gly Asp His Ala Phe
305 310 315 320

His Thr Asn Ala Arg Asp Ala Leu Asn Val Ser Gln Ala Trp Arg Trp
325 330 335

Ser Leu Pro Tyr Glu Lys Val Ser Arg Leu Gln Lys Ala Cys Gly Asp
340 345 350

Ala Met Asn Leu Leu Gly Tyr Arg His Val Arg Ser Glu Gln Glu Gln
355 360 365

Arg Asn Leu Leu Leu Asp Leu Leu Ser Thr Trp Thr Val Pro Glu Gln
370 375 380

Ile His
385

<210> 11682

<211> 411

<212> PRT

<213> Homo sapiens

<220>
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 <220>
 <221> source
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 <220>
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 <223> /note="Gene Name:
 carbohydrate (N-acetylglucosamine 6-O) sulfotransferase
 5"

 <220>
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 <223> /note="Uniprot ID: Q9GZS9"

 <220>
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 <223> /note="ENSP ID: ENSP00000338783"

 <400> 11682
 Met Gly Met Arg Ala Arg Val Pro Lys Val Ala His Ser Thr Arg Arg
 1 5 10 15

 Pro Pro Ala Ala Arg Met Trp Leu Pro Arg Phe Ser Ser Lys Thr Val
 20 25 30

 Thr Val Leu Leu Leu Ala Gln Thr Thr Cys Leu Leu Leu Phe Ile Ile
 35 40 45

 Ser Arg Pro Gly Pro Ser Ser Pro Ala Gly Gly Glu Asp Arg Val His
 50 55 60

 Val Leu Val Leu Ser Ser Trp Arg Ser Gly Ser Ser Phe Leu Gly Gln
 65 70 75 80

 Leu Phe Ser Gln His Pro Asp Val Phe Tyr Leu Met Glu Pro Ala Trp
 85 90 95

 His Val Trp Thr Thr Leu Ser Gln Gly Ser Ala Ala Thr Leu His Met
 100 105 110

 Ala Val Arg Asp Leu Met Arg Ser Ile Phe Leu Cys Asp Met Asp Val
 115 120 125

 Phe Asp Ala Tyr Met Pro Gln Ser Arg Asn Leu Ser Ala Phe Phe Asn
 130 135 140

Trp	Ala	Thr	Ser	Arg	Ala	Leu	Cys	Ser	Pro	Pro	Ala	Cys	Ser	Ala	Phe
145					150					155					160
Pro	Arg	Gly	Thr	Ile	Ser	Lys	Gln	Asp	Val	Cys	Lys	Thr	Leu	Cys	Thr
				165					170					175	
Arg	Gln	Pro	Phe	Ser	Leu	Ala	Arg	Glu	Ala	Cys	Arg	Ser	Tyr	Ser	His
			180					185					190		
Val	Val	Leu	Lys	Glu	Val	Arg	Phe	Phe	Asn	Leu	Gln	Val	Leu	Tyr	Pro
		195					200					205			
Leu	Leu	Ser	Asp	Pro	Ala	Leu	Asn	Leu	Arg	Ile	Val	His	Leu	Val	Arg
	210					215					220				
Asp	Pro	Arg	Ala	Val	Leu	Arg	Ser	Arg	Glu	Ala	Ala	Gly	Pro	Ile	Leu
225					230					235					240
Ala	Arg	Asp	Asn	Gly	Ile	Val	Leu	Gly	Thr	Asn	Gly	Lys	Trp	Val	Glu
				245					250					255	
Ala	Asp	Pro	His	Leu	Arg	Leu	Ile	Arg	Glu	Val	Cys	Arg	Ser	His	Val
			260					265					270		
Arg	Ile	Ala	Glu	Ala	Ala	Thr	Leu	Lys	Pro	Pro	Pro	Phe	Leu	Arg	Gly
		275					280					285			
Arg	Tyr	Arg	Leu	Val	Arg	Phe	Glu	Asp	Leu	Ala	Arg	Glu	Pro	Leu	Ala
	290					295					300				
Glu	Ile	Arg	Ala	Leu	Tyr	Ala	Phe	Thr	Gly	Leu	Thr	Leu	Thr	Pro	Gln
305					310					315					320
Leu	Glu	Ala	Trp	Ile	His	Asn	Ile	Thr	His	Gly	Ser	Gly	Ile	Gly	Lys
				325					330					335	
Pro	Ile	Glu	Ala	Phe	His	Thr	Ser	Ser	Arg	Asn	Ala	Arg	Asn	Val	Ser
			340					345					350		
Gln	Ala	Trp	Arg	His	Ala	Leu	Pro	Phe	Thr	Lys	Ile	Leu	Arg	Val	Gln
		355					360					365			

Glu Val Cys Ala Gly Ala Leu Gln Leu Leu Gly Tyr Arg Pro Val Tyr
370 375 380

Ser Ala Asp Gln Gln Arg Asp Leu Thr Leu Asp Leu Val Leu Pro Arg
385 390 395 400

Gly Pro Asp His Phe Ser Trp Ala Ser Pro Asp
405 410

<210> 11683
<211> 99
<212> PRT
<213> Homo sapiens

<220>
<221> source
<223> /note="Payload ID: 2304"

<220>
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<223> /note="Gene Symbol: CHST5"

<220>
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<223> /note="Gene Name:
carbohydrate (N-acetylglucosamine 6-O) sulfotransferase
5"

<220>
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<223> /note="ENSP ID: ENSP00000454375"

<400> 11683
Met Ser Arg His Leu Pro Trp Ile Cys Asp Gln Arg Cys Ser Ser Pro
1 5 10 15

Ser Ser Pro Gly Arg Trp Pro Pro Ala Ala Arg Met Trp Leu Pro Arg
20 25 30

Phe Ser Ser Lys Thr Val Thr Val Leu Leu Leu Ala Gln Thr Thr Cys
35 40 45

Leu Leu Leu Phe Ile Ile Ser Arg Pro Gly Pro Ser Ser Pro Ala Gly
50 55 60

Gly Glu Asp Arg Val His Val Leu Val Leu Ser Ser Trp Arg Ser Gly
65 70 75 80

Ser Ser Phe Leu Gly Gln Leu Phe Ser Gln His Pro Asp Val Phe Tyr
85 90 95

Leu Met Glu

<210> 11684
<211> 395
<212> PRT
<213> Homo sapiens

<220>
<221> source
<223> /note="Payload ID: 2305"

<220>
<221> source
<223> /note="Gene Symbol: CHST6"

<220>
<221> source
<223> /note="Gene Name:
carbohydrate (N-acetylglucosamine 6-O) sulfotransferase
6"

<220>
<221> source
<223> /note="Uniprot ID: Q9GZX3"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000328983"

<400> 11684
Met Trp Leu Pro Arg Val Ser Ser Thr Ala Val Thr Ala Leu Leu Leu
1 5 10 15

Ala Gln Thr Phe Leu Leu Leu Phe Leu Val Ser Arg Pro Gly Pro Ser
20 25 30

Ser Pro Ala Gly Gly Glu Ala Arg Val His Val Leu Val Leu Ser Ser
35 40 45

Trp Arg Ser Gly Ser Ser Phe Val Gly Gln Leu Phe Asn Gln His Pro
50 55 60

Asp Val Phe Tyr Leu Met Glu Pro Ala Trp His Val Trp Thr Thr Leu
65 70 75 80

Ser Gln Gly Ser Ala Ala Thr Leu His Met Ala Val Arg Asp Leu Val

85

90

95

Arg Ser Val Phe Leu Cys Asp Met Asp Val Phe Asp Ala Tyr Leu Pro
 100 105 110

Trp Arg Arg Asn Leu Ser Asp Leu Phe Gln Trp Ala Val Ser Arg Ala
 115 120 125

Leu Cys Ser Pro Pro Ala Cys Ser Ala Phe Pro Arg Gly Ala Ile Ser
 130 135 140

Ser Glu Ala Val Cys Lys Pro Leu Cys Ala Arg Gln Ser Phe Thr Leu
 145 150 155 160

Ala Arg Glu Ala Cys Arg Ser Tyr Ser His Val Val Leu Lys Glu Val
 165 170 175

Arg Phe Phe Asn Leu Gln Val Leu Tyr Pro Leu Leu Ser Asp Pro Ala
 180 185 190

Leu Asn Leu Arg Ile Val His Leu Val Arg Asp Pro Arg Ala Val Leu
 195 200 205

Arg Ser Arg Glu Gln Thr Ala Lys Ala Leu Ala Arg Asp Asn Gly Ile
 210 215 220

Val Leu Gly Thr Asn Gly Thr Trp Val Glu Ala Asp Pro Gly Leu Arg
 225 230 235 240

Val Val Arg Glu Val Cys Arg Ser His Val Arg Ile Ala Glu Ala Ala
 245 250 255

Thr Leu Lys Pro Pro Pro Phe Leu Arg Gly Arg Tyr Arg Leu Val Arg
 260 265 270

Phe Glu Asp Leu Ala Arg Glu Pro Leu Ala Glu Ile Arg Ala Leu Tyr
 275 280 285

Ala Phe Thr Gly Leu Ser Leu Thr Pro Gln Leu Glu Ala Trp Ile His
 290 295 300

Asn Ile Thr His Gly Ser Gly Pro Gly Ala Arg Arg Glu Ala Phe Lys
 305 310 315 320

26097

Thr Ser Ser Arg Asn Ala Leu Asn Val Ser Gln Ala Trp Arg His Ala
325 330 335

Leu Pro Phe Ala Lys Ile Arg Arg Val Gln Glu Leu Cys Ala Gly Ala
340 345 350

Leu Gln Leu Leu Gly Tyr Arg Pro Val Tyr Ser Glu Asp Glu Gln Arg
355 360 365

Asn Leu Ala Leu Asp Leu Val Leu Pro Arg Gly Leu Asn Gly Phe Thr
370 375 380

Trp Ala Ser Ser Thr Ala Ser His Pro Arg Asn
385 390 395

<210> 11685
<211> 395
<212> PRT
<213> Homo sapiens

<220>
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<223> /note="Payload ID: 2305"

<220>
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<223> /note="Gene Symbol: CHST6"

<220>
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<223> /note="Gene Name:
carbohydrate (N-acetylglucosamine 6-O) sulfotransferase
6"

<220>
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<223> /note="Uniprot ID: Q9GZX3"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000375079"

<400> 11685
Met Trp Leu Pro Arg Val Ser Ser Thr Ala Val Thr Ala Leu Leu Leu
1 5 10 15

Ala Gln Thr Phe Leu Leu Leu Phe Leu Val Ser Arg Pro Gly Pro Ser
20 25 30

Ser	Pro	Ala	Gly	Gly	Glu	Ala	Arg	Val	His	Val	Leu	Val	Leu	Ser	Ser		
		35					40					45					
Trp	Arg	Ser	Gly	Ser	Ser	Phe	Val	Gly	Gln	Leu	Phe	Asn	Gln	His	Pro		
	50					55					60						
Asp	Val	Phe	Tyr	Leu	Met	Glu	Pro	Ala	Trp	His	Val	Trp	Thr	Thr	Leu		
65					70					75					80		
Ser	Gln	Gly	Ser	Ala	Ala	Thr	Leu	His	Met	Ala	Val	Arg	Asp	Leu	Val		
				85					90					95			
Arg	Ser	Val	Phe	Leu	Cys	Asp	Met	Asp	Val	Phe	Asp	Ala	Tyr	Leu	Pro		
			100					105					110				
Trp	Arg	Arg	Asn	Leu	Ser	Asp	Leu	Phe	Gln	Trp	Ala	Val	Ser	Arg	Ala		
		115					120					125					
Leu	Cys	Ser	Pro	Pro	Ala	Cys	Ser	Ala	Phe	Pro	Arg	Gly	Ala	Ile	Ser		
	130					135					140						
Ser	Glu	Ala	Val	Cys	Lys	Pro	Leu	Cys	Ala	Arg	Gln	Ser	Phe	Thr	Leu		
145					150					155					160		
Ala	Arg	Glu	Ala	Cys	Arg	Ser	Tyr	Ser	His	Val	Val	Leu	Lys	Glu	Val		
				165					170					175			
Arg	Phe	Phe	Asn	Leu	Gln	Val	Leu	Tyr	Pro	Leu	Leu	Ser	Asp	Pro	Ala		
			180					185					190				
Leu	Asn	Leu	Arg	Ile	Val	His	Leu	Val	Arg	Asp	Pro	Arg	Ala	Val	Leu		
		195					200					205					
Arg	Ser	Arg	Glu	Gln	Thr	Ala	Lys	Ala	Leu	Ala	Arg	Asp	Asn	Gly	Ile		
	210					215					220						
Val	Leu	Gly	Thr	Asn	Gly	Thr	Trp	Val	Glu	Ala	Asp	Pro	Gly	Leu	Arg		
225					230					235					240		
Val	Val	Arg	Glu	Val	Cys	Arg	Ser	His	Val	Arg	Ile	Ala	Glu	Ala	Ala		
				245					250					255			

Thr Leu Lys Pro Pro Pro Phe Leu Arg Gly Arg Tyr Arg Leu Val Arg
 260 265 270
 Phe Glu Asp Leu Ala Arg Glu Pro Leu Ala Glu Ile Arg Ala Leu Tyr
 275 280 285
 Ala Phe Thr Gly Leu Ser Leu Thr Pro Gln Leu Glu Ala Trp Ile His
 290 295 300
 Asn Ile Thr His Gly Ser Gly Pro Gly Ala Arg Arg Glu Ala Phe Lys
 305 310 315 320
 Thr Ser Ser Arg Asn Ala Leu Asn Val Ser Gln Ala Trp Arg His Ala
 325 330 335
 Leu Pro Phe Ala Lys Ile Arg Arg Val Gln Glu Leu Cys Ala Gly Ala
 340 345 350
 Leu Gln Leu Leu Gly Tyr Arg Pro Val Tyr Ser Glu Asp Glu Gln Arg
 355 360 365
 Asn Leu Ala Leu Asp Leu Val Leu Pro Arg Gly Leu Asn Gly Phe Thr
 370 375 380
 Trp Ala Ser Ser Thr Ala Ser His Pro Arg Asn
 385 390 395

<210> 11686

<211> 486

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2306"

<220>

<221> source

<223> /note="Gene Symbol: CHST7"

<220>

<221> source

<223> /note="Gene Name:
 carbohydrate (N-acetylglucosamine 6-O) sulfotransferase
 7"

<220>

<221> source

<223> /note="Uniprot ID: Q9NS84"

<220>

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<223> /note="ENSP ID: ENSP00000276055"

<400> 11686

Met Lys Gly Arg Arg Arg Arg Arg Arg Glu Tyr Cys Lys Phe Ala Leu
1 5 10 15

Leu Leu Val Leu Tyr Thr Leu Val Leu Leu Leu Val Pro Ser Val Leu
20 25 30

Asp Gly Gly Arg Asp Gly Asp Lys Gly Ala Glu His Cys Pro Gly Leu
35 40 45

Gln Arg Ser Leu Gly Val Trp Ser Leu Glu Ala Ala Ala Ala Gly Glu
50 55 60

Arg Glu Gln Gly Ala Glu Ala Arg Ala Ala Glu Glu Gly Gly Ala Asn
65 70 75 80

Gln Ser Pro Arg Phe Pro Ser Asn Leu Ser Gly Ala Val Gly Glu Ala
85 90 95

Val Ser Arg Glu Lys Gln His Ile Tyr Val His Ala Thr Trp Arg Thr
100 105 110

Gly Ser Ser Phe Leu Gly Glu Leu Phe Asn Gln His Pro Asp Val Phe
115 120 125

Tyr Leu Tyr Glu Pro Met Trp His Leu Trp Gln Ala Leu Tyr Pro Gly
130 135 140

Asp Ala Glu Ser Leu Gln Gly Ala Leu Arg Asp Met Leu Arg Ser Leu
145 150 155 160

Phe Arg Cys Asp Phe Ser Val Leu Arg Leu Tyr Ala Pro Pro Gly Asp
165 170 175

Pro Ala Ala Arg Ala Pro Asp Thr Ala Asn Leu Thr Thr Ala Ala Leu
180 185 190

Phe Arg Trp Arg Thr Asn Lys Val Ile Cys Ser Pro Pro Leu Cys Pro
195 200 205

Gly	Ala	Pro	Arg	Ala	Arg	Ala	Glu	Val	Gly	Leu	Val	Glu	Asp	Thr	Ala	
210						215					220					
Cys	Glu	Arg	Ser	Cys	Pro	Pro	Val	Ala	Ile	Arg	Ala	Leu	Glu	Ala	Glu	
225					230					235					240	
Cys	Arg	Lys	Tyr	Pro	Val	Val	Val	Ile	Lys	Asp	Val	Arg	Leu	Leu	Asp	
				245					250					255		
Leu	Gly	Val	Leu	Val	Pro	Leu	Leu	Arg	Asp	Pro	Gly	Leu	Asn	Leu	Lys	
			260					265					270			
Val	Val	Gln	Leu	Phe	Arg	Asp	Pro	Arg	Ala	Val	His	Asn	Ser	Arg	Leu	
		275					280					285				
Lys	Ser	Arg	Gln	Gly	Leu	Leu	Arg	Glu	Ser	Ile	Gln	Val	Leu	Arg	Thr	
	290					295					300					
Arg	Gln	Arg	Gly	Asp	Arg	Phe	His	Arg	Val	Leu	Leu	Ala	His	Gly	Val	
305					310					315					320	
Gly	Ala	Arg	Pro	Gly	Gly	Gln	Ser	Arg	Ala	Leu	Pro	Ala	Ala	Pro	Arg	
				325					330					335		
Ala	Asp	Phe	Phe	Leu	Thr	Gly	Ala	Leu	Glu	Val	Ile	Cys	Glu	Ala	Trp	
			340					345					350			
Leu	Arg	Asp	Leu	Leu	Phe	Ala	Arg	Gly	Ala	Pro	Ala	Trp	Leu	Arg	Arg	
		355					360					365				
Arg	Tyr	Leu	Arg	Leu	Arg	Tyr	Glu	Asp	Leu	Val	Arg	Gln	Pro	Arg	Ala	
	370					375					380					
Gln	Leu	Arg	Arg	Leu	Leu	Arg	Phe	Ser	Gly	Leu	Arg	Ala	Leu	Ala	Ala	
385					390					395					400	
Leu	Asp	Ala	Phe	Ala	Leu	Asn	Met	Thr	Arg	Gly	Ala	Ala	Tyr	Gly	Ala	
				405					410					415		
Asp	Arg	Pro	Phe	His	Leu	Ser	Ala	Arg	Asp	Ala	Arg	Glu	Ala	Val	His	
			420					425					430			

Ala Trp Arg Glu Arg Leu Ser Arg Glu Gln Val Arg Gln Val Glu Ala
435 440 445

Ala Cys Ala Pro Ala Met Arg Leu Leu Ala Tyr Pro Arg Ser Gly Glu
450 455 460

Glu Gly Asp Ala Glu Gln Pro Arg Glu Gly Glu Thr Pro Leu Glu Met
465 470 475 480

Asp Ala Asp Gly Ala Thr
485

<210> 11687
<211> 530
<212> PRT
<213> Homo sapiens

<220>
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<223> /note="Payload ID: 2307"

<220>
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<223> /note="Gene Symbol: CHST2"

<220>
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<223> /note="Gene Name:
carbohydrate (N-acetylglucosamine-6-O) sulfotransferase
2"

<220>
<221> source
<223> /note="Uniprot ID: Q9Y4C5"

<220>
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<223> /note="ENSP ID: ENSP00000307911"

<400> 11687
Met Ser Arg Ser Pro Gln Arg Ala Leu Pro Pro Gly Ala Leu Pro Arg
1 5 10 15

Leu Leu Gln Ala Ala Pro Ala Ala Ala Pro Arg Ala Leu Leu Pro Gln
20 25 30

Trp Pro Arg Arg Pro Gly Arg Arg Trp Pro Ala Ser Pro Leu Gly Met
35 40 45

Lys 50	Val	Phe	Arg	Arg	Lys 55	Ala	Leu	Val	Leu	Cys 60	Ala	Gly	Tyr	Ala	Leu
Leu 65	Leu	Val	Leu	Thr 70	Met	Leu	Asn	Leu	Leu	Asp 75	Tyr	Lys	Trp	His	Lys 80
Glu	Pro	Leu	Gln	Gln 85	Cys	Asn	Pro	Asp	Gly 90	Pro	Leu	Gly	Ala	Ala 95	Ala
Gly	Ala	Ala	Gly 100	Gly	Ser	Trp	Gly	Arg 105	Pro	Gly	Pro	Pro	Pro	Ala	Gly
Pro	Pro	Arg 115	Ala	His	Ala	Arg	Leu 120	Asp	Leu	Arg	Thr	Pro 125	Tyr	Arg	Pro
Pro	Ala 130	Ala	Ala	Val	Gly	Ala 135	Ala	Pro	Ala	Ala	Ala 140	Ala	Gly	Met	Ala
Gly 145	Val	Ala	Ala	Pro	Pro 150	Gly	Asn	Gly	Thr	Arg 155	Gly	Thr	Gly	Gly	Val 160
Gly	Asp	Lys	Arg	Gln 165	Leu	Val	Tyr	Val	Phe 170	Thr	Thr	Trp	Arg	Ser 175	Gly
Ser	Ser	Phe	Phe 180	Gly	Glu	Leu	Phe	Asn 185	Gln	Asn	Pro	Glu	Val 190	Phe	Phe
Leu	Tyr	Glu 195	Pro	Val	Trp	His	Val 200	Trp	Gln	Lys	Leu	Tyr 205	Pro	Gly	Asp
Ala	Val 210	Ser	Leu	Gln	Gly	Ala 215	Ala	Arg	Asp	Met	Leu 220	Ser	Ala	Leu	Tyr
Arg 225	Cys	Asp	Leu	Ser	Val 230	Phe	Gln	Leu	Tyr	Ser 235	Pro	Ala	Gly	Ser	Gly 240
Gly	Arg	Asn	Leu	Thr 245	Thr	Leu	Gly	Ile	Phe 250	Gly	Ala	Ala	Thr	Asn 255	Lys
Val	Val	Cys	Ser 260	Ser	Pro	Leu	Cys	Pro 265	Ala	Tyr	Arg	Lys	Glu 270	Val	Val
Gly	Leu	Val	Asp	Asp	Arg	Val	Cys	Lys	Lys	Cys	Pro	Pro	Gln	Arg	Leu

275								280								285
Ala	Arg	Phe	Glu	Glu	Glu	Cys	Arg	Lys	Tyr	Arg	Thr	Leu	Val	Ile	Lys	
290						295					300					
Gly	Val	Arg	Val	Phe	Asp	Val	Ala	Val	Leu	Ala	Pro	Leu	Leu	Arg	Asp	
305					310					315					320	
Pro	Ala	Leu	Asp	Leu	Lys	Val	Ile	His	Leu	Val	Arg	Asp	Pro	Arg	Ala	
				325					330					335		
Val	Ala	Ser	Ser	Arg	Ile	Arg	Ser	Arg	His	Gly	Leu	Ile	Arg	Glu	Ser	
			340					345					350			
Leu	Gln	Val	Val	Arg	Ser	Arg	Asp	Pro	Arg	Ala	His	Arg	Met	Pro	Phe	
		355					360					365				
Leu	Glu	Ala	Ala	Gly	His	Lys	Leu	Gly	Ala	Lys	Lys	Glu	Gly	Val	Gly	
370						375					380					
Gly	Pro	Ala	Asp	Tyr	His	Ala	Leu	Gly	Ala	Met	Glu	Val	Ile	Cys	Asn	
385					390					395					400	
Ser	Met	Ala	Lys	Thr	Leu	Gln	Thr	Ala	Leu	Gln	Pro	Pro	Asp	Trp	Leu	
				405					410					415		
Gln	Gly	His	Tyr	Leu	Val	Val	Arg	Tyr	Glu	Asp	Leu	Val	Gly	Asp	Pro	
			420					425					430			
Val	Lys	Thr	Leu	Arg	Arg	Val	Tyr	Asp	Phe	Val	Gly	Leu	Leu	Val	Ser	
		435					440					445				
Pro	Glu	Met	Glu	Gln	Phe	Ala	Leu	Asn	Met	Thr	Ser	Gly	Ser	Gly	Ser	
	450					455					460					
Ser	Ser	Lys	Pro	Phe	Val	Val	Ser	Ala	Arg	Asn	Ala	Thr	Gln	Ala	Ala	
465					470					475					480	
Asn	Ala	Trp	Arg	Thr	Ala	Leu	Thr	Phe	Gln	Gln	Ile	Lys	Gln	Val	Glu	
				485					490					495		
Glu	Phe	Cys	Tyr	Gln	Pro	Met	Ala	Val	Leu	Gly	Tyr	Glu	Arg	Val	Asn	
			500					505					510			

Ser Pro Glu Glu Val Lys Asp Leu Ser Lys Thr Leu Leu Arg Lys Pro
515 520 525

Arg Leu
530

<210> 11688
<211> 390
<212> PRT
<213> Homo sapiens

<220>
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<223> /note="Payload ID: 2308"

<220>
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<223> /note="Gene Symbol: CARKD"

<220>
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carbohydrate kinase domain containing"

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<400> 11688
Met Val Thr Arg Ala Gly Ala Gly Thr Ala Val Ala Gly Ala Val Val
1 5 10 15

Val Ala Leu Leu Ser Ala Ala Leu Ala Leu Tyr Gly Pro Pro Leu Asp
20 25 30

Ala Val Leu Glu Arg Ala Phe Ser Leu Arg Lys Ala His Ser Ile Lys
35 40 45

Asp Met Glu Asn Thr Leu Gln Leu Val Arg Asn Ile Ile Pro Pro Leu
50 55 60

Ser Ser Thr Lys His Lys Gly Gln Asp Gly Arg Ile Gly Val Val Gly
65 70 75 80

Gly	Cys	Gln	Glu	Tyr	Thr	Gly	Ala	Pro	Tyr	Phe	Ala	Ala	Ile	Ser	Ala	
				85					90					95		
Leu	Lys	Val	Gly	Ala	Asp	Leu	Ser	His	Val	Phe	Cys	Ala	Ser	Ala	Ala	
			100					105					110			
Ala	Pro	Val	Ile	Lys	Ala	Tyr	Ser	Pro	Glu	Leu	Ile	Val	His	Pro	Val	
		115					120					125				
Leu	Asp	Ser	Pro	Asn	Ala	Val	His	Glu	Val	Glu	Lys	Trp	Leu	Pro	Arg	
	130					135					140					
Leu	His	Ala	Leu	Val	Val	Gly	Pro	Gly	Leu	Gly	Arg	Asp	Asp	Ala	Leu	
145					150					155					160	
Leu	Arg	Asn	Val	Gln	Gly	Ile	Leu	Glu	Val	Ser	Lys	Ala	Arg	Asp	Ile	
				165					170					175		
Pro	Val	Val	Ile	Asp	Ala	Asp	Gly	Leu	Trp	Leu	Val	Ala	Gln	Gln	Pro	
			180					185					190			
Ala	Leu	Ile	His	Gly	Tyr	Arg	Lys	Ala	Val	Leu	Thr	Pro	Asn	His	Val	
		195					200					205				
Glu	Phe	Ser	Arg	Leu	Tyr	Asp	Ala	Val	Leu	Arg	Gly	Pro	Met	Asp	Ser	
	210					215					220					
Asp	Asp	Ser	His	Gly	Ser	Val	Leu	Arg	Leu	Ser	Gln	Ala	Leu	Gly	Asn	
225					230					235					240	
Val	Thr	Val	Val	Gln	Lys	Gly	Glu	Arg	Asp	Ile	Leu	Ser	Asn	Gly	Gln	
				245					250					255		
Gln	Val	Leu	Val	Cys	Ser	Gln	Glu	Gly	Ser	Ser	Arg	Arg	Cys	Gly	Gly	
			260					265					270			
Gln	Gly	Asp	Leu	Leu	Ser	Gly	Ser	Leu	Gly	Val	Leu	Val	His	Trp	Ala	
		275					280					285				
Leu	Leu	Ala	Gly	Pro	Gln	Lys	Thr	Asn	Gly	Gly	Ile	Ser	Asp	Leu	Lys	
	290					295					300					
Leu	Thr	Ile	Trp	Gly	Pro	Glu	Ile	Glu	Thr	Gly	Val	Lys	Thr	Arg	Ala	

305 310 315 320
 Gln Gly Ser Cys Gly Pro Arg Thr Thr Thr Pro Thr Ser Pro His Leu
 325 330 335
 Leu Leu Ser Pro Ser Pro Gln Val Gln Pro Ser Pro Gly Gly Arg Val
 340 345 350
 Trp Arg Leu Leu Ser His Gln Ala Val Gln Pro Pro Ser Leu Pro Glu
 355 360 365
 Ala Arg Ser Leu His His His Leu Arg His Asp Arg Arg Gly Gly Gly
 370 375 380
 Arg Leu Gln Gln Ala Leu
 385 390

 <210> 11689
 <211> 237
 <212> PRT
 <213> Homo sapiens

 <220>
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 <220>
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 <223> /note="Gene Symbol: CARKD"

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 <220>
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 <223> /note="Uniprot ID: Q8IW45"

 <220>
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 <223> /note="ENSP ID: ENSP00000413191"

 <400> 11689
 Met Leu Pro Asp Gly Pro Gly Ser Ser Leu Trp Gly Asn Pro Gly Leu
 1 5 10 15

 Gln Thr Ser Asp Ser Pro Asn Ala Val His Glu Val Glu Lys Trp Leu
 20 25 30

Pro	Arg	Leu	His	Ala	Leu	Val	Val	Gly	Pro	Gly	Leu	Gly	Arg	Asp	Asp	
		35					40					45				
Ala	Leu	Leu	Arg	Asn	Val	Gln	Gly	Ile	Leu	Glu	Val	Ser	Lys	Ala	Arg	
	50					55					60					
Asp	Ile	Pro	Val	Val	Ile	Asp	Ala	Asp	Gly	Leu	Trp	Leu	Val	Ala	Gln	
65					70					75					80	
Gln	Pro	Ala	Leu	Ile	His	Gly	Tyr	Arg	Lys	Ala	Val	Leu	Thr	Pro	Asn	
				85					90					95		
His	Val	Glu	Phe	Ser	Arg	Leu	Tyr	Asp	Ala	Val	Leu	Arg	Gly	Pro	Met	
			100					105					110			
Asp	Ser	Asp	Asp	Ser	His	Gly	Ser	Val	Leu	Arg	Leu	Ser	Gln	Ala	Leu	
		115					120					125				
Gly	Asn	Val	Thr	Val	Val	Gln	Lys	Gly	Glu	Arg	Asp	Ile	Leu	Ser	Asn	
	130					135					140					
Gly	Gln	Gln	Val	Leu	Val	Cys	Ser	Gln	Glu	Gly	Ser	Ser	Arg	Arg	Cys	
145					150					155					160	
Gly	Gly	Gln	Gly	Asp	Leu	Leu	Ser	Gly	Ser	Leu	Gly	Val	Leu	Val	His	
				165					170					175		
Trp	Ala	Leu	Leu	Ala	Gly	Pro	Gln	Lys	Thr	Asn	Gly	Ser	Ser	Pro	Leu	
			180					185					190			
Leu	Val	Ala	Ala	Phe	Gly	Ala	Cys	Ser	Leu	Thr	Arg	Gln	Cys	Asn	His	
		195					200					205				
Gln	Ala	Phe	Gln	Lys	His	Gly	Arg	Ser	Thr	Thr	Thr	Ser	Asp	Met	Ile	
	210					215					220					
Ala	Glu	Val	Gly	Ala	Ala	Phe	Ser	Lys	Leu	Phe	Glu	Thr				
225					230					235						

<210> 11690

<211> 356

<212> PRT

<213> Homo sapiens

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<220>
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<223> /note="Payload ID: 2309"

<220>
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<223> /note="Gene Symbol: CHST10"

<220>
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<223> /note="Gene Name:
        carbohydrate sulfotransferase 10"

<220>
<221> source
<223> /note="Uniprot ID: O43529"

<220>
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<223> /note="ENSP ID: ENSP00000264249"

<400> 11690
Met His His Gln Trp Leu Leu Leu Ala Ala Cys Phe Trp Val Ile Phe
1              5              10              15

Met Phe Met Val Ala Ser Lys Phe Ile Thr Leu Thr Phe Lys Asp Pro
          20              25              30

Asp Val Tyr Ser Ala Lys Gln Glu Phe Leu Phe Leu Thr Thr Met Pro
          35              40              45

Glu Val Arg Lys Leu Pro Glu Glu Lys His Ile Pro Glu Glu Leu Lys
          50              55              60

Pro Thr Gly Lys Glu Leu Pro Asp Ser Gln Leu Val Gln Pro Leu Val
65              70              75              80

Tyr Met Glu Arg Leu Glu Leu Ile Arg Asn Val Cys Arg Asp Asp Ala
          85              90              95

Leu Lys Asn Leu Ser His Thr Pro Val Ser Lys Phe Val Leu Asp Arg
          100             105             110

Ile Phe Val Cys Asp Lys His Lys Ile Leu Phe Cys Gln Thr Pro Lys
          115             120             125

Val Gly Asn Thr Gln Trp Lys Lys Val Leu Ile Val Leu Asn Gly Ala
130             135             140

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Phe	Ser	Ser	Ile	Glu	Glu	Ile	Pro	Glu	Asn	Val	Val	His	Asp	His	Glu
145					150					155					160
Lys	Asn	Gly	Leu	Pro	Arg	Leu	Ser	Ser	Phe	Ser	Asp	Ala	Glu	Ile	Gln
				165					170					175	
Lys	Arg	Leu	Lys	Thr	Tyr	Phe	Lys	Phe	Phe	Ile	Val	Arg	Asp	Pro	Phe
			180					185					190		
Glu	Arg	Leu	Ile	Ser	Ala	Phe	Lys	Asp	Lys	Phe	Val	His	Asn	Pro	Arg
		195					200					205			
Phe	Glu	Pro	Trp	Tyr	Arg	His	Glu	Ile	Ala	Pro	Gly	Ile	Ile	Arg	Lys
	210					215					220				
Tyr	Arg	Arg	Asn	Arg	Thr	Glu	Thr	Arg	Gly	Ile	Gln	Phe	Glu	Asp	Phe
225					230					235					240
Val	Arg	Tyr	Leu	Gly	Asp	Pro	Asn	His	Arg	Trp	Leu	Asp	Leu	Gln	Phe
				245					250					255	
Gly	Asp	His	Ile	Ile	His	Trp	Val	Thr	Tyr	Val	Glu	Leu	Cys	Ala	Pro
			260					265					270		
Cys	Glu	Ile	Met	Tyr	Ser	Val	Ile	Gly	His	His	Glu	Thr	Leu	Glu	Asp
		275					280					285			
Asp	Ala	Pro	Tyr	Ile	Leu	Lys	Glu	Ala	Gly	Ile	Asp	His	Leu	Val	Ser
	290					295					300				
Tyr	Pro	Thr	Ile	Pro	Pro	Gly	Ile	Thr	Val	Tyr	Asn	Arg	Thr	Lys	Val
305					310					315					320
Glu	His	Tyr	Phe	Leu	Gly	Ile	Ser	Lys	Arg	Asp	Ile	Arg	Arg	Leu	Tyr
				325					330					335	
Ala	Arg	Phe	Glu	Gly	Asp	Phe	Lys	Leu	Phe	Gly	Tyr	Gln	Lys	Pro	Asp
			340					345					350		
Phe	Leu	Leu	Asn												
			355												

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<210> 11691
<211> 141
<212> PRT
<213> Homo sapiens

<220>
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<220>
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<220>
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<223> /note="Gene Name:
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<220>
<221> source
<223> /note="ENSP ID: ENSP00000387121"

<400> 11691
Met His His Gln Trp Leu Leu Leu Ala Ala Cys Phe Trp Val Ile Phe
1              5              10              15

Met Phe Met Val Ala Ser Lys Phe Ile Thr Leu Thr Phe Lys Asp Pro
                20              25              30

Asp Val Tyr Ser Ala Lys Gln Glu Phe Leu Phe Leu Thr Thr Met Pro
        35              40              45

Glu Val Arg Lys Leu Pro Glu Glu Lys His Ile Pro Glu Glu Leu Lys
        50              55              60

Pro Thr Gly Lys Glu Leu Pro Asp Ser Gln Leu Val Gln Pro Leu Val
65              70              75              80

Tyr Met Glu Arg Leu Glu Leu Ile Arg Asn Val Cys Arg Asp Asp Ala
                85              90              95

Leu Lys Asn Leu Ser His Thr Pro Val Ser Lys Phe Val Leu Asp Arg
                100             105             110

Ile Phe Val Cys Asp Lys His Lys Ile Leu Phe Cys Gln Thr Pro Lys
        115             120             125

Val Gly Asn Thr Gln Trp Lys Lys Val Leu Ile Val Leu

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130 135 140

<210> 11692
 <211> 356
 <212> PRT
 <213> Homo sapiens

<220>
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 carbohydrate sulfotransferase 10"

<220>
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<220>
 <221> source
 <223> /note="ENSP ID: ENSP00000387309"

<400> 11692
 Met His His Gln Trp Leu Leu Leu Ala Ala Cys Phe Trp Val Ile Phe
 1 5 10 15
 Met Phe Met Val Ala Ser Lys Phe Ile Thr Leu Thr Phe Lys Asp Pro
 20 25 30
 Asp Val Tyr Ser Ala Lys Gln Glu Phe Leu Phe Leu Thr Thr Met Pro
 35 40 45
 Glu Val Arg Lys Leu Pro Glu Glu Lys His Ile Pro Glu Glu Leu Lys
 50 55 60
 Pro Thr Gly Lys Glu Leu Pro Asp Ser Gln Leu Val Gln Pro Leu Val
 65 70 75 80
 Tyr Met Glu Arg Leu Glu Leu Ile Arg Asn Val Cys Arg Asp Asp Ala
 85 90 95
 Leu Lys Asn Leu Ser His Thr Pro Val Ser Lys Phe Val Leu Asp Arg
 100 105 110

Ile	Phe	Val	Cys	Asp	Lys	His	Lys	Ile	Leu	Phe	Cys	Gln	Thr	Pro	Lys			
		115					120					125						
Val	Gly	Asn	Thr	Gln	Trp	Lys	Lys	Val	Leu	Ile	Val	Leu	Asn	Gly	Ala			
	130					135					140							
Phe	Ser	Ser	Ile	Glu	Glu	Ile	Pro	Glu	Asn	Val	Val	His	Asp	His	Glu			
145					150					155					160			
Lys	Asn	Gly	Leu	Pro	Arg	Leu	Ser	Ser	Phe	Ser	Asp	Ala	Glu	Ile	Gln			
				165					170					175				
Lys	Arg	Leu	Lys	Thr	Tyr	Phe	Lys	Phe	Phe	Ile	Val	Arg	Asp	Pro	Phe			
			180					185					190					
Glu	Arg	Leu	Ile	Ser	Ala	Phe	Lys	Asp	Lys	Phe	Val	His	Asn	Pro	Arg			
		195					200					205						
Phe	Glu	Pro	Trp	Tyr	Arg	His	Glu	Ile	Ala	Pro	Gly	Ile	Ile	Arg	Lys			
	210					215					220							
Tyr	Arg	Arg	Asn	Arg	Thr	Glu	Thr	Arg	Gly	Ile	Gln	Phe	Glu	Asp	Phe			
225					230					235					240			
Val	Arg	Tyr	Leu	Gly	Asp	Pro	Asn	His	Arg	Trp	Leu	Asp	Leu	Gln	Phe			
				245					250					255				
Gly	Asp	His	Ile	Ile	His	Trp	Val	Thr	Tyr	Val	Glu	Leu	Cys	Ala	Pro			
			260					265					270					
Cys	Glu	Ile	Met	Tyr	Ser	Val	Ile	Gly	His	His	Glu	Thr	Leu	Glu	Asp			
		275					280					285						
Asp	Ala	Pro	Tyr	Ile	Leu	Lys	Glu	Ala	Gly	Ile	Asp	His	Leu	Val	Ser			
	290					295					300							
Tyr	Pro	Thr	Ile	Pro	Pro	Gly	Ile	Thr	Val	Tyr	Asn	Arg	Thr	Lys	Val			
305				310						315				320				
Glu	His	Tyr	Phe	Leu	Gly	Ile	Ser	Lys	Arg	Asp	Ile	Arg	Arg	Leu	Tyr			
				325					330					335				

Ala Arg Phe Glu Gly Asp Phe Lys Leu Phe Gly Tyr Gln Lys Pro Asp
340 345 350

Phe Leu Leu Asn
355

<210> 11693
<211> 142
<212> PRT
<213> Homo sapiens

<220>
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<220>
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<220>
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<223> /note="Gene Name:
carbohydrate sulfotransferase 10"

<220>
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<223> /note="ENSP ID: ENSP00000387977"

<400> 11693
Met Gln Arg Lys Ala Gly Lys Lys Glu His Val Gln Leu Arg Asp Lys
1 5 10 15

Arg Asn Gln Glu Pro Gln Phe Arg Gly Asn Thr Ala Arg Lys Cys Glu
20 25 30

Pro Gln Ala Ala Glu Gly Arg Val Ser Glu Trp Leu Arg Cys Asp Asn
35 40 45

Met His His Gln Trp Leu Leu Leu Ala Ala Cys Phe Trp Val Ile Phe
50 55 60

Met Phe Met Val Ala Ser Lys Phe Ile Thr Leu Thr Phe Lys Asp Pro
65 70 75 80

Asp Val Tyr Ser Ala Lys Gln Glu Phe Leu Phe Leu Thr Thr Met Pro
85 90 95

Glu Val Arg Lys Leu Pro Glu Glu Lys His Ile Pro Glu Glu Leu Lys
100 105 110

Pro Thr Gly Lys Glu Leu Pro Asp Ser Gln Leu Val Gln Pro Leu Val
115 120 125

Tyr Met Glu Arg Leu Glu Leu Ile Arg Asn Val Cys Arg Asp
130 135 140

<210> 11694
<211> 33
<212> PRT
<213> Homo sapiens

<220>
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<220>
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<220>
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<223> /note="Gene Name:
carbohydrate sulfotransferase 10"

<220>
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<400> 11694
Met His His Gln Trp Leu Leu Leu Ala Ala Cys Phe Trp Val Ile Phe
1 5 10 15

Met Phe Met Val Ala Ser Lys Phe Ile Thr Leu Thr Phe Lys Asp Pro
20 25 30

Asp

<210> 11695
<211> 133
<212> PRT
<213> Homo sapiens

<220>
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<220>
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<223> /note="Gene Symbol: CHST10"

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<221> source
<223> /note="Gene Name:
carbohydrate sulfotransferase 10"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000405922"

<400> 11695
Met His His Gln Trp Leu Leu Leu Ala Ala Cys Phe Trp Val Ile Phe
1 5 10 15

Met Phe Met Val Ala Ser Lys Phe Ile Thr Leu Thr Phe Lys Asp Pro
20 25 30

Asp Val Tyr Ser Ala Lys Gln Glu Phe Leu Phe Leu Thr Thr Met Pro
35 40 45

Glu Val Arg Lys Leu Pro Glu Glu Lys His Ile Pro Glu Glu Leu Lys
50 55 60

Pro Thr Gly Lys Glu Leu Pro Asp Ser Gln Leu Val Gln Pro Leu Val
65 70 75 80

Tyr Met Glu Arg Leu Glu Leu Ile Arg Asn Val Cys Arg Asp Asp Ala
85 90 95

Leu Lys Asn Leu Ser His Thr Pro Val Ser Lys Phe Val Leu Asp Arg
100 105 110

Ile Phe Val Cys Asp Lys His Lys Ile Leu Phe Cys Gln Thr Pro Lys
115 120 125

Val Gly Asn Thr Gln
130

<210> 11696
<211> 85
<212> PRT
<213> Homo sapiens

<220>
<221> source
<223> /note="Payload ID: 2309"

<220>

<221> source
<223> /note="Gene Symbol: CHST10"

<220>
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<223> /note="Gene Name:
carbohydrate sulfotransferase 10"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000407525"

<400> 11696
Met His His Gln Trp Leu Leu Leu Ala Ala Cys Phe Trp Val Ile Phe
1 5 10 15

Met Phe Met Val Ala Ser Lys Phe Ile Thr Leu Thr Phe Lys Asp Pro
20 25 30

Asp Val Tyr Ser Ala Lys Gln Glu Phe Leu Phe Leu Thr Thr Met Pro
35 40 45

Glu Val Arg Lys Leu Pro Glu Glu Lys His Ile Pro Glu Glu Leu Lys
50 55 60

Pro Thr Gly Lys Glu Leu Pro Asp Ser Gln Leu Val Gln Pro Leu Val
65 70 75 80

Tyr Met Glu Arg Leu
85

<210> 11697
<211> 64
<212> PRT
<213> Homo sapiens

<220>
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<220>
<221> source
<223> /note="Gene Name:
carbohydrate sulfotransferase 10"

<220>
<221> source

<223> /note="ENSP ID: ENSP00000416831"

<400> 11697

Met His His Gln Trp Leu Leu Leu Ala Ala Cys Phe Trp Val Ile Phe
1 5 10 15

Met Phe Met Val Ala Ser Lys Phe Ile Thr Leu Thr Phe Lys Asp Pro
20 25 30

Asp Val Tyr Ser Ala Lys Gln Glu Phe Leu Phe Leu Thr Thr Met Pro
35 40 45

Glu Val Arg Lys Leu Pro Glu Glu Lys His Ile Pro Glu Glu Leu Lys
50 55 60

<210> 11698

<211> 261

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2310"

<220>

<221> source

<223> /note="Gene Symbol: CA1"

<220>

<221> source

<223> /note="Gene Name:
carbonic anhydrase I"

<220>

<221> source

<223> /note="Uniprot ID: P00915"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000392338"

<400> 11698

Met Ala Ser Pro Asp Trp Gly Tyr Asp Asp Lys Asn Gly Pro Glu Gln
1 5 10 15

Trp Ser Lys Leu Tyr Pro Ile Ala Asn Gly Asn Asn Gln Ser Pro Val
20 25 30

Asp Ile Lys Thr Ser Glu Thr Lys His Asp Thr Ser Leu Lys Pro Ile
35 40 45

Ser	Val	Ser	Tyr	Asn	Pro	Ala	Thr	Ala	Lys	Glu	Ile	Ile	Asn	Val	Gly			
50						55					60							
His	Ser	Phe	His	Val	Asn	Phe	Glu	Asp	Asn	Asp	Asn	Arg	Ser	Val	Leu			
65					70				75						80			
Lys	Gly	Gly	Pro	Phe	Ser	Asp	Ser	Tyr	Arg	Leu	Phe	Gln	Phe	His	Phe			
				85					90					95				
His	Trp	Gly	Ser	Thr	Asn	Glu	His	Gly	Ser	Glu	His	Thr	Val	Asp	Gly			
			100					105					110					
Val	Lys	Tyr	Ser	Ala	Glu	Leu	His	Val	Ala	His	Trp	Asn	Ser	Ala	Lys			
		115					120					125						
Tyr	Ser	Ser	Leu	Ala	Glu	Ala	Ala	Ser	Lys	Ala	Asp	Gly	Leu	Ala	Val			
	130					135					140							
Ile	Gly	Val	Leu	Met	Lys	Val	Gly	Glu	Ala	Asn	Pro	Lys	Leu	Gln	Lys			
145					150					155					160			
Val	Leu	Asp	Ala	Leu	Gln	Ala	Ile	Lys	Thr	Lys	Gly	Lys	Arg	Ala	Pro			
				165					170					175				
Phe	Thr	Asn	Phe	Asp	Pro	Ser	Thr	Leu	Leu	Pro	Ser	Ser	Leu	Asp	Phe			
			180					185					190					
Trp	Thr	Tyr	Pro	Gly	Ser	Leu	Thr	His	Pro	Pro	Leu	Tyr	Glu	Ser	Val			
		195					200					205						
Thr	Trp	Ile	Ile	Cys	Lys	Glu	Ser	Ile	Ser	Val	Ser	Ser	Glu	Gln	Leu			
	210					215					220							
Ala	Gln	Phe	Arg	Ser	Leu	Leu	Ser	Asn	Val	Glu	Gly	Asp	Asn	Ala	Val			
225					230					235					240			
Pro	Met	Gln	His	Asn	Asn	Arg	Pro	Thr	Gln	Pro	Leu	Lys	Gly	Arg	Thr			
				245					250					255				
Val	Arg	Ala	Ser	Phe														
			260															


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<210> 11699
<211> 127
<212> PRT
<213> Homo sapiens

<220>
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<220>
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<223> /note="Gene Symbol: CA1"

<220>
<221> source
<223> /note="Gene Name:
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<220>
<221> source
<223> /note="ENSP ID: ENSP00000427773"

<400> 11699
Met Met Thr Lys Met Leu His Val Ala His Trp Asn Ser Ala Lys Tyr
1          5          10          15

Ser Ser Leu Ala Glu Ala Ala Ser Lys Ala Asp Gly Leu Ala Val Ile
          20          25          30

Gly Val Leu Met Lys Gly Lys Arg Ala Pro Phe Thr Asn Phe Asp Pro
          35          40          45

Ser Thr Leu Leu Pro Ser Ser Leu Asp Phe Trp Thr Tyr Pro Gly Ser
          50          55          60

Leu Thr His Pro Pro Leu Tyr Glu Ser Val Thr Trp Ile Ile Cys Lys
65          70          75          80

Glu Ser Ile Ser Val Ser Ser Glu Gln Leu Ala Gln Phe Arg Ser Leu
          85          90          95

Leu Ser Asn Val Glu Gly Asp Asn Ala Val Pro Met Gln His Asn Asn
          100          105          110

Arg Pro Thr Gln Pro Leu Lys Gly Arg Thr Val Arg Ala Ser Phe
          115          120          125

<210> 11700
<211> 149

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<212> PRT
<213> Homo sapiens

<220>
<221> source
<223> /note="Payload ID: 2310"

<220>
<221> source
<223> /note="Gene Symbol: CA1"

<220>
<221> source
<223> /note="Gene Name:
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<220>
<221> source
<223> /note="ENSP ID: ENSP00000427852"

<400> 11700
Met Ala Ser Pro Asp Trp Gly Tyr Asp Asp Lys Asn Gly Pro Glu Gln
1          5          10          15

Trp Ser Lys Leu Tyr Pro Ile Ala Asn Gly Asn Asn Gln Ser Pro Val
          20          25          30

Asp Ile Lys Thr Ser Glu Thr Lys His Asp Thr Ser Leu Lys Pro Ile
          35          40          45

Ser Val Ser Tyr Asn Pro Ala Thr Ala Lys Glu Ile Ile Asn Val Gly
          50          55          60

His Ser Phe His Val Asn Phe Glu Asp Asn Asp Asn Arg Ser Val Leu
65          70          75          80

Lys Gly Gly Pro Phe Ser Asp Ser Tyr Arg Leu Phe Gln Phe His Phe
          85          90          95

His Trp Gly Ser Thr Asn Glu His Gly Ser Glu His Thr Val Asp Gly
          100          105          110

Val Lys Tyr Ser Ala Glu Leu His Val Ala His Trp Asn Ser Ala Lys
          115          120          125

Tyr Ser Ser Leu Ala Glu Ala Ala Ser Lys Ala Asp Gly Leu Ala Val
130          135          140

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Ile Gly Val Leu Met
145

<210> 11701

<211> 194

<212> PRT

<213> Homo sapiens

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<223> /note="Gene Name:
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<220>

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<223> /note="ENSP ID: ENSP00000428923"

<400> 11701

Met Ala Ser Pro Asp Trp Gly Tyr Asp Asp Lys Asn Val Leu Lys Gly
1 5 10 15

Gly Pro Phe Ser Asp Ser Tyr Arg Leu Phe Gln Phe His Phe His Trp
20 25 30

Gly Ser Thr Asn Glu His Gly Ser Glu His Thr Val Asp Gly Val Lys
35 40 45

Tyr Ser Ala Glu Leu His Val Ala His Trp Asn Ser Ala Lys Tyr Ser
50 55 60

Ser Leu Ala Glu Ala Ala Ser Lys Ala Asp Gly Leu Ala Val Ile Gly
65 70 75 80

Val Leu Met Lys Val Gly Glu Ala Asn Pro Lys Leu Gln Lys Val Leu
85 90 95

Asp Ala Leu Gln Ala Ile Lys Thr Lys Gly Lys Arg Ala Pro Phe Thr
100 105 110

Asn Phe Asp Pro Ser Thr Leu Leu Pro Ser Ser Leu Asp Phe Trp Thr
115 120 125

26123

Tyr Pro Gly Ser Leu Thr His Pro Pro Leu Tyr Glu Ser Val Thr Trp
130 135 140

Ile Ile Cys Lys Glu Ser Ile Ser Val Ser Ser Glu Gln Leu Ala Gln
145 150 155 160

Phe Arg Ser Leu Leu Ser Asn Val Glu Gly Asp Asn Ala Val Pro Met
165 170 175

Gln His Asn Asn Arg Pro Thr Gln Pro Leu Lys Gly Arg Thr Val Arg
180 185 190

Ala Ser

<210> 11702
<211> 178
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<223> Any amino acid

<400> 11702
Xaa His Ser Phe His Val Asn Phe Glu Asp Asn Asp Asn Arg Ser Val
1 5 10 15

Leu Lys Gly Gly Pro Phe Ser Asp Ser Tyr Arg Leu Phe Gln Phe His
20 25 30

Phe His Trp Gly Ser Thr Asn Glu His Gly Ser Glu His Thr Val Asp
35 40 45

Gly Val Lys Tyr Ser Ala Glu Leu His Val Ala His Trp Asn Ser Ala
50 55 60

Lys Tyr Ser Ser Leu Ala Glu Ala Ala Ser Lys Ala Asp Gly Leu Ala
65 70 75 80

Val Ile Gly Val Leu Met Lys Val Gly Glu Ala Asn Pro Lys Leu Gln
85 90 95

Lys Val Leu Asp Ala Leu Gln Ala Ile Lys Thr Lys Gly Lys Arg Ala
100 105 110

Pro Phe Thr Asn Phe Asp Pro Ser Thr Leu Leu Pro Ser Ser Leu Asp
115 120 125

Phe Trp Thr Tyr Pro Gly Ser Leu Thr His Pro Pro Leu Tyr Glu Ser
130 135 140

Val Thr Trp Ile Ile Cys Lys Glu Ser Ile Ser Val Ser Ser Glu Gln
145 150 155 160

His Asn Asn Arg Pro Thr Gln Pro Leu Lys Gly Arg Thr Val Arg Ala
165 170 175

Ser Phe

<210> 11703

<211> 22

<212> PRT

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<223> /note="Gene Name:
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<220>
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<400> 11703
Met Ala Ser Pro Asp Trp Gly Tyr Asp Asp Lys Asn Gly Pro Glu Gln
1 5 10 15

Trp Ser Lys Leu Tyr Pro
20

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<211> 261
<212> PRT
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<220>
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<223> /note="Uniprot ID: P00915"

<220>
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<400> 11704
Met Ala Ser Pro Asp Trp Gly Tyr Asp Asp Lys Asn Gly Pro Glu Gln
1 5 10 15

Trp Ser Lys Leu Tyr Pro Ile Ala Asn Gly Asn Asn Gln Ser Pro Val
20 25 30

Asp Ile Lys Thr Ser Glu Thr Lys His Asp Thr Ser Leu Lys Pro Ile
35 40 45

Ser Val Ser Tyr Asn Pro Ala Thr Ala Lys Glu Ile Ile Asn Val Gly
50 55 60

His Ser Phe His Val Asn Phe Glu Asp Asn Asp Asn Arg Ser Val Leu
65 70 75 80

Lys Gly Gly Pro Phe Ser Asp Ser Tyr Arg Leu Phe Gln Phe His Phe
85 90 95

His Trp Gly Ser Thr Asn Glu His Gly Ser Glu His Thr Val Asp Gly
100 105 110

Val Lys Tyr Ser Ala Glu Leu His Val Ala His Trp Asn Ser Ala Lys
115 120 125

Tyr Ser Ser Leu Ala Glu Ala Ala Ser Lys Ala Asp Gly Leu Ala Val
130 135 140

Ile Gly Val Leu Met Lys Val Gly Glu Ala Asn Pro Lys Leu Gln Lys
145 150 155 160

Val Leu Asp Ala Leu Gln Ala Ile Lys Thr Lys Gly Lys Arg Ala Pro
165 170 175

Phe Thr Asn Phe Asp Pro Ser Thr Leu Leu Pro Ser Ser Leu Asp Phe
180 185 190

Trp Thr Tyr Pro Gly Ser Leu Thr His Pro Pro Leu Tyr Glu Ser Val
195 200 205

Thr Trp Ile Ile Cys Lys Glu Ser Ile Ser Val Ser Ser Glu Gln Leu
210 215 220

Ala Gln Phe Arg Ser Leu Leu Ser Asn Val Glu Gly Asp Asn Ala Val
225 230 235 240

Pro Met Gln His Asn Asn Arg Pro Thr Gln Pro Leu Lys Gly Arg Thr
245 250 255

Val Arg Ala Ser Phe
260

<210> 11705
<211> 175
<212> PRT

<213> Homo sapiens

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<223> /note="Gene Name:
carbonic anhydrase I"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000429843"

<400> 11705

Met Ala Ser Pro Asp Trp Gly Tyr Asp Asp Lys Asn Gly Pro Glu Gln
1 5 10 15

Trp Ser Lys Leu Tyr Pro Ile Ala Asn Gly Asn Asn Gln Ser Pro Val
20 25 30

Asp Ile Lys Thr Ser Glu Thr Lys His Asp Thr Ser Leu Lys Pro Ile
35 40 45

Ser Val Ser Tyr Asn Pro Ala Thr Ala Lys Glu Ile Ile Asn Val Gly
50 55 60

His Ser Phe His Val Asn Phe Glu Asp Asn Asp Asn Arg Ser Val Leu
65 70 75 80

Lys Gly Gly Pro Phe Ser Asp Ser Tyr Arg Leu Phe Gln Phe His Phe
85 90 95

His Trp Gly Ser Thr Asn Glu His Gly Ser Glu His Thr Val Asp Gly
100 105 110

Val Lys Tyr Ser Ala Glu Leu His Val Ala His Trp Asn Ser Ala Lys
115 120 125

Tyr Ser Ser Leu Ala Glu Ala Ala Ser Lys Ala Asp Gly Leu Ala Val
130 135 140

Ile Gly Val Leu Met Lys Val Gly Glu Ala Asn Pro Lys Leu Gln Lys

145 150 155 160
 Val Leu Asp Ala Leu Gln Ala Ile Lys Thr Lys Gly Lys Arg Ala
 165 170 175

 <210> 11706
 <211> 118
 <212> PRT
 <213> Homo sapiens

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 <223> /note="Gene Name:
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 <223> /note="ENSP ID: ENSP00000430372"

 <400> 11706
 Met Ala Ser Pro Asp Trp Gly Tyr Asp Asp Lys Asn Gly Pro Glu Gln
 1 5 10 15

 Trp Ser Lys Leu Tyr Pro Ile Ala Asn Gly Asn Asn Gln Ser Pro Val
 20 25 30

 Asp Ile Lys Thr Ser Glu Thr Lys His Asp Thr Ser Leu Lys Pro Ile
 35 40 45

 Ser Val Ser Tyr Asn Pro Ala Thr Ala Lys Glu Ile Ile Asn Val Gly
 50 55 60

 His Ser Phe His Val Asn Phe Glu Asp Asn Asp Asn Arg Ser Val Leu
 65 70 75 80

 Lys Gly Gly Pro Phe Ser Asp Ser Tyr Arg Leu Phe Gln Phe His Phe
 85 90 95

 His Trp Gly Ser Thr Asn Glu His Gly Ser Glu His Thr Val Asp Gly
 100 105 110

Val Lys Tyr Ser Ala Glu
115

<210> 11707

<211> 149

<212> PRT

<213> Homo sapiens

<220>

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<223> /note="Payload ID: 2310"

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<221> source

<223> /note="Gene Name:
carbonic anhydrase I"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000430471"

<400> 11707

Met Ala Ser Pro Asp Trp Gly Tyr Asp Asp Lys Asn Gly Pro Glu Gln
1 5 10 15

Trp Ser Lys Leu Tyr Pro Ile Ala Asn Gly Asn Asn Gln Ser Pro Val
20 25 30

Asp Ile Lys Thr Ser Glu Thr Lys His Asp Thr Ser Leu Lys Pro Ile
35 40 45

Ser Val Ser Tyr Asn Pro Ala Thr Ala Lys Glu Ile Ile Asn Val Gly
50 55 60

His Ser Phe His Val Asn Phe Glu Asp Asn Asp Asn Arg Ser Val Leu
65 70 75 80

Lys Gly Gly Pro Phe Ser Asp Ser Tyr Arg Leu Phe Gln Phe His Phe
85 90 95

His Trp Gly Ser Thr Asn Glu His Gly Ser Glu His Thr Val Asp Gly
100 105 110

Val Lys Tyr Ser Ala Glu Leu His Val Ala His Trp Asn Ser Ala Lys

26130

115 120 125

Tyr Ser Ser Leu Ala Glu Ala Ala Ser Lys Ala Asp Gly Leu Ala Val
130 135 140

Ile Gly Val Leu Met
145

<210> 11708
<211> 137
<212> PRT
<213> Homo sapiens

<220>
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<223> /note="Gene Name:
carbonic anhydrase I"

<220>
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<223> /note="ENSP ID: ENSP00000430543"

<400> 11708
Met Met Thr Lys Met Leu His Val Ala His Trp Asn Ser Ala Lys Tyr
1 5 10 15

Ser Ser Leu Ala Glu Ala Ala Ser Lys Ala Asp Gly Leu Ala Val Ile
20 25 30

Gly Val Leu Met Lys Val Gly Glu Ala Asn Pro Lys Leu Gln Lys Val
35 40 45

Leu Asp Ala Leu Gln Ala Ile Lys Thr Lys Gly Lys Arg Ala Pro Phe
50 55 60

Thr Asn Phe Asp Pro Ser Thr Leu Leu Pro Ser Ser Leu Asp Phe Trp
65 70 75 80

Thr Tyr Pro Gly Ser Leu Thr His Pro Pro Leu Tyr Glu Ser Val Thr
85 90 95

Trp Ile Ile Cys Lys Glu Ser Ile Ser Val Ser Ser Glu Gln Leu Ala
100 105 110

Gln Phe Arg Ser Leu Leu Ser Asn Val Glu Gly Asp Asn Ala Val Pro
115 120 125

Met Gln His Asn Asn Arg Pro Thr Gln
130 135

<210> 11709

<211> 87

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2310"

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<221> source

<223> /note="Gene Name:
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<220>

<221> source

<223> /note="ENSP ID: ENSP00000430571"

<400> 11709

Met Met Thr Lys Met Leu His Val Ala His Trp Asn Ser Ala Lys Tyr
1 5 10 15

Ser Ser Leu Ala Glu Ala Ala Ser Lys Ala Asp Gly Leu Ala Val Ile
20 25 30

Gly Val Leu Met Lys Val Gly Glu Ala Asn Pro Lys Leu Gln Lys Val
35 40 45

Leu Asp Ala Leu Gln Ala Ile Lys Thr Lys Gly Lys Arg Ala Pro Phe
50 55 60

Thr Asn Phe Asp Pro Ser Thr Leu Leu Pro Ser Ser Leu Asp Phe Trp
65 70 75 80

Thr Tyr Pro Gly Ser Leu Thr

26132

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<210> 11710
<211> 261
<212> PRT
<213> Homo sapiens

<220>
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<220>
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<220>
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<223> /note="ENSP ID: ENSP00000430656"

<400> 11710
Met Ala Ser Pro Asp Trp Gly Tyr Asp Asp Lys Asn Gly Pro Glu Gln
1              5              10              15

Trp Ser Lys Leu Tyr Pro Ile Ala Asn Gly Asn Asn Gln Ser Pro Val
          20              25              30

Asp Ile Lys Thr Ser Glu Thr Lys His Asp Thr Ser Leu Lys Pro Ile
          35              40              45

Ser Val Ser Tyr Asn Pro Ala Thr Ala Lys Glu Ile Ile Asn Val Gly
          50              55              60

His Ser Phe His Val Asn Phe Glu Asp Asn Asp Asn Arg Ser Val Leu
65              70              75              80

Lys Gly Gly Pro Phe Ser Asp Ser Tyr Arg Leu Phe Gln Phe His Phe
          85              90              95

His Trp Gly Ser Thr Asn Glu His Gly Ser Glu His Thr Val Asp Gly
          100              105              110

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Val Lys Tyr Ser Ala Glu Leu His Val Ala His Trp Asn Ser Ala Lys
115 120 125

Tyr Ser Ser Leu Ala Glu Ala Ala Ser Lys Ala Asp Gly Leu Ala Val
130 135 140

Ile Gly Val Leu Met Lys Val Gly Glu Ala Asn Pro Lys Leu Gln Lys
145 150 155 160

Val Leu Asp Ala Leu Gln Ala Ile Lys Thr Lys Gly Lys Arg Ala Pro
165 170 175

Phe Thr Asn Phe Asp Pro Ser Thr Leu Leu Pro Ser Ser Leu Asp Phe
180 185 190

Trp Thr Tyr Pro Gly Ser Leu Thr His Pro Pro Leu Tyr Glu Ser Val
195 200 205

Thr Trp Ile Ile Cys Lys Glu Ser Ile Ser Val Ser Ser Glu Gln Leu
210 215 220

Ala Gln Phe Arg Ser Leu Leu Ser Asn Val Glu Gly Asp Asn Ala Val
225 230 235 240

Pro Met Gln His Asn Asn Arg Pro Thr Gln Pro Leu Lys Gly Arg Thr
245 250 255

Val Arg Ala Ser Phe
260

<210> 11711

<211> 81

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2310"

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<221> source

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<221> source

<223> /note="Gene Name:

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<220>

<221> source

<223> /note="ENSP ID: ENSP00000430710"

<400> 11711

Met Ala Ser Pro Asp Trp Gly Tyr Asp Asp Lys Asn Gly Pro Glu Gln
1 5 10 15

Trp Ser Lys Leu Tyr Pro Ile Ala Asn Gly Asn Asn Gln Ser Pro Val
20 25 30

Asp Ile Lys Thr Ser Glu Thr Lys His Asp Thr Ser Leu Lys Pro Ile
35 40 45

Ser Val Ser Tyr Asn Pro Ala Thr Ala Lys Glu Ile Ile Asn Val Gly
50 55 60

His Ser Phe His Val Asn Phe Glu Asp Asn Asp Asn Arg Ser Ala Leu
65 70 75 80

Leu

<210> 11712

<211> 148

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2310"

<220>

<221> source

<223> /note="Gene Symbol: CA1"

<220>

<221> source

<223> /note="Gene Name:
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<220>

<221> source

<223> /note="ENSP ID: ENSP00000430737"

<400> 11712

Met Ala Ser Pro Asp Trp Gly Tyr Asp Asp Lys Asn Gly Pro Glu Gln
1 5 10 15

Trp Ser Lys Leu Tyr Pro Ile Ala Asn Gly Asn Asn Gln Ser Pro Val
 20 25 30
 Asp Ile Lys Thr Ser Glu Thr Lys His Asp Thr Ser Leu Lys Pro Ile
 35 40 45
 Ser Val Ser Tyr Asn Pro Ala Thr Ala Lys Glu Ile Ile Asn Val Gly
 50 55 60
 His Ser Phe His Val Asn Phe Glu Asp Asn Asp Asn Arg Ser Val Leu
 65 70 75 80
 Lys Gly Gly Pro Phe Ser Asp Ser Tyr Arg Leu Phe Gln Phe His Phe
 85 90 95
 His Trp Gly Ser Thr Asn Glu His Gly Ser Glu His Thr Val Asp Gly
 100 105 110
 Val Lys Tyr Ser Ala Glu Leu His Val Ala His Trp Asn Ser Ala Lys
 115 120 125
 Tyr Ser Ser Leu Ala Glu Ala Ala Ser Lys Ala Asp Gly Leu Ala Val
 130 135 140
 Ile Gly Val Leu
 145

<210> 11713
 <211> 251
 <212> PRT
 <213> Homo sapiens

<220>
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 <221> source
 <223> /note="Gene Name:
 carbonic anhydrase I"

<220>
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<223> /note="ENSP ID: ENSP00000430861"

<400> 11713

Met Ala Ser Pro Asp Trp Gly Tyr Asp Asp Lys Asn Gly Pro Glu Gln
1 5 10 15

Trp Ser Lys Leu Tyr Pro Ile Ala Asn Gly Asn Asn Gln Ser Pro Val
20 25 30

Asp Ile Lys Thr Ser Glu Thr Lys His Asp Thr Ser Leu Lys Pro Ile
35 40 45

Ser Val Ser Tyr Asn Pro Ala Thr Ala Lys Glu Ile Ile Asn Val Gly
50 55 60

His Ser Phe His Val Asn Phe Glu Asp Asn Asp Asn Arg Ser Val Leu
65 70 75 80

Lys Gly Gly Pro Phe Ser Asp Ser Tyr Arg Leu Phe Gln Phe His Phe
85 90 95

His Trp Gly Ser Thr Asn Glu His Gly Ser Glu His Thr Val Asp Gly
100 105 110

Val Lys Tyr Ser Ala Glu Leu His Val Ala His Trp Asn Ser Ala Lys
115 120 125

Tyr Ser Ser Leu Ala Glu Ala Ala Ser Lys Ala Asp Gly Leu Ala Val
130 135 140

Ile Gly Val Leu Met Lys Val Gly Glu Ala Asn Pro Lys Leu Gln Lys
145 150 155 160

Val Leu Asp Ala Leu Gln Ala Ile Lys Thr Lys Gly Lys Arg Ala Pro
165 170 175

Phe Thr Asn Phe Asp Pro Ser Thr Leu Leu Pro Ser Ser Leu Asp Phe
180 185 190

Trp Thr Tyr Pro Gly Ser Leu Thr His Pro Pro Leu Tyr Glu Ser Val
195 200 205

Thr Trp Ile Ile Cys Lys Glu Ser Ile Ser Val Ser Ser Glu Gln Leu
210 215 220

26137

Ala Gln Phe Arg Ser Leu Leu Ser Asn Val Glu Gly Asp Asn Ala Val
 225 230 235 240

Pro Met Gln His Asn Asn Arg Pro Thr Gln Pro
 245 250

<210> 11714
 <211> 99
 <212> PRT
 <213> Homo sapiens

<220>
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<220>
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<220>
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 <223> /note="Gene Name:
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<220>
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 <223> /note="ENSP ID: ENSP00000430975"

<400> 11714
 Met Ala Ser Pro Asp Trp Gly Tyr Asp Asp Lys Asn Gly Pro Glu Gln
 1 5 10 15

Trp Ser Lys Leu Tyr Pro Ile Ala Asn Gly Asn Asn Gln Ser Pro Val
 20 25 30

Asp Ile Lys Thr Ser Glu Thr Lys His Asp Thr Ser Leu Lys Pro Ile
 35 40 45

Ser Val Ser Tyr Asn Pro Ala Thr Ala Lys Glu Ile Ile Asn Val Gly
 50 55 60

His Ser Phe His Val Asn Phe Glu Asp Asn Asp Asn Arg Ser Val Leu
 65 70 75 80

Lys Gly Gly Pro Phe Ser Asp Ser Tyr Arg Leu Phe Gln Phe His Phe
 85 90 95

His Trp Gly

<210> 11715

<211> 261

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2310"

<220>

<221> source

<223> /note="Gene Symbol: CA1"

<220>

<221> source

<223> /note="Gene Name:
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<221> source

<223> /note="Uniprot ID: P00915"

<220>

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<223> /note="ENSP ID: ENSP00000443517"

<400> 11715

Met Ala Ser Pro Asp Trp Gly Tyr Asp Asp Lys Asn Gly Pro Glu Gln
1 5 10 15

Trp Ser Lys Leu Tyr Pro Ile Ala Asn Gly Asn Asn Gln Ser Pro Val
20 25 30

Asp Ile Lys Thr Ser Glu Thr Lys His Asp Thr Ser Leu Lys Pro Ile
35 40 45

Ser Val Ser Tyr Asn Pro Ala Thr Ala Lys Glu Ile Ile Asn Val Gly
50 55 60

His Ser Phe His Val Asn Phe Glu Asp Asn Asp Asn Arg Ser Val Leu
65 70 75 80

Lys Gly Gly Pro Phe Ser Asp Ser Tyr Arg Leu Phe Gln Phe His Phe
85 90 95

His Trp Gly Ser Thr Asn Glu His Gly Ser Glu His Thr Val Asp Gly
100 105 110

Val Lys Tyr Ser Ala Glu Leu His Val Ala His Trp Asn Ser Ala Lys
115 120 125

Tyr Ser Ser Leu Ala Glu Ala Ala Ser Lys Ala Asp Gly Leu Ala Val
130 135 140

Ile Gly Val Leu Met Lys Val Gly Glu Ala Asn Pro Lys Leu Gln Lys
145 150 155 160

Val Leu Asp Ala Leu Gln Ala Ile Lys Thr Lys Gly Lys Arg Ala Pro
165 170 175

Phe Thr Asn Phe Asp Pro Ser Thr Leu Leu Pro Ser Ser Leu Asp Phe
180 185 190

Trp Thr Tyr Pro Gly Ser Leu Thr His Pro Pro Leu Tyr Glu Ser Val
195 200 205

Thr Trp Ile Ile Cys Lys Glu Ser Ile Ser Val Ser Ser Glu Gln Leu
210 215 220

Ala Gln Phe Arg Ser Leu Leu Ser Asn Val Glu Gly Asp Asn Ala Val
225 230 235 240

Pro Met Gln His Asn Asn Arg Pro Thr Gln Pro Leu Lys Gly Arg Thr
245 250 255

Val Arg Ala Ser Phe
260

<210> 11716

<211> 127

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2310"

<220>

<221> source

<223> /note="Gene Symbol: CA1"

<220>

<221> source

<223> /note="Gene Name:
carbonic anhydrase I"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000486171"

<400> 11716

Met Met Thr Lys Met Leu His Val Ala His Trp Asn Ser Ala Lys Tyr
1 5 10 15

Ser Ser Leu Ala Glu Ala Ala Ser Lys Ala Asp Gly Leu Ala Val Ile
20 25 30

Gly Val Leu Met Lys Gly Lys Arg Ala Pro Phe Thr Asn Phe Asp Pro
35 40 45

Ser Thr Leu Leu Pro Ser Ser Leu Asp Phe Trp Thr Tyr Pro Gly Ser
50 55 60

Leu Thr His Pro Pro Leu Tyr Glu Ser Val Thr Trp Ile Ile Cys Lys
65 70 75 80

Glu Ser Ile Ser Val Ser Ser Glu Gln Leu Ala Gln Phe Arg Ser Leu
85 90 95

Leu Ser Asn Val Glu Gly Asp Asn Ala Val Pro Met Gln His Asn Asn
100 105 110

Arg Pro Thr Gln Pro Leu Lys Gly Arg Thr Val Arg Ala Ser Phe
115 120 125

<210> 11717

<211> 260

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2311"

<220>

<221> source

<223> /note="Gene Symbol: CA2"

<220>

<221> source

<223> /note="Gene Name:
carbonic anhydrase II"

<220>
 <221> source
 <223> /note="Uniprot ID: P00918"

<220>
 <221> source
 <223> /note="ENSP ID: ENSP00000285379"

<400> 11717

Met Ser His His Trp Gly Tyr Gly Lys His Asn Gly Pro Glu His Trp
 1 5 10 15

His Lys Asp Phe Pro Ile Ala Lys Gly Glu Arg Gln Ser Pro Val Asp
 20 25 30

Ile Asp Thr His Thr Ala Lys Tyr Asp Pro Ser Leu Lys Pro Leu Ser
 35 40 45

Val Ser Tyr Asp Gln Ala Thr Ser Leu Arg Ile Leu Asn Asn Gly His
 50 55 60

Ala Phe Asn Val Glu Phe Asp Asp Ser Gln Asp Lys Ala Val Leu Lys
 65 70 75 80

Gly Gly Pro Leu Asp Gly Thr Tyr Arg Leu Ile Gln Phe His Phe His
 85 90 95

Trp Gly Ser Leu Asp Gly Gln Gly Ser Glu His Thr Val Asp Lys Lys
 100 105 110

Lys Tyr Ala Ala Glu Leu His Leu Val His Trp Asn Thr Lys Tyr Gly
 115 120 125

Asp Phe Gly Lys Ala Val Gln Gln Pro Asp Gly Leu Ala Val Leu Gly
 130 135 140

Ile Phe Leu Lys Val Gly Ser Ala Lys Pro Gly Leu Gln Lys Val Val
 145 150 155 160

Asp Val Leu Asp Ser Ile Lys Thr Lys Gly Lys Ser Ala Asp Phe Thr
 165 170 175

Asn Phe Asp Pro Arg Gly Leu Leu Pro Glu Ser Leu Asp Tyr Trp Thr
 180 185 190

Tyr Pro Gly Ser Leu Thr Thr Pro Pro Leu Leu Glu Cys Val Thr Trp
195 200 205

Ile Val Leu Lys Glu Pro Ile Ser Val Ser Ser Glu Gln Val Leu Lys
210 215 220

Phe Arg Lys Leu Asn Phe Asn Gly Glu Gly Glu Pro Glu Glu Leu Met
225 230 235 240

Val Asp Asn Trp Arg Pro Ala Gln Pro Leu Lys Asn Arg Gln Ile Lys
245 250 255

Ala Ser Phe Lys
260

<210> 11718
<211> 97
<212> PRT
<213> Homo sapiens

<220>
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<223> /note="Payload ID: 2311"

<220>
<221> source
<223> /note="Gene Symbol: CA2"

<220>
<221> source
<223> /note="Gene Name:
carbonic anhydrase II"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000428443"

<400> 11718
Met Ser His His Trp Gly Tyr Gly Lys His Asn Gly Pro Glu His Trp
1 5 10 15

His Lys Asp Phe Pro Ile Ala Lys Gly Glu Arg Gln Ser Pro Val Asp
20 25 30

Ile Asp Thr His Thr Ala Lys Tyr Asp Pro Ser Leu Lys Pro Leu Ser
35 40 45

Val Ser Tyr Asp Gln Ala Thr Ser Leu Arg Ile Leu Asn Asn Gly His

50 55 60

Ala Phe Asn Val Glu Phe Asp Asp Ser Gln Asp Lys Ala Ala Ser Leu
65 70 75 80

Gly Ser Leu Glu His Gln Ile Trp Gly Phe Trp Glu Ser Cys Ala Ala
85 90 95

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<210> 11719
<211> 101
<212> PRT
<213> Homo sapiens

<220>
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<220>
<221> source
<223> /note="Gene Name:
        carbonic anhydrase II"

<220>
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<223> /note="ENSP ID: ENSP00000428947"
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Ile Ser Met Leu Arg Lys Lys Asp Val Lys Asn Ile His Ser Pro Asp
85 90 95

Asn Ala Cys Glu Glu
100

<210> 11720

<211> 260

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2312"

<220>

<221> source

<223> /note="Gene Symbol: CA3"

<220>

<221> source

<223> /note="Gene Name:
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<220>

<221> source

<223> /note="Uniprot ID: P07451"

<220>

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<223> /note="ENSP ID: ENSP00000285381"

<400> 11720

Met Ala Lys Glu Trp Gly Tyr Ala Ser His Asn Gly Pro Asp His Trp
1 5 10 15

His Glu Leu Phe Pro Asn Ala Lys Gly Glu Asn Gln Ser Pro Val Glu
20 25 30

Leu His Thr Lys Asp Ile Arg His Asp Pro Ser Leu Gln Pro Trp Ser
35 40 45

Val Ser Tyr Asp Gly Gly Ser Ala Lys Thr Ile Leu Asn Asn Gly Lys
50 55 60

Thr Cys Arg Val Val Phe Asp Asp Thr Tyr Asp Arg Ser Met Leu Arg
65 70 75 80

Gly Gly Pro Leu Pro Gly Pro Tyr Arg Leu Arg Gln Phe His Leu His

26145

85

90

95

Trp Gly Ser Ser Asp Asp His Gly Ser Glu His Thr Val Asp Gly Val
 100 105 110

Lys Tyr Ala Ala Glu Leu His Leu Val His Trp Asn Pro Lys Tyr Asn
 115 120 125

Thr Phe Lys Glu Ala Leu Lys Gln Arg Asp Gly Ile Ala Val Ile Gly
 130 135 140

Ile Phe Leu Lys Ile Gly His Glu Asn Gly Glu Phe Gln Ile Phe Leu
 145 150 155 160

Asp Ala Leu Asp Lys Ile Lys Thr Lys Gly Lys Glu Ala Pro Phe Thr
 165 170 175

Lys Phe Asp Pro Ser Cys Leu Phe Pro Ala Cys Arg Asp Tyr Trp Thr
 180 185 190

Tyr Gln Gly Ser Phe Thr Thr Pro Pro Cys Glu Glu Cys Ile Val Trp
 195 200 205

Leu Leu Leu Lys Glu Pro Met Thr Val Ser Ser Asp Gln Met Ala Lys
 210 215 220

Leu Arg Ser Leu Leu Ser Ser Ala Glu Asn Glu Pro Pro Val Pro Leu
 225 230 235 240

Val Ser Asn Trp Arg Pro Pro Gln Pro Ile Asn Asn Arg Val Val Arg
 245 250 255

Ala Ser Phe Lys
 260

<210> 11721

<211> 19

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2312"

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26146

<221> source
<223> /note="Gene Symbol: CA3"

<220>
<221> source
<223> /note="Gene Name:
carbonic anhydrase III"

<220>
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<223> /note="ENSP ID: ENSP00000429760"

<400> 11721
Met Leu Arg Gly Gly Pro Leu Pro Gly Pro Tyr Arg Leu Arg Gln Phe
1 5 10 15

His Leu His

<210> 11722
<211> 312
<212> PRT
<213> Homo sapiens

<220>
<221> source
<223> /note="Payload ID: 2313"

<220>
<221> source
<223> /note="Gene Symbol: CA4"

<220>
<221> source
<223> /note="Gene Name:
carbonic anhydrase IV"

<220>
<221> source
<223> /note="Uniprot ID: P22748"

<220>
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<223> /note="ENSP ID: ENSP00000300900"

<400> 11722
Met Arg Met Leu Leu Ala Leu Leu Ala Leu Ser Ala Ala Arg Pro Ser
1 5 10 15

Ala Ser Ala Glu Ser His Trp Cys Tyr Glu Val Gln Ala Glu Ser Ser
20 25 30

Asn Tyr Pro Cys Leu Val Pro Val Lys Trp Gly Gly Asn Cys Gln Lys

35					40					45					
Asp	Arg	Gln	Ser	Pro	Ile	Asn	Ile	Val	Thr	Thr	Lys	Ala	Lys	Val	Asp
	50					55					60				
Lys	Lys	Leu	Gly	Arg	Phe	Phe	Phe	Ser	Gly	Tyr	Asp	Lys	Lys	Gln	Thr
65					70					75					80
Trp	Thr	Val	Gln	Asn	Asn	Gly	His	Ser	Val	Met	Met	Leu	Leu	Glu	Asn
				85					90					95	
Lys	Ala	Ser	Ile	Ser	Gly	Gly	Gly	Leu	Pro	Ala	Pro	Tyr	Gln	Ala	Lys
			100					105					110		
Gln	Leu	His	Leu	His	Trp	Ser	Asp	Leu	Pro	Tyr	Lys	Gly	Ser	Glu	His
		115					120					125			
Ser	Leu	Asp	Gly	Glu	His	Phe	Ala	Met	Glu	Met	His	Ile	Val	His	Glu
	130					135					140				
Lys	Glu	Lys	Gly	Thr	Ser	Arg	Asn	Val	Lys	Glu	Ala	Gln	Asp	Pro	Glu
145					150					155					160
Asp	Glu	Ile	Ala	Val	Leu	Ala	Phe	Leu	Val	Glu	Ala	Gly	Thr	Gln	Val
				165					170					175	
Asn	Glu	Gly	Phe	Gln	Pro	Leu	Val	Glu	Ala	Leu	Ser	Asn	Ile	Pro	Lys
			180					185					190		
Pro	Glu	Met	Ser	Thr	Thr	Met	Ala	Glu	Ser	Ser	Leu	Leu	Asp	Leu	Leu
		195					200					205			
Pro	Lys	Glu	Glu	Lys	Leu	Arg	His	Tyr	Phe	Arg	Tyr	Leu	Gly	Ser	Leu
	210					215					220				
Thr	Thr	Pro	Thr	Cys	Asp	Glu	Lys	Val	Val	Trp	Thr	Val	Phe	Arg	Glu
225					230					235					240
Pro	Ile	Gln	Leu	His	Arg	Glu	Gln	Ile	Leu	Ala	Phe	Ser	Gln	Lys	Leu
				245					250					255	
Tyr	Tyr	Asp	Lys	Glu	Gln	Thr	Val	Ser	Met	Lys	Asp	Asn	Val	Arg	Pro
			260					265					270		

Leu Gln Gln Leu Gly Gln Arg Thr Val Ile Lys Ser Gly Ala Pro Gly
275 280 285

Arg Pro Leu Pro Trp Ala Leu Pro Ala Leu Leu Gly Pro Met Leu Ala
290 295 300

Cys Leu Leu Ala Gly Phe Leu Arg
305 310

<210> 11723
<211> 99
<212> PRT
<213> Homo sapiens

<220>
<221> source
<223> /note="Payload ID: 2313"

<220>
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<223> /note="Gene Symbol: CA4"

<220>
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<223> /note="Gene Name:
carbonic anhydrase IV"

<220>
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<223> /note="ENSP ID: ENSP00000464757"

<220>
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<222> (1)..(1)
<223> Any amino acid

<400> 11723
Xaa Ser Asn Ile Pro Lys Pro Glu Met Ser Thr Thr Met Ala Glu Ser
1 5 10 15

Ser Leu Leu Asp Leu Leu Pro Lys Glu Glu Lys Leu Arg His Tyr Phe
20 25 30

Arg Tyr Leu Gly Ser Leu Thr Thr Pro Thr Cys Asp Glu Lys Val Val
35 40 45

Trp Thr Val Phe Arg Glu Pro Ile Gln Leu His Arg Glu Gln Val His
50 55 60

Arg Ala Trp Gly Arg Ala Trp Ala Pro Thr Ala Trp Leu Pro Arg Asn
65 70 75 80

Tyr Pro Ser Val Cys Pro Gln Arg Ser Leu Arg Ile Gln Val Gly Ser
85 90 95

Pro Gly Asn

<210> 11724
<211> 184
<212> PRT
<213> Homo sapiens

<220>
<221> source
<223> /note="Payload ID: 2313"

<220>
<221> source
<223> /note="Gene Symbol: CA4"

<220>
<221> source
<223> /note="Gene Name:
carbonic anhydrase IV"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000465837"

<400> 11724
Val Lys Glu Ala Gln Asp Pro Glu Asp Glu Ile Ala Val Leu Ala Phe
1 5 10 15

Leu Val Glu Ile Gly Arg Met Asn Trp Pro Pro Pro Leu Ala Pro Cys
20 25 30

Arg Leu Ser Gln Asp Pro Ser Leu Pro Phe Gln Ala Gly Thr Gln Val
35 40 45

Asn Glu Gly Phe Gln Pro Leu Val Glu Ala Leu Ser Asn Ile Pro Lys
50 55 60

Pro Glu Met Ser Thr Thr Met Ala Glu Ser Ser Leu Leu Asp Leu Leu
65 70 75 80

Pro Lys Glu Glu Lys Leu Arg His Tyr Phe Arg Tyr Leu Gly Ser Leu
85 90 95

Thr Thr Pro Thr Cys Asp Glu Lys Val Val Trp Thr Val Phe Arg Glu
100 105 110

Pro Ile Gln Leu His Arg Glu Gln Ile Leu Ala Phe Ser Gln Lys Leu
115 120 125

Tyr Tyr Asp Lys Glu Gln Thr Val Ser Met Lys Asp Asn Val Arg Pro
130 135 140

Leu Gln Gln Leu Gly Gln Arg Thr Val Ile Lys Ser Gly Ala Pro Gly
145 150 155 160

Arg Pro Leu Pro Trp Ala Leu Pro Ala Leu Leu Gly Pro Met Leu Ala
165 170 175

Cys Leu Leu Ala Gly Phe Leu Arg
180

<210> 11725
<211> 38
<212> PRT
<213> Homo sapiens

<220>
<221> source
<223> /note="Payload ID: 2313"

<220>
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<223> /note="Gene Symbol: CA4"

<220>
<221> source
<223> /note="Gene Name:
carbonic anhydrase IV"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000466964"

<400> 11725
Met Met Leu Leu Glu Asn Lys Ala Ser Ile Ser Gly Gly Gly Leu Pro
1 5 10 15

Ala Pro Tyr Gln Ala Lys Gln Leu His Leu His Trp Ser Asp Leu Pro
20 25 30

Tyr Lys Gly Ser Glu His
35

<210> 11726

<211> 106

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2313"

<220>

<221> source

<223> /note="Gene Symbol: CA4"

<220>

<221> source

<223> /note="Gene Name:
carbonic anhydrase IV"

<220>

<221> source

<223> /note="Uniprot ID: P22748"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000467465"

<400> 11726

Met Arg Met Leu Leu Ala Leu Leu Ala Leu Ser Ala Ala Arg Pro Ser
1 5 10 15

Ala Ser Ala Glu Ser His Trp Cys Tyr Glu Val Gln Ala Glu Ser Ser
20 25 30

Asn Tyr Pro Cys Leu Val Pro Val Lys Trp Gly Gly Asn Cys Gln Lys
35 40 45

Asp Arg Gln Ser Pro Ile Asn Ile Val Thr Thr Lys Ala Lys Val Asp
50 55 60

Lys Lys Leu Gly Arg Phe Phe Phe Ser Gly Tyr Asp Lys Lys Gln Thr
65 70 75 80

Trp Thr Val Gln Asn Asn Gly His Ser Gly Trp Asn Pro Gly Glu Arg
85 90 95

Gly Leu Pro Ala Thr Gly Gly Gly Thr Val
100 105

<210> 11727

<211> 459

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2314"

<220>

<221> source

<223> /note="Gene Symbol: CA9"

<220>

<221> source

<223> /note="Gene Name:
carbonic anhydrase IX"

<220>

<221> source

<223> /note="Uniprot ID: Q16790"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000367608"

<400> 11727

Met Ala Pro Leu Cys Pro Ser Pro Trp Leu Pro Leu Leu Ile Pro Ala
1 5 10 15

Pro Ala Pro Gly Leu Thr Val Gln Leu Leu Leu Ser Leu Leu Leu
20 25 30

Val Pro Val His Pro Gln Arg Leu Pro Arg Met Gln Glu Asp Ser Pro
35 40 45

Leu Gly Gly Gly Ser Ser Gly Glu Asp Asp Pro Leu Gly Glu Glu Asp
50 55 60

Leu Pro Ser Glu Glu Asp Ser Pro Arg Glu Glu Asp Pro Pro Gly Glu
65 70 75 80

Glu Asp Leu Pro Gly Glu Glu Asp Leu Pro Gly Glu Glu Asp Leu Pro
85 90 95

Glu Val Lys Pro Lys Ser Glu Glu Glu Gly Ser Leu Lys Leu Glu Asp
100 105 110

26153

Leu	Pro	Thr	Val	Glu	Ala	Pro	Gly	Asp	Pro	Gln	Glu	Pro	Gln	Asn	Asn		
		115					120					125					
Ala	His	Arg	Asp	Lys	Glu	Gly	Asp	Asp	Gln	Ser	His	Trp	Arg	Tyr	Gly		
	130					135					140						
Gly	Asp	Pro	Pro	Trp	Pro	Arg	Val	Ser	Pro	Ala	Cys	Ala	Gly	Arg	Phe		
145					150					155					160		
Gln	Ser	Pro	Val	Asp	Ile	Arg	Pro	Gln	Leu	Ala	Ala	Phe	Cys	Pro	Ala		
				165					170					175			
Leu	Arg	Pro	Leu	Glu	Leu	Leu	Gly	Phe	Gln	Leu	Pro	Pro	Leu	Pro	Glu		
			180					185						190			
Leu	Arg	Leu	Arg	Asn	Asn	Gly	His	Ser	Val	Gln	Leu	Thr	Leu	Pro	Pro		
		195					200					205					
Gly	Leu	Glu	Met	Ala	Leu	Gly	Pro	Gly	Arg	Glu	Tyr	Arg	Ala	Leu	Gln		
	210					215					220						
Leu	His	Leu	His	Trp	Gly	Ala	Ala	Gly	Arg	Pro	Gly	Ser	Glu	His	Thr		
225					230					235					240		
Val	Glu	Gly	His	Arg	Phe	Pro	Ala	Glu	Ile	His	Val	Val	His	Leu	Ser		
				245					250					255			
Thr	Ala	Phe	Ala	Arg	Val	Asp	Glu	Ala	Leu	Gly	Arg	Pro	Gly	Gly	Leu		
			260					265					270				
Ala	Val	Leu	Ala	Ala	Phe	Leu	Glu	Glu	Gly	Pro	Glu	Glu	Asn	Ser	Ala		
		275					280					285					
Tyr	Glu	Gln	Leu	Leu	Ser	Arg	Leu	Glu	Glu	Ile	Ala	Glu	Glu	Gly	Ser		
	290					295					300						
Glu	Thr	Gln	Val	Pro	Gly	Leu	Asp	Ile	Ser	Ala	Leu	Leu	Pro	Ser	Asp		
305					310					315					320		
Phe	Ser	Arg	Tyr	Phe	Gln	Tyr	Glu	Gly	Ser	Leu	Thr	Thr	Pro	Pro	Cys		
				325					330					335			

Ala Gln Gly Val Ile Trp Thr Val Phe Asn Gln Thr Val Met Leu Ser
340 345 350

Ala Lys Gln Leu His Thr Leu Ser Asp Thr Leu Trp Gly Pro Gly Asp
355 360 365

Ser Arg Leu Gln Leu Asn Phe Arg Ala Thr Gln Pro Leu Asn Gly Arg
370 375 380

Val Ile Glu Ala Ser Phe Pro Ala Gly Val Asp Ser Ser Pro Arg Ala
385 390 395 400

Ala Glu Pro Val Gln Leu Asn Ser Cys Leu Ala Ala Gly Asp Ile Leu
405 410 415

Ala Leu Val Phe Gly Leu Leu Phe Ala Val Thr Ser Val Ala Phe Leu
420 425 430

Val Gln Met Arg Arg Gln His Arg Arg Gly Thr Lys Gly Gly Val Ser
435 440 445

Tyr Arg Pro Ala Glu Val Ala Glu Thr Gly Ala
450 455

<210> 11728
<211> 356
<212> PRT
<213> Homo sapiens

<220>
<221> source
<223> /note="Payload ID: 2314"

<220>
<221> source
<223> /note="Gene Symbol: CA9"

<220>
<221> source
<223> /note="Gene Name:
carbonic anhydrase IX"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000482050"

<400> 11728
Met Ala Pro Leu Cys Pro Ser Pro Trp Leu Pro Leu Leu Ile Pro Ala

1		5		10		15										
Pro	Ala	Pro	Gly	Leu	Thr	Val	Gln	Leu	Leu	Leu	Ser	Leu	Leu	Leu	Leu	
			20					25					30			
Val	Pro	Val	His	Pro	Gln	Arg	Leu	Pro	Arg	Met	Gln	Glu	Asp	Ser	Pro	
		35					40					45				
Leu	Gly	Gly	Gly	Ser	Ser	Gly	Glu	Asp	Asp	Pro	Leu	Gly	Glu	Glu	Asp	
	50					55					60					
Leu	Pro	Ser	Glu	Glu	Asp	Ser	Pro	Arg	Glu	Glu	Asp	Pro	Pro	Gly	Glu	
65					70					75					80	
Glu	Asp	Leu	Pro	Gly	Glu	Glu	Asp	Leu	Pro	Gly	Glu	Glu	Asp	Leu	Pro	
				85					90					95		
Glu	Val	Lys	Pro	Lys	Ser	Glu	Glu	Glu	Gly	Ser	Leu	Lys	Leu	Glu	Asp	
			100					105					110			
Leu	Pro	Thr	Val	Glu	Ala	Pro	Gly	Asp	Pro	Gln	Glu	Pro	Gln	Asn	Asn	
		115					120					125				
Ala	His	Arg	Asp	Lys	Glu	Gly	Asp	Asp	Gln	Ser	His	Trp	Arg	Tyr	Gly	
	130					135					140					
Gly	Asp	Pro	Pro	Trp	Pro	Arg	Val	Ser	Pro	Ala	Cys	Ala	Gly	Arg	Phe	
145					150					155					160	
Gln	Ser	Pro	Val	Asp	Ile	Arg	Pro	Gln	Leu	Ala	Ala	Phe	Cys	Pro	Ala	
				165					170					175		
Leu	Arg	Pro	Leu	Glu	Leu	Leu	Gly	Phe	Gln	Leu	Pro	Pro	Leu	Pro	Glu	
			180					185					190			
Leu	Arg	Leu	Arg	Asn	Asn	Gly	His	Ser	Val	Gln	Leu	Thr	Leu	Pro	Pro	
		195					200					205				
Gly	Leu	Glu	Met	Ala	Leu	Gly	Pro	Gly	Arg	Glu	Tyr	Arg	Ala	Leu	Gln	
	210					215					220					
Leu	His	Leu	His	Trp	Gly	Ala	Ala	Gly	Arg	Pro	Gly	Ser	Glu	His	Thr	
225					230					235					240	

Val Glu Gly His Arg Phe Pro Ala Glu Ile His Val Val His Leu Ser
245 250 255

Thr Ala Phe Ala Arg Val Asp Glu Ala Leu Gly Arg Pro Gly Gly Leu
260 265 270

Ala Val Leu Ala Ala Phe Leu Glu Glu Gly Pro Glu Glu Asn Ser Ala
275 280 285

Tyr Glu Gln Leu Leu Ser Arg Leu Glu Glu Ile Ala Glu Glu Gly Ser
290 295 300

Glu Thr Gln Val Pro Gly Leu Asp Ile Ser Ala Leu Leu Pro Ser Asp
305 310 315 320

Phe Ser Arg Tyr Phe Gln Tyr Glu Gly Ser Leu Thr Thr Pro Pro Cys
325 330 335

Ala Gln Gly Val Ile Trp Thr Val Phe Asn Gln Thr Val Met Leu Ser
340 345 350

Ala Lys Gln Ser
355

<210> 11729
<211> 305
<212> PRT
<213> Homo sapiens

<220>
<221> source
<223> /note="Payload ID: 2315"

<220>
<221> source
<223> /note="Gene Symbol: CA5A"

<220>
<221> source
<223> /note="Gene Name:
carbonic anhydrase VA, mitochondrial"

<220>
<221> source
<223> /note="Uniprot ID: P35218"

<220>

<221> source
<223> /note="ENSP ID: ENSP00000309649"

<400> 11729

Met Leu Gly Arg Asn Thr Trp Lys Thr Ser Ala Phe Ser Phe Leu Val
1 5 10 15

Glu Gln Met Trp Ala Pro Leu Trp Ser Arg Ser Met Arg Pro Gly Arg
20 25 30

Trp Cys Ser Gln Arg Ser Cys Ala Trp Gln Thr Ser Asn Asn Thr Leu
35 40 45

His Pro Leu Trp Thr Val Pro Val Ser Val Pro Gly Gly Thr Arg Gln
50 55 60

Ser Pro Ile Asn Ile Gln Trp Arg Asp Ser Val Tyr Asp Pro Gln Leu
65 70 75 80

Lys Pro Leu Arg Val Ser Tyr Glu Ala Ala Ser Cys Leu Tyr Ile Trp
85 90 95

Asn Thr Gly Tyr Leu Phe Gln Val Glu Phe Asp Asp Ala Thr Glu Ala
100 105 110

Ser Gly Ile Ser Gly Gly Pro Leu Glu Asn His Tyr Arg Leu Lys Gln
115 120 125

Phe His Phe His Trp Gly Ala Val Asn Glu Gly Gly Ser Glu His Thr
130 135 140

Val Asp Gly His Ala Tyr Pro Ala Glu Leu His Leu Val His Trp Asn
145 150 155 160

Ser Val Lys Tyr Gln Asn Tyr Lys Glu Ala Val Val Gly Glu Asn Gly
165 170 175

Leu Ala Val Ile Gly Val Phe Leu Lys Leu Gly Ala His His Gln Thr
180 185 190

Leu Gln Arg Leu Val Asp Ile Leu Pro Glu Ile Lys His Lys Asp Ala
195 200 205

Arg Ala Ala Met Arg Pro Phe Asp Pro Ser Thr Leu Leu Pro Thr Cys

210 215 220
 Trp Asp Tyr Trp Thr Tyr Ala Gly Ser Leu Thr Thr Pro Pro Leu Thr
 225 230 235 240
 Glu Ser Val Thr Trp Ile Ile Gln Lys Glu Pro Val Glu Val Ala Pro
 245 250 255
 Ser Gln Leu Ser Ala Phe Arg Thr Leu Leu Phe Ser Ala Leu Gly Glu
 260 265 270
 Glu Glu Lys Met Met Val Asn Asn Tyr Arg Pro Leu Gln Pro Leu Met
 275 280 285
 Asn Arg Lys Val Trp Ala Ser Phe Gln Ala Thr Asn Glu Gly Thr Arg
 290 295 300
 Ser
 305

<210> 11730
 <211> 317
 <212> PRT
 <213> Homo sapiens

<220>
 <221> source
 <223> /note="Payload ID: 2316"

<220>
 <221> source
 <223> /note="Gene Symbol: CA5B"

<220>
 <221> source
 <223> /note="Gene Name:
 carbonic anhydrase VB, mitochondrial"

<220>
 <221> source
 <223> /note="Uniprot ID: Q9Y2D0"

<220>
 <221> source
 <223> /note="ENSP ID: ENSP00000314099"

<400> 11730
 Met Val Val Met Asn Ser Leu Arg Val Ile Leu Gln Ala Ser Pro Gly
 1 5 10 15

Lys	Leu	Leu	Trp	Arg	Lys	Phe	Gln	Ile	Pro	Arg	Phe	Met	Pro	Ala	Arg		
			20					25					30				
Pro	Cys	Ser	Leu	Tyr	Thr	Cys	Thr	Tyr	Lys	Thr	Arg	Asn	Arg	Ala	Leu		
		35					40					45					
His	Pro	Leu	Trp	Glu	Ser	Val	Asp	Leu	Val	Pro	Gly	Gly	Asp	Arg	Gln		
	50					55					60						
Ser	Pro	Ile	Asn	Ile	Arg	Trp	Arg	Asp	Ser	Val	Tyr	Asp	Pro	Gly	Leu		
65					70					75					80		
Lys	Pro	Leu	Thr	Ile	Ser	Tyr	Asp	Pro	Ala	Thr	Cys	Leu	His	Val	Trp		
				85					90					95			
Asn	Asn	Gly	Tyr	Ser	Phe	Leu	Val	Glu	Phe	Glu	Asp	Ser	Thr	Asp	Lys		
			100					105					110				
Ser	Val	Ile	Lys	Gly	Gly	Pro	Leu	Glu	His	Asn	Tyr	Arg	Leu	Lys	Gln		
		115					120					125					
Phe	His	Phe	His	Trp	Gly	Ala	Ile	Asp	Ala	Trp	Gly	Ser	Glu	His	Thr		
	130					135					140						
Val	Asp	Ser	Lys	Cys	Phe	Pro	Ala	Glu	Leu	His	Leu	Val	His	Trp	Asn		
145					150					155					160		
Ala	Val	Arg	Phe	Glu	Asn	Phe	Glu	Asp	Ala	Ala	Leu	Glu	Glu	Asn	Gly		
				165					170					175			
Leu	Ala	Val	Ile	Gly	Val	Phe	Leu	Lys	Leu	Gly	Lys	His	His	Lys	Glu		
			180					185					190				
Leu	Gln	Lys	Leu	Val	Asp	Thr	Leu	Pro	Ser	Ile	Lys	His	Lys	Asp	Ala		
		195					200					205					
Leu	Val	Glu	Phe	Gly	Ser	Phe	Asp	Pro	Ser	Cys	Leu	Met	Pro	Thr	Cys		
	210					215					220						
Pro	Asp	Tyr	Trp	Thr	Tyr	Ser	Gly	Ser	Leu	Thr	Thr	Pro	Pro	Leu	Ser		
225					230					235					240		

Glu Ser Val Thr Trp Ile Ile Lys Lys Gln Pro Val Glu Val Asp His
245 250 255

Asp Gln Leu Glu Gln Phe Arg Thr Leu Leu Phe Thr Ser Glu Gly Glu
260 265 270

Lys Glu Lys Arg Met Val Asp Asn Phe Arg Pro Leu Gln Pro Leu Met
275 280 285

Asn Arg Thr Val Arg Ser Ser Phe Arg His Asp Tyr Val Leu Asn Val
290 295 300

Gln Ala Lys Pro Lys Pro Ala Thr Ser Gln Ala Thr Pro
305 310 315

<210> 11731
<211> 317
<212> PRT
<213> Homo sapiens

<220>
<221> source
<223> /note="Payload ID: 2316"

<220>
<221> source
<223> /note="Gene Symbol: CA5B"

<220>
<221> source
<223> /note="Gene Name:
carbonic anhydrase VB, mitochondrial"

<220>
<221> source
<223> /note="Uniprot ID: Q9Y2D0"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000417021"

<400> 11731
Met Val Val Met Asn Ser Leu Arg Val Ile Leu Gln Ala Ser Pro Gly
1 5 10 15

Lys Leu Leu Trp Arg Lys Phe Gln Ile Pro Arg Phe Met Pro Ala Arg
20 25 30

Pro Cys Ser Leu Tyr Thr Cys Thr Tyr Lys Thr Arg Asn Arg Ala Leu
35 40 45

His 50	Pro	Leu	Trp	Glu	Ser	Val 55	Asp	Leu	Val	Pro	Gly 60	Gly	Asp	Arg	Gln
Ser 65	Pro	Ile	Asn	Ile	Arg 70	Trp	Arg	Asp	Ser	Val 75	Tyr	Asp	Pro	Gly	Leu 80
Lys	Pro	Leu	Thr	Ile 85	Ser	Tyr	Asp	Pro	Ala 90	Thr	Cys	Leu	His	Val 95	Trp
Asn	Asn	Gly	Tyr 100	Ser	Phe	Leu	Val	Glu 105	Phe	Glu	Asp	Ser	Thr 110	Asp	Lys
Ser	Val	Ile 115	Lys	Gly	Gly	Pro	Leu 120	Glu	His	Asn	Tyr	Arg 125	Leu	Lys	Gln
Phe	His 130	Phe	His	Trp	Gly	Ala 135	Ile	Asp	Ala	Trp	Gly 140	Ser	Glu	His	Thr
Val 145	Asp	Ser	Lys	Cys	Phe 150	Pro	Ala	Glu	Leu	His 155	Leu	Val	His	Trp	Asn 160
Ala	Val	Arg	Phe	Glu 165	Asn	Phe	Glu	Asp	Ala 170	Ala	Leu	Glu	Glu	Asn 175	Gly
Leu	Ala	Val	Ile 180	Gly	Val	Phe	Leu	Lys 185	Leu	Gly	Lys	His	His 190	Lys	Glu
Leu	Gln	Lys 195	Leu	Val	Asp	Thr	Leu 200	Pro	Ser	Ile	Lys	His 205	Lys	Asp	Ala
Leu	Val 210	Glu	Phe	Gly	Ser	Phe 215	Asp	Pro	Ser	Cys	Leu 220	Met	Pro	Thr	Cys
Pro 225	Asp	Tyr	Trp	Thr	Tyr 230	Ser	Gly	Ser	Leu	Thr 235	Thr	Pro	Pro	Leu	Ser 240
Glu	Ser	Val	Thr	Trp 245	Ile	Ile	Lys	Lys	Gln 250	Pro	Val	Glu	Val	Asp 255	His
Asp	Gln	Leu	Glu 260	Gln	Phe	Arg	Thr	Leu 265	Leu	Phe	Thr	Ser	Glu 270	Gly	Glu

Lys Glu Lys Arg Met Val Asp Asn Phe Arg Pro Leu Gln Pro Leu Met
275 280 285

Asn Arg Thr Val Arg Ser Ser Phe Arg His Asp Tyr Val Leu Asn Val
290 295 300

Gln Ala Lys Pro Lys Pro Ala Thr Ser Gln Ala Thr Pro
305 310 315

<210> 11732

<211> 70

<212> PRT

<213> Homo sapiens

<220>

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<223> /note="Payload ID: 2316"

<220>

<221> source

<223> /note="Gene Symbol: CA5B"

<220>

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<223> /note="Gene Name:
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<220>

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<223> /note="ENSP ID: ENSP00000417236"

<220>

<221> MOD_RES

<222> (1)..(1)

<223> Any amino acid

<400> 11732

Xaa Val Asp Leu Val Pro Gly Gly Asp Arg Gln Ser Pro Ile Asn Ile
1 5 10 15

Arg Trp Arg Asp Ser Val Tyr Asp Pro Gly Leu Lys Pro Leu Thr Ile
20 25 30

Ser Tyr Asp Pro Ala Thr Cys Leu His Val Trp Asn Asn Gly Tyr Ser
35 40 45

Phe Leu Val Glu Phe Glu Asp Ser Thr Asp Lys Ser Glu Cys Ala Pro
50 55 60

Phe Ser Thr Gly Ser Pro
65 70

<210> 11733
<211> 136
<212> PRT
<213> Homo sapiens

<220>
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<220>
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<223> /note="Gene Symbol: CA5B"

<220>
<221> source
<223> /note="Gene Name:
carbonic anhydrase VB, mitochondrial"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000417553"

<400> 11733
Met Val Val Met Asn Ser Leu Arg Val Ile Leu Gln Ala Ser Pro Gly
1 5 10 15

Lys Leu Leu Trp Arg Lys Phe Gln Ile Pro Arg Phe Met Pro Ala Arg
20 25 30

Pro Cys Ser Leu Tyr Thr Cys Thr Tyr Lys Thr Arg Asn Arg Ala Leu
35 40 45

His Pro Leu Trp Glu Ser Val Asp Leu Val Pro Gly Gly Asp Arg Gln
50 55 60

Ser Pro Ile Asn Ile Arg Trp Arg Asp Ser Val Tyr Asp Pro Gly Leu
65 70 75 80

Lys Pro Leu Thr Ile Ser Tyr Asp Pro Ala Thr Cys Leu His Val Trp
85 90 95

Asn Asn Gly Tyr Ser Phe Leu Val Glu Phe Glu Asp Ser Thr Asp Lys
100 105 110

Ser Val Ile Lys Gly Gly Pro Leu Glu His Asn Tyr Arg Leu Lys Gln

115

120

125

Phe His Phe His Trp Gly Ala Ile
 130 135

<210> 11734

<211> 76

<212> PRT

<213> Homo sapiens

<220>

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<223> /note="Payload ID: 2316"

<220>

<221> source

<223> /note="Gene Symbol: CA5B"

<220>

<221> source

<223> /note="Gene Name:
 carbonic anhydrase VB, mitochondrial"

<220>

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<223> /note="ENSP ID: ENSP00000418622"

<400> 11734

Met Val Val Met Asn Ser Leu Arg Val Ile Leu Gln Ala Ser Pro Gly
 1 5 10 15

Lys Leu Leu Trp Arg Lys Phe Gln Ile Pro Arg Phe Met Pro Ala Arg
 20 25 30

Pro Cys Ser Leu Tyr Thr Cys Thr Tyr Lys Thr Arg Asn Arg Ala Leu
 35 40 45

His Pro Leu Trp Glu Ser Val Asp Leu Val Pro Gly Gly Asp Arg Gln
 50 55 60

Ser Pro Ile Asn Ile Arg Trp Arg Asp Ser Val Tyr
 65 70 75

<210> 11735

<211> 313

<212> PRT

<213> Homo sapiens

<220>

<221> source

26165

<223> /note="Payload ID: 2317"

<220>

<221> source

<223> /note="Gene Symbol: CA6"

<220>

<221> source

<223> /note="Gene Name:
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<220>

<221> source

<223> /note="Uniprot ID: P23280"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000366654"

<400> 11735

Met Arg Ala Leu Val Leu Leu Leu Ser Leu Phe Leu Leu Gly Gly Gln
1 5 10 15

Ala Gln His Val Ser Asp Trp Thr Tyr Ser Glu Gly Ala Leu Asp Glu
20 25 30

Ala His Trp Pro Gln His Tyr Pro Ala Cys Gly Gly Gln Arg Gln Ser
35 40 45

Pro Ile Asn Leu Gln Arg Thr Lys Val Arg Tyr Asn Pro Ser Leu Lys
50 55 60

Gly Leu Asn Met Thr Gly Tyr Glu Thr Gln Ala Gly Glu Phe Pro Met
65 70 75 80

Val Asn Asn Gly His Thr Val Gln Ile Ser Leu Pro Ser Thr Met Arg
85 90 95

Met Thr Val Ala Asp Gly Thr Val Tyr Ile Ala Gln Gln Met His Phe
100 105 110

His Trp Gly Gly Ala Ser Ser Glu Ile Ser Gly Ser Glu His Thr Val
115 120 125

Asp Gly Ile Arg His Val Ile Glu Ile His Ile Val His Tyr Asn Ser
130 135 140

Lys Tyr Lys Ser Tyr Asp Ile Ala Gln Asp Ala Pro Asp Gly Leu Ala

145		150		155		160										
Val	Leu	Ala	Ala	Phe	Val	Tyr	Glu	Val	Lys	Asn	Tyr	Pro	Glu	Asn	Thr	Tyr
				165						170					175	
Tyr	Ser	Asn	Phe	Ile	Ser	His	Leu	Ala	Asn	Ile	Lys	Tyr	Pro	Gly	Gln	
			180					185					190			
Arg	Thr	Thr	Leu	Thr	Gly	Leu	Asp	Val	Gln	Asp	Met	Leu	Pro	Arg	Asn	
		195					200					205				
Leu	Gln	His	Tyr	Tyr	Thr	Tyr	His	Gly	Ser	Leu	Thr	Thr	Pro	Pro	Cys	
	210					215					220					
Thr	Glu	Asn	Val	His	Trp	Phe	Val	Leu	Ala	Asp	Phe	Val	Lys	Leu	Ser	
225					230					235					240	
Arg	Thr	Gln	Val	Trp	Lys	Leu	Glu	Asn	Ser	Leu	Leu	Asp	His	Arg	Asn	
				245					250					255		
Lys	Thr	Ile	His	Asn	Asp	Tyr	Arg	Arg	Thr	Gln	Pro	Leu	Asn	His	Arg	
			260				265						270			
Val	Val	Glu	Ser	Asn	Phe	Pro	Asn	Gln	Gly	Lys	Gly	His	Gly	Gly	His	
		275					280					285				
Arg	Gly	Arg	Ser	Gln	Asn	Pro	Arg	Val	Gln	Pro	Thr	Ser	Thr	Arg	His	
	290					295					300					
Pro	Leu	Ala	Leu	Gly	Ser	Leu	Glu	Ala								
305					310											

<210> 11736
 <211> 248
 <212> PRT
 <213> Homo sapiens

<220>
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 <223> /note="Payload ID: 2317"

<220>
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 <223> /note="Gene Symbol: CA6"

<220>

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<221> source
<223> /note="Gene Name:
        carbonic anhydrase VI"

<220>
<221> source
<223> /note="Uniprot ID: P23280"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000366661"

<400> 11736
Met Arg Ala Leu Val Leu Leu Leu Ser Leu Phe Leu Leu Gly Gly Gln
1          5          10

Ala Gln His Val Ser Asp Trp Thr Tyr Ser Val Gln Ile Ser Leu Pro
          20          25          30

Ser Thr Met Arg Met Thr Val Ala Asp Gly Thr Val Tyr Ile Ala Gln
          35          40          45

Gln Met His Phe His Trp Gly Gly Ala Ser Ser Glu Ile Ser Gly Ser
          50          55          60

Glu His Thr Val Asp Gly Ile Arg His Val Ile Glu Ile His Ile Val
65          70          75          80

His Tyr Asn Ser Lys Tyr Lys Ser Tyr Asp Ile Ala Gln Asp Ala Pro
          85          90          95

Asp Gly Leu Ala Val Leu Ala Ala Phe Val Glu Val Lys Asn Tyr Pro
          100          105          110

Glu Asn Thr Tyr Tyr Ser Asn Phe Ile Ser His Leu Ala Asn Ile Lys
          115          120          125

Tyr Pro Gly Gln Arg Thr Thr Leu Thr Gly Leu Asp Val Gln Asp Met
          130          135          140

Leu Pro Arg Asn Leu Gln His Tyr Tyr Thr Tyr His Gly Ser Leu Thr
145          150          155          160

Thr Pro Pro Cys Thr Glu Asn Val His Trp Phe Val Leu Ala Asp Phe
          165          170          175

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Val Lys Leu Ser Arg Thr Gln Val Trp Lys Leu Glu Asn Ser Leu Leu
180 185 190

Asp His Arg Asn Lys Thr Ile His Asn Asp Tyr Arg Arg Thr Gln Pro
195 200 205

Leu Asn His Arg Val Val Glu Ser Asn Phe Pro Asn Gln Glu Tyr Thr
210 215 220

Leu Gly Ser Glu Phe Gln Phe Tyr Leu His Lys Ile Glu Glu Ile Leu
225 230 235 240

Asp Tyr Leu Arg Arg Ala Leu Asn
245

<210> 11737
<211> 308
<212> PRT
<213> Homo sapiens

<220>
<221> source
<223> /note="Payload ID: 2317"

<220>
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<223> /note="Gene Symbol: CA6"

<220>
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<223> /note="Gene Name:
carbonic anhydrase VI"

<220>
<221> source
<223> /note="Uniprot ID: P23280"

<220>
<221> source
<223> /note="ENSP ID: ENSP0000036662"

<400> 11737
Met Arg Ala Leu Val Leu Leu Leu Ser Leu Phe Leu Leu Gly Gly Gln
1 5 10 15

Ala Gln His Val Ser Asp Trp Thr Tyr Ser Glu Gly Ala Leu Asp Glu
20 25 30

Ala His Trp Pro Gln His Tyr Pro Ala Cys Gly Gly Gln Arg Gln Ser
35 40 45

Pro	Ile	Asn	Leu	Gln	Arg	Thr	Lys	Val	Arg	Tyr	Asn	Pro	Ser	Leu	Lys
50						55					60				
Gly	Leu	Asn	Met	Thr	Gly	Tyr	Glu	Thr	Gln	Ala	Gly	Glu	Phe	Pro	Met
65					70					75					80
Val	Asn	Asn	Gly	His	Thr	Val	Gln	Ile	Ser	Leu	Pro	Ser	Thr	Met	Arg
				85					90					95	
Met	Thr	Val	Ala	Asp	Gly	Thr	Val	Tyr	Ile	Ala	Gln	Gln	Met	His	Phe
			100					105					110		
His	Trp	Gly	Gly	Ala	Ser	Ser	Glu	Ile	Ser	Gly	Ser	Glu	His	Thr	Val
		115					120					125			
Asp	Gly	Ile	Arg	His	Val	Ile	Glu	Ile	His	Ile	Val	His	Tyr	Asn	Ser
	130					135					140				
Lys	Tyr	Lys	Ser	Tyr	Asp	Ile	Ala	Gln	Asp	Ala	Pro	Asp	Gly	Leu	Ala
145					150					155					160
Val	Leu	Ala	Ala	Phe	Val	Glu	Val	Lys	Asn	Tyr	Pro	Glu	Asn	Thr	Tyr
				165					170					175	
Tyr	Ser	Asn	Phe	Ile	Ser	His	Leu	Ala	Asn	Ile	Lys	Tyr	Pro	Gly	Gln
			180					185					190		
Arg	Thr	Thr	Leu	Thr	Gly	Leu	Asp	Val	Gln	Asp	Met	Leu	Pro	Arg	Asn
		195					200					205			
Leu	Gln	His	Tyr	Tyr	Thr	Tyr	His	Gly	Ser	Leu	Thr	Thr	Pro	Pro	Cys
	210					215					220				
Thr	Glu	Asn	Val	His	Trp	Phe	Val	Leu	Ala	Asp	Phe	Val	Lys	Leu	Ser
225					230					235					240
Arg	Thr	Gln	Val	Trp	Lys	Leu	Glu	Asn	Ser	Leu	Leu	Asp	His	Arg	Asn
				245					250					255	
Lys	Thr	Ile	His	Asn	Asp	Tyr	Arg	Arg	Thr	Gln	Pro	Leu	Asn	His	Arg
			260					265					270		

Val Val Glu Ser Asn Phe Pro Asn Gln Glu Tyr Thr Leu Gly Ser Glu
275 280 285

Phe Gln Phe Tyr Leu His Lys Ile Glu Glu Ile Leu Asp Tyr Leu Arg
290 295 300

Arg Ala Leu Asn
305

<210> 11738
<211> 179
<212> PRT
<213> Homo sapiens

<220>
<221> source
<223> /note="Payload ID: 2317"

<220>
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<223> /note="Gene Symbol: CA6"

<220>
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<223> /note="Gene Name:
carbonic anhydrase VI"

<220>
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<223> /note="ENSP ID: ENSP00000435280"

<400> 11738
Met Arg Ala Leu Val Leu Leu Leu Ser Leu Phe Leu Leu Gly Gly Gln
1 5 10 15

Ala Gln His Val Ser Asp Trp Thr Tyr Ser Glu Gly Ala Leu Asp Glu
20 25 30

Ala His Trp Pro Gln His Tyr Pro Ala Cys Gly Gly Gln Arg Gln Ser
35 40 45

Pro Ile Asn Leu Gln Arg Thr Lys Val Arg Tyr Asn Pro Ser Leu Lys
50 55 60

Gly Leu Asn Met Thr Gly Tyr Glu Thr Gln Ala Gly Glu Phe Pro Met
65 70 75 80

Val Asn Asn Gly His Thr Asp Trp Gln Ala Glu Leu Phe Leu Pro Ser
26171

85

90

95

Leu Ser Ser Pro Cys Gly Glu Gly Ala Lys His Lys Gly Gln Arg Gln
 100 105 110

Trp Leu Cys Ser Pro Ser Leu Asp Ser Trp Trp Glu Ala Ile Ile Asp
 115 120 125

Gly Gly Ser Leu Trp Ala Thr Leu Ala Glu Cys Gly Leu Arg Ala Glu
 130 135 140

Gly Pro Glu Glu Gly Arg His Met Glu Glu Lys Ser Pro Ala Ser Gln
 145 150 155 160

Gly Ala Cys Ser Gly Ser Arg Leu Pro Ile Ser Arg Gly Pro Cys Thr
 165 170 175

Phe Phe Leu

<210> 11739

<211> 187

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2317"

<220>

<221> source

<223> /note="Gene Symbol: CA6"

<220>

<221> source

<223> /note="Gene Name:
 carbonic anhydrase VI"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000447108"

<400> 11739

Met Arg Ala Leu Val Leu Leu Leu Ser Leu Phe Leu Leu Gly Gly Gln
 1 5 10 15

Ala Gln His Val Ser Asp Trp Thr Tyr Ser Glu Gly Ala Leu Asp Glu
 20 25 30

26172

carbonic anhydrase VII"

<220>

<221> source

<223> /note="Uniprot ID: P43166"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000345659"

<400> 11740

Met Thr Gly His His Gly Trp Gly Tyr Gly Gln Asp Asp Gly Pro Ser
1 5 10 15

His Trp His Lys Leu Tyr Pro Ile Ala Gln Gly Asp Arg Gln Ser Pro
20 25 30

Ile Asn Ile Ile Ser Ser Gln Ala Val Tyr Ser Pro Ser Leu Gln Pro
35 40 45

Leu Glu Leu Ser Tyr Glu Ala Cys Met Ser Leu Ser Ile Thr Asn Asn
50 55 60

Gly His Ser Val Gln Val Asp Phe Asn Asp Ser Asp Asp Arg Thr Val
65 70 75 80

Val Thr Gly Gly Pro Leu Glu Gly Pro Tyr Arg Leu Lys Gln Phe His
85 90 95

Phe His Trp Gly Lys Lys His Asp Val Gly Ser Glu His Thr Val Asp
100 105 110

Gly Lys Ser Phe Pro Ser Glu Leu His Leu Val His Trp Asn Ala Lys
115 120 125

Lys Tyr Ser Thr Phe Gly Glu Ala Ala Ser Ala Pro Asp Gly Leu Ala
130 135 140

Val Val Gly Val Phe Leu Glu Thr Gly Asp Glu His Pro Ser Met Asn
145 150 155 160

Arg Leu Thr Asp Ala Leu Tyr Met Val Arg Phe Lys Gly Thr Lys Ala
165 170 175

Gln Phe Ser Cys Phe Asn Pro Lys Cys Leu Leu Pro Ala Ser Arg His
180 185 190

Tyr Trp Thr Tyr Pro Gly Ser Leu Thr Thr Pro Pro Leu Ser Glu Ser
195 200 205

Val Thr Trp Ile Val Leu Arg Glu Pro Ile Cys Ile Ser Glu Arg Gln
210 215 220

Met Gly Lys Phe Arg Ser Leu Leu Phe Thr Ser Glu Asp Asp Glu Arg
225 230 235 240

Ile His Met Val Asn Asn Phe Arg Pro Pro Gln Pro Leu Lys Gly Arg
245 250 255

Val Val Lys Ala Ser Phe Arg Ala
260

<210> 11741
<211> 208
<212> PRT
<213> Homo sapiens

<220>
<221> source
<223> /note="Payload ID: 2318"

<220>
<221> source
<223> /note="Gene Symbol: CA7"

<220>
<221> source
<223> /note="Gene Name:
carbonic anhydrase VII"

<220>
<221> source
<223> /note="Uniprot ID: P43166"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000377632"

<400> 11741
Met Ser Leu Ser Ile Thr Asn Asn Gly His Ser Val Gln Val Asp Phe
1 5 10 15

Asn Asp Ser Asp Asp Arg Thr Val Val Thr Gly Gly Pro Leu Glu Gly
20 25 30

<220>
 <221> source
 <223> /note="Gene Name:
 carbonic anhydrase VII"

<220>
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 <223> /note="ENSP ID: ENSP00000447178"

<400> 11742
 Met Ser Leu Ser Ile Thr Asn Asn Gly His Ser Val Gln Val Asp Phe
 1 5 10 15

Asn Asp Ser Asp Asp Arg Thr Ala Ala Ser Gly Ser Leu Glu Cys Gln
 20 25 30

Glu Val Gln His Phe Trp Gly Gly Gly Leu Ser Thr
 35 40

<210> 11743
 <211> 290
 <212> PRT
 <213> Homo sapiens

<220>
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 <223> /note="Payload ID: 2319"

<220>
 <221> source
 <223> /note="Gene Symbol: CA8"

<220>
 <221> source
 <223> /note="Gene Name:
 carbonic anhydrase VIII"

<220>
 <221> source
 <223> /note="Uniprot ID: P35219"

<220>
 <221> source
 <223> /note="ENSP ID: ENSP00000314407"

<400> 11743
 Met Ala Asp Leu Ser Phe Ile Glu Asp Thr Val Ala Phe Pro Glu Lys
 1 5 10 15

Glu Glu Asp Glu Glu Glu Glu Glu Gly Val Glu Trp Gly Tyr Glu
 20 25 30

Glu Gly Val Glu Trp Gly Leu Val Phe Pro Asp Ala Asn Gly Glu Tyr
 35 40 45

Gln Ser Pro Ile Asn Leu Asn Ser Arg Glu Ala Arg Tyr Asp Pro Ser
 50 55 60

Leu Leu Asp Val Arg Leu Ser Pro Asn Tyr Val Val Cys Arg Asp Cys
 65 70 75 80

Glu Val Thr Asn Asp Gly His Thr Ile Gln Val Ile Leu Lys Ser Lys
 85 90 95

Ser Val Leu Ser Gly Gly Pro Leu Pro Gln Gly His Glu Phe Glu Leu
 100 105 110

Tyr Glu Val Arg Phe His Trp Gly Arg Glu Asn Gln Arg Gly Ser Glu
 115 120 125

His Thr Val Asn Phe Lys Ala Phe Pro Met Glu Leu His Leu Ile His
 130 135 140

Trp Asn Ser Thr Leu Phe Gly Ser Ile Asp Glu Ala Val Gly Lys Pro
 145 150 155 160

His Gly Ile Ala Ile Ile Ala Leu Phe Val Gln Ile Gly Lys Glu His
 165 170 175

Val Gly Leu Lys Ala Val Thr Glu Ile Leu Gln Asp Ile Gln Tyr Lys
 180 185 190

Gly Lys Ser Lys Thr Ile Pro Cys Phe Asn Pro Asn Thr Leu Leu Pro
 195 200 205

Asp Pro Leu Leu Arg Asp Tyr Trp Val Tyr Glu Gly Ser Leu Thr Ile
 210 215 220

Pro Pro Cys Ser Glu Gly Val Thr Trp Ile Leu Phe Arg Tyr Pro Leu
 225 230 235 240

Thr Ile Ser Gln Leu Gln Ile Glu Glu Phe Arg Arg Leu Arg Thr His
 245 250 255

Val Lys Gly Ala Glu Leu Val Glu Gly Cys Asp Gly Ile Leu Gly Asp

260

265

270

Asn Phe Arg Pro Thr Gln Pro Leu Ser Asp Arg Val Ile Arg Ala Ala
 275 280 285

Phe Gln
 290

<210> 11744
 <211> 328
 <212> PRT
 <213> Homo sapiens

<220>
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 <223> /note="Payload ID: 2320"

<220>
 <221> source
 <223> /note="Gene Symbol: CA10"

<220>
 <221> source
 <223> /note="Gene Name:
 carbonic anhydrase X"

<220>
 <221> source
 <223> /note="Uniprot ID: Q9NS85"

<220>
 <221> source
 <223> /note="ENSP ID: ENSP00000285273"

<400> 11744
 Met Glu Ile Val Trp Glu Val Leu Phe Leu Leu Gln Ala Asn Phe Ile
 1 5 10 15

Val Cys Ile Ser Ala Gln Gln Asn Ser Pro Lys Ile His Glu Gly Trp
 20 25 30

Trp Ala Tyr Lys Glu Val Val Gln Gly Ser Phe Val Pro Val Pro Ser
 35 40 45

Phe Trp Gly Leu Val Asn Ser Ala Trp Asn Leu Cys Ser Val Gly Lys
 50 55 60

Arg Gln Ser Pro Val Asn Ile Glu Thr Ser His Met Ile Phe Asp Pro
 65 70 75 80

26179

Phe	Leu	Thr	Pro	Leu	Arg	Ile	Asn	Thr	Gly	Gly	Arg	Lys	Val	Ser	Gly	85	90	95
Thr	Met	Tyr	Asn	Thr	Gly	Arg	His	Val	Ser	Leu	Arg	Leu	Asp	Lys	Glu	100	105	110
His	Leu	Val	Asn	Ile	Ser	Gly	Gly	Pro	Met	Thr	Tyr	Ser	His	Arg	Leu	115	120	125
Glu	Glu	Ile	Arg	Leu	His	Phe	Gly	Ser	Glu	Asp	Ser	Gln	Gly	Ser	Glu	130	135	140
His	Leu	Leu	Asn	Gly	Gln	Ala	Phe	Ser	Gly	Glu	Val	Gln	Leu	Ile	His	145	150	155
Tyr	Asn	His	Glu	Leu	Tyr	Thr	Asn	Val	Thr	Glu	Ala	Ala	Lys	Ser	Pro	165	170	175
Asn	Gly	Leu	Val	Val	Val	Ser	Ile	Phe	Ile	Lys	Val	Ser	Asp	Ser	Ser	180	185	190
Asn	Pro	Phe	Leu	Asn	Arg	Met	Leu	Asn	Arg	Asp	Thr	Ile	Thr	Arg	Ile	195	200	205
Thr	Tyr	Lys	Asn	Asp	Ala	Tyr	Leu	Leu	Gln	Gly	Leu	Asn	Ile	Glu	Glu	210	215	220
Leu	Tyr	Pro	Glu	Thr	Ser	Ser	Phe	Ile	Thr	Tyr	Asp	Gly	Ser	Met	Thr	225	230	235
Ile	Pro	Pro	Cys	Tyr	Glu	Thr	Ala	Ser	Trp	Ile	Ile	Met	Asn	Lys	Pro	245	250	255
Val	Tyr	Ile	Thr	Arg	Met	Gln	Met	His	Ser	Leu	Arg	Leu	Leu	Ser	Gln	260	265	270
Asn	Gln	Pro	Ser	Gln	Ile	Phe	Leu	Ser	Met	Ser	Asp	Asn	Phe	Arg	Pro	275	280	285
Val	Gln	Pro	Leu	Asn	Asn	Arg	Cys	Ile	Arg	Thr	Asn	Ile	Asn	Phe	Ser	290	295	300

Leu Gln Gly Lys Asp Cys Pro Asn Asn Arg Ala Gln Lys Leu Gln Tyr
305 310 315 320

Arg Val Asn Glu Trp Leu Leu Lys
325

<210> 11745

<211> 328

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2320"

<220>

<221> source

<223> /note="Gene Symbol: CA10"

<220>

<221> source

<223> /note="Gene Name:
carbonic anhydrase X"

<220>

<221> source

<223> /note="Uniprot ID: Q9NS85"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000390666"

<400> 11745

Met Glu Ile Val Trp Glu Val Leu Phe Leu Leu Gln Ala Asn Phe Ile
1 5 10 15

Val Cys Ile Ser Ala Gln Gln Asn Ser Pro Lys Ile His Glu Gly Trp
20 25 30

Trp Ala Tyr Lys Glu Val Val Gln Gly Ser Phe Val Pro Val Pro Ser
35 40 45

Phe Trp Gly Leu Val Asn Ser Ala Trp Asn Leu Cys Ser Val Gly Lys
50 55 60

Arg Gln Ser Pro Val Asn Ile Glu Thr Ser His Met Ile Phe Asp Pro
65 70 75 80

Phe Leu Thr Pro Leu Arg Ile Asn Thr Gly Gly Arg Lys Val Ser Gly
85 90 95

Thr	Met	Tyr	Asn	Thr	Gly	Arg	His	Val	Ser	Leu	Arg	Leu	Asp	Lys	Glu			
			100					105					110					
His	Leu	Val	Asn	Ile	Ser	Gly	Gly	Pro	Met	Thr	Tyr	Ser	His	Arg	Leu			
		115					120					125						
Glu	Glu	Ile	Arg	Leu	His	Phe	Gly	Ser	Glu	Asp	Ser	Gln	Gly	Ser	Glu			
	130					135					140							
His	Leu	Leu	Asn	Gly	Gln	Ala	Phe	Ser	Gly	Glu	Val	Gln	Leu	Ile	His			
145					150					155					160			
Tyr	Asn	His	Glu	Leu	Tyr	Thr	Asn	Val	Thr	Glu	Ala	Ala	Lys	Ser	Pro			
				165					170					175				
Asn	Gly	Leu	Val	Val	Val	Ser	Ile	Phe	Ile	Lys	Val	Ser	Asp	Ser	Ser			
			180					185					190					
Asn	Pro	Phe	Leu	Asn	Arg	Met	Leu	Asn	Arg	Asp	Thr	Ile	Thr	Arg	Ile			
		195					200					205						
Thr	Tyr	Lys	Asn	Asp	Ala	Tyr	Leu	Leu	Gln	Gly	Leu	Asn	Ile	Glu	Glu			
	210					215					220							
Leu	Tyr	Pro	Glu	Thr	Ser	Ser	Phe	Ile	Thr	Tyr	Asp	Gly	Ser	Met	Thr			
225					230					235					240			
Ile	Pro	Pro	Cys	Tyr	Glu	Thr	Ala	Ser	Trp	Ile	Ile	Met	Asn	Lys	Pro			
				245					250					255				
Val	Tyr	Ile	Thr	Arg	Met	Gln	Met	His	Ser	Leu	Arg	Leu	Leu	Ser	Gln			
			260					265					270					
Asn	Gln	Pro	Ser	Gln	Ile	Phe	Leu	Ser	Met	Ser	Asp	Asn	Phe	Arg	Pro			
		275					280					285						
Val	Gln	Pro	Leu	Asn	Asn	Arg	Cys	Ile	Arg	Thr	Asn	Ile	Asn	Phe	Ser			
	290					295					300							
Leu	Gln	Gly	Lys	Asp	Cys	Pro	Asn	Asn	Arg	Ala	Gln	Lys	Leu	Gln	Tyr			
305					310					315					320			

Arg Val Asn Glu Trp Leu Leu Lys
325

<210> 11746

<211> 328

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2320"

<220>

<221> source

<223> /note="Gene Symbol: CA10"

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<223> /note="Gene Name:
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<220>

<221> source

<223> /note="Uniprot ID: Q9NS85"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000405388"

<400> 11746

Met Glu Ile Val Trp Glu Val Leu Phe Leu Leu Gln Ala Asn Phe Ile
1 5 10 15

Val Cys Ile Ser Ala Gln Gln Asn Ser Pro Lys Ile His Glu Gly Trp
20 25 30

Trp Ala Tyr Lys Glu Val Val Gln Gly Ser Phe Val Pro Val Pro Ser
35 40 45

Phe Trp Gly Leu Val Asn Ser Ala Trp Asn Leu Cys Ser Val Gly Lys
50 55 60

Arg Gln Ser Pro Val Asn Ile Glu Thr Ser His Met Ile Phe Asp Pro
65 70 75 80

Phe Leu Thr Pro Leu Arg Ile Asn Thr Gly Gly Arg Lys Val Ser Gly
85 90 95

Thr Met Tyr Asn Thr Gly Arg His Val Ser Leu Arg Leu Asp Lys Glu

26183

[illegible]

<210> 11747
 <211> 56
 <212> PRT
 <213> Homo sapiens

 <220>
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 <223> /note="Payload ID: 2320"

 <220>
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 <220>
 <221> source
 <223> /note="Gene Name:
 carbonic anhydrase X"

 <220>
 <221> source
 <223> /note="ENSP ID: ENSP00000458145"

 <400> 11747
 His Val Ser Leu Arg Leu Asp Lys Glu His Leu Val Asn Ile Ser Gly
 1 5 10 15

 Gly Pro Met Thr Tyr Ser His Arg Leu Glu Glu Ile Arg Leu His Phe
 20 25 30

 Gly Ser Glu Asp Ser Gln Gly Ser Glu His Leu Leu Asn Gly Gln Ala
 35 40 45

 Phe Ser Gly Glu Glu Lys Val Cys
 50 55

 <210> 11748
 <211> 253
 <212> PRT
 <213> Homo sapiens

 <220>
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 <220>
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carbonic anhydrase X"

<220>

<221> source

<223> /note="Uniprot ID: Q9NS85"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000459619"

<400> 11748

Met Ile Phe Asp Pro Phe Leu Thr Pro Leu Arg Ile Asn Thr Gly Gly
1 5 10 15

Arg Lys Val Ser Gly Thr Met Tyr Asn Thr Gly Arg His Val Ser Leu
20 25 30

Arg Leu Asp Lys Glu His Leu Val Asn Ile Ser Gly Gly Pro Met Thr
35 40 45

Tyr Ser His Arg Leu Glu Glu Ile Arg Leu His Phe Gly Ser Glu Asp
50 55 60

Ser Gln Gly Ser Glu His Leu Leu Asn Gly Gln Ala Phe Ser Gly Glu
65 70 75 80

Val Gln Leu Ile His Tyr Asn His Glu Leu Tyr Thr Asn Val Thr Glu
85 90 95

Ala Ala Lys Ser Pro Asn Gly Leu Val Val Val Ser Ile Phe Ile Lys
100 105 110

Val Ser Asp Ser Ser Asn Pro Phe Leu Asn Arg Met Leu Asn Arg Asp
115 120 125

Thr Ile Thr Arg Ile Thr Tyr Lys Asn Asp Ala Tyr Leu Leu Gln Gly
130 135 140

Leu Asn Ile Glu Glu Leu Tyr Pro Glu Thr Ser Ser Phe Ile Thr Tyr
145 150 155 160

Asp Gly Ser Met Thr Ile Pro Pro Cys Tyr Glu Thr Ala Ser Trp Ile
165 170 175

Ile Met Asn Lys Pro Val Tyr Ile Thr Arg Met Gln Met His Ser Leu
180 185 190

Arg Leu Leu Ser Gln Asn Gln Pro Ser Gln Ile Phe Leu Ser Met Ser
195 200 205

Asp Asn Phe Arg Pro Val Gln Pro Leu Asn Asn Arg Cys Ile Arg Thr
210 215 220

Asn Ile Asn Phe Ser Leu Gln Gly Lys Asp Cys Pro Asn Asn Arg Ala
225 230 235 240

Gln Lys Leu Gln Tyr Arg Val Asn Glu Trp Leu Leu Lys
245 250

<210> 11749
<211> 276
<212> PRT
<213> Homo sapiens

<220>
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<220>
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<223> /note="Gene Symbol: CA10"

<220>
<221> source
<223> /note="Gene Name:
carbonic anhydrase X"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000460238"

<400> 11749
Met Glu Ile Val Trp Glu Val Leu Phe Leu Leu Gln Ala Asn Phe Ile
1 5 10 15

Val Cys Ile Ser Ala Gln Gln Asn Ser Pro Lys Ile His Glu Gly Trp
20 25 30

Trp Ala Tyr Lys Glu Val Val Gln Gly Ser Phe Val Pro Val Pro Ser
35 40 45

Phe Trp Gly Leu Val Asn Ser Ala Trp Asn Leu Cys Ser Val Gly Lys
50 55 60

Arg Gln Ser Pro Val Asn Ile Glu Thr Ser His Met Ile Phe Asp Pro
65 70 75 80

Phe Leu Thr Pro Leu Arg Ile Asn Thr Gly Gly Arg Lys Val Ser Gly
85 90 95

Thr Met Tyr Asn Thr Gly Arg His Val Ser Leu Arg Leu Asp Lys Glu
100 105 110

His Leu Val Asn Ile Ser Gly Gly Pro Met Thr Tyr Ser His Arg Leu
115 120 125

Glu Glu Ile Arg Leu His Phe Gly Ser Glu Asp Ser Gln Gly Ser Glu
130 135 140

His Leu Leu Asn Gly Gln Ala Phe Ser Gly Glu Val Gln Leu Ile His
145 150 155 160

Tyr Asn His Glu Leu Tyr Thr Asn Val Thr Glu Ala Ala Lys Ser Pro
165 170 175

Asn Gly Leu Val Val Val Ser Ile Phe Ile Lys Val Ser Asp Ser Ser
180 185 190

Asn Pro Phe Leu Asn Arg Met Leu Asn Arg Asp Thr Ile Thr Arg Ile
195 200 205

Thr Tyr Lys Asn Asp Ala Tyr Leu Leu Gln Gly Leu Asn Ile Glu Glu
210 215 220

Leu Tyr Pro Glu Thr Ser Ser Phe Ile Thr Tyr Asp Gly Ser Met Thr
225 230 235 240

Ile Pro Pro Cys Tyr Glu Thr Ala Ser Trp Ile Ile Met Asn Lys Pro
245 250 255

Val Tyr Ile Thr Arg Met Gln Met His Ser Leu Arg Leu Leu Ser Gln
260 265 270

Asn Gln Pro Ser
275

<210> 11750

<211> 42
<212> PRT
<213> Homo sapiens

<220>
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<223> /note="Payload ID: 2320"

<220>
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<223> /note="Gene Symbol: CA10"

<220>
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<223> /note="Gene Name:
carbonic anhydrase X"

<220>
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<400> 11750
Met Glu Ile Val Trp Glu Val Leu Phe Leu Leu Gln Ala Asn Phe Ile
1 5 10 15

Val Cys Ile Ser Gly Asp Leu Arg Arg Ala Val Arg Arg Leu Trp Trp
20 25 30

Gln Ser Gly Leu Glu Met Gln Val Thr Cys
35 40

<210> 11751
<211> 328
<212> PRT
<213> Homo sapiens

<220>
<221> source
<223> /note="Payload ID: 2321"

<220>
<221> source
<223> /note="Gene Symbol: CA11"

<220>
<221> source
<223> /note="Gene Name:
carbonic anhydrase XI"

<220>
<221> source
<223> /note="Uniprot ID: O75493"

<220>

<221> source
<223> /note="ENSP ID: ENSP00000084798"

<400> 11751

Met Gly Ala Ala Ala Arg Leu Ser Ala Pro Arg Ala Leu Val Leu Trp
1 5 10 15

Ala Ala Leu Gly Ala Ala Ala His Ile Gly Pro Ala Pro Asp Pro Glu
20 25 30

Asp Trp Trp Ser Tyr Lys Asp Asn Leu Gln Gly Asn Phe Val Pro Gly
35 40 45

Pro Pro Phe Trp Gly Leu Val Asn Ala Ala Trp Ser Leu Cys Ala Val
50 55 60

Gly Lys Arg Gln Ser Pro Val Asp Val Glu Leu Lys Arg Val Leu Tyr
65 70 75 80

Asp Pro Phe Leu Pro Pro Leu Arg Leu Ser Thr Gly Gly Glu Lys Leu
85 90 95

Arg Gly Thr Leu Tyr Asn Thr Gly Arg His Val Ser Phe Leu Pro Ala
100 105 110

Pro Arg Pro Val Val Asn Val Ser Gly Gly Pro Leu Leu Tyr Ser His
115 120 125

Arg Leu Ser Glu Leu Arg Leu Leu Phe Gly Ala Arg Asp Gly Ala Gly
130 135 140

Ser Glu His Gln Ile Asn His Gln Gly Phe Ser Ala Glu Val Gln Leu
145 150 155 160

Ile His Phe Asn Gln Glu Leu Tyr Gly Asn Phe Ser Ala Ala Ser Arg
165 170 175

Gly Pro Asn Gly Leu Ala Ile Leu Ser Leu Phe Val Asn Val Ala Ser
180 185 190

Thr Ser Asn Pro Phe Leu Ser Arg Leu Leu Asn Arg Asp Thr Ile Thr
195 200 205

Arg Ile Ser Tyr Lys Asn Asp Ala Tyr Phe Leu Gln Asp Leu Ser Leu

210					215					220					
Glu	Leu	Leu	Phe	Pro	Glu	Ser	Phe	Gly	Phe	Ile	Thr	Tyr	Gln	Gly	Ser
225					230					235					240
Leu	Ser	Thr	Pro	Pro	Cys	Ser	Glu	Thr	Val	Thr	Trp	Ile	Leu	Ile	Asp
				245					250					255	
Arg	Ala	Leu	Asn	Ile	Thr	Ser	Leu	Gln	Met	His	Ser	Leu	Arg	Leu	Leu
			260					265					270		
Ser	Gln	Asn	Pro	Pro	Ser	Gln	Ile	Phe	Gln	Ser	Leu	Ser	Gly	Asn	Ser
		275					280					285			
Arg	Pro	Leu	Gln	Pro	Leu	Ala	His	Arg	Ala	Leu	Arg	Gly	Asn	Arg	Asp
	290					295					300				
Pro	Arg	His	Pro	Glu	Arg	Arg	Cys	Arg	Gly	Pro	Asn	Tyr	Arg	Leu	His
305					310					315					320
Val	Asp	Gly	Val	Pro	His	Gly	Arg								
				325											

<210> 11752
 <211> 113
 <212> PRT
 <213> Homo sapiens

<220>
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<220>
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 <223> /note="Gene Symbol: CA11"

<220>
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 <223> /note="Gene Name:
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<220>
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 <223> /note="ENSP ID: ENSP00000469234"

<220>
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 <222> (1)..(1)

<223> Any amino acid

<400> 11752

Xaa Asp Ala Tyr Phe Leu Gln Asp Leu Ser Leu Glu Leu Leu Phe Pro
1 5 10 15

Glu Ser Phe Gly Phe Ile Thr Tyr Gln Gly Ser Leu Ser Thr Pro Pro
20 25 30

Cys Ser Glu Thr Val Thr Trp Ile Leu Ile Asp Arg Ala Leu Asn Ile
35 40 45

Thr Ser Leu Gln Met His Ser Leu Arg Leu Leu Ser Gln Asn Pro Pro
50 55 60

Ser Gln Ile Phe Gln Ser Leu Ser Gly Asn Ser Arg Pro Leu Gln Pro
65 70 75 80

Leu Ala His Arg Ala Leu Arg Gly Asn Arg Asp Pro Arg His Pro Glu
85 90 95

Arg Arg Cys Arg Gly Pro Asn Tyr Arg Leu His Ala Gln Cys Phe Ser
100 105 110

Thr

<210> 11753

<211> 354

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2322"

<220>

<221> source

<223> /note="Gene Symbol: CA12"

<220>

<221> source

<223> /note="Gene Name:
carbonic anhydrase XII"

<220>

<221> source

<223> /note="Uniprot ID: O43570"

<220>
 <221> source
 <223> /note="ENSP ID: ENSP00000178638"

<400> 11753

Met Pro Arg Arg Ser Leu His Ala Ala Ala Val Leu Leu Leu Val Ile
 1 5 10 15

Leu Lys Glu Gln Pro Ser Ser Pro Ala Pro Val Asn Gly Ser Lys Trp
 20 25 30

Thr Tyr Phe Gly Pro Asp Gly Glu Asn Ser Trp Ser Lys Lys Tyr Pro
 35 40 45

Ser Cys Gly Gly Leu Leu Gln Ser Pro Ile Asp Leu His Ser Asp Ile
 50 55 60

Leu Gln Tyr Asp Ala Ser Leu Thr Pro Leu Glu Phe Gln Gly Tyr Asn
 65 70 75 80

Leu Ser Ala Asn Lys Gln Phe Leu Leu Thr Asn Asn Gly His Ser Val
 85 90 95

Lys Leu Asn Leu Pro Ser Asp Met His Ile Gln Gly Leu Gln Ser Arg
 100 105 110

Tyr Ser Ala Thr Gln Leu His Leu His Trp Gly Asn Pro Asn Asp Pro
 115 120 125

His Gly Ser Glu His Thr Val Ser Gly Gln His Phe Ala Ala Glu Leu
 130 135 140

His Ile Val His Tyr Asn Ser Asp Leu Tyr Pro Asp Ala Ser Thr Ala
 145 150 155 160

Ser Asn Lys Ser Glu Gly Leu Ala Val Leu Ala Val Leu Ile Glu Met
 165 170 175

Gly Ser Phe Asn Pro Ser Tyr Asp Lys Ile Phe Ser His Leu Gln His
 180 185 190

Val Lys Tyr Lys Gly Gln Glu Ala Phe Val Pro Gly Phe Asn Ile Glu
 195 200 205

Glu Leu Leu Pro Glu Arg Thr Ala Glu Tyr Tyr Arg Tyr Arg Gly Ser
210 215 220

Leu Thr Thr Pro Pro Cys Asn Pro Thr Val Leu Trp Thr Val Phe Arg
225 230 235 240

Asn Pro Val Gln Ile Ser Gln Glu Gln Leu Leu Ala Leu Glu Thr Ala
245 250 255

Leu Tyr Cys Thr His Met Asp Asp Pro Ser Pro Arg Glu Met Ile Asn
260 265 270

Asn Phe Arg Gln Val Gln Lys Phe Asp Glu Arg Leu Val Tyr Thr Ser
275 280 285

Phe Ser Gln Val Gln Val Cys Thr Ala Ala Gly Leu Ser Leu Gly Ile
290 295 300

Ile Leu Ser Leu Ala Leu Ala Gly Ile Leu Gly Ile Cys Ile Val Val
305 310 315 320

Val Val Ser Ile Trp Leu Phe Arg Arg Lys Ser Ile Lys Lys Gly Asp
325 330 335

Asn Lys Gly Val Ile Tyr Lys Pro Ala Thr Lys Met Glu Thr Glu Ala
340 345 350

His Ala

<210> 11754
<211> 343
<212> PRT
<213> Homo sapiens

<220>
<221> source
<223> /note="Payload ID: 2322"

<220>
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<223> /note="Gene Symbol: CA12"

<220>
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<223> /note="Gene Name:
carbonic anhydrase XII"

<220>
<221> source
<223> /note="Uniprot ID: O43570"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000343088"

<400> 11754
Met Pro Arg Arg Ser Leu His Ala Ala Ala Val Leu Leu Leu Val Ile
1 5 10 15

Leu Lys Glu Gln Pro Ser Ser Pro Ala Pro Val Asn Gly Ser Lys Trp
20 25 30

Thr Tyr Phe Gly Pro Asp Gly Glu Asn Ser Trp Ser Lys Lys Tyr Pro
35 40 45

Ser Cys Gly Gly Leu Leu Gln Ser Pro Ile Asp Leu His Ser Asp Ile
50 55 60

Leu Gln Tyr Asp Ala Ser Leu Thr Pro Leu Glu Phe Gln Gly Tyr Asn
65 70 75 80

Leu Ser Ala Asn Lys Gln Phe Leu Leu Thr Asn Asn Gly His Ser Val
85 90 95

Lys Leu Asn Leu Pro Ser Asp Met His Ile Gln Gly Leu Gln Ser Arg
100 105 110

Tyr Ser Ala Thr Gln Leu His Leu His Trp Gly Asn Pro Asn Asp Pro
115 120 125

His Gly Ser Glu His Thr Val Ser Gly Gln His Phe Ala Ala Glu Leu
130 135 140

His Ile Val His Tyr Asn Ser Asp Leu Tyr Pro Asp Ala Ser Thr Ala
145 150 155 160

Ser Asn Lys Ser Glu Gly Leu Ala Val Leu Ala Val Leu Ile Glu Met
165 170 175

Gly Ser Phe Asn Pro Ser Tyr Asp Lys Ile Phe Ser His Leu Gln His
180 185 190

Val Lys Tyr Lys Gly Gln Glu Ala Phe Val Pro Gly Phe Asn Ile Glu
195 200 205

Glu Leu Leu Pro Glu Arg Thr Ala Glu Tyr Tyr Arg Tyr Arg Gly Ser
210 215 220

Leu Thr Thr Pro Pro Cys Asn Pro Thr Val Leu Trp Thr Val Phe Arg
225 230 235 240

Asn Pro Val Gln Ile Ser Gln Glu Gln Leu Leu Ala Leu Glu Thr Ala
245 250 255

Leu Tyr Cys Thr His Met Asp Asp Pro Ser Pro Arg Glu Met Ile Asn
260 265 270

Asn Phe Arg Gln Val Gln Lys Phe Asp Glu Arg Leu Val Tyr Thr Ser
275 280 285

Phe Ser Gln Gly Ile Ile Leu Ser Leu Ala Leu Ala Gly Ile Leu Gly
290 295 300

Ile Cys Ile Val Val Val Val Ser Ile Trp Leu Phe Arg Arg Lys Ser
305 310 315 320

Ile Lys Lys Gly Asp Asn Lys Gly Val Ile Tyr Lys Pro Ala Thr Lys
325 330 335

Met Glu Thr Glu Ala His Ala
340

<210> 11755
<211> 283
<212> PRT
<213> Homo sapiens

<220>
<221> source
<223> /note="Payload ID: 2322"

<220>
<221> source
<223> /note="Gene Symbol: CA12"

<220>
<221> source
<223> /note="Gene Name:

carbonic anhydrase XII"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000403028"

<400> 11755

Met Pro Arg Arg Ser Leu His Ala Ala Ala Val Leu Leu Leu Val Ile
1 5 10 15

Leu Lys Glu Gln Pro Ser Ser Pro Ala Pro Val Asn Gly Ser Lys Trp
20 25 30

Thr Tyr Phe Val Lys Leu Asn Leu Pro Ser Asp Met His Ile Gln Gly
35 40 45

Leu Gln Ser Arg Tyr Ser Ala Thr Gln Leu His Leu His Trp Gly Asn
50 55 60

Pro Asn Asp Pro His Gly Ser Glu His Thr Val Ser Gly Gln His Phe
65 70 75 80

Ala Ala Glu Leu His Ile Val His Tyr Asn Ser Asp Leu Tyr Pro Asp
85 90 95

Ala Ser Thr Ala Ser Asn Lys Ser Glu Gly Leu Ala Val Leu Ala Val
100 105 110

Leu Ile Glu Met Gly Ser Phe Asn Pro Ser Tyr Asp Lys Ile Phe Ser
115 120 125

His Leu Gln His Val Lys Tyr Lys Gly Gln Glu Ala Phe Val Pro Gly
130 135 140

Phe Asn Ile Glu Glu Leu Leu Pro Glu Arg Thr Ala Glu Tyr Tyr Arg
145 150 155 160

Tyr Arg Gly Ser Leu Thr Thr Pro Pro Cys Asn Pro Thr Val Leu Trp
165 170 175

Thr Val Phe Arg Asn Pro Val Gln Ile Ser Gln Glu Gln Leu Leu Ala
180 185 190

Leu Glu Thr Ala Leu Tyr Cys Thr His Met Asp Asp Pro Ser Pro Arg
195 200 205

Glu Met Ile Asn Asn Phe Arg Gln Val Gln Lys Phe Asp Glu Arg Leu
 210 215 220

Val Tyr Thr Ser Phe Ser Gln Gly Ile Ile Leu Ser Leu Ala Leu Ala
 225 230 235 240

Gly Ile Leu Gly Ile Cys Ile Val Val Val Val Ser Ile Trp Leu Phe
 245 250 255

Arg Arg Lys Ser Ile Lys Lys Gly Asp Asn Lys Gly Val Ile Tyr Lys
 260 265 270

Pro Ala Thr Lys Met Glu Thr Glu Ala His Ala
 275 280

<210> 11756
 <211> 262
 <212> PRT
 <213> Homo sapiens

<220>
 <221> source
 <223> /note="Payload ID: 2323"

<220>
 <221> source
 <223> /note="Gene Symbol: CA13"

<220>
 <221> source
 <223> /note="Gene Name:
 carbonic anhydrase XIII"

<220>
 <221> source
 <223> /note="Uniprot ID: Q8N1Q1"

<220>
 <221> source
 <223> /note="ENSP ID: ENSP00000318912"

<400> 11756
 Met Ser Arg Leu Ser Trp Gly Tyr Arg Glu His Asn Gly Pro Ile His
 1 5 10 15

Trp Lys Glu Phe Phe Pro Ile Ala Asp Gly Asp Gln Gln Ser Pro Ile
 20 25 30

Glu Ile Lys Thr Lys Glu Val Lys Tyr Asp Ser Ser Leu Arg Pro Leu
 35 40 45

Ser Ile Lys Tyr Asp Pro Ser Ser Ala Lys Ile Ile Ser Asn Ser Gly
 50 55 60

His Ser Phe Asn Val Asp Phe Asp Asp Thr Glu Asn Lys Ser Val Leu
 65 70 75 80

Arg Gly Gly Pro Leu Thr Gly Ser Tyr Arg Leu Arg Gln Val His Leu
 85 90 95

His Trp Gly Ser Ala Asp Asp His Gly Ser Glu His Ile Val Asp Gly
 100 105 110

Val Ser Tyr Ala Ala Glu Leu His Val Val His Trp Asn Ser Asp Lys
 115 120 125

Tyr Pro Ser Phe Val Glu Ala Ala His Glu Pro Asp Gly Leu Ala Val
 130 135 140

Leu Gly Val Phe Leu Gln Ile Gly Glu Pro Asn Ser Gln Leu Gln Lys
 145 150 155 160

Ile Thr Asp Thr Leu Asp Ser Ile Lys Glu Lys Gly Lys Gln Thr Arg
 165 170 175

Phe Thr Asn Phe Asp Leu Leu Ser Leu Leu Pro Pro Ser Trp Asp Tyr
 180 185 190

Trp Thr Tyr Pro Gly Ser Leu Thr Val Pro Pro Leu Leu Glu Ser Val
 195 200 205

Thr Trp Ile Val Leu Lys Gln Pro Ile Asn Ile Ser Ser Gln Gln Leu
 210 215 220

Ala Lys Phe Arg Ser Leu Leu Cys Thr Ala Glu Gly Glu Ala Ala Ala
 225 230 235 240

Phe Leu Val Ser Asn His Arg Pro Pro Gln Pro Leu Lys Gly Arg Lys
 245 250 255

Val Arg Ala Ser Phe His

<210> 11757

<211> 337

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2324"

<220>

<221> source

<223> /note="Gene Symbol: CA14"

<220>

<221> source

<223> /note="Gene Name:
carbonic anhydrase XIV"

<220>

<221> source

<223> /note="Uniprot ID: Q9ULX7"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000358107"

<400> 11757

Met Leu Phe Ser Ala Leu Leu Leu Glu Val Ile Trp Ile Leu Ala Ala
1 5 10 15

Asp Gly Gly Gln His Trp Thr Tyr Glu Gly Pro His Gly Gln Asp His
20 25 30

Trp Pro Ala Ser Tyr Pro Glu Cys Gly Asn Asn Ala Gln Ser Pro Ile
35 40 45

Asp Ile Gln Thr Asp Ser Val Thr Phe Asp Pro Asp Leu Pro Ala Leu
50 55 60

Gln Pro His Gly Tyr Asp Gln Pro Gly Thr Glu Pro Leu Asp Leu His
65 70 75 80

Asn Asn Gly His Thr Val Gln Leu Ser Leu Pro Ser Thr Leu Tyr Leu
85 90 95

Gly Gly Leu Pro Arg Lys Tyr Val Ala Ala Gln Leu His Leu His Trp
100 105 110

Gly	Gln	Lys	Gly	Ser	Pro	Gly	Gly	Ser	Glu	His	Gln	Ile	Asn	Ser	Glu
		115					120					125			
Ala	Thr	Phe	Ala	Glu	Leu	His	Ile	Val	His	Tyr	Asp	Ser	Asp	Ser	Tyr
	130					135					140				
Asp	Ser	Leu	Ser	Glu	Ala	Ala	Glu	Arg	Pro	Gln	Gly	Leu	Ala	Val	Leu
145					150					155					160
Gly	Ile	Leu	Ile	Glu	Val	Gly	Glu	Thr	Lys	Asn	Ile	Ala	Tyr	Glu	His
				165					170					175	
Ile	Leu	Ser	His	Leu	His	Glu	Val	Arg	His	Lys	Asp	Gln	Lys	Thr	Ser
			180					185					190		
Val	Pro	Pro	Phe	Asn	Leu	Arg	Glu	Leu	Leu	Pro	Lys	Gln	Leu	Gly	Gln
		195					200					205			
Tyr	Phe	Arg	Tyr	Asn	Gly	Ser	Leu	Thr	Thr	Pro	Pro	Cys	Tyr	Gln	Ser
	210					215					220				
Val	Leu	Trp	Thr	Val	Phe	Tyr	Arg	Arg	Ser	Gln	Ile	Ser	Met	Glu	Gln
225					230					235					240
Leu	Glu	Lys	Leu	Gln	Gly	Thr	Leu	Phe	Ser	Thr	Glu	Glu	Glu	Pro	Ser
				245					250					255	
Lys	Leu	Leu	Val	Gln	Asn	Tyr	Arg	Ala	Leu	Gln	Pro	Leu	Asn	Gln	Arg
			260					265					270		
Met	Val	Phe	Ala	Ser	Phe	Ile	Gln	Ala	Gly	Ser	Ser	Tyr	Thr	Thr	Gly
		275					280					285			
Glu	Met	Leu	Ser	Leu	Gly	Val	Gly	Ile	Leu	Val	Gly	Cys	Leu	Cys	Leu
	290					295					300				
Leu	Leu	Ala	Val	Tyr	Phe	Ile	Ala	Arg	Lys	Ile	Arg	Lys	Lys	Arg	Leu
305					310					315					320
Glu	Asn	Arg	Lys	Ser	Val	Val	Phe	Thr	Ser	Ala	Gln	Ala	Thr	Thr	Glu
				325					330					335	

Ala

<210> 11758

<211> 130

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2324"

<220>

<221> source

<223> /note="Gene Symbol: CA14"

<220>

<221> source

<223> /note="Gene Name:
carbonic anhydrase XIV"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000475238"

<400> 11758

Gln	Lys	Thr	Ser	Val	Pro	Pro	Phe	Asn	Leu	Arg	Glu	Leu	Leu	Pro	Lys
1				5					10					15	

Gln	Leu	Gly	Gln	Tyr	Phe	Arg	Tyr	Asn	Gly	Ser	Leu	Thr	Thr	Pro	Pro
			20					25					30		

Cys	Tyr	Gln	Ser	Val	Leu	Trp	Thr	Val	Phe	Tyr	Arg	Arg	Ser	Gln	Ile
		35					40					45			

Ser	Met	Glu	Gln	Leu	Glu	Lys	Leu	Gln	Gly	Thr	Leu	Phe	Ser	Thr	Glu
	50					55					60				

Glu	Glu	Pro	Ser	Lys	Leu	Leu	Val	Gln	Asn	Tyr	Arg	Ala	Leu	Gln	Pro
65					70					75					80

Leu	Asn	Gln	Arg	Met	Val	Phe	Ala	Ser	Phe	Ile	Gln	Gly	Ser	Ser	Tyr
				85					90					95	

Thr	Thr	Gly	Arg	Arg	Gly	Trp	Lys	Thr	Glu	Arg	Val	Trp	Ser	Ser	Pro
			100					105					110		

Gln	His	Lys	Pro	Arg	Leu	Arg	His	Lys	Phe	Leu	Leu	Arg	Tyr	His	Gly
		115					120					125			

26202

Cys Gly
130

<210> 11759
<211> 42
<212> PRT
<213> Homo sapiens

<220>
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<223> /note="Gene Name:
carbonic anhydrase XIV"

<220>
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<223> /note="ENSP ID: ENSP00000475869"

<400> 11759
Met Leu Phe Ser Ala Leu Leu Leu Glu Val Ile Trp Ile Leu Ala Ala
1 5 10 15

Asp Gly Gly Gln His Trp Thr Tyr Glu Ala Pro Pro Phe Trp Ile Ser
20 25 30

Ser Cys Leu Glu Phe His Ile Tyr Gly Ser
35 40

<210> 11760
<211> 277
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<220>
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<220>
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<223> /note="Gene Name:

carbonyl reductase 1"

<220>

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<223> /note="Uniprot ID: P16152"

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<223> /note="ENSP ID: ENSP00000290349"

<400> 11760

Met Ser Ser Gly Ile His Val Ala Leu Val Thr Gly Gly Asn Lys Gly
1 5 10 15

Ile Gly Leu Ala Ile Val Arg Asp Leu Cys Arg Leu Phe Ser Gly Asp
20 25 30

Val Val Leu Thr Ala Arg Asp Val Thr Arg Gly Gln Ala Ala Val Gln
35 40 45

Gln Leu Gln Ala Glu Gly Leu Ser Pro Arg Phe His Gln Leu Asp Ile
50 55 60

Asp Asp Leu Gln Ser Ile Arg Ala Leu Arg Asp Phe Leu Arg Lys Glu
65 70 75 80

Tyr Gly Gly Leu Asp Val Leu Val Asn Asn Ala Gly Ile Ala Phe Lys
85 90 95

Val Ala Asp Pro Thr Pro Phe His Ile Gln Ala Glu Val Thr Met Lys
100 105 110

Thr Asn Phe Phe Gly Thr Arg Asp Val Cys Thr Glu Leu Leu Pro Leu
115 120 125

Ile Lys Pro Gln Gly Arg Val Val Asn Val Ser Ser Ile Met Ser Val
130 135 140

Arg Ala Leu Lys Ser Cys Ser Pro Glu Leu Gln Gln Lys Phe Arg Ser
145 150 155 160

Glu Thr Ile Thr Glu Glu Glu Leu Val Gly Leu Met Asn Lys Phe Val
165 170 175

Glu Asp Thr Lys Lys Gly Val His Gln Lys Glu Gly Trp Pro Ser Ser
180 185 190

Ala Tyr Gly Val Thr Lys Ile Gly Val Thr Val Leu Ser Arg Ile His
195 200 205

Ala Arg Lys Leu Ser Glu Gln Arg Lys Gly Asp Lys Ile Leu Leu Asn
210 215 220

Ala Cys Cys Pro Gly Trp Val Arg Thr Asp Met Ala Gly Pro Lys Ala
225 230 235 240

Thr Lys Ser Pro Glu Glu Gly Ala Glu Thr Pro Val Tyr Leu Ala Leu
245 250 255

Leu Pro Pro Asp Ala Glu Gly Pro His Gly Gln Phe Val Ser Glu Lys
260 265 270

Arg Val Glu Gln Trp
275

<210> 11761
<211> 222
<212> PRT
<213> Homo sapiens

<220>
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<220>
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<223> /note="Gene Symbol: CBR1"

<220>
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<223> /note="Gene Name:
carbonyl reductase 1"

<220>
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<400> 11761
Met Ser Ser Gly Ile His Val Ala Leu Val Thr Gly Gly Asn Lys Gly
1 5 10 15

Ile Gly Leu Ala Ile Val Arg Asp Leu Cys Arg Leu Phe Ser Gly Asp
20 25 30

Val Val Leu Thr Ala Arg Asp Val Thr Arg Gly Gln Ala Ala Val Gln
 35 40 45

 Gln Leu Gln Ala Glu Gly Leu Ser Pro Arg Phe His Gln Leu Asp Ile
 50 55 60

 Asp Asp Leu Gln Ser Ile Arg Ala Leu Arg Asp Phe Leu Arg Lys Glu
 65 70 75 80

 Tyr Gly Gly Leu Asp Val Leu Val Asn Asn Ala Gly Ile Ala Phe Lys
 85 90 95

 Val Ala Asp Pro Thr Pro Phe His Ile Gln Ala Glu Val Thr Met Lys
 100 105 110

 Thr Asn Phe Phe Gly Thr Arg Asp Val Cys Thr Glu Leu Leu Pro Leu
 115 120 125

 Ile Lys Pro Gln Val Val Leu Leu Leu Arg Leu Trp Phe Thr Arg Thr
 130 135 140

 Ser Lys Gly Ser Ser Ser Lys Ser His Leu Thr Leu Leu Ser Gln Asn
 145 150 155 160

 Ser Lys Ala Gly Met Asn Phe Phe Met Gln Leu Pro Pro His Phe Leu
 165 170 175

 Cys Val Phe Leu Leu Glu Leu Ile Pro Val Thr Val Ser His Met Lys
 180 185 190

 Ile Phe Cys Ser Lys Ile Pro Ala Asn Leu Ala Phe Thr Ser Leu Arg
 195 200 205

 Asp Cys Cys Thr Pro Phe Tyr Ile Met Leu Cys Gly Val Ser
 210 215 220

<210> 11762

<211> 178

<212> PRT

<213> Homo sapiens

<220>

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<223> /note="Payload ID: 2325"

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<400> 11762
Met Ser Ser Gly Ile His Val Ala Leu Val Thr Gly Gly Asn Lys Gly
1          5          10          15

Ile Gly Leu Ala Ile Val Arg Asp Leu Cys Arg Leu Phe Ser Gly Asp
          20          25          30

Val Val Leu Thr Ala Arg Asp Val Thr Arg Gly Gln Ala Ala Val Gln
          35          40          45

Gln Leu Gln Ala Glu Gly Leu Ser Pro Arg Phe His Gln Leu Asp Ile
          50          55          60

Asp Asp Leu Gln Ser Ile Arg Ala Leu Arg Asp Phe Leu Arg Lys Glu
65          70          75          80

Tyr Gly Gly Leu Asp Val Leu Val Asn Asn Ala Gly Ile Ala Phe Lys
          85          90          95

Val Ala Asp Pro Thr Pro Phe His Ile Gln Ala Glu Val Thr Met Lys
          100          105          110

Thr Asn Phe Phe Gly Thr Arg Asp Val Cys Thr Glu Leu Leu Pro Leu
          115          120          125

Ile Lys Pro Gln Gly Glu Ser Asp Gly Lys Gln Arg Thr Phe Ser Leu
          130          135          140

Gly Leu Asp Leu Ala Pro Ala Cys Leu Gly Phe Leu Leu Gln Ala Pro
145          150          155          160

Ala Ser Ser Pro Cys Cys Thr Cys Thr Asp Leu Cys Ala Phe Ser Pro
          165          170          175

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Ala Ser

<210> 11763

<211> 173

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2325"

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<223> /note="Gene Symbol: CBR1"

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<223> /note="Gene Name:
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<220>

<221> source

<223> /note="Uniprot ID: P16152"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000434613"

<400> 11763

Met Ser Ser Gly Ile His Val Ala Leu Val Thr Gly Gly Asn Lys Gly
1 5 10 15

Ile Gly Leu Ala Ile Val Arg Asp Leu Cys Arg Leu Phe Ser Gly Asp
20 25 30

Val Val Leu Thr Ala Arg Asp Val Thr Arg Gly Gln Ala Ala Val Gln
35 40 45

Gln Leu Gln Ala Glu Gly Leu Ser Pro Arg Phe His Gln Leu Asp Ile
50 55 60

Asp Asp Leu Gln Ser Ile Arg Ala Leu Arg Asp Phe Leu Arg Lys Glu
65 70 75 80

Tyr Gly Gly Leu Asp Val Leu Val Asn Asn Ala Gly Ile Ala Phe Lys
85 90 95

Val Ala Asp Pro Thr Pro Phe His Ile Gln Ala Glu Val Thr Met Lys

26208

100 105 110
 Thr Asn Phe Phe Gly Thr Arg Asp Val Cys Thr Glu Leu Leu Pro Leu
 115 120 125
 Ile Lys Pro Gln Ala Ser Cys Val Leu Ser Ala Trp Ser Cys Leu Ser
 130 135 140
 Gln Asn Pro Ser Gly Gly Lys Ser Lys Pro Leu Ala Trp Phe Thr Glu
 145 150 155 160
 Met Ser Ile Ile Cys Arg Cys Leu Thr Leu Gly Pro Phe
 165 170

<210> 11764
 <211> 277
 <212> PRT
 <213> Homo sapiens

<220>
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 <223> /note="Payload ID: 2326"

<220>
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 <223> /note="Gene Symbol: CBR3"

<220>
 <221> source
 <223> /note="Gene Name:
 carbonyl reductase 3"

<220>
 <221> source
 <223> /note="Uniprot ID: O75828"

<220>
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 <223> /note="ENSP ID: ENSP00000290354"

<400> 11764
 Met Ser Ser Cys Ser Arg Val Ala Leu Val Thr Gly Ala Asn Arg Gly
 1 5 10 15

Ile Gly Leu Ala Ile Ala Arg Glu Leu Cys Arg Gln Phe Ser Gly Asp
 20 25 30

Val Val Leu Thr Ala Arg Asp Val Ala Arg Gly Gln Ala Ala Val Gln
 35 40 45

Gln	Leu	Gln	Ala	Glu	Gly	Leu	Ser	Pro	Arg	Phe	His	Gln	Leu	Asp	Ile
50						55					60				
Asp	Asp	Leu	Gln	Ser	Ile	Arg	Ala	Leu	Arg	Asp	Phe	Leu	Arg	Lys	Glu
65					70					75					80
Tyr	Gly	Gly	Leu	Asn	Val	Leu	Val	Asn	Asn	Ala	Ala	Val	Ala	Phe	Lys
				85					90					95	
Ser	Asp	Asp	Pro	Met	Pro	Phe	Asp	Ile	Lys	Ala	Glu	Met	Thr	Leu	Lys
			100					105					110		
Thr	Asn	Phe	Phe	Ala	Thr	Arg	Asn	Met	Cys	Asn	Glu	Leu	Leu	Pro	Ile
		115					120					125			
Met	Lys	Pro	His	Gly	Arg	Val	Val	Asn	Ile	Ser	Ser	Leu	Gln	Cys	Leu
	130					135					140				
Arg	Ala	Phe	Glu	Asn	Cys	Ser	Glu	Asp	Leu	Gln	Glu	Arg	Phe	His	Ser
145					150					155					160
Glu	Thr	Leu	Thr	Glu	Gly	Asp	Leu	Val	Asp	Leu	Met	Lys	Lys	Phe	Val
				165					170					175	
Glu	Asp	Thr	Lys	Asn	Glu	Val	His	Glu	Arg	Glu	Gly	Trp	Pro	Asn	Ser
			180					185					190		
Pro	Tyr	Gly	Val	Ser	Lys	Leu	Gly	Val	Thr	Val	Leu	Ser	Arg	Ile	Leu
		195					200					205			
Ala	Arg	Arg	Leu	Asp	Glu	Lys	Arg	Lys	Ala	Asp	Arg	Ile	Leu	Val	Asn
	210					215					220				
Ala	Cys	Cys	Pro	Gly	Pro	Val	Lys	Thr	Asp	Met	Asp	Gly	Lys	Asp	Ser
225					230					235					240
Ile	Arg	Thr	Val	Glu	Glu	Gly	Ala	Glu	Thr	Pro	Val	Tyr	Leu	Ala	Leu
				245					250					255	
Leu	Pro	Pro	Asp	Ala	Thr	Glu	Pro	Gln	Gly	Gln	Leu	Val	His	Asp	Lys
			260					265					270		

Val Val Gln Asn Trp
275

<210> 11765

<211> 237

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2327"

<220>

<221> source

<223> /note="Gene Symbol: CBR4"

<220>

<221> source

<223> /note="Gene Name:
carbonyl reductase 4"

<220>

<221> source

<223> /note="Uniprot ID: Q8N4T8"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000303525"

<400> 11765

Met Asp Lys Val Cys Ala Val Phe Gly Gly Ser Arg Gly Ile Gly Arg
1 5 10 15

Ala Val Ala Gln Leu Met Ala Arg Lys Gly Tyr Arg Leu Ala Val Ile
20 25 30

Ala Arg Asn Leu Glu Gly Ala Lys Ala Ala Ala Gly Asp Leu Gly Gly
35 40 45

Asp His Leu Ala Phe Ser Cys Asp Val Ala Lys Glu His Asp Val Gln
50 55 60

Asn Thr Phe Glu Glu Leu Glu Lys His Leu Gly Arg Val Asn Phe Leu
65 70 75 80

Val Asn Ala Ala Gly Ile Asn Arg Asp Gly Leu Leu Val Arg Thr Lys
85 90 95

Thr Glu Asp Met Val Ser Gln Leu His Thr Asn Leu Leu Gly Ser Met
100 105 110

26211

Leu Thr Cys Lys Ala Ala Met Arg Thr Met Ile Gln Gln Gln Gly Gly
115 120 125

Ser Ile Val Asn Val Gly Ser Ile Val Gly Leu Lys Gly Asn Ser Gly
130 135 140

Gln Ser Val Tyr Ser Ala Ser Lys Gly Gly Leu Val Gly Phe Ser Arg
145 150 155 160

Ala Leu Ala Lys Glu Val Ala Arg Lys Lys Ile Arg Val Asn Val Val
165 170 175

Ala Pro Gly Phe Val His Thr Asp Met Thr Lys Asp Leu Lys Glu Glu
180 185 190

His Leu Lys Lys Asn Ile Pro Leu Gly Arg Phe Gly Glu Thr Ile Glu
195 200 205

Val Ala His Ala Val Val Phe Leu Leu Glu Ser Pro Tyr Ile Thr Gly
210 215 220

His Val Leu Val Val Asp Gly Gly Leu Gln Leu Ile Leu
225 230 235

<210> 11766
<211> 60
<212> PRT
<213> Homo sapiens

<220>
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<223> /note="Payload ID: 2327"

<220>
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<223> /note="Gene Symbol: CBR4"

<220>
<221> source
<223> /note="Gene Name:
carbonyl reductase 4"

<220>
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<223> /note="ENSP ID: ENSP00000421254"

<400> 11766

Met Asp Lys Val Cys Ala Val Phe Gly Gly Ser Arg Gly Ile Gly Arg
 1 5 10 15

Ala Val Ala Gln Leu Met Ala Arg Lys Gly Tyr Arg Leu Ala Val Ile
 20 25 30

Ala Arg Asn Leu Glu Gly Ala Lys Ala Ala Ala Gly Asp Leu Gly Glu
 35 40 45

Ile Phe Ser Pro Gln Ser Pro Lys Asp Leu Gly Leu
 50 55 60

<210> 11767

<211> 186

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2327"

<220>

<221> source

<223> /note="Gene Symbol: CBR4"

<220>

<221> source

<223> /note="Gene Name:
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<220>

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<223> /note="ENSP ID: ENSP00000423128"

<400> 11767

Val Cys Ala Val Phe Gly Gly Ser Arg Gly Ile Gly Arg Ala Val Ala
 1 5 10 15

Gln Leu Met Ala Arg Lys Gly Tyr Arg Leu Ala Val Ile Ala Arg Asn
 20 25 30

Leu Glu Gly Ala Lys Ala Ala Ala Gly Asp Leu Gly Gly Asp His Leu
 35 40 45

Ala Phe Ser Cys Asp Val Ala Lys Glu His Asp Val Gln Asn Thr Phe
 50 55 60

Glu Glu Leu Glu Lys His Leu Gly Arg Val Asn Phe Leu Val Asn Ala
 65 70 75 80

Ala Gly Ile Asn Arg Asp Gly Leu Leu Val Arg Thr Lys Thr Glu Asp
85 90 95

Met Val Ser Gln Leu His Thr Asn Leu Leu Gly Ser Met Leu Thr Cys
100 105 110

Lys Ala Ala Met Arg Thr Met Ile Gln Gln Gln Gly Gly Ser Ile Val
115 120 125

Asn Val Gly His Arg Arg Glu Met Leu Leu His Lys Arg Ser Ile Val
130 135 140

Gly Leu Lys Gly Asn Ser Gly Gln Ser Val Tyr Ser Ala Ser Lys Gly
145 150 155 160

Gly Leu Val Gly Phe Ser Arg Ala Leu Ala Lys Glu Val Ala Arg Lys
165 170 175

Lys Ile Arg Val Asn Val Val Ala Pro Gly
180 185

<210> 11768
<211> 51
<212> PRT
<213> Homo sapiens

<220>
<221> source
<223> /note="Payload ID: 2327"

<220>
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<223> /note="Gene Symbol: CBR4"

<220>
<221> source
<223> /note="Gene Name:
carbonyl reductase 4"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000424717"

<400> 11768
Met Asp Lys Val Cys Ala Val Phe Gly Gly Ser Arg Gly Ile Gly Arg
1 5 10 15

Ala Val Ala Gln Leu Met Ala Arg Lys Gly Tyr Arg Leu Ala Val Ile
20 25 30

Ala Arg Asn Leu Glu Gly Ala Lys Ala Ala Ala Gly Asp Leu Gly Gly
35 40 45

Met Val Phe
50

<210> 11769
<211> 60
<212> PRT
<213> Homo sapiens

<220>
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<223> /note="Payload ID: 2327"

<220>
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<223> /note="Gene Symbol: CBR4"

<220>
<221> source
<223> /note="Gene Name:
carbonyl reductase 4"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000425671"

<400> 11769
Met Asp Lys Val Cys Ala Val Phe Gly Gly Ser Arg Gly Ile Gly Arg
1 5 10 15

Ala Val Ala Gln Leu Met Ala Arg Lys Gly Tyr Arg Leu Ala Val Ile
20 25 30

Ala Arg Asn Leu Glu Gly Ala Lys Ala Ala Ala Gly Asp Leu Gly Gly
35 40 45

Leu Pro Ile Met Leu Pro Val Leu Asp Pro Asn Ser
50 55 60

<210> 11770
<211> 179
<212> PRT
<213> Homo sapiens

<220>

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<221> source
<223> /note="Payload ID: 2327"

<220>
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<220>
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<223> /note="Gene Name:
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<220>
<221> source
<223> /note="Uniprot ID: Q8N4T8"

<220>
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<223> /note="ENSP ID: ENSP00000427615"

<400> 11770
Met Asp Lys Val Cys Ala Val Phe Gly Gly Ser Arg Gly Ile Gly Arg
1          5          10          15

Ala Val Ala Gln Leu Met Ala Arg Lys Gly Tyr Arg Leu Ala Val Ile
          20          25          30

Ala Arg Asn Leu Glu Gly Ala Lys Ala Ala Ala Gly Asp Leu Gly Gly
          35          40          45

Asp His Leu Ala Phe Ser Cys Asp Val Ala Lys Glu His Asp Val Gln
          50          55          60

Asn Thr Phe Glu Glu Leu Glu Lys His Leu Gly Arg Val Asn Phe Leu
65          70          75          80

Val Asn Ala Ala Gly Ile Asn Arg Asp Gly Leu Leu Val Arg Thr Lys
          85          90          95

Thr Glu Asp Met Val Ser Gln Leu His Thr Asn Leu Leu Gly Ser Met
          100          105          110

Leu Thr Cys Lys Ala Ala Met Arg Thr Met Ile Gln Gln Gln Gly Gly
          115          120          125

Ser Ile Val Asn Val Gly Ser Ile Val Gly Leu Lys Gly Asn Ser Gly
130          135          140

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Gln Ser Val Tyr Ser Ala Ser Lys Gly Gly Leu Val Gly Phe Ser Arg
145 150 155 160

Ala Leu Ala Lys Glu Val Ala Arg Lys Lys Ile Arg Val Asn Val Val
165 170 175

Ala Pro Gly

<210> 11771

<211> 756

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2328"

<220>

<221> source

<223> /note="Gene Symbol: CEL"

<220>

<221> source

<223> /note="Gene Name:
carboxyl ester lipase"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000361151"

<400> 11771

Met Leu Thr Met Gly Arg Leu Gln Leu Val Val Leu Gly Leu Thr Cys
1 5 10 15

Cys Trp Ala Val Ala Ser Ala Ala Lys Leu Gly Ala Val Tyr Thr Glu
20 25 30

Gly Gly Phe Val Glu Gly Val Asn Lys Lys Leu Gly Leu Leu Gly Asp
35 40 45

Ser Val Asp Ile Phe Lys Gly Ile Pro Phe Ala Ala Pro Thr Lys Ala
50 55 60

Leu Glu Asn Pro Gln Pro His Pro Gly Trp Gln Gly Thr Leu Lys Ala
65 70 75 80

Lys Asn Phe Lys Lys Arg Cys Leu Gln Ala Thr Ile Thr Gln Asp Ser
85 90 95

Thr	Tyr	Gly	Asp	Glu	Asp	Cys	Leu	Tyr	Leu	Asn	Ile	Trp	Val	Pro	Gln			
			100					105					110					
Gly	Arg	Lys	Gln	Val	Ser	Arg	Asp	Leu	Pro	Val	Met	Ile	Trp	Ile	Tyr			
		115					120					125						
Gly	Gly	Ala	Phe	Leu	Met	Gly	Ser	Gly	His	Gly	Ala	Asn	Phe	Leu	Asn			
	130					135					140							
Asn	Tyr	Leu	Tyr	Asp	Gly	Glu	Glu	Ile	Ala	Thr	Arg	Gly	Asn	Val	Ile			
145					150					155					160			
Val	Val	Thr	Phe	Asn	Tyr	Arg	Val	Gly	Pro	Leu	Gly	Phe	Leu	Ser	Thr			
				165					170					175				
Gly	Asp	Ala	Asn	Leu	Pro	Gly	Asn	Tyr	Gly	Leu	Arg	Asp	Gln	His	Met			
			180					185					190					
Ala	Ile	Ala	Trp	Val	Lys	Arg	Asn	Ile	Ala	Ala	Phe	Gly	Gly	Asp	Pro			
		195					200					205						
Asn	Asn	Ile	Thr	Leu	Phe	Gly	Glu	Ser	Ala	Gly	Gly	Ala	Ser	Val	Ser			
	210					215					220							
Leu	Gln	Thr	Leu	Ser	Pro	Tyr	Asn	Lys	Gly	Leu	Ile	Arg	Arg	Ala	Ile			
225					230					235					240			
Ser	Gln	Ser	Gly	Val	Ala	Leu	Ser	Pro	Trp	Val	Ile	Gln	Lys	Asn	Pro			
				245					250					255				
Leu	Phe	Trp	Ala	Lys	Lys	Val	Ala	Glu	Lys	Val	Gly	Cys	Pro	Val	Gly			
			260					265					270					
Asp	Ala	Ala	Arg	Met	Ala	Gln	Cys	Leu	Lys	Val	Thr	Asp	Pro	Arg	Ala			
		275					280					285						
Leu	Thr	Leu	Ala	Tyr	Lys	Val	Pro	Leu	Ala	Gly	Leu	Glu	Tyr	Pro	Met			
	290					295					300							
Leu	His	Tyr	Val	Gly	Phe	Val	Pro	Val	Ile	Asp	Gly	Asp	Phe	Ile	Pro			
305					310					315					320			

Ala	Asp	Pro	Ile	Asn	Leu	Tyr	Ala	Asn	Ala	Ala	Asp	Ile	Asp	Tyr	Ile	325	330	335	
Ala	Gly	Thr	Asn	Asn	Met	Asp	Gly	His	Ile	Phe	Ala	Ser	Ile	Asp	Met	340	345	350	
Pro	Ala	Ile	Asn	Lys	Gly	Asn	Lys	Lys	Val	Thr	Glu	Glu	Asp	Phe	Tyr	355	360	365	
Lys	Leu	Val	Ser	Glu	Phe	Thr	Ile	Thr	Lys	Gly	Leu	Arg	Gly	Ala	Lys	370	375	380	
Thr	Thr	Phe	Asp	Val	Tyr	Thr	Glu	Ser	Trp	Ala	Gln	Asp	Pro	Ser	Gln	385	390	395	400
Glu	Asn	Lys	Lys	Lys	Thr	Val	Val	Asp	Phe	Glu	Thr	Asp	Val	Leu	Phe	405	410	415	
Leu	Val	Pro	Thr	Glu	Ile	Ala	Leu	Ala	Gln	His	Arg	Ala	Asn	Ala	Lys	420	425	430	
Ser	Ala	Lys	Thr	Tyr	Ala	Tyr	Leu	Phe	Ser	His	Pro	Ser	Arg	Met	Pro	435	440	445	
Val	Tyr	Pro	Lys	Trp	Val	Gly	Ala	Asp	His	Ala	Asp	Asp	Ile	Gln	Tyr	450	455	460	
Val	Phe	Gly	Lys	Pro	Phe	Ala	Thr	Pro	Thr	Gly	Tyr	Arg	Pro	Gln	Asp	465	470	475	480
Arg	Thr	Val	Ser	Lys	Ala	Met	Ile	Ala	Tyr	Trp	Thr	Asn	Phe	Ala	Lys	485	490	495	
Thr	Gly	Asp	Pro	Asn	Met	Gly	Asp	Ser	Ala	Val	Pro	Thr	His	Trp	Glu	500	505	510	
Pro	Tyr	Thr	Thr	Glu	Asn	Ser	Gly	Tyr	Leu	Glu	Ile	Thr	Lys	Lys	Met	515	520	525	
Gly	Ser	Ser	Ser	Met	Lys	Arg	Ser	Leu	Arg	Thr	Asn	Phe	Leu	Arg	Tyr	530	535	540	

Trp Thr Leu Thr Tyr Leu Ala Leu Pro Thr Val Thr Asp Gln Glu Ala
545 550 555 560

Thr Pro Val Pro Pro Thr Gly Asp Ser Glu Ala Thr Pro Val Pro Pro
565 570 575

Thr Gly Asp Ser Glu Thr Ala Pro Val Pro Pro Thr Gly Asp Ser Gly
580 585 590

Ala Pro Pro Val Pro Pro Thr Gly Asp Ser Gly Ala Pro Pro Val Pro
595 600 605

Pro Thr Gly Asp Ser Gly Ala Pro Pro Val Pro Pro Thr Gly Asp Ser
610 615 620

Gly Ala Pro Pro Val Pro Pro Thr Gly Asp Ser Gly Ala Pro Pro Val
625 630 635 640

Pro Pro Thr Gly Asp Ser Gly Ala Pro Pro Val Pro Pro Thr Gly Asp
645 650 655

Ser Gly Ala Pro Pro Val Pro Pro Thr Gly Asp Ser Gly Ala Pro Pro
660 665 670

Val Pro Pro Thr Gly Asp Ala Gly Pro Pro Pro Val Pro Pro Thr Gly
675 680 685

Asp Ser Gly Ala Pro Pro Val Pro Pro Thr Gly Asp Ser Gly Ala Pro
690 695 700

Pro Val Thr Pro Thr Gly Asp Ser Glu Thr Ala Pro Val Pro Pro Thr
705 710 715 720

Gly Asp Ser Gly Ala Pro Pro Val Pro Pro Thr Gly Asp Ser Glu Ala
725 730 735

Ala Pro Val Pro Pro Thr Asp Asp Ser Lys Glu Ala Gln Met Pro Ala
740 745 750

Val Ile Arg Phe
755

<210> 11772

26220

<211> 59
<212> PRT
<213> Homo sapiens

<220>
<221> source
<223> /note="Payload ID: 2328"

<220>
<221> source
<223> /note="Gene Symbol: CEL"

<220>
<221> source
<223> /note="Gene Name:
carboxyl ester lipase"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000480238"

<400> 11772
Met Leu Thr Met Gly Arg Leu Gln Leu Val Val Leu Gly Leu Thr Cys
1 5 10 15

Cys Trp Ala Val Ala Ser Ala Ala Lys Thr Pro Cys Cys Thr Met Trp
20 25 30

Ala Ser Ser Leu Ser Leu Met Glu Thr Ser Ser Pro Leu Thr Arg Ser
35 40 45

Thr Cys Thr Pro Thr Pro Pro Thr Ser Thr Ile
50 55

<210> 11773
<211> 568
<212> PRT
<213> Homo sapiens

<220>
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<220>
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carboxylesterase 1"

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<220>
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<223> /note="ENSP ID: ENSP00000353720"

<400> 11773

Met Trp Leu Arg Ala Phe Ile Leu Ala Thr Leu Ser Ala Ser Ala Ala
1 5 10 15

Trp Ala Gly His Pro Ser Ser Pro Pro Val Val Asp Thr Val His Gly
20 25 30

Lys Val Leu Gly Lys Phe Val Ser Leu Glu Gly Phe Ala Gln Pro Val
35 40 45

Ala Ile Phe Leu Gly Ile Pro Phe Ala Lys Pro Pro Leu Gly Pro Leu
50 55 60

Arg Phe Thr Pro Pro Gln Pro Ala Glu Pro Trp Ser Phe Val Lys Asn
65 70 75 80

Ala Thr Ser Tyr Pro Pro Met Cys Thr Gln Asp Pro Lys Ala Gly Gln
85 90 95

Leu Leu Ser Glu Leu Phe Thr Asn Arg Lys Glu Asn Ile Pro Leu Lys
100 105 110

Leu Ser Glu Asp Cys Leu Tyr Leu Asn Ile Tyr Thr Pro Ala Asp Leu
115 120 125

Thr Lys Lys Asn Arg Leu Pro Val Met Val Trp Ile His Gly Gly Gly
130 135 140

Leu Met Val Gly Ala Ala Ser Thr Tyr Asp Gly Leu Ala Leu Ala Ala
145 150 155 160

His Glu Asn Val Val Val Val Thr Ile Gln Tyr Arg Leu Gly Ile Trp
165 170 175

Gly Phe Phe Ser Thr Gly Asp Glu His Ser Arg Gly Asn Trp Gly His
180 185 190

Leu Asp Gln Val Ala Ala Leu Arg Trp Val Gln Asp Asn Ile Ala Ser

195																
Phe	Gly	Gly	Asn	Pro	Gly	Ser	Val	Thr	Ile	Phe	Gly	Glu	Ser	Ala	Gly	
	210					215					220					
Gly	Glu	Ser	Val	Ser	Val	Leu	Val	Leu	Ser	Pro	Leu	Ala	Lys	Asn	Leu	
225					230					235					240	
Phe	His	Arg	Ala	Ile	Ser	Glu	Ser	Gly	Val	Ala	Leu	Thr	Ser	Val	Leu	
				245					250					255		
Val	Lys	Lys	Gly	Asp	Val	Lys	Pro	Leu	Ala	Glu	Gln	Ile	Ala	Ile	Thr	
			260					265					270			
Ala	Gly	Cys	Lys	Thr	Thr	Thr	Ser	Ala	Val	Met	Val	His	Cys	Leu	Arg	
		275					280					285				
Gln	Lys	Thr	Glu	Glu	Glu	Leu	Leu	Glu	Thr	Thr	Leu	Lys	Met	Lys	Phe	
	290					295					300					
Leu	Ser	Leu	Asp	Leu	Gln	Gly	Asp	Pro	Arg	Glu	Ser	Gln	Pro	Leu	Leu	
305					310					315					320	
Gly	Thr	Val	Ile	Asp	Gly	Met	Leu	Leu	Leu	Lys	Thr	Pro	Glu	Glu	Leu	
				325					330					335		
Gln	Ala	Glu	Arg	Asn	Phe	His	Thr	Val	Pro	Tyr	Met	Val	Gly	Ile	Asn	
			340					345					350			
Lys	Gln	Glu	Phe	Gly	Trp	Leu	Ile	Pro	Met	Gln	Leu	Met	Ser	Tyr	Pro	
		355					360					365				
Leu	Ser	Glu	Gly	Gln	Leu	Asp	Gln	Lys	Thr	Ala	Met	Ser	Leu	Leu	Trp	
	370					375					380					
Lys	Ser	Tyr	Pro	Leu	Val	Cys	Ile	Ala	Lys	Glu	Leu	Ile	Pro	Glu	Ala	
385					390					395					400	
Thr	Glu	Lys	Tyr	Leu	Gly	Gly	Thr	Asp	Asp	Thr	Val	Lys	Lys	Lys	Asp	
				405					410					415		
Leu	Phe	Leu	Asp	Leu	Ile	Ala	Asp	Val	Met	Phe	Gly	Val	Pro	Ser	Val	
			420					425					430			

Ile Val Ala Arg Asn His Arg Asp Ala Gly Ala Pro Thr Tyr Met Tyr
435 440 445

Glu Phe Gln Tyr Arg Pro Ser Phe Ser Ser Asp Met Lys Pro Lys Thr
450 455 460

Val Ile Gly Asp His Gly Asp Glu Leu Phe Ser Val Phe Gly Ala Pro
465 470 475 480

Phe Leu Lys Glu Gly Ala Ser Glu Glu Glu Ile Arg Leu Ser Lys Met
485 490 495

Val Met Lys Phe Trp Ala Asn Phe Ala Arg Asn Gly Asn Pro Asn Gly
500 505 510

Glu Gly Leu Pro His Trp Pro Glu Tyr Asn Gln Lys Glu Gly Tyr Leu
515 520 525

Gln Ile Gly Ala Asn Thr Gln Ala Ala Gln Lys Leu Lys Asp Lys Glu
530 535 540

Val Ala Phe Trp Thr Asn Leu Phe Ala Lys Lys Ala Val Glu Lys Pro
545 550 555 560

Pro Gln Thr Glu His Ile Glu Leu
565

<210> 11774

<211> 567

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2329"

<220>

<221> source

<223> /note="Gene Symbol: CES1"

<220>

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<223> /note="Gene Name:
carboxylesterase 1"

<220>

<221> source
<223> /note="Uniprot ID: P23141"

<220>
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<223> /note="ENSP ID: ENSP00000355193"

<400> 11774

Met Trp Leu Arg Ala Phe Ile Leu Ala Thr Leu Ser Ala Ser Ala Ala
1 5 10 15

Trp Gly His Pro Ser Ser Pro Pro Val Val Asp Thr Val His Gly Lys
20 25 30

Val Leu Gly Lys Phe Val Ser Leu Glu Gly Phe Ala Gln Pro Val Ala
35 40 45

Ile Phe Leu Gly Ile Pro Phe Ala Lys Pro Pro Leu Gly Pro Leu Arg
50 55 60

Phe Thr Pro Pro Gln Pro Ala Glu Pro Trp Ser Phe Val Lys Asn Ala
65 70 75 80

Thr Ser Tyr Pro Pro Met Cys Thr Gln Asp Pro Lys Ala Gly Gln Leu
85 90 95

Leu Ser Glu Leu Phe Thr Asn Arg Lys Glu Asn Ile Pro Leu Lys Leu
100 105 110

Ser Glu Asp Cys Leu Tyr Leu Asn Ile Tyr Thr Pro Ala Asp Leu Thr
115 120 125

Lys Lys Asn Arg Leu Pro Val Met Val Trp Ile His Gly Gly Gly Leu
130 135 140

Met Val Gly Ala Ala Ser Thr Tyr Asp Gly Leu Ala Leu Ala Ala His
145 150 155 160

Glu Asn Val Val Val Val Thr Ile Gln Tyr Arg Leu Gly Ile Trp Gly
165 170 175

Phe Phe Ser Thr Gly Asp Glu His Ser Arg Gly Asn Trp Gly His Leu
180 185 190

Asp Gln Val Ala Ala Leu Arg Trp Val Gln Asp Asn Ile Ala Ser Phe

26225

195																
Gly	Gly	Asn	Pro	Gly	Ser	Val	Thr	Ile	Phe	Gly	Glu	Ser	Ala	Gly	Gly	
210						215					220					
Glu	Ser	Val	Ser	Val	Leu	Val	Leu	Ser	Pro	Leu	Ala	Lys	Asn	Leu	Phe	
225					230					235					240	
His	Arg	Ala	Ile	Ser	Glu	Ser	Gly	Val	Ala	Leu	Thr	Ser	Val	Leu	Val	
				245					250					255		
Lys	Lys	Gly	Asp	Val	Lys	Pro	Leu	Ala	Glu	Gln	Ile	Ala	Ile	Thr	Ala	
			260					265					270			
Gly	Cys	Lys	Thr	Thr	Thr	Ser	Ala	Val	Met	Val	His	Cys	Leu	Arg	Gln	
		275					280					285				
Lys	Thr	Glu	Glu	Glu	Leu	Leu	Glu	Thr	Thr	Leu	Lys	Met	Lys	Phe	Leu	
	290					295					300					
Ser	Leu	Asp	Leu	Gln	Gly	Asp	Pro	Arg	Glu	Ser	Gln	Pro	Leu	Leu	Gly	
305					310					315					320	
Thr	Val	Ile	Asp	Gly	Met	Leu	Leu	Leu	Lys	Thr	Pro	Glu	Glu	Leu	Gln	
				325					330					335		
Ala	Glu	Arg	Asn	Phe	His	Thr	Val	Pro	Tyr	Met	Val	Gly	Ile	Asn	Lys	
			340					345					350			
Gln	Glu	Phe	Gly	Trp	Leu	Ile	Pro	Met	Gln	Leu	Met	Ser	Tyr	Pro	Leu	
		355					360					365				
Ser	Glu	Gly	Gln	Leu	Asp	Gln	Lys	Thr	Ala	Met	Ser	Leu	Leu	Trp	Lys	
	370					375					380					
Ser	Tyr	Pro	Leu	Val	Cys	Ile	Ala	Lys	Glu	Leu	Ile	Pro	Glu	Ala	Thr	
385					390					395					400	
Glu	Lys	Tyr	Leu	Gly	Gly	Thr	Asp	Asp	Thr	Val	Lys	Lys	Lys	Asp	Leu	
				405					410					415		
Phe	Leu	Asp	Leu	Ile	Ala	Asp	Val	Met	Phe	Gly	Val	Pro	Ser	Val	Ile	
			420					425					430			

Val Ala Arg Asn His Arg Asp Ala Gly Ala Pro Thr Tyr Met Tyr Glu
435 440 445

Phe Gln Tyr Arg Pro Ser Phe Ser Ser Asp Met Lys Pro Lys Thr Val
450 455 460

Ile Gly Asp His Gly Asp Glu Leu Phe Ser Val Phe Gly Ala Pro Phe
465 470 475 480

Leu Lys Glu Gly Ala Ser Glu Glu Glu Ile Arg Leu Ser Lys Met Val
485 490 495

Met Lys Phe Trp Ala Asn Phe Ala Arg Asn Gly Asn Pro Asn Gly Glu
500 505 510

Gly Leu Pro His Trp Pro Glu Tyr Asn Gln Lys Glu Gly Tyr Leu Gln
515 520 525

Ile Gly Ala Asn Thr Gln Ala Ala Gln Lys Leu Lys Asp Lys Glu Val
530 535 540

Ala Phe Trp Thr Asn Leu Phe Ala Lys Lys Ala Val Glu Lys Pro Pro
545 550 555 560

Gln Thr Glu His Ile Glu Leu
565

<210> 11775

<211> 566

<212> PRT

<213> Homo sapiens

<220>

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<223> /note="Payload ID: 2329"

<220>

<221> source

<223> /note="Gene Symbol: CES1"

<220>

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<223> /note="Gene Name:
carboxylesterase 1"

<220>

<221> source
<223> /note="Uniprot ID: P23141"

<220>
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<223> /note="ENSP ID: ENSP00000390492"

<400> 11775

Met Trp Leu Arg Ala Phe Ile Leu Ala Thr Leu Ser Ala Ser Ala Ala
1 5 10 15

Trp Gly His Pro Ser Ser Pro Pro Val Val Asp Thr Val His Gly Lys
20 25 30

Val Leu Gly Lys Phe Val Ser Leu Glu Gly Phe Ala Gln Pro Val Ala
35 40 45

Ile Phe Leu Gly Ile Pro Phe Ala Lys Pro Pro Leu Gly Pro Leu Arg
50 55 60

Phe Thr Pro Pro Gln Pro Ala Glu Pro Trp Ser Phe Val Lys Asn Ala
65 70 75 80

Thr Ser Tyr Pro Pro Met Cys Thr Gln Asp Pro Lys Ala Gly Gln Leu
85 90 95

Leu Ser Glu Leu Phe Thr Asn Arg Lys Glu Asn Ile Pro Leu Lys Leu
100 105 110

Ser Glu Asp Cys Leu Tyr Leu Asn Ile Tyr Thr Pro Ala Asp Leu Thr
115 120 125

Lys Lys Asn Arg Leu Pro Val Met Val Trp Ile His Gly Gly Gly Leu
130 135 140

Met Val Gly Ala Ala Ser Thr Tyr Asp Gly Leu Ala Leu Ala Ala His
145 150 155 160

Glu Asn Val Val Val Val Thr Ile Gln Tyr Arg Leu Gly Ile Trp Gly
165 170 175

Phe Phe Ser Thr Gly Asp Glu His Ser Arg Gly Asn Trp Gly His Leu
180 185 190

Asp Gln Val Ala Ala Leu Arg Trp Val Gln Asp Asn Ile Ala Ser Phe

26228

195																
Gly	Gly	Asn	Pro	Gly	Ser	Val	Thr	Ile	Phe	Gly	Glu	Ser	Ala	Gly	Gly	
210						215					220					
Glu	Ser	Val	Ser	Val	Leu	Val	Leu	Ser	Pro	Leu	Ala	Lys	Asn	Leu	Phe	
225					230					235					240	
His	Arg	Ala	Ile	Ser	Glu	Ser	Gly	Val	Ala	Leu	Thr	Ser	Val	Leu	Val	
				245					250					255		
Lys	Lys	Gly	Asp	Val	Lys	Pro	Leu	Ala	Glu	Gln	Ile	Ala	Ile	Thr	Ala	
			260					265					270			
Gly	Cys	Lys	Thr	Thr	Thr	Ser	Ala	Val	Met	Val	His	Cys	Leu	Arg	Gln	
		275					280					285				
Lys	Thr	Glu	Glu	Glu	Leu	Leu	Glu	Thr	Thr	Leu	Lys	Met	Lys	Phe	Leu	
	290					295					300					
Ser	Leu	Asp	Leu	Gln	Gly	Asp	Pro	Arg	Glu	Ser	Gln	Pro	Leu	Leu	Gly	
305					310					315					320	
Thr	Val	Ile	Asp	Gly	Met	Leu	Leu	Leu	Lys	Thr	Pro	Glu	Glu	Leu	Gln	
				325					330					335		
Ala	Glu	Arg	Asn	Phe	His	Thr	Val	Pro	Tyr	Met	Val	Gly	Ile	Asn	Lys	
			340					345					350			
Gln	Glu	Phe	Gly	Trp	Leu	Ile	Pro	Met	Leu	Met	Ser	Tyr	Pro	Leu	Ser	
		355					360					365				
Glu	Gly	Gln	Leu	Asp	Gln	Lys	Thr	Ala	Met	Ser	Leu	Leu	Trp	Lys	Ser	
	370					375					380					
Tyr	Pro	Leu	Val	Cys	Ile	Ala	Lys	Glu	Leu	Ile	Pro	Glu	Ala	Thr	Glu	
385					390					395					400	
Lys	Tyr	Leu	Gly	Gly	Thr	Asp	Asp	Thr	Val	Lys	Lys	Lys	Asp	Leu	Phe	
				405					410					415		
Leu	Asp	Leu	Ile	Ala	Asp	Val	Met	Phe	Gly	Val	Pro	Ser	Val	Ile	Val	
			420					425					430			

Ala Arg Asn His Arg Asp Ala Gly Ala Pro Thr Tyr Met Tyr Glu Phe
435 440 445

Gln Tyr Arg Pro Ser Phe Ser Ser Asp Met Lys Pro Lys Thr Val Ile
450 455 460

Gly Asp His Gly Asp Glu Leu Phe Ser Val Phe Gly Ala Pro Phe Leu
465 470 475 480

Lys Glu Gly Ala Ser Glu Glu Glu Ile Arg Leu Ser Lys Met Val Met
485 490 495

Lys Phe Trp Ala Asn Phe Ala Arg Asn Gly Asn Pro Asn Gly Glu Gly
500 505 510

Leu Pro His Trp Pro Glu Tyr Asn Gln Lys Glu Gly Tyr Leu Gln Ile
515 520 525

Gly Ala Asn Thr Gln Ala Ala Gln Lys Leu Lys Asp Lys Glu Val Ala
530 535 540

Phe Trp Thr Asn Leu Phe Ala Lys Lys Ala Val Glu Lys Pro Pro Gln
545 550 555 560

Thr Glu His Ile Glu Leu
565

<210> 11776

<211> 44

<212> PRT

<213> Homo sapiens

<220>

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<223> /note="Payload ID: 2329"

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<221> source

<223> /note="Gene Symbol: CES1"

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<223> /note="Gene Name:
carboxylesterase 1"

<220>

<221> source
<223> /note="ENSP ID: ENSP00000455902"

<400> 11776
Glu Arg Asn Phe His Thr Val Pro Tyr Met Val Gly Ile Asn Lys Gln
1 5 10 15

Glu Phe Gly Trp Leu Ile Pro Met Met Leu Glu His Pro Pro Thr Cys
20 25 30

Met Ser Phe Ser Thr Val Gln Ala Ser His Gln Thr
35 40

<210> 11777
<211> 131
<212> PRT
<213> Homo sapiens

<220>
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<220>
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<220>
<221> source
<223> /note="Gene Name:
carboxylesterase 1"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000455959"

<400> 11777
Lys Glu Leu Ile Pro Glu Ala Thr Glu Lys Tyr Leu Gly Gly Thr Asp
1 5 10 15

Asp Thr Val Lys Lys Lys Asp Leu Phe Leu Asp Leu Ile Ala Asp Val
20 25 30

Met Phe Gly Val Pro Ser Val Ile Val Ala Arg Asn His Arg Glu Gly
35 40 45

Ala Ser Glu Glu Glu Ile Arg Leu Ser Lys Met Val Met Lys Phe Trp
50 55 60

Ala Asn Phe Ala Arg Asn Gly Asn Pro Asn Gly Glu Gly Leu Pro His
65 70 75 80

Trp Pro Glu Tyr Asn Gln Lys Glu Gly Tyr Leu Gln Ile Gly Ala Asn
85 90 95

Thr Gln Ala Ala Gln Lys Leu Lys Asp Lys Glu Val Ala Phe Trp Thr
100 105 110

Asn Leu Phe Ala Lys Lys Ala Val Glu Lys Pro Pro Gln Thr Glu His
115 120 125

Ile Glu Leu
130

<210> 11778
<211> 44
<212> PRT
<213> Homo sapiens

<220>
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<223> /note="Gene Symbol: CES1"

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<221> source
<223> /note="Gene Name:
carboxylesterase 1"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000456356"

<400> 11778
Glu Arg Asn Phe His Thr Val Pro Tyr Met Val Gly Ile Asn Lys Gln
1 5 10 15

Glu Phe Gly Trp Leu Ile Pro Met Met Leu Glu His Pro Pro Thr Cys
20 25 30

Met Ser Phe Ser Thr Val Gln Ala Ser His Gln Thr
35 40

<210> 11779
<211> 84
<212> PRT
<213> Homo sapiens

<220>
<221> source
<223> /note="Payload ID: 2329"

<220>
<221> source
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<220>
<221> source
<223> /note="Gene Name:
carboxylesterase 1"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000456865"

<220>
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<222> (1)..(1)
<223> Any amino acid

<400> 11779
Xaa Arg Gln Lys Thr Glu Glu Glu Leu Leu Glu Thr Thr Leu Lys Met
1 5 10 15

Lys Phe Leu Ser Leu Asp Leu Gln Gly Asp Pro Arg Glu Ser Gln Pro
20 25 30

Leu Leu Gly Thr Val Ile Asp Gly Met Leu Leu Leu Lys Thr Pro Glu
35 40 45

Glu Leu Gln Ala Glu Arg Asn Phe His Thr Val Pro Tyr Met Val Gly
50 55 60

Ile Asn Lys Gln Glu Phe Gly Trp Leu Ile Pro Met Gly Thr Ala Asp
65 70 75 80

Ile Ser Val Tyr

<210> 11780
<211> 566
<212> PRT
<213> Homo sapiens

<220>
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 <223> /note="Uniprot ID: P23141"

<220>
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 <223> /note="ENSP ID: ENSP00000458586"

<400> 11780
 Met Trp Leu Pro Ala Leu Val Leu Ala Thr Leu Ala Ala Ser Ala Ala
 1 5 10 15

Trp Gly His Pro Ser Ser Pro Pro Val Val Asp Thr Val His Gly Lys
 20 25 30

Val Leu Gly Lys Phe Val Ser Leu Glu Gly Phe Ala Gln Pro Val Ala
 35 40 45

Ile Phe Leu Gly Ile Pro Phe Ala Lys Pro Pro Leu Gly Pro Leu Arg
 50 55 60

Phe Thr Pro Pro Gln Pro Ala Glu Pro Trp Ser Phe Val Lys Asn Ala
 65 70 75 80

Thr Ser Tyr Pro Pro Met Cys Thr Gln Asp Pro Lys Ala Gly Gln Leu
 85 90 95

Leu Ser Glu Leu Phe Thr Asn Arg Lys Glu Asn Ile Pro Leu Lys Leu
 100 105 110

Ser Glu Asp Cys Leu Tyr Leu Asn Ile Tyr Thr Pro Ala Asp Leu Thr
 115 120 125

Lys Lys Asn Arg Leu Pro Val Met Val Trp Ile His Gly Gly Gly Leu
 130 135 140

Met Val Gly Ala Ala Ser Thr Tyr Asp Gly Leu Ala Leu Ala Ala His
 145 150 155 160

Glu	Asn	Val	Val	Val	Val	Thr	Ile	Gln	Tyr	Arg	Leu	Gly	Ile	Trp	Gly	
				165					170					175		
Phe	Phe	Ser	Thr	Gly	Asp	Glu	His	Ser	Arg	Gly	Asn	Trp	Gly	His	Leu	
			180					185					190			
Asp	Gln	Val	Ala	Ala	Leu	Arg	Trp	Val	Gln	Asp	Asn	Ile	Ala	Ser	Phe	
		195					200					205				
Gly	Gly	Asn	Pro	Gly	Ser	Val	Thr	Ile	Phe	Gly	Glu	Ser	Ala	Gly	Gly	
	210					215					220					
Glu	Ser	Val	Ser	Val	Leu	Val	Leu	Ser	Pro	Leu	Ala	Lys	Asn	Leu	Phe	
225					230					235					240	
His	Arg	Ala	Ile	Ser	Glu	Ser	Gly	Val	Ala	Leu	Thr	Ser	Val	Leu	Val	
				245					250					255		
Lys	Lys	Gly	Asp	Val	Lys	Pro	Leu	Ala	Glu	Gln	Ile	Ala	Ile	Thr	Ala	
			260					265					270			
Gly	Cys	Lys	Thr	Thr	Thr	Ser	Ala	Val	Met	Val	His	Cys	Leu	Arg	Gln	
		275					280					285				
Lys	Thr	Glu	Glu	Glu	Leu	Leu	Glu	Thr	Thr	Leu	Lys	Met	Lys	Phe	Leu	
	290					295					300					
Ser	Leu	Asp	Leu	Gln	Gly	Asp	Pro	Arg	Glu	Ser	Gln	Pro	Leu	Leu	Gly	
305					310					315					320	
Thr	Val	Ile	Asp	Gly	Met	Leu	Leu	Leu	Lys	Thr	Pro	Glu	Glu	Leu	Gln	
				325					330					335		
Ala	Glu	Arg	Asn	Phe	His	Thr	Val	Pro	Tyr	Met	Val	Gly	Ile	Asn	Lys	
			340					345					350			
Gln	Glu	Phe	Gly	Trp	Leu	Ile	Pro	Met	Leu	Met	Ser	Tyr	Pro	Leu	Ser	
		355					360					365				
Glu	Gly	Gln	Leu	Asp	Gln	Lys	Thr	Ala	Met	Ser	Leu	Leu	Trp	Lys	Ser	
	370					375					380					

Tyr Pro Leu Val Cys Ile Ala Lys Glu Leu Ile Pro Glu Ala Thr Glu
385 390 395 400

Lys Tyr Leu Gly Gly Thr Asp Asp Thr Val Lys Lys Lys Asp Leu Phe
405 410 415

Leu Asp Leu Ile Ala Asp Val Met Phe Gly Val Pro Ser Val Ile Val
420 425 430

Ala Arg Asn His Arg Asp Ala Gly Ala Pro Thr Tyr Met Tyr Glu Phe
435 440 445

Gln Tyr Arg Pro Ser Phe Ser Ser Asp Met Lys Pro Lys Thr Val Ile
450 455 460

Gly Asp His Gly Asp Glu Leu Phe Ser Val Phe Gly Ala Pro Phe Leu
465 470 475 480

Lys Glu Gly Ala Ser Glu Glu Glu Ile Arg Leu Ser Lys Met Val Met
485 490 495

Lys Phe Trp Ala Asn Phe Ala Arg Asn Gly Asn Pro Asn Gly Glu Gly
500 505 510

Leu Pro His Trp Pro Glu Tyr Asn Gln Lys Glu Gly Tyr Leu Gln Ile
515 520 525

Gly Ala Asn Thr Gln Ala Ala Gln Lys Leu Lys Asp Lys Glu Val Ala
530 535 540

Phe Trp Thr Asn Leu Phe Ala Lys Lys Ala Val Glu Lys Pro Pro Gln
545 550 555 560

Thr Glu His Ile Glu Leu
565

<210> 11781

<211> 134

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2329"

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<220>
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<223> /note="Gene Name:
        carboxylesterase 1"

<220>
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<223> /note="ENSP ID: ENSP00000458773"

<400> 11781
Cys Ile Ala Lys Glu Leu Ile Pro Glu Ala Thr Glu Lys Tyr Leu Gly
1          5          10          15

Gly Thr Asp Asp Thr Val Lys Lys Lys Asp Leu Phe Leu Asp Leu Ile
          20          25          30

Ala Asp Val Met Phe Gly Val Pro Ser Val Ile Val Ala Arg Asn His
          35          40          45

Arg Glu Gly Ala Ser Glu Glu Glu Ile Arg Leu Ser Lys Met Val Met
          50          55          60

Lys Phe Trp Ala Asn Phe Ala Arg Asn Gly Asn Pro Asn Gly Glu Gly
65          70          75          80

Leu Pro His Trp Pro Glu Tyr Asn Gln Lys Glu Gly Tyr Leu Gln Ile
          85          90          95

Gly Ala Asn Thr Gln Ala Ala Gln Lys Leu Lys Asp Lys Glu Val Ala
          100          105          110

Phe Trp Thr Asn Leu Phe Ala Lys Lys Ala Val Glu Lys Pro Pro Gln
          115          120          125

Thr Glu His Ile Glu Leu
          130

<210> 11782
<211> 84
<212> PRT
<213> Homo sapiens

<220>

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<221> source
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<220>
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<223> /note="Gene Name:
carboxylesterase 1"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000459806"

<220>
<221> MOD_RES
<222> (1)..(1)
<223> Any amino acid

<400> 11782
Xaa Arg Gln Lys Thr Glu Glu Glu Leu Leu Glu Thr Thr Leu Lys Met
1 5 10 15

Lys Phe Leu Ser Leu Asp Leu Gln Gly Asp Pro Arg Glu Ser Gln Pro
20 25 30

Leu Leu Gly Thr Val Ile Asp Gly Met Leu Leu Leu Lys Thr Pro Glu
35 40 45

Glu Leu Gln Ala Glu Arg Asn Phe His Thr Val Pro Tyr Met Val Gly
50 55 60

Ile Asn Lys Gln Glu Phe Gly Trp Leu Ile Pro Met Gly Thr Ala Asp
65 70 75 80

Ile Ser Val Tyr

<210> 11783
<211> 567
<212> PRT
<213> Homo sapiens

<220>
<221> source
<223> /note="Payload ID: 2329"

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<221> source
<223> /note="Gene Symbol: CES1"

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<223> /note="Gene Name:
        carboxylesterase 1"

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<223> /note="Uniprot ID: P23141"

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<400> 11783
Met Trp Leu Pro Ala Leu Val Leu Ala Thr Leu Ala Ala Ser Ala Ala
1          5          10          15

Trp Gly His Pro Ser Ser Pro Pro Val Val Asp Thr Val His Gly Lys
          20          25          30

Val Leu Gly Lys Phe Val Ser Leu Glu Gly Phe Ala Gln Pro Val Ala
          35          40          45

Ile Phe Leu Gly Ile Pro Phe Ala Lys Pro Pro Leu Gly Pro Leu Arg
          50          55          60

Phe Thr Pro Pro Gln Pro Ala Glu Pro Trp Ser Phe Val Lys Asn Ala
65          70          75          80

Thr Ser Tyr Pro Pro Met Cys Thr Gln Asp Pro Lys Ala Gly Gln Leu
          85          90          95

Leu Ser Glu Leu Phe Thr Asn Arg Lys Glu Asn Ile Pro Leu Lys Leu
          100          105          110

Ser Glu Asp Cys Leu Tyr Leu Asn Ile Tyr Thr Pro Ala Asp Leu Thr
          115          120          125

Lys Lys Asn Arg Leu Pro Val Met Val Trp Ile His Gly Gly Gly Leu
          130          135          140

Met Val Gly Ala Ala Ser Thr Tyr Asp Gly Leu Ala Leu Ala Ala His
145          150          155          160

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Glu	Asn	Val	Val	Val	Val	Thr	Ile	Gln	Tyr	Arg	Leu	Gly	Ile	Trp	Gly		
				165					170					175			
Phe	Phe	Ser	Thr	Gly	Asp	Glu	His	Ser	Arg	Gly	Asn	Trp	Gly	His	Leu		
			180					185					190				
Asp	Gln	Val	Ala	Ala	Leu	Arg	Trp	Val	Gln	Asp	Asn	Ile	Ala	Ser	Phe		
		195					200					205					
Gly	Gly	Asn	Pro	Gly	Ser	Val	Thr	Ile	Phe	Gly	Glu	Ser	Ala	Gly	Gly		
	210					215					220						
Glu	Ser	Val	Ser	Val	Leu	Val	Leu	Ser	Pro	Leu	Ala	Lys	Asn	Leu	Phe		
225					230					235					240		
His	Arg	Ala	Ile	Ser	Glu	Ser	Gly	Val	Ala	Leu	Thr	Ser	Val	Leu	Val		
				245					250					255			
Lys	Lys	Gly	Asp	Val	Lys	Pro	Leu	Ala	Glu	Gln	Ile	Ala	Ile	Thr	Ala		
			260					265					270				
Gly	Cys	Lys	Thr	Thr	Thr	Ser	Ala	Val	Met	Val	His	Cys	Leu	Arg	Gln		
		275					280					285					
Lys	Thr	Glu	Glu	Glu	Leu	Leu	Glu	Thr	Thr	Leu	Lys	Met	Lys	Phe	Leu		
	290					295					300						
Ser	Leu	Asp	Leu	Gln	Gly	Asp	Pro	Arg	Glu	Ser	Gln	Pro	Leu	Leu	Gly		
305					310					315					320		
Thr	Val	Ile	Asp	Gly	Met	Leu	Leu	Leu	Lys	Thr	Pro	Glu	Glu	Leu	Gln		
				325					330					335			
Ala	Glu	Arg	Asn	Phe	His	Thr	Val	Pro	Tyr	Met	Val	Gly	Ile	Asn	Lys		
			340					345					350				
Gln	Glu	Phe	Gly	Trp	Leu	Ile	Pro	Met	Gln	Leu	Met	Ser	Tyr	Pro	Leu		
		355					360					365					
Ser	Glu	Gly	Gln	Leu	Asp	Gln	Lys	Thr	Ala	Met	Ser	Leu	Leu	Trp	Lys		
	370					375					380						
Ser	Tyr	Pro	Leu	Val	Cys	Ile	Ala	Lys	Glu	Leu	Ile	Pro	Glu	Ala	Thr		

385					390					395					400
Glu	Lys	Tyr	Leu	Gly	Gly	Thr	Asp	Asp	Thr	Val	Lys	Lys	Lys	Asp	Leu
				405					410					415	
Phe	Leu	Asp	Leu	Ile	Ala	Asp	Val	Met	Phe	Gly	Val	Pro	Ser	Val	Ile
			420					425					430		
Val	Ala	Arg	Asn	His	Arg	Asp	Ala	Gly	Ala	Pro	Thr	Tyr	Met	Tyr	Glu
		435					440					445			
Phe	Gln	Tyr	Arg	Pro	Ser	Phe	Ser	Ser	Asp	Met	Lys	Pro	Lys	Thr	Val
	450					455					460				
Ile	Gly	Asp	His	Gly	Asp	Glu	Leu	Phe	Ser	Val	Phe	Gly	Ala	Pro	Phe
465					470					475					480
Leu	Lys	Glu	Gly	Ala	Ser	Glu	Glu	Glu	Ile	Arg	Leu	Ser	Lys	Met	Val
				485					490					495	
Met	Lys	Phe	Trp	Ala	Asn	Phe	Ala	Arg	Asn	Gly	Asn	Pro	Asn	Gly	Glu
			500					505					510		
Gly	Leu	Pro	His	Trp	Pro	Glu	Tyr	Asn	Gln	Lys	Glu	Gly	Tyr	Leu	Gln
		515					520					525			
Ile	Gly	Ala	Asn	Thr	Gln	Ala	Ala	Gln	Lys	Leu	Lys	Asp	Lys	Glu	Val
	530					535					540				
Ala	Phe	Trp	Thr	Asn	Leu	Phe	Ala	Lys	Lys	Ala	Val	Glu	Lys	Pro	Pro
545					550					555					560
Gln	Thr	Glu	His	Ile	Glu	Leu									
				565											

<210> 11784

<211> 568

<212> PRT

<213> Homo sapiens

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<220>
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<220>
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Met Trp Leu Pro Ala Leu Val Leu Ala Thr Leu Ala Ala Ser Ala Ala
1          5          10          15

Trp Ala Gly His Pro Ser Ser Pro Pro Val Val Asp Thr Val His Gly
          20          25          30

Lys Val Leu Gly Lys Phe Val Ser Leu Glu Gly Phe Ala Gln Pro Val
          35          40          45

Ala Ile Phe Leu Gly Ile Pro Phe Ala Lys Pro Pro Leu Gly Pro Leu
          50          55          60

Arg Phe Thr Pro Pro Gln Pro Ala Glu Pro Trp Ser Phe Val Lys Asn
65          70          75          80

Ala Thr Ser Tyr Pro Pro Met Cys Thr Gln Asp Pro Lys Ala Gly Gln
          85          90          95

Leu Leu Ser Glu Leu Phe Thr Asn Arg Lys Glu Asn Ile Pro Leu Lys
          100          105          110

Leu Ser Glu Asp Cys Leu Tyr Leu Asn Ile Tyr Thr Pro Ala Asp Leu
          115          120          125

Thr Lys Lys Asn Arg Leu Pro Val Met Val Trp Ile His Gly Gly Gly
          130          135          140

Leu Met Val Gly Ala Ala Ser Thr Tyr Asp Gly Leu Ala Leu Ala Ala
145          150          155          160

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His Glu Asn Val Val Val Val Thr Ile Gln Tyr Arg Leu Gly Ile Trp
165 170 175

Gly Phe Phe Ser Thr Gly Asp Glu His Ser Arg Gly Asn Trp Gly His
180 185 190

Leu Asp Gln Val Ala Ala Leu Arg Trp Val Gln Asp Asn Ile Ala Ser
195 200 205

Phe Gly Gly Asn Pro Gly Ser Val Thr Ile Phe Gly Glu Ser Ala Gly
210 215 220

Gly Glu Ser Val Ser Val Leu Val Leu Ser Pro Leu Ala Lys Asn Leu
225 230 235 240

Phe His Arg Ala Ile Ser Glu Ser Gly Val Ala Leu Thr Ser Val Leu
245 250 255

Val Lys Lys Gly Asp Val Lys Pro Leu Ala Glu Gln Ile Ala Ile Thr
260 265 270

Ala Gly Cys Lys Thr Thr Thr Ser Ala Val Met Val His Cys Leu Arg
275 280 285

Gln Lys Thr Glu Glu Glu Leu Leu Glu Thr Thr Leu Lys Met Lys Phe
290 295 300

Leu Ser Leu Asp Leu Gln Gly Asp Pro Arg Glu Ser Gln Pro Leu Leu
305 310 315 320

Gly Thr Val Ile Asp Gly Met Leu Leu Leu Lys Thr Pro Glu Glu Leu
325 330 335

Gln Ala Glu Arg Asn Phe His Thr Val Pro Tyr Met Val Gly Ile Asn
340 345 350

Lys Gln Glu Phe Gly Trp Leu Ile Pro Met Gln Leu Met Ser Tyr Pro
355 360 365

Leu Ser Glu Gly Gln Leu Asp Gln Lys Thr Ala Met Ser Leu Leu Trp
370 375 380

Lys Ser Tyr Pro Leu Val Cys Ile Ala Lys Glu Leu Ile Pro Glu Ala

385		390		395		400									
Thr	Glu	Lys	Tyr	Leu	Gly	Gly	Thr	Asp	Asp	Thr	Val	Lys	Lys	Lys	Asp
				405					410					415	
Leu	Phe	Leu	Asp	Leu	Ile	Ala	Asp	Val	Met	Phe	Gly	Val	Pro	Ser	Val
			420					425					430		
Ile	Val	Ala	Arg	Asn	His	Arg	Asp	Ala	Gly	Ala	Pro	Thr	Tyr	Met	Tyr
		435					440					445			
Glu	Phe	Gln	Tyr	Arg	Pro	Ser	Phe	Ser	Ser	Asp	Met	Lys	Pro	Lys	Thr
	450					455					460				
Val	Ile	Gly	Asp	His	Gly	Asp	Glu	Leu	Phe	Ser	Val	Phe	Gly	Ala	Pro
465					470					475					480
Phe	Leu	Lys	Glu	Gly	Ala	Ser	Glu	Glu	Glu	Ile	Arg	Leu	Ser	Lys	Met
				485					490					495	
Val	Met	Lys	Phe	Trp	Ala	Asn	Phe	Ala	Arg	Asn	Gly	Asn	Pro	Asn	Gly
			500					505					510		
Glu	Gly	Leu	Pro	His	Trp	Pro	Glu	Tyr	Asn	Gln	Lys	Glu	Gly	Tyr	Leu
		515					520					525			
Gln	Ile	Gly	Ala	Asn	Thr	Gln	Ala	Ala	Gln	Lys	Leu	Lys	Asp	Lys	Glu
	530					535					540				
Val	Ala	Phe	Trp	Thr	Asn	Leu	Phe	Ala	Lys	Lys	Ala	Val	Glu	Lys	Pro
545					550					555					560
Pro	Gln	Thr	Glu	His	Ile	Glu	Leu								
				565											

<210> 11785

<211> 623

<212> PRT

<213> Homo sapiens

<220>

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<223> /note="Payload ID: 2330"

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<221> source
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<220>
<221> source
<223> /note="Gene Name:
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<220>
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<223> /note="ENSP ID: ENSP00000317842"

<400> 11785
Met Thr Ala Gln Ser Arg Ser Pro Thr Thr Pro Thr Phe Pro Gly Pro
1          5          10          15

Ser Gln Arg Thr Pro Leu Thr Pro Cys Pro Val Gln Thr Pro Arg Leu
          20          25          30

Gly Lys Ala Leu Ile His Cys Trp Thr Asp Pro Gly Gln Pro Leu Gly
          35          40          45

Glu Gln Gln Arg Val Arg Arg Gln Arg Thr Glu Thr Ser Glu Pro Thr
          50          55          60

Met Arg Leu His Arg Leu Arg Ala Arg Leu Ser Ala Val Ala Cys Gly
65          70          75          80

Leu Leu Leu Leu Leu Val Arg Gly Gln Gly Gln Asp Ser Ala Ser Pro
          85          90          95

Ile Arg Thr Thr His Thr Gly Gln Val Leu Gly Ser Leu Val His Val
          100          105          110

Lys Gly Ala Asn Ala Gly Val Gln Thr Phe Leu Gly Ile Pro Phe Ala
          115          120          125

Lys Pro Pro Leu Gly Pro Leu Arg Phe Ala Pro Pro Glu Pro Pro Glu
          130          135          140

Ser Trp Ser Gly Val Arg Asp Gly Thr Thr His Pro Ala Met Cys Leu
145          150          155          160

Gln Asp Leu Thr Ala Val Glu Ser Glu Phe Leu Ser Gln Phe Asn Met
          165          170          175

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Thr	Phe	Pro	Ser	Asp	Ser	Met	Ser	Glu	Asp	Cys	Leu	Tyr	Leu	Ser	Ile	180	185	190
Tyr	Thr	Pro	Ala	His	Ser	His	Glu	Gly	Ser	Asn	Leu	Pro	Val	Met	Val	195	200	205
Trp	Ile	His	Gly	Gly	Ala	Leu	Val	Phe	Gly	Met	Ala	Ser	Leu	Tyr	Asp	210	215	220
Gly	Ser	Met	Leu	Ala	Ala	Leu	Glu	Asn	Val	Val	Val	Val	Ile	Ile	Gln	225	230	235
Tyr	Arg	Leu	Gly	Val	Leu	Gly	Phe	Phe	Ser	Thr	Gly	Asp	Lys	His	Ala	245	250	255
Thr	Gly	Asn	Trp	Gly	Tyr	Leu	Asp	Gln	Val	Ala	Ala	Leu	Arg	Trp	Val	260	265	270
Gln	Gln	Asn	Ile	Ala	His	Phe	Gly	Gly	Asn	Pro	Asp	Arg	Val	Thr	Ile	275	280	285
Phe	Gly	Glu	Ser	Ala	Gly	Gly	Thr	Ser	Val	Ser	Ser	Leu	Val	Val	Ser	290	295	300
Pro	Ile	Ser	Gln	Gly	Leu	Phe	His	Gly	Ala	Ile	Met	Glu	Ser	Gly	Val	305	310	315
Ala	Leu	Leu	Pro	Gly	Leu	Ile	Ala	Ser	Ser	Ala	Asp	Val	Ile	Ser	Thr	325	330	335
Val	Val	Ala	Asn	Leu	Ser	Ala	Cys	Asp	Gln	Val	Asp	Ser	Glu	Ala	Leu	340	345	350
Val	Gly	Cys	Leu	Arg	Gly	Lys	Ser	Lys	Glu	Glu	Ile	Leu	Ala	Ile	Asn	355	360	365
Lys	Pro	Phe	Lys	Met	Ile	Pro	Gly	Val	Val	Asp	Gly	Val	Phe	Leu	Pro	370	375	380
Arg	His	Pro	Gln	Glu	Leu	Leu	Ala	Ser	Ala	Asp	Phe	Gln	Pro	Val	Pro	385	390	395
Ser	Ile	Val	Gly	Val	Asn	Asn	Asn	Glu	Phe	Gly	Trp	Leu	Ile	Pro	Lys			

				405						410						415			
Val	Met	Arg	Ile	Tyr	Asp	Thr	Gln	Lys	Glu	Met	Asp	Arg	Glu	Ala	Ser				
			420					425					430						
Gln	Ala	Ala	Leu	Gln	Lys	Met	Leu	Thr	Leu	Leu	Met	Leu	Pro	Pro	Thr				
		435					440					445							
Phe	Gly	Asp	Leu	Leu	Arg	Glu	Glu	Tyr	Ile	Gly	Asp	Asn	Gly	Asp	Pro				
	450					455					460								
Gln	Thr	Leu	Gln	Ala	Gln	Phe	Gln	Glu	Met	Met	Ala	Asp	Ser	Met	Phe				
465					470					475					480				
Val	Ile	Pro	Ala	Leu	Gln	Val	Ala	His	Phe	Gln	Cys	Ser	Arg	Ala	Pro				
				485					490					495					
Val	Tyr	Phe	Tyr	Glu	Phe	Gln	His	Gln	Pro	Ser	Trp	Leu	Lys	Asn	Ile				
			500					505					510						
Arg	Pro	Pro	His	Met	Lys	Ala	Asp	His	Gly	Asp	Glu	Leu	Pro	Phe	Val				
		515					520					525							
Phe	Arg	Ser	Phe	Phe	Gly	Gly	Asn	Tyr	Ile	Lys	Phe	Thr	Glu	Glu	Glu				
	530					535					540								
Glu	Gln	Leu	Ser	Arg	Lys	Met	Met	Lys	Tyr	Trp	Ala	Asn	Phe	Ala	Arg				
545					550					555					560				
Asn	Gly	Asn	Pro	Asn	Gly	Glu	Gly	Leu	Pro	His	Trp	Pro	Leu	Phe	Asp				
				565					570					575					
Gln	Glu	Glu	Gln	Tyr	Leu	Gln	Leu	Asn	Leu	Gln	Pro	Ala	Val	Gly	Arg				
			580					585					590						
Ala	Leu	Lys	Ala	His	Arg	Leu	Gln	Phe	Trp	Lys	Lys	Ala	Leu	Pro	Gln				
		595					600					605							
Lys	Ile	Gln	Glu	Leu	Glu	Glu	Pro	Glu	Glu	Arg	His	Thr	Glu	Leu					
	610					615					620								

<210> 11786

<211> 607

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<212> PRT
<213> Homo sapiens

<220>
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<220>
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<223> /note="Gene Name:
        carboxylesterase 2"

<220>
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<223> /note="Uniprot ID: O00748"

<220>
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<400> 11786
Met Thr Ala Gln Ser Arg Ser Pro Thr Thr Pro Thr Phe Pro Gly Pro
1              5              10              15

Ser Gln Arg Thr Pro Leu Thr Pro Cys Pro Val Gln Thr Pro Arg Leu
              20              25              30

Gly Lys Ala Leu Ile His Cys Trp Thr Asp Pro Gly Gln Pro Leu Gly
              35              40              45

Glu Gln Gln Arg Val Arg Arg Gln Arg Thr Glu Thr Ser Glu Pro Thr
              50              55              60

Met Arg Leu His Arg Leu Arg Ala Arg Leu Ser Ala Val Ala Cys Gly
65              70              75              80

Leu Leu Leu Leu Leu Val Arg Gly Gln Gly Gln Asp Ser Ala Ser Pro
              85              90              95

Ile Arg Thr Thr His Thr Gly Gln Val Leu Gly Ser Leu Val His Val
              100              105              110

Lys Gly Ala Asn Ala Gly Val Gln Thr Phe Leu Gly Ile Pro Phe Ala
              115              120              125

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Lys	Pro	Pro	Leu	Gly	Pro	Leu	Arg	Phe	Ala	Pro	Pro	Glu	Pro	Pro	Glu	
	130					135					140					
Ser	Trp	Ser	Gly	Val	Arg	Asp	Gly	Thr	Thr	His	Pro	Ala	Met	Cys	Leu	
145					150					155					160	
Gln	Asp	Leu	Thr	Ala	Val	Glu	Ser	Glu	Phe	Leu	Ser	Gln	Phe	Asn	Met	
				165					170					175		
Thr	Phe	Pro	Ser	Asp	Ser	Met	Ser	Glu	Asp	Cys	Leu	Tyr	Leu	Ser	Ile	
			180					185					190			
Tyr	Thr	Pro	Ala	His	Ser	His	Glu	Gly	Ser	Asn	Leu	Pro	Val	Met	Val	
		195					200					205				
Trp	Ile	His	Gly	Gly	Ala	Leu	Val	Phe	Gly	Met	Ala	Ser	Leu	Tyr	Asp	
	210					215					220					
Gly	Ser	Met	Leu	Ala	Ala	Leu	Glu	Asn	Val	Val	Val	Val	Ile	Ile	Gln	
225					230					235					240	
Tyr	Arg	Leu	Gly	Val	Leu	Gly	Phe	Phe	Ser	Thr	Gly	Asp	Lys	His	Ala	
				245					250					255		
Thr	Gly	Asn	Trp	Gly	Tyr	Leu	Asp	Gln	Val	Ala	Ala	Leu	Arg	Trp	Val	
			260					265					270			
Gln	Gln	Asn	Ile	Ala	His	Phe	Gly	Gly	Asn	Pro	Asp	Arg	Val	Thr	Ile	
		275					280					285				
Phe	Gly	Glu	Ser	Ala	Gly	Gly	Thr	Ser	Val	Ser	Ser	Leu	Val	Val	Ser	
	290					295					300					
Pro	Ile	Ser	Gln	Gly	Leu	Phe	His	Gly	Ala	Ile	Met	Glu	Ser	Gly	Val	
305					310					315					320	
Ala	Leu	Leu	Pro	Gly	Leu	Ile	Ala	Ser	Ser	Ala	Asp	Val	Ile	Ser	Thr	
				325					330					335		
Val	Val	Ala	Asn	Leu	Ser	Ala	Cys	Asp	Gln	Val	Asp	Ser	Glu	Ala	Leu	
			340					345					350			
Val	Gly	Cys	Leu	Arg	Gly	Lys	Ser	Lys	Glu	Glu	Ile	Leu	Ala	Ile	Asn	

355																
Lys	Pro	Phe	Lys	Met	Ile	Pro	Gly	Val	Val	Asp	Gly	Val	Phe	Leu	Pro	
	370					375					380					
Arg	His	Pro	Gln	Glu	Leu	Leu	Ala	Ser	Ala	Asp	Phe	Gln	Pro	Val	Pro	
385					390					395					400	
Ser	Ile	Val	Gly	Val	Asn	Asn	Asn	Glu	Phe	Gly	Trp	Leu	Ile	Pro	Lys	
				405					410					415		
Val	Met	Arg	Ile	Tyr	Asp	Thr	Gln	Lys	Glu	Met	Asp	Arg	Glu	Ala	Ser	
			420					425					430			
Gln	Ala	Ala	Leu	Gln	Lys	Met	Leu	Thr	Leu	Leu	Met	Leu	Pro	Pro	Thr	
		435					440					445				
Phe	Gly	Asp	Leu	Leu	Arg	Glu	Glu	Tyr	Ile	Gly	Asp	Asn	Gly	Asp	Pro	
	450					455					460					
Gln	Thr	Leu	Gln	Ala	Gln	Phe	Gln	Glu	Met	Met	Ala	Asp	Ser	Met	Phe	
465					470					475					480	
Val	Ile	Pro	Ala	Leu	Gln	Val	Ala	His	Phe	Gln	Cys	Ser	Arg	Ala	Pro	
				485					490					495		
Val	Tyr	Phe	Tyr	Glu	Phe	Gln	His	Gln	Pro	Ser	Trp	Leu	Lys	Asn	Ile	
			500					505					510			
Arg	Pro	Pro	His	Met	Lys	Ala	Asp	His	Val	Lys	Phe	Thr	Glu	Glu	Glu	
		515					520					525				
Glu	Gln	Leu	Ser	Arg	Lys	Met	Met	Lys	Tyr	Trp	Ala	Asn	Phe	Ala	Arg	
	530					535					540					
Asn	Gly	Asn	Pro	Asn	Gly	Glu	Gly	Leu	Pro	His	Trp	Pro	Leu	Phe	Asp	
545					550					555					560	
Gln	Glu	Glu	Gln	Tyr	Leu	Gln	Leu	Asn	Leu	Gln	Pro	Ala	Val	Gly	Arg	
				565					570					575		
Ala	Leu	Lys	Ala	His	Arg	Leu	Gln	Phe	Trp	Lys	Lys	Ala	Leu	Pro	Gln	
			580					585					590			

Lys Ile Gln Glu Leu Glu Glu Pro Glu Glu Arg His Thr Glu Leu
595 600 605

<210> 11787

<211> 122

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2330"

<220>

<221> source

<223> /note="Gene Symbol: CES2"

<220>

<221> source

<223> /note="Gene Name:
carboxylesterase 2"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000456167"

<400> 11787

Met Thr Ala Gln Ser Arg Ser Pro Thr Thr Pro Thr Phe Pro Gly Pro
1 5 10 15

Ser Gln Arg Thr Pro Leu Thr Pro Cys Pro Val Gln Thr Pro Arg Leu
20 25 30

Gly Lys Ala Leu Ile His Cys Trp Thr Asp Pro Gly Gln Pro Leu Gly
35 40 45

Glu Gln Gln Arg Val Arg Arg Gln Arg Thr Glu Thr Ser Glu Pro Thr
50 55 60

Met Arg Leu His Arg Leu Arg Ala Arg Leu Ser Ala Val Ala Cys Gly
65 70 75 80

Leu Leu Leu Leu Leu Val Arg Gly Gln Gly Glu Ala Pro Ser Glu Gly
85 90 95

Arg Gln Gly Pro Gly Ser Asp Leu Pro Asn Ala Ala Glu Ala Glu Pro
100 105 110

Asp Ser Ala Gly Gly Gln Ala Pro Gly Arg
115 120

<210> 11788

<211> 122

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2330"

<220>

<221> source

<223> /note="Gene Symbol: CES2"

<220>

<221> source

<223> /note="Gene Name:
carboxylesterase 2"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000457721"

<400> 11788

Met Thr Ala Gln Ser Arg Ser Pro Thr Thr Pro Thr Phe Pro Gly Pro
1 5 10 15

Ser Gln Arg Thr Pro Leu Thr Pro Cys Pro Val Gln Thr Pro Arg Leu
20 25 30

Gly Lys Ala Leu Ile His Cys Trp Thr Asp Pro Gly Gln Pro Leu Gly
35 40 45

Glu Gln Gln Arg Val Arg Arg Gln Arg Thr Glu Thr Ser Glu Pro Thr
50 55 60

Met Arg Leu His Arg Leu Arg Ala Arg Leu Ser Ala Val Ala Cys Gly
65 70 75 80

Leu Leu Leu Leu Leu Val Arg Gly Gln Gly Glu Ala Pro Ser Glu Gly
85 90 95

Arg Gln Gly Pro Gly Ser Asp Leu Pro Asn Ala Ala Glu Ala Glu Pro
100 105 110

Asp Ser Ala Gly Gly Gln Ala Pro Gly Arg
115 120

<210> 11789
<211> 21
<212> PRT
<213> Homo sapiens

<220>
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<220>
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<223> /note="Gene Name:
carboxylesterase 2"

<220>
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<223> /note="ENSP ID: ENSP00000463166"

<400> 11789
Met Thr Ala Gln Ser Arg Ser Pro Thr Thr Pro Thr Phe Pro Gly Pro
1 5 10 15

Ser Gln Arg Thr Pro
20

<210> 11790
<211> 125
<212> PRT
<213> Homo sapiens

<220>
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<220>
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carboxylesterase 2"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000463641"

<400> 11790
Met Cys Leu Gln Asp Leu Thr Ala Val Glu Ser Glu Phe Leu Ser Gln

1		5		10		15											
Phe	Asn	Met	Thr	Phe	Pro	Ser	Asp	Ser	Met	Ser	Glu	Asp	Cys	Leu	Tyr		
			20					25					30				
Leu	Ser	Ile	Tyr	Thr	Pro	Ala	His	Ser	His	Glu	Gly	Ser	Asn	Leu	Pro		
		35					40					45					
Val	Met	Val	Trp	Ile	His	Gly	Gly	Ala	Leu	Val	Phe	Gly	Met	Ala	Ser		
	50					55					60						
Leu	Tyr	Asp	Gly	Ser	Met	Leu	Ala	Ala	Leu	Glu	Asn	Val	Val	Val	Val		
65					70					75					80		
Ile	Ile	Gln	Tyr	Arg	Leu	Gly	Val	Leu	Gly	Phe	Phe	Ser	Thr	Gly	Asp		
				85					90					95			
Lys	His	Ala	Thr	Gly	Asn	Trp	Gly	Tyr	Leu	Asp	Gln	Val	Ala	Ala	Leu		
			100					105					110				
Arg	Trp	Val	Gln	Gln	Asn	Ile	Ala	His	Phe	Gly	Gly	Asn					
		115					120					125					

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<210> 11791
<211> 201
<212> PRT
<213> Homo sapiens

<220>
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<223> /note="Gene Symbol: CES2"

<220>
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<223> /note="Gene Name:
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<220>
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<220>
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<222> (1)..(1)

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<223> Any amino acid

<400> 11791

Xaa Val Asp Ser Glu Ala Leu Val Gly Cys Leu Arg Gly Lys Ser Lys
1 5 10 15

Glu Glu Ile Leu Ala Ile Asn Lys Pro Phe Lys Met Ile Pro Gly Val
20 25 30

Val Asp Gly Val Phe Leu Pro Arg His Pro Gln Glu Leu Leu Ala Ser
35 40 45

Ala Asp Phe Gln Pro Val Pro Ser Ile Val Gly Val Asn Asn Asn Glu
50 55 60

Phe Gly Trp Leu Ile Pro Lys Val Met Arg Ile Tyr Asp Thr Gln Lys
65 70 75 80

Glu Met Asp Arg Glu Ala Ser Gln Ala Ala Leu Gln Lys Met Leu Thr
85 90 95

Leu Leu Met Leu Pro Pro Thr Phe Gly Asp Leu Leu Arg Glu Glu Tyr
100 105 110

Ile Gly Asp Asn Gly Asp Pro Gln Thr Leu Gln Ala Gln Phe Gln Glu
115 120 125

Met Met Ala Asp Ser Met Phe Val Ile Pro Ala Leu Gln Val Ala His
130 135 140

Phe Gln Cys Ser Arg Ala Pro Val Tyr Phe Tyr Glu Phe Gln His Gln
145 150 155 160

Pro Ser Trp Leu Lys Asn Ile Arg Pro Pro His Met Lys Ala Asp His
165 170 175

Val Lys Phe Thr Glu Glu Glu Glu Gln Leu Ser Arg Lys Met Met Lys
180 185 190

Tyr Trp Ala Asn Phe Ala Arg Asn Gly
195 200

<210> 11792

<211> 571

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<212> PRT
<213> Homo sapiens

<220>
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<220>
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<220>
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        carboxylesterase 3"

<220>
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<223> /note="Uniprot ID: Q6UWW8"

<220>
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<400> 11792
Met Glu Arg Ala Val Arg Val Glu Ser Gly Val Leu Val Gly Val Val
1              5              10              15

Cys Leu Leu Leu Ala Cys Pro Ala Thr Ala Thr Gly Pro Glu Val Ala
          20              25              30

Gln Pro Glu Val Asp Thr Thr Leu Gly Arg Val Arg Gly Arg Gln Val
          35              40              45

Gly Val Lys Gly Thr Asp Arg Leu Val Asn Val Phe Leu Gly Ile Pro
          50              55              60

Phe Ala Gln Pro Pro Leu Gly Pro Asp Arg Phe Ser Ala Pro His Pro
65              70              75              80

Ala Gln Pro Trp Glu Gly Val Arg Asp Ala Ser Thr Ala Pro Pro Met
          85              90              95

Cys Leu Gln Asp Val Glu Ser Met Asn Ser Ser Arg Phe Val Leu Asn
          100              105              110

Gly Lys Gln Gln Ile Phe Ser Val Ser Glu Asp Cys Leu Val Leu Asn
          115              120              125

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Val	Tyr	Ser	Pro	Ala	Glu	Val	Pro	Ala	Gly	Ser	Gly	Arg	Pro	Val	Met
130						135					140				
Val	Trp	Val	His	Gly	Gly	Ala	Leu	Ile	Thr	Gly	Ala	Ala	Thr	Ser	Tyr
145					150					155					160
Asp	Gly	Ser	Ala	Leu	Ala	Ala	Tyr	Gly	Asp	Val	Val	Val	Val	Thr	Val
				165					170					175	
Gln	Tyr	Arg	Leu	Gly	Val	Leu	Gly	Phe	Phe	Ser	Thr	Gly	Asp	Glu	His
			180					185					190		
Ala	Pro	Gly	Asn	Gln	Gly	Phe	Leu	Asp	Val	Val	Ala	Ala	Leu	Arg	Trp
		195					200					205			
Val	Gln	Glu	Asn	Ile	Ala	Pro	Phe	Gly	Gly	Asp	Leu	Asn	Cys	Val	Thr
	210					215					220				
Val	Phe	Gly	Gly	Ser	Ala	Gly	Gly	Ser	Ile	Ile	Ser	Gly	Leu	Val	Leu
225					230					235					240
Ser	Pro	Val	Ala	Ala	Gly	Leu	Phe	His	Arg	Ala	Ile	Thr	Gln	Ser	Gly
				245					250					255	
Val	Ile	Thr	Thr	Pro	Gly	Ile	Ile	Asp	Ser	His	Pro	Trp	Pro	Leu	Ala
			260					265					270		
Gln	Lys	Ile	Ala	Asn	Thr	Leu	Ala	Cys	Ser	Ser	Ser	Ser	Pro	Ala	Glu
		275					280					285			
Met	Val	Gln	Cys	Leu	Gln	Gln	Lys	Glu	Gly	Glu	Glu	Leu	Val	Leu	Ser
	290					295					300				
Lys	Lys	Leu	Lys	Asn	Thr	Ile	Tyr	Pro	Leu	Thr	Val	Asp	Gly	Thr	Val
305					310					315					320
Phe	Pro	Lys	Ser	Pro	Lys	Glu	Leu	Leu	Lys	Glu	Lys	Pro	Phe	His	Ser
				325					330					335	
Val	Pro	Phe	Leu	Met	Gly	Val	Asn	Asn	His	Glu	Phe	Ser	Trp	Leu	Ile
			340					345					350		
Pro	Arg	Gly	Trp	Gly	Leu	Leu	Asp	Thr	Met	Glu	Gln	Met	Ser	Arg	Glu

355		360		365											
Asp	Met	Leu	Ala	Ile	Ser	Thr	Pro	Val	Leu	Thr	Ser	Leu	Asp	Val	Pro
370						375					380				
Pro	Glu	Met	Met	Pro	Thr	Val	Ile	Asp	Glu	Tyr	Leu	Gly	Ser	Asn	Ser
385					390					395					400
Asp	Ala	Gln	Ala	Lys	Cys	Gln	Ala	Phe	Gln	Glu	Phe	Met	Gly	Asp	Val
				405					410					415	
Phe	Ile	Asn	Val	Pro	Thr	Val	Ser	Phe	Ser	Arg	Tyr	Leu	Arg	Asp	Ser
			420					425					430		
Gly	Ser	Pro	Val	Phe	Phe	Tyr	Glu	Phe	Gln	His	Arg	Pro	Ser	Ser	Phe
		435					440					445			
Ala	Lys	Ile	Lys	Pro	Ala	Trp	Val	Lys	Ala	Asp	His	Gly	Ala	Glu	Gly
450						455					460				
Ala	Phe	Val	Phe	Gly	Gly	Pro	Phe	Leu	Met	Asp	Glu	Ser	Ser	Arg	Leu
465					470					475					480
Ala	Phe	Pro	Glu	Ala	Thr	Glu	Glu	Glu	Lys	Gln	Leu	Ser	Leu	Thr	Met
				485					490					495	
Met	Ala	Gln	Trp	Thr	His	Phe	Ala	Arg	Thr	Gly	Asp	Pro	Asn	Ser	Lys
			500					505					510		
Ala	Leu	Pro	Pro	Trp	Pro	Gln	Phe	Asn	Gln	Ala	Glu	Gln	Tyr	Leu	Glu
		515					520					525			
Ile	Asn	Pro	Val	Pro	Arg	Ala	Gly	Gln	Lys	Phe	Arg	Glu	Ala	Trp	Met
530						535					540				
Gln	Phe	Trp	Ser	Glu	Thr	Leu	Pro	Ser	Lys	Ile	Gln	Gln	Trp	His	Gln
545					550					555					560
Lys	Gln	Lys	Asn	Arg	Lys	Ala	Gln	Glu	Asp	Leu					
			565						570						

<210> 11793
 <211> 568

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<212> PRT
<213> Homo sapiens

<220>
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<223> /note="Payload ID: 2331"

<220>
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<223> /note="Gene Symbol: CES3"

<220>
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<223> /note="Gene Name:
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<220>
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Met Glu Arg Ala Val Arg Val Glu Ser Gly Val Leu Val Gly Val Val
1          5          10          15

Cys Leu Leu Leu Ala Cys Pro Ala Thr Ala Thr Gly Pro Glu Val Ala
          20          25          30

Gln Pro Glu Val Asp Thr Thr Leu Gly Arg Val Arg Gly Arg Gln Val
          35          40          45

Gly Val Lys Gly Thr Asp Arg Leu Val Asn Val Phe Leu Gly Ile Pro
          50          55          60

Phe Ala Gln Pro Pro Leu Gly Pro Asp Arg Phe Ser Ala Pro His Pro
65          70          75          80

Ala Gln Pro Trp Glu Gly Val Arg Asp Ala Ser Thr Ala Pro Pro Met
          85          90          95

Cys Leu Gln Asp Val Glu Ser Met Asn Ser Ser Arg Phe Val Leu Asn
          100          105          110

Gly Lys Gln Gln Ile Phe Ser Val Ser Glu Asp Cys Leu Val Leu Asn
          115          120          125

Val Tyr Ser Pro Ala Glu Val Pro Ala Gly Ser Gly Arg Pro Val Met
130          135          140

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Val Trp Val His Gly Gly Ala Leu Ile Thr Gly Ala Ala Thr Ser Tyr
145 150 155 160

Asp Gly Ser Ala Leu Ala Ala Tyr Gly Asp Val Val Val Val Thr Val
165 170 175

Gln Tyr Arg Leu Gly Val Leu Gly Phe Phe Ser Thr Gly Asp Glu His
180 185 190

Ala Pro Gly Asn Gln Gly Phe Leu Asp Val Val Ala Ala Leu Arg Trp
195 200 205

Val Gln Glu Asn Ile Ala Pro Phe Gly Gly Asp Leu Asn Cys Val Thr
210 215 220

Val Phe Gly Gly Ser Ala Gly Gly Ser Ile Ile Ser Gly Leu Val Leu
225 230 235 240

Ser Pro Val Ala Ala Gly Leu Phe His Arg Ala Ile Thr Gln Ser Gly
245 250 255

Val Ile Thr Thr Pro Gly Ile Ile Asp Ser His Pro Trp Pro Leu Ala
260 265 270

Gln Lys Ile Ala Asn Thr Leu Ala Cys Ser Ser Ser Ser Pro Ala Glu
275 280 285

Met Val Gln Cys Leu Gln Gln Lys Glu Gly Glu Glu Leu Val Leu Ser
290 295 300

Lys Lys Leu Lys Asn Thr Ile Tyr Pro Leu Thr Val Asp Gly Thr Val
305 310 315 320

Phe Pro Lys Ser Pro Lys Glu Leu Leu Lys Glu Lys Pro Phe His Ser
325 330 335

Val Pro Phe Leu Met Gly Val Asn Asn His Glu Phe Ser Trp Leu Ile
340 345 350

Pro Arg Gly Trp Gly Leu Leu Asp Thr Met Glu Gln Met Ser Arg Glu
355 360 365

Asp Met Leu Ala Ile Ser Thr Pro Val Leu Thr Ser Leu Asp Val Pro

370						375										380
Pro	Glu	Met	Met	Pro	Thr	Val	Ile	Asp	Glu	Tyr	Leu	Gly	Ser	Asn	Ser	
385					390					395					400	
Asp	Ala	Gln	Ala	Lys	Cys	Gln	Ala	Phe	Gln	Glu	Phe	Met	Gly	Asp	Val	
				405					410					415		
Phe	Ile	Asn	Val	Pro	Thr	Val	Ser	Phe	Ser	Arg	Tyr	Leu	Arg	Asp	Ser	
			420					425					430			
Gly	Ser	Pro	Val	Phe	Phe	Tyr	Glu	Phe	Gln	His	Arg	Pro	Ser	Ser	Phe	
		435					440					445				
Ala	Lys	Ile	Lys	Pro	Ala	Trp	Val	Lys	Ala	Asp	His	Gly	Ala	Glu	Gly	
	450					455					460					
Ala	Phe	Val	Phe	Gly	Gly	Pro	Phe	Leu	Met	Asp	Glu	Ser	Ser	Arg	Leu	
465					470					475					480	
Glu	Ala	Thr	Glu	Glu	Glu	Lys	Gln	Leu	Ser	Leu	Thr	Met	Met	Ala	Gln	
				485					490					495		
Trp	Thr	His	Phe	Ala	Arg	Thr	Gly	Asp	Pro	Asn	Ser	Lys	Ala	Leu	Pro	
			500					505					510			
Pro	Trp	Pro	Gln	Phe	Asn	Gln	Ala	Glu	Gln	Tyr	Leu	Glu	Ile	Asn	Pro	
		515					520					525				
Val	Pro	Arg	Ala	Gly	Gln	Lys	Phe	Arg	Glu	Ala	Trp	Met	Gln	Phe	Trp	
	530					535					540					
Ser	Glu	Thr	Leu	Pro	Ser	Lys	Ile	Gln	Gln	Trp	His	Gln	Lys	Gln	Lys	
545					550					555					560	
Asn	Arg	Lys	Ala	Gln	Glu	Asp	Leu									
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<210> 11794

<211> 210

<212> PRT

<213> Homo sapiens

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<223> /note="Payload ID: 2331"

<220>
<221> source
<223> /note="Gene Symbol: CES3"

<220>
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<223> /note="Gene Name:
        carboxylesterase 3"

<220>
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<223> /note="Uniprot ID: Q6UWW8"

<220>
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<223> /note="ENSP ID: ENSP00000445559"

<400> 11794
Met Glu Gln Met Ser Arg Glu Asp Met Leu Ala Ile Ser Thr Pro Val
1          5          10          15

Leu Thr Ser Leu Asp Val Pro Pro Glu Met Met Pro Thr Val Ile Asp
          20          25          30

Glu Tyr Leu Gly Ser Asn Ser Asp Ala Gln Ala Lys Cys Gln Ala Phe
          35          40          45

Gln Glu Phe Met Gly Asp Val Phe Ile Asn Val Pro Thr Val Ser Phe
          50          55          60

Ser Arg Tyr Leu Arg Asp Ser Gly Ser Pro Val Phe Phe Tyr Glu Phe
65          70          75          80

Gln His Arg Pro Ser Ser Phe Ala Lys Ile Lys Pro Ala Trp Val Lys
          85          90          95

Ala Asp His Gly Ala Glu Gly Ala Phe Val Phe Gly Gly Pro Phe Leu
          100          105          110

Met Asp Glu Ser Ser Arg Leu Ala Phe Pro Glu Ala Thr Glu Glu Glu
          115          120          125

Lys Gln Leu Ser Leu Thr Met Met Ala Gln Trp Thr His Phe Ala Arg
130          135          140

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Thr Gly Asp Pro Asn Ser Lys Ala Leu Pro Pro Trp Pro Gln Phe Asn
 145 150 155 160

Gln Ala Glu Gln Tyr Leu Glu Ile Asn Pro Val Pro Arg Ala Gly Gln
 165 170 175

Lys Phe Arg Glu Ala Trp Met Gln Phe Trp Ser Glu Thr Leu Pro Ser
 180 185 190

Lys Ile Gln Gln Trp His Gln Lys Gln Lys Asn Arg Lys Ala Gln Glu
 195 200 205

Asp Leu
 210

<210> 11795
 <211> 40
 <212> PRT
 <213> Homo sapiens

<220>
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<220>
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<220>
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 <223> /note="ENSP ID: ENSP00000456203"

<400> 11795
 Met Glu Arg Ala Val Arg Val Glu Ser Gly Val Leu Val Gly Val Val
 1 5 10 15

Cys Leu Leu Leu Ala Cys Pro Ala Thr Ala Thr Gly Tyr Gln Asp Ala
 20 25 30

Val Trp Ala Arg Ser Cys Ser Ala
 35 40

<210> 11796
 <211> 379

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<212> PRT
<213> Homo sapiens

<220>
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<220>
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<400> 11796
Met Glu Arg Ala Val Arg Val Glu Ser Gly Val Leu Val Gly Val Val
1          5          10          15

Cys Leu Leu Leu Ala Cys Pro Ala Thr Ala Thr Gly Pro Glu Val Ala
          20          25          30

Gln Pro Glu Val Asp Thr Thr Leu Gly Arg Val Arg Gly Arg Gln Val
          35          40          45

Gly Val Lys Gly Thr Asp Arg Leu Val Asn Val Phe Leu Gly Ile Pro
          50          55          60

Phe Ala Gln Pro Pro Leu Gly Pro Asp Arg Phe Ser Ala Pro His Pro
65          70          75          80

Ala Gln Pro Trp Glu Gly Val Arg Asp Ala Ser Thr Ala Pro Pro Met
          85          90          95

Cys Leu Gln Asp Val Glu Ser Met Asn Ser Ser Arg Phe Val Leu Asn
          100          105          110

Gly Lys Gln Gln Ile Phe Ser Val Ser Glu Asp Cys Leu Val Leu Asn
          115          120          125

Val Tyr Ser Pro Ala Glu Val Pro Ala Gly Ser Gly Arg Pro Val Met
130          135          140

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Val Trp Val His Gly Gly Ala Leu Ile Thr Gly Ala Ala Thr Ser Tyr
 145 150 155 160

Asp Gly Ser Ala Leu Ala Ala Tyr Gly Asp Val Val Val Val Thr Val
 165 170 175

Gln Tyr Arg Leu Gly Val Leu Gly Phe Phe Ser Thr Gly Asp Glu His
 180 185 190

Ala Pro Gly Asn Gln Gly Phe Leu Asp Val Val Ala Ala Leu Arg Trp
 195 200 205

Val Gln Glu Asn Ile Ala Pro Phe Gly Gly Asp Leu Asn Cys Val Thr
 210 215 220

Val Phe Gly Gly Ser Ala Gly Gly Ser Ile Ile Ser Gly Leu Val Leu
 225 230 235 240

Ser Pro Val Ala Ala Gly Leu Phe His Arg Ala Ile Thr Gln Ser Gly
 245 250 255

Val Ile Thr Thr Pro Gly Ile Ile Asp Ser His Pro Trp Pro Leu Ala
 260 265 270

Gln Lys Ile Ala Asn Thr Leu Ala Cys Ser Ser Ser Ser Pro Ala Glu
 275 280 285

Met Val Gln Cys Leu Gln Gln Lys Glu Gly Glu Glu Leu Val Leu Ser
 290 295 300

Lys Lys Leu Lys Asn Thr Ile Tyr Pro Leu Thr Val Asp Gly Thr Val
 305 310 315 320

Phe Pro Lys Ser Pro Lys Glu Leu Leu Lys Glu Lys Pro Phe His Ser
 325 330 335

Val Pro Phe Leu Met Gly Val Asn Asn His Glu Phe Ser Trp Leu Ile
 340 345 350

Pro Arg Ile Leu Glu Ala Leu Ser Phe Ser Met Ser Ser Ser Ile Asp
 355 360 365

Pro Val Leu Leu Arg Arg Ser Asn Leu Pro Gly

370

375

<210> 11797

<211> 454

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2332"

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<223> /note="Gene Symbol: CES4A"

<220>

<221> source

<223> /note="Gene Name:
carboxylesterase 4A"

<220>

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<223> /note="ENSP ID: ENSP00000441103"

<400> 11797

Gly	Lys	Gln	Met	His	Val	Gly	Lys	Thr	Pro	Ile	Gln	Val	Phe	Leu	Gly
1				5					10					15	

Val	Pro	Phe	Ser	Arg	Pro	Pro	Leu	Gly	Ile	Leu	Arg	Phe	Ala	Pro	Pro
			20					25					30		

Glu	Pro	Pro	Glu	Pro	Trp	Lys	Gly	Ile	Arg	Asp	Ala	Thr	Thr	Tyr	Pro
		35					40					45			

Pro	Gly	Cys	Leu	Gln	Glu	Ser	Trp	Gly	Gln	Leu	Ala	Ser	Met	Tyr	Val
	50					55					60				

Ser	Thr	Arg	Glu	Arg	Tyr	Lys	Trp	Leu	Arg	Phe	Ser	Glu	Asp	Cys	Leu
65					70					75					80

Tyr	Leu	Asn	Val	Tyr	Ala	Pro	Ala	Arg	Ala	Pro	Gly	Asp	Pro	Gln	Leu
				85					90					95	

Pro	Val	Met	Val	Trp	Phe	Pro	Gly	Gly	Ala	Phe	Ile	Val	Gly	Ala	Ala
			100					105					110		

Ser	Ser	Tyr	Glu	Gly	Ser	Asp	Leu	Ala	Ala	Arg	Glu	Lys	Val	Val	Leu
		115					120					125			

26266

Val	Phe	Leu	Gln	His	Arg	Leu	Gly	Ile	Phe	Gly	Phe	Leu	Ser	Thr	Asp	130	135	140
Asp	Ser	His	Ala	Arg	Gly	Asn	Trp	Gly	Leu	Leu	Asp	Gln	Met	Ala	Ala	145	150	155
Leu	Arg	Trp	Val	Gln	Glu	Asn	Ile	Ala	Ala	Phe	Gly	Gly	Asp	Pro	Gly	165	170	175
Asn	Val	Thr	Leu	Phe	Gly	Gln	Ser	Ala	Gly	Ala	Met	Ser	Ile	Ser	Gly	180	185	190
Leu	Met	Met	Ser	Pro	Leu	Ala	Ser	Gly	Leu	Phe	His	Arg	Ala	Ile	Ser	195	200	205
Gln	Ser	Gly	Thr	Ala	Leu	Phe	Arg	Leu	Phe	Ile	Thr	Ser	Asn	Pro	Leu	210	215	220
Lys	Val	Ala	Lys	Lys	Val	Ala	His	Leu	Ala	Gly	Cys	Asn	His	Asn	Ser	225	230	235
Thr	Gln	Ile	Leu	Val	Asn	Cys	Leu	Arg	Ala	Leu	Ser	Gly	Thr	Lys	Val	245	250	255
Met	Arg	Val	Ser	Asn	Lys	Met	Arg	Phe	Leu	Gln	Leu	Asn	Phe	Gln	Arg	260	265	270
Asp	Pro	Glu	Glu	Ile	Ile	Trp	Ser	Met	Ser	Pro	Val	Val	Asp	Gly	Val	275	280	285
Val	Ile	Pro	Asp	Asp	Pro	Leu	Val	Leu	Leu	Thr	Gln	Gly	Lys	Val	Ser	290	295	300
Ser	Val	Pro	Tyr	Leu	Leu	Gly	Val	Asn	Asn	Leu	Glu	Phe	Asn	Trp	Leu	305	310	315
Leu	Pro	Tyr	Asn	Ile	Thr	Lys	Glu	Gln	Val	Pro	Leu	Val	Val	Glu	Glu	325	330	335
Tyr	Leu	Asp	Asn	Val	Asn	Glu	His	Asp	Trp	Lys	Met	Leu	Arg	Asn	Arg	340	345	350

Met Met Asp Ile Val Gln Asp Ala Thr Phe Val Tyr Ala Thr Leu Gln
 355 360 365

Thr Ala His Tyr His Arg Gly Leu Ser Met Gly Lys Glu Lys Ala Leu
 370 375 380

Ser Leu Gln Met Met Lys Tyr Trp Ala Asn Phe Ala Arg Thr Gly Asn
 385 390 395 400

Pro Asn Asp Gly Asn Leu Pro Cys Trp Pro Arg Tyr Asn Lys Asp Glu
 405 410 415

Lys Tyr Leu Gln Leu Asp Phe Thr Thr Arg Val Gly Met Lys Leu Lys
 420 425 430

Glu Lys Lys Met Ala Phe Trp Met Ser Leu Tyr Gln Ser Gln Arg Pro
 435 440 445

Glu Lys Gln Arg Gln Phe
 450

<210> 11798
 <211> 374
 <212> PRT
 <213> Homo sapiens

<220>
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<220>
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<220>
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<400> 11798
 Met Tyr Val Ser Thr Arg Glu Arg Tyr Lys Trp Leu Arg Phe Ser Glu
 1 5 10 15

Asp	Cys	Leu	Tyr	Leu	Asn	Val	Tyr	Ala	Pro	Ala	Arg	Ala	Pro	Gly	Asp		
			20					25					30				
Pro	Gln	Leu	Pro	Val	Met	Val	Trp	Phe	Pro	Gly	Gly	Ala	Phe	Ile	Val		
		35					40					45					
Gly	Ala	Ala	Ser	Ser	Tyr	Glu	Gly	Ser	Asp	Leu	Ala	Ala	Arg	Glu	Lys		
	50					55					60						
Val	Val	Leu	Val	Phe	Leu	Gln	His	Arg	Leu	Gly	Ile	Phe	Gly	Phe	Leu		
65					70					75					80		
Arg	Trp	Arg	Gly	Arg	Thr	Asp	Asp	Ser	His	Ala	Arg	Gly	Asn	Trp	Gly		
				85					90					95			
Leu	Leu	Asp	Gln	Met	Ala	Ala	Leu	Arg	Trp	Val	Gln	Glu	Asn	Ile	Ala		
			100					105					110				
Ala	Phe	Gly	Gly	Asp	Pro	Gly	Asn	Val	Thr	Leu	Phe	Gly	Gln	Ser	Ala		
		115					120					125					
Gly	Ala	Met	Ser	Ile	Ser	Gly	Leu	Met	Met	Ser	Pro	Leu	Ala	Ser	Gly		
	130					135					140						
Leu	Phe	His	Arg	Ala	Ile	Ser	Gln	Ser	Gly	Thr	Ala	Leu	Phe	Arg	Leu		
145					150					155					160		
Phe	Ile	Thr	Ser	Asn	Pro	Leu	Lys	Val	Ala	Lys	Lys	Val	Ala	His	Leu		
				165					170					175			
Ala	Gly	Cys	Asn	His	Asn	Ser	Thr	Gln	Ile	Leu	Val	Asn	Cys	Leu	Arg		
			180					185					190				
Ala	Leu	Ser	Gly	Thr	Lys	Val	Met	Arg	Val	Ser	Asn	Lys	Met	Arg	Phe		
		195					200					205					
Leu	Gln	Leu	Asn	Phe	Gln	Arg	Asp	Pro	Glu	Glu	Ile	Ile	Trp	Ser	Met		
	210					215					220						
Ser	Pro	Val	Val	Asp	Gly	Val	Val	Ile	Pro	Asp	Asp	Pro	Leu	Val	Leu		
225					230					235					240		

Leu Thr Gln Gly Lys Val Ser Ser Val Pro Tyr Leu Leu Gly Val Asn
245 250 255

Asn Leu Glu Phe Asn Trp Leu Leu Pro Tyr Ile Met Lys Phe Pro Leu
260 265 270

Asn Arg Gln Ala Met Arg Lys Glu Thr Ile Thr Lys Met Leu Trp Ser
275 280 285

Thr Arg Thr Leu Leu Asn Ile Thr Lys Glu Gln Val Pro Leu Val Val
290 295 300

Glu Glu Tyr Leu Asp Asn Val Asn Glu His Asp Trp Lys Met Leu Arg
305 310 315 320

Asn Arg Met Met Asp Ile Val Gln Asp Ala Thr Phe Val Tyr Ala Thr
325 330 335

Leu Gln Thr Ala His Tyr His Arg Glu Thr Pro Met Met Gly Ile Cys
340 345 350

Pro Ala Gly His Ala Thr Thr Arg Met Lys Ser Thr Cys Ser Trp Ile
355 360 365

Leu Pro Gln Glu Trp Ala
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<210> 11799
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<223> /note="Uniprot ID: Q5XG92"

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Met Tyr Val Ser Thr Arg Glu Arg Tyr Lys Trp Leu Arg Phe Ser Glu
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Asp Cys Leu Tyr Leu Asn Val Tyr Ala Pro Ala Arg Ala Pro Gly Asp
20 25 30

Pro Gln Leu Pro Val Met Val Trp Phe Pro Gly Gly Ala Phe Ile Val
35 40 45

Gly Ala Ala Ser Ser Tyr Glu Gly Ser Asp Leu Ala Ala Arg Glu Lys
50 55 60

Val Val Leu Val Phe Leu Gln His Arg Leu Gly Ile Phe Gly Phe Leu
65 70 75 80

Ser Thr Asp Asp Ser His Ala Arg Gly Asn Trp Gly Leu Leu Asp Gln
85 90 95

Met Ala Ala Leu Arg Trp Val Gln Glu Asn Ile Ala Ala Phe Gly Gly
100 105 110

Asp Pro Gly Asn Val Thr Leu Phe Gly Gln Ser Ala Gly Ala Met Ser
115 120 125

Ile Ser Gly Leu Met Met Ser Pro Leu Ala Ser Gly Leu Phe His Arg
130 135 140

Ala Ile Ser Gln Ser Gly Thr Ala Leu Phe Arg Leu Phe Ile Thr Ser
145 150 155 160

Asn Pro Leu Lys Val Ala Lys Lys Val Ala His Leu Ala Gly Cys Asn
165 170 175

His Asn Ser Thr Gln Ile Leu Val Asn Cys Leu Arg Ala Leu Ser Gly
180 185 190

Thr Lys Val Met Arg Val Ser Asn Lys Met Arg Phe Leu Gln Leu Asn
195 200 205

26271

Phe	Gln	Arg	Asp	Pro	Glu	Glu	Ile	Ile	Trp	Ser	Met	Ser	Pro	Val	Val	
210						215					220					
Asp	Gly	Val	Val	Ile	Pro	Asp	Asp	Pro	Leu	Val	Leu	Leu	Thr	Gln	Gly	
225					230					235					240	
Lys	Val	Ser	Ser	Val	Pro	Tyr	Leu	Leu	Gly	Val	Asn	Asn	Leu	Glu	Phe	
				245					250					255		
Asn	Trp	Leu	Leu	Pro	Tyr	Ile	Met	Lys	Phe	Pro	Leu	Asn	Arg	Gln	Ala	
			260					265					270			
Met	Arg	Lys	Glu	Thr	Ile	Thr	Lys	Met	Leu	Trp	Ser	Thr	Arg	Thr	Leu	
		275					280					285				
Leu	Asn	Ile	Thr	Lys	Glu	Gln	Val	Pro	Leu	Val	Val	Glu	Glu	Tyr	Leu	
	290					295					300					
Asp	Asn	Val	Asn	Glu	His	Asp	Trp	Lys	Met	Leu	Arg	Asn	Arg	Met	Met	
305					310					315					320	
Asp	Ile	Val	Gln	Asp	Ala	Thr	Phe	Val	Tyr	Ala	Thr	Leu	Gln	Thr	Ala	
				325					330					335		
His	Tyr	His	Arg	Asp	Ala	Gly	Leu	Pro	Val	Tyr	Leu	Tyr	Glu	Phe	Glu	
			340					345					350			
His	His	Ala	Arg	Gly	Ile	Ile	Val	Lys	Pro	Arg	Thr	Asp	Gly	Ala	Asp	
		355					360					365				
His	Gly	Asp	Glu	Met	Tyr	Phe	Leu	Phe	Gly	Gly	Pro	Phe	Ala	Thr	Gly	
	370					375					380					
Leu	Ser	Met	Gly	Lys	Glu	Lys	Ala	Leu	Ser	Leu	Gln	Met	Met	Lys	Tyr	
385					390					395					400	
Trp	Ala	Asn	Phe	Ala	Arg	Thr	Gly	Asn	Pro	Asn	Asp	Gly	Asn	Leu	Pro	
				405					410					415		
Cys	Trp	Pro	Arg	Tyr	Asn	Lys	Asp	Glu	Lys	Tyr	Leu	Gln	Leu	Asp	Phe	
			420					425					430			

Thr Thr Arg Val Gly Met Lys Leu Lys Glu Lys Lys Met Ala Phe Trp
435 440 445

Met Ser Leu Tyr Gln Ser Gln Arg Pro Glu Lys Gln Arg Gln Phe
450 455 460

<210> 11800

<211> 468

<212> PRT

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<223> /note="Uniprot ID: Q5XG92"

<220>

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<400> 11800

Met Arg Trp Ile Leu Cys Trp Ser Leu Thr Leu Cys Leu Met Ala Gln
1 5 10 15

Thr Ala Leu Gly Ala Leu His Thr Lys Arg Pro Gln Val Val Thr Lys
20 25 30

Tyr Gly Thr Leu Gln Gly Lys Gln Met His Val Gly Lys Thr Pro Ile
35 40 45

Gln Val Phe Leu Gly Val Pro Phe Ser Arg Pro Pro Leu Gly Ile Leu
50 55 60

Arg Phe Ala Pro Pro Glu Pro Pro Glu Pro Trp Lys Gly Ile Arg Asp
65 70 75 80

Ala Thr Thr Tyr Pro Pro Gly Cys Leu Gln Glu Ser Trp Gly Gln Leu

26273

85

90

95

Ala Ser Met Tyr Val Ser Thr Arg Glu Arg Tyr Lys Trp Leu Arg Phe
100 105 110

Ser Glu Asp Cys Leu Tyr Leu Asn Val Tyr Ala Pro Ala Arg Ala Pro
115 120 125

Gly Asp Pro Gln Leu Pro Val Met Val Trp Phe Pro Gly Gly Ala Phe
130 135 140

Ile Val Gly Ala Ala Ser Ser Tyr Glu Gly Ser Asp Leu Ala Ala Arg
145 150 155 160

Glu Lys Val Val Leu Val Phe Leu Gln His Arg Leu Gly Ile Phe Gly
165 170 175

Phe Leu Ser Thr Asp Asp Ser His Ala Arg Gly Asn Trp Gly Leu Leu
180 185 190

Asp Gln Met Ala Ala Leu Arg Trp Val Gln Glu Asn Ile Ala Ala Phe
195 200 205

Gly Gly Asp Pro Gly Asn Val Thr Leu Phe Gly Gln Ser Ala Gly Ala
210 215 220

Met Ser Ile Ser Gly Leu Met Met Ser Pro Leu Ala Ser Gly Leu Phe
225 230 235 240

His Arg Ala Ile Ser Gln Ser Gly Thr Ala Leu Phe Arg Leu Phe Ile
245 250 255

Thr Ser Asn Pro Leu Lys Val Ala Lys Lys Val Ala His Leu Ala Gly
260 265 270

Cys Asn His Asn Ser Thr Gln Ile Leu Val Asn Cys Leu Arg Ala Leu
275 280 285

Ser Gly Thr Lys Val Met Arg Val Ser Asn Lys Met Arg Phe Leu Gln
290 295 300

Leu Asn Phe Gln Arg Asp Pro Glu Glu Ile Ile Trp Ser Met Ser Pro
305 310 315 320

26274

Val Val Asp Gly Val Val Ile Pro Asp Asp Pro Leu Val Leu Leu Thr
325 330 335

Gln Gly Lys Val Ser Ser Val Pro Tyr Leu Leu Gly Val Asn Asn Leu
340 345 350

Glu Phe Asn Trp Leu Leu Pro Tyr Ile Met Lys Phe Pro Leu Asn Arg
355 360 365

Gln Ala Met Arg Lys Glu Thr Ile Thr Lys Met Leu Trp Ser Thr Arg
370 375 380

Thr Leu Leu Asn Ile Thr Lys Glu Gln Val Pro Leu Val Val Glu Glu
385 390 395 400

Tyr Leu Asp Asn Val Asn Glu His Asp Trp Lys Met Leu Arg Asn Arg
405 410 415

Met Met Asp Ile Val Gln Asp Ala Thr Phe Val Tyr Ala Thr Leu Gln
420 425 430

Thr Ala His Tyr His Arg Glu Thr Pro Met Met Gly Ile Cys Pro Ala
435 440 445

Gly His Ala Thr Thr Arg Met Lys Ser Thr Cys Ser Trp Ile Leu Pro
450 455 460

Gln Glu Trp Ala
465

<210> 11801
<211> 135
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<223> /note="Gene Name:
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<223> /note="ENSP ID: ENSP00000444182"

<400> 11801

Met Tyr Val Ser Thr Arg Glu Arg Tyr Lys Trp Leu Arg Phe Ser Glu
1 5 10 15

Asp Cys Leu Tyr Leu Asn Val Tyr Ala Pro Ala Arg Ala Pro Gly Asp
20 25 30

Pro Gln Leu Pro Val Met Val Trp Phe Pro Gly Gly Ala Phe Ile Val
35 40 45

Gly Ala Ala Ser Ser Tyr Glu Gly Ser Asp Leu Ala Ala Arg Glu Lys
50 55 60

Val Val Leu Val Phe Leu Gln His Arg Leu Gly Ile Phe Gly Phe Leu
65 70 75 80

Arg Trp Arg Gly Arg Tyr Pro Leu Gly Pro Gln Leu Trp Pro Glu Arg
85 90 95

Arg Gly Leu Ala Arg Thr Thr Ala Thr Arg Ala Gly Thr Gly Gly Cys
100 105 110

Trp Thr Arg Trp Arg Leu Cys Ala Gly Cys Arg Arg Thr Ser Gln Pro
115 120 125

Ser Gly Glu Thr Gln Glu Met
130 135

<210> 11802

<211> 177

<212> PRT

<213> Homo sapiens

<220>

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<220>
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 <222> (1)..(1)
 <223> Any amino acid

<400> 11802

Xaa Ala Leu His Thr Lys Arg Pro Gln Val Val Thr Lys Tyr Gly Thr
 1 5 10 15

Leu Gln Gly Lys Gln Met His Val Gly Lys Thr Pro Ile Gln Val Phe
 20 25 30

Leu Gly Val Pro Phe Ser Arg Pro Pro Leu Gly Ile Leu Arg Phe Ala
 35 40 45

Pro Pro Glu Pro Pro Glu Pro Trp Lys Gly Ile Arg Asp Ala Thr Thr
 50 55 60

Tyr Pro Pro Gly Trp Ser Leu Ala Leu Ser Pro Gly Trp Ser Ala Val
 65 70 75 80

Ala Arg Ser Arg Leu Thr Ala Thr Ser Ala Ser Arg Val Gln Ala Ser
 85 90 95

Leu Leu Pro Gln Pro Leu Ser Ile Trp Gly Tyr Arg Cys Leu Gln Glu
 100 105 110

Ser Trp Gly Gln Leu Ala Ser Met Tyr Val Ser Thr Arg Glu Arg Tyr
 115 120 125

Lys Trp Leu Arg Phe Ser Glu Asp Cys Leu Tyr Leu Asn Val Tyr Ala
 130 135 140

Pro Ala Arg Ala Pro Gly Asp Pro Gln Leu Pro Val Ser Asp Gly Leu
 145 150 155 160

Val Pro Gly Arg Arg Leu His Arg Gly Arg Cys Phe Phe Val Arg Gly

Leu

<210> 11803

<211> 575

<212> PRT

<213> Homo sapiens

<220>

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<223> /note="Payload ID: 2333"

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<223> /note="Gene Symbol: CES5A"

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<221> source

<223> /note="Gene Name:
carboxylesterase 5A"

<220>

<221> source

<223> /note="Uniprot ID: Q6NT32"

<220>

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<223> /note="ENSP ID: ENSP00000290567"

<400> 11803

Met Ser Gly Asn Trp Val His Pro Gly Gln Ile Leu Ile Trp Ala Ile
1 5 10 15

Trp Val Leu Ala Ala Pro Thr Lys Gly Pro Ser Ala Glu Gly Pro Gln
20 25 30

Arg Asn Thr Arg Leu Gly Trp Ile Gln Gly Lys Gln Val Thr Val Leu
35 40 45

Gly Ser Pro Val Pro Val Asn Val Phe Leu Gly Val Pro Phe Ala Ala
50 55 60

Pro Pro Leu Gly Ser Leu Arg Phe Thr Asn Pro Gln Pro Ala Ser Pro
65 70 75 80

Trp Asp Asn Leu Arg Glu Ala Thr Ser Tyr Pro Asn Leu Cys Leu Gln
85 90 95

Asn	Ser	Glu	Trp	Leu	Leu	Leu	Asp	Gln	His	Met	Leu	Lys	Val	His	Tyr		
			100					105					110				
Pro	Lys	Phe	Gly	Val	Ser	Glu	Asp	Cys	Leu	Tyr	Leu	Asn	Ile	Tyr	Ala		
		115					120					125					
Pro	Ala	His	Ala	Asp	Thr	Gly	Ser	Lys	Leu	Pro	Val	Leu	Val	Trp	Phe		
	130					135					140						
Pro	Gly	Gly	Ala	Phe	Lys	Thr	Gly	Ser	Ala	Ser	Ile	Phe	Asp	Gly	Ser		
145					150					155					160		
Ala	Leu	Ala	Ala	Tyr	Glu	Asp	Val	Leu	Val	Val	Val	Val	Gln	Tyr	Arg		
				165					170					175			
Leu	Gly	Ile	Phe	Gly	Phe	Phe	Thr	Thr	Trp	Asp	Gln	His	Ala	Pro	Gly		
			180					185					190				
Asn	Trp	Ala	Phe	Lys	Asp	Gln	Val	Ala	Ala	Leu	Ser	Trp	Val	Gln	Lys		
		195					200					205					
Asn	Ile	Glu	Phe	Phe	Gly	Gly	Asp	Pro	Ser	Ser	Val	Thr	Ile	Phe	Gly		
	210					215					220						
Glu	Ser	Ala	Gly	Ala	Ile	Ser	Val	Ser	Ser	Leu	Ile	Leu	Ser	Pro	Met		
225					230					235					240		
Ala	Lys	Gly	Leu	Phe	His	Lys	Ala	Ile	Met	Glu	Ser	Gly	Val	Ala	Ile		
				245					250					255			
Ile	Pro	Tyr	Leu	Glu	Ala	His	Asp	Tyr	Glu	Lys	Ser	Glu	Asp	Leu	Gln		
			260					265					270				
Val	Val	Ala	His	Phe	Cys	Gly	Asn	Asn	Ala	Ser	Asp	Ser	Glu	Ala	Leu		
		275					280					285					
Leu	Arg	Cys	Leu	Arg	Thr	Lys	Pro	Ser	Lys	Glu	Leu	Leu	Thr	Leu	Ser		
	290					295					300						
Gln	Lys	Thr	Lys	Ser	Phe	Thr	Arg	Val	Val	Asp	Gly	Ala	Phe	Phe	Pro		
305					310					315					320		

Asn Glu Pro Leu Asp Leu Leu Ser Gln Lys Ala Phe Lys Ala Ile Pro
325 330 335

Ser Ile Ile Gly Val Asn Asn His Glu Cys Gly Phe Leu Leu Pro Met
340 345 350

Lys Glu Ala Pro Glu Ile Leu Ser Gly Ser Asn Lys Ser Leu Ala Leu
355 360 365

His Leu Ile Gln Asn Ile Leu His Ile Pro Pro Gln Tyr Leu His Leu
370 375 380

Val Ala Asn Glu Tyr Phe His Asp Lys His Ser Leu Thr Glu Ile Arg
385 390 395 400

Asp Ser Leu Leu Asp Leu Leu Gly Asp Val Phe Phe Val Val Pro Ala
405 410 415

Leu Ile Thr Ala Arg Tyr His Arg Asp Ala Gly Ala Pro Val Tyr Phe
420 425 430

Tyr Glu Phe Arg His Arg Pro Gln Cys Phe Glu Asp Thr Lys Pro Ala
435 440 445

Phe Val Lys Ala Asp His Ala Asp Glu Val Arg Phe Val Phe Gly Gly
450 455 460

Ala Phe Leu Lys Gly Asp Ile Val Met Phe Glu Gly Ala Thr Glu Glu
465 470 475 480

Glu Lys Leu Leu Ser Arg Lys Met Met Lys Tyr Trp Ala Thr Phe Ala
485 490 495

Arg Thr Gly Asn Pro Asn Gly Asn Asp Leu Ser Leu Trp Pro Ala Tyr
500 505 510

Asn Leu Thr Glu Gln Tyr Leu Gln Leu Asp Leu Asn Met Ser Leu Gly
515 520 525

Gln Arg Leu Lys Glu Pro Arg Val Asp Phe Trp Thr Ser Thr Ile Pro
530 535 540

Leu Ile Leu Ser Ala Ser Asp Met Leu His Ser Pro Leu Ser Ser Leu

560

Thr Phe Leu Ser Leu Leu Gln Pro Phe Phe Phe Phe Cys Ala Pro
565 570 575

<210> 11804

<211> 525

<212> PRT

<213> Homo sapiens

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<223> /note="Gene Symbol: CES5A"

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<223> /note="Gene Name:
carboxylesterase 5A"
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<223> /note="ENSP ID: ENSP00000324271"

<400> 11804

Met Ser Gly Asn Trp Val His Pro Gly Gln Ile Leu Ile Trp Ala Ile
1 5 10 15

Trp Val Leu Ala Ala Pro Thr Lys Gly Pro Ser Ala Glu Gly Pro Gln
20 25 30

Arg Asn Thr Arg Leu Gly Trp Ile Gln Gly Lys Gln Val Thr Val Leu
35 40 45

Gly Ser Pro Val Pro Val Asn Val Phe Leu Gly Val Pro Phe Ala Ala
50 55 60

Pro Pro Leu Gly Ser Leu Arg Phe Thr Asn Pro Gln Pro Ala Ser Pro
65 70 75 80

Trp Asp Asn Leu Arg Glu Ala Thr Ser Tyr Pro Asn Leu Cys Leu Gln
85 90 95

Asn	Ser	Glu	Trp	Leu	Leu	Leu	Asp	Gln	His	Met	Leu	Lys	Val	His	Tyr		
			100					105					110				
Pro	Lys	Phe	Gly	Val	Ser	Glu	Asp	Cys	Leu	Tyr	Leu	Asn	Ile	Tyr	Ala		
		115					120					125					
Pro	Ala	His	Ala	Asp	Thr	Gly	Ser	Lys	Leu	Pro	Val	Leu	Val	Trp	Phe		
	130					135					140						
Pro	Gly	Gly	Ala	Phe	Lys	Thr	Gly	Ser	Ala	Ser	Ile	Phe	Asp	Gly	Ser		
145					150					155					160		
Ala	Leu	Ala	Ala	Tyr	Glu	Asp	Val	Leu	Val	Val	Val	Val	Gln	Tyr	Arg		
				165					170					175			
Leu	Gly	Ile	Phe	Gly	Phe	Phe	Thr	Thr	Trp	Asp	Gln	His	Ala	Pro	Gly		
			180					185					190				
Asn	Trp	Ala	Phe	Lys	Asp	Gln	Val	Ala	Ala	Leu	Ser	Trp	Val	Gln	Lys		
		195					200					205					
Asn	Ile	Glu	Phe	Phe	Gly	Gly	Asp	Pro	Ser	Ser	Val	Thr	Ile	Phe	Gly		
	210					215					220						
Glu	Ser	Ala	Gly	Ala	Ile	Ser	Val	Ser	Ser	Leu	Ile	Leu	Ser	Pro	Met		
225					230					235					240		
Ala	Lys	Gly	Leu	Phe	His	Lys	Ala	Ile	Met	Glu	Ser	Gly	Val	Ala	Ile		
				245					250					255			
Ile	Pro	Tyr	Leu	Glu	Ala	His	Asp	Tyr	Glu	Lys	Ser	Glu	Asp	Leu	Gln		
			260					265					270				
Val	Val	Ala	His	Phe	Cys	Gly	Asn	Asn	Ala	Ser	Asp	Ser	Glu	Ala	Leu		
		275					280					285					
Leu	Arg	Cys	Leu	Arg	Thr	Lys	Pro	Ser	Lys	Glu	Leu	Leu	Thr	Leu	Ser		
	290					295					300						
Gln	Lys	Thr	Lys	Ser	Phe	Thr	Arg	Val	Val	Asp	Gly	Ala	Phe	Phe	Pro		
305					310					315					320		

Asn Glu Pro Leu Asp Leu Leu Ser Gln Lys Ala Phe Lys Ala Ile Pro
325 330 335

Ser Ile Ile Gly Val Asn Asn His Glu Cys Gly Phe Leu Leu Pro Met
340 345 350

Lys Glu Ala Pro Glu Ile Leu Ser Gly Ser Asn Lys Ser Leu Ala Leu
355 360 365

His Leu Ile Gln Asn Ile Leu His Ile Pro Pro Gln Tyr Leu His Leu
370 375 380

Val Ala Asn Glu Tyr Phe His Asp Lys His Ser Leu Thr Glu Ile Arg
385 390 395 400

Asp Ser Leu Leu Asp Leu Leu Gly Asp Val Phe Phe Val Val Pro Ala
405 410 415

Leu Ile Thr Ala Arg Tyr His Arg Glu Gly Ala Thr Glu Glu Glu Lys
420 425 430

Leu Leu Ser Arg Lys Met Met Lys Tyr Trp Ala Thr Phe Ala Arg Thr
435 440 445

Gly Asn Pro Asn Gly Asn Asp Leu Ser Leu Trp Pro Ala Tyr Asn Leu
450 455 460

Thr Glu Gln Tyr Leu Gln Leu Asp Leu Asn Met Ser Leu Gly Gln Arg
465 470 475 480

Leu Lys Glu Pro Arg Val Asp Phe Trp Thr Ser Thr Ile Pro Leu Ile
485 490 495

Leu Ser Ala Ser Asp Met Leu His Ser Pro Leu Ser Ser Leu Thr Phe
500 505 510

Leu Ser Leu Leu Gln Pro Phe Phe Phe Cys Ala Pro
515 520 525

<210> 11805

<211> 469

<212> PRT

<213> Homo sapiens

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<223> /note="Gene Name:
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<220>
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<223> /note="Uniprot ID: Q6NT32"

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Met Leu Lys Val His Tyr Pro Lys Phe Gly Val Ser Glu Asp Cys Leu
1              5              10              15

Tyr Leu Asn Ile Tyr Ala Pro Ala His Ala Asp Thr Gly Ser Lys Leu
          20              25              30

Pro Val Leu Val Trp Phe Pro Gly Gly Ala Phe Lys Thr Gly Ser Ala
          35              40              45

Ser Ile Phe Asp Gly Ser Ala Leu Ala Ala Tyr Glu Asp Val Leu Val
          50              55              60

Val Val Val Gln Tyr Arg Leu Gly Ile Phe Gly Phe Phe Thr Thr Trp
65              70              75              80

Asp Gln His Ala Pro Gly Asn Trp Ala Phe Lys Asp Gln Val Ala Ala
          85              90              95

Leu Ser Trp Val Gln Lys Asn Ile Glu Phe Phe Gly Gly Asp Pro Ser
          100              105              110

Ser Val Thr Ile Phe Gly Glu Ser Ala Gly Ala Ile Ser Val Ser Ser
          115              120              125

Leu Ile Leu Ser Pro Met Ala Lys Gly Leu Phe His Lys Ala Ile Met
130              135              140

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Glu	Ser	Gly	Val	Ala	Ile	Ile	Pro	Tyr	Leu	Glu	Ala	His	Asp	Tyr	Glu
145					150					155					160
Lys	Ser	Glu	Asp	Leu	Gln	Val	Val	Ala	His	Phe	Cys	Gly	Asn	Asn	Ala
				165					170					175	
Ser	Asp	Ser	Glu	Ala	Leu	Leu	Arg	Cys	Leu	Arg	Thr	Lys	Pro	Ser	Lys
			180					185					190		
Glu	Leu	Leu	Thr	Leu	Ser	Gln	Lys	Thr	Lys	Ser	Phe	Thr	Arg	Val	Val
		195					200					205			
Asp	Gly	Ala	Phe	Phe	Pro	Asn	Glu	Pro	Leu	Asp	Leu	Leu	Ser	Gln	Lys
	210					215					220				
Ala	Phe	Lys	Ala	Ile	Pro	Ser	Ile	Ile	Gly	Val	Asn	Asn	His	Glu	Cys
225					230					235					240
Gly	Phe	Leu	Leu	Pro	Met	Lys	Glu	Ala	Pro	Glu	Ile	Leu	Ser	Gly	Ser
				245					250					255	
Asn	Lys	Ser	Leu	Ala	Leu	His	Leu	Ile	Gln	Asn	Ile	Leu	His	Ile	Pro
			260					265					270		
Pro	Gln	Tyr	Leu	His	Leu	Val	Ala	Asn	Glu	Tyr	Phe	His	Asp	Lys	His
		275					280					285			
Ser	Leu	Thr	Glu	Ile	Arg	Asp	Ser	Leu	Leu	Asp	Leu	Leu	Gly	Asp	Val
	290					295					300				
Phe	Phe	Val	Val	Pro	Ala	Leu	Ile	Thr	Ala	Arg	Tyr	His	Arg	Asp	Ala
305					310					315					320
Gly	Ala	Pro	Val	Tyr	Phe	Tyr	Glu	Phe	Arg	His	Arg	Pro	Gln	Cys	Phe
				325					330					335	
Glu	Asp	Thr	Lys	Pro	Ala	Phe	Val	Lys	Ala	Asp	His	Ala	Asp	Glu	Val
			340					345					350		
Arg	Phe	Val	Phe	Gly	Gly	Ala	Phe	Leu	Lys	Gly	Asp	Ile	Val	Met	Phe
		355						360				365			

Glu Gly Ala Thr Glu Glu Glu Lys Leu Leu Ser Arg Lys Met Met Lys
370 375 380

Tyr Trp Ala Thr Phe Ala Arg Thr Gly Asn Pro Asn Gly Asn Asp Leu
385 390 395 400

Ser Leu Trp Pro Ala Tyr Asn Leu Thr Glu Gln Tyr Leu Gln Leu Asp
405 410 415

Leu Asn Met Ser Leu Gly Gln Arg Leu Lys Glu Pro Arg Val Asp Phe
420 425 430

Trp Thr Ser Thr Ile Pro Leu Ile Leu Ser Ala Ser Asp Met Leu His
435 440 445

Ser Pro Leu Ser Ser Leu Thr Phe Leu Ser Leu Leu Gln Pro Phe Phe
450 455 460

Phe Phe Cys Ala Pro
465

<210> 11806
<211> 604
<212> PRT
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<223> /note="Gene Name:
carboxylesterase 5A"

<220>
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<223> /note="Uniprot ID: Q6NT32"

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<400> 11806
Met Ala Val Leu Val Cys Pro Ala Ser Cys His Gly Leu Lys Glu Phe
1 5 10 15

Arg	Ile	Arg	Arg	Gly	Met	Trp	Arg	Leu	Cys	Leu	Val	Tyr	Tyr	Phe	Tyr		
			20					25					30				
Pro	Ala	Ser	Ser	Thr	Leu	Tyr	Val	Leu	Arg	Ile	Asp	Val	Leu	Asn	Tyr		
		35					40					45					
Thr	Ser	Lys	Asp	Glu	Gly	Pro	Ser	Ala	Glu	Gly	Pro	Gln	Arg	Asn	Thr		
	50					55					60						
Arg	Leu	Gly	Trp	Ile	Gln	Gly	Lys	Gln	Val	Thr	Val	Leu	Gly	Ser	Pro		
65					70					75					80		
Val	Pro	Val	Asn	Val	Phe	Leu	Gly	Val	Pro	Phe	Ala	Ala	Pro	Pro	Leu		
			85						90					95			
Gly	Ser	Leu	Arg	Phe	Thr	Asn	Pro	Gln	Pro	Ala	Ser	Pro	Trp	Asp	Asn		
			100					105					110				
Leu	Arg	Glu	Ala	Thr	Ser	Tyr	Pro	Asn	Leu	Cys	Leu	Gln	Asn	Ser	Glu		
		115					120					125					
Trp	Leu	Leu	Leu	Asp	Gln	His	Met	Leu	Lys	Val	His	Tyr	Pro	Lys	Phe		
	130					135					140						
Gly	Val	Ser	Glu	Asp	Cys	Leu	Tyr	Leu	Asn	Ile	Tyr	Ala	Pro	Ala	His		
145					150					155					160		
Ala	Asp	Thr	Gly	Ser	Lys	Leu	Pro	Val	Leu	Val	Trp	Phe	Pro	Gly	Gly		
				165					170					175			
Ala	Phe	Lys	Thr	Gly	Ser	Ala	Ser	Ile	Phe	Asp	Gly	Ser	Ala	Leu	Ala		
			180					185					190				
Ala	Tyr	Glu	Asp	Val	Leu	Val	Val	Val	Val	Gln	Tyr	Arg	Leu	Gly	Ile		
		195					200					205					
Phe	Gly	Phe	Phe	Thr	Thr	Trp	Asp	Gln	His	Ala	Pro	Gly	Asn	Trp	Ala		
	210					215					220						
Phe	Lys	Asp	Gln	Val	Ala	Ala	Leu	Ser	Trp	Val	Gln	Lys	Asn	Ile	Glu		
225					230					235					240		

Phe	Phe	Gly	Gly	Asp	Pro	Ser	Ser	Val	Thr	Ile	Phe	Gly	Glu	Ser	Ala	245	250	255
Gly	Ala	Ile	Ser	Val	Ser	Ser	Leu	Ile	Leu	Ser	Pro	Met	Ala	Lys	Gly	260	265	270
Leu	Phe	His	Lys	Ala	Ile	Met	Glu	Ser	Gly	Val	Ala	Ile	Ile	Pro	Tyr	275	280	285
Leu	Glu	Ala	His	Asp	Tyr	Glu	Lys	Ser	Glu	Asp	Leu	Gln	Val	Val	Ala	290	295	300
His	Phe	Cys	Gly	Asn	Asn	Ala	Ser	Asp	Ser	Glu	Ala	Leu	Leu	Arg	Cys	305	310	315
Leu	Arg	Thr	Lys	Pro	Ser	Lys	Glu	Leu	Leu	Thr	Leu	Ser	Gln	Lys	Thr	325	330	335
Lys	Ser	Phe	Thr	Arg	Val	Val	Asp	Gly	Ala	Phe	Phe	Pro	Asn	Glu	Pro	340	345	350
Leu	Asp	Leu	Leu	Ser	Gln	Lys	Ala	Phe	Lys	Ala	Ile	Pro	Ser	Ile	Ile	355	360	365
Gly	Val	Asn	Asn	His	Glu	Cys	Gly	Phe	Leu	Leu	Pro	Met	Lys	Glu	Ala	370	375	380
Pro	Glu	Ile	Leu	Ser	Gly	Ser	Asn	Lys	Ser	Leu	Ala	Leu	His	Leu	Ile	385	390	395
Gln	Asn	Ile	Leu	His	Ile	Pro	Pro	Gln	Tyr	Leu	His	Leu	Val	Ala	Asn	405	410	415
Glu	Tyr	Phe	His	Asp	Lys	His	Ser	Leu	Thr	Glu	Ile	Arg	Asp	Ser	Leu	420	425	430
Leu	Asp	Leu	Leu	Gly	Asp	Val	Phe	Phe	Val	Val	Pro	Ala	Leu	Ile	Thr	435	440	445
Ala	Arg	Tyr	His	Arg	Asp	Ala	Gly	Ala	Pro	Val	Tyr	Phe	Tyr	Glu	Phe	450	455	460

Arg His Arg Pro Gln Cys Phe Glu Asp Thr Lys Pro Ala Phe Val Lys
465 470 475 480

Ala Asp His Ala Asp Glu Val Arg Phe Val Phe Gly Gly Ala Phe Leu
485 490 495

Lys Gly Asp Ile Val Met Phe Glu Gly Ala Thr Glu Glu Glu Lys Leu
500 505 510

Leu Ser Arg Lys Met Met Lys Tyr Trp Ala Thr Phe Ala Arg Thr Gly
515 520 525

Asn Pro Asn Gly Asn Asp Leu Ser Leu Trp Pro Ala Tyr Asn Leu Thr
530 535 540

Glu Gln Tyr Leu Gln Leu Asp Leu Asn Met Ser Leu Gly Gln Arg Leu
545 550 555 560

Lys Glu Pro Arg Val Asp Phe Trp Thr Ser Thr Ile Pro Leu Ile Leu
565 570 575

Ser Ala Ser Asp Met Leu His Ser Pro Leu Ser Ser Leu Thr Phe Leu
580 585 590

Ser Leu Leu Gln Pro Phe Phe Phe Cys Ala Pro
595 600

<210> 11807
<211> 545
<212> PRT
<213> Homo sapiens

<220>
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<223> /note="Payload ID: 2333"

<220>
<221> source
<223> /note="Gene Symbol: CES5A"

<220>
<221> source
<223> /note="Gene Name:
carboxylesterase 5A"

<220>
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<223> /note="ENSP ID: ENSP00000428887"

<400> 11807

Met Ser Gly Asn Trp Val His Pro Gly Gln Ile Leu Ile Trp Ala Ile
1 5 10 15

Trp Val Leu Ala Ala Pro Thr Lys Gly Pro Ser Ala Glu Gly Pro Gln
20 25 30

Arg Asn Thr Arg Leu Gly Trp Ile Gln Gly Lys Gln Val Thr Val Leu
35 40 45

Gly Ser Pro Val Pro Val Asn Val Phe Leu Gly Val Pro Phe Ala Ala
50 55 60

Pro Pro Leu Gly Ser Leu Arg Phe Thr Asn Pro Gln Pro Ala Ser Pro
65 70 75 80

Trp Asp Asn Leu Arg Glu Ala Thr Ser Tyr Pro Asn Leu Cys Leu Gln
85 90 95

Asn Ser Glu Trp Leu Leu Leu Asp Gln His Met Leu Lys Val Leu Val
100 105 110

Trp Phe Pro Gly Gly Ala Phe Lys Thr Gly Ser Ala Ser Ile Phe Asp
115 120 125

Gly Ser Ala Leu Ala Ala Tyr Glu Asp Val Leu Val Val Val Gln
130 135 140

Tyr Arg Leu Gly Ile Phe Gly Phe Phe Thr Thr Trp Asp Gln His Ala
145 150 155 160

Pro Gly Asn Trp Ala Phe Lys Asp Gln Val Ala Ala Leu Ser Trp Val
165 170 175

Gln Lys Asn Ile Glu Phe Phe Gly Gly Asp Pro Ser Ser Val Thr Ile
180 185 190

Phe Gly Glu Ser Ala Gly Ala Ile Ser Val Ser Ser Leu Ile Leu Ser
195 200 205

Pro Met Ala Lys Gly Leu Phe His Lys Ala Ile Met Glu Ser Gly Val
210 215 220

26290

Ala	Ile	Ile	Pro	Tyr	Leu	Glu	Ala	His	Asp	Tyr	Glu	Lys	Ser	Glu	Asp
225					230				235						240
Leu	Gln	Val	Val	Ala	His	Phe	Cys	Gly	Asn	Asn	Ala	Ser	Asp	Ser	Glu
				245					250					255	
Ala	Leu	Leu	Arg	Cys	Leu	Arg	Thr	Lys	Pro	Ser	Lys	Glu	Leu	Leu	Thr
			260					265					270		
Leu	Ser	Gln	Lys	Thr	Lys	Ser	Phe	Thr	Arg	Val	Val	Asp	Gly	Ala	Phe
		275					280					285			
Phe	Pro	Asn	Glu	Pro	Leu	Asp	Leu	Leu	Ser	Gln	Lys	Ala	Phe	Lys	Ala
	290					295					300				
Ile	Pro	Ser	Ile	Ile	Gly	Val	Asn	Asn	His	Glu	Cys	Gly	Phe	Leu	Leu
305					310					315					320
Pro	Met	Lys	Glu	Ala	Pro	Glu	Ile	Leu	Ser	Gly	Ser	Asn	Lys	Ser	Leu
				325					330					335	
Ala	Leu	His	Leu	Ile	Gln	Asn	Ile	Leu	His	Ile	Pro	Pro	Gln	Tyr	Leu
			340					345					350		
His	Leu	Val	Ala	Asn	Glu	Tyr	Phe	His	Asp	Lys	His	Ser	Leu	Thr	Glu
		355					360					365			
Ile	Arg	Asp	Ser	Leu	Leu	Asp	Leu	Leu	Gly	Asp	Val	Phe	Phe	Val	Val
	370					375					380				
Pro	Ala	Leu	Ile	Thr	Ala	Arg	Tyr	His	Arg	Asp	Ala	Gly	Ala	Pro	Val
385					390					395					400
Tyr	Phe	Tyr	Glu	Phe	Arg	His	Arg	Pro	Gln	Cys	Phe	Glu	Asp	Thr	Lys
				405					410					415	
Pro	Ala	Phe	Val	Lys	Ala	Asp	His	Ala	Asp	Glu	Val	Arg	Phe	Val	Phe
			420					425					430		
Gly	Gly	Ala	Phe	Leu	Lys	Gly	Asp	Ile	Val	Met	Phe	Glu	Gly	Ala	Thr
		435					440					445			

Glu Glu Glu Lys Leu Leu Ser Arg Lys Met Met Lys Tyr Trp Ala Thr
450 455 460

Phe Ala Arg Thr Gly Asn Pro Asn Gly Asn Asp Leu Ser Leu Trp Pro
465 470 475 480

Ala Tyr Asn Leu Thr Glu Gln Tyr Leu Gln Leu Asp Leu Asn Met Ser
485 490 495

Leu Gly Gln Arg Leu Lys Glu Pro Arg Val Asp Phe Trp Thr Ser Thr
500 505 510

Ile Pro Leu Ile Leu Ser Ala Ser Asp Met Leu His Ser Pro Leu Ser
515 520 525

Ser Leu Thr Phe Leu Ser Leu Leu Gln Pro Phe Phe Phe Phe Cys Ala
530 535 540

Pro
545

<210> 11808
<211> 75
<212> PRT
<213> Homo sapiens

<220>
<221> source
<223> /note="Payload ID: 2333"

<220>
<221> source
<223> /note="Gene Symbol: CES5A"

<220>
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<223> /note="Gene Name:
carboxylesterase 5A"

<220>
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<223> /note="ENSP ID: ENSP00000439810"

<400> 11808
Met Leu Lys Val His Tyr Pro Lys Phe Gly Val Ser Glu Asp Cys Leu
1 5 10 15

Tyr Leu Asn Ile Tyr Ala Pro Ala His Ala Asp Thr Gly Ser Lys Leu
20 25 30

Pro Val Leu Val Trp Phe Pro Gly Gly Ala Phe Lys Thr Gly Ser Ala
35 40 45

Ser Ile Phe Asp Gly Ser Ala Leu Ala Ala Tyr Glu Asp Val Leu Val
50 55 60

Val Val Val Gln Tyr Arg Leu Gly Ile Phe Gly
65 70 75

<210> 11809
<211> 545
<212> PRT
<213> Homo sapiens

<220>
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<220>
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<220>
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<223> /note="Gene Name:
carboxylesterase 5A"

<220>
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<223> /note="ENSP ID: ENSP00000458678"

<400> 11809
Met Ser Gly Asn Trp Val His Pro Gly Gln Ile Leu Ile Trp Ala Ile
1 5 10 15

Trp Val Leu Ala Ala Pro Thr Lys Gly Pro Ser Ala Glu Gly Pro Gln
20 25 30

Arg Asn Thr Arg Leu Gly Trp Ile Gln Gly Lys Gln Val Thr Val Leu
35 40 45

Gly Ser Pro Val Pro Val Asn Val Phe Leu Gly Val Pro Phe Ala Ala
50 55 60

Pro Pro Leu Gly Ser Leu Arg Phe Thr Asn Pro Gln Pro Ala Ser Pro
65 70 75 80

Trp	Asp	Asn	Leu	Arg	Glu	Ala	Thr	Ser	Tyr	Pro	Asn	Leu	Cys	Leu	Gln	85	90	95
Asn	Ser	Glu	Trp	Leu	Leu	Leu	Asp	Gln	His	Met	Leu	Lys	Val	Leu	Val	100	105	110
Trp	Phe	Pro	Gly	Gly	Ala	Phe	Lys	Thr	Gly	Ser	Ala	Ser	Ile	Phe	Asp	115	120	125
Gly	Ser	Ala	Leu	Ala	Ala	Tyr	Glu	Asp	Val	Leu	Val	Val	Val	Val	Gln	130	135	140
Tyr	Arg	Leu	Gly	Ile	Phe	Gly	Phe	Phe	Thr	Thr	Trp	Asp	Gln	His	Ala	145	150	155
Pro	Gly	Asn	Trp	Ala	Phe	Lys	Asp	Gln	Val	Ala	Ala	Leu	Ser	Trp	Val	165	170	175
Gln	Lys	Asn	Ile	Glu	Phe	Phe	Gly	Gly	Asp	Pro	Ser	Ser	Val	Thr	Ile	180	185	190
Phe	Gly	Glu	Ser	Ala	Gly	Ala	Ile	Ser	Val	Ser	Ser	Leu	Ile	Leu	Ser	195	200	205
Pro	Met	Ala	Lys	Gly	Leu	Phe	His	Lys	Ala	Ile	Met	Glu	Ser	Gly	Val	210	215	220
Ala	Ile	Ile	Pro	Tyr	Leu	Glu	Ala	His	Asp	Tyr	Glu	Lys	Ser	Glu	Asp	225	230	235
Leu	Gln	Val	Val	Ala	His	Phe	Cys	Gly	Asn	Asn	Ala	Ser	Asp	Ser	Glu	245	250	255
Ala	Leu	Leu	Arg	Cys	Leu	Arg	Thr	Lys	Pro	Ser	Lys	Glu	Leu	Leu	Thr	260	265	270
Leu	Ser	Gln	Lys	Thr	Lys	Ser	Phe	Thr	Arg	Val	Val	Asp	Gly	Ala	Phe	275	280	285
Phe	Pro	Asn	Glu	Pro	Leu	Asp	Leu	Leu	Ser	Gln	Lys	Ala	Phe	Lys	Ala	290	295	300
Ile	Pro	Ser	Ile	Ile	Gly	Val	Asn	Asn	His	Glu	Cys	Gly	Phe	Leu	Leu			

305		310		315		320
Pro	Met	Lys	Glu	Ala	Pro	Leu
			325			330
Ala	Leu	His	Leu	Ile	Gln	Asn
			340			345
His	Leu	Val	Ala	Asn	Glu	Tyr
			355			360
Ile	Arg	Asp	Ser	Leu	Leu	Asp
						375
Pro	Ala	Leu	Ile	Thr	Ala	Arg
						390
Tyr	Phe	Tyr	Glu	Phe	Arg	His
						405
Pro	Ala	Phe	Val	Lys	Ala	Asp
						420
Gly	Gly	Ala	Phe	Leu	Lys	Gly
						435
Glu	Glu	Glu	Lys	Leu	Leu	Ser
						450
Phe	Ala	Arg	Thr	Gly	Asn	Pro
						465
Ala	Tyr	Asn	Leu	Thr	Glu	Gln
						485
Leu	Gly	Gln	Arg	Leu	Lys	Glu
						500
Ile	Pro	Leu	Ile	Leu	Ser	Ala
						515
Ser	Leu	Thr	Phe	Leu	Ser	Leu
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Pro
545

<210> 11810
<211> 575
<212> PRT
<213> Homo sapiens

<220>
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<220>
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<223> /note="Gene Name:
carboxylesterase 5A"

<220>
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<223> /note="ENSP ID: ENSP00000459314"

<400> 11810
Met Ser Gly Asn Trp Val His Pro Gly Gln Ile Leu Ile Trp Ala Ile
1 5 10 15

Trp Val Leu Ala Ala Pro Thr Lys Gly Pro Ser Ala Glu Gly Pro Gln
20 25 30

Arg Asn Thr Arg Leu Gly Trp Ile Gln Gly Lys Gln Val Thr Val Leu
35 40 45

Gly Ser Pro Val Pro Val Asn Val Phe Leu Gly Val Pro Phe Ala Ala
50 55 60

Pro Pro Leu Gly Ser Leu Arg Phe Thr Asn Pro Gln Pro Ala Ser Pro
65 70 75 80

Trp Asp Asn Leu Arg Glu Ala Thr Ser Tyr Pro Asn Leu Cys Leu Gln
85 90 95

Asn Ser Glu Trp Leu Leu Leu Asp Gln His Met Leu Lys Val His Tyr
100 105 110

Pro	Lys	Phe	Gly	Val	Ser	Glu	Asp	Cys	Leu	Tyr	Leu	Asn	Ile	Tyr	Ala	
		115					120					125				
Pro	Ala	His	Ala	Asp	Thr	Gly	Ser	Lys	Leu	Pro	Val	Leu	Val	Trp	Phe	
	130					135					140					
Pro	Gly	Gly	Ala	Phe	Lys	Thr	Gly	Ser	Ala	Ser	Ile	Phe	Asp	Gly	Ser	
145					150					155					160	
Ala	Leu	Ala	Ala	Tyr	Glu	Asp	Val	Leu	Val	Val	Val	Val	Gln	Tyr	Arg	
				165					170					175		
Leu	Gly	Ile	Phe	Gly	Phe	Phe	Thr	Thr	Trp	Asp	Gln	His	Ala	Pro	Gly	
			180					185					190			
Asn	Trp	Ala	Phe	Lys	Asp	Gln	Val	Ala	Ala	Leu	Ser	Trp	Val	Gln	Lys	
		195					200					205				
Asn	Ile	Glu	Phe	Phe	Gly	Gly	Asp	Pro	Ser	Ser	Val	Thr	Ile	Phe	Gly	
	210					215					220					
Glu	Ser	Ala	Gly	Ala	Ile	Ser	Val	Ser	Ser	Leu	Ile	Leu	Ser	Pro	Met	
225					230					235					240	
Ala	Lys	Gly	Leu	Phe	His	Lys	Ala	Ile	Met	Glu	Ser	Gly	Val	Ala	Ile	
				245					250					255		
Ile	Pro	Tyr	Leu	Glu	Ala	His	Asp	Tyr	Glu	Lys	Ser	Glu	Asp	Leu	Gln	
			260					265					270			
Val	Val	Ala	His	Phe	Cys	Gly	Asn	Asn	Ala	Ser	Asp	Ser	Glu	Ala	Leu	
		275					280					285				
Leu	Arg	Cys	Leu	Arg	Thr	Lys	Pro	Ser	Lys	Glu	Leu	Leu	Thr	Leu	Ser	
	290					295					300					
Gln	Lys	Thr	Lys	Ser	Phe	Thr	Arg	Val	Val	Asp	Gly	Ala	Phe	Phe	Pro	
305					310					315					320	
Asn	Glu	Pro	Leu	Asp	Leu	Leu	Ser	Gln	Lys	Ala	Phe	Lys	Ala	Ile	Pro	
				325					330					335		
Ser	Ile	Ile	Gly	Val	Asn	Asn	His	Glu	Cys	Gly	Phe	Leu	Leu	Pro	Met	

<210> 11811
<211> 75
<212> PRT
<213> Homo sapiens

<220>
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<223> /note="Gene Name:
carboxylesterase 5A"

<220>
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<223> /note="ENSP ID: ENSP00000460292"

<400> 11811
Met Leu Lys Val His Tyr Pro Lys Phe Gly Val Ser Glu Asp Cys Leu
1 5 10 15

Tyr Leu Asn Ile Tyr Ala Pro Ala His Ala Asp Thr Gly Ser Lys Leu
20 25 30

Pro Val Leu Val Trp Phe Pro Gly Gly Ala Phe Lys Thr Gly Ser Ala
35 40 45

Ser Ile Phe Asp Gly Ser Ala Leu Ala Ala Tyr Glu Asp Val Leu Val
50 55 60

Val Val Val Gln Tyr Arg Leu Gly Ile Phe Gly
65 70 75

<210> 11812
<211> 604
<212> PRT
<213> Homo sapiens

<220>
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<220>
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 <223> /note="ENSP ID: ENSP00000460799"

<400> 11812
 Met Ala Val Leu Val Cys Pro Ala Ser Cys His Gly Leu Lys Glu Phe
 1 5 10 15

Arg Ile Arg Arg Gly Met Trp Arg Leu Cys Leu Val Tyr Tyr Phe Tyr
 20 25 30

Pro Ala Ser Ser Thr Leu Tyr Val Leu Arg Ile Asp Val Leu Asn Tyr
 35 40 45

Thr Ser Lys Asp Glu Gly Pro Ser Ala Glu Gly Pro Gln Arg Asn Thr
 50 55 60

Arg Leu Gly Trp Ile Gln Gly Lys Gln Val Thr Val Leu Gly Ser Pro
65 70 75 80

Val Pro Val Asn Val Phe Leu Gly Val Pro Phe Ala Ala Pro Pro Leu
 85 90 95

Gly Ser Leu Arg Phe Thr Asn Pro Gln Pro Ala Ser Pro Trp Asp Asn
 100 105 110

Leu Arg Glu Ala Thr Ser Tyr Pro Asn Leu Cys Leu Gln Asn Ser Glu
 115 120 125

Trp Leu Leu Leu Asp Gln His Met Leu Lys Val His Tyr Pro Lys Phe
130 135 140

Gly Val Ser Glu Asp Cys Leu Tyr Leu Asn Ile Tyr Ala Pro Ala His
145 150 155 160

Ala Asp Thr Gly Ser Lys Leu Pro Val Leu Val Trp Phe Pro Gly Gly
 165 170 175

Ala Phe Lys Thr Gly Ser Ala Ser Ile Phe Asp Gly Ser Ala Leu Ala
 180 185 190

Ala	Tyr	Glu	Asp	Val	Leu	Val	Val	Val	Val	Gln	Tyr	Arg	Leu	Gly	Ile		
		195						200				205					
Phe	Gly	Phe	Phe	Thr	Thr	Trp	Asp	Gln	His	Ala	Pro	Gly	Asn	Trp	Ala		
	210					215					220						
Phe	Lys	Asp	Gln	Val	Ala	Ala	Leu	Ser	Trp	Val	Gln	Lys	Asn	Ile	Glu		
225					230					235					240		
Phe	Phe	Gly	Gly	Asp	Pro	Ser	Ser	Val	Thr	Ile	Phe	Gly	Glu	Ser	Ala		
				245					250					255			
Gly	Ala	Ile	Ser	Val	Ser	Ser	Leu	Ile	Leu	Ser	Pro	Met	Ala	Lys	Gly		
			260					265					270				
Leu	Phe	His	Lys	Ala	Ile	Met	Glu	Ser	Gly	Val	Ala	Ile	Ile	Pro	Tyr		
		275					280					285					
Leu	Glu	Ala	His	Asp	Tyr	Glu	Lys	Ser	Glu	Asp	Leu	Gln	Val	Val	Ala		
	290					295					300						
His	Phe	Cys	Gly	Asn	Asn	Ala	Ser	Asp	Ser	Glu	Ala	Leu	Leu	Arg	Cys		
305					310					315					320		
Leu	Arg	Thr	Lys	Pro	Ser	Lys	Glu	Leu	Leu	Thr	Leu	Ser	Gln	Lys	Thr		
				325					330					335			
Lys	Ser	Phe	Thr	Arg	Val	Val	Asp	Gly	Ala	Phe	Phe	Pro	Asn	Glu	Pro		
			340					345					350				
Leu	Asp	Leu	Leu	Ser	Gln	Lys	Ala	Phe	Lys	Ala	Ile	Pro	Ser	Ile	Ile		
		355					360					365					
Gly	Val	Asn	Asn	His	Glu	Cys	Gly	Phe	Leu	Leu	Pro	Met	Lys	Glu	Ala		
	370					375					380						
Pro	Glu	Ile	Leu	Ser	Gly	Ser	Asn	Lys	Ser	Leu	Ala	Leu	His	Leu	Ile		
385					390					395					400		
Gln	Asn	Ile	Leu	His	Ile	Pro	Pro	Gln	Tyr	Leu	His	Leu	Val	Ala	Asn		
				405					410					415			

Glu Tyr Phe His Asp Lys His Ser Leu Thr Glu Ile Arg Asp Ser Leu
420 425 430

Leu Asp Leu Leu Gly Asp Val Phe Phe Val Val Pro Ala Leu Ile Thr
435 440 445

Ala Arg Tyr His Arg Asp Ala Gly Ala Pro Val Tyr Phe Tyr Glu Phe
450 455 460

Arg His Arg Pro Gln Cys Phe Glu Asp Thr Lys Pro Ala Phe Val Lys
465 470 475 480

Ala Asp His Ala Asp Glu Val Arg Phe Val Phe Gly Gly Ala Phe Leu
485 490 495

Lys Gly Asp Ile Val Met Phe Glu Gly Ala Thr Glu Glu Glu Lys Leu
500 505 510

Leu Ser Arg Lys Met Met Lys Tyr Trp Ala Thr Phe Ala Arg Thr Gly
515 520 525

Asn Pro Asn Gly Asn Asp Leu Ser Leu Trp Pro Ala Tyr Asn Leu Thr
530 535 540

Glu Gln Tyr Leu Gln Leu Asp Leu Asn Met Ser Leu Gly Gln Arg Leu
545 550 555 560

Lys Glu Pro Arg Val Glu Phe Trp Thr Ser Thr Ile Pro Leu Ile Leu
565 570 575

Ser Ala Ser Asp Met Leu His Ser Pro Leu Ser Ser Leu Thr Phe Leu
580 585 590

Ser Leu Leu Gln Pro Phe Phe Phe Phe Cys Ala Pro
595 600

<210> 11813

<211> 355

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2333"

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<220>
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 <223> /note="Gene Name:
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<220>
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 <223> /note="ENSP ID: ENSP00000460847"

<400> 11813

Met Glu Asp Asp Leu Ser Trp Arg Ser Trp Ser Leu Leu Cys Met Glu
 1 5 10 15

Ile Leu Ser Pro Met Ala Lys Gly Leu Phe His Lys Ala Ile Met Glu
 20 25 30

Ser Gly Val Ala Ile Ile Pro Tyr Leu Glu Ala His Asp Tyr Glu Lys
 35 40 45

Ser Glu Asp Leu Gln Val Val Ala His Phe Cys Gly Asn Asn Ala Ser
 50 55 60

Asp Ser Glu Ala Leu Leu Arg Cys Leu Arg Thr Lys Pro Ser Lys Glu
 65 70 75 80

Leu Leu Thr Leu Ser Gln Lys Thr Lys Ser Phe Thr Arg Val Val Asp
 85 90 95

Gly Ala Phe Phe Pro Asn Glu Pro Leu Asp Leu Leu Ser Gln Lys Ala
 100 105 110

Phe Lys Ala Ile Pro Ser Ile Ile Gly Val Asn Asn His Glu Cys Gly
 115 120 125

Phe Leu Leu Pro Met Glu Ala Pro Glu Ile Leu Ser Gly Ser Asn Lys
 130 135 140

Ser Leu Ala Leu His Leu Ile Gln Asn Ile Leu His Ile Pro Pro Gln
 145 150 155 160

Tyr Leu His Leu Val Ala Asn Glu Tyr Phe His Asp Lys His Ser Leu
 165 170 175

Thr Glu Ile Arg Asp Ser Leu Leu Asp Leu Leu Gly Asp Val Phe Phe
180 185 190

Val Val Pro Ala Leu Ile Thr Ala Arg Tyr His Arg Asp Ala Gly Ala
195 200 205

Pro Val Tyr Phe Tyr Glu Phe Arg His Arg Pro Gln Cys Phe Glu Asp
210 215 220

Thr Lys Pro Ala Phe Val Lys Ala Asp His Ala Asp Glu Val Arg Phe
225 230 235 240

Val Phe Gly Gly Ala Phe Leu Lys Gly Asp Ile Val Met Phe Glu Gly
245 250 255

Ala Thr Glu Glu Glu Lys Leu Leu Ser Arg Lys Met Met Lys Tyr Trp
260 265 270

Ala Thr Phe Ala Arg Thr Gly Asn Pro Asn Gly Asn Asp Leu Ser Leu
275 280 285

Trp Pro Ala Tyr Asn Leu Thr Glu Gln Tyr Leu Gln Leu Asp Leu Asn
290 295 300

Met Ser Leu Gly Gln Arg Leu Lys Glu Pro Arg Val Glu Phe Trp Thr
305 310 315 320

Ser Thr Ile Pro Leu Ile Leu Ser Ala Ser Asp Met Leu His Ser Pro
325 330 335

Leu Ser Ser Leu Thr Phe Leu Ser Leu Leu Gln Pro Phe Phe Phe Phe
340 345 350

Cys Ala Pro
355

<210> 11814

<211> 525

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2333"

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<223> /note="Gene Symbol: CES5A"

<220>

<221> source

<223> /note="Gene Name:
carboxylesterase 5A"

<220>

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<223> /note="ENSP ID: ENSP00000461336"

<400> 11814

Met Ser Gly Asn Trp Val His Pro Gly Gln Ile Leu Ile Trp Ala Ile
1 5 10 15

Trp Val Leu Ala Ala Pro Thr Lys Gly Pro Ser Ala Glu Gly Pro Gln
20 25 30

Arg Asn Thr Arg Leu Gly Trp Ile Gln Gly Lys Gln Val Thr Val Leu
35 40 45

Gly Ser Pro Val Pro Val Asn Val Phe Leu Gly Val Pro Phe Ala Ala
50 55 60

Pro Pro Leu Gly Ser Leu Arg Phe Thr Asn Pro Gln Pro Ala Ser Pro
65 70 75 80

Trp Asp Asn Leu Arg Glu Ala Thr Ser Tyr Pro Asn Leu Cys Leu Gln
85 90 95

Asn Ser Glu Trp Leu Leu Leu Asp Gln His Met Leu Lys Val His Tyr
100 105 110

Pro Lys Phe Gly Val Ser Glu Asp Cys Leu Tyr Leu Asn Ile Tyr Ala
115 120 125

Pro Ala His Ala Asp Thr Gly Ser Lys Leu Pro Val Leu Val Trp Phe
130 135 140

Pro Gly Gly Ala Phe Lys Thr Gly Ser Ala Ser Ile Phe Asp Gly Ser
145 150 155 160

Ala Leu Ala Ala Tyr Glu Asp Val Leu Val Val Val Gln Tyr Arg

26305

165								170				175			
Leu	Gly	Ile	Phe	Gly	Phe	Phe	Thr	Thr	Trp	Asp	Gln	His	Ala	Pro	Gly
			180					185					190		
Asn	Trp	Ala	Phe	Lys	Asp	Gln	Val	Ala	Ala	Leu	Ser	Trp	Val	Gln	Lys
		195					200					205			
Asn	Ile	Glu	Phe	Phe	Gly	Gly	Asp	Pro	Ser	Ser	Val	Thr	Ile	Phe	Gly
	210					215					220				
Glu	Ser	Ala	Gly	Ala	Ile	Ser	Val	Ser	Ser	Leu	Ile	Leu	Ser	Pro	Met
225					230					235					240
Ala	Lys	Gly	Leu	Phe	His	Lys	Ala	Ile	Met	Glu	Ser	Gly	Val	Ala	Ile
				245					250					255	
Ile	Pro	Tyr	Leu	Glu	Ala	His	Asp	Tyr	Glu	Lys	Ser	Glu	Asp	Leu	Gln
			260					265					270		
Val	Val	Ala	His	Phe	Cys	Gly	Asn	Asn	Ala	Ser	Asp	Ser	Glu	Ala	Leu
		275					280					285			
Leu	Arg	Cys	Leu	Arg	Thr	Lys	Pro	Ser	Lys	Glu	Leu	Leu	Thr	Leu	Ser
	290					295					300				
Gln	Lys	Thr	Lys	Ser	Phe	Thr	Arg	Val	Val	Asp	Gly	Ala	Phe	Phe	Pro
305					310					315					320
Asn	Glu	Pro	Leu	Asp	Leu	Leu	Ser	Gln	Lys	Ala	Phe	Lys	Ala	Ile	Pro
				325					330					335	
Ser	Ile	Ile	Gly	Val	Asn	Asn	His	Glu	Cys	Gly	Phe	Leu	Leu	Pro	Met
			340					345					350		
Lys	Glu	Ala	Pro	Glu	Ile	Leu	Ser	Gly	Ser	Asn	Lys	Ser	Leu	Ala	Leu
		355					360					365			
His	Leu	Ile	Gln	Asn	Ile	Leu	His	Ile	Pro	Pro	Gln	Tyr	Leu	His	Leu
	370					375					380				
Val	Ala	Asn	Glu	Tyr	Phe	His	Asp	Lys	His	Ser	Leu	Thr	Glu	Ile	Arg
385					390					395					400

Asp Ser Leu Leu Asp Leu Leu Gly Asp Val Phe Phe Val Val Pro Ala
405 410 415

Leu Ile Thr Ala Arg Tyr His Arg Glu Gly Ala Thr Glu Glu Glu Lys
420 425 430

Leu Leu Ser Arg Lys Met Met Lys Tyr Trp Ala Thr Phe Ala Arg Thr
435 440 445

Gly Asn Pro Asn Gly Asn Asp Leu Ser Leu Trp Pro Ala Tyr Asn Leu
450 455 460

Thr Glu Gln Tyr Leu Gln Leu Asp Leu Asn Met Ser Leu Gly Gln Arg
465 470 475 480

Leu Lys Glu Pro Arg Val Glu Phe Trp Thr Ser Thr Ile Pro Leu Ile
485 490 495

Leu Ser Ala Ser Asp Met Leu His Ser Pro Leu Ser Ser Leu Thr Phe
500 505 510

Leu Ser Leu Leu Gln Pro Phe Phe Phe Cys Ala Pro
515 520 525

<210> 11815
<211> 469
<212> PRT
<213> Homo sapiens

<220>
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<223> /note="Payload ID: 2333"

<220>
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<223> /note="Gene Symbol: CES5A"

<220>
<221> source
<223> /note="Gene Name:
carboxylesterase 5A"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000461519"

<400> 11815

Met	Leu	Lys	Val	His	Tyr	Pro	Lys	Phe	Gly	Val	Ser	Glu	Asp	Cys	Leu			
1				5					10					15				
Tyr	Leu	Asn	Ile	Tyr	Ala	Pro	Ala	His	Ala	Asp	Thr	Gly	Ser	Lys	Leu			
			20					25					30					
Pro	Val	Leu	Val	Trp	Phe	Pro	Gly	Gly	Ala	Phe	Lys	Thr	Gly	Ser	Ala			
		35					40					45						
Ser	Ile	Phe	Asp	Gly	Ser	Ala	Leu	Ala	Ala	Tyr	Glu	Asp	Val	Leu	Val			
	50					55					60							
Val	Val	Val	Gln	Tyr	Arg	Leu	Gly	Ile	Phe	Gly	Phe	Phe	Thr	Thr	Trp			
65					70					75					80			
Asp	Gln	His	Ala	Pro	Gly	Asn	Trp	Ala	Phe	Lys	Asp	Gln	Val	Ala	Ala			
				85					90					95				
Leu	Ser	Trp	Val	Gln	Lys	Asn	Ile	Glu	Phe	Phe	Gly	Gly	Asp	Pro	Ser			
			100					105					110					
Ser	Val	Thr	Ile	Phe	Gly	Glu	Ser	Ala	Gly	Ala	Ile	Ser	Val	Ser	Ser			
		115					120					125						
Leu	Ile	Leu	Ser	Pro	Met	Ala	Lys	Gly	Leu	Phe	His	Lys	Ala	Ile	Met			
	130					135					140							
Glu	Ser	Gly	Val	Ala	Ile	Ile	Pro	Tyr	Leu	Glu	Ala	His	Asp	Tyr	Glu			
145					150					155					160			
Lys	Ser	Glu	Asp	Leu	Gln	Val	Val	Ala	His	Phe	Cys	Gly	Asn	Asn	Ala			
				165					170					175				
Ser	Asp	Ser	Glu	Ala	Leu	Leu	Arg	Cys	Leu	Arg	Thr	Lys	Pro	Ser	Lys			
			180					185					190					
Glu	Leu	Leu	Thr	Leu	Ser	Gln	Lys	Thr	Lys	Ser	Phe	Thr	Arg	Val	Val			
		195					200					205						
Asp	Gly	Ala	Phe	Phe	Pro	Asn	Glu	Pro	Leu	Asp	Leu	Leu	Ser	Gln	Lys			
	210					215					220							
Ala	Phe	Lys	Ala	Ile	Pro	Ser	Ile	Ile	Gly	Val	Asn	Asn	His	Glu	Cys			

225						230										235						240
Gly	Phe	Leu	Leu	Pro	Met	Lys	Glu	Ala	Pro	Glu	Ile	Leu	Ser	Gly	Ser							
				245					250					255								
Asn	Lys	Ser	Leu	Ala	Leu	His	Leu	Ile	Gln	Asn	Ile	Leu	His	Ile	Pro							
			260					265					270									
Pro	Gln	Tyr	Leu	His	Leu	Val	Ala	Asn	Glu	Tyr	Phe	His	Asp	Lys	His							
		275					280					285										
Ser	Leu	Thr	Glu	Ile	Arg	Asp	Ser	Leu	Leu	Asp	Leu	Leu	Gly	Asp	Val							
	290					295						300										
Phe	Phe	Val	Val	Pro	Ala	Leu	Ile	Thr	Ala	Arg	Tyr	His	Arg	Asp	Ala							
305					310					315					320							
Gly	Ala	Pro	Val	Tyr	Phe	Tyr	Glu	Phe	Arg	His	Arg	Pro	Gln	Cys	Phe							
				325					330					335								
Glu	Asp	Thr	Lys	Pro	Ala	Phe	Val	Lys	Ala	Asp	His	Ala	Asp	Glu	Val							
			340					345					350									
Arg	Phe	Val	Phe	Gly	Gly	Ala	Phe	Leu	Lys	Gly	Asp	Ile	Val	Met	Phe							
		355					360					365										
Glu	Gly	Ala	Thr	Glu	Glu	Glu	Lys	Leu	Leu	Ser	Arg	Lys	Met	Met	Lys							
	370					375					380											
Tyr	Trp	Ala	Thr	Phe	Ala	Arg	Thr	Gly	Asn	Pro	Asn	Gly	Asn	Asp	Leu							
385					390					395					400							
Ser	Leu	Trp	Pro	Ala	Tyr	Asn	Leu	Thr	Glu	Gln	Tyr	Leu	Gln	Leu	Asp							
				405					410					415								
Leu	Asn	Met	Ser	Leu	Gly	Gln	Arg	Leu	Lys	Glu	Pro	Arg	Val	Glu	Phe							
			420					425					430									
Trp	Thr	Ser	Thr	Ile	Pro	Leu	Ile	Leu	Ser	Ala	Ser	Asp	Met	Leu	His							
		435					440					445										
Ser	Pro	Leu	Ser	Ser	Leu	Thr	Phe	Leu	Ser	Leu	Leu	Gln	Pro	Phe	Phe							
	450					455					460											

Phe Phe Cys Ala Pro
465

<210> 11816

<211> 78

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2333"

<220>

<221> source

<223> /note="Gene Symbol: CES5A"

<220>

<221> source

<223> /note="Gene Name:
carboxylesterase 5A"

<220>

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<223> /note="ENSP ID: ENSP00000461804"

<400> 11816

Met	Leu	Lys	Val	His	Tyr	Pro	Lys	Phe	Gly	Val	Ser	Glu	Asp	Cys	Leu
1				5					10					15	

Tyr	Leu	Asn	Ile	Tyr	Ala	Pro	Ala	His	Ala	Asp	Thr	Gly	Ser	Lys	Leu
			20					25					30		

Pro	Val	Leu	Val	Trp	Phe	Pro	Gly	Gly	Ala	Phe	Lys	Thr	Gly	Ser	Ala
		35					40					45			

Ser	Ile	Phe	Asp	Gly	Ser	Ala	Leu	Ala	Ala	Tyr	Glu	Asp	Val	Leu	Val
	50					55					60				

Val	Val	Val	Gln	Tyr	Arg	Leu	Gly	Ile	Phe	Gly	Phe	Phe	Thr
65					70					75			

<210> 11817

<211> 355

<212> PRT

<213> Homo sapiens

<220>

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<223> /note="Payload ID: 2333"

<220>
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<220>
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 <223> /note="Gene Name:
 carboxylesterase 5A"

<220>
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 <223> /note="ENSP ID: ENSP00000487767"

<400> 11817

Met Glu Asp Asp Leu Ser Trp Arg Ser Trp Ser Leu Leu Cys Met Glu
 1 5 10 15

Ile Leu Ser Pro Met Ala Lys Gly Leu Phe His Lys Ala Ile Met Glu
 20 25 30

Ser Gly Val Ala Ile Ile Pro Tyr Leu Glu Ala His Asp Tyr Glu Lys
 35 40 45

Ser Glu Asp Leu Gln Val Val Ala His Phe Cys Gly Asn Asn Ala Ser
 50 55 60

Asp Ser Glu Ala Leu Leu Arg Cys Leu Arg Thr Lys Pro Ser Lys Glu
 65 70 75 80

Leu Leu Thr Leu Ser Gln Lys Thr Lys Ser Phe Thr Arg Val Val Asp
 85 90 95

Gly Ala Phe Phe Pro Asn Glu Pro Leu Asp Leu Leu Ser Gln Lys Ala
 100 105 110

Phe Lys Ala Ile Pro Ser Ile Ile Gly Val Asn Asn His Glu Cys Gly
 115 120 125

Phe Leu Leu Pro Met Glu Ala Pro Glu Ile Leu Ser Gly Ser Asn Lys
 130 135 140

Ser Leu Ala Leu His Leu Ile Gln Asn Ile Leu His Ile Pro Pro Gln
 145 150 155 160

Tyr Leu His Leu Val Ala Asn Glu Tyr Phe His Asp Lys His Ser Leu
 165 170 175

Thr Glu Ile Arg Asp Ser Leu Leu Asp Leu Leu Gly Asp Val Phe Phe
180 185 190

Val Val Pro Ala Leu Ile Thr Ala Arg Tyr His Arg Asp Ala Gly Ala
195 200 205

Pro Val Tyr Phe Tyr Glu Phe Arg His Arg Pro Gln Cys Phe Glu Asp
210 215 220

Thr Lys Pro Ala Phe Val Lys Ala Asp His Ala Asp Glu Val Arg Phe
225 230 235 240

Val Phe Gly Gly Ala Phe Leu Lys Gly Asp Ile Val Met Phe Glu Gly
245 250 255

Ala Thr Glu Glu Glu Lys Leu Leu Ser Arg Lys Met Met Lys Tyr Trp
260 265 270

Ala Thr Phe Ala Arg Thr Gly Asn Pro Asn Gly Asn Asp Leu Ser Leu
275 280 285

Trp Pro Ala Tyr Asn Leu Thr Glu Gln Tyr Leu Gln Leu Asp Leu Asn
290 295 300

Met Ser Leu Gly Gln Arg Leu Lys Glu Pro Arg Val Asp Phe Trp Thr
305 310 315 320

Ser Thr Ile Pro Leu Ile Leu Ser Ala Ser Asp Met Leu His Ser Pro
325 330 335

Leu Ser Ser Leu Thr Phe Leu Ser Leu Leu Gln Pro Phe Phe Phe Phe
340 345 350

Cys Ala Pro
355

<210> 11818

<211> 78

<212> PRT

<213> Homo sapiens

<220>

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<223> /note="Payload ID: 2333"
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 <223> /note="Gene Name:
 carboxylesterase 5A"
 <220>
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 <223> /note="ENSP ID: ENSP00000487919"
 <400> 11818
 Met Leu Lys Val His Tyr Pro Lys Phe Gly Val Ser Glu Asp Cys Leu
 1 5 10 15
 Tyr Leu Asn Ile Tyr Ala Pro Ala His Ala Asp Thr Gly Ser Lys Leu
 20 25 30
 Pro Val Leu Val Trp Phe Pro Gly Gly Ala Phe Lys Thr Gly Ser Ala
 35 40 45
 Ser Ile Phe Asp Gly Ser Ala Leu Ala Ala Tyr Glu Asp Val Leu Val
 50 55 60
 Val Val Val Gln Tyr Arg Leu Gly Ile Phe Gly Phe Phe Thr
 65 70 75
 <210> 11819
 <211> 245
 <212> PRT
 <213> Homo sapiens
 <220>
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 <223> /note="Payload ID: 2334"
 <220>
 <221> source
 <223> /note="Gene Symbol: CMBL"
 <220>
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 <223> /note="Gene Name:
 carboxymethylenebutenolidase homolog (Pseudomonas)"
 <220>
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 <223> /note="Uniprot ID: Q96DG6"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000296658"

<400> 11819

Met Ala Asn Glu Ala Tyr Pro Cys Pro Cys Asp Ile Gly His Arg Leu
1 5 10 15

Glu Tyr Gly Gly Leu Gly Arg Glu Val Gln Val Glu His Ile Lys Ala
20 25 30

Tyr Val Thr Lys Ser Pro Val Asp Ala Gly Lys Ala Val Ile Val Ile
35 40 45

Gln Asp Ile Phe Gly Trp Gln Leu Pro Asn Thr Arg Tyr Ile Ala Asp
50 55 60

Met Ile Ser Gly Asn Gly Tyr Thr Thr Ile Val Pro Asp Phe Phe Val
65 70 75 80

Gly Gln Glu Pro Trp Asp Pro Ser Gly Asp Trp Ser Ile Phe Pro Glu
85 90 95

Trp Leu Lys Thr Arg Asn Ala Gln Lys Ile Asp Arg Glu Ile Ser Ala
100 105 110

Ile Leu Lys Tyr Leu Lys Gln Gln Cys His Ala Gln Lys Ile Gly Ile
115 120 125

Val Gly Phe Cys Trp Gly Gly Thr Ala Val His His Leu Met Met Lys
130 135 140

Tyr Ser Glu Phe Arg Ala Gly Val Ser Val Tyr Gly Ile Val Lys Asp
145 150 155 160

Ser Glu Asp Ile Tyr Asn Leu Lys Asn Pro Thr Leu Phe Ile Phe Ala
165 170 175

Glu Asn Asp Val Val Ile Pro Leu Lys Asp Val Ser Leu Leu Thr Gln
180 185 190

Lys Leu Lys Glu His Cys Lys Val Glu Tyr Gln Ile Lys Thr Phe Ser
195 200 205

Gly Gln Thr His Gly Phe Val His Arg Lys Arg Glu Asp Cys Ser Pro
210 215 220

Ala Asp Lys Pro Tyr Ile Asp Glu Ala Arg Arg Asn Leu Ile Glu Trp
225 230 235 240

Leu Asn Lys Tyr Met
245

<210> 11820
<211> 419
<212> PRT
<213> Homo sapiens

<220>
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<223> /note="Payload ID: 2335"

<220>
<221> source
<223> /note="Gene Symbol: CPA1"

<220>
<221> source
<223> /note="Gene Name:
carboxypeptidase A1 (pancreatic)"

<220>
<221> source
<223> /note="Uniprot ID: P15085"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000011292"

<400> 11820
Met Arg Gly Leu Leu Val Leu Ser Val Leu Leu Gly Ala Val Phe Gly
1 5 10 15

Lys Glu Asp Phe Val Gly His Gln Val Leu Arg Ile Ser Val Ala Asp
20 25 30

Glu Ala Gln Val Gln Lys Val Lys Glu Leu Glu Asp Leu Glu His Leu
35 40 45

Gln Leu Asp Phe Trp Arg Gly Pro Ala His Pro Gly Ser Pro Ile Asp
50 55 60

Val Arg Val Pro Phe Pro Ser Ile Gln Ala Val Lys Ile Phe Leu Glu
26315

65		70		75		80									
Ser	His	Gly	Ile	Ser	Tyr	Glu	Thr	Met	Ile	Glu	Asp	Val	Gln	Ser	Leu
				85					90					95	
Leu	Asp	Glu	Glu	Gln	Glu	Gln	Met	Phe	Ala	Phe	Arg	Ser	Arg	Ala	Arg
			100					105					110		
Ser	Thr	Asp	Thr	Phe	Asn	Tyr	Ala	Thr	Tyr	His	Thr	Leu	Glu	Glu	Ile
		115					120					125			
Tyr	Asp	Phe	Leu	Asp	Leu	Leu	Val	Ala	Glu	Asn	Pro	His	Leu	Val	Ser
	130					135					140				
Lys	Ile	Gln	Ile	Gly	Asn	Thr	Tyr	Glu	Gly	Arg	Pro	Ile	Tyr	Val	Leu
145					150					155					160
Lys	Phe	Ser	Thr	Gly	Gly	Ser	Lys	Arg	Pro	Ala	Ile	Trp	Ile	Asp	Thr
				165					170					175	
Gly	Ile	His	Ser	Arg	Glu	Trp	Val	Thr	Gln	Ala	Ser	Gly	Val	Trp	Phe
			180					185					190		
Ala	Lys	Lys	Ile	Thr	Gln	Asp	Tyr	Gly	Gln	Asp	Ala	Ala	Phe	Thr	Ala
		195					200					205			
Ile	Leu	Asp	Thr	Leu	Asp	Ile	Phe	Leu	Glu	Ile	Val	Thr	Asn	Pro	Asp
	210					215					220				
Gly	Phe	Ala	Phe	Thr	His	Ser	Thr	Asn	Arg	Met	Trp	Arg	Lys	Thr	Arg
225					230					235					240
Ser	His	Thr	Ala	Gly	Ser	Leu	Cys	Ile	Gly	Val	Asp	Pro	Asn	Arg	Asn
				245					250					255	
Trp	Asp	Ala	Gly	Phe	Gly	Leu	Ser	Gly	Ala	Ser	Ser	Asn	Pro	Cys	Ser
			260					265					270		
Glu	Thr	Tyr	His	Gly	Lys	Phe	Ala	Asn	Ser	Glu	Val	Glu	Val	Lys	Ser
		275					280					285			
Ile	Val	Asp	Phe	Val	Lys	Asp	His	Gly	Asn	Ile	Lys	Ala	Phe	Ile	Ser
	290					295					300				

Ile His Ser Tyr Ser Gln Leu Leu Met Tyr Pro Tyr Gly Tyr Lys Thr
305 310 315 320

Glu Pro Val Pro Asp Gln Asp Glu Leu Asp Gln Leu Ser Lys Ala Ala
325 330 335

Val Thr Ala Leu Ala Ser Leu Tyr Gly Thr Lys Phe Asn Tyr Gly Ser
340 345 350

Ile Ile Lys Ala Ile Tyr Gln Ala Ser Gly Ser Thr Ile Asp Trp Thr
355 360 365

Tyr Ser Gln Gly Ile Lys Tyr Ser Phe Thr Phe Glu Leu Arg Asp Thr
370 375 380

Gly Arg Tyr Gly Phe Leu Leu Pro Ala Ser Gln Ile Ile Pro Thr Ala
385 390 395 400

Lys Glu Thr Trp Leu Ala Leu Leu Thr Ile Met Glu His Thr Leu Asn
405 410 415

His Pro Tyr

<210> 11821
<211> 269
<212> PRT
<213> Homo sapiens

<220>
<221> source
<223> /note="Payload ID: 2335"

<220>
<221> source
<223> /note="Gene Symbol: CPA1"

<220>
<221> source
<223> /note="Gene Name:
carboxypeptidase A1 (pancreatic)"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000419408"

<400> 11821

Met	Ile	Glu	Asp	Val	Gln	Ser	Leu	Leu	Asp	Glu	Glu	Gln	Glu	Gln	Met			
1				5					10					15				
Phe	Ala	Phe	Arg	Ser	Arg	Ala	Arg	Ser	Thr	Asp	Thr	Phe	Asn	Tyr	Ala			
			20					25					30					
Thr	Tyr	His	Thr	Leu	Glu	Glu	Ile	Tyr	Asp	Phe	Leu	Asp	Leu	Leu	Val			
		35					40					45						
Ala	Glu	Asn	Pro	His	Leu	Val	Ser	Lys	Ile	Gln	Ile	Gly	Asn	Thr	Tyr			
	50					55						60						
Glu	Gly	Arg	Pro	Ile	Tyr	Val	Leu	Lys	Phe	Ser	Thr	Gly	Gly	Ser	Lys			
65					70					75					80			
Arg	Pro	Ala	Ile	Trp	Ile	Asp	Thr	Gly	Ile	His	Ser	Arg	Glu	Trp	Val			
				85					90					95				
Thr	Gln	Ala	Ser	Gly	Val	Trp	Phe	Ala	Lys	Lys	Ile	Thr	Gln	Asp	Tyr			
			100					105					110					
Gly	Gln	Asp	Ala	Ala	Phe	Thr	Ala	Ile	Leu	Asp	Thr	Leu	Asp	Ile	Phe			
		115					120					125						
Leu	Glu	Ile	Val	Thr	Asn	Pro	Asp	Gly	Phe	Ala	Phe	Thr	His	Ser	Thr			
	130					135					140							
Asn	Arg	Met	Trp	Arg	Lys	Thr	Arg	Ser	His	Thr	Ala	Gly	Ser	Leu	Cys			
145					150					155					160			
Ile	Gly	Val	Asp	Pro	Asn	Arg	Asn	Trp	Asp	Ala	Gly	Phe	Gly	Leu	Ser			
				165					170					175				
Gly	Ala	Ser	Ser	Asn	Pro	Cys	Ser	Glu	Thr	Tyr	His	Gly	Lys	Phe	Ala			
			180					185					190					
Asn	Ser	Glu	Val	Glu	Val	Lys	Ser	Ile	Val	Asp	Phe	Val	Lys	Asp	His			
		195					200					205						
Gly	Asn	Ile	Lys	Ala	Phe	Ile	Ser	Ile	His	Ser	Tyr	Ser	Gln	Leu	Leu			
	210					215					220							
Met	Tyr	Pro	Tyr	Gly	Tyr	Lys	Thr	Glu	Pro	Val	Pro	Asp	Gln	Asp	Glu			

225		230		235		240									
Leu	Asp	Gln	Leu	Ser	Lys	Ala	Ala	Val	Thr	Ala	Leu	Ala	Ser	Leu	Tyr
				245					250					255	

Gly	Thr	Lys	Phe	Asn	Tyr	Gly	Ser	Ile	Ile	Lys	Ala	Ile
			260					265				

<210> 11822
 <211> 331
 <212> PRT
 <213> Homo sapiens

<220>
 <221> source
 <223> /note="Payload ID: 2335"

<220>
 <221> source
 <223> /note="Gene Symbol: CPA1"

<220>
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 <223> /note="Gene Name:
 carboxypeptidase A1 (pancreatic)"

<220>
 <221> source
 <223> /note="ENSP ID: ENSP00000419497"

<400> 11822
 Met Ile Glu Asp Val Gln Ser Leu Leu Asp Glu Glu Gln Glu Gln Met
 1 5 10 15

Phe	Ala	Phe	Arg	Ser	Arg	Ala	Arg	Ser	Thr	Asp	Thr	Phe	Asn	Tyr	Ala
			20					25					30		

Thr	Tyr	His	Thr	Leu	Glu	Glu	Ile	Tyr	Asp	Phe	Leu	Asp	Leu	Leu	Val
		35					40					45			

Ala	Glu	Asn	Pro	His	Leu	Val	Ser	Lys	Ile	Gln	Ile	Gly	Asn	Thr	Tyr
	50					55					60				

Glu	Gly	Arg	Pro	Ile	Tyr	Val	Leu	Lys	Phe	Ser	Thr	Gly	Gly	Ser	Lys
65					70					75					80

Arg	Pro	Ala	Ile	Trp	Ile	Asp	Thr	Gly	Ile	His	Ser	Arg	Glu	Trp	Val
				85					90					95	

Thr	Gln	Ala	Ser	Gly	Val	Trp	Phe	Ala	Lys	Lys	Ile	Thr	Gln	Asp	Tyr			
			100					105					110					
Gly	Gln	Asp	Ala	Ala	Phe	Thr	Ala	Ile	Leu	Asp	Thr	Leu	Asp	Ile	Phe			
		115					120					125						
Leu	Glu	Ile	Val	Thr	Asn	Pro	Asp	Gly	Phe	Ala	Phe	Thr	His	Ser	Thr			
	130					135						140						
Asn	Arg	Met	Trp	Arg	Lys	Thr	Arg	Ser	His	Thr	Ala	Gly	Ser	Leu	Cys			
145					150					155					160			
Ile	Gly	Val	Asp	Pro	Asn	Arg	Asn	Trp	Asp	Ala	Gly	Phe	Gly	Leu	Ser			
				165					170					175				
Gly	Ala	Ser	Ser	Asn	Pro	Cys	Ser	Glu	Thr	Tyr	His	Gly	Lys	Phe	Ala			
			180					185					190					
Asn	Ser	Glu	Val	Glu	Val	Lys	Ser	Ile	Val	Asp	Phe	Val	Lys	Asp	His			
		195					200					205						
Gly	Asn	Ile	Lys	Ala	Phe	Ile	Ser	Ile	His	Ser	Tyr	Ser	Gln	Leu	Leu			
	210					215					220							
Met	Tyr	Pro	Tyr	Gly	Tyr	Lys	Thr	Glu	Pro	Val	Pro	Asp	Gln	Asp	Glu			
225					230					235					240			
Leu	Asp	Gln	Leu	Ser	Lys	Ala	Ala	Val	Thr	Ala	Leu	Ala	Ser	Leu	Tyr			
				245					250					255				
Gly	Thr	Lys	Phe	Asn	Tyr	Gly	Ser	Ile	Ile	Lys	Ala	Ile	Tyr	Gln	Ala			
			260					265					270					
Ser	Gly	Ser	Thr	Ile	Asp	Trp	Thr	Tyr	Ser	Gln	Gly	Ile	Lys	Tyr	Ser			
		275					280					285						
Phe	Thr	Phe	Glu	Leu	Arg	Asp	Thr	Gly	Arg	Tyr	Gly	Phe	Leu	Leu	Pro			
	290					295					300							
Ala	Ser	Gln	Ile	Ile	Pro	Thr	Ala	Lys	Glu	Thr	Trp	Leu	Ala	Leu	Leu			
305					310					315					320			

Thr Ile Met Glu His Thr Leu Asn His Pro Tyr
325 330

<210> 11823

<211> 103

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2335"

<220>

<221> source

<223> /note="Gene Symbol: CPA1"

<220>

<221> source

<223> /note="Gene Name:
carboxypeptidase A1 (pancreatic)"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000420218"

<400> 11823

Met Ile Glu Asp Val Gln Ser Leu Leu Asp Glu Glu Gln Glu Gln Met
1 5 10 15

Phe Ala Phe Arg Ser Arg Ala Arg Ser Thr Asp Thr Phe Asn Tyr Ala
20 25 30

Thr Tyr His Thr Leu Glu Glu Ile Tyr Asp Phe Leu Asp Leu Leu Val
35 40 45

Ala Glu Asn Pro His Leu Val Ser Lys Ile Gln Ile Gly Asn Thr Tyr
50 55 60

Glu Gly Arg Pro Ile Tyr Val Leu Lys Phe Ser Thr Gly Gly Ser Lys
65 70 75 80

Arg Pro Ala Ile Trp Ile Asp Thr Gly Ile His Ser Arg Glu Trp Val
85 90 95

Thr Gln Ala Ser Gly Val Trp
100

<210> 11824

<211> 191

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<212> PRT
<213> Homo sapiens

<220>
<221> source
<223> /note="Payload ID: 2335"

<220>
<221> source
<223> /note="Gene Symbol: CPA1"

<220>
<221> source
<223> /note="Gene Name:
        carboxypeptidase A1 (pancreatic)"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000475021"

<400> 11824
Ser Leu Thr Phe Pro Pro Gly Ser Ser Met Arg Gly Leu Leu Val Leu
1          5          10          15

Ser Val Leu Leu Gly Ala Val Phe Gly Lys Glu Asp Phe Val Gly His
20          25          30

Gln Val Leu Arg Ile Ser Val Ala Asp Glu Ala Gln Val Gln Lys Ile
35          40          45

Thr Gln Asp Tyr Gly Gln Asp Ala Ala Phe Thr Ala Ile Leu Asp Thr
50          55          60

Leu Asp Ile Phe Leu Glu Ile Val Thr Asn Pro Asp Gly Phe Ala Phe
65          70          75          80

Thr His Ser Thr Asn Arg Met Trp Arg Lys Thr Arg Ser His Thr Ala
85          90          95

Gly Ser Leu Cys Ile Gly Val Asp Pro Asn Arg Asn Trp Asp Ala Gly
100         105         110

Phe Gly Leu Ser Gly Ala Ser Ser Asn Pro Cys Ser Glu Thr Tyr His
115         120         125

Gly Lys Phe Ala Asn Ser Glu Val Glu Val Lys Ser Ile Val Asp Phe
130         135         140

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Val Lys Asp His Gly Asn Ile Lys Ala Phe Ile Ser Ile His Ser Tyr
 145 150 155 160

Ser Gln Leu Leu Met Tyr Pro Tyr Gly Tyr Lys Thr Glu Pro Val Pro
 165 170 175

Asp Gln Asp Glu Leu Asp Gln Leu Ser Lys Ala Ala Val Thr Ala
 180 185 190

<210> 11825

<211> 419

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2336"

<220>

<221> source

<223> /note="Gene Symbol: CPA2"

<220>

<221> source

<223> /note="Gene Name:
 carboxypeptidase A2 (pancreatic)"

<220>

<221> source

<223> /note="Uniprot ID: P48052"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000222481"

<400> 11825

Met Ala Met Arg Leu Ile Leu Phe Phe Gly Ala Leu Phe Gly His Ile
 1 5 10 15

Tyr Cys Leu Glu Thr Phe Val Gly Asp Gln Val Leu Glu Ile Val Pro
 20 25 30

Ser Asn Glu Glu Gln Ile Lys Asn Leu Leu Gln Leu Glu Ala Gln Glu
 35 40 45

His Leu Gln Leu Asp Phe Trp Lys Ser Pro Thr Thr Pro Gly Glu Thr
 50 55 60

Ala His Val Arg Val Pro Phe Val Asn Val Gln Ala Val Lys Val Phe
 65 70 75 80

Leu	Glu	Ser	Gln	Gly	Ile	Ala	Tyr	Ser	Ile	Met	Ile	Glu	Asp	Val	Gln	
				85					90					95		
Val	Leu	Leu	Asp	Lys	Glu	Asn	Glu	Glu	Met	Leu	Phe	Asn	Arg	Arg	Arg	
			100					105					110			
Glu	Arg	Ser	Gly	Asn	Phe	Asn	Phe	Gly	Ala	Tyr	His	Thr	Leu	Glu	Glu	
		115					120					125				
Ile	Ser	Gln	Glu	Met	Asp	Asn	Leu	Val	Ala	Glu	His	Pro	Gly	Leu	Val	
	130					135					140					
Ser	Lys	Val	Asn	Ile	Gly	Ser	Ser	Phe	Glu	Asn	Arg	Pro	Met	Asn	Val	
145					150					155					160	
Leu	Lys	Phe	Ser	Thr	Gly	Gly	Asp	Lys	Pro	Ala	Ile	Trp	Leu	Asp	Ala	
				165					170					175		
Gly	Ile	His	Ala	Arg	Glu	Trp	Val	Thr	Gln	Ala	Thr	Ala	Leu	Trp	Thr	
			180					185					190			
Ala	Asn	Lys	Ile	Val	Ser	Asp	Tyr	Gly	Lys	Asp	Pro	Ser	Ile	Thr	Ser	
		195					200					205				
Ile	Leu	Asp	Ala	Leu	Asp	Ile	Phe	Leu	Leu	Pro	Val	Thr	Asn	Pro	Asp	
	210					215					220					
Gly	Tyr	Val	Phe	Ser	Gln	Thr	Lys	Asn	Arg	Met	Trp	Arg	Lys	Thr	Arg	
225					230					235					240	
Ser	Lys	Val	Ser	Gly	Ser	Leu	Cys	Val	Gly	Val	Asp	Pro	Asn	Arg	Asn	
				245					250					255		
Trp	Asp	Ala	Gly	Phe	Gly	Gly	Pro	Gly	Ala	Ser	Ser	Asn	Pro	Cys	Ser	
			260					265					270			
Asp	Ser	Tyr	His	Gly	Pro	Ser	Ala	Asn	Ser	Glu	Val	Glu	Val	Lys	Ser	
		275					280					285				
Ile	Val	Asp	Phe	Ile	Lys	Ser	His	Gly	Lys	Val	Lys	Ala	Phe	Ile	Thr	
	290					295					300					

Leu His Ser Tyr Ser Gln Leu Leu Met Phe Pro Tyr Gly Tyr Lys Cys
305 310 315 320

Thr Lys Leu Asp Asp Phe Asp Glu Leu Ser Glu Val Ala Gln Lys Ala
325 330 335

Ala Gln Ser Leu Arg Ser Leu His Gly Thr Lys Tyr Lys Val Gly Pro
340 345 350

Ile Cys Ser Val Ile Tyr Gln Ala Ser Gly Gly Ser Ile Asp Trp Ser
355 360 365

Tyr Asp Tyr Gly Ile Lys Tyr Ser Phe Ala Phe Glu Leu Arg Asp Thr
370 375 380

Gly Arg Tyr Gly Phe Leu Leu Pro Ala Arg Gln Ile Leu Pro Thr Ala
385 390 395 400

Glu Glu Thr Trp Leu Gly Leu Lys Ala Ile Met Glu His Val Arg Asp
405 410 415

His Pro Tyr

<210> 11826
<211> 182
<212> PRT
<213> Homo sapiens

<220>
<221> source
<223> /note="Payload ID: 2336"

<220>
<221> source
<223> /note="Gene Symbol: CPA2"

<220>
<221> source
<223> /note="Gene Name:
carboxypeptidase A2 (pancreatic)"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000395582"

<400> 11826
Met Arg Leu Ile Leu Phe Phe Gly Ala Leu Phe Gly His Ile Tyr Cys

1		5		10		15											
Leu	Glu	Thr	Phe	Val	Gly	Asp	Gln	Val	Leu	Glu	Ile	Val	Pro	Ser	Asn		
			20				25						30				
Glu	Glu	Gln	Ile	Lys	Asn	Leu	Leu	Gln	Leu	Glu	Ala	Gln	Glu	His	Leu		
		35				40						45					
Gln	Leu	Asp	Phe	Trp	Lys	Ser	Pro	Thr	Thr	Pro	Gly	Glu	Thr	Ala	His		
	50					55					60						
Val	Arg	Val	Pro	Phe	Val	Asn	Val	Gln	Ala	Val	Lys	Val	Phe	Leu	Glu		
65					70					75					80		
Ser	Gln	Gly	Ile	Ala	Tyr	Ser	Ile	Met	Ile	Glu	Asp	Val	Gln	Val	Leu		
				85					90					95			
Leu	Asp	Lys	Glu	Asn	Glu	Glu	Met	Leu	Phe	Asn	Arg	Arg	Arg	Glu	Arg		
			100					105					110				
Ser	Gly	Asn	Phe	Asn	Phe	Gly	Ala	Tyr	His	Thr	Leu	Glu	Glu	Ile	Ser		
		115					120					125					
Gln	Glu	Met	Asp	Asn	Leu	Val	Ala	Glu	His	Pro	Gly	Leu	Val	Ser	Lys		
	130					135					140						
Val	Asn	Ile	Gly	Ser	Ser	Phe	Glu	Asn	Arg	Pro	Met	Asn	Val	Leu	Lys		
145					150					155					160		
Lys	Ser	Ser	Gly	Arg	Met	Gln	Lys	Asp	Asp	Gly	Gln	Leu	Asn	Pro	Lys		
				165					170					175			
Pro	Gln	Arg	Gln	Thr	Pro												
			180														

<210> 11827

<211> 417

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2337"

<220>

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<221> source
<223> /note="Gene Symbol: CPA3"

<220>
<221> source
<223> /note="Gene Name:
        carboxypeptidase A3 (mast cell)"

<220>
<221> source
<223> /note="Uniprot ID: P15088"

<220>
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<223> /note="ENSP ID: ENSP00000296046"

<400> 11827
Met Arg Leu Ile Leu Pro Val Gly Leu Ile Ala Thr Thr Leu Ala Ile
1          5          10          15

Ala Pro Val Arg Phe Asp Arg Glu Lys Val Phe Arg Val Lys Pro Gln
          20          25          30

Asp Glu Lys Gln Ala Asp Ile Ile Lys Asp Leu Ala Lys Thr Asn Glu
          35          40          45

Leu Asp Phe Trp Tyr Pro Gly Ala Thr His His Val Ala Ala Asn Met
          50          55          60

Met Val Asp Phe Arg Val Ser Glu Lys Glu Ser Gln Ala Ile Gln Ser
65          70          75          80

Ala Leu Asp Gln Asn Lys Met His Tyr Glu Ile Leu Ile His Asp Leu
          85          90          95

Gln Glu Glu Ile Glu Lys Gln Phe Asp Val Lys Glu Asp Ile Pro Gly
          100          105          110

Arg His Ser Tyr Ala Lys Tyr Asn Asn Trp Glu Lys Ile Val Ala Trp
          115          120          125

Thr Glu Lys Met Met Asp Lys Tyr Pro Glu Met Val Ser Arg Ile Lys
          130          135          140

Ile Gly Ser Thr Val Glu Asp Asn Pro Leu Tyr Val Leu Lys Ile Gly
145          150          155          160

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Glu	Lys	Asn	Glu	Arg	Arg	Lys	Ala	Ile	Phe	Thr	Asp	Cys	Gly	Ile	His	
				165					170					175		
Ala	Arg	Glu	Trp	Val	Ser	Pro	Ala	Phe	Cys	Gln	Trp	Phe	Val	Tyr	Gln	
			180					185					190			
Ala	Thr	Lys	Thr	Tyr	Gly	Arg	Asn	Lys	Ile	Met	Thr	Lys	Leu	Leu	Asp	
		195					200					205				
Arg	Met	Asn	Phe	Tyr	Ile	Leu	Pro	Val	Phe	Asn	Val	Asp	Gly	Tyr	Ile	
	210					215					220					
Trp	Ser	Trp	Thr	Lys	Asn	Arg	Met	Trp	Arg	Lys	Asn	Arg	Ser	Lys	Asn	
225					230					235					240	
Gln	Asn	Ser	Lys	Cys	Ile	Gly	Thr	Asp	Leu	Asn	Arg	Asn	Phe	Asn	Ala	
				245					250					255		
Ser	Trp	Asn	Ser	Ile	Pro	Asn	Thr	Asn	Asp	Pro	Cys	Ala	Asp	Asn	Tyr	
			260					265					270			
Arg	Gly	Ser	Ala	Pro	Glu	Ser	Glu	Lys	Glu	Thr	Lys	Ala	Val	Thr	Asn	
		275					280					285				
Phe	Ile	Arg	Ser	His	Leu	Asn	Glu	Ile	Lys	Val	Tyr	Ile	Thr	Phe	His	
	290					295					300					
Ser	Tyr	Ser	Gln	Met	Leu	Leu	Phe	Pro	Tyr	Gly	Tyr	Thr	Ser	Lys	Leu	
305					310					315					320	
Pro	Pro	Asn	His	Glu	Asp	Leu	Ala	Lys	Val	Ala	Lys	Ile	Gly	Thr	Asp	
				325					330					335		
Val	Leu	Ser	Thr	Arg	Tyr	Glu	Thr	Arg	Tyr	Ile	Tyr	Gly	Pro	Ile	Glu	
			340					345					350			
Ser	Thr	Ile	Tyr	Pro	Ile	Ser	Gly	Ser	Ser	Leu	Asp	Trp	Ala	Tyr	Asp	
		355					360					365				
Leu	Gly	Ile	Lys	His	Thr	Phe	Ala	Phe	Glu	Leu	Arg	Asp	Lys	Gly	Lys	
	370					375					380					
Phe	Gly	Phe	Leu	Leu	Pro	Glu	Ser	Arg	Ile	Lys	Pro	Thr	Cys	Arg	Glu	

385		390		395		400									
Thr	Met	Leu	Ala	Val	Lys	Phe	Ile	Ala	Lys	Tyr	Ile	Leu	Lys	His	Thr
				405					410					415	

Ser

<210> 11828
 <211> 421
 <212> PRT
 <213> Homo sapiens

<220>
 <221> source
 <223> /note="Payload ID: 2338"

<220>
 <221> source
 <223> /note="Gene Symbol: CPA4"

<220>
 <221> source
 <223> /note="Gene Name:
 carboxypeptidase A4"

<220>
 <221> source
 <223> /note="Uniprot ID: Q9UI42"

<220>
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 <223> /note="ENSP ID: ENSP00000222482"

<400> 11828
 Met Arg Trp Ile Leu Phe Ile Gly Ala Leu Ile Gly Ser Ser Ile Cys
 1 5 10 15

Gly Gln Glu Lys Phe Phe Gly Asp Gln Val Leu Arg Ile Asn Val Arg
 20 25 30

Asn Gly Asp Glu Ile Ser Lys Leu Ser Gln Leu Val Asn Ser Asn Asn
 35 40 45

Leu Lys Leu Asn Phe Trp Lys Ser Pro Ser Ser Phe Asn Arg Pro Val
 50 55 60

Asp Val Leu Val Pro Ser Val Ser Leu Gln Ala Phe Lys Ser Phe Leu
 65 70 75 80

Arg	Ser	Gln	Gly	Leu	Glu	Tyr	Ala	Val	Thr	Ile	Glu	Asp	Leu	Gln	Ala	
				85					90					95		
Leu	Leu	Asp	Asn	Glu	Asp	Asp	Glu	Met	Gln	His	Asn	Glu	Gly	Gln	Glu	
			100					105					110			
Arg	Ser	Ser	Asn	Asn	Phe	Asn	Tyr	Gly	Ala	Tyr	His	Ser	Leu	Glu	Ala	
		115					120					125				
Ile	Tyr	His	Glu	Met	Asp	Asn	Ile	Ala	Ala	Asp	Phe	Pro	Asp	Leu	Ala	
	130					135					140					
Arg	Arg	Val	Lys	Ile	Gly	His	Ser	Phe	Glu	Asn	Arg	Pro	Met	Tyr	Val	
145					150					155					160	
Leu	Lys	Phe	Ser	Thr	Gly	Lys	Gly	Val	Arg	Arg	Pro	Ala	Val	Trp	Leu	
				165					170					175		
Asn	Ala	Gly	Ile	His	Ser	Arg	Glu	Trp	Ile	Ser	Gln	Ala	Thr	Ala	Ile	
			180					185					190			
Trp	Thr	Ala	Arg	Lys	Ile	Val	Ser	Asp	Tyr	Gln	Arg	Asp	Pro	Ala	Ile	
		195					200					205				
Thr	Ser	Ile	Leu	Glu	Lys	Met	Asp	Ile	Phe	Leu	Leu	Pro	Val	Ala	Asn	
	210					215					220					
Pro	Asp	Gly	Tyr	Val	Tyr	Thr	Gln	Thr	Gln	Asn	Arg	Leu	Trp	Arg	Lys	
225					230					235					240	
Thr	Arg	Ser	Arg	Asn	Pro	Gly	Ser	Ser	Cys	Ile	Gly	Ala	Asp	Pro	Asn	
				245					250					255		
Arg	Asn	Trp	Asn	Ala	Ser	Phe	Ala	Gly	Lys	Gly	Ala	Ser	Asp	Asn	Pro	
			260					265					270			
Cys	Ser	Glu	Val	Tyr	His	Gly	Pro	His	Ala	Asn	Ser	Glu	Val	Glu	Val	
		275					280					285				
Lys	Ser	Val	Val	Asp	Phe	Ile	Gln	Lys	His	Gly	Asn	Phe	Lys	Gly	Phe	
	290					295					300					

Ile Asp Leu His Ser Tyr Ser Gln Leu Leu Met Tyr Pro Tyr Gly Tyr
305 310 315 320

Ser Val Lys Lys Ala Pro Asp Ala Glu Glu Leu Asp Lys Val Ala Arg
325 330 335

Leu Ala Ala Lys Ala Leu Ala Ser Val Ser Gly Thr Glu Tyr Gln Val
340 345 350

Gly Pro Thr Cys Thr Thr Val Tyr Pro Ala Ser Gly Ser Ser Ile Asp
355 360 365

Trp Ala Tyr Asp Asn Gly Ile Lys Phe Ala Phe Thr Phe Glu Leu Arg
370 375 380

Asp Thr Gly Thr Tyr Gly Phe Leu Leu Pro Ala Asn Gln Ile Ile Pro
385 390 395 400

Thr Ala Glu Glu Thr Trp Leu Gly Leu Lys Thr Ile Met Glu His Val
405 410 415

Arg Asp Asn Leu Tyr
420

<210> 11829
<211> 388
<212> PRT
<213> Homo sapiens

<220>
<221> source
<223> /note="Payload ID: 2338"

<220>
<221> source
<223> /note="Gene Symbol: CPA4"

<220>
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<223> /note="Gene Name:
carboxypeptidase A4"

<220>
<221> source
<223> /note="Uniprot ID: Q9UI42"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000412947"

<400> 11829

Met Arg Trp Ile Leu Phe Ile Gly Ala Leu Ile Gly Ser Ser Ile Cys
1 5 10 15

Gly Gln Glu Lys Phe Phe Gly Asp Gln Val Leu Arg Ile Asn Val Arg
20 25 30

Asn Gly Asp Glu Ile Ser Lys Leu Ser Gln Leu Val Asn Ser Asn Asn
35 40 45

Leu Lys Leu Asn Phe Trp Lys Ser Pro Ser Ser Phe Asn Arg Pro Val
50 55 60

Asp Val Leu Val Pro Ser Val Ser Leu Gln Ala Phe Lys Ser Phe Leu
65 70 75 80

Arg Ser Gln Gly Leu Glu Tyr Ala Val Thr Ile Glu Asp Leu Gln Ile
85 90 95

Tyr His Glu Met Asp Asn Ile Ala Ala Asp Phe Pro Asp Leu Ala Arg
100 105 110

Arg Val Lys Ile Gly His Ser Phe Glu Asn Arg Pro Met Tyr Val Leu
115 120 125

Lys Phe Ser Thr Gly Lys Gly Val Arg Arg Pro Ala Val Trp Leu Asn
130 135 140

Ala Gly Ile His Ser Arg Glu Trp Ile Ser Gln Ala Thr Ala Ile Trp
145 150 155 160

Thr Ala Arg Lys Ile Val Ser Asp Tyr Gln Arg Asp Pro Ala Ile Thr
165 170 175

Ser Ile Leu Glu Lys Met Asp Ile Phe Leu Leu Pro Val Ala Asn Pro
180 185 190

Asp Gly Tyr Val Tyr Thr Gln Thr Gln Asn Arg Leu Trp Arg Lys Thr
195 200 205

Arg Ser Arg Asn Pro Gly Ser Ser Cys Ile Gly Ala Asp Pro Asn Arg
210 215 220

26332

Asn Trp Asn Ala Ser Phe Ala Gly Lys Gly Ala Ser Asp Asn Pro Cys
225 230 235 240

Ser Glu Val Tyr His Gly Pro His Ala Asn Ser Glu Val Glu Val Lys
245 250 255

Ser Val Val Asp Phe Ile Gln Lys His Gly Asn Phe Lys Gly Phe Ile
260 265 270

Asp Leu His Ser Tyr Ser Gln Leu Leu Met Tyr Pro Tyr Gly Tyr Ser
275 280 285

Val Lys Lys Ala Pro Asp Ala Glu Glu Leu Asp Lys Val Ala Arg Leu
290 295 300

Ala Ala Lys Ala Leu Ala Ser Val Ser Gly Thr Glu Tyr Gln Val Gly
305 310 315 320

Pro Thr Cys Thr Thr Val Tyr Pro Ala Ser Gly Ser Ser Ile Asp Trp
325 330 335

Ala Tyr Asp Asn Gly Ile Lys Phe Ala Phe Thr Phe Glu Leu Arg Asp
340 345 350

Thr Gly Thr Tyr Gly Phe Leu Leu Pro Ala Asn Gln Ile Ile Pro Thr
355 360 365

Ala Glu Glu Thr Trp Leu Gly Leu Lys Thr Ile Met Glu His Val Arg
370 375 380

Asp Asn Leu Tyr
385

<210> 11830

<211> 171

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2338"

<220>

<221> source

<223> /note="Gene Symbol: CPA4"

<220>
<221> source
<223> /note="Gene Name:
carboxypeptidase A4"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000417255"

<400> 11830
Met Arg Trp Ile Leu Phe Ile Gly Ala Leu Ile Gly Ser Ser Ile Cys
1 5 10 15

Gly Gln Glu Lys Phe Phe Gly Asp Gln Val Leu Arg Ile Asn Val Arg
20 25 30

Asn Gly Asp Glu Ile Ser Lys Leu Ser Gln Leu Val Asn Ser Asn Asn
35 40 45

Leu Lys Leu Asn Phe Trp Lys Ser Pro Ser Ser Phe Asn Arg Pro Val
50 55 60

Asp Val Leu Val Pro Ser Val Ser Leu Gln Ala Phe Lys Ser Phe Leu
65 70 75 80

Arg Ser Gln Gly Leu Glu Tyr Ala Val Thr Ile Glu Asp Leu Gln Ala
85 90 95

Leu Leu Asp Asn Glu Asp Asp Glu Met Gln His Asn Glu Gly Gln Glu
100 105 110

Arg Ser Ser Asn Asn Phe Asn Tyr Gly Ala Tyr His Ser Leu Glu Ala
115 120 125

Ile Tyr His Glu Met Asp Asn Ile Ala Ala Asp Phe Pro Asp Leu Ala
130 135 140

Arg Arg Val Lys Ile Gly His Ser Phe Glu Asn Arg Pro Met Tyr Val
145 150 155 160

Leu Lys Ile Val Ser Asp Tyr Gln Arg Asp Pro
165 170

<210> 11831
<211> 29

<212> PRT
 <213> Homo sapiens

 <220>
 <221> source
 <223> /note="Payload ID: 2338"

 <220>
 <221> source
 <223> /note="Gene Symbol: CPA4"

 <220>
 <221> source
 <223> /note="Gene Name:
 carboxypeptidase A4"

 <220>
 <221> source
 <223> /note="ENSP ID: ENSP00000418276"

 <400> 11831
 Met Gln His Asn Glu Gly Gln Glu Arg Ser Ser Asn Asn Phe Asn Tyr
 1 5 10 15

 Gly Ala Tyr His Ser Leu Glu Ala Ile Tyr His Glu Met
 20 25

<210> 11832
 <211> 177
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 <213> Homo sapiens

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 <223> /note="Payload ID: 2338"

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 <400> 11832
 Met Arg Trp Ile Leu Phe Ile Gly Ala Leu Ile Gly Ser Ser Ile Cys
 1 5 10 15

 Gly Gln Glu Lys Phe Phe Gly Asp Gln Val Leu Arg Ile Asn Val Arg

20					25					30					
Asn	Gly	Asp	Glu	Ile	Ser	Lys	Leu	Ser	Gln	Leu	Val	Asn	Ser	Asn	Asn
		35					40					45			
Leu	Lys	Leu	Asn	Phe	Trp	Lys	Ser	Pro	Ser	Ser	Phe	Asn	Arg	Pro	Val
	50					55					60				
Asp	Val	Leu	Val	Pro	Ser	Val	Ser	Leu	Gln	Ala	Phe	Lys	Ser	Phe	Leu
65					70					75					80
Arg	Ser	Gln	Gly	Leu	Glu	Tyr	Ala	Val	Thr	Ile	Glu	Asp	Leu	Gln	Ile
				85					90					95	
Tyr	His	Glu	Met	Asp	Asn	Ile	Ala	Ala	Asp	Phe	Pro	Asp	Leu	Ala	Arg
			100					105					110		
Arg	Val	Lys	Ile	Gly	His	Ser	Phe	Glu	Asn	Arg	Pro	Met	Tyr	Val	Leu
		115					120					125			
Lys	Phe	Ser	Thr	Gly	Lys	Gly	Val	Arg	Arg	Pro	Ala	Val	Trp	Leu	Asn
	130					135					140				
Ala	Gly	Ile	His	Ser	Arg	Glu	Trp	Ile	Ser	Gln	Ala	Thr	Ala	Ile	Trp
145					150					155					160
Thr	Ala	Arg	Lys	Ile	Val	Ser	Asp	Tyr	Gln	Arg	Asp	Pro	Ala	Ile	Thr
				165					170					175	

Ser

<210> 11833

<211> 317

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<220>

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<220>
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<400> 11833

Met Gln His Asn Glu Gly Gln Glu Arg Ser Ser Asn Asn Phe Asn Tyr
 1 5 10 15

Gly Ala Tyr His Ser Leu Glu Ala Ile Tyr His Glu Met Asp Asn Ile
 20 25 30

Ala Ala Asp Phe Pro Asp Leu Ala Arg Arg Val Lys Ile Gly His Ser
 35 40 45

Phe Glu Asn Arg Pro Met Tyr Val Leu Lys Phe Ser Thr Gly Lys Gly
 50 55 60

Val Arg Arg Pro Ala Val Trp Leu Asn Ala Gly Ile His Ser Arg Glu
 65 70 75 80

Trp Ile Ser Gln Ala Thr Ala Ile Trp Thr Ala Arg Lys Ile Val Ser
 85 90 95

Asp Tyr Gln Arg Asp Pro Ala Ile Thr Ser Ile Leu Glu Lys Met Asp
 100 105 110

Ile Phe Leu Leu Pro Val Ala Asn Pro Asp Gly Tyr Val Tyr Thr Gln
 115 120 125

Thr Gln Asn Arg Leu Trp Arg Lys Thr Arg Ser Arg Asn Pro Gly Ser
 130 135 140

Ser Cys Ile Gly Ala Asp Pro Asn Arg Asn Trp Asn Ala Ser Phe Ala
 145 150 155 160

Gly Lys Gly Ala Ser Asp Asn Pro Cys Ser Glu Val Tyr His Gly Pro
 165 170 175

His Ala Asn Ser Glu Val Glu Val Lys Ser Val Val Asp Phe Ile Gln
 180 185 190

Lys His Gly Asn Phe Lys Gly Phe Ile Asp Leu His Ser Tyr Ser Gln
 195 200 205
 Leu Leu Met Tyr Pro Tyr Gly Tyr Ser Val Lys Lys Ala Pro Asp Ala
 210 215 220
 Glu Glu Leu Asp Lys Val Ala Arg Leu Ala Ala Lys Ala Leu Ala Ser
 225 230 235 240
 Val Ser Gly Thr Glu Tyr Gln Val Gly Pro Thr Cys Thr Thr Val Tyr
 245 250 255
 Pro Ala Ser Gly Ser Ser Ile Asp Trp Ala Tyr Asp Asn Gly Ile Lys
 260 265 270
 Phe Ala Phe Thr Phe Glu Leu Arg Asp Thr Gly Thr Tyr Gly Phe Leu
 275 280 285
 Leu Pro Ala Asn Gln Ile Ile Pro Thr Ala Glu Glu Thr Trp Leu Gly
 290 295 300
 Leu Lys Thr Ile Met Glu His Val Arg Asp Asn Leu Tyr
 305 310 315

<210> 11834

<211> 436

<212> PRT

<213> Homo sapiens

<220>

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<223> /note="Payload ID: 2339"

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<223> /note="Gene Symbol: CPA5"

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<223> /note="Gene Name:
carboxypeptidase A5"

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<223> /note="Uniprot ID: Q8WXQ8"

<220>

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<223> /note="ENSP ID: ENSP00000376907"

<400> 11834

Met Gln Gly Thr Pro Gly Gly Gly Thr Arg Pro Gly Pro Ser Pro Val
1 5 10 15

Asp Arg Arg Thr Leu Leu Val Phe Ser Phe Ile Leu Ala Ala Ala Leu
20 25 30

Gly Gln Met Asn Phe Thr Gly Asp Gln Val Leu Arg Val Leu Ala Lys
35 40 45

Asp Glu Lys Gln Leu Ser Leu Leu Gly Asp Leu Glu Gly Leu Lys Pro
50 55 60

Gln Lys Val Asp Phe Trp Arg Gly Pro Ala Arg Pro Ser Leu Pro Val
65 70 75 80

Asp Met Arg Val Pro Phe Ser Glu Leu Lys Asp Ile Lys Ala Tyr Leu
85 90 95

Glu Ser His Gly Leu Ala Tyr Ser Ile Met Ile Lys Asp Ile Gln Val
100 105 110

Leu Leu Asp Glu Glu Arg Gln Ala Met Ala Lys Ser Arg Arg Leu Glu
115 120 125

Arg Ser Thr Asn Ser Phe Ser Tyr Ser Ser Tyr His Thr Leu Glu Glu
130 135 140

Ile Tyr Ser Trp Ile Asp Asn Phe Val Met Glu His Ser Asp Ile Val
145 150 155 160

Ser Lys Ile Gln Ile Gly Asn Ser Phe Glu Asn Gln Ser Ile Leu Val
165 170 175

Leu Lys Phe Ser Thr Gly Gly Ser Arg His Pro Ala Ile Trp Ile Asp
180 185 190

Thr Gly Ile His Ser Arg Glu Trp Ile Thr His Ala Thr Gly Ile Trp
195 200 205

Thr Ala Asn Lys Ile Val Ser Asp Tyr Gly Lys Asp Arg Val Leu Thr
210 215 220

26339

Asp	Ile	Leu	Asn	Ala	Met	Asp	Ile	Phe	Ile	Glu	Leu	Val	Thr	Asn	Pro	225	230	235	240
Asp	Gly	Phe	Ala	Phe	Thr	His	Ser	Met	Asn	Arg	Leu	Trp	Arg	Lys	Asn	245	250	255	
Lys	Ser	Ile	Arg	Pro	Gly	Ile	Phe	Cys	Ile	Gly	Val	Asp	Leu	Asn	Arg	260	265	270	
Asn	Trp	Lys	Ser	Gly	Phe	Gly	Gly	Asn	Gly	Ser	Asn	Ser	Asn	Pro	Cys	275	280	285	
Ser	Glu	Thr	Tyr	His	Gly	Pro	Ser	Pro	Gln	Ser	Glu	Pro	Glu	Val	Ala	290	295	300	
Ala	Ile	Val	Asn	Phe	Ile	Thr	Ala	His	Gly	Asn	Phe	Lys	Ala	Leu	Ile	305	310	315	320
Ser	Ile	His	Ser	Tyr	Ser	Gln	Met	Leu	Met	Tyr	Pro	Tyr	Gly	Arg	Leu	325	330	335	
Leu	Glu	Pro	Val	Ser	Asn	Gln	Arg	Glu	Leu	Tyr	Asp	Leu	Ala	Lys	Asp	340	345	350	
Ala	Val	Glu	Ala	Leu	Tyr	Lys	Val	His	Gly	Ile	Glu	Tyr	Ile	Phe	Gly	355	360	365	
Ser	Ile	Ser	Thr	Thr	Leu	Tyr	Val	Ala	Ser	Gly	Ile	Thr	Val	Asp	Trp	370	375	380	
Ala	Tyr	Asp	Ser	Gly	Ile	Lys	Tyr	Ala	Phe	Ser	Phe	Glu	Leu	Arg	Asp	385	390	395	400
Thr	Gly	Gln	Tyr	Gly	Phe	Leu	Leu	Pro	Ala	Thr	Gln	Ile	Ile	Pro	Thr	405	410	415	
Ala	Gln	Glu	Thr	Trp	Met	Ala	Leu	Arg	Thr	Ile	Met	Glu	His	Thr	Leu	420	425	430	
Asn	His	Pro	Tyr													435			

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<210> 11835
<211> 403
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<213> Homo sapiens

<220>
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<223> /note="Gene Name:
        carboxypeptidase A5"

<220>
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<220>
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<223> /note="ENSP ID: ENSP00000393045"

<400> 11835
Met  Gln  Gly  Thr  Pro  Gly  Gly  Gly  Thr  Arg  Pro  Gly  Pro  Ser  Pro  Val
1      5      10      15

Asp  Arg  Arg  Thr  Leu  Leu  Val  Phe  Ser  Phe  Ile  Leu  Ala  Ala  Ala  Leu
      20      25      30

Gly  Gln  Met  Asn  Phe  Thr  Gly  Asp  Gln  Val  Leu  Arg  Val  Leu  Ala  Lys
      35      40      45

Asp  Glu  Lys  Gln  Leu  Ser  Leu  Leu  Gly  Asp  Leu  Glu  Gly  Leu  Lys  Pro
      50      55      60

Gln  Lys  Val  Asp  Phe  Trp  Arg  Gly  Pro  Ala  Arg  Pro  Ser  Leu  Pro  Val
65      70      75      80

Asp  Met  Arg  Val  Pro  Phe  Ser  Glu  Leu  Lys  Asp  Ile  Lys  Ala  Tyr  Leu
      85      90      95

Glu  Ser  His  Gly  Leu  Ala  Tyr  Ser  Ile  Met  Ile  Lys  Asp  Ile  Gln  Val
      100      105      110

Leu  Leu  Asp  Glu  Glu  Arg  Gln  Ala  Met  Ala  Lys  Ser  Arg  Arg  Leu  Glu
      115      120      125

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Pro Ser Thr Gly Pro Met Thr Val Ala Ser Ser Thr Pro Ser Ala Leu
355 360 365

Ser Ser Gly Thr Leu Gly Ser Met Ala Ser Cys Cys Arg Pro His Arg
370 375 380

Ser Ser Pro Arg Pro Arg Arg Arg Gly Trp Arg Phe Gly Pro Ser Trp
385 390 395 400

Ser Thr Pro

<210> 11836
<211> 436
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<213> Homo sapiens

<220>
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<220>
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Met Gln Gly Thr Pro Gly Gly Gly Thr Arg Pro Gly Pro Ser Pro Val
1 5 10 15

Asp Arg Arg Thr Leu Leu Val Phe Ser Phe Ile Leu Ala Ala Ala Leu
20 25 30

Gly Gln Met Asn Phe Thr Gly Asp Gln Val Leu Arg Val Leu Ala Lys
35 40 45

Asp Glu Lys Gln Leu Ser Leu Leu Gly Asp Leu Glu Gly Leu Lys Pro

50					55					60					
Gln 65	Lys	Val	Asp	Phe	Trp 70	Arg	Gly	Pro	Ala	Arg 75	Pro	Ser	Leu	Pro	Val 80
Asp	Met	Arg	Val	Pro	Phe 85	Ser	Glu	Leu	Lys 90	Asp	Ile	Lys	Ala	Tyr 95	Leu
Glu	Ser	His	Gly 100	Leu	Ala	Tyr	Ser	Ile 105	Met	Ile	Lys	Asp	Ile 110	Gln	Val
Leu	Leu	Asp 115	Glu	Glu	Arg	Gln	Ala 120	Met	Ala	Lys	Ser	Arg 125	Arg	Leu	Glu
Arg 130	Ser	Thr	Asn	Ser	Phe	Ser 135	Tyr	Ser	Ser	Tyr	His 140	Thr	Leu	Glu	Glu
Ile 145	Tyr	Ser	Trp	Ile	Asp 150	Asn	Phe	Val	Met	Glu 155	His	Ser	Asp	Ile 160	Val
Ser	Lys	Ile	Gln	Ile 165	Gly	Asn	Ser	Phe	Glu 170	Asn	Gln	Ser	Ile	Leu 175	Val
Leu	Lys	Phe	Ser 180	Thr	Gly	Gly	Ser	Arg 185	His	Pro	Ala	Ile	Trp 190	Ile	Asp
Thr	Gly 195	Ile	His	Ser	Arg	Glu	Trp 200	Ile	Thr	His	Ala	Thr 205	Gly	Ile	Trp
Thr 210	Ala	Asn	Lys	Ile	Val	Ser 215	Asp	Tyr	Gly	Lys	Asp 220	Arg	Val	Leu	Thr
Asp 225	Ile	Leu	Asn	Ala	Met 230	Asp	Ile	Phe	Ile	Glu 235	Leu	Val	Thr	Asn	Pro 240
Asp	Gly	Phe	Ala	Phe 245	Thr	His	Ser	Met	Asn 250	Arg	Leu	Trp	Arg	Lys 255	Asn
Lys	Ser	Ile	Arg 260	Pro	Gly	Ile	Phe	Cys 265	Ile	Gly	Val	Asp	Leu 270	Asn	Arg
Asn	Trp 275	Lys	Ser	Gly	Phe	Gly	Gly 280	Asn	Gly	Ser	Asn 285	Ser	Asn	Pro	Cys

Ser Glu Thr Tyr His Gly Pro Ser Pro Gln Ser Glu Pro Glu Val Ala
290 295 300

Ala Ile Val Asn Phe Ile Thr Ala His Gly Asn Phe Lys Ala Leu Ile
305 310 315 320

Ser Ile His Ser Tyr Ser Gln Met Leu Met Tyr Pro Tyr Gly Arg Leu
325 330 335

Leu Glu Pro Val Ser Asn Gln Arg Glu Leu Tyr Asp Leu Ala Lys Asp
340 345 350

Ala Val Glu Ala Leu Tyr Lys Val His Gly Ile Glu Tyr Ile Phe Gly
355 360 365

Ser Ile Ser Thr Thr Leu Tyr Val Ala Ser Gly Ile Thr Val Asp Trp
370 375 380

Ala Tyr Asp Ser Gly Ile Lys Tyr Ala Phe Ser Phe Glu Leu Arg Asp
385 390 395 400

Thr Gly Gln Tyr Gly Phe Leu Leu Pro Ala Thr Gln Ile Ile Pro Thr
405 410 415

Ala Gln Glu Thr Trp Met Ala Leu Arg Thr Ile Met Glu His Thr Leu
420 425 430

Asn His Pro Tyr
435

<210> 11837
<211> 85
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<220>
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<223> /note="Gene Name:
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<223> /note="ENSP ID: ENSP00000417886"

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<222> (1)..(1)

<223> Any amino acid

<400> 11837

Xaa Ser Ile Arg Pro Gly Ile Phe Cys Ile Gly Val Asp Leu Asn Arg
1 5 10 15

Asn Trp Lys Ser Gly Phe Gly Asp Val Ala Ser Gly Ile Thr Val Asp
20 25 30

Trp Ala Tyr Asp Ser Gly Ile Lys Tyr Ala Phe Ser Phe Glu Leu Arg
35 40 45

Asp Thr Gly Gln Tyr Gly Phe Leu Leu Pro Ala Thr Gln Ile Ile Pro
50 55 60

Thr Ala Gln Glu Thr Trp Met Ala Leu Arg Thr Ile Met Glu His Thr
65 70 75 80

Leu Asn His Pro Tyr
85

<210> 11838

<211> 436

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2339"

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<221> source

<223> /note="Gene Symbol: CPA5"

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<221> source
<223> /note="Uniprot ID: Q8WXQ8"

<220>
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<223> /note="ENSP ID: ENSP00000418183"

<400> 11838

Met Gln Gly Thr Pro Gly Gly Gly Thr Arg Pro Gly Pro Ser Pro Val
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Asp Arg Arg Thr Leu Leu Val Phe Ser Phe Ile Leu Ala Ala Ala Leu
20 25 30

Gly Gln Met Asn Phe Thr Gly Asp Gln Val Leu Arg Val Leu Ala Lys
35 40 45

Asp Glu Lys Gln Leu Ser Leu Leu Gly Asp Leu Glu Gly Leu Lys Pro
50 55 60

Gln Lys Val Asp Phe Trp Arg Gly Pro Ala Arg Pro Ser Leu Pro Val
65 70 75 80

Asp Met Arg Val Pro Phe Ser Glu Leu Lys Asp Ile Lys Ala Tyr Leu
85 90 95

Glu Ser His Gly Leu Ala Tyr Ser Ile Met Ile Lys Asp Ile Gln Val
100 105 110

Leu Leu Asp Glu Glu Arg Gln Ala Met Ala Lys Ser Arg Arg Leu Glu
115 120 125

Arg Ser Thr Asn Ser Phe Ser Tyr Ser Ser Tyr His Thr Leu Glu Glu
130 135 140

Ile Tyr Ser Trp Ile Asp Asn Phe Val Met Glu His Ser Asp Ile Val
145 150 155 160

Ser Lys Ile Gln Ile Gly Asn Ser Phe Glu Asn Gln Ser Ile Leu Val
165 170 175

Leu Lys Phe Ser Thr Gly Gly Ser Arg His Pro Ala Ile Trp Ile Asp
180 185 190

Thr Gly Ile His Ser Arg Glu Trp Ile Thr His Ala Thr Gly Ile Trp

195																
Thr	Ala	Asn	Lys	Ile	Val	Ser	Asp	Tyr	Gly	Lys	Asp	Arg	Val	Leu	Thr	
210						215					220					
Asp	Ile	Leu	Asn	Ala	Met	Asp	Ile	Phe	Ile	Glu	Leu	Val	Thr	Asn	Pro	
225					230					235					240	
Asp	Gly	Phe	Ala	Phe	Thr	His	Ser	Met	Asn	Arg	Leu	Trp	Arg	Lys	Asn	
				245					250					255		
Lys	Ser	Ile	Arg	Pro	Gly	Ile	Phe	Cys	Ile	Gly	Val	Asp	Leu	Asn	Arg	
			260					265					270			
Asn	Trp	Lys	Ser	Gly	Phe	Gly	Gly	Asn	Gly	Ser	Asn	Ser	Asn	Pro	Cys	
		275					280					285				
Ser	Glu	Thr	Tyr	His	Gly	Pro	Ser	Pro	Gln	Ser	Glu	Pro	Glu	Val	Ala	
290						295					300					
Ala	Ile	Val	Asn	Phe	Ile	Thr	Ala	His	Gly	Asn	Phe	Lys	Ala	Leu	Ile	
305					310					315					320	
Ser	Ile	His	Ser	Tyr	Ser	Gln	Met	Leu	Met	Tyr	Pro	Tyr	Gly	Arg	Leu	
				325					330					335		
Leu	Glu	Pro	Val	Ser	Asn	Gln	Arg	Glu	Leu	Tyr	Asp	Leu	Ala	Lys	Asp	
			340					345					350			
Ala	Val	Glu	Ala	Leu	Tyr	Lys	Val	His	Gly	Ile	Glu	Tyr	Ile	Phe	Gly	
		355					360					365				
Ser	Ile	Ser	Thr	Thr	Leu	Tyr	Val	Ala	Ser	Gly	Ile	Thr	Val	Asp	Trp	
370						375					380					
Ala	Tyr	Asp	Ser	Gly	Ile	Lys	Tyr	Ala	Phe	Ser	Phe	Glu	Leu	Arg	Asp	
385					390					395					400	
Thr	Gly	Gln	Tyr	Gly	Phe	Leu	Leu	Pro	Ala	Thr	Gln	Ile	Ile	Pro	Thr	
				405					410					415		
Ala	Gln	Glu	Thr	Trp	Met	Ala	Leu	Arg	Thr	Ile	Met	Glu	His	Thr	Leu	
			420					425					430			

Asn His Pro Tyr
435

<210> 11839
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<220>
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<220>
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<400> 11839
Met Gln Gly Thr Pro Gly Gly Gly
1 5

<210> 11840
<211> 436
<212> PRT
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<220>
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<220>
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<223> /note="Uniprot ID: Q8WXQ8"

<220>
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<223> /note="ENSP ID: ENSP00000419025"

<400> 11840

Met Gln Gly Thr Pro Gly Gly Gly Thr Arg Pro Gly Pro Ser Pro Val
1 5 10 15

Asp Arg Arg Thr Leu Leu Val Phe Ser Phe Ile Leu Ala Ala Ala Leu
20 25 30

Gly Gln Met Asn Phe Thr Gly Asp Gln Val Leu Arg Val Leu Ala Lys
35 40 45

Asp Glu Lys Gln Leu Ser Leu Leu Gly Asp Leu Glu Gly Leu Lys Pro
50 55 60

Gln Lys Val Asp Phe Trp Arg Gly Pro Ala Arg Pro Ser Leu Pro Val
65 70 75 80

Asp Met Arg Val Pro Phe Ser Glu Leu Lys Asp Ile Lys Ala Tyr Leu
85 90 95

Glu Ser His Gly Leu Ala Tyr Ser Ile Met Ile Lys Asp Ile Gln Val
100 105 110

Leu Leu Asp Glu Glu Arg Gln Ala Met Ala Lys Ser Arg Arg Leu Glu
115 120 125

Arg Ser Thr Asn Ser Phe Ser Tyr Ser Ser Tyr His Thr Leu Glu Glu
130 135 140

Ile Tyr Ser Trp Ile Asp Asn Phe Val Met Glu His Ser Asp Ile Val
145 150 155 160

Ser Lys Ile Gln Ile Gly Asn Ser Phe Glu Asn Gln Ser Ile Leu Val
165 170 175

Leu Lys Phe Ser Thr Gly Gly Ser Arg His Pro Ala Ile Trp Ile Asp
180 185 190

Thr Gly Ile His Ser Arg Glu Trp Ile Thr His Ala Thr Gly Ile Trp
195 200 205

Thr Ala Asn Lys Ile Val Ser Asp Tyr Gly Lys Asp Arg Val Leu Thr
210 215 220

26350

Asp	Ile	Leu	Asn	Ala	Met	Asp	Ile	Phe	Ile	Glu	Leu	Val	Thr	Asn	Pro	225	230	235	240
Asp	Gly	Phe	Ala	Phe	Thr	His	Ser	Met	Asn	Arg	Leu	Trp	Arg	Lys	Asn	245	250	255	
Lys	Ser	Ile	Arg	Pro	Gly	Ile	Phe	Cys	Ile	Gly	Val	Asp	Leu	Asn	Arg	260	265	270	
Asn	Trp	Lys	Ser	Gly	Phe	Gly	Gly	Asn	Gly	Ser	Asn	Ser	Asn	Pro	Cys	275	280	285	
Ser	Glu	Thr	Tyr	His	Gly	Pro	Ser	Pro	Gln	Ser	Glu	Pro	Glu	Val	Ala	290	295	300	
Ala	Ile	Val	Asn	Phe	Ile	Thr	Ala	His	Gly	Asn	Phe	Lys	Ala	Leu	Ile	305	310	315	320
Ser	Ile	His	Ser	Tyr	Ser	Gln	Met	Leu	Met	Tyr	Pro	Tyr	Gly	Arg	Leu	325	330	335	
Leu	Glu	Pro	Val	Ser	Asn	Gln	Arg	Glu	Leu	Tyr	Asp	Leu	Ala	Lys	Asp	340	345	350	
Ala	Val	Glu	Ala	Leu	Tyr	Lys	Val	His	Gly	Ile	Glu	Tyr	Ile	Phe	Gly	355	360	365	
Ser	Ile	Ser	Thr	Thr	Leu	Tyr	Val	Ala	Ser	Gly	Ile	Thr	Val	Asp	Trp	370	375	380	
Ala	Tyr	Asp	Ser	Gly	Ile	Lys	Tyr	Ala	Phe	Ser	Phe	Glu	Leu	Arg	Asp	385	390	395	400
Thr	Gly	Gln	Tyr	Gly	Phe	Leu	Leu	Pro	Ala	Thr	Gln	Ile	Ile	Pro	Thr	405	410	415	
Ala	Gln	Glu	Thr	Trp	Met	Ala	Leu	Arg	Thr	Ile	Met	Glu	His	Thr	Leu	420	425	430	
Asn	His	Pro	Tyr													435			

<210> 11841
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<220>
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<223> /note="Gene Name:
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<220>
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<400> 11841
Met Gln Gly Thr Pro Gly Gly Gly Thr Arg Pro Gly Pro Ser Pro Val
1 5 10 15

Asp Arg Arg Thr Leu Leu Val Phe Ser Phe Ile Leu Ala Ala Ala Leu
20 25 30

<210> 11842
<211> 123
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<220>
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<400> 11842
Met Gln Gly Thr Pro Gly Gly Gly Thr Arg Pro Gly Pro Ser Pro Val
1 5 10 15

Asp Arg Arg Thr Leu Leu Val Phe Ser Phe Ile Leu Ala Ala Ala Leu
20 25 30

Gly Gln Met Asn Phe Thr Gly Asp Gln Val Leu Arg Val Leu Ala Lys
35 40 45

Asp Glu Lys Gln Leu Ser Leu Leu Gly Asp Leu Glu Gly Leu Lys Pro
50 55 60

Gln Lys Val Asp Phe Trp Arg Gly Pro Ala Arg Pro Ser Leu Pro Val
65 70 75 80

Asp Met Arg Val Pro Phe Ser Glu Leu Lys Asp Ile Lys Ala Tyr Leu
85 90 95

Glu Ser His Gly Leu Ala Tyr Ser Ile Met Ile Lys Asp Ile Gln Val
100 105 110

Leu Leu Asp Glu Glu Arg Gln Ala Met Ala Lys
115 120

<210> 11843
<211> 436
<212> PRT
<213> Homo sapiens

<220>
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<220>
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<220>
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<223> /note="Gene Name:
carboxypeptidase A5"

<220>
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<223> /note="Uniprot ID: Q8WXQ8"

<220>
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<223> /note="ENSP ID: ENSP00000420237"

<400> 11843

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Asp	Arg	Arg	Thr	Leu	Leu	Val	Phe	Ser	Phe	Ile	Leu	Ala	Ala	Ala	Leu			
			20					25					30					
Gly	Gln	Met	Asn	Phe	Thr	Gly	Asp	Gln	Val	Leu	Arg	Val	Leu	Ala	Lys			
		35					40					45						
Asp	Glu	Lys	Gln	Leu	Ser	Leu	Leu	Gly	Asp	Leu	Glu	Gly	Leu	Lys	Pro			
	50					55					60							
Gln	Lys	Val	Asp	Phe	Trp	Arg	Gly	Pro	Ala	Arg	Pro	Ser	Leu	Pro	Val			
65					70					75					80			
Asp	Met	Arg	Val	Pro	Phe	Ser	Glu	Leu	Lys	Asp	Ile	Lys	Ala	Tyr	Leu			
				85					90					95				
Glu	Ser	His	Gly	Leu	Ala	Tyr	Ser	Ile	Met	Ile	Lys	Asp	Ile	Gln	Val			
			100					105					110					
Leu	Leu	Asp	Glu	Glu	Arg	Gln	Ala	Met	Ala	Lys	Ser	Arg	Arg	Leu	Glu			
		115					120					125						
Arg	Ser	Thr	Asn	Ser	Phe	Ser	Tyr	Ser	Ser	Tyr	His	Thr	Leu	Glu	Glu			
	130					135					140							
Ile	Tyr	Ser	Trp	Ile	Asp	Asn	Phe	Val	Met	Glu	His	Ser	Asp	Ile	Val			
145					150					155					160			
Ser	Lys	Ile	Gln	Ile	Gly	Asn	Ser	Phe	Glu	Asn	Gln	Ser	Ile	Leu	Val			
				165					170					175				
Leu	Lys	Phe	Ser	Thr	Gly	Gly	Ser	Arg	His	Pro	Ala	Ile	Trp	Ile	Asp			
			180					185					190					
Thr	Gly	Ile	His	Ser	Arg	Glu	Trp	Ile	Thr	His	Ala	Thr	Gly	Ile	Trp			
		195					200					205						
Thr	Ala	Asn	Lys	Ile	Val	Ser	Asp	Tyr	Gly	Lys	Asp	Arg	Val	Leu	Thr			
	210					215					220							
Asp	Ile	Leu	Asn	Ala	Met	Asp	Ile	Phe	Ile	Glu	Leu	Val	Thr	Asn	Pro			

225					230					235				240		
Asp	Gly	Phe	Ala	Phe	Thr	His	Ser	Met	Asn	Arg	Leu	Trp	Arg	Lys	Asn	
			245						250					255		
Lys	Ser	Ile	Arg	Pro	Gly	Ile	Phe	Cys	Ile	Gly	Val	Asp	Leu	Asn	Arg	
			260					265					270			
Asn	Trp	Lys	Ser	Gly	Phe	Gly	Gly	Asn	Gly	Ser	Asn	Ser	Asn	Pro	Cys	
		275					280					285				
Ser	Glu	Thr	Tyr	His	Gly	Pro	Ser	Pro	Gln	Ser	Glu	Pro	Glu	Val	Ala	
	290					295					300					
Ala	Ile	Val	Asn	Phe	Ile	Thr	Ala	His	Gly	Asn	Phe	Lys	Ala	Leu	Ile	
305					310					315					320	
Ser	Ile	His	Ser	Tyr	Ser	Gln	Met	Leu	Met	Tyr	Pro	Tyr	Gly	Arg	Leu	
				325					330					335		
Leu	Glu	Pro	Val	Ser	Asn	Gln	Arg	Glu	Leu	Tyr	Asp	Leu	Ala	Lys	Asp	
			340					345					350			
Ala	Val	Glu	Ala	Leu	Tyr	Lys	Val	His	Gly	Ile	Glu	Tyr	Ile	Phe	Gly	
		355					360					365				
Ser	Ile	Ser	Thr	Thr	Leu	Tyr	Val	Ala	Ser	Gly	Ile	Thr	Val	Asp	Trp	
	370					375					380					
Ala	Tyr	Asp	Ser	Gly	Ile	Lys	Tyr	Ala	Phe	Ser	Phe	Glu	Leu	Arg	Asp	
385					390					395					400	
Thr	Gly	Gln	Tyr	Gly	Phe	Leu	Leu	Pro	Ala	Thr	Gln	Ile	Ile	Pro	Thr	
				405					410					415		
Ala	Gln	Glu	Thr	Trp	Met	Ala	Leu	Arg	Thr	Ile	Met	Glu	His	Thr	Leu	
			420					425					430			
Asn	His	Pro	Tyr													
		435														

<210> 11844
<211> 437

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<212> PRT
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<220>
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<223> /note="Payload ID: 2340"

<220>
<221> source
<223> /note="Gene Symbol: CPA6"

<220>
<221> source
<223> /note="Gene Name:
        carboxypeptidase A6"

<220>
<221> source
<223> /note="Uniprot ID: Q8N4T0"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000297770"

<400> 11844
Met Lys Cys Leu Gly Lys Arg Arg Gly Gln Ala Ala Ala Phe Leu Pro
1          5          10          15

Leu Cys Trp Leu Phe Leu Lys Ile Leu Gln Pro Gly His Ser His Leu
          20          25          30

Tyr Asn Asn Arg Tyr Ala Gly Asp Lys Val Ile Arg Phe Ile Pro Lys
          35          40          45

Thr Glu Glu Glu Ala Tyr Ala Leu Lys Lys Ile Ser Tyr Gln Leu Lys
          50          55          60

Val Asp Leu Trp Gln Pro Ser Ser Ile Ser Tyr Val Ser Glu Gly Thr
65          70          75          80

Val Thr Asp Val His Ile Pro Gln Asn Gly Ser Arg Ala Leu Leu Ala
          85          90          95

Phe Leu Gln Glu Ala Asn Ile Gln Tyr Lys Val Leu Ile Glu Asp Leu
          100          105          110

Gln Lys Thr Leu Glu Lys Gly Ser Ser Leu His Thr Gln Arg Asn Arg
          115          120          125

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Arg	Ser	Leu	Ser	Gly	Tyr	Asn	Tyr	Glu	Val	Tyr	His	Ser	Leu	Glu	Glu
	130					135					140				
Ile	Gln	Asn	Trp	Met	His	His	Leu	Asn	Lys	Thr	His	Ser	Gly	Leu	Ile
145					150					155					160
His	Met	Phe	Ser	Ile	Gly	Arg	Ser	Tyr	Glu	Gly	Arg	Ser	Leu	Phe	Ile
				165					170					175	
Leu	Lys	Leu	Gly	Arg	Arg	Ser	Arg	Leu	Lys	Arg	Ala	Val	Trp	Ile	Asp
			180					185					190		
Cys	Gly	Ile	His	Ala	Arg	Glu	Trp	Ile	Gly	Pro	Ala	Phe	Cys	Gln	Trp
		195					200					205			
Phe	Val	Lys	Glu	Ala	Leu	Leu	Thr	Tyr	Lys	Ser	Asp	Pro	Ala	Met	Arg
	210					215					220				
Lys	Met	Leu	Asn	His	Leu	Tyr	Phe	Tyr	Ile	Met	Pro	Val	Phe	Asn	Val
225					230					235					240
Asp	Gly	Tyr	His	Phe	Ser	Trp	Thr	Asn	Asp	Arg	Phe	Trp	Arg	Lys	Thr
				245					250					255	
Arg	Ser	Arg	Asn	Ser	Arg	Phe	Arg	Cys	Arg	Gly	Val	Asp	Ala	Asn	Arg
			260					265					270		
Asn	Trp	Lys	Val	Lys	Trp	Cys	Asp	Glu	Gly	Ala	Ser	Met	His	Pro	Cys
		275					280					285			
Asp	Asp	Thr	Tyr	Cys	Gly	Pro	Phe	Pro	Glu	Ser	Glu	Pro	Glu	Val	Lys
	290					295					300				
Ala	Val	Ala	Asn	Phe	Leu	Arg	Lys	His	Arg	Lys	His	Ile	Arg	Ala	Tyr
305					310					315					320
Leu	Ser	Phe	His	Ala	Tyr	Ala	Gln	Met	Leu	Leu	Tyr	Pro	Tyr	Ser	Tyr
				325					330					335	
Lys	Tyr	Ala	Thr	Ile	Pro	Asn	Phe	Arg	Cys	Val	Glu	Ser	Ala	Ala	Tyr
			340				345						350		
Lys	Ala	Val	Asn	Ala	Leu	Gln	Ser	Val	Tyr	Gly	Val	Arg	Tyr	Arg	Tyr

Thr Glu Glu Glu Ala Tyr Ala Leu Lys Lys Ile Ser Tyr Gln Leu Lys
50 55 60

Gly Pro His Arg Arg Ser Ser Glu Asn Thr Gly Glu Gly Lys Gln Leu
65 70 75 80

Ala His Pro Glu Lys Pro Lys Ile Pro Leu Trp Ile
85 90

<210> 11846

<211> 315

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2340"

<220>

<221> source

<223> /note="Gene Symbol: CPA6"

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<223> /note="Gene Name:
carboxypeptidase A6"

<220>

<221> source

<223> /note="Uniprot ID: Q8N4T0"

<220>

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<223> /note="ENSP ID: ENSP00000431112"

<400> 11846

Met Lys Cys Leu Gly Lys Arg Arg Gly Gln Ala Ala Ala Phe Leu Pro
1 5 10 15

Leu Cys Trp Leu Phe Leu Lys Ile Leu Gln Pro Gly His Ser His Leu
20 25 30

Tyr Asn Asn Arg Tyr Ala Gly Asp Lys Val Ile Arg Phe Ile Pro Lys
35 40 45

Thr Glu Glu Glu Ala Tyr Ala Leu Lys Lys Ile Ser Tyr Gln Leu Lys
50 55 60

Val Asp Leu Trp Gln Pro Ser Ser Ile Ser Tyr Val Ser Glu Gly Thr

26359

65					70						75					80
Val	Thr	Asp	Val	His	Ile	Pro	Gln	Asn	Gly	Ser	Arg	Ala	Leu	Leu	Ala	
				85					90					95		
Phe	Leu	Gln	Glu	Ala	Asn	Ile	Gln	Tyr	Lys	Val	Leu	Ile	Glu	Asp	Leu	
			100					105					110			
Gln	Lys	Thr	Leu	Glu	Lys	Gly	Ser	Ser	Leu	His	Thr	Gln	Arg	Asn	Arg	
		115					120					125				
Arg	Ser	Leu	Ser	Gly	Tyr	Asn	Tyr	Glu	Val	Tyr	His	Ser	Leu	Glu	Glu	
	130					135					140					
Ile	Gln	Asn	Trp	Met	His	His	Leu	Asn	Lys	Thr	His	Ser	Gly	Leu	Ile	
145					150					155					160	
His	Met	Phe	Ser	Ile	Gly	Arg	Ser	Tyr	Glu	Gly	Arg	Ser	Leu	Phe	Ile	
				165					170					175		
Leu	Lys	Leu	Gly	Arg	Arg	Ser	Arg	Leu	Lys	Arg	Ala	Val	Trp	Ile	Asp	
			180					185					190			
Cys	Gly	Ile	His	Ala	Arg	Glu	Trp	Ile	Gly	Pro	Ala	Phe	Cys	Gln	Trp	
		195					200					205				
Phe	Val	Lys	Glu	Ala	Leu	Leu	Thr	Tyr	Lys	Ser	Asp	Pro	Ala	Met	Arg	
	210					215					220					
Lys	Met	Leu	Asn	His	Leu	Tyr	Phe	Tyr	Ile	Met	Pro	Val	Phe	Asn	Val	
225					230					235					240	
Asp	Gly	Tyr	His	Phe	Ser	Trp	Thr	Asn	Asp	Arg	Phe	Trp	Arg	Lys	Thr	
				245					250					255		
Arg	Ser	Arg	Asn	Ser	Arg	Phe	Arg	Cys	Arg	Gly	Val	Asp	Ala	Asn	Arg	
			260					265					270			
Asn	Trp	Lys	Val	Lys	Trp	Cys	Gly	Lys	Phe	Gly	Thr	Asn	Trp	Asp	Pro	
		275					280					285				
Asp	Pro	Lys	Val	Ser	Ala	Gly	Phe	Thr	Leu	Gln	Asn	Met	Ser	Pro	Glu	
	290					295					300					

Asp Ser His Gly Arg Leu Met Phe Phe Cys Met
305 310 315

<210> 11847

<211> 417

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2341"

<220>

<221> source

<223> /note="Gene Symbol: CPB1"

<220>

<221> source

<223> /note="Gene Name:
carboxypeptidase B1 (tissue)"

<220>

<221> source

<223> /note="Uniprot ID: P15086"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000282957"

<400> 11847

Met Leu Ala Leu Leu Val Leu Val Thr Val Ala Leu Ala Ser Ala His
1 5 10 15

His Gly Gly Glu His Phe Glu Gly Glu Lys Val Phe Arg Val Asn Val
20 25 30

Glu Asp Glu Asn His Ile Asn Ile Ile Arg Glu Leu Ala Ser Thr Thr
35 40 45

Gln Ile Asp Phe Trp Lys Pro Asp Ser Val Thr Gln Ile Lys Pro His
50 55 60

Ser Thr Val Asp Phe Arg Val Lys Ala Glu Asp Thr Val Thr Val Glu
65 70 75 80

Asn Val Leu Lys Gln Asn Glu Leu Gln Tyr Lys Val Leu Ile Ser Asn
85 90 95

Leu	Arg	Asn	Val	Val	Glu	Ala	Gln	Phe	Asp	Ser	Arg	Val	Arg	Ala	Thr	
			100					105					110			
Gly	His	Ser	Tyr	Glu	Lys	Tyr	Asn	Lys	Trp	Glu	Thr	Ile	Glu	Ala	Trp	
		115					120					125				
Thr	Gln	Gln	Val	Ala	Thr	Glu	Asn	Pro	Ala	Leu	Ile	Ser	Arg	Ser	Val	
	130					135					140					
Ile	Gly	Thr	Thr	Phe	Glu	Gly	Arg	Ala	Ile	Tyr	Leu	Leu	Lys	Val	Gly	
145					150					155					160	
Lys	Ala	Gly	Gln	Asn	Lys	Pro	Ala	Ile	Phe	Met	Asp	Cys	Gly	Phe	His	
				165					170					175		
Ala	Arg	Glu	Trp	Ile	Ser	Pro	Ala	Phe	Cys	Gln	Trp	Phe	Val	Arg	Glu	
			180					185					190			
Ala	Val	Arg	Thr	Tyr	Gly	Arg	Glu	Ile	Gln	Val	Thr	Glu	Leu	Leu	Asp	
		195					200					205				
Lys	Leu	Asp	Phe	Tyr	Val	Leu	Pro	Val	Leu	Asn	Ile	Asp	Gly	Tyr	Ile	
	210					215					220					
Tyr	Thr	Trp	Thr	Lys	Ser	Arg	Phe	Trp	Arg	Lys	Thr	Arg	Ser	Thr	His	
225					230					235					240	
Thr	Gly	Ser	Ser	Cys	Ile	Gly	Thr	Asp	Pro	Asn	Arg	Asn	Phe	Asp	Ala	
				245					250					255		
Gly	Trp	Cys	Glu	Ile	Gly	Ala	Ser	Arg	Asn	Pro	Cys	Asp	Glu	Thr	Tyr	
			260					265					270			
Cys	Gly	Pro	Ala	Ala	Glu	Ser	Glu	Lys	Glu	Thr	Lys	Ala	Leu	Ala	Asp	
		275					280					285				
Phe	Ile	Arg	Asn	Lys	Leu	Ser	Ser	Ile	Lys	Ala	Tyr	Leu	Thr	Ile	His	
	290					295					300					
Ser	Tyr	Ser	Gln	Met	Met	Ile	Tyr	Pro	Tyr	Ser	Tyr	Ala	Tyr	Lys	Leu	
305					310					315					320	
Gly	Glu	Asn	Asn	Ala	Glu	Leu	Asn	Ala	Leu	Ala	Lys	Ala	Thr	Val	Lys	

325

330

335

Glu Leu Ala Ser Leu His Gly Thr Lys Tyr Thr Tyr Gly Pro Gly Ala
 340 345 350

Thr Thr Ile Tyr Pro Ala Ala Gly Gly Ser Asp Asp Trp Ala Tyr Asp
 355 360 365

Gln Gly Ile Arg Tyr Ser Phe Thr Phe Glu Leu Arg Asp Thr Gly Arg
 370 375 380

Tyr Gly Phe Leu Leu Pro Glu Ser Gln Ile Arg Ala Thr Cys Glu Glu
 385 390 395 400

Thr Phe Leu Ala Ile Lys Tyr Val Ala Ser Tyr Val Leu Glu His Leu
 405 410 415

Tyr

<210> 11848

<211> 99

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2341"

<220>

<221> source

<223> /note="Gene Symbol: CPB1"

<220>

<221> source

<223> /note="Gene Name:
carboxypeptidase B1 (tissue)"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000417117"

<400> 11848

Met Leu Ala Leu Leu Val Leu Val Thr Val Ala Leu Ala Ser Ala His
 1 5 10 15

His Gly Gly Glu His Phe Glu Gly Glu Lys Val Phe Arg Val Asn Val
 20 25 30

26363

Glu Asp Glu Asn His Ile Asn Ile Ile Arg Glu Leu Ala Ser Thr Thr
35 40 45

Gln Ile Asp Phe Trp Lys Pro Asp Ser Val Thr Gln Ile Lys Pro His
50 55 60

Ser Thr Val Asp Phe Arg Val Lys Ala Glu Asp Thr Val Thr Val Glu
65 70 75 80

Asn Val Leu Lys Gln Asn Glu Leu Gln Tyr Lys Val Leu Ile Ser Asn
85 90 95

Leu Arg Asn

<210> 11849
<211> 417
<212> PRT
<213> Homo sapiens

<220>
<221> source
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<220>
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<220>
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carboxypeptidase B1 (tissue)"

<220>
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<220>
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<223> /note="ENSP ID: ENSP00000417222"

<400> 11849
Met Leu Ala Leu Leu Val Leu Val Thr Val Ala Leu Ala Ser Ala His
1 5 10 15

His Gly Gly Glu His Phe Glu Gly Glu Lys Val Phe Arg Val Asn Val
20 25 30

Glu Asp Glu Asn His Ile Asn Ile Ile Arg Glu Leu Ala Ser Thr Thr

35					40					45					
Gln	Ile	Asp	Phe	Trp	Lys	Pro	Asp	Ser	Val	Thr	Gln	Ile	Lys	Pro	His
50						55					60				
Ser	Thr	Val	Asp	Phe	Arg	Val	Lys	Ala	Glu	Asp	Thr	Val	Thr	Val	Glu
65					70					75					80
Asn	Val	Leu	Lys	Gln	Asn	Glu	Leu	Gln	Tyr	Lys	Val	Leu	Ile	Ser	Asn
				85					90					95	
Leu	Arg	Asn	Val	Val	Glu	Ala	Gln	Phe	Asp	Ser	Arg	Val	Arg	Ala	Thr
			100					105					110		
Gly	His	Ser	Tyr	Glu	Lys	Tyr	Asn	Lys	Trp	Glu	Thr	Ile	Glu	Ala	Trp
		115					120					125			
Thr	Gln	Gln	Val	Ala	Thr	Glu	Asn	Pro	Ala	Leu	Ile	Ser	Arg	Ser	Val
	130					135					140				
Ile	Gly	Thr	Thr	Phe	Glu	Gly	Arg	Ala	Ile	Tyr	Leu	Leu	Lys	Val	Gly
145					150					155					160
Lys	Ala	Gly	Gln	Asn	Lys	Pro	Ala	Ile	Phe	Met	Asp	Cys	Gly	Phe	His
				165					170					175	
Ala	Arg	Glu	Trp	Ile	Ser	Pro	Ala	Phe	Cys	Gln	Trp	Phe	Val	Arg	Glu
			180					185					190		
Ala	Val	Arg	Thr	Tyr	Gly	Arg	Glu	Ile	Gln	Val	Thr	Glu	Leu	Leu	Asp
		195					200					205			
Lys	Leu	Asp	Phe	Tyr	Val	Leu	Pro	Val	Leu	Asn	Ile	Asp	Gly	Tyr	Ile
	210					215					220				
Tyr	Thr	Trp	Thr	Lys	Ser	Arg	Phe	Trp	Arg	Lys	Thr	Arg	Ser	Thr	His
225					230					235					240
Thr	Gly	Ser	Ser	Cys	Ile	Gly	Thr	Asp	Pro	Asn	Arg	Asn	Phe	Asp	Ala
				245					250					255	
Gly	Trp	Cys	Glu	Ile	Gly	Ala	Ser	Arg	Asn	Pro	Cys	Asp	Glu	Thr	Tyr
			260					265					270		

Cys Gly Pro Ala Ala Glu Ser Glu Lys Glu Thr Lys Ala Leu Ala Asp
275 280 285

Phe Ile Arg Asn Lys Leu Ser Ser Ile Lys Ala Tyr Leu Thr Ile His
290 295 300

Ser Tyr Ser Gln Met Met Ile Tyr Pro Tyr Ser Tyr Ala Tyr Lys Leu
305 310 315 320

Gly Glu Asn Asn Ala Glu Leu Asn Ala Leu Ala Lys Ala Thr Val Lys
325 330 335

Glu Leu Ala Ser Leu His Gly Thr Lys Tyr Thr Tyr Gly Pro Gly Ala
340 345 350

Thr Thr Ile Tyr Pro Ala Ala Gly Gly Ser Asp Asp Trp Ala Tyr Asp
355 360 365

Gln Gly Ile Arg Tyr Ser Phe Thr Phe Glu Leu Arg Asp Thr Gly Arg
370 375 380

Tyr Gly Phe Leu Leu Pro Glu Ser Gln Ile Arg Ala Thr Cys Glu Glu
385 390 395 400

Thr Phe Leu Ala Ile Lys Tyr Val Ala Ser Tyr Val Leu Glu His Leu
405 410 415

Tyr

<210> 11850
<211> 59
<212> PRT
<213> Homo sapiens

<220>
<221> source
<223> /note="Payload ID: 2341"

<220>
<221> source
<223> /note="Gene Symbol: CPB1"

<220>
<221> source

<223> /note="Gene Name:
carboxypeptidase B1 (tissue)"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000419114"

<400> 11850

Met Leu Ala Leu Leu Val Leu Val Thr Val Ala Leu Ala Ser Ala His
1 5 10 15

His Gly Gly Glu His Phe Glu Gly Glu Lys Val Phe Arg Val Asn Val
20 25 30

Glu Asp Glu Asn His Ile Asn Ile Ile Arg Glu Leu Ala Ser Thr Thr
35 40 45

Gln Ile Asp Phe Trp Lys Pro Asp Ser Val Thr
50 55

<210> 11851

<211> 203

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2341"

<220>

<221> source

<223> /note="Gene Symbol: CPB1"

<220>

<221> source

<223> /note="Gene Name:
carboxypeptidase B1 (tissue)"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000419427"

<400> 11851

Met Leu Ala Leu Leu Val Leu Val Thr Val Ala Leu Ala Ser Ala His
1 5 10 15

His Gly Gly Glu His Phe Glu Gly Glu Lys Val Phe Arg Val Asn Val
20 25 30

Glu Asp Glu Asn His Ile Asn Ile Ile Arg Glu Leu Ala Ser Thr Thr
35 40 45

Gln Ile Asp Phe Trp Lys Pro Asp Ser Val Thr Gln Ile Lys Pro His
 50 55 60
 Ser Thr Val Asp Phe Arg Val Lys Ala Glu Asp Thr Val Thr Val Glu
 65 70 75 80
 Asn Val Leu Lys Gln Asn Glu Leu Gln Tyr Lys Val Leu Ile Ser Asn
 85 90 95
 Leu Arg Asn Val Val Glu Ala Gln Phe Asp Ser Arg Val Arg Ala Thr
 100 105 110
 Gly His Ser Tyr Glu Lys Tyr Asn Lys Trp Glu Thr Val Gly Lys Ala
 115 120 125
 Gly Gln Asn Lys Pro Ala Ile Phe Met Asp Cys Gly Phe His Ala Arg
 130 135 140
 Glu Trp Ile Ser Pro Ala Phe Cys Gln Trp Phe Val Arg Glu Ala Val
 145 150 155 160
 Arg Thr Tyr Gly Arg Glu Ile Gln Val Thr Glu Leu Leu Asp Lys Leu
 165 170 175
 Asp Phe Tyr Val Leu Pro Val Leu Asn Ile Asp Gly Tyr Ile Tyr Thr
 180 185 190
 Trp Thr Lys Ser Arg Phe Trp Arg Lys Thr Arg
 195 200

<210> 11852

<211> 423

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2342"

<220>

<221> source

<223> /note="Gene Symbol: CPB2"

<220>

<221> source

<223> /note="Gene Name:
carboxypeptidase B2 (plasma)"

<220>

<221> source

<223> /note="Uniprot ID: Q96IY4"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000181383"

<400> 11852

Met Lys Leu Cys Ser Leu Ala Val Leu Val Pro Ile Val Leu Phe Cys
1 5 10 15

Glu Gln His Val Phe Ala Phe Gln Ser Gly Gln Val Leu Ala Ala Leu
20 25 30

Pro Arg Thr Ser Arg Gln Val Gln Val Leu Gln Asn Leu Thr Thr Thr
35 40 45

Tyr Glu Ile Val Leu Trp Gln Pro Val Thr Ala Asp Leu Ile Val Lys
50 55 60

Lys Lys Gln Val His Phe Phe Val Asn Ala Ser Asp Val Asp Asn Val
65 70 75 80

Lys Ala His Leu Asn Val Ser Gly Ile Pro Cys Ser Val Leu Leu Ala
85 90 95

Asp Val Glu Asp Leu Ile Gln Gln Gln Ile Ser Asn Asp Thr Val Ser
100 105 110

Pro Arg Ala Ser Ala Ser Tyr Tyr Glu Gln Tyr His Ser Leu Asn Glu
115 120 125

Ile Tyr Ser Trp Ile Glu Phe Ile Thr Glu Arg His Pro Asp Met Leu
130 135 140

Thr Lys Ile His Ile Gly Ser Ser Phe Glu Lys Tyr Pro Leu Tyr Val
145 150 155 160

Leu Lys Val Ser Gly Lys Glu Gln Ala Ala Lys Asn Ala Ile Trp Ile
165 170 175

Asp Cys Gly Ile His Ala Arg Glu Trp Ile Ser Pro Ala Phe Cys Leu

					180						185						190
Trp	Phe	Ile	Gly	His	Ile	Thr	Gln	Phe	Tyr	Gly	Ile	Ile	Gly	Gln	Tyr		
		195					200					205					
Thr	Asn	Leu	Leu	Arg	Leu	Val	Asp	Phe	Tyr	Val	Met	Pro	Val	Val	Asn		
	210					215					220						
Val	Asp	Gly	Tyr	Asp	Tyr	Ser	Trp	Lys	Lys	Asn	Arg	Met	Trp	Arg	Lys		
225					230					235					240		
Asn	Arg	Ser	Phe	Tyr	Ala	Asn	Asn	His	Cys	Ile	Gly	Thr	Asp	Leu	Asn		
				245					250					255			
Arg	Asn	Phe	Ala	Ser	Lys	His	Trp	Cys	Glu	Glu	Gly	Ala	Ser	Ser	Ser		
			260					265					270				
Ser	Cys	Ser	Glu	Thr	Tyr	Cys	Gly	Leu	Tyr	Pro	Glu	Ser	Glu	Pro	Glu		
		275					280					285					
Val	Lys	Ala	Val	Ala	Ser	Phe	Leu	Arg	Arg	Asn	Ile	Asn	Gln	Ile	Lys		
	290					295					300						
Ala	Tyr	Ile	Ser	Met	His	Ser	Tyr	Ser	Gln	His	Ile	Val	Phe	Pro	Tyr		
305					310					315					320		
Ser	Tyr	Thr	Arg	Ser	Lys	Ser	Lys	Asp	His	Glu	Glu	Leu	Ser	Leu	Val		
				325					330					335			
Ala	Ser	Glu	Ala	Val	Arg	Ala	Ile	Glu	Lys	Ile	Ser	Lys	Asn	Thr	Arg		
			340					345					350				
Tyr	Thr	His	Gly	His	Gly	Ser	Glu	Thr	Leu	Tyr	Leu	Ala	Pro	Gly	Gly		
		355					360					365					
Gly	Asp	Asp	Trp	Ile	Tyr	Asp	Leu	Gly	Ile	Lys	Tyr	Ser	Phe	Thr	Ile		
	370					375					380						
Glu	Leu	Arg	Asp	Thr	Gly	Thr	Tyr	Gly	Phe	Leu	Leu	Pro	Glu	Arg	Tyr		
385					390					395					400		
Ile	Lys	Pro	Thr	Cys	Arg	Glu	Ala	Phe	Ala	Ala	Val	Ser	Lys	Ile	Ala		
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Trp His Val Ile Arg Asn Val
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<210> 11853

<211> 386

<212> PRT

<213> Homo sapiens

<220>

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<223> /note="Payload ID: 2342"

<220>

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<223> /note="Gene Symbol: CPB2"

<220>

<221> source

<223> /note="Gene Name:
carboxypeptidase B2 (plasma)"

<220>

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<223> /note="ENSP ID: ENSP00000400714"

<400> 11853

Met Lys Leu Cys Ser Leu Ala Val Leu Val Pro Ile Val Leu Phe Cys
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Glu Gln His Val Phe Ala Phe Gln Ser Gly Gln Val Leu Ala Ala Leu
20 25 30

Pro Arg Thr Ser Arg Gln Val Gln Val Leu Gln Asn Leu Thr Thr Thr
35 40 45

Tyr Glu Ile Val Leu Trp Gln Pro Val Thr Ala Asp Leu Ile Val Lys
50 55 60

Lys Lys Gln Val His Phe Phe Val Asn Ala Ser Asp Val Asp Asn Val
65 70 75 80

Lys Ala His Leu Asn Val Ser Gly Ile Pro Cys Ser Val Leu Leu Ala
85 90 95

Asp Val Glu Asp Leu Ile Gln Gln Gln Ile Ser Asn Asp Thr Val Ser
100 105 110

Pro	Arg	Ala	Ser	Ala	Ser	Tyr	Tyr	Glu	Gln	Tyr	His	Ser	Leu	Asn	Glu		
		115					120					125					
Ile	Tyr	Ser	Trp	Ile	Glu	Phe	Ile	Thr	Glu	Arg	His	Pro	Asp	Met	Leu		
	130					135					140						
Thr	Lys	Ile	His	Ile	Gly	Ser	Ser	Phe	Glu	Lys	Tyr	Pro	Leu	Tyr	Val		
145					150					155					160		
Leu	Lys	Val	Ser	Gly	Lys	Glu	Gln	Ala	Ala	Lys	Asn	Ala	Ile	Trp	Ile		
				165					170					175			
Asp	Cys	Gly	Ile	His	Ala	Arg	Glu	Trp	Ile	Ser	Pro	Ala	Phe	Cys	Leu		
			180					185					190				
Trp	Phe	Ile	Gly	His	Asn	Arg	Met	Trp	Arg	Lys	Asn	Arg	Ser	Phe	Tyr		
		195					200					205					
Ala	Asn	Asn	His	Cys	Ile	Gly	Thr	Asp	Leu	Asn	Arg	Asn	Phe	Ala	Ser		
	210					215					220						
Lys	His	Trp	Cys	Glu	Glu	Gly	Ala	Ser	Ser	Ser	Ser	Cys	Ser	Glu	Thr		
225					230					235					240		
Tyr	Cys	Gly	Leu	Tyr	Pro	Glu	Ser	Glu	Pro	Glu	Val	Lys	Ala	Val	Ala		
				245					250					255			
Ser	Phe	Leu	Arg	Arg	Asn	Ile	Asn	Gln	Ile	Lys	Ala	Tyr	Ile	Ser	Met		
			260					265					270				
His	Ser	Tyr	Ser	Gln	His	Ile	Val	Phe	Pro	Tyr	Ser	Tyr	Thr	Arg	Ser		
		275					280					285					
Lys	Ser	Lys	Asp	His	Glu	Glu	Leu	Ser	Leu	Val	Ala	Ser	Glu	Ala	Val		
	290					295					300						
Arg	Ala	Ile	Glu	Lys	Ile	Ser	Lys	Asn	Thr	Arg	Tyr	Thr	His	Gly	His		
305					310					315					320		
Gly	Ser	Glu	Thr	Leu	Tyr	Leu	Ala	Pro	Gly	Gly	Gly	Asp	Asp	Trp	Ile		
				325					330					335			
Tyr	Asp	Leu	Gly	Ile	Lys	Tyr	Ser	Phe	Thr	Ile	Glu	Leu	Arg	Asp	Thr		

Glu	Ser	Ala	Leu	Arg	Glu	Ala	Ala	Ala	Ala	Gly	Leu	Pro	Gly	Leu	Ala	
65					70					75					80	
Arg	Leu	Phe	Ser	Ile	Gly	Arg	Ser	Val	Glu	Gly	Arg	Pro	Leu	Trp	Val	
				85					90					95		
Leu	Arg	Leu	Thr	Ala	Gly	Leu	Gly	Ser	Leu	Ile	Pro	Glu	Gly	Asp	Ala	
			100					105					110			
Gly	Pro	Asp	Ala	Ala	Gly	Pro	Asp	Ala	Ala	Gly	Pro	Leu	Leu	Pro	Gly	
		115					120					125				
Arg	Pro	Gln	Val	Lys	Leu	Val	Gly	Asn	Met	His	Gly	Asp	Glu	Thr	Val	
	130					135					140					
Ser	Arg	Gln	Val	Leu	Ile	Tyr	Leu	Ala	Arg	Glu	Leu	Ala	Ala	Gly	Tyr	
145					150					155					160	
Arg	Arg	Gly	Asp	Pro	Arg	Leu	Val	Arg	Leu	Leu	Asn	Thr	Thr	Asp	Val	
				165					170					175		
Tyr	Leu	Leu	Pro	Ser	Leu	Asn	Pro	Asp	Gly	Phe	Glu	Arg	Ala	Arg	Glu	
			180					185					190			
Gly	Asp	Cys	Gly	Phe	Gly	Asp	Gly	Gly	Pro	Ser	Gly	Ala	Ser	Gly	Arg	
		195					200					205				
Asp	Asn	Ser	Arg	Gly	Arg	Asp	Leu	Asn	Arg	Ser	Phe	Pro	Asp	Gln	Phe	
	210					215					220					
Ser	Thr	Gly	Glu	Pro	Pro	Ala	Leu	Asp	Glu	Val	Pro	Glu	Val	Arg	Ala	
225					230					235					240	
Leu	Ile	Glu	Trp	Ile	Arg	Arg	Asn	Lys	Phe	Val	Leu	Ser	Gly	Asn	Leu	
				245					250					255		
His	Gly	Gly	Ser	Val	Val	Ala	Ser	Tyr	Pro	Phe	Asp	Asp	Ser	Pro	Glu	
			260					265					270			
His	Lys	Ala	Thr	Gly	Ile	Tyr	Ser	Lys	Thr	Ser	Asp	Asp	Glu	Val	Phe	
		275					280					285				

Lys Tyr Leu Ala Lys Ala Tyr Ala Ser Asn His Pro Ile Met Lys Thr
290 295 300

Gly Glu Pro His Cys Pro Gly Asp Glu Asp Glu Thr Phe Lys Asp Gly
305 310 315 320

Ile Thr Asn Gly Ala His Trp Tyr Asp Val Glu Gly Gly Met Gln Asp
325 330 335

Tyr Asn Tyr Val Trp Ala Asn Cys Phe Glu Ile Thr Leu Glu Leu Ser
340 345 350

Cys Cys Lys Tyr Pro Pro Ala Ser Gln Leu Arg Gln Glu Trp Glu Asn
355 360 365

Asn Arg Glu Ser Leu Ile Thr Leu Ile Glu Lys Val His Ile Gly Val
370 375 380

Lys Gly Phe Val Lys Asp Ser Ile Thr Gly Ser Gly Leu Glu Asn Ala
385 390 395 400

Thr Ile Ser Val Ala Gly Ile Asn His Asn Ile Thr Thr Gly Arg Phe
405 410 415

Gly Asp Phe Tyr Arg Leu Leu Val Pro Gly Thr Tyr Asn Leu Thr Val
420 425 430

Val Leu Thr Gly Tyr Met Pro Leu Thr Val Thr Asn Val Val Val Lys
435 440 445

Glu Gly Pro Ala Thr Glu Val Asp Phe Ser Leu Arg Pro Thr Val Thr
450 455 460

Ser Val Ile Pro Asp Thr Thr Glu Ala Val Ser Thr Ala Ser Thr Val
465 470 475 480

Ala Ile Pro Asn Ile Leu Ser Gly Thr Ser Ser Ser Tyr Gln Pro Ile
485 490 495

Gln Pro Lys Asp Phe His His His His Phe Pro Asp Met Glu Ile Phe
500 505 510

Leu Arg Arg Phe Ala Asn Glu Tyr Pro Asn Ile Thr Arg Leu Tyr Ser

515																	
Leu	Gly	Lys	Ser	Val	Glu	Ser	Arg	Glu	Leu	Tyr	Val	Met	Glu	Ile	Ser		
	530					535					540						
Asp	Asn	Pro	Gly	Val	His	Glu	Pro	Gly	Glu	Pro	Glu	Phe	Lys	Tyr	Ile		
545					550					555					560		
Gly	Asn	Met	His	Gly	Asn	Glu	Val	Val	Gly	Arg	Glu	Leu	Leu	Leu	Asn		
				565					570						575		
Leu	Ile	Glu	Tyr	Leu	Cys	Lys	Asn	Phe	Gly	Thr	Asp	Pro	Glu	Val	Thr		
			580					585					590				
Asp	Leu	Val	His	Asn	Thr	Arg	Ile	His	Leu	Met	Pro	Ser	Met	Asn	Pro		
		595					600					605					
Asp	Gly	Tyr	Glu	Lys	Ser	Gln	Glu	Gly	Asp	Ser	Ile	Ser	Val	Ile	Gly		
	610					615					620						
Arg	Asn	Asn	Ser	Asn	Asn	Phe	Asp	Leu	Asn	Arg	Asn	Phe	Pro	Asp	Gln		
625					630					635					640		
Phe	Val	Gln	Ile	Thr	Asp	Pro	Thr	Gln	Pro	Glu	Thr	Ile	Ala	Val	Met		
				645					650					655			
Ser	Trp	Met	Lys	Ser	Tyr	Pro	Phe	Val	Leu	Ser	Ala	Asn	Leu	His	Gly		
			660					665					670				
Gly	Ser	Leu	Val	Val	Asn	Tyr	Pro	Phe	Asp	Asp	Asp	Glu	Gln	Gly	Leu		
		675					680					685					
Ala	Thr	Tyr	Ser	Lys	Ser	Pro	Asp	Asp	Ala	Val	Phe	Gln	Gln	Ile	Ala		
	690					695					700						
Leu	Ser	Tyr	Ser	Lys	Glu	Asn	Ser	Gln	Met	Phe	Gln	Gly	Arg	Pro	Cys		
705					710					715					720		
Lys	Asn	Met	Tyr	Pro	Asn	Glu	Tyr	Phe	Pro	His	Gly	Ile	Thr	Asn	Gly		
				725					730					735			
Ala	Ser	Trp	Tyr	Asn	Val	Pro	Gly	Gly	Met	Gln	Asp	Trp	Asn	Tyr	Leu		
			740					745					750				

Gln	Thr	Asn	Cys	Phe	Glu	Val	Thr	Ile	Glu	Leu	Gly	Cys	Val	Lys	Tyr		
		755					760					765					
Pro	Leu	Glu	Lys	Glu	Leu	Pro	Asn	Phe	Trp	Glu	Gln	Asn	Arg	Arg	Ser		
	770					775					780						
Leu	Ile	Gln	Phe	Met	Lys	Gln	Val	His	Gln	Gly	Val	Arg	Gly	Phe	Val		
785					790					795					800		
Leu	Asp	Ala	Thr	Asp	Gly	Arg	Gly	Ile	Leu	Asn	Ala	Thr	Ile	Ser	Val		
				805					810					815			
Ala	Glu	Ile	Asn	His	Pro	Val	Thr	Thr	Tyr	Lys	Thr	Gly	Asp	Tyr	Trp		
			820					825					830				
Arg	Leu	Leu	Val	Pro	Gly	Thr	Tyr	Lys	Ile	Thr	Ala	Ser	Ala	Arg	Gly		
	835						840					845					
Tyr	Asn	Pro	Val	Thr	Lys	Asn	Val	Thr	Val	Lys	Ser	Glu	Gly	Ala	Ile		
	850					855					860						
Gln	Val	Asn	Phe	Thr	Leu	Val	Arg	Ser	Ser	Thr	Asp	Ser	Asn	Asn	Glu		
865					870					875					880		
Ser	Lys	Lys	Gly	Lys	Gly	Ala	Ser	Ser	Ser	Thr	Asn	Asp	Ala	Ser	Asp		
				885					890					895			
Pro	Thr	Thr	Lys	Glu	Phe	Glu	Thr	Leu	Ile	Lys	Asp	Leu	Ser	Ala	Glu		
			900					905					910				
Asn	Gly	Leu	Glu	Ser	Leu	Met	Leu	Arg	Ser	Ser	Ser	Asn	Leu	Ala	Leu		
		915					920					925					
Ala	Leu	Tyr	Arg	Tyr	His	Ser	Tyr	Lys	Asp	Leu	Ser	Glu	Phe	Leu	Arg		
	930					935					940						
Gly	Leu	Val	Met	Asn	Tyr	Pro	His	Ile	Thr	Asn	Leu	Thr	Asn	Leu	Gly		
945					950					955					960		
Gln	Ser	Thr	Glu	Tyr	Arg	His	Ile	Trp	Ser	Leu	Glu	Ile	Ser	Asn	Lys		
				965					970					975			

Pro Asn Val Ser Glu Pro Glu Glu Pro Lys Ile Arg Phe Val Ala Gly
980 985 990

Ile His Gly Asn Ala Pro Val Gly Thr Glu Leu Leu Leu Ala Leu
Ala
995 1000 1005

Glu Phe Leu Cys Leu Asn Tyr Lys Lys Asn Pro Ala Val Thr Gln
1010 1015 1020

Leu Val Asp Arg Thr Arg Ile Val Ile Val Pro Ser Leu Asn Pro
1025 1030 1035

Asp Gly Arg Glu Arg Ala Gln Glu Lys Asp Cys Thr Ser Lys Ile
1040 1045 1050

Gly Gln Thr Asn Ala Arg Gly Lys Asp Leu Asp Thr Asp Phe Thr
1055 1060 1065

Asn Asn Ala Ser Gln Pro Glu Thr Lys Ala Ile Ile Glu Asn Leu
1070 1075 1080

Ile Gln Lys Gln Asp Phe Ser Leu Ser Val Ala Leu Asp Gly Gly
1085 1090 1095

Ser Met Leu Val Thr Tyr Pro Tyr Asp Lys Pro Val Gln Thr Val
1100 1105 1110

Glu Asn Lys Glu Thr Leu Lys His Leu Ala Ser Leu Tyr Ala Asn
1115 1120 1125

Asn His Pro Ser Met His Met Gly Gln Pro Ser Cys Pro Asn Lys
1130 1135 1140

Ser Asp Glu Asn Ile Pro Gly Gly Val Met Arg Gly Ala Glu Trp
1145 1150 1155

His Ser His Leu Gly Ser Met Lys Asp Tyr Ser Val Thr Tyr Gly
1160 1165 1170

His Cys Pro Glu Ile Thr Val Tyr Thr Ser Cys Cys Tyr Phe Pro
1175 1180 1185

Ser	Ala	Ala	Arg	Leu	Pro	Ser	Leu	Trp	Ala	Asp	Asn	Lys	Arg	Ser
	1190					1195					1200			
Leu	Leu	Ser	Met	Leu	Val	Glu	Val	His	Lys	Gly	Val	His	Gly	Phe
	1205					1210					1215			
Val	Lys	Asp	Lys	Thr	Gly	Lys	Pro	Ile	Ser	Lys	Ala	Val	Ile	Val
	1220					1225					1230			
Leu	Asn	Glu	Gly	Ile	Lys	Val	Gln	Thr	Lys	Glu	Gly	Gly	Tyr	Phe
	1235					1240					1245			
His	Val	Leu	Leu	Ala	Pro	Gly	Val	His	Asn	Ile	Ile	Ala	Ile	Ala
	1250					1255					1260			
Asp	Gly	Tyr	Gln	Gln	Gln	His	Ser	Gln	Val	Phe	Val	His	His	Asp
	1265					1270					1275			
Ala	Ala	Ser	Ser	Val	Val	Ile	Val	Phe	Asp	Thr	Asp	Asn	Arg	Ile
	1280					1285					1290			
Phe	Gly	Leu	Pro	Arg	Glu	Leu	Val	Val	Thr	Val	Ser	Gly	Ala	Thr
	1295					1300					1305			
Met	Ser	Ala	Leu	Ile	Leu	Thr	Ala	Cys	Ile	Ile	Trp	Cys	Ile	Cys
	1310					1315					1320			
Ser	Ile	Lys	Ser	Asn	Arg	His	Lys	Asp	Gly	Phe	His	Arg	Leu	Arg
	1325					1330					1335			
Gln	His	His	Asp	Glu	Tyr	Glu	Asp	Glu	Ile	Arg	Met	Met	Ser	Thr
	1340					1345					1350			
Gly	Ser	Lys	Lys	Ser	Leu	Leu	Ser	His	Glu	Phe	Gln	Asp	Glu	Thr
	1355					1360					1365			
Asp	Thr	Glu	Glu	Glu	Thr	Leu	Tyr	Ser	Ser	Lys	His			
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<223> /note="Gene Symbol: CPD"

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<223> /note="Gene Name:
carboxypeptidase D"

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Ser Tyr Pro Phe Asp Asp Ser Pro Glu His Lys Ala Thr Gly Ile Tyr
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Ser Lys Thr Ser Asp Asp Glu Val Phe Lys Tyr Leu Ala Lys Ala Tyr
35 40 45

Ala Ser Asn His Pro Ile Met Lys Thr Gly Glu Pro His Cys Pro Gly
50 55 60

Asp Glu Asp Glu Thr Phe Lys Asp Gly Ile Thr Asn Gly Ala His Trp
65 70 75 80

Tyr Asp Val Glu Gly Gly Met Gln Asp Tyr Asn Tyr Val Trp Ala Asn
85 90 95

Cys Phe Glu Ile Thr Leu Glu Leu Ser Cys Cys Lys Tyr Pro Pro Ala
100 105 110

Ser Gln Leu Arg Gln Glu Trp Glu Asn Asn Arg Glu Ser Leu Ile Thr
115 120 125

Leu Ile Glu Lys Val His Ile Gly Val Lys Gly Phe Val Lys Asp Ser
130 135 140

Ile	Thr	Gly	Ser	Gly	Leu	Glu	Asn	Ala	Thr	Ile	Ser	Val	Ala	Gly	Ile	145	150	155	160
Asn	His	Asn	Ile	Thr	Thr	Gly	Arg	Phe	Gly	Asp	Phe	Tyr	Arg	Leu	Leu	165	170	175	
Val	Pro	Gly	Thr	Tyr	Asn	Leu	Thr	Val	Val	Leu	Thr	Gly	Tyr	Met	Pro	180	185	190	
Leu	Thr	Val	Thr	Asn	Val	Val	Val	Lys	Glu	Gly	Pro	Ala	Thr	Glu	Val	195	200	205	
Asp	Phe	Ser	Leu	Arg	Pro	Thr	Val	Thr	Ser	Val	Ile	Pro	Asp	Thr	Thr	210	215	220	
Glu	Ala	Val	Ser	Thr	Ala	Ser	Thr	Val	Ala	Ile	Pro	Asn	Ile	Leu	Ser	225	230	235	240
Gly	Thr	Ser	Ser	Ser	Tyr	Gln	Pro	Ile	Gln	Pro	Lys	Asp	Phe	His	His	245	250	255	
His	His	Phe	Pro	Asp	Met	Glu	Ile	Phe	Leu	Arg	Arg	Phe	Ala	Asn	Glu	260	265	270	
Tyr	Pro	Asn	Ile	Thr	Arg	Leu	Tyr	Ser	Leu	Gly	Lys	Ser	Val	Glu	Ser	275	280	285	
Arg	Glu	Leu	Tyr	Val	Met	Glu	Ile	Ser	Asp	Asn	Pro	Gly	Val	His	Glu	290	295	300	
Pro	Gly	Glu	Pro	Glu	Phe	Lys	Tyr	Ile	Gly	Asn	Met	His	Gly	Asn	Glu	305	310	315	320
Val	Val	Gly	Arg	Glu	Leu	Leu	Leu	Asn	Leu	Ile	Glu	Tyr	Leu	Cys	Lys	325	330	335	
Asn	Phe	Gly	Thr	Asp	Pro	Glu	Val	Thr	Asp	Leu	Val	His	Asn	Thr	Arg	340	345	350	
Ile	His	Leu	Met	Pro	Ser	Met	Asn	Pro	Asp	Gly	Tyr	Glu	Lys	Ser	Gln	355	360	365	

Glu	Gly	Asp	Ser	Ile	Ser	Val	Ile	Gly	Arg	Asn	Asn	Ser	Asn	Asn	Phe	
	370					375					380					
Asp	Leu	Asn	Arg	Asn	Phe	Pro	Asp	Gln	Phe	Val	Gln	Ile	Thr	Asp	Pro	
385					390					395					400	
Thr	Gln	Pro	Glu	Thr	Ile	Ala	Val	Met	Ser	Trp	Met	Lys	Ser	Tyr	Pro	
				405					410					415		
Phe	Val	Leu	Ser	Ala	Asn	Leu	His	Gly	Gly	Ser	Leu	Val	Val	Asn	Tyr	
			420					425					430			
Pro	Phe	Asp	Asp	Asp	Glu	Gln	Gly	Leu	Ala	Thr	Tyr	Ser	Lys	Ser	Pro	
		435					440					445				
Asp	Asp	Ala	Val	Phe	Gln	Gln	Ile	Ala	Leu	Ser	Tyr	Ser	Lys	Glu	Asn	
	450					455					460					
Ser	Gln	Met	Phe	Gln	Gly	Arg	Pro	Cys	Lys	Asn	Met	Tyr	Pro	Asn	Glu	
465					470					475					480	
Tyr	Phe	Pro	His	Gly	Ile	Thr	Asn	Gly	Ala	Ser	Trp	Tyr	Asn	Val	Pro	
				485					490					495		
Gly	Gly	Met	Gln	Asp	Trp	Asn	Tyr	Leu	Gln	Thr	Asn	Cys	Phe	Glu	Val	
			500					505					510			
Thr	Ile	Glu	Leu	Gly	Cys	Val	Lys	Tyr	Pro	Leu	Glu	Lys	Glu	Leu	Pro	
		515					520					525				
Asn	Phe	Trp	Glu	Gln	Asn	Arg	Arg	Ser	Leu	Ile	Gln	Phe	Met	Lys	Gln	
	530					535					540					
Val	His	Gln	Gly	Val	Arg	Gly	Phe	Val	Leu	Asp	Ala	Thr	Asp	Gly	Arg	
545					550					555					560	
Gly	Ile	Leu	Asn	Ala	Thr	Ile	Ser	Val	Ala	Glu	Ile	Asn	His	Pro	Val	
				565					570					575		
Thr	Thr	Tyr	Lys	Thr	Gly	Asp	Tyr	Trp	Arg	Leu	Leu	Val	Pro	Gly	Thr	
			580					585					590			

Tyr Lys Ile Thr Ala Ser Ala Arg Gly Tyr Asn Pro Val Thr Lys Asn
 595 600 605
 Val Thr Val Lys Ser Glu Gly Ala Ile Gln Val Asn Phe Thr Leu Val
 610 615 620
 Arg Ser Ser Thr Asp Ser Asn Asn Glu Ser Lys Lys Gly Lys Gly Ala
 625 630 635 640
 Ser Ser Ser Thr Asn Asp Ala Ser Asp Pro Thr Thr Lys Glu Phe Glu
 645 650 655
 Thr Leu Ile Lys Asp Leu Ser Ala Glu Asn Gly Leu Glu Ser Leu Met
 660 665 670
 Leu Arg Ser Ser Ser Asn Leu Ala Leu Ala Leu Tyr Arg Tyr His Ser
 675 680 685
 Tyr Lys Asp Leu Ser Glu Phe Leu Arg Gly Leu Val Met Asn Tyr Pro
 690 695 700
 His Ile Thr Asn Leu Thr Asn Leu Gly Gln Ser Thr Glu Tyr Arg His
 705 710 715 720
 Ile Trp Ser Leu Glu Ile Ser Asn Lys Pro Asn Val Ser Glu Pro Glu
 725 730 735
 Glu Pro Lys Ile Arg Phe Val Ala Gly Ile His Gly Asn Ala Pro Val
 740 745 750
 Gly Thr Glu Leu Leu Leu Ala Leu Ala Glu Phe Leu Cys Leu Asn Tyr
 755 760 765
 Lys Lys Asn Pro Ala Val Thr Gln Leu Val Asp Arg Thr Arg Ile Val
 770 775 780
 Ile Val Pro Ser Leu Asn Pro Asp Gly Arg Glu Arg Ala Gln Glu Lys
 785 790 795 800
 Asp Cys Thr Ser Lys Ile Gly Gln Thr Asn Ala Arg Gly Lys Asp Leu
 805 810 815
 Asp Thr Asp Phe Thr Asn Asn Ala Ser Gln Pro Glu Thr Lys Ala Ile

820	825	830															
Ile	Glu	Asn	Leu	Ile	Gln	Lys	Gln	Asp	Phe	Ser	Leu	Ser	Val	Ala	Leu		
		835					840					845					
Asp	Gly	Gly	Ser	Met	Leu	Val	Thr	Tyr	Pro	Tyr	Asp	Lys	Pro	Val	Gln		
	850					855					860						
Thr	Val	Glu	Asn	Lys	Glu	Thr	Leu	Lys	His	Leu	Ala	Ser	Leu	Tyr	Ala		
865					870					875					880		
Asn	Asn	His	Pro	Ser	Met	His	Met	Gly	Gln	Pro	Ser	Cys	Pro	Asn	Lys		
				885					890					895			
Ser	Asp	Glu	Asn	Ile	Pro	Gly	Gly	Val	Met	Arg	Gly	Ala	Glu	Trp	His		
			900					905					910				
Ser	His	Leu	Gly	Ser	Met	Lys	Asp	Tyr	Ser	Val	Thr	Tyr	Gly	His	Cys		
		915					920					925					
Pro	Glu	Ile	Thr	Val	Tyr	Thr	Ser	Cys	Cys	Tyr	Phe	Pro	Ser	Ala	Ala		
	930					935					940						
Arg	Leu	Pro	Ser	Leu	Trp	Ala	Asp	Asn	Lys	Arg	Ser	Leu	Leu	Ser	Met		
945					950					955					960		
Leu	Val	Glu	Val	His	Lys	Gly	Val	His	Gly	Phe	Val	Lys	Asp	Lys	Thr		
				965					970					975			
Gly	Lys	Pro	Ile	Ser	Lys	Ala	Val	Ile	Val	Leu	Asn	Glu	Gly	Ile	Lys		
			980					985					990				
Val	Gln	Thr	Lys	Glu	Gly	Gly	Tyr	Phe	His	Val	Leu	Leu	Ala	Pro			
Gly																	
			995				1000					1005					
Val	His	Asn	Ile	Ile	Ala	Ile	Ala	Asp	Gly	Tyr	Gln	Gln	Gln	His			
	1010					1015					1020						
Ser	Gln	Val	Phe	Val	His	His	Asp	Ala	Ala	Ser	Ser	Val	Val	Ile			
	1025					1030					1035						
Val	Phe	Asp	Thr	Asp	Asn	Arg	Ile	Phe	Gly	Leu	Pro	Arg	Glu	Leu			

1040 1045 1050
 Val Val Thr Val Ser Gly Ala Thr Met Ser Ala Leu Ile Leu Thr
 1055 1060 1065
 Ala Cys Ile Ile Trp Cys Ile Cys Ser Ile Lys Ser Asn Arg His
 1070 1075 1080
 Lys Asp Gly Phe His Arg Leu Arg Gln His His Asp Glu Tyr Glu
 1085 1090 1095
 Asp Glu Ile Arg Met Met Ser Thr Gly Ser Lys Lys Ser Leu Leu
 1100 1105 1110
 Ser His Glu Phe Gln Asp Glu Thr Asp Thr Glu Glu Glu Thr Leu
 1115 1120 1125
 Tyr Ser Ser Lys His
 1130

 <210> 11856
 <211> 184
 <212> PRT
 <213> Homo sapiens

 <220>
 <221> source
 <223> /note="Payload ID: 2343"

 <220>
 <221> source
 <223> /note="Gene Symbol: CPD"

 <220>
 <221> source
 <223> /note="Gene Name:
 carboxypeptidase D"

 <220>
 <221> source
 <223> /note="ENSP ID: ENSP00000463763"

 <400> 11856
 Val His Gln Gly Val Arg Gly Phe Val Leu Asp Ala Thr Asp Gly Arg
 1 5 10 15

 Gly Ile Leu Asn Ala Thr Ile Ser Val Ala Glu Ile Asn His Pro Val
 20 25 30

Thr	Thr	Tyr	Lys	Thr	Gly	Asp	Tyr	Trp	Arg	Leu	Leu	Val	Pro	Gly	Thr	
		35					40					45				
Tyr	Lys	Ile	Thr	Ala	Ser	Ala	Arg	Gly	Tyr	Asn	Pro	Val	Thr	Lys	Asn	
	50					55					60					
Val	Thr	Val	Lys	Ser	Glu	Gly	Ala	Ile	Gln	Val	Asn	Phe	Thr	Leu	Val	
65					70					75					80	
Arg	Ser	Ser	Thr	Asp	Ser	Asn	Asn	Glu	Ser	Lys	Lys	Gly	Lys	Gly	Ala	
				85					90						95	
Ser	Ser	Ser	Thr	Asn	Asp	Ala	Ser	Asp	Pro	Thr	Thr	Lys	Glu	Phe	Glu	
			100					105					110			
Thr	Leu	Ile	Lys	Asp	Leu	Ser	Ala	Glu	Asn	Gly	Leu	Glu	Ser	Leu	Met	
		115					120					125				
Leu	Arg	Ser	Ser	Ser	Asn	Leu	Ala	Leu	Ala	Leu	Tyr	Arg	Tyr	His	Ser	
	130					135					140					
Tyr	Lys	Asp	Leu	Ser	Glu	Phe	Leu	Arg	Gly	Leu	Val	Met	Asn	Tyr	Pro	
145					150					155					160	
His	Ile	Thr	Asn	Leu	Thr	Asn	Leu	Gly	Pro	Lys	Asn	Leu	Leu	Leu	Ser	
			165						170						175	
Ser	Gln	Ile	Val	Phe	Tyr	Ile	His									
			180													

<210> 11857
 <211> 82
 <212> PRT
 <213> Homo sapiens

<220>
 <221> source
 <223> /note="Payload ID: 2343"

<220>
 <221> source
 <223> /note="Gene Symbol: CPD"

<220>
 <221> source
 <223> /note="Gene Name:

carboxypeptidase D"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000464255"

<400> 11857

Asn Ala Arg Gly Lys Asp Leu Asp Thr Asp Phe Thr Asn Asn Ala Ser
1 5 10 15

Gln Pro Glu Thr Lys Ala Ile Ile Glu Asn Leu Ile Gln Lys Gln Asp
20 25 30

Phe Ser Leu Ser Val Ala Leu Asp Gly Gly Ser Met Leu Val Thr Tyr
35 40 45

Pro Tyr Asp Lys Pro Val Gln Thr Val Glu Asn Lys Glu Thr Leu Lys
50 55 60

His Leu Ala Ser Leu Tyr Ala Asn Asn His Pro Ser Met His Met Val
65 70 75 80

Leu Trp

<210> 11858

<211> 40

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2343"

<220>

<221> source

<223> /note="Gene Symbol: CPD"

<220>

<221> source

<223> /note="Gene Name:
carboxypeptidase D"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000466049"

<220>

<221> MOD_RES

<222> (1)..(1)

<223> Any amino acid

<400> 11858

Xaa Val Gly Thr Glu Leu Leu Leu Ala Leu Ala Glu Phe Leu Cys Leu
1 5 10 15

Asn Tyr Lys Lys Asn Pro Ala Val Thr Gln Met Gly Glu Arg Glu Leu
20 25 30

Lys Arg Lys Thr Val Leu Gln Lys
35 40

<210> 11859

<211> 476

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2344"

<220>

<221> source

<223> /note="Gene Symbol: CPE"

<220>

<221> source

<223> /note="Gene Name:
carboxypeptidase E"

<220>

<221> source

<223> /note="Uniprot ID: P16870"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000386104"

<400> 11859

Met Ala Gly Arg Gly Gly Ser Ala Leu Leu Ala Leu Cys Gly Ala Leu
1 5 10 15

Ala Ala Cys Gly Trp Leu Leu Gly Ala Glu Ala Gln Glu Pro Gly Ala
20 25 30

Pro Ala Ala Gly Met Arg Arg Arg Arg Arg Leu Gln Gln Glu Asp Gly
35 40 45

Ile Ser Phe Glu Tyr His Arg Tyr Pro Glu Leu Arg Glu Ala Leu Val
50 55 60

Ser	Val	Trp	Leu	Gln	Cys	Thr	Ala	Ile	Ser	Arg	Ile	Tyr	Thr	Val	Gly	65	70	75	80
Arg	Ser	Phe	Glu	Gly	Arg	Glu	Leu	Leu	Val	Ile	Glu	Leu	Ser	Asp	Asn	85	90	95	
Pro	Gly	Val	His	Glu	Pro	Gly	Glu	Pro	Glu	Phe	Lys	Tyr	Ile	Gly	Asn	100	105	110	
Met	His	Gly	Asn	Glu	Ala	Val	Gly	Arg	Glu	Leu	Leu	Ile	Phe	Leu	Ala	115	120	125	
Gln	Tyr	Leu	Cys	Asn	Glu	Tyr	Gln	Lys	Gly	Asn	Glu	Thr	Ile	Val	Asn	130	135	140	
Leu	Ile	His	Ser	Thr	Arg	Ile	His	Ile	Met	Pro	Ser	Leu	Asn	Pro	Asp	145	150	155	160
Gly	Phe	Glu	Lys	Ala	Ala	Ser	Gln	Pro	Gly	Glu	Leu	Lys	Asp	Trp	Phe	165	170	175	
Val	Gly	Arg	Ser	Asn	Ala	Gln	Gly	Ile	Asp	Leu	Asn	Arg	Asn	Phe	Pro	180	185	190	
Asp	Leu	Asp	Arg	Ile	Val	Tyr	Val	Asn	Glu	Lys	Glu	Gly	Gly	Pro	Asn	195	200	205	
Asn	His	Leu	Leu	Lys	Asn	Met	Lys	Lys	Ile	Val	Asp	Gln	Asn	Thr	Lys	210	215	220	
Leu	Ala	Pro	Glu	Thr	Lys	Ala	Val	Ile	His	Trp	Ile	Met	Asp	Ile	Pro	225	230	235	240
Phe	Val	Leu	Ser	Ala	Asn	Leu	His	Gly	Gly	Asp	Leu	Val	Ala	Asn	Tyr	245	250	255	
Pro	Tyr	Asp	Glu	Thr	Arg	Ser	Gly	Ser	Ala	His	Glu	Tyr	Ser	Ser	Ser	260	265	270	
Pro	Asp	Asp	Ala	Ile	Phe	Gln	Ser	Leu	Ala	Arg	Ala	Tyr	Ser	Ser	Phe	275	280	285	

Asn Pro Ala Met Ser Asp Pro Asn Arg Pro Pro Cys Arg Lys Asn Asp
 290 295 300
 Asp Asp Ser Ser Phe Val Asp Gly Thr Thr Asn Gly Gly Ala Trp Tyr
 305 310 315 320
 Ser Val Pro Gly Gly Met Gln Asp Phe Asn Tyr Leu Ser Ser Asn Cys
 325 330 335
 Phe Glu Ile Thr Val Glu Leu Ser Cys Glu Lys Phe Pro Pro Glu Glu
 340 345 350
 Thr Leu Lys Thr Tyr Trp Glu Asp Asn Lys Asn Ser Leu Ile Ser Tyr
 355 360 365
 Leu Glu Gln Ile His Arg Gly Val Lys Gly Phe Val Arg Asp Leu Gln
 370 375 380
 Gly Asn Pro Ile Ala Asn Ala Thr Ile Ser Val Glu Gly Ile Asp His
 385 390 395 400
 Asp Val Thr Ser Ala Lys Asp Gly Asp Tyr Trp Arg Leu Leu Ile Pro
 405 410 415
 Gly Asn Tyr Lys Leu Thr Ala Ser Ala Pro Gly Tyr Leu Ala Ile Thr
 420 425 430
 Lys Lys Val Ala Val Pro Tyr Ser Pro Ala Ala Gly Val Asp Phe Glu
 435 440 445
 Leu Glu Ser Phe Ser Glu Arg Lys Glu Glu Glu Lys Glu Glu Leu Met
 450 455 460
 Glu Trp Trp Lys Met Met Ser Glu Thr Leu Asn Phe
 465 470 475

<210> 11860

<211> 147

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2344"

<220>
<221> source
<223> /note="Gene Symbol: CPE"

<220>
<221> source
<223> /note="Gene Name:
carboxypeptidase E"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000416601"

<400> 11860
Met His Gly Asn Glu Ala Val Gly Arg Glu Leu Leu Ile Phe Leu Ala
1 5 10 15

Gln Tyr Leu Cys Asn Glu Tyr Gln Lys Gly Asn Glu Thr Ile Val Asn
20 25 30

Leu Ile His Ser Thr Arg Ile His Ile Met Pro Ser Leu Asn Pro Asp
35 40 45

Gly Phe Glu Lys Ala Ala Ser Gln Pro Gly Glu Leu Lys Asp Trp Phe
50 55 60

Val Gly Arg Ser Asn Ala Gln Gly Ile Asp Leu Asn Arg Asn Phe Pro
65 70 75 80

Asp Leu Asp Arg Ile Val Tyr Val Asn Glu Lys Glu Gly Gly Pro Asn
85 90 95

Asn His Leu Leu Lys Asn Met Lys Lys Ile Val Asp Gln Asn Thr Lys
100 105 110

Leu Ala Pro Glu Thr Lys Ala Val Ile His Trp Ile Met Asp Ile Pro
115 120 125

Phe Val Leu Ser Ala Asn Leu His Gly Gly Asp Leu Val Ala Asn Tyr
130 135 140

Pro Tyr Asp
145

<210> 11861
<211> 157
<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2344"

<220>

<221> source

<223> /note="Gene Symbol: CPE"

<220>

<221> source

<223> /note="Gene Name:
carboxypeptidase E"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000423699"

<400> 11861

Met His Gly Asn Glu Ala Val Gly Arg Glu Leu Leu Ile Phe Leu Ala
1 5 10 15

Gln Tyr Leu Cys Asn Glu Tyr Gln Lys Gly Asn Glu Thr Ile Val Asn
20 25 30

Leu Ile His Ser Thr Arg Ile His Ile Met Pro Ser Leu Asn Pro Asp
35 40 45

Gly Phe Glu Lys Ala Ala Ser Gln Pro Gly Glu Leu Lys Asp Trp Phe
50 55 60

Val Gly Arg Ser Asn Ala Gln Gly Ile Asp Leu Asn Arg Asn Phe Pro
65 70 75 80

Asp Leu Asp Arg Ile Val Tyr Val Asn Glu Lys Glu Gly Gly Pro Asn
85 90 95

Asn His Leu Leu Lys Asn Met Lys Lys Ile Val Asp Gln Asn Thr Lys
100 105 110

Leu Ala Pro Glu Thr Lys Ala Val Ile His Trp Ile Met Asp Ile Pro
115 120 125

Phe Val Leu Ser Ala Asn Leu His Gly Gly Asp Leu Val Ala Asn Tyr
130 135 140

Pro Tyr Asp Glu Thr Arg Ser Gly Ser Ala His Glu Tyr

26392

145

150

155

<210> 11862

<211> 139

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2344"

<220>

<221> source

<223> /note="Gene Symbol: CPE"

<220>

<221> source

<223> /note="Gene Name:
carboxypeptidase E"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000424830"

<400> 11862

Met	His	Gly	Asn	Glu	Ala	Val	Gly	Arg	Glu	Leu	Leu	Ile	Phe	Leu	Ala
1			5						10					15	

Gln	Tyr	Leu	Cys	Asn	Glu	Tyr	Gln	Lys	Gly	Asn	Glu	Thr	Ile	Val	Asn
			20					25					30		

Leu	Ile	His	Ser	Thr	Arg	Ile	His	Ile	Met	Pro	Ser	Leu	Asn	Pro	Asp
		35				40						45			

Gly	Phe	Glu	Lys	Ala	Ala	Ser	Gln	Pro	Gly	Glu	Leu	Lys	Asp	Trp	Phe
	50					55					60				

Val	Gly	Arg	Ser	Asn	Ala	Gln	Gly	Ile	Asp	Leu	Asn	Arg	Asn	Phe	Pro
65					70					75					80

Asp	Leu	Asp	Arg	Ile	Val	Tyr	Val	Asn	Glu	Lys	Glu	Gly	Gly	Pro	Asn
				85					90					95	

Asn	His	Leu	Leu	Lys	Asn	Met	Lys	Lys	Ile	Val	Asp	Gln	Asn	Thr	Lys
			100					105					110		

Leu	Ala	Pro	Glu	Thr	Lys	Ala	Val	Ile	His	Trp	Ile	Met	Asp	Ile	Pro
		115					120						125		

26393

Phe Val Leu Ser Ala Asn Leu His Gly Gly Asp
130 135

<210> 11863
<211> 108
<212> PRT
<213> Homo sapiens

<220>
<221> source
<223> /note="Payload ID: 2344"

<220>
<221> source
<223> /note="Gene Symbol: CPE"

<220>
<221> source
<223> /note="Gene Name:
carboxypeptidase E"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000427629"

<220>
<221> MOD_RES
<222> (1)..(1)
<223> Any amino acid

<400> 11863
Xaa Leu Gly Ala Glu Ala Gln Glu Pro Gly Ala Pro Ala Ala Gly Met
1 5 10 15

Arg Arg Arg Arg Arg Leu Gln Gln Glu Asp Gly Ile Ser Phe Glu Tyr
20 25 30

His Arg Tyr Pro Glu Leu Arg Glu Ala Leu Val Ser Val Trp Leu Gln
35 40 45

Cys Thr Ala Ile Ser Arg Ile Tyr Thr Val Gly Arg Ser Phe Glu Gly
50 55 60

Arg Glu Leu Leu Val Ile Glu Leu Ser Asp Asn Pro Gly Val His Glu
65 70 75 80

Pro Asp Cys Lys Leu Tyr Glu Val Gly Thr Leu Ile Pro Ala Pro Ser
85 90 95

Ser Cys Leu Ala His Ser Gly Leu Glu Tyr Thr Leu
100 105

<210> 11864

<211> 443

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2345"

<220>

<221> source

<223> /note="Gene Symbol: CPM"

<220>

<221> source

<223> /note="Gene Name:
carboxypeptidase M"

<220>

<221> source

<223> /note="Uniprot ID: P14384"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000339157"

<400> 11864

Met Asp Phe Pro Cys Leu Trp Leu Gly Leu Leu Leu Pro Leu Val Ala
1 5 10 15

Ala Leu Asp Phe Asn Tyr His Arg Gln Glu Gly Met Glu Ala Phe Leu
20 25 30

Lys Thr Val Ala Gln Asn Tyr Ser Ser Val Thr His Leu His Ser Ile
35 40 45

Gly Lys Ser Val Lys Gly Arg Asn Leu Trp Val Leu Val Val Gly Arg
50 55 60

Phe Pro Lys Glu His Arg Ile Gly Ile Pro Glu Phe Lys Tyr Val Ala
65 70 75 80

Asn Met His Gly Asp Glu Thr Val Gly Arg Glu Leu Leu Leu His Leu
85 90 95

Ile Asp Tyr Leu Val Thr Ser Asp Gly Lys Asp Pro Glu Ile Thr Asn

26395

				100						105						110			
Leu	Ile	Asn	Ser	Thr	Arg	Ile	His	Ile	Met	Pro	Ser	Met	Asn	Pro	Asp				
		115					120					125							
Gly	Phe	Glu	Ala	Val	Lys	Lys	Pro	Asp	Cys	Tyr	Tyr	Ser	Ile	Gly	Arg				
	130					135						140							
Glu	Asn	Tyr	Asn	Gln	Tyr	Asp	Leu	Asn	Arg	Asn	Phe	Pro	Asp	Ala	Phe				
145					150					155					160				
Glu	Tyr	Asn	Asn	Val	Ser	Arg	Gln	Pro	Glu	Thr	Val	Ala	Val	Met	Lys				
				165					170					175					
Trp	Leu	Lys	Thr	Glu	Thr	Phe	Val	Leu	Ser	Ala	Asn	Leu	His	Gly	Gly				
			180					185					190						
Ala	Leu	Val	Ala	Ser	Tyr	Pro	Phe	Asp	Asn	Gly	Val	Gln	Ala	Thr	Gly				
		195					200					205							
Ala	Leu	Tyr	Ser	Arg	Ser	Leu	Thr	Pro	Asp	Asp	Asp	Val	Phe	Gln	Tyr				
	210					215					220								
Leu	Ala	His	Thr	Tyr	Ala	Ser	Arg	Asn	Pro	Asn	Met	Lys	Lys	Gly	Asp				
225					230					235					240				
Glu	Cys	Lys	Asn	Lys	Met	Asn	Phe	Pro	Asn	Gly	Val	Thr	Asn	Gly	Tyr				
				245					250					255					
Ser	Trp	Tyr	Pro	Leu	Gln	Gly	Gly	Met	Gln	Asp	Tyr	Asn	Tyr	Ile	Trp				
			260					265					270						
Ala	Gln	Cys	Phe	Glu	Ile	Thr	Leu	Glu	Leu	Ser	Cys	Cys	Lys	Tyr	Pro				
		275					280					285							
Arg	Glu	Glu	Lys	Leu	Pro	Ser	Phe	Trp	Asn	Asn	Asn	Lys	Ala	Ser	Leu				
	290					295					300								
Ile	Glu	Tyr	Ile	Lys	Gln	Val	His	Leu	Gly	Val	Lys	Gly	Gln	Val	Phe				
305					310					315					320				
Asp	Gln	Asn	Gly	Asn	Pro	Leu	Pro	Asn	Val	Ile	Val	Glu	Val	Gln	Asp				
				325					330					335					

Arg Lys His Ile Cys Pro Tyr Arg Thr Asn Lys Tyr Gly Glu Tyr Tyr
340 345 350

Leu Leu Leu Leu Pro Gly Ser Tyr Ile Ile Asn Val Thr Val Pro Gly
355 360 365

His Asp Pro His Ile Thr Lys Val Ile Ile Pro Glu Lys Ser Gln Asn
370 375 380

Phe Ser Ala Leu Lys Lys Asp Ile Leu Leu Pro Phe Gln Gly Gln Leu
385 390 395 400

Asp Ser Ile Pro Val Ser Asn Pro Ser Cys Pro Met Ile Pro Leu Tyr
405 410 415

Arg Asn Leu Pro Asp His Ser Ala Ala Thr Lys Pro Ser Leu Phe Leu
420 425 430

Phe Leu Val Ser Leu Leu His Ile Phe Phe Lys
435 440

<210> 11865
<211> 64
<212> PRT
<213> Homo sapiens

<220>
<221> source
<223> /note="Payload ID: 2345"

<220>
<221> source
<223> /note="Gene Symbol: CPM"

<220>
<221> source
<223> /note="Gene Name:
carboxypeptidase M"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000446573"

<400> 11865
Met Asp Phe Pro Cys Leu Trp Leu Gly Leu Leu Leu Pro Leu Val Ala
1 5 10 15

Ala Leu Asp Phe Asn Tyr His Arg Gln Glu Gly Met Glu Ala Phe Leu
20 25 30

Lys Thr Val Ala Gln Asn Tyr Ser Ser Val Thr His Leu His Ser Ile
35 40 45

Gly Lys Ser Val Lys Asp Cys Trp Ala Gly Ala Ala Ala Pro Ser Asp
50 55 60

<210> 11866

<211> 249

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2345"

<220>

<221> source

<223> /note="Gene Symbol: CPM"

<220>

<221> source

<223> /note="Gene Name:
carboxypeptidase M"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000446799"

<400> 11866

Met Asp Phe Pro Cys Leu Trp Leu Gly Leu Leu Leu Pro Leu Val Ala
1 5 10 15

Ala Leu Asp Phe Asn Tyr His Arg Gln Glu Gly Met Glu Ala Phe Leu
20 25 30

Lys Thr Val Ala Gln Asn Tyr Ser Ser Val Thr His Leu His Ser Ile
35 40 45

Gly Lys Ser Val Lys Gly Arg Asn Leu Trp Val Leu Val Val Gly Arg
50 55 60

Phe Pro Lys Glu His Arg Ile Gly Ile Pro Glu Phe Lys Tyr Val Ala
65 70 75 80

Asn Met His Gly Asp Glu Thr Val Gly Arg Glu Leu Leu Leu His Leu
85 90 95

Ile Asp Tyr Leu Val Thr Ser Asp Gly Lys Asp Pro Glu Ile Thr Asn
100 105 110

Leu Ile Asn Ser Thr Arg Ile His Ile Met Pro Ser Met Asn Pro Asp
115 120 125

Gly Phe Glu Ala Val Lys Lys Pro Asp Cys Tyr Tyr Ser Ile Gly Arg
130 135 140

Glu Asn Tyr Asn Gln Tyr Asp Leu Asn Arg Asn Phe Pro Asp Ala Phe
145 150 155 160

Glu Tyr Asn Asn Val Ser Arg Gln Pro Glu Thr Val Ala Val Met Lys
165 170 175

Trp Leu Lys Thr Glu Thr Phe Val Leu Ser Ala Asn Leu His Gly Gly
180 185 190

Ala Leu Val Ala Ser Tyr Pro Phe Asp Asn Gly Val Gln Ala Thr Gly
195 200 205

Ala Leu Tyr Ser Arg Ser Leu Thr Pro Asp Asp Asp Val Phe Gln Tyr
210 215 220

Leu Ala His Thr Tyr Ala Ser Arg Asn Pro Asn Met Lys Lys Gly Asp
225 230 235 240

Glu Cys Lys Asn Lys Met Asn Phe Pro
245

<210> 11867

<211> 35

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2345"

<220>

<221> source

<223> /note="Gene Symbol: CPM"

<220>

<221> source

<223> /note="Gene Name:
carboxypeptidase M"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000447051"

<400> 11867

Ser Cys Pro Met Ile Pro Leu Tyr Arg Asn Leu Pro Asp His Ser Ala
1 5 10 15

Ala Thr Lys Pro Ser Leu Phe Leu Phe Leu Val Ser Leu Leu His Ile
20 25 30

Phe Phe Lys
35

<210> 11868

<211> 443

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2345"

<220>

<221> source

<223> /note="Gene Symbol: CPM"

<220>

<221> source

<223> /note="Gene Name:
carboxypeptidase M"

<220>

<221> source

<223> /note="Uniprot ID: P14384"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000447255"

<400> 11868

Met Asp Phe Pro Cys Leu Trp Leu Gly Leu Leu Leu Pro Leu Val Ala
1 5 10 15

Ala Leu Asp Phe Asn Tyr His Arg Gln Glu Gly Met Glu Ala Phe Leu
20 25 30

Lys Thr Val Ala Gln Asn Tyr Ser Ser Val Thr His Leu His Ser Ile
35 40 45

Gly	Lys	Ser	Val	Lys	Gly	Arg	Asn	Leu	Trp	Val	Leu	Val	Val	Gly	Arg	
50						55					60					
Phe	Pro	Lys	Glu	His	Arg	Ile	Gly	Ile	Pro	Glu	Phe	Lys	Tyr	Val	Ala	
65					70					75					80	
Asn	Met	His	Gly	Asp	Glu	Thr	Val	Gly	Arg	Glu	Leu	Leu	Leu	His	Leu	
				85					90					95		
Ile	Asp	Tyr	Leu	Val	Thr	Ser	Asp	Gly	Lys	Asp	Pro	Glu	Ile	Thr	Asn	
			100					105					110			
Leu	Ile	Asn	Ser	Thr	Arg	Ile	His	Ile	Met	Pro	Ser	Met	Asn	Pro	Asp	
		115					120					125				
Gly	Phe	Glu	Ala	Val	Lys	Lys	Pro	Asp	Cys	Tyr	Tyr	Ser	Ile	Gly	Arg	
	130					135					140					
Glu	Asn	Tyr	Asn	Gln	Tyr	Asp	Leu	Asn	Arg	Asn	Phe	Pro	Asp	Ala	Phe	
145					150					155					160	
Glu	Tyr	Asn	Asn	Val	Ser	Arg	Gln	Pro	Glu	Thr	Val	Ala	Val	Met	Lys	
				165					170					175		
Trp	Leu	Lys	Thr	Glu	Thr	Phe	Val	Leu	Ser	Ala	Asn	Leu	His	Gly	Gly	
			180					185					190			
Ala	Leu	Val	Ala	Ser	Tyr	Pro	Phe	Asp	Asn	Gly	Val	Gln	Ala	Thr	Gly	
		195					200					205				
Ala	Leu	Tyr	Ser	Arg	Ser	Leu	Thr	Pro	Asp	Asp	Asp	Val	Phe	Gln	Tyr	
	210					215					220					
Leu	Ala	His	Thr	Tyr	Ala	Ser	Arg	Asn	Pro	Asn	Met	Lys	Lys	Gly	Asp	
225					230					235					240	
Glu	Cys	Lys	Asn	Lys	Met	Asn	Phe	Pro	Asn	Gly	Val	Thr	Asn	Gly	Tyr	
				245					250					255		
Ser	Trp	Tyr	Pro	Leu	Gln	Gly	Gly	Met	Gln	Asp	Tyr	Asn	Tyr	Ile	Trp	
			260					265					270			

Ala Gln Cys Phe Glu Ile Thr Leu Glu Leu Ser Cys Cys Lys Tyr Pro
275 280 285

Arg Glu Glu Lys Leu Pro Ser Phe Trp Asn Asn Asn Lys Ala Ser Leu
290 295 300

Ile Glu Tyr Ile Lys Gln Val His Leu Gly Val Lys Gly Gln Val Phe
305 310 315 320

Asp Gln Asn Gly Asn Pro Leu Pro Asn Val Ile Val Glu Val Gln Asp
325 330 335

Arg Lys His Ile Cys Pro Tyr Arg Thr Asn Lys Tyr Gly Glu Tyr Tyr
340 345 350

Leu Leu Leu Leu Pro Gly Ser Tyr Ile Ile Asn Val Thr Val Pro Gly
355 360 365

His Asp Pro His Ile Thr Lys Val Ile Ile Pro Glu Lys Ser Gln Asn
370 375 380

Phe Ser Ala Leu Lys Lys Asp Ile Leu Leu Pro Phe Gln Gly Gln Leu
385 390 395 400

Asp Ser Ile Pro Val Ser Asn Pro Ser Cys Pro Met Ile Pro Leu Tyr
405 410 415

Arg Asn Leu Pro Asp His Ser Ala Ala Thr Lys Pro Ser Leu Phe Leu
420 425 430

Phe Leu Val Ser Leu Leu His Ile Phe Phe Lys
435 440

<210> 11869

<211> 198

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2345"

<220>

<221> source

<223> /note="Gene Symbol: CPM"

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<220>
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<223> /note="Gene Name:
        carboxypeptidase M"

<220>
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<223> /note="ENSP ID: ENSP00000447455"

<220>
<221> MOD_RES
<222> (1)..(1)
<223> Any amino acid

<400> 11869
Xaa Pro Phe Asp Asn Gly Val Gln Ala Thr Gly Ala Leu Tyr Ser Arg
1          5          10          15

Ser Leu Thr Pro Asp Asp Asp Val Phe Gln Tyr Leu Ala His Thr Tyr
20          25          30

Ala Ser Arg Asn Pro Asn Met Lys Lys Gly Asp Glu Cys Lys Asn Lys
35          40          45

Met Asn Phe Pro Asn Gly Val Thr Asn Gly Tyr Ser Trp Tyr Pro Leu
50          55          60

Gln Gly Gly Met Gln Asp Tyr Asn Tyr Ile Trp Ala Gln Cys Phe Glu
65          70          75          80

Ile Thr Leu Glu Leu Ser Cys Cys Lys Tyr Pro Arg Glu Glu Lys Leu
85          90          95

Pro Ser Phe Trp Asn Asn Asn Lys Ala Ser Leu Ile Glu Tyr Ile Lys
100         105         110

Gln Val His Leu Gly Val Lys Gly Gln Val Phe Asp Gln Asn Gly Asn
115         120         125

Pro Leu Pro Asn Val Ile Val Glu Val Gln Asp Arg Lys His Ile Cys
130         135         140

Pro Tyr Arg Thr Asn Lys Tyr Gly Glu Tyr Tyr Leu Leu Leu Leu Pro
145         150         155         160

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Gly Ser Tyr Ile Ile Asn Val Thr Val Pro Gly His Asp Pro His Ile
165 170 175

Thr Lys Leu Arg Ser Phe Ala Cys Asn Arg Gly Gln Asp Glu Phe Cys
180 185 190

Leu Thr Ser Leu Met Ser
195

<210> 11870
<211> 72
<212> PRT
<213> Homo sapiens

<220>
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<220>
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<220>
<221> source
<223> /note="Gene Name:
carboxypeptidase M"

<220>
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<400> 11870
Met Asp Phe Pro Cys Leu Trp Leu Gly Leu Leu Leu Pro Leu Val Ala
1 5 10 15

Ala Leu Asp Phe Asn Tyr His Arg Gln Glu Gly Met Glu Ala Phe Leu
20 25 30

Lys Thr Val Ala Gln Asn Tyr Ser Ser Val Thr His Leu His Ser Ile
35 40 45

Gly Lys Ser Val Lys Glu Thr Cys Gly Phe Leu Leu Trp Gly Gly Phe
50 55 60

Gln Arg Asn Thr Glu Leu Gly Phe
65 70

<210> 11871
<211> 443

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<212> PRT
<213> Homo sapiens

<220>
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<220>
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<220>
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<220>
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<223> /note="Uniprot ID: P14384"

<220>
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<400> 11871
Met Asp Phe Pro Cys Leu Trp Leu Gly Leu Leu Leu Pro Leu Val Ala
1              5              10              15

Ala Leu Asp Phe Asn Tyr His Arg Gln Glu Gly Met Glu Ala Phe Leu
                20              25              30

Lys Thr Val Ala Gln Asn Tyr Ser Ser Val Thr His Leu His Ser Ile
          35              40              45

Gly Lys Ser Val Lys Gly Arg Asn Leu Trp Val Leu Val Val Gly Arg
          50              55              60

Phe Pro Lys Glu His Arg Ile Gly Ile Pro Glu Phe Lys Tyr Val Ala
65              70              75              80

Asn Met His Gly Asp Glu Thr Val Gly Arg Glu Leu Leu Leu His Leu
          85              90              95

Ile Asp Tyr Leu Val Thr Ser Asp Gly Lys Asp Pro Glu Ile Thr Asn
          100             105             110

Leu Ile Asn Ser Thr Arg Ile His Ile Met Pro Ser Met Asn Pro Asp
          115             120             125

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Gly	Phe	Glu	Ala	Val	Lys	Lys	Pro	Asp	Cys	Tyr	Tyr	Ser	Ile	Gly	Arg	
	130					135					140					
Glu	Asn	Tyr	Asn	Gln	Tyr	Asp	Leu	Asn	Arg	Asn	Phe	Pro	Asp	Ala	Phe	
145					150					155					160	
Glu	Tyr	Asn	Asn	Val	Ser	Arg	Gln	Pro	Glu	Thr	Val	Ala	Val	Met	Lys	
				165					170					175		
Trp	Leu	Lys	Thr	Glu	Thr	Phe	Val	Leu	Ser	Ala	Asn	Leu	His	Gly	Gly	
			180					185					190			
Ala	Leu	Val	Ala	Ser	Tyr	Pro	Phe	Asp	Asn	Gly	Val	Gln	Ala	Thr	Gly	
		195					200					205				
Ala	Leu	Tyr	Ser	Arg	Ser	Leu	Thr	Pro	Asp	Asp	Asp	Val	Phe	Gln	Tyr	
	210					215					220					
Leu	Ala	His	Thr	Tyr	Ala	Ser	Arg	Asn	Pro	Asn	Met	Lys	Lys	Gly	Asp	
225					230					235					240	
Glu	Cys	Lys	Asn	Lys	Met	Asn	Phe	Pro	Asn	Gly	Val	Thr	Asn	Gly	Tyr	
				245					250					255		
Ser	Trp	Tyr	Pro	Leu	Gln	Gly	Gly	Met	Gln	Asp	Tyr	Asn	Tyr	Ile	Trp	
			260					265					270			
Ala	Gln	Cys	Phe	Glu	Ile	Thr	Leu	Glu	Leu	Ser	Cys	Cys	Lys	Tyr	Pro	
		275					280					285				
Arg	Glu	Glu	Lys	Leu	Pro	Ser	Phe	Trp	Asn	Asn	Asn	Lys	Ala	Ser	Leu	
	290					295					300					
Ile	Glu	Tyr	Ile	Lys	Gln	Val	His	Leu	Gly	Val	Lys	Gly	Gln	Val	Phe	
305					310					315					320	
Asp	Gln	Asn	Gly	Asn	Pro	Leu	Pro	Asn	Val	Ile	Val	Glu	Val	Gln	Asp	
				325					330					335		
Arg	Lys	His	Ile	Cys	Pro	Tyr	Arg	Thr	Asn	Lys	Tyr	Gly	Glu	Tyr	Tyr	
			340					345					350			
Leu	Leu	Leu	Leu	Pro	Gly	Ser	Tyr	Ile	Ile	Asn	Val	Thr	Val	Pro	Gly	

355 360 365
 His Asp Pro His Ile Thr Lys Val Ile Ile Pro Glu Lys Ser Gln Asn
 370 375 380
 Phe Ser Ala Leu Lys Lys Asp Ile Leu Leu Pro Phe Gln Gly Gln Leu
 385 390 395 400
 Asp Ser Ile Pro Val Ser Asn Pro Ser Cys Pro Met Ile Pro Leu Tyr
 405 410 415
 Arg Asn Leu Pro Asp His Ser Ala Ala Thr Lys Pro Ser Leu Phe Leu
 420 425 430
 Phe Leu Val Ser Leu Leu His Ile Phe Phe Lys
 435 440

<210> 11872
 <211> 136
 <212> PRT
 <213> Homo sapiens

<220>
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 <223> /note="Payload ID: 2345"

<220>
 <221> source
 <223> /note="Gene Symbol: CPM"

<220>
 <221> source
 <223> /note="Gene Name:
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<220>
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 <223> /note="ENSP ID: ENSP00000449911"

<400> 11872
 Met Asp Phe Pro Cys Leu Trp Leu Gly Leu Leu Leu Pro Leu Val Ala
 1 5 10 15

Ala Leu Asp Phe Asn Tyr His Arg Gln Glu Gly Met Glu Ala Phe Leu
 20 25 30

Lys Thr Val Ala Gln Asn Tyr Ser Ser Val Thr His Leu His Ser Ile
 35 40 45

Gly Lys Ser Val Lys Gly Arg Asn Leu Trp Val Leu Val Val Gly Arg
50 55 60

Phe Pro Lys Glu His Arg Ile Gly Ile Pro Glu Phe Lys Tyr Val Ala
65 70 75 80

Asn Met His Gly Asp Glu Thr Val Gly Arg Glu Leu Leu Leu His Leu
85 90 95

Ile Asp Tyr Leu Val Thr Ser Asp Gly Lys Asp Pro Glu Ile Thr Asn
100 105 110

Leu Ile Asn Ser Thr Arg Ile His Ile Met Pro Ser Met Asn Pro Asp
115 120 125

Gly Phe Glu Ala Val Lys Lys Pro
130 135

<210> 11873
<211> 64
<212> PRT
<213> Homo sapiens

<220>
<221> source
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<220>
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<220>
<221> source
<223> /note="Gene Name:
carboxypeptidase M"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000450400"

<400> 11873
Met Asp Phe Pro Cys Leu Trp Leu Gly Leu Leu Leu Pro Leu Val Ala
1 5 10 15

Ala Leu Asp Phe Asn Tyr His Arg Gln Glu Gly Met Glu Ala Phe Leu
20 25 30

Lys Thr Val Ala Gln Asn Tyr Ser Ser Val Thr His Leu His Ser Ile

35

40

45

Gly Lys Ser Val Lys Asp Cys Trp Ala Gly Ala Ala Ala Pro Ser Asp
 50 55 60

<210> 11874

<211> 458

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2346"

<220>

<221> source

<223> /note="Gene Symbol: CPN1"

<220>

<221> source

<223> /note="Gene Name:
 carboxypeptidase N, polypeptide
 1"

<220>

<221> source

<223> /note="Uniprot ID: P15169"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000359446"

<400> 11874

Met Ser Asp Leu Leu Ser Val Phe Leu His Leu Leu Leu Leu Phe Lys
 1 5 10 15

Leu Val Ala Pro Val Thr Phe Arg His His Arg Tyr Asp Asp Leu Val
 20 25 30

Arg Thr Leu Tyr Lys Val Gln Asn Glu Cys Pro Gly Ile Thr Arg Val
 35 40 45

Tyr Ser Ile Gly Arg Ser Val Glu Gly Arg His Leu Tyr Val Leu Glu
 50 55 60

Phe Ser Asp His Pro Gly Ile His Glu Pro Leu Glu Pro Glu Val Lys
 65 70 75 80

Tyr Val Gly Asn Met His Gly Asn Glu Ala Leu Gly Arg Glu Leu Met
 85 90 95

26409

Leu	Gln	Leu	Ser	Glu	Phe	Leu	Cys	Glu	Glu	Phe	Arg	Asn	Arg	Asn	Gln		
			100					105					110				
Arg	Ile	Val	Gln	Leu	Ile	Gln	Asp	Thr	Arg	Ile	His	Ile	Leu	Pro	Ser		
		115					120					125					
Met	Asn	Pro	Asp	Gly	Tyr	Glu	Val	Ala	Ala	Ala	Gln	Gly	Pro	Asn	Lys		
	130					135					140						
Pro	Gly	Tyr	Leu	Val	Gly	Arg	Asn	Asn	Ala	Asn	Gly	Val	Asp	Leu	Asn		
145					150					155					160		
Arg	Asn	Phe	Pro	Asp	Leu	Asn	Thr	Tyr	Ile	Tyr	Tyr	Asn	Glu	Lys	Tyr		
				165					170					175			
Gly	Gly	Pro	Asn	His	His	Leu	Pro	Leu	Pro	Asp	Asn	Trp	Lys	Ser	Gln		
			180					185					190				
Val	Glu	Pro	Glu	Thr	Arg	Ala	Val	Ile	Arg	Trp	Met	His	Ser	Phe	Asn		
		195					200					205					
Phe	Val	Leu	Ser	Ala	Asn	Leu	His	Gly	Gly	Ala	Val	Val	Ala	Asn	Tyr		
	210					215					220						
Pro	Tyr	Asp	Lys	Ser	Phe	Glu	His	Arg	Val	Arg	Gly	Val	Arg	Arg	Thr		
225					230					235					240		
Ala	Ser	Thr	Pro	Thr	Pro	Asp	Asp	Lys	Leu	Phe	Gln	Lys	Leu	Ala	Lys		
				245					250					255			
Val	Tyr	Ser	Tyr	Ala	His	Gly	Trp	Met	Phe	Gln	Gly	Trp	Asn	Cys	Gly		
			260					265					270				
Asp	Tyr	Phe	Pro	Asp	Gly	Ile	Thr	Asn	Gly	Ala	Ser	Trp	Tyr	Ser	Leu		
		275					280					285					
Ser	Lys	Gly	Met	Gln	Asp	Phe	Asn	Tyr	Leu	His	Thr	Asn	Cys	Phe	Glu		
	290					295					300						
Ile	Thr	Leu	Glu	Leu	Ser	Cys	Asp	Lys	Phe	Pro	Pro	Glu	Glu	Glu	Leu		
305					310					315					320		

Gln Arg Glu Trp Leu Gly Asn Arg Glu Ala Leu Ile Gln Phe Leu Glu
325 330 335

Gln Val His Gln Gly Ile Lys Gly Met Val Leu Asp Glu Asn Tyr Asn
340 345 350

Asn Leu Ala Asn Ala Val Ile Ser Val Ser Gly Ile Asn His Asp Val
355 360 365

Thr Ser Gly Asp His Gly Asp Tyr Phe Arg Leu Leu Leu Pro Gly Ile
370 375 380

Tyr Thr Val Ser Ala Thr Ala Pro Gly Tyr Asp Pro Glu Thr Val Thr
385 390 395 400

Val Thr Val Gly Pro Ala Glu Pro Thr Leu Val Asn Phe His Leu Lys
405 410 415

Arg Ser Ile Pro Gln Val Ser Pro Val Arg Arg Ala Pro Ser Arg Arg
420 425 430

His Gly Val Arg Ala Lys Val Gln Pro Gln Ala Arg Lys Lys Glu Met
435 440 445

Glu Met Arg Gln Leu Gln Arg Gly Pro Ala
450 455

<210> 11875
<211> 204
<212> PRT
<213> Homo sapiens

<220>
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<223> /note="Payload ID: 2346"

<220>
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<223> /note="Gene Symbol: CPN1"

<220>
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<223> /note="Gene Name:
carboxypeptidase N, polypeptide
1"

<220>

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<223> /note="ENSP ID: ENSP00000410895"

<400> 11875

Met His Ser Phe Asn Phe Val Leu Ser Ala Asn Leu His Gly Gly Ala
1 5 10 15

Val Val Ala Asn Tyr Pro Tyr Asp Lys Ser Phe Glu His Arg Val Arg
20 25 30

Gly Val Arg Arg Thr Ala Ser Thr Pro Thr Pro Asp Asp Lys Leu Phe
35 40 45

Gln Lys Leu Ala Lys Val Tyr Ser Tyr Ala His Gly Trp Met Phe Gln
50 55 60

Gly Trp Asn Cys Gly Asp Tyr Phe Pro Asp Gly Ile Thr Asn Gly Ala
65 70 75 80

Ser Trp Tyr Ser Leu Ser Lys Gly Met Gln Asp Phe Asn Tyr Leu His
85 90 95

Thr Asn Cys Phe Glu Ile Thr Leu Glu Leu Ser Cys Asp Lys Phe Pro
100 105 110

Pro Glu Glu Glu Leu Gln Arg Glu Trp Leu Gly Asn Arg Glu Ala Leu
115 120 125

Ile Gln Phe Leu Glu Gln Val His Gln Gly Ile Lys Gly Met Val Leu
130 135 140

Asp Glu Asn Tyr Asn Asn Leu Ala Asn Ala Val Ile Ser Val Ser Gly
145 150 155 160

Ile Asn His Asp Val Thr Ser Gly Asp His Gly Asp Tyr Phe Arg Leu
165 170 175

Leu Leu Pro Gly Ile Tyr Thr Val Ser Ala Thr Ala Pro Gly Tyr Asp
180 185 190

Pro Glu Thr Val Thr Val Thr Val Gly Pro Ala Glu
195 200

<210> 11876

<211> 545
<212> PRT
<213> Homo sapiens

<220>
<221> source
<223> /note="Payload ID: 2347"

<220>
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<223> /note="Gene Symbol: CPN2"

<220>
<221> source
<223> /note="Gene Name:
carboxypeptidase N, polypeptide
2"

<220>
<221> source
<223> /note="Uniprot ID: P22792"

<220>
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<223> /note="ENSP ID: ENSP00000319464"

<400> 11876
Met Leu Pro Gly Ala Trp Leu Leu Trp Thr Ser Leu Leu Leu Leu Ala
1 5 10 15

Arg Pro Ala Gln Pro Cys Pro Met Gly Cys Asp Cys Phe Val Gln Glu
20 25 30

Val Phe Cys Ser Asp Glu Glu Leu Ala Thr Val Pro Leu Asp Ile Pro
35 40 45

Pro Tyr Thr Lys Asn Ile Ile Phe Val Glu Thr Ser Phe Thr Thr Leu
50 55 60

Glu Thr Arg Ala Phe Gly Ser Asn Pro Asn Leu Thr Lys Val Val Phe
65 70 75 80

Leu Asn Thr Gln Leu Cys Gln Phe Arg Pro Asp Ala Phe Gly Gly Leu
85 90 95

Pro Arg Leu Glu Asp Leu Glu Val Thr Gly Ser Ser Phe Leu Asn Leu
100 105 110

Ser Thr Asn Ile Phe Ser Asn Leu Thr Ser Leu Gly Lys Leu Thr Leu
115 120 125

Asn	Phe	Asn	Met	Leu	Glu	Ala	Leu	Pro	Glu	Gly	Leu	Phe	Gln	His	Leu			
	130					135					140							
Ala	Ala	Leu	Glu	Ser	Leu	His	Leu	Gln	Gly	Asn	Gln	Leu	Gln	Ala	Leu			
145					150					155					160			
Pro	Arg	Arg	Leu	Phe	Gln	Pro	Leu	Thr	His	Leu	Lys	Thr	Leu	Asn	Leu			
				165					170					175				
Ala	Gln	Asn	Leu	Leu	Ala	Gln	Leu	Pro	Glu	Glu	Leu	Phe	His	Pro	Leu			
			180					185					190					
Thr	Ser	Leu	Gln	Thr	Leu	Lys	Leu	Ser	Asn	Asn	Ala	Leu	Ser	Gly	Leu			
		195					200					205						
Pro	Gln	Gly	Val	Phe	Gly	Lys	Leu	Gly	Ser	Leu	Gln	Glu	Leu	Phe	Leu			
	210					215					220							
Asp	Ser	Asn	Asn	Ile	Ser	Glu	Leu	Pro	Pro	Gln	Val	Phe	Ser	Gln	Leu			
225					230					235					240			
Phe	Cys	Leu	Glu	Arg	Leu	Trp	Leu	Gln	Arg	Asn	Ala	Ile	Thr	His	Leu			
				245					250					255				
Pro	Leu	Ser	Ile	Phe	Ala	Ser	Leu	Gly	Asn	Leu	Thr	Phe	Leu	Ser	Leu			
			260					265					270					
Gln	Trp	Asn	Met	Leu	Arg	Val	Leu	Pro	Ala	Gly	Leu	Phe	Ala	His	Thr			
		275					280					285						
Pro	Cys	Leu	Val	Gly	Leu	Ser	Leu	Thr	His	Asn	Gln	Leu	Glu	Thr	Val			
	290					295					300							
Ala	Glu	Gly	Thr	Phe	Ala	His	Leu	Ser	Asn	Leu	Arg	Ser	Leu	Met	Leu			
305					310					315					320			
Ser	Tyr	Asn	Ala	Ile	Thr	His	Leu	Pro	Ala	Gly	Ile	Phe	Arg	Asp	Leu			
				325					330					335				
Glu	Glu	Leu	Val	Lys	Leu	Tyr	Leu	Gly	Ser	Asn	Asn	Leu	Thr	Ala	Leu			
			340					345					350					

His Pro Ala Leu Phe Gln Asn Leu Ser Lys Leu Glu Leu Leu Ser Leu
355 360 365

Ser Lys Asn Gln Leu Thr Thr Leu Pro Glu Gly Ile Phe Asp Thr Asn
370 375 380

Tyr Asn Leu Phe Asn Leu Ala Leu His Gly Asn Pro Trp Gln Cys Asp
385 390 395 400

Cys His Leu Ala Tyr Leu Phe Asn Trp Leu Gln Gln Tyr Thr Asp Arg
405 410 415

Leu Leu Asn Ile Gln Thr Tyr Cys Ala Gly Pro Ala Tyr Leu Lys Gly
420 425 430

Gln Val Val Pro Ala Leu Asn Glu Lys Gln Leu Val Cys Pro Val Thr
435 440 445

Arg Asp His Leu Gly Phe Gln Val Thr Trp Pro Asp Glu Ser Lys Ala
450 455 460

Gly Gly Ser Trp Asp Leu Ala Val Gln Glu Arg Ala Ala Arg Ser Gln
465 470 475 480

Cys Thr Tyr Ser Asn Pro Glu Gly Thr Val Val Leu Ala Cys Asp Gln
485 490 495

Ala Gln Cys Arg Trp Leu Asn Val Gln Leu Ser Pro Gln Gln Gly Ser
500 505 510

Leu Gly Leu Gln Tyr Asn Ala Ser Gln Glu Trp Asp Leu Arg Ser Ser
515 520 525

Cys Gly Ser Leu Arg Leu Thr Val Ser Ile Glu Ala Arg Ala Ala Gly
530 535 540

Pro
545

<210> 11877

<211> 545

<212> PRT

<213> Homo sapiens

<220>
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<220>
<221> source
<223> /note="Gene Symbol: CPN2"

<220>
<221> source
<223> /note="Gene Name:
carboxypeptidase N, polypeptide
2"

<220>
<221> source
<223> /note="Uniprot ID: P22792"

<220>
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<223> /note="ENSP ID: ENSP00000402232"

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Met Leu Pro Gly Ala Trp Leu Leu Trp Thr Ser Leu Leu Leu Leu Ala
1 5 10 15

Arg Pro Ala Gln Pro Cys Pro Met Gly Cys Asp Cys Phe Val Gln Glu
20 25 30

Val Phe Cys Ser Asp Glu Glu Leu Ala Thr Val Pro Leu Asp Ile Pro
35 40 45

Pro Tyr Thr Lys Asn Ile Ile Phe Val Glu Thr Ser Phe Thr Thr Leu
50 55 60

Glu Thr Arg Ala Phe Gly Ser Asn Pro Asn Leu Thr Lys Val Val Phe
65 70 75 80

Leu Asn Thr Gln Leu Cys Gln Phe Arg Pro Asp Ala Phe Gly Gly Leu
85 90 95

Pro Arg Leu Glu Asp Leu Glu Val Thr Gly Ser Ser Phe Leu Asn Leu
100 105 110

Ser Thr Asn Ile Phe Ser Asn Leu Thr Ser Leu Gly Lys Leu Thr Leu
115 120 125

Asn Phe Asn Met Leu Glu Ala Leu Pro Glu Gly Leu Phe Gln His Leu

130						135						140			
Ala	Ala	Leu	Glu	Ser	Leu	His	Leu	Gln	Gly	Asn	Gln	Leu	Gln	Ala	Leu
145					150					155					160
Pro	Arg	Arg	Leu	Phe	Gln	Pro	Leu	Thr	His	Leu	Lys	Thr	Leu	Asn	Leu
				165					170					175	
Ala	Gln	Asn	Leu	Leu	Ala	Gln	Leu	Pro	Glu	Glu	Leu	Phe	His	Pro	Leu
			180					185					190		
Thr	Ser	Leu	Gln	Thr	Leu	Lys	Leu	Ser	Asn	Asn	Ala	Leu	Ser	Gly	Leu
		195					200					205			
Pro	Gln	Gly	Val	Phe	Gly	Lys	Leu	Gly	Ser	Leu	Gln	Glu	Leu	Phe	Leu
	210					215					220				
Asp	Ser	Asn	Asn	Ile	Ser	Glu	Leu	Pro	Pro	Gln	Val	Phe	Ser	Gln	Leu
225					230					235					240
Phe	Cys	Leu	Glu	Arg	Leu	Trp	Leu	Gln	Arg	Asn	Ala	Ile	Thr	His	Leu
				245					250					255	
Pro	Leu	Ser	Ile	Phe	Ala	Ser	Leu	Gly	Asn	Leu	Thr	Phe	Leu	Ser	Leu
			260					265					270		
Gln	Trp	Asn	Met	Leu	Arg	Val	Leu	Pro	Ala	Gly	Leu	Phe	Ala	His	Thr
		275					280					285			
Pro	Cys	Leu	Val	Gly	Leu	Ser	Leu	Thr	His	Asn	Gln	Leu	Glu	Thr	Val
	290					295					300				
Ala	Glu	Gly	Thr	Phe	Ala	His	Leu	Ser	Asn	Leu	Arg	Ser	Leu	Met	Leu
305					310					315					320
Ser	Tyr	Asn	Ala	Ile	Thr	His	Leu	Pro	Ala	Gly	Ile	Phe	Arg	Asp	Leu
				325					330					335	
Glu	Glu	Leu	Val	Lys	Leu	Tyr	Leu	Gly	Ser	Asn	Asn	Leu	Thr	Ala	Leu
			340					345					350		
His	Pro	Ala	Leu	Phe	Gln	Asn	Leu	Ser	Lys	Leu	Glu	Leu	Leu	Ser	Leu
		355					360					365			

Ser Lys Asn Gln Leu Thr Thr Leu Pro Glu Gly Ile Phe Asp Thr Asn
370 375 380

Tyr Asn Leu Phe Asn Leu Ala Leu His Gly Asn Pro Trp Gln Cys Asp
385 390 395 400

Cys His Leu Ala Tyr Leu Phe Asn Trp Leu Gln Gln Tyr Thr Asp Arg
405 410 415

Leu Leu Asn Ile Gln Thr Tyr Cys Ala Gly Pro Ala Tyr Leu Lys Gly
420 425 430

Gln Val Val Pro Ala Leu Asn Glu Lys Gln Leu Val Cys Pro Val Thr
435 440 445

Arg Asp His Leu Gly Phe Gln Val Thr Trp Pro Asp Glu Ser Lys Ala
450 455 460

Gly Gly Ser Trp Asp Leu Ala Val Gln Glu Arg Ala Ala Arg Ser Gln
465 470 475 480

Cys Thr Tyr Ser Asn Pro Glu Gly Thr Val Val Leu Ala Cys Asp Gln
485 490 495

Ala Gln Cys Arg Trp Leu Asn Val Gln Leu Ser Pro Gln Gln Gly Ser
500 505 510

Leu Gly Leu Gln Tyr Asn Ala Ser Gln Glu Trp Asp Leu Arg Ser Ser
515 520 525

Cys Gly Ser Leu Arg Leu Thr Val Ser Ile Glu Ala Arg Ala Ala Gly
530 535 540

Pro
545

<210> 11878
<211> 374
<212> PRT
<213> Homo sapiens

<220>
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<223> /note="Payload ID: 2348"

<220>

<221> source

<223> /note="Gene Symbol: CPO"

<220>

<221> source

<223> /note="Gene Name:
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<220>

<221> source

<223> /note="Uniprot ID: Q8IVL8"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000272852"

<400> 11878

Met Lys Pro Leu Leu Glu Thr Leu Tyr Leu Leu Gly Met Leu Val Pro
1 5 10 15

Gly Gly Leu Gly Tyr Asp Arg Ser Leu Ala Gln His Arg Gln Glu Ile
20 25 30

Val Asp Lys Ser Val Ser Pro Trp Ser Leu Glu Thr Tyr Ser Tyr Asn
35 40 45

Ile Tyr His Pro Met Gly Glu Ile Tyr Glu Trp Met Arg Glu Ile Ser
50 55 60

Glu Lys Tyr Lys Glu Val Val Thr Gln His Phe Leu Gly Val Thr Tyr
65 70 75 80

Glu Thr His Pro Met Tyr Tyr Leu Lys Ile Ser Gln Pro Ser Gly Asn
85 90 95

Pro Lys Lys Ile Ile Trp Met Asp Cys Gly Ile His Ala Arg Glu Trp
100 105 110

Ile Ala Pro Ala Phe Cys Gln Trp Phe Val Lys Glu Ile Leu Gln Asn
115 120 125

His Lys Asp Asn Ser Ser Ile Arg Lys Leu Leu Arg Asn Leu Asp Phe
130 135 140

Tyr Val Leu Pro Val Leu Asn Ile Asp Gly Tyr Ile Tyr Thr Trp Thr

145					150					155					160
Thr	Asp	Arg	Leu	Trp	Arg	Lys	Ser	Arg	Ser	Pro	His	Asn	Asn	Gly	Thr
				165					170					175	
Cys	Phe	Gly	Thr	Asp	Leu	Asn	Arg	Asn	Phe	Asn	Ala	Ser	Trp	Cys	Ser
			180					185					190		
Ile	Gly	Ala	Ser	Arg	Asn	Cys	Gln	Asp	Gln	Thr	Phe	Cys	Gly	Thr	Gly
		195					200					205			
Pro	Val	Ser	Glu	Pro	Glu	Thr	Lys	Ala	Val	Ala	Ser	Phe	Ile	Glu	Ser
	210					215					220				
Lys	Lys	Asp	Asp	Ile	Leu	Cys	Phe	Leu	Thr	Met	His	Ser	Tyr	Gly	Gln
225					230					235					240
Leu	Ile	Leu	Thr	Pro	Tyr	Gly	Tyr	Thr	Lys	Asn	Lys	Ser	Ser	Asn	His
				245					250					255	
Pro	Glu	Met	Ile	Gln	Val	Gly	Gln	Lys	Ala	Ala	Asn	Ala	Leu	Lys	Ala
			260					265					270		
Lys	Tyr	Gly	Thr	Asn	Tyr	Arg	Val	Gly	Ser	Ser	Ala	Asp	Ile	Leu	Tyr
		275					280					285			
Ala	Ser	Ser	Gly	Ser	Ser	Arg	Asp	Trp	Ala	Arg	Asp	Ile	Gly	Ile	Pro
	290					295					300				
Phe	Ser	Tyr	Thr	Phe	Glu	Leu	Arg	Asp	Ser	Gly	Thr	Tyr	Gly	Phe	Val
305					310					315					320
Leu	Pro	Glu	Ala	Gln	Ile	Gln	Pro	Thr	Cys	Glu	Glu	Thr	Met	Glu	Ala
				325					330					335	
Val	Leu	Ser	Val	Leu	Asp	Asp	Val	Tyr	Ala	Lys	His	Trp	His	Ser	Asp
			340					345					350		
Ser	Ala	Gly	Arg	Val	Thr	Ser	Ala	Thr	Met	Leu	Leu	Gly	Leu	Leu	Val
		355					360					365			
Ser	Cys	Met	Ser	Leu	Leu										
370															

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<210> 11879
<211> 472
<212> PRT
<213> Homo sapiens

<220>
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<223> /note="Payload ID: 2349"

<220>
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<223> /note="Gene Symbol: CPQ"

<220>
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<223> /note="Gene Name:
        carboxypeptidase Q"

<220>
<221> source
<223> /note="Uniprot ID: Q9Y646"

<220>
<221> source
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<400> 11879
Met Lys Phe Leu Ile Phe Ala Phe Phe Gly Gly Val His Leu Leu Ser
1          5          10          15

Leu Cys Ser Gly Lys Ala Ile Cys Lys Asn Gly Ile Ser Lys Arg Thr
          20          25          30

Phe Glu Glu Ile Lys Glu Glu Ile Ala Ser Cys Gly Asp Val Ala Lys
          35          40          45

Ala Ile Ile Asn Leu Ala Val Tyr Gly Lys Ala Gln Asn Arg Ser Tyr
          50          55          60

Glu Arg Leu Ala Leu Leu Val Asp Thr Val Gly Pro Arg Leu Ser Gly
65          70          75          80

Ser Lys Asn Leu Glu Lys Ala Ile Gln Ile Met Tyr Gln Asn Leu Gln
          85          90          95

Gln Asp Gly Leu Glu Lys Val His Leu Glu Pro Val Arg Ile Pro His
          100          105          110

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Trp	Glu	Arg	Gly	Glu	Glu	Ser	Ala	Val	Met	Leu	Glu	Pro	Arg	Ile	His
		115					120					125			
Lys	Ile	Ala	Ile	Leu	Gly	Leu	Gly	Ser	Ser	Ile	Gly	Thr	Pro	Pro	Glu
	130					135					140				
Gly	Ile	Thr	Ala	Glu	Val	Leu	Val	Val	Thr	Ser	Phe	Asp	Glu	Leu	Gln
145					150					155					160
Arg	Arg	Ala	Ser	Glu	Ala	Arg	Gly	Lys	Ile	Val	Val	Tyr	Asn	Gln	Pro
				165					170					175	
Tyr	Ile	Asn	Tyr	Ser	Arg	Thr	Val	Gln	Tyr	Arg	Thr	Gln	Gly	Ala	Val
			180					185					190		
Glu	Ala	Ala	Lys	Val	Gly	Ala	Leu	Ala	Ser	Leu	Ile	Arg	Ser	Val	Ala
		195					200					205			
Ser	Phe	Ser	Ile	Tyr	Ser	Pro	His	Thr	Gly	Ile	Gln	Glu	Tyr	Gln	Asp
	210					215					220				
Gly	Val	Pro	Lys	Ile	Pro	Thr	Ala	Cys	Ile	Thr	Val	Glu	Asp	Ala	Glu
225					230					235					240
Met	Met	Ser	Arg	Met	Ala	Ser	His	Gly	Ile	Lys	Ile	Val	Ile	Gln	Leu
				245					250					255	
Lys	Met	Gly	Ala	Lys	Thr	Tyr	Pro	Asp	Thr	Asp	Ser	Phe	Asn	Thr	Val
			260					265					270		
Ala	Glu	Ile	Thr	Gly	Ser	Lys	Tyr	Pro	Glu	Gln	Val	Val	Leu	Val	Ser
		275					280					285			
Gly	His	Leu	Asp	Ser	Trp	Asp	Val	Gly	Gln	Gly	Ala	Met	Asp	Asp	Gly
	290					295					300				
Gly	Gly	Ala	Phe	Ile	Ser	Trp	Glu	Ala	Leu	Ser	Leu	Ile	Lys	Asp	Leu
305					310					315					320
Gly	Leu	Arg	Pro	Lys	Arg	Thr	Leu	Arg	Leu	Val	Leu	Trp	Thr	Ala	Glu
				325					330					335	
Glu	Gln	Gly	Gly	Val	Gly	Ala	Phe	Gln	Tyr	Tyr	Gln	Leu	His	Lys	Val

340 345 350
 Asn Ile Ser Asn Tyr Ser Leu Val Met Glu Ser Asp Ala Gly Thr Phe
 355 360 365
 Leu Pro Thr Gly Leu Gln Phe Thr Gly Ser Glu Lys Ala Arg Ala Ile
 370 375 380
 Met Glu Glu Val Met Ser Leu Leu Gln Pro Leu Asn Ile Thr Gln Val
 385 390 395 400
 Leu Ser His Gly Glu Gly Thr Asp Ile Asn Phe Trp Ile Gln Ala Gly
 405 410 415
 Val Pro Gly Ala Ser Leu Leu Asp Asp Leu Tyr Lys Tyr Phe Phe Phe
 420 425 430
 His His Ser His Gly Asp Thr Met Thr Val Met Asp Pro Lys Gln Met
 435 440 445
 Asn Val Ala Ala Ala Val Trp Ala Val Val Ser Tyr Val Val Ala Asp
 450 455 460
 Met Glu Glu Met Leu Pro Arg Ser
 465 470

<210> 11880
 <211> 130
 <212> PRT
 <213> Homo sapiens

<220>
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 <223> /note="Payload ID: 2349"

<220>
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 <223> /note="Gene Symbol: CPQ"

<220>
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 <223> /note="Gene Name:
 carboxypeptidase Q"

<220>
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<220>
 <221> MOD_RES
 <222> (1)..(1)
 <223> Any amino acid

 <400> 11880
 Xaa Phe Gln Tyr Tyr Gln Leu His Lys Val Asn Ile Ser Asn Tyr Ser
 1 5 10 15

 Leu Val Met Glu Ser Asp Ala Gly Thr Phe Leu Pro Thr Gly Leu Gln
 20 25 30

 Phe Thr Gly Ser Glu Lys Ala Arg Ala Ile Met Glu Glu Val Met Ser
 35 40 45

 Leu Leu Gln Pro Leu Asn Ile Thr Gln Val Leu Ser His Gly Glu Gly
 50 55 60

 Thr Asp Ile Asn Phe Trp Ile Gln Ala Gly Val Pro Gly Ala Ser Leu
 65 70 75 80

 Leu Asp Asp Leu Tyr Lys Tyr Phe Phe Phe His His Ser His Gly Asp
 85 90 95

 Thr Met Thr Val Met Asp Pro Lys Gln Met Asn Val Ala Ala Ala Val
 100 105 110

 Trp Ala Val Val Ser Tyr Val Val Ala Asp Met Glu Glu Met Leu Pro
 115 120 125

 Arg Ser
 130

<210> 11881
 <211> 186
 <212> PRT
 <213> Homo sapiens

<220>
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<220>
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<220>

<221> source
<223> /note="Gene Name:
carboxypeptidase Q"

<220>
<221> source
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<400> 11881

Met Lys Phe Leu Ile Phe Ala Phe Phe Gly Gly Val His Leu Leu Ser
1 5 10 15

Leu Cys Ser Gly Lys Ala Ile Cys Lys Asn Gly Ile Ser Lys Arg Thr
20 25 30

Phe Glu Glu Ile Lys Glu Glu Ile Ala Ser Cys Gly Asp Val Ala Lys
35 40 45

Ala Ile Ile Asn Leu Ala Val Tyr Gly Lys Ala Gln Asn Arg Ser Tyr
50 55 60

Glu Arg Leu Ala Leu Leu Val Asp Thr Val Gly Pro Arg Leu Ser Gly
65 70 75 80

Ser Lys Asn Leu Glu Lys Ala Ile Gln Ile Met Tyr Gln Asn Leu Gln
85 90 95

Gln Asp Gly Leu Glu Lys Val His Leu Glu Pro Val Arg Ile Pro His
100 105 110

Trp Glu Arg Gly Glu Glu Ser Ala Val Met Leu Glu Pro Arg Ile His
115 120 125

Lys Ile Ala Ile Leu Gly Leu Gly Ser Ser Ile Gly Thr Pro Pro Glu
130 135 140

Gly Ile Thr Ala Glu Val Leu Val Val Thr Ser Phe Asp Glu Leu Gln
145 150 155 160

Arg Arg Ala Ser Glu Ala Arg Gly Lys Ile Val Val Tyr Asn Gln Pro
165 170 175

Tyr Ile Asn Tyr Ser Arg Thr Val Gln Tyr
180 185

<210> 11882
<211> 130
<212> PRT
<213> Homo sapiens

<220>
<221> source
<223> /note="Payload ID: 2349"

<220>
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<223> /note="Gene Symbol: CPQ"

<220>
<221> source
<223> /note="Gene Name:
carboxypeptidase Q"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000429934"

<400> 11882
Met Lys Phe Leu Ile Phe Ala Phe Phe Gly Gly Val His Leu Leu Ser
1 5 10 15

Leu Cys Ser Gly Lys Ala Ile Cys Lys Asn Gly Ile Ser Lys Arg Thr
20 25 30

Phe Glu Glu Ile Lys Glu Glu Ile Ala Ser Cys Gly Asp Val Ala Lys
35 40 45

Ala Ile Ile Asn Leu Ala Val Tyr Gly Lys Ala Gln Asn Arg Ser Tyr
50 55 60

Glu Arg Leu Ala Leu Leu Val Asp Thr Val Gly Pro Arg Leu Ser Gly
65 70 75 80

Ser Lys Asn Leu Glu Lys Ala Ile Gln Ile Met Tyr Gln Asn Leu Gln
85 90 95

Gln Asp Gly Leu Glu Lys Val His Leu Glu Pro Val Arg Ile Pro His
100 105 110

Trp Glu Arg Gly Glu Glu Ser Ala Val Met Leu Glu Pro Arg Ile His
115 120 125

Lys Ile
130

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<210> 11883
<211> 131
<212> PRT
<213> Homo sapiens

<220>
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<223> /note="Payload ID: 2349"

<220>
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<223> /note="Gene Symbol: CPQ"

<220>
<221> source
<223> /note="Gene Name:
        carboxypeptidase Q"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000431024"

<400> 11883
Met Lys Phe Leu Ile Phe Ala Phe Phe Gly Gly Val His Leu Leu Ser
1          5          10          15

Leu Cys Ser Gly Lys Ala Ile Cys Lys Asn Gly Ile Ser Lys Arg Thr
          20          25          30

Phe Glu Glu Ile Lys Glu Glu Ile Ala Ser Cys Gly Asp Val Ala Lys
          35          40          45

Ala Ile Ile Asn Leu Ala Val Tyr Gly Lys Ala Gln Asn Arg Ser Tyr
          50          55          60

Glu Arg Leu Ala Leu Leu Val Asp Thr Val Gly Pro Arg Leu Ser Gly
65          70          75          80

Ser Lys Asn Leu Glu Lys Ala Ile Gln Ile Met Tyr Gln Asn Leu Gln
          85          90          95

Gln Asp Gly Leu Glu Lys Val His Leu Glu Pro Val Arg Ile Pro His
          100          105          110

Trp Glu Arg Gly Glu Glu Ser Ala Val Met Leu Glu Pro Arg Ile His
          115          120          125

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Lys Ile Ala
130

<210> 11884
<211> 137
<212> PRT
<213> Homo sapiens

<220>
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<220>
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<223> /note="Gene Symbol: CPQ"

<220>
<221> source
<223> /note="Gene Name:
carboxypeptidase Q"

<220>
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<223> /note="ENSP ID: ENSP00000431114"

<400> 11884
Met Lys Phe Leu Ile Phe Ala Phe Phe Gly Gly Val His Leu Leu Ser
1 5 10 15

Leu Cys Ser Gly Lys Ala Ile Cys Lys Asn Gly Ile Ser Lys Arg Thr
20 25 30

Phe Glu Glu Ile Lys Glu Glu Ile Ala Ser Cys Gly Asp Val Ala Lys
35 40 45

Ala Ile Ile Asn Leu Ala Val Tyr Gly Lys Ala Gln Asn Arg Ser Tyr
50 55 60

Glu Arg Leu Ala Leu Leu Val Asp Thr Val Gly Pro Arg Leu Ser Gly
65 70 75 80

Ser Lys Asn Leu Glu Lys Ala Ile Gln Ile Met Tyr Gln Asn Leu Gln
85 90 95

Gln Asp Gly Leu Glu Lys Val His Leu Glu Pro Val Arg Ile Pro His
100 105 110

Trp Glu Arg Gly Glu Glu Ser Ala Val Met Leu Glu Pro Arg Ile His
115 120 125

Lys Ile Ala Ile Leu Gly Leu Gly Ser
130 135

<210> 11885

<211> 734

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2350"

<220>

<221> source

<223> /note="Gene Symbol: CPXM1"

<220>

<221> source

<223> /note="Gene Name:
carboxypeptidase X (M14 family), member 1"

<220>

<221> source

<223> /note="Uniprot ID: Q96SM3"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000369979"

<400> 11885

Met Trp Gly Leu Leu Ala Leu Ala Ala Phe Ala Pro Ala Val Gly
1 5 10 15

Pro Ala Leu Gly Ala Pro Arg Asn Ser Val Leu Gly Leu Ala Gln Pro
20 25 30

Gly Thr Thr Lys Val Pro Gly Ser Thr Pro Ala Leu His Ser Ser Pro
35 40 45

Ala Gln Pro Pro Ala Glu Thr Ala Asn Gly Thr Ser Glu Gln His Val
50 55 60

Arg Ile Arg Val Ile Lys Lys Lys Lys Val Ile Met Lys Lys Arg Lys
65 70 75 80

Lys Leu Thr Leu Thr Arg Pro Thr Pro Leu Val Thr Ala Gly Pro Leu
85 90 95

Val	Thr	Pro	Thr	Pro	Ala	Gly	Thr	Leu	Asp	Pro	Ala	Glu	Lys	Gln	Glu		
			100					105					110				
Thr	Gly	Cys	Pro	Pro	Leu	Gly	Leu	Glu	Ser	Leu	Arg	Val	Ser	Asp	Ser		
		115					120					125					
Arg	Leu	Glu	Ala	Ser	Ser	Ser	Gln	Ser	Phe	Gly	Leu	Gly	Pro	His	Arg		
	130					135					140						
Gly	Arg	Leu	Asn	Ile	Gln	Ser	Gly	Leu	Glu	Asp	Gly	Asp	Leu	Tyr	Asp		
145					150					155					160		
Gly	Ala	Trp	Cys	Ala	Glu	Glu	Gln	Asp	Ala	Asp	Pro	Trp	Phe	Gln	Val		
				165					170					175			
Asp	Ala	Gly	His	Pro	Thr	Arg	Phe	Ser	Gly	Val	Ile	Thr	Gln	Gly	Arg		
			180					185					190				
Asn	Ser	Val	Trp	Arg	Tyr	Asp	Trp	Val	Thr	Ser	Tyr	Lys	Val	Gln	Phe		
		195					200					205					
Ser	Asn	Asp	Ser	Arg	Thr	Trp	Trp	Gly	Ser	Arg	Asn	His	Ser	Ser	Gly		
	210					215					220						
Met	Asp	Ala	Val	Phe	Pro	Ala	Asn	Ser	Asp	Pro	Glu	Thr	Pro	Val	Leu		
225					230					235					240		
Asn	Leu	Leu	Pro	Glu	Pro	Gln	Val	Ala	Arg	Phe	Ile	Arg	Leu	Leu	Pro		
				245					250					255			
Gln	Thr	Trp	Leu	Gln	Gly	Gly	Ala	Pro	Cys	Leu	Arg	Ala	Glu	Ile	Leu		
			260					265					270				
Ala	Cys	Pro	Val	Ser	Asp	Pro	Asn	Asp	Leu	Phe	Leu	Glu	Ala	Pro	Ala		
		275					280					285					
Ser	Gly	Ser	Ser	Asp	Pro	Leu	Asp	Phe	Gln	His	His	Asn	Tyr	Lys	Ala		
	290					295					300						
Met	Arg	Lys	Leu	Met	Lys	Gln	Val	Gln	Glu	Gln	Cys	Pro	Asn	Ile	Thr		
305					310					315					320		
Arg	Ile	Tyr	Ser	Ile	Gly	Lys	Ser	Tyr	Gln	Gly	Leu	Lys	Leu	Tyr	Val		

				325					330					335			
Met	Glu	Met	Ser	Asp	Lys	Pro	Gly	Glu	His	Glu	Leu	Gly	Glu	Pro	Glu		
			340					345					350				
Val	Arg	Tyr	Val	Ala	Gly	Met	His	Gly	Asn	Glu	Ala	Leu	Gly	Arg	Glu		
		355					360					365					
Leu	Leu	Leu	Leu	Leu	Met	Gln	Phe	Leu	Cys	His	Glu	Phe	Leu	Arg	Gly		
	370					375					380						
Asn	Pro	Arg	Val	Thr	Arg	Leu	Leu	Ser	Glu	Met	Arg	Ile	His	Leu	Leu		
385					390					395					400		
Pro	Ser	Met	Asn	Pro	Asp	Gly	Tyr	Glu	Ile	Ala	Tyr	His	Arg	Gly	Ser		
				405					410					415			
Glu	Leu	Val	Gly	Trp	Ala	Glu	Gly	Arg	Trp	Asn	Asn	Gln	Ser	Ile	Asp		
			420					425					430				
Leu	Asn	His	Asn	Phe	Ala	Asp	Leu	Asn	Thr	Pro	Leu	Trp	Glu	Ala	Gln		
		435					440					445					
Asp	Asp	Gly	Lys	Val	Pro	His	Ile	Val	Pro	Asn	His	His	Leu	Pro	Leu		
	450					455					460						
Pro	Thr	Tyr	Tyr	Thr	Leu	Pro	Asn	Ala	Thr	Val	Ala	Pro	Glu	Thr	Arg		
465					470					475					480		
Ala	Val	Ile	Lys	Trp	Met	Lys	Arg	Ile	Pro	Phe	Val	Leu	Ser	Ala	Asn		
				485					490					495			
Leu	His	Gly	Gly	Glu	Leu	Val	Val	Ser	Tyr	Pro	Phe	Asp	Met	Thr	Arg		
			500					505					510				
Thr	Pro	Trp	Ala	Ala	Arg	Glu	Leu	Thr	Pro	Thr	Pro	Asp	Asp	Ala	Val		
		515					520					525					
Phe	Arg	Trp	Leu	Ser	Thr	Val	Tyr	Ala	Gly	Ser	Asn	Leu	Ala	Met	Gln		
	530					535					540						
Asp	Thr	Ser	Arg	Arg	Pro	Cys	His	Ser	Gln	Asp	Phe	Ser	Val	His	Gly		
545					550					555					560		

Asn Ile Ile Asn Gly Ala Asp Trp His Thr Val Pro Gly Ser Met Asn
565 570 575

Asp Phe Ser Tyr Leu His Thr Asn Cys Phe Glu Val Thr Val Glu Leu
580 585 590

Ser Cys Asp Lys Phe Pro His Glu Asn Glu Leu Pro Gln Glu Trp Glu
595 600 605

Asn Asn Lys Asp Ala Leu Leu Thr Tyr Leu Glu Gln Val Arg Met Gly
610 615 620

Ile Ala Gly Val Val Arg Asp Lys Asp Thr Glu Leu Gly Ile Ala Asp
625 630 635 640

Ala Val Ile Ala Val Asp Gly Ile Asn His Asp Val Thr Thr Ala Trp
645 650 655

Gly Gly Asp Tyr Trp Arg Leu Leu Thr Pro Gly Asp Tyr Met Val Thr
660 665 670

Ala Ser Ala Glu Gly Tyr His Ser Val Thr Arg Asn Cys Arg Val Thr
675 680 685

Phe Glu Glu Gly Pro Phe Pro Cys Asn Phe Val Leu Thr Lys Thr Pro
690 695 700

Lys Gln Arg Leu Arg Glu Leu Leu Ala Ala Gly Ala Lys Val Pro Pro
705 710 715 720

Asp Leu Arg Arg Arg Leu Glu Arg Leu Arg Gly Gln Lys Asp
725 730

<210> 11886

<211> 756

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2351"

<220>

<221> source

<223> /note="Gene Symbol: CPXM2"

<220>

<221> source

<223> /note="Gene Name:
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<220>

<221> source

<223> /note="Uniprot ID: Q8N436"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000241305"

<400> 11886

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Ala Val Thr Leu Ala Gly Val Gly Ala Gln Gly Ala Ala Leu Glu Asp
20 25 30

Pro Asp Tyr Tyr Gly Gln Glu Ile Trp Ser Arg Glu Pro Tyr Tyr Ala
35 40 45

Arg Pro Glu Pro Glu Leu Glu Thr Phe Ser Pro Pro Leu Pro Ala Gly
50 55 60

Pro Gly Glu Glu Trp Glu Arg Arg Pro Gln Glu Pro Arg Pro Pro Lys
65 70 75 80

Arg Ala Thr Lys Pro Lys Lys Ala Pro Lys Arg Glu Lys Ser Ala Pro
85 90 95

Glu Pro Pro Pro Pro Gly Lys His Ser Asn Lys Lys Val Met Arg Thr
100 105 110

Lys Ser Ser Glu Lys Ala Ala Asn Asp Asp His Ser Val Arg Val Ala
115 120 125

Arg Glu Asp Val Arg Glu Ser Cys Pro Pro Leu Gly Leu Glu Thr Leu
130 135 140

Lys Ile Thr Asp Phe Gln Leu His Ala Ser Thr Val Lys Arg Tyr Gly
145 150 155 160

Leu Gly Ala His Arg Gly Arg Leu Asn Ile Gln Ala Gly Ile Asn Glu

165								170				175			
Asn	Asp	Phe	Tyr	Asp	Gly	Ala	Trp	Cys	Ala	Gly	Arg	Asn	Asp	Leu	Gln
			180					185					190		
Gln	Trp	Ile	Glu	Val	Asp	Ala	Arg	Arg	Leu	Thr	Arg	Phe	Thr	Gly	Val
		195					200					205			
Ile	Thr	Gln	Gly	Arg	Asn	Ser	Leu	Trp	Leu	Ser	Asp	Trp	Val	Thr	Ser
	210					215					220				
Tyr	Lys	Val	Met	Val	Ser	Asn	Asp	Ser	His	Thr	Trp	Val	Thr	Val	Lys
225					230					235					240
Asn	Gly	Ser	Gly	Asp	Met	Ile	Phe	Glu	Gly	Asn	Ser	Glu	Lys	Glu	Ile
				245					250					255	
Pro	Val	Leu	Asn	Glu	Leu	Pro	Val	Pro	Met	Val	Ala	Arg	Tyr	Ile	Arg
			260					265					270		
Ile	Asn	Pro	Gln	Ser	Trp	Phe	Asp	Asn	Gly	Ser	Ile	Cys	Met	Arg	Met
		275					280					285			
Glu	Ile	Leu	Gly	Cys	Pro	Leu	Pro	Asp	Pro	Asn	Asn	Tyr	Tyr	His	Arg
	290					295					300				
Arg	Asn	Glu	Met	Thr	Thr	Thr	Asp	Asp	Leu	Asp	Phe	Lys	His	His	Asn
305					310					315					320
Tyr	Lys	Glu	Met	Arg	Gln	Leu	Met	Lys	Val	Val	Asn	Glu	Met	Cys	Pro
				325					330					335	
Asn	Ile	Thr	Arg	Ile	Tyr	Asn	Ile	Gly	Lys	Ser	His	Gln	Gly	Leu	Lys
			340					345					350		
Leu	Tyr	Ala	Val	Glu	Ile	Ser	Asp	His	Pro	Gly	Glu	His	Glu	Val	Gly
		355					360					365			
Glu	Pro	Glu	Phe	His	Tyr	Ile	Ala	Gly	Ala	His	Gly	Asn	Glu	Val	Leu
	370					375					380				
Gly	Arg	Glu	Leu	Leu	Leu	Leu	Val	Gln	Phe	Val	Cys	Gln	Glu	Tyr	
385					390				395					400	

Leu	Ala	Arg	Asn	Ala	Arg	Ile	Val	His	Leu	Val	Glu	Glu	Thr	Arg	Ile	405	410	415	
His	Val	Leu	Pro	Ser	Leu	Asn	Pro	Asp	Gly	Tyr	Glu	Lys	Ala	Tyr	Glu	420	425	430	
Gly	Gly	Ser	Glu	Leu	Gly	Gly	Trp	Ser	Leu	Gly	Arg	Trp	Thr	His	Asp	435	440	445	
Gly	Ile	Asp	Ile	Asn	Asn	Asn	Phe	Pro	Asp	Leu	Asn	Thr	Leu	Leu	Trp	450	455	460	
Glu	Ala	Glu	Asp	Arg	Gln	Asn	Val	Pro	Arg	Lys	Val	Pro	Asn	His	Tyr	465	470	475	480
Ile	Ala	Ile	Pro	Glu	Trp	Phe	Leu	Ser	Glu	Asn	Ala	Thr	Val	Ala	Ala	485	490	495	
Glu	Thr	Arg	Ala	Val	Ile	Ala	Trp	Met	Glu	Lys	Ile	Pro	Phe	Val	Leu	500	505	510	
Gly	Gly	Asn	Leu	Gln	Gly	Gly	Glu	Leu	Val	Val	Ala	Tyr	Pro	Tyr	Asp	515	520	525	
Leu	Val	Arg	Ser	Pro	Trp	Lys	Thr	Gln	Glu	His	Thr	Pro	Thr	Pro	Asp	530	535	540	
Asp	His	Val	Phe	Arg	Trp	Leu	Ala	Tyr	Ser	Tyr	Ala	Ser	Thr	His	Arg	545	550	555	560
Leu	Met	Thr	Asp	Ala	Arg	Arg	Arg	Val	Cys	His	Thr	Glu	Asp	Phe	Gln	565	570	575	
Lys	Glu	Glu	Gly	Thr	Val	Asn	Gly	Ala	Ser	Trp	His	Thr	Val	Ala	Gly	580	585	590	
Ser	Leu	Asn	Asp	Phe	Ser	Tyr	Leu	His	Thr	Asn	Cys	Phe	Glu	Leu	Ser	595	600	605	
Ile	Tyr	Val	Gly	Cys	Asp	Lys	Tyr	Pro	His	Glu	Ser	Gln	Leu	Pro	Glu	610	615	620	

Glu Trp Glu Asn Asn Arg Glu Ser Leu Ile Val Phe Met Glu Gln Val
625 630 635 640

His Arg Gly Ile Lys Gly Leu Val Arg Asp Ser His Gly Lys Gly Ile
645 650 655

Pro Asn Ala Ile Ile Ser Val Glu Gly Ile Asn His Asp Ile Arg Thr
660 665 670

Ala Asn Asp Gly Asp Tyr Trp Arg Leu Leu Asn Pro Gly Glu Tyr Val
675 680 685

Val Thr Ala Lys Ala Glu Gly Phe Thr Ala Ser Thr Lys Asn Cys Met
690 695 700

Val Gly Tyr Asp Met Gly Ala Thr Arg Cys Asp Phe Thr Leu Ser Lys
705 710 715 720

Thr Asn Met Ala Arg Ile Arg Glu Ile Met Glu Lys Phe Gly Lys Gln
725 730 735

Pro Val Ser Leu Pro Ala Arg Arg Leu Lys Leu Arg Gly Gln Lys Arg
740 745 750

Arg Gln Arg Gly
755

<210> 11887
<211> 224
<212> PRT
<213> Homo sapiens

<220>
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<220>
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<220>
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<223> /note="Gene Name:
carboxypeptidase X (M14 family), member 2"

<220>
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<223> /note="ENSP ID: ENSP00000483180"

<400> 11887

Met Glu Lys Ile Pro Phe Val Leu Gly Gly Asn Leu Gln Gly Gly Glu
1 5 10 15

Leu Val Val Ala Tyr Pro Tyr Asp Leu Val Arg Ser Pro Trp Lys Thr
20 25 30

Gln Glu His Thr Pro Thr Pro Asp Asp His Val Phe Arg Trp Leu Ala
35 40 45

Tyr Ser Tyr Ala Ser Thr His Arg Leu Met Thr Asp Ala Arg Arg Arg
50 55 60

Val Cys His Thr Glu Asp Phe Gln Lys Glu Glu Gly Thr Val Asn Gly
65 70 75 80

Ala Ser Trp His Thr Val Ala Gly Ser Leu Asn Asp Phe Ser Tyr Leu
85 90 95

His Thr Asn Cys Phe Glu Leu Ser Ile Tyr Val Gly Cys Asp Lys Tyr
100 105 110

Pro His Glu Ser Gln Leu Pro Glu Glu Trp Glu Asn Asn Arg Glu Ser
115 120 125

Leu Ile Val Phe Met Glu Gln Val His Arg Gly Ile Lys Gly Leu Val
130 135 140

Arg Asp Ser His Gly Lys Gly Ile Pro Asn Ala Ile Ile Ser Val Glu
145 150 155 160

Gly Ile Asn His Asp Ile Arg Thr Gly Arg Val Ser Leu Gln Lys Leu
165 170 175

Ser Leu Ala Cys Arg Arg Val Arg Cys Ala Phe Ala Leu Ser Ser Ser
180 185 190

Ser Thr Met Ile Val Arg Pro Pro Gln Pro Tyr Gly Thr Val Pro His
195 200 205

Ser Ser Pro Asp Pro Val Thr Thr Lys Ile Ser Pro Leu Arg Asn Phe
210 215 220

26437

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<210> 11888
<211> 641
<212> PRT
<213> Homo sapiens

<220>
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<223> /note="Payload ID: 2352"

<220>
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<223> /note="Gene Symbol: CPZ"

<220>
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<223> /note="Gene Name:
        carboxypeptidase Z"

<220>
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<223> /note="Uniprot ID: Q66K79"

<220>
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<400> 11888
Met Pro Pro Pro Leu Pro Leu Leu Leu Thr Val Leu Val Val Ala
1          5          10          15

Ala Ala Arg Pro Gly Cys Glu Phe Glu Arg Asn Pro Ala Ala Thr Cys
          20          25          30

Val Asp Leu Gln Leu Arg Thr Cys Ser Asp Ala Ala Tyr Asn His Thr
          35          40          45

Thr Phe Pro Asn Leu Leu Gln His Arg Ser Trp Glu Val Val Glu Ala
          50          55          60

Ser Ser Glu Tyr Ile Leu Leu Ser Val Leu His Gln Leu Leu Glu Gly
65          70          75          80

Gln Cys Asn Pro Asp Leu Arg Leu Leu Gly Cys Ala Val Leu Ala Pro
          85          90          95

Arg Cys Glu Gly Gly Trp Val Arg Arg Pro Cys Arg His Ile Cys Glu
          100          105          110

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Gly	Leu	Arg	Glu	Val	Cys	Gln	Pro	Ala	Phe	Asp	Ala	Ile	Asp	Met	Ala		
		115					120					125					
Trp	Pro	Tyr	Phe	Leu	Asp	Cys	His	Arg	Tyr	Phe	Thr	Arg	Glu	Asp	Glu		
	130					135					140						
Gly	Cys	Tyr	Asp	Pro	Leu	Glu	Lys	Leu	Arg	Gly	Gly	Leu	Glu	Ala	Asp		
145					150					155					160		
Glu	Ala	Leu	Pro	Ser	Gly	Leu	Pro	Pro	Thr	Phe	Ile	Arg	Phe	Ser	His		
				165					170					175			
His	Ser	Tyr	Ala	Gln	Met	Val	Arg	Val	Leu	Arg	Arg	Thr	Ala	Ser	Arg		
			180					185					190				
Cys	Ala	His	Val	Ala	Arg	Thr	Tyr	Ser	Ile	Gly	Arg	Ser	Phe	Asp	Gly		
		195					200					205					
Arg	Glu	Leu	Leu	Val	Ile	Glu	Phe	Ser	Ser	Arg	Pro	Gly	Gln	His	Glu		
	210					215					220						
Leu	Met	Glu	Pro	Glu	Val	Lys	Leu	Ile	Gly	Asn	Ile	His	Gly	Asn	Glu		
225					230					235					240		
Val	Ala	Gly	Arg	Glu	Met	Leu	Ile	Tyr	Leu	Ala	Gln	Tyr	Leu	Cys	Ser		
				245					250					255			
Glu	Tyr	Leu	Leu	Gly	Asn	Pro	Arg	Ile	Gln	Arg	Leu	Leu	Asn	Thr	Thr		
			260					265					270				
Arg	Ile	His	Leu	Leu	Pro	Ser	Met	Asn	Pro	Asp	Gly	Tyr	Glu	Val	Ala		
		275					280					285					
Ala	Ala	Glu	Gly	Ala	Gly	Tyr	Asn	Gly	Trp	Thr	Ser	Gly	Arg	Gln	Asn		
	290					295					300						
Ala	Gln	Asn	Leu	Asp	Leu	Asn	Arg	Asn	Phe	Pro	Asp	Leu	Thr	Ser	Glu		
305					310					315					320		
Tyr	Tyr	Arg	Leu	Ala	Glu	Thr	Arg	Gly	Ala	Arg	Ser	Asp	His	Ile	Pro		
				325					330					335			
Ile	Pro	Gln	His	Tyr	Trp	Trp	Gly	Lys	Val	Ala	Pro	Glu	Thr	Lys	Ala		

Pro Lys Asn Phe Ile His Gly Leu Arg Arg Thr Gly Pro His Asp Pro
580 585 590

Leu Gly Gly Ala Ser Ser Leu Gly Glu Ala Thr Glu Pro Asp Pro Leu
595 600 605

Arg Ala Arg Arg Gln Pro Ser Ala Asp Gly Ser Lys Pro Trp Trp Trp
610 615 620

Ser Tyr Phe Thr Ser Leu Ser Thr His Arg Pro Arg Trp Leu Leu Lys
625 630 635 640

Tyr

<210> 11889
<211> 652
<212> PRT
<213> Homo sapiens

<220>
<221> source
<223> /note="Payload ID: 2352"

<220>
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<223> /note="Gene Symbol: CPZ"

<220>
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<223> /note="Gene Name:
carboxypeptidase Z"

<220>
<221> source
<223> /note="Uniprot ID: Q66K79"

<220>
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<400> 11889
Met Pro Pro Pro Leu Pro Leu Leu Leu Thr Val Leu Val Val Ala
1 5 10 15

Ala Ala Arg Pro Gly Cys Glu Phe Glu Arg Asn Pro Ala Gly Glu Cys
20 25 30

His	Arg	Pro	Pro	Ala	Ala	Asp	Ser	Ala	Thr	Cys	Val	Asp	Leu	Gln	Leu			
		35					40					45						
Arg	Thr	Cys	Ser	Asp	Ala	Ala	Tyr	Asn	His	Thr	Thr	Phe	Pro	Asn	Leu			
	50					55					60							
Leu	Gln	His	Arg	Ser	Trp	Glu	Val	Val	Glu	Ala	Ser	Ser	Glu	Tyr	Ile			
65					70					75					80			
Leu	Leu	Ser	Val	Leu	His	Gln	Leu	Leu	Glu	Gly	Gln	Cys	Asn	Pro	Asp			
				85					90					95				
Leu	Arg	Leu	Leu	Gly	Cys	Ala	Val	Leu	Ala	Pro	Arg	Cys	Glu	Gly	Gly			
			100					105					110					
Trp	Val	Arg	Arg	Pro	Cys	Arg	His	Ile	Cys	Glu	Gly	Leu	Arg	Glu	Val			
		115					120					125						
Cys	Gln	Pro	Ala	Phe	Asp	Ala	Ile	Asp	Met	Ala	Trp	Pro	Tyr	Phe	Leu			
	130					135					140							
Asp	Cys	His	Arg	Tyr	Phe	Thr	Arg	Glu	Asp	Glu	Gly	Cys	Tyr	Asp	Pro			
145					150					155					160			
Leu	Glu	Lys	Leu	Arg	Gly	Gly	Leu	Glu	Ala	Asp	Glu	Ala	Leu	Pro	Ser			
				165					170					175				
Gly	Leu	Pro	Pro	Thr	Phe	Ile	Arg	Phe	Ser	His	His	Ser	Tyr	Ala	Gln			
			180					185					190					
Met	Val	Arg	Val	Leu	Arg	Arg	Thr	Ala	Ser	Arg	Cys	Ala	His	Val	Ala			
		195					200					205						
Arg	Thr	Tyr	Ser	Ile	Gly	Arg	Ser	Phe	Asp	Gly	Arg	Glu	Leu	Leu	Val			
	210					215					220							
Ile	Glu	Phe	Ser	Ser	Arg	Pro	Gly	Gln	His	Glu	Leu	Met	Glu	Pro	Glu			
225					230					235					240			
Val	Lys	Leu	Ile	Gly	Asn	Ile	His	Gly	Asn	Glu	Val	Ala	Gly	Arg	Glu			
				245					250					255				
Met	Leu	Ile	Tyr	Leu	Ala	Gln	Tyr	Leu	Cys	Ser	Glu	Tyr	Leu	Leu	Gly			

260						265						270					
Asn	Pro	Arg	Ile	Gln	Arg	Leu	Leu	Asn	Thr	Thr	Arg	Ile	His	Leu	Leu		
		275					280					285					
Pro	Ser	Met	Asn	Pro	Asp	Gly	Tyr	Glu	Val	Ala	Ala	Ala	Glu	Gly	Ala		
	290					295					300						
Gly	Tyr	Asn	Gly	Trp	Thr	Ser	Gly	Arg	Gln	Asn	Ala	Gln	Asn	Leu	Asp		
305					310					315					320		
Leu	Asn	Arg	Asn	Phe	Pro	Asp	Leu	Thr	Ser	Glu	Tyr	Tyr	Arg	Leu	Ala		
				325					330					335			
Glu	Thr	Arg	Gly	Ala	Arg	Ser	Asp	His	Ile	Pro	Ile	Pro	Gln	His	Tyr		
			340					345					350				
Trp	Trp	Gly	Lys	Val	Ala	Pro	Glu	Thr	Lys	Ala	Ile	Met	Lys	Trp	Met		
		355					360					365					
Gln	Thr	Ile	Pro	Phe	Val	Leu	Ser	Ala	Ser	Leu	His	Gly	Gly	Asp	Leu		
	370					375					380						
Val	Val	Ser	Tyr	Pro	Phe	Asp	Phe	Ser	Lys	His	Pro	Gln	Glu	Glu	Lys		
385					390					395					400		
Met	Phe	Ser	Pro	Thr	Pro	Asp	Glu	Lys	Met	Phe	Lys	Leu	Leu	Ser	Arg		
				405					410					415			
Ala	Tyr	Ala	Asp	Val	His	Pro	Met	Met	Met	Asp	Arg	Ser	Glu	Asn	Arg		
			420					425					430				
Cys	Gly	Gly	Asn	Phe	Leu	Lys	Arg	Gly	Ser	Ile	Ile	Asn	Gly	Ala	Asp		
		435					440					445					
Trp	Tyr	Ser	Phe	Thr	Gly	Gly	Met	Ser	Asp	Phe	Asn	Tyr	Leu	His	Thr		
	450					455					460						
Asn	Cys	Phe	Glu	Ile	Thr	Val	Glu	Leu	Gly	Cys	Val	Lys	Phe	Pro	Pro		
465					470					475					480		
Glu	Glu	Ala	Leu	Tyr	Ile	Leu	Trp	Gln	His	Asn	Lys	Glu	Ser	Leu	Leu		
				485					490					495			

Asn Phe Val Glu Thr Val His Arg Gly Ile Lys Gly Val Val Thr Asp
500 505 510

Lys Phe Gly Lys Pro Val Lys Asn Ala Arg Ile Ser Val Lys Gly Ile
515 520 525

Arg His Asp Ile Thr Thr Ala Pro Asp Gly Asp Tyr Trp Arg Leu Leu
530 535 540

Pro Pro Gly Ile His Ile Val Ile Ala Gln Ala Pro Gly Tyr Ala Lys
545 550 555 560

Val Ile Lys Lys Val Ile Ile Pro Ala Arg Met Lys Arg Ala Gly Arg
565 570 575

Val Asp Phe Ile Leu Gln Pro Leu Gly Met Gly Pro Lys Asn Phe Ile
580 585 590

His Gly Leu Arg Arg Thr Gly Pro His Asp Pro Leu Gly Gly Ala Ser
595 600 605

Ser Leu Gly Glu Ala Thr Glu Pro Asp Pro Leu Arg Ala Arg Arg Gln
610 615 620

Pro Ser Ala Asp Gly Ser Lys Pro Trp Trp Trp Ser Tyr Phe Thr Ser
625 630 635 640

Leu Ser Thr His Arg Pro Arg Trp Leu Leu Lys Tyr
645 650

<210> 11890

<211> 515

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2352"

<220>

<221> source

<223> /note="Gene Symbol: CPZ"

<220>

<221> source

<223> /note="Gene Name:
carboxypeptidase Z"

<220>

<221> source

<223> /note="Uniprot ID: Q66K79"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000371920"

<400> 11890

Met Ala Trp Pro Tyr Phe Leu Asp Cys His Arg Tyr Phe Thr Arg Glu
1 5 10 15

Asp Glu Gly Cys Tyr Asp Pro Leu Glu Lys Leu Arg Gly Gly Leu Glu
20 25 30

Ala Asp Glu Ala Leu Pro Ser Gly Leu Pro Pro Thr Phe Ile Arg Phe
35 40 45

Ser His His Ser Tyr Ala Gln Met Val Arg Val Leu Arg Arg Thr Ala
50 55 60

Ser Arg Cys Ala His Val Ala Arg Thr Tyr Ser Ile Gly Arg Ser Phe
65 70 75 80

Asp Gly Arg Glu Leu Leu Val Ile Glu Phe Ser Ser Arg Pro Gly Gln
85 90 95

His Glu Leu Met Glu Pro Glu Val Lys Leu Ile Gly Asn Ile His Gly
100 105 110

Asn Glu Val Ala Gly Arg Glu Met Leu Ile Tyr Leu Ala Gln Tyr Leu
115 120 125

Cys Ser Glu Tyr Leu Leu Gly Asn Pro Arg Ile Gln Arg Leu Leu Asn
130 135 140

Thr Thr Arg Ile His Leu Leu Pro Ser Met Asn Pro Asp Gly Tyr Glu
145 150 155 160

Val Ala Ala Ala Glu Gly Ala Gly Tyr Asn Gly Trp Thr Ser Gly Arg
165 170 175

Gln Asn Ala Gln Asn Leu Asp Leu Asn Arg Asn Phe Pro Asp Leu Thr

26445

Gln Ala Pro Gly Tyr Ala Lys Val Ile Lys Lys Val Ile Ile Pro Ala
420 425 430

Arg Met Lys Arg Ala Gly Arg Val Asp Phe Ile Leu Gln Pro Leu Gly
435 440 445

Met Gly Pro Lys Asn Phe Ile His Gly Leu Arg Arg Thr Gly Pro His
450 455 460

Asp Pro Leu Gly Gly Ala Ser Ser Leu Gly Glu Ala Thr Glu Pro Asp
465 470 475 480

Pro Leu Arg Ala Arg Arg Gln Pro Ser Ala Asp Gly Ser Lys Pro Trp
485 490 495

Trp Trp Ser Tyr Phe Thr Ser Leu Ser Thr His Arg Pro Arg Trp Leu
500 505 510

Leu Lys Tyr
515

<210> 11891
<211> 69
<212> PRT
<213> Homo sapiens

<220>
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<220>
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<220>
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<223> /note="Gene Name:
carboxypeptidase Z"

<220>
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<223> /note="ENSP ID: ENSP00000422693"

<400> 11891
Met Pro Pro Pro Leu Pro Leu Leu Leu Leu Thr Val Leu Val Val Ala
1 5 10 15

Ala Ala Arg Pro Gly Cys Glu Phe Glu Arg Asn Pro Ala Gly Glu Cys
20 25 30

His Arg Pro Pro Ala Ala Asp Ser Gly Thr Val Pro Gly Pro Pro Trp
35 40 45

Leu Leu Phe Cys Arg Arg Ala Ala Ala Pro Thr Leu Ser Glu His Phe
50 55 60

Arg Gln Leu Asn Pro
65

<210> 11892

<211> 476

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2353"

<220>

<221> source

<223> /note="Gene Symbol: CPVL"

<220>

<221> source

<223> /note="Gene Name:
carboxypeptidase, vitellogenic-like"

<220>

<221> source

<223> /note="Uniprot ID: Q9H3G5"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000265394"

<400> 11892

Met Val Gly Ala Met Trp Lys Val Ile Val Ser Leu Val Leu Leu Met
1 5 10 15

Pro Gly Pro Cys Asp Gly Leu Phe Arg Ser Leu Tyr Arg Ser Val Ser
20 25 30

Met Pro Pro Lys Gly Asp Ser Gly Gln Pro Leu Phe Leu Thr Pro Tyr
35 40 45

Ile Glu Ala Gly Lys Ile Gln Lys Gly Arg Glu Leu Ser Leu Val Gly
50 55 60

Pro	Phe	Pro	Gly	Leu	Asn	Met	Lys	Ser	Tyr	Ala	Gly	Phe	Leu	Thr	Val	
65					70					75					80	
Asn	Lys	Thr	Tyr	Asn	Ser	Asn	Leu	Phe	Phe	Trp	Phe	Phe	Pro	Ala	Gln	
				85					90					95		
Ile	Gln	Pro	Glu	Asp	Ala	Pro	Val	Val	Leu	Trp	Leu	Gln	Gly	Gly	Pro	
			100					105					110			
Gly	Gly	Ser	Ser	Met	Phe	Gly	Leu	Phe	Val	Glu	His	Gly	Pro	Tyr	Val	
		115					120					125				
Val	Thr	Ser	Asn	Met	Thr	Leu	Arg	Asp	Arg	Asp	Phe	Pro	Trp	Thr	Thr	
	130					135					140					
Thr	Leu	Ser	Met	Leu	Tyr	Ile	Asp	Asn	Pro	Val	Gly	Thr	Gly	Phe	Ser	
145					150					155					160	
Phe	Thr	Asp	Asp	Thr	His	Gly	Tyr	Ala	Val	Asn	Glu	Asp	Asp	Val	Ala	
				165					170					175		
Arg	Asp	Leu	Tyr	Ser	Ala	Leu	Ile	Gln	Phe	Phe	Gln	Ile	Phe	Pro	Glu	
			180					185					190			
Tyr	Lys	Asn	Asn	Asp	Phe	Tyr	Val	Thr	Gly	Glu	Ser	Tyr	Ala	Gly	Lys	
		195					200					205				
Tyr	Val	Pro	Ala	Ile	Ala	His	Leu	Ile	His	Ser	Leu	Asn	Pro	Val	Arg	
	210					215					220					
Glu	Val	Lys	Ile	Asn	Leu	Asn	Gly	Ile	Ala	Ile	Gly	Asp	Gly	Tyr	Ser	
225					230					235					240	
Asp	Pro	Glu	Ser	Ile	Ile	Gly	Gly	Tyr	Ala	Glu	Phe	Leu	Tyr	Gln	Ile	
				245					250					255		
Gly	Leu	Leu	Asp	Glu	Lys	Gln	Lys	Lys	Tyr	Phe	Gln	Lys	Gln	Cys	His	
			260					265					270			
Glu	Cys	Ile	Glu	His	Ile	Arg	Lys	Gln	Asn	Trp	Phe	Glu	Ala	Phe	Glu	
		275					280					285				

Ile Leu Asp Lys Leu Leu Asp Gly Asp Leu Thr Ser Asp Pro Ser Tyr
290 295 300

Phe Gln Asn Val Thr Gly Cys Ser Asn Tyr Tyr Asn Phe Leu Arg Cys
305 310 315 320

Thr Glu Pro Glu Asp Gln Leu Tyr Tyr Val Lys Phe Leu Ser Leu Pro
325 330 335

Glu Val Arg Gln Ala Ile His Val Gly Asn Gln Thr Phe Asn Asp Gly
340 345 350

Thr Ile Val Glu Lys Tyr Leu Arg Glu Asp Thr Val Gln Ser Val Lys
355 360 365

Pro Trp Leu Thr Glu Ile Met Asn Asn Tyr Lys Val Leu Ile Tyr Asn
370 375 380

Gly Gln Leu Asp Ile Ile Val Ala Ala Ala Leu Thr Glu Arg Ser Leu
385 390 395 400

Met Gly Met Asp Trp Lys Gly Ser Gln Glu Tyr Lys Lys Ala Glu Lys
405 410 415

Lys Val Trp Lys Ile Phe Lys Ser Asp Ser Glu Val Ala Gly Tyr Ile
420 425 430

Arg Gln Ala Gly Asp Phe His Gln Val Ile Ile Arg Gly Gly Gly His
435 440 445

Ile Leu Pro Tyr Asp Gln Pro Leu Arg Ala Phe Asp Met Ile Asn Arg
450 455 460

Phe Ile Tyr Gly Lys Gly Trp Asp Pro Tyr Val Gly
465 470 475

<210> 11893

<211> 476

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2353"

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<220>
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<220>
<221> source
<223> /note="Gene Name:
        carboxypeptidase, vitellogenic-like"

<220>
<221> source
<223> /note="Uniprot ID: Q9H3G5"

<220>
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<400> 11893
Met Val Gly Ala Met Trp Lys Val Ile Val Ser Leu Val Leu Leu Met
1          5          10          15

Pro Gly Pro Cys Asp Gly Leu Phe Arg Ser Leu Tyr Arg Ser Val Ser
20          25          30

Met Pro Pro Lys Gly Asp Ser Gly Gln Pro Leu Phe Leu Thr Pro Tyr
35          40          45

Ile Glu Ala Gly Lys Ile Gln Lys Gly Arg Glu Leu Ser Leu Val Gly
50          55          60

Pro Phe Pro Gly Leu Asn Met Lys Ser Tyr Ala Gly Phe Leu Thr Val
65          70          75          80

Asn Lys Thr Tyr Asn Ser Asn Leu Phe Phe Trp Phe Phe Pro Ala Gln
85          90          95

Ile Gln Pro Glu Asp Ala Pro Val Val Leu Trp Leu Gln Gly Gly Pro
100         105         110

Gly Gly Ser Ser Met Phe Gly Leu Phe Val Glu His Gly Pro Tyr Val
115         120         125

Val Thr Ser Asn Met Thr Leu Arg Asp Arg Asp Phe Pro Trp Thr Thr
130         135         140

Thr Leu Ser Met Leu Tyr Ile Asp Asn Pro Val Gly Thr Gly Phe Ser
145         150         155         160

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Phe	Thr	Asp	Asp	Thr	His	Gly	Tyr	Ala	Val	Asn	Glu	Asp	Asp	Val	Ala	
				165					170					175		
Arg	Asp	Leu	Tyr	Ser	Ala	Leu	Ile	Gln	Phe	Phe	Gln	Ile	Phe	Pro	Glu	
			180					185					190			
Tyr	Lys	Asn	Asn	Asp	Phe	Tyr	Val	Thr	Gly	Glu	Ser	Tyr	Ala	Gly	Lys	
		195					200					205				
Tyr	Val	Pro	Ala	Ile	Ala	His	Leu	Ile	His	Ser	Leu	Asn	Pro	Val	Arg	
	210					215					220					
Glu	Val	Lys	Ile	Asn	Leu	Asn	Gly	Ile	Ala	Ile	Gly	Asp	Gly	Tyr	Ser	
225					230					235					240	
Asp	Pro	Glu	Ser	Ile	Ile	Gly	Gly	Tyr	Ala	Glu	Phe	Leu	Tyr	Gln	Ile	
				245					250					255		
Gly	Leu	Leu	Asp	Glu	Lys	Gln	Lys	Lys	Tyr	Phe	Gln	Lys	Gln	Cys	His	
			260					265					270			
Glu	Cys	Ile	Glu	His	Ile	Arg	Lys	Gln	Asn	Trp	Phe	Glu	Ala	Phe	Glu	
		275					280					285				
Ile	Leu	Asp	Lys	Leu	Leu	Asp	Gly	Asp	Leu	Thr	Ser	Asp	Pro	Ser	Tyr	
	290					295					300					
Phe	Gln	Asn	Val	Thr	Gly	Cys	Ser	Asn	Tyr	Tyr	Asn	Phe	Leu	Arg	Cys	
305					310					315					320	
Thr	Glu	Pro	Glu	Asp	Gln	Leu	Tyr	Tyr	Val	Lys	Phe	Leu	Ser	Leu	Pro	
				325					330					335		
Glu	Val	Arg	Gln	Ala	Ile	His	Val	Gly	Asn	Gln	Thr	Phe	Asn	Asp	Gly	
			340					345					350			
Thr	Ile	Val	Glu	Lys	Tyr	Leu	Arg	Glu	Asp	Thr	Val	Gln	Ser	Val	Lys	
		355					360					365				
Pro	Trp	Leu	Thr	Glu	Ile	Met	Asn	Asn	Tyr	Lys	Val	Leu	Ile	Tyr	Asn	
	370					375					380					

Gly Gln Leu Asp Ile Ile Val Ala Ala Ala Leu Thr Glu Arg Ser Leu
385 390 395 400

Met Gly Met Asp Trp Lys Gly Ser Gln Glu Tyr Lys Lys Ala Glu Lys
405 410 415

Lys Val Trp Lys Ile Phe Lys Ser Asp Ser Glu Val Ala Gly Tyr Ile
420 425 430

Arg Gln Ala Gly Asp Phe His Gln Val Ile Ile Arg Gly Gly Gly His
435 440 445

Ile Leu Pro Tyr Asp Gln Pro Leu Arg Ala Phe Asp Met Ile Asn Arg
450 455 460

Phe Ile Tyr Gly Lys Gly Trp Asp Pro Tyr Val Gly
465 470 475

<210> 11894
<211> 476
<212> PRT
<213> Homo sapiens

<220>
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<223> /note="Payload ID: 2353"

<220>
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<223> /note="Gene Name:
carboxypeptidase, vitellogenic-like"

<220>
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<220>
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Met Val Gly Ala Met Trp Lys Val Ile Val Ser Leu Val Leu Leu Met
1 5 10 15

Pro Gly Pro Cys Asp Gly Leu Phe Arg Ser Leu Tyr Arg Ser Val Ser

20					25					30					
Met	Pro	Pro	Lys	Gly	Asp	Ser	Gly	Gln	Pro	Leu	Phe	Leu	Thr	Pro	Tyr
		35					40					45			
Ile	Glu	Ala	Gly	Lys	Ile	Gln	Lys	Gly	Arg	Glu	Leu	Ser	Leu	Val	Gly
	50					55					60				
Pro	Phe	Pro	Gly	Leu	Asn	Met	Lys	Ser	Tyr	Ala	Gly	Phe	Leu	Thr	Val
65					70					75					80
Asn	Lys	Thr	Tyr	Asn	Ser	Asn	Leu	Phe	Phe	Trp	Phe	Phe	Pro	Ala	Gln
				85					90					95	
Ile	Gln	Pro	Glu	Asp	Ala	Pro	Val	Val	Leu	Trp	Leu	Gln	Gly	Gly	Pro
			100					105					110		
Gly	Gly	Ser	Ser	Met	Phe	Gly	Leu	Phe	Val	Glu	His	Gly	Pro	Tyr	Val
		115					120					125			
Val	Thr	Ser	Asn	Met	Thr	Leu	Arg	Asp	Arg	Asp	Phe	Pro	Trp	Thr	Thr
	130					135					140				
Thr	Leu	Ser	Met	Leu	Tyr	Ile	Asp	Asn	Pro	Val	Gly	Thr	Gly	Phe	Ser
145					150					155					160
Phe	Thr	Asp	Asp	Thr	His	Gly	Tyr	Ala	Val	Asn	Glu	Asp	Asp	Val	Ala
				165					170					175	
Arg	Asp	Leu	Tyr	Ser	Ala	Leu	Ile	Gln	Phe	Phe	Gln	Ile	Phe	Pro	Glu
			180					185					190		
Tyr	Lys	Asn	Asn	Asp	Phe	Tyr	Val	Thr	Gly	Glu	Ser	Tyr	Ala	Gly	Lys
		195					200					205			
Tyr	Val	Pro	Ala	Ile	Ala	His	Leu	Ile	His	Ser	Leu	Asn	Pro	Val	Arg
	210					215					220				
Glu	Val	Lys	Ile	Asn	Leu	Asn	Gly	Ile	Ala	Ile	Gly	Asp	Gly	Tyr	Ser
225					230					235					240
Asp	Pro	Glu	Ser	Ile	Ile	Gly	Gly	Tyr	Ala	Glu	Phe	Leu	Tyr	Gln	Ile
				245					250					255	

Gly	Leu	Leu	Asp	Glu	Lys	Gln	Lys	Lys	Tyr	Phe	Gln	Lys	Gln	Cys	His		
			260					265					270				
Glu	Cys	Ile	Glu	His	Ile	Arg	Lys	Gln	Asn	Trp	Phe	Glu	Ala	Phe	Glu		
		275					280					285					
Ile	Leu	Asp	Lys	Leu	Leu	Asp	Gly	Asp	Leu	Thr	Ser	Asp	Pro	Ser	Tyr		
	290					295					300						
Phe	Gln	Asn	Val	Thr	Gly	Cys	Ser	Asn	Tyr	Tyr	Asn	Phe	Leu	Arg	Cys		
305					310					315					320		
Thr	Glu	Pro	Glu	Asp	Gln	Leu	Tyr	Tyr	Val	Lys	Phe	Leu	Ser	Leu	Pro		
				325					330						335		
Glu	Val	Arg	Gln	Ala	Ile	His	Val	Gly	Asn	Gln	Thr	Phe	Asn	Asp	Gly		
			340					345					350				
Thr	Ile	Val	Glu	Lys	Tyr	Leu	Arg	Glu	Asp	Thr	Val	Gln	Ser	Val	Lys		
		355					360					365					
Pro	Trp	Leu	Thr	Glu	Ile	Met	Asn	Asn	Tyr	Lys	Val	Leu	Ile	Tyr	Asn		
	370					375					380						
Gly	Gln	Leu	Asp	Ile	Ile	Val	Ala	Ala	Ala	Leu	Thr	Glu	Arg	Ser	Leu		
385					390					395					400		
Met	Gly	Met	Asp	Trp	Lys	Gly	Ser	Gln	Glu	Tyr	Lys	Lys	Ala	Glu	Lys		
				405					410					415			
Lys	Val	Trp	Lys	Ile	Phe	Lys	Ser	Asp	Ser	Glu	Val	Ala	Gly	Tyr	Ile		
			420					425					430				
Arg	Gln	Ala	Gly	Asp	Phe	His	Gln	Val	Ile	Ile	Arg	Gly	Gly	Gly	His		
		435					440					445					
Ile	Leu	Pro	Tyr	Asp	Gln	Pro	Leu	Arg	Ala	Phe	Asp	Met	Ile	Asn	Arg		
	450					455					460						
Phe	Ile	Tyr	Gly	Lys	Gly	Trp	Asp	Pro	Tyr	Val	Gly						
465					470					475							

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<210> 11895
<211> 141
<212> PRT
<213> Homo sapiens

<220>
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<223> /note="Payload ID: 2353"

<220>
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<223> /note="Gene Symbol: CPVL"

<220>
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<223> /note="Gene Name:
        carboxypeptidase, vitellogenic-like"

<220>
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<223> /note="ENSP ID: ENSP00000395690"

<400> 11895
Met Lys Ser Tyr Ala Gly Phe Leu Thr Val Asn Lys Thr Tyr Asn Ser
1          5          10          15

Asn Leu Phe Phe Trp Phe Phe Pro Ala Gln Ile Gln Pro Glu Asp Ala
          20          25          30

Pro Val Val Leu Trp Leu Gln Gly Gly Pro Gly Gly Ser Ser Met Phe
          35          40          45

Gly Leu Phe Val Glu His Gly Pro Tyr Val Val Thr Ser Asn Met Thr
50          55          60

Leu Arg Asp Arg Asp Phe Pro Trp Thr Thr Thr Leu Ser Met Leu Tyr
65          70          75          80

Ile Asp Asn Pro Val Gly Thr Gly Phe Ser Phe Thr Asp Asp Thr His
          85          90          95

Gly Tyr Ala Val Asn Glu Asp Asp Val Ala Arg Asp Leu Tyr Ser Ala
          100          105          110

Leu Ile Gln Phe Phe Gln Ile Phe Pro Glu Tyr Lys Asn Asn Asp Phe
115          120          125

Tyr Val Thr Gly Glu Ser Tyr Ala Gly Lys Tyr Val Pro

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130

135

140

<210> 11896

<211> 180

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2353"

<220>

<221> source

<223> /note="Gene Symbol: CPVL"

<220>

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<223> /note="Gene Name:
carboxypeptidase, vitellogenic-like"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000397327"

<220>

<221> MOD_RES

<222> (1)..(1)

<223> Any amino acid

<400> 11896

Xaa	Lys	Tyr	Phe	Gln	Lys	Gln	Cys	His	Glu	Cys	Ile	Glu	His	Ile	Arg
1				5					10					15	

Lys	Gln	Asn	Trp	Phe	Glu	Ala	Phe	Glu	Glu	Pro	Glu	Asp	Gln	Leu	Tyr
			20					25					30		

Tyr	Val	Lys	Phe	Leu	Ser	Leu	Pro	Glu	Val	Arg	Gln	Ala	Ile	His	Val
		35					40					45			

Gly	Asn	Gln	Thr	Phe	Asn	Asp	Gly	Thr	Ile	Val	Glu	Lys	Tyr	Leu	Arg
	50					55					60				

Glu	Asp	Thr	Val	Gln	Ser	Val	Lys	Pro	Trp	Leu	Thr	Glu	Ile	Met	Asn
65					70					75					80

Asn	Tyr	Lys	Val	Leu	Ile	Tyr	Asn	Gly	Gln	Leu	Asp	Ile	Ile	Val	Ala
				85					90					95	

Ala	Ala	Leu	Thr	Glu	Arg	Ser	Leu	Met	Gly	Met	Asp	Trp	Lys	Gly	Ser
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

26457

100 105 110
 Gln Glu Tyr Lys Lys Ala Glu Lys Lys Val Trp Lys Ile Phe Lys Ser
 115 120 125
 Asp Ser Glu Val Ala Gly Tyr Ile Arg Gln Ala Gly Asp Phe His Gln
 130 135 140
 Val Ile Ile Arg Gly Gly Gly His Ile Leu Pro Tyr Asp Gln Pro Leu
 145 150 155 160
 Arg Ala Phe Asp Met Ile Asn Arg Phe Ile Tyr Gly Lys Gly Trp Asp
 165 170 175
 Pro Tyr Val Gly
 180

<210> 11897
 <211> 141
 <212> PRT
 <213> Homo sapiens

<220>
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<220>
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 <223> /note="Gene Name:
 carboxypeptidase, vitellogenic-like"

<220>
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<400> 11897
 Ile Ile Gly Gly Tyr Ala Glu Phe Leu Tyr Gln Ile Gly Leu Leu Asp
 1 5 10 15

Glu Lys Gln Lys Lys Tyr Phe Gln Lys Gln Cys His Glu Cys Ile Glu
 20 25 30

His Ile Arg Lys Gln Asn Trp Phe Glu Ala Phe Glu Val Leu Ile Tyr
 35 40 45

Asn Gly Gln Leu Asp Ile Ile Val Ala Ala Ala Leu Thr Glu Arg Ser
50 55 60

Leu Met Gly Met Asp Trp Lys Gly Ser Gln Glu Tyr Lys Lys Ala Glu
65 70 75 80

Lys Lys Val Trp Lys Ile Phe Lys Ser Asp Ser Glu Val Ala Gly Tyr
85 90 95

Ile Arg Gln Ala Gly Asp Phe His Gln Val Ile Ile Arg Gly Gly Gly
100 105 110

His Ile Leu Pro Tyr Asp Gln Pro Leu Arg Ala Phe Asp Met Ile Asn
115 120 125

Arg Phe Ile Tyr Gly Lys Gly Trp Asp Pro Tyr Val Gly
130 135 140

<210> 11898
<211> 244
<212> PRT
<213> Homo sapiens

<220>
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<220>
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<220>
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<223> /note="Gene Name:
carboxypeptidase, vitellogenic-like"

<220>
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<223> /note="ENSP ID: ENSP00000409036"

<400> 11898
Met Lys Ser Tyr Ala Gly Phe Leu Thr Val Asn Lys Thr Tyr Asn Ser
1 5 10 15

Asn Leu Phe Phe Trp Phe Phe Pro Ala Gln Ile Gln Pro Glu Asp Ala
20 25 30

Pro Val Val Leu Trp Leu Gln Gly Gly Pro Gly Gly Ser Ser Met Phe

35					40					45					
Gly	Leu	Phe	Val	Glu	His	Gly	Pro	Tyr	Val	Val	Thr	Ser	Asn	Met	Thr
50						55					60				
Leu	Arg	Asp	Arg	Asp	Phe	Pro	Trp	Thr	Thr	Thr	Leu	Ser	Met	Leu	Tyr
65					70					75					80
Ile	Asp	Asn	Pro	Val	Gly	Thr	Gly	Phe	Ser	Phe	Thr	Asp	Asp	Thr	His
				85					90					95	
Gly	Tyr	Ala	Val	Asn	Glu	Asp	Asp	Val	Ala	Arg	Asp	Leu	Tyr	Ser	Ala
			100					105					110		
Leu	Ile	Gln	Phe	Phe	Gln	Ile	Phe	Pro	Glu	Tyr	Lys	Asn	Asn	Asp	Phe
		115					120					125			
Tyr	Val	Thr	Gly	Glu	Ser	Tyr	Ala	Gly	Lys	Tyr	Val	Pro	Ala	Ile	Ala
	130					135					140				
His	Leu	Ile	His	Ser	Leu	Asn	Pro	Val	Arg	Glu	Val	Lys	Ile	Asn	Leu
145					150					155					160
Asn	Gly	Ile	Ala	Ile	Gly	Asp	Gly	Tyr	Ser	Asp	Pro	Glu	Ser	Ile	Ile
				165					170					175	
Gly	Gly	Tyr	Ala	Glu	Phe	Leu	Tyr	Gln	Ile	Gly	Leu	Leu	Asp	Glu	Lys
			180					185					190		
Gln	Lys	Lys	Tyr	Phe	Gln	Lys	Gln	Cys	His	Glu	Cys	Ile	Glu	His	Ile
		195					200					205			
Arg	Lys	Gln	Asn	Trp	Phe	Glu	Ala	Phe	Glu	Ile	Leu	Asp	Lys	Leu	Leu
	210					215					220				
Asp	Gly	Asp	Leu	Thr	Ser	Asp	Pro	Ser	Tyr	Phe	Gln	Asn	Val	Thr	Gly
225					230					235					240
Cys	Ser	Asn	Tyr												

<210> 11899

<211> 43

26460

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<212> PRT
<213> Homo sapiens

<220>
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<223> /note="Payload ID: 2353"

<220>
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<220>
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<223> /note="Gene Name:
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<220>
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<223> /note="ENSP ID: ENSP00000412857"

<400> 11899
Met Val Gly Ala Met Trp Lys Val Ile Val Ser Leu Val Leu Leu Met
1              5              10              15

Pro Gly Pro Cys Asp Gly Leu Phe Arg Ser Leu Tyr Arg Ser Val Ser
          20              25              30

Met Pro Pro Lys Gly Asp Ser Gly Gln Pro Leu
      35              40

<210> 11900
<211> 52
<212> PRT
<213> Homo sapiens

<220>
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<220>
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<223> /note="Gene Name:
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<220>
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<223> /note="ENSP ID: ENSP00000413287"

<400> 11900
Met Val Gly Ala Met Trp Lys Val Ile Val Ser Leu Val Leu Leu Met

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[illegible]

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<210> 11902
<211> 100
<212> PRT
<213> Homo sapiens

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<220>
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<220>
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<223> /note="Gene Name:
carboxypeptidase, vitellogenic-like"

<220>
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<223> /note="ENSP ID: ENSP00000417015"

<400> 11902
Met Phe Gly Leu Phe Val Glu His Gly Pro Tyr Val Val Thr Ser Asn
1 5 10 15

Met Thr Leu Arg Asp Arg Asp Phe Pro Trp Thr Thr Thr Leu Ser Met
20 25 30

Leu Tyr Ile Asp Asn Pro Val Gly Thr Gly Phe Ser Phe Thr Asp Asp
35 40 45

Thr His Gly Tyr Ala Val Asn Glu Asp Asp Val Ala Arg Asp Leu Tyr
50 55 60

Ser Ala Leu Ile Gln Phe Phe Gln Ile Phe Pro Glu Tyr Lys Asn Asn
65 70 75 80

Asp Phe Tyr Val Thr Gly Glu Ser Tyr Ala Gly Lys Tyr Val Pro Ala
85 90 95

Ile Ala His Leu
100

<210> 11903
<211> 232
<212> PRT
<213> Homo sapiens

<220>
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<220>
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<223> /note="Gene Name:
carboxypeptidase, vitellogenic-like"

<220>
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<400> 11903

Met Phe Gly Leu Phe Val Glu His Gly Pro Tyr Val Val Thr Ser Asn
1 5 10 15

Met Thr Leu Arg Asp Arg Asp Phe Pro Trp Thr Thr Thr Leu Ser Met
20 25 30

Leu Tyr Ile Asp Asn Pro Val Gly Thr Gly Phe Ser Phe Thr Asp Asp
35 40 45

Thr His Gly Tyr Ala Val Asn Glu Asp Asp Val Ala Arg Asp Leu Tyr
50 55 60

Ser Ala Leu Ile Gln Phe Phe Gln Ile Phe Pro Glu Tyr Lys Asn Asn
65 70 75 80

Asp Phe Tyr Val Thr Gly Glu Ser Tyr Ala Gly Lys Tyr Val Pro Ala
85 90 95

Ile Ala His Leu Ile His Ser Leu Asn Pro Val Arg Glu Val Lys Ile
100 105 110

Asn Leu Asn Gly Ile Ala Ile Gly Asp Gly Tyr Ser Asp Pro Glu Ser
115 120 125

Ile Ile Gly Gly Tyr Ala Glu Phe Leu Tyr Gln Ile Gly Leu Leu Asp
130 135 140

Glu Lys Gln Lys Lys Tyr Phe Gln Lys Gln Cys His Glu Cys Ile Glu
145 150 155 160

His Ile Arg Lys Gln Asn Trp Phe Glu Ala Phe Glu Ile Leu Asp Lys
165 170 175

Leu Leu Asp Gly Asp Leu Thr Ser Asp Pro Ser Tyr Phe Gln Asn Val
180 185 190

Thr Gly Cys Ser Asn Tyr Tyr Asn Phe Leu Arg Cys Thr Glu Pro Glu
195 200 205

Asp Gln Leu Tyr Tyr Val Lys Phe Leu Ser Leu Pro Glu Val Arg Gln
210 215 220

Ala Pro Arg Gly Glu Ser Asp Phe
225 230

<210> 11904
<211> 230
<212> PRT
<213> Homo sapiens

<220>
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<223> /note="Payload ID: 2353"

<220>
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<223> /note="Gene Symbol: CPVL"

<220>
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<223> /note="Gene Name:
carboxypeptidase, vitellogenic-like"

<220>
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<223> /note="ENSP ID: ENSP00000481092"

<400> 11904
Met Phe Gly Leu Phe Val Glu His Gly Pro Tyr Val Val Thr Ser Asn
1 5 10 15

Met Thr Leu Arg Asp Arg Asp Phe Pro Trp Thr Thr Thr Leu Ser Met
20 25 30

Leu Tyr Ile Asp Asn Pro Val Gly Thr Gly Phe Ser Phe Thr Asp Asp
35 40 45

Thr His Gly Tyr Ala Val Asn Glu Asp Asp Val Ala Arg Asp Leu Tyr
50 55 60

Ser Ala Leu Ile Gln Phe Phe Gln Ile Phe Pro Glu Tyr Lys Asn Asn
65 70 75 80

Asp Phe Tyr Val Thr Gly Glu Ser Tyr Ala Gly Lys Tyr Val Pro Ala
85 90 95

Ile Ala His Leu Ile His Ser Leu Asn Pro Val Arg Glu Val Lys Ile
100 105 110

Asn Leu Asn Gly Ile Ala Ile Gly Asp Gly Tyr Ser Asp Pro Glu Ser

26465

115					120					125					
Ile	Ile	Gly	Gly	Tyr	Ala	Glu	Phe	Leu	Tyr	Gln	Ile	Gly	Leu	Leu	Asp
	130					135					140				
Glu	Lys	Gln	Lys	Lys	Tyr	Phe	Gln	Lys	Gln	Cys	His	Glu	Cys	Ile	Glu
145					150					155					160
His	Ile	Arg	Lys	Gln	Asn	Trp	Phe	Glu	Ala	Phe	Glu	Ile	Leu	Asp	Lys
				165					170					175	
Leu	Leu	Asp	Gly	Asp	Leu	Thr	Ser	Asp	Pro	Ser	Tyr	Phe	Gln	Asn	Val
			180					185					190		
Thr	Gly	Cys	Ser	Asn	Tyr	Tyr	Asn	Phe	Leu	Arg	Cys	Thr	Glu	Pro	Glu
		195					200					205			
Asp	Gln	Leu	Tyr	Tyr	Val	Lys	Phe	Cys	His	Ser	Gln	Arg	Asp	Lys	Pro
	210					215					220				
Arg	Gly	Glu	Ser	Asp	Phe										
225					230										

<210> 11905

<211> 526

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2354"

<220>

<221> source

<223> /note="Gene Symbol: CEACAM1"

<220>

<221> source

<223> /note="Gene Name:
carcinoembryonic antigen-related cell adhesion
molecule 1 (biliary glycoprotein)"

<220>

<221> source

<223> /note="Uniprot ID: P13688"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000161559"

<400> 11905

Met Gly His Leu Ser Ala Pro Leu His Arg Val Arg Val Pro Trp Gln
1 5 10 15

Gly Leu Leu Leu Thr Ala Ser Leu Leu Thr Phe Trp Asn Pro Pro Thr
20 25 30

Thr Ala Gln Leu Thr Thr Glu Ser Met Pro Phe Asn Val Ala Glu Gly
35 40 45

Lys Glu Val Leu Leu Leu Val His Asn Leu Pro Gln Gln Leu Phe Gly
50 55 60

Tyr Ser Trp Tyr Lys Gly Glu Arg Val Asp Gly Asn Arg Gln Ile Val
65 70 75 80

Gly Tyr Ala Ile Gly Thr Gln Gln Ala Thr Pro Gly Pro Ala Asn Ser
85 90 95

Gly Arg Glu Thr Ile Tyr Pro Asn Ala Ser Leu Leu Ile Gln Asn Val
100 105 110

Thr Gln Asn Asp Thr Gly Phe Tyr Thr Leu Gln Val Ile Lys Ser Asp
115 120 125

Leu Val Asn Glu Glu Ala Thr Gly Gln Phe His Val Tyr Pro Glu Leu
130 135 140

Pro Lys Pro Ser Ile Ser Ser Asn Asn Ser Asn Pro Val Glu Asp Lys
145 150 155 160

Asp Ala Val Ala Phe Thr Cys Glu Pro Glu Thr Gln Asp Thr Thr Tyr
165 170 175

Leu Trp Trp Ile Asn Asn Gln Ser Leu Pro Val Ser Pro Arg Leu Gln
180 185 190

Leu Ser Asn Gly Asn Arg Thr Leu Thr Leu Leu Ser Val Thr Arg Asn
195 200 205

Asp Thr Gly Pro Tyr Glu Cys Glu Ile Gln Asn Pro Val Ser Ala Asn
210 215 220

Arg	Ser	Asp	Pro	Val	Thr	Leu	Asn	Val	Thr	Tyr	Gly	Pro	Asp	Thr	Pro	225	230	235	240
Thr	Ile	Ser	Pro	Ser	Asp	Thr	Tyr	Tyr	Arg	Pro	Gly	Ala	Asn	Leu	Ser	245	250	255	
Leu	Ser	Cys	Tyr	Ala	Ala	Ser	Asn	Pro	Pro	Ala	Gln	Tyr	Ser	Trp	Leu	260	265	270	
Ile	Asn	Gly	Thr	Phe	Gln	Gln	Ser	Thr	Gln	Glu	Leu	Phe	Ile	Pro	Asn	275	280	285	
Ile	Thr	Val	Asn	Asn	Ser	Gly	Ser	Tyr	Thr	Cys	His	Ala	Asn	Asn	Ser	290	295	300	
Val	Thr	Gly	Cys	Asn	Arg	Thr	Thr	Val	Lys	Thr	Ile	Ile	Val	Thr	Glu	305	310	315	320
Leu	Ser	Pro	Val	Val	Ala	Lys	Pro	Gln	Ile	Lys	Ala	Ser	Lys	Thr	Thr	325	330	335	
Val	Thr	Gly	Asp	Lys	Asp	Ser	Val	Asn	Leu	Thr	Cys	Ser	Thr	Asn	Asp	340	345	350	
Thr	Gly	Ile	Ser	Ile	Arg	Trp	Phe	Phe	Lys	Asn	Gln	Ser	Leu	Pro	Ser	355	360	365	
Ser	Glu	Arg	Met	Lys	Leu	Ser	Gln	Gly	Asn	Thr	Thr	Leu	Ser	Ile	Asn	370	375	380	
Pro	Val	Lys	Arg	Glu	Asp	Ala	Gly	Thr	Tyr	Trp	Cys	Glu	Val	Phe	Asn	385	390	395	400
Pro	Ile	Ser	Lys	Asn	Gln	Ser	Asp	Pro	Ile	Met	Leu	Asn	Val	Asn	Tyr	405	410	415	
Asn	Ala	Leu	Pro	Gln	Glu	Asn	Gly	Leu	Ser	Pro	Gly	Ala	Ile	Ala	Gly	420	425	430	
Ile	Val	Ile	Gly	Val	Val	Ala	Leu	Val	Ala	Leu	Ile	Ala	Val	Ala	Leu	435	440	445	

Ala Cys Phe Leu His Phe Gly Lys Thr Gly Arg Ala Ser Asp Gln Arg
450 455 460

Asp Leu Thr Glu His Lys Pro Ser Val Ser Asn His Thr Gln Asp His
465 470 475 480

Ser Asn Asp Pro Pro Asn Lys Met Asn Glu Val Thr Tyr Ser Thr Leu
485 490 495

Asn Phe Glu Ala Gln Gln Pro Thr Gln Pro Thr Ser Ala Ser Pro Ser
500 505 510

Leu Thr Ala Thr Glu Ile Ile Tyr Ser Glu Val Lys Lys Gln
515 520 525

<210> 11906
<211> 430
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<213> Homo sapiens

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<220>
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<223> /note="Gene Name:
carcinoembryonic antigen-related cell adhesion
molecule 1 (biliary glycoprotein)"

<220>
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Gly Leu Leu Leu Thr Ala Ser Leu Leu Thr Phe Trp Asn Pro Pro Thr
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Thr Ala Gln Leu Thr Thr Glu Ser Met Pro Phe Asn Val Ala Glu Gly

35					40					45					
Lys	Glu	Val	Leu	Leu	Leu	Val	His	Asn	Leu	Pro	Gln	Gln	Leu	Phe	Gly
50						55					60				
Tyr	Ser	Trp	Tyr	Lys	Gly	Glu	Arg	Val	Asp	Gly	Asn	Arg	Gln	Ile	Val
65					70					75					80
Gly	Tyr	Ala	Ile	Gly	Thr	Gln	Gln	Ala	Thr	Pro	Gly	Pro	Ala	Asn	Ser
				85					90					95	
Gly	Arg	Glu	Thr	Ile	Tyr	Pro	Asn	Ala	Ser	Leu	Leu	Ile	Gln	Asn	Val
			100					105					110		
Thr	Gln	Asn	Asp	Thr	Gly	Phe	Tyr	Thr	Leu	Gln	Val	Ile	Lys	Ser	Asp
		115					120					125			
Leu	Val	Asn	Glu	Glu	Ala	Thr	Gly	Gln	Phe	His	Val	Tyr	Pro	Glu	Leu
	130					135					140				
Pro	Lys	Pro	Ser	Ile	Ser	Ser	Asn	Asn	Ser	Asn	Pro	Val	Glu	Asp	Lys
145					150					155					160
Asp	Ala	Val	Ala	Phe	Thr	Cys	Glu	Pro	Glu	Thr	Gln	Asp	Thr	Thr	Tyr
				165					170					175	
Leu	Trp	Trp	Ile	Asn	Asn	Gln	Ser	Leu	Pro	Val	Ser	Pro	Arg	Leu	Gln
			180					185					190		
Leu	Ser	Asn	Gly	Asn	Arg	Thr	Leu	Thr	Leu	Leu	Ser	Val	Thr	Arg	Asn
		195					200					205			
Asp	Thr	Gly	Pro	Tyr	Glu	Cys	Glu	Ile	Gln	Asn	Pro	Val	Ser	Ala	Asn
	210					215					220				
Arg	Ser	Asp	Pro	Val	Thr	Leu	Asn	Val	Thr	Tyr	Gly	Pro	Asp	Thr	Pro
225					230					235					240
Thr	Ile	Ser	Pro	Ser	Asp	Thr	Tyr	Tyr	Arg	Pro	Gly	Ala	Asn	Leu	Ser
				245					250					255	
Leu	Ser	Cys	Tyr	Ala	Ala	Ser	Asn	Pro	Pro	Ala	Gln	Tyr	Ser	Trp	Leu
			260					265					270		

Ile Asn Gly Thr Phe Gln Gln Ser Thr Gln Glu Leu Phe Ile Pro Asn
275 280 285

Ile Thr Val Asn Asn Ser Gly Ser Tyr Thr Cys His Ala Asn Asn Ser
290 295 300

Val Thr Gly Cys Asn Arg Thr Thr Val Lys Thr Ile Ile Val Thr Asp
305 310 315 320

Asn Ala Leu Pro Gln Glu Asn Gly Leu Ser Pro Gly Ala Ile Ala Gly
325 330 335

Ile Val Ile Gly Val Val Ala Leu Val Ala Leu Ile Ala Val Ala Leu
340 345 350

Ala Cys Phe Leu His Phe Gly Lys Thr Gly Arg Ala Ser Asp Gln Arg
355 360 365

Asp Leu Thr Glu His Lys Pro Ser Val Ser Asn His Thr Gln Asp His
370 375 380

Ser Asn Asp Pro Pro Asn Lys Met Asn Glu Val Thr Tyr Ser Thr Leu
385 390 395 400

Asn Phe Glu Ala Gln Gln Pro Thr Gln Pro Thr Ser Ala Ser Pro Ser
405 410 415

Leu Thr Ala Thr Glu Ile Ile Tyr Ser Glu Val Lys Lys Gln
420 425 430

<210> 11907

<211> 461

<212> PRT

<213> Homo sapiens

<220>

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<223> /note="Gene Name:
carcinoembryonic antigen-related cell adhesion
molecule 1 (biliary glycoprotein) "

<220>

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<400> 11907

Met Gly His Leu Ser Ala Pro Leu His Arg Val Arg Val Pro Trp Gln
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Gly Leu Leu Leu Thr Ala Ser Leu Leu Thr Phe Trp Asn Pro Pro Thr
20 25 30

Thr Ala Gln Leu Thr Thr Glu Ser Met Pro Phe Asn Val Ala Glu Gly
35 40 45

Lys Glu Val Leu Leu Leu Val His Asn Leu Pro Gln Gln Leu Phe Gly
50 55 60

Tyr Ser Trp Tyr Lys Gly Glu Arg Val Asp Gly Asn Arg Gln Ile Val
65 70 75 80

Gly Tyr Ala Ile Gly Thr Gln Gln Ala Thr Pro Gly Pro Ala Asn Ser
85 90 95

Gly Arg Glu Thr Ile Tyr Pro Asn Ala Ser Leu Leu Ile Gln Asn Val
100 105 110

Thr Gln Asn Asp Thr Gly Phe Tyr Thr Leu Gln Val Ile Lys Ser Asp
115 120 125

Leu Val Asn Glu Glu Ala Thr Gly Gln Phe His Val Tyr Pro Glu Leu
130 135 140

Pro Lys Pro Ser Ile Ser Ser Asn Asn Ser Asn Pro Val Glu Asp Lys
145 150 155 160

Asp Ala Val Ala Phe Thr Cys Glu Pro Glu Thr Gln Asp Thr Thr Tyr
165 170 175

Leu Trp Trp Ile Asn Asn Gln Ser Leu Pro Val Ser Pro Arg Leu Gln
 180 185 190

Leu Ser Asn Gly Asn Arg Thr Leu Thr Leu Leu Ser Val Thr Arg Asn
 195 200 205

Asp Thr Gly Pro Tyr Glu Cys Glu Ile Gln Asn Pro Val Ser Ala Asn
 210 215 220

Arg Ser Asp Pro Val Thr Leu Asn Val Thr Tyr Gly Pro Asp Thr Pro
 225 230 235 240

Thr Ile Ser Pro Ser Asp Thr Tyr Tyr Arg Pro Gly Ala Asn Leu Ser
 245 250 255

Leu Ser Cys Tyr Ala Ala Ser Asn Pro Pro Ala Gln Tyr Ser Trp Leu
 260 265 270

Ile Asn Gly Thr Phe Gln Gln Ser Thr Gln Glu Leu Phe Ile Pro Asn
 275 280 285

Ile Thr Val Asn Asn Ser Gly Ser Tyr Thr Cys His Ala Asn Asn Ser
 290 295 300

Val Thr Gly Cys Asn Arg Thr Thr Val Lys Thr Ile Ile Val Thr Glu
 305 310 315 320

Arg Gln Asn Leu Thr Met Leu Pro Arg Leu Asp Ser Asn Ser Trp Ala
 325 330 335

Gln Ala Ile Leu Pro Ser Val Ser Gln Ser Ala Glu Ile Thr Asp Asn
 340 345 350

Ala Leu Pro Gln Glu Asn Gly Leu Ser Pro Gly Ala Ile Ala Gly Ile
 355 360 365

Val Ile Gly Val Val Ala Leu Val Ala Leu Ile Ala Val Ala Leu Ala
 370 375 380

Cys Phe Leu His Phe Gly Lys Thr Gly Arg Ala Ser Asp Gln Arg Asp
 385 390 395 400

Leu Thr Glu His Lys Pro Ser Val Ser Asn His Thr Gln Asp His Ser

405

410

415

Asn Asp Pro Pro Asn Lys Met Asn Glu Val Thr Tyr Ser Thr Leu Asn
 420 425 430

Phe Glu Ala Gln Gln Pro Thr Gln Pro Thr Ser Ala Ser Pro Ser Leu
 435 440 445

Thr Ala Thr Glu Ile Ile Tyr Ser Glu Val Lys Lys Gln
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<210> 11908

<211> 368

<212> PRT

<213> Homo sapiens

<220>

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<223> /note="Gene Symbol: CEACAM1"

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<223> /note="Gene Name:
 carcinoembryonic antigen-related cell adhesion
 molecule 1 (biliary glycoprotein)"

<220>

<221> source

<223> /note="Uniprot ID: P13688"

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<223> /note="ENSP ID: ENSP00000384083"

<400> 11908

Met Gly His Leu Ser Ala Pro Leu His Arg Val Arg Val Pro Trp Gln
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Gly Leu Leu Leu Thr Ala Ser Leu Leu Thr Phe Trp Asn Pro Pro Thr
 20 25 30

Thr Ala Gln Leu Thr Thr Glu Ser Met Pro Phe Asn Val Ala Glu Gly
 35 40 45

Lys Glu Val Leu Leu Leu Val His Asn Leu Pro Gln Gln Leu Phe Gly
 50 55 60

26474

Tyr	Ser	Trp	Tyr	Lys	Gly	Glu	Arg	Val	Asp	Gly	Asn	Arg	Gln	Ile	Val	
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Gly	Tyr	Ala	Ile	Gly	Thr	Gln	Gln	Ala	Thr	Pro	Gly	Pro	Ala	Asn	Ser	
				85					90					95		
Gly	Arg	Glu	Thr	Ile	Tyr	Pro	Asn	Ala	Ser	Leu	Leu	Ile	Gln	Asn	Val	
			100					105					110			
Thr	Gln	Asn	Asp	Thr	Gly	Phe	Tyr	Thr	Leu	Gln	Val	Ile	Lys	Ser	Asp	
		115					120					125				
Leu	Val	Asn	Glu	Glu	Ala	Thr	Gly	Gln	Phe	His	Val	Tyr	Pro	Glu	Leu	
	130						135				140					
Pro	Lys	Pro	Ser	Ile	Ser	Ser	Asn	Asn	Ser	Asn	Pro	Val	Glu	Asp	Lys	
145					150					155					160	
Asp	Ala	Val	Ala	Phe	Thr	Cys	Glu	Pro	Glu	Thr	Gln	Asp	Thr	Thr	Tyr	
				165					170					175		
Leu	Trp	Trp	Ile	Asn	Asn	Gln	Ser	Leu	Pro	Val	Ser	Pro	Arg	Leu	Gln	
			180					185					190			
Leu	Ser	Asn	Gly	Asn	Arg	Thr	Leu	Thr	Leu	Leu	Ser	Val	Thr	Arg	Asn	
		195					200					205				
Asp	Thr	Gly	Pro	Tyr	Glu	Cys	Glu	Ile	Gln	Asn	Pro	Val	Ser	Ala	Asn	
	210					215					220					
Arg	Ser	Asp	Pro	Val	Thr	Leu	Asn	Val	Thr	Tyr	Gly	Pro	Asp	Thr	Pro	
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Thr	Ile	Ser	Pro	Ser	Asp	Thr	Tyr	Tyr	Arg	Pro	Gly	Ala	Asn	Leu	Ser	
				245					250					255		
Leu	Ser	Cys	Tyr	Ala	Ala	Ser	Asn	Pro	Pro	Ala	Gln	Tyr	Ser	Trp	Leu	
			260					265					270			
Ile	Asn	Gly	Thr	Phe	Gln	Gln	Ser	Thr	Gln	Glu	Leu	Phe	Ile	Pro	Asn	
		275					280					285				

Ile Thr Val Asn Asn Ser Gly Ser Tyr Thr Cys His Ala Asn Asn Ser
290 295 300

Val Thr Gly Cys Asn Arg Thr Thr Val Lys Thr Ile Ile Val Thr Asp
305 310 315 320

Asn Ala Leu Pro Gln Glu Asn Gly Leu Ser Pro Gly Ala Ile Ala Gly
325 330 335

Ile Val Ile Gly Val Val Ala Leu Val Ala Leu Ile Ala Val Ala Leu
340 345 350

Ala Cys Phe Leu His Phe Gly Lys Thr Gly Ser Ser Gly Pro Leu Gln
355 360 365

<210> 11909
<211> 464
<212> PRT
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carcinoembryonic antigen-related cell adhesion
molecule 1 (biliary glycoprotein)"

<220>
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<400> 11909
Met Gly His Leu Ser Ala Pro Leu His Arg Val Arg Val Pro Trp Gln
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Gly Leu Leu Leu Thr Ala Ser Leu Leu Thr Phe Trp Asn Pro Pro Thr
20 25 30

Thr	Ala	Gln	Leu	Thr	Thr	Glu	Ser	Met	Pro	Phe	Asn	Val	Ala	Glu	Gly			
		35					40					45						
Lys	Glu	Val	Leu	Leu	Leu	Val	His	Asn	Leu	Pro	Gln	Gln	Leu	Phe	Gly			
	50					55					60							
Tyr	Ser	Trp	Tyr	Lys	Gly	Glu	Arg	Val	Asp	Gly	Asn	Arg	Gln	Ile	Val			
65					70					75					80			
Gly	Tyr	Ala	Ile	Gly	Thr	Gln	Gln	Ala	Thr	Pro	Gly	Pro	Ala	Asn	Ser			
				85					90					95				
Gly	Arg	Glu	Thr	Ile	Tyr	Pro	Asn	Ala	Ser	Leu	Leu	Ile	Gln	Asn	Val			
			100					105					110					
Thr	Gln	Asn	Asp	Thr	Gly	Phe	Tyr	Thr	Leu	Gln	Val	Ile	Lys	Ser	Asp			
		115					120					125						
Leu	Val	Asn	Glu	Glu	Ala	Thr	Gly	Gln	Phe	His	Val	Tyr	Pro	Glu	Leu			
	130					135					140							
Pro	Lys	Pro	Ser	Ile	Ser	Ser	Asn	Asn	Ser	Asn	Pro	Val	Glu	Asp	Lys			
145					150					155					160			
Asp	Ala	Val	Ala	Phe	Thr	Cys	Glu	Pro	Glu	Thr	Gln	Asp	Thr	Thr	Tyr			
				165					170					175				
Leu	Trp	Trp	Ile	Asn	Asn	Gln	Ser	Leu	Pro	Val	Ser	Pro	Arg	Leu	Gln			
			180					185					190					
Leu	Ser	Asn	Gly	Asn	Arg	Thr	Leu	Thr	Leu	Leu	Ser	Val	Thr	Arg	Asn			
		195					200					205						
Asp	Thr	Gly	Pro	Tyr	Glu	Cys	Glu	Ile	Gln	Asn	Pro	Val	Ser	Ala	Asn			
	210					215					220							
Arg	Ser	Asp	Pro	Val	Thr	Leu	Asn	Val	Thr	Tyr	Gly	Pro	Asp	Thr	Pro			
225					230					235					240			
Thr	Ile	Ser	Pro	Ser	Asp	Thr	Tyr	Tyr	Arg	Pro	Gly	Ala	Asn	Leu	Ser			
				245					250					255				
Leu	Ser	Cys	Tyr	Ala	Ala	Ser	Asn	Pro	Pro	Ala	Gln	Tyr	Ser	Trp	Leu			

260	265	270														
Ile	Asn	Gly	Thr	Phe	Gln	Gln	Ser	Thr	Gln	Glu	Leu	Phe	Ile	Pro	Asn	
		275					280					285				
Ile	Thr	Val	Asn	Asn	Ser	Gly	Ser	Tyr	Thr	Cys	His	Ala	Asn	Asn	Ser	
	290					295					300					
Val	Thr	Gly	Cys	Asn	Arg	Thr	Thr	Val	Lys	Thr	Ile	Ile	Val	Thr	Glu	
305					310					315					320	
Leu	Ser	Pro	Val	Val	Ala	Lys	Pro	Gln	Ile	Lys	Ala	Ser	Lys	Thr	Thr	
				325					330					335		
Val	Thr	Gly	Asp	Lys	Asp	Ser	Val	Asn	Leu	Thr	Cys	Ser	Thr	Asn	Asp	
			340					345					350			
Thr	Gly	Ile	Ser	Ile	Arg	Trp	Phe	Phe	Lys	Asn	Gln	Ser	Leu	Pro	Ser	
		355					360					365				
Ser	Glu	Arg	Met	Lys	Leu	Ser	Gln	Gly	Asn	Thr	Thr	Leu	Ser	Ile	Asn	
	370					375					380					
Pro	Val	Lys	Arg	Glu	Asp	Ala	Gly	Thr	Tyr	Trp	Cys	Glu	Val	Phe	Asn	
385					390					395					400	
Pro	Ile	Ser	Lys	Asn	Gln	Ser	Asp	Pro	Ile	Met	Leu	Asn	Val	Asn	Tyr	
				405					410					415		
Asn	Ala	Leu	Pro	Gln	Glu	Asn	Gly	Leu	Ser	Pro	Gly	Ala	Ile	Ala	Gly	
			420					425					430			
Ile	Val	Ile	Gly	Val	Val	Ala	Leu	Val	Ala	Leu	Ile	Ala	Val	Ala	Leu	
		435					440					445				
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<210> 11910

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<212> PRT

<213> Homo sapiens

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<220>
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<223> /note="Gene Name:
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      molecule 1 (biliary glycoprotein)"

<220>
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<223> /note="ENSP ID: ENSP00000471566"

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Met Pro Phe Asn Val Ala Glu Gly Lys Glu Val Leu Leu Leu Val His
1          5          10          15

Asn Leu Pro Gln Gln Leu Phe Gly Tyr Ser Trp Tyr Lys Gly Glu Arg
          20          25          30

Val Asp Gly Asn Arg Gln Ile Val Gly Tyr Ala Ile Gly Thr Gln Gln
          35          40          45

Ala Thr Pro Gly Pro Ala Asn Ser Gly Arg Glu Thr Ile Tyr Pro Asn
          50          55          60

Ala Ser Leu Leu Ile Gln Asn Val Thr Gln Asn Asp Thr Gly Phe Tyr
65          70          75          80

Thr Leu Gln Val Ile Lys Ser Asp Leu Val Asn Glu Glu Ala Thr Gly
          85          90          95

Gln Phe His

<210> 11911
<211> 399
<212> PRT
<213> Homo sapiens

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<223> /note="Gene Symbol: CEACAM1"

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<223> /note="Gene Name:
carcinoembryonic antigen-related cell adhesion
molecule 1 (biliary glycoprotein)"

<220>

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<223> /note="Uniprot ID: P13688"

<220>

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<223> /note="ENSP ID: ENSP00000471918"

<400> 11911

Met Gly His Leu Ser Ala Pro Leu His Arg Val Arg Val Pro Trp Gln
1 5 10 15

Gly Leu Leu Leu Thr Ala Ser Leu Leu Thr Phe Trp Asn Pro Pro Thr
20 25 30

Thr Ala Gln Leu Thr Thr Glu Ser Met Pro Phe Asn Val Ala Glu Gly
35 40 45

Lys Glu Val Leu Leu Leu Val His Asn Leu Pro Gln Gln Leu Phe Gly
50 55 60

Tyr Ser Trp Tyr Lys Gly Glu Arg Val Asp Gly Asn Arg Gln Ile Val
65 70 75 80

Gly Tyr Ala Ile Gly Thr Gln Gln Ala Thr Pro Gly Pro Ala Asn Ser
85 90 95

Gly Arg Glu Thr Ile Tyr Pro Asn Ala Ser Leu Leu Ile Gln Asn Val
100 105 110

Thr Gln Asn Asp Thr Gly Phe Tyr Thr Leu Gln Val Ile Lys Ser Asp
115 120 125

Leu Val Asn Glu Glu Ala Thr Gly Gln Phe His Val Tyr Pro Glu Leu
130 135 140

Pro Lys Pro Ser Ile Ser Ser Asn Asn Ser Asn Pro Val Glu Asp Lys
145 150 155 160

Asp	Ala	Val	Ala	Phe	Thr	Cys	Glu	Pro	Glu	Thr	Gln	Asp	Thr	Thr	Tyr	
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Leu	Trp	Trp	Ile	Asn	Asn	Gln	Ser	Leu	Pro	Val	Ser	Pro	Arg	Leu	Gln	
			180					185					190			
Leu	Ser	Asn	Gly	Asn	Arg	Thr	Leu	Thr	Leu	Leu	Ser	Val	Thr	Arg	Asn	
		195					200					205				
Asp	Thr	Gly	Pro	Tyr	Glu	Cys	Glu	Ile	Gln	Asn	Pro	Val	Ser	Ala	Asn	
	210					215					220					
Arg	Ser	Asp	Pro	Val	Thr	Leu	Asn	Val	Thr	Tyr	Gly	Pro	Asp	Thr	Pro	
225					230					235					240	
Thr	Ile	Ser	Pro	Ser	Asp	Thr	Tyr	Tyr	Arg	Pro	Gly	Ala	Asn	Leu	Ser	
				245					250					255		
Leu	Ser	Cys	Tyr	Ala	Ala	Ser	Asn	Pro	Pro	Ala	Gln	Tyr	Ser	Trp	Leu	
			260					265					270			
Ile	Asn	Gly	Thr	Phe	Gln	Gln	Ser	Thr	Gln	Glu	Leu	Phe	Ile	Pro	Asn	
		275					280					285				
Ile	Thr	Val	Asn	Asn	Ser	Gly	Ser	Tyr	Thr	Cys	His	Ala	Asn	Asn	Ser	
	290					295					300					
Val	Thr	Gly	Cys	Asn	Arg	Thr	Thr	Val	Lys	Thr	Ile	Ile	Val	Thr	Glu	
305					310					315					320	
Met	Ala	Phe	His	His	Val	Ala	Lys	Ala	Gly	Leu	Lys	Leu	Leu	Ser	Ser	
				325					330					335		
Ser	Asn	Pro	Pro	Ala	Ser	Thr	Ser	Gln	Ser	Ala	Lys	Ile	Thr	Asp	Asn	
			340					345					350			
Ala	Leu	Pro	Gln	Glu	Asn	Gly	Leu	Ser	Pro	Gly	Ala	Ile	Ala	Gly	Ile	
		355					360					365				
Val	Ile	Gly	Val	Val	Ala	Leu	Val	Ala	Leu	Ile	Ala	Val	Ala	Leu	Ala	
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385

390

395

<210> 11912

<211> 94

<212> PRT

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<223> /note="Gene Name:
carcinoembryonic antigen-related cell adhesion
molecule 1 (biliary glycoprotein)"

<220>

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<223> /note="ENSP ID: ENSP00000472633"

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Met Pro Phe Asn Val Ala Glu Gly Lys Glu Val Leu Leu Leu Val His
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20 25 30Val Asp Gly Asn Arg Gln Ile Val Gly Tyr Ala Ile Gly Thr Gln Gln
35 40 45Ala Thr Pro Gly Pro Ala Asn Ser Gly Arg Glu Thr Ile Tyr Pro Asn
50 55 60Ala Ser Leu Leu Ile Gln Asn Val Thr Gln Asn Asp Thr Gly Phe Tyr
65 70 75 80Thr Leu Gln Val Ile Lys Ser Asp Leu Val Asn Glu Glu Ala
85 90

<210> 11913

<211> 425

<212> PRT

<213> Homo sapiens

<220>

26482

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<223> /note="Gene Symbol: CEACAM16"

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<223> /note="Gene Name:
        carcinoembryonic antigen-related cell adhesion
        molecule 16"

<220>
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<223> /note="Uniprot ID: Q2WEN9"

<220>
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Met Ala Leu Thr Gly Tyr Ser Trp Leu Leu Leu Ser Ala Thr Phe Leu
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Asn Val Gly Ala Glu Ile Ser Ile Thr Leu Glu Pro Ala Gln Pro Ser
          20          25          30

Glu Gly Asp Asn Val Thr Leu Val Val His Gly Leu Ser Gly Glu Leu
          35          40          45

Leu Ala Tyr Ser Trp Tyr Ala Gly Pro Thr Leu Ser Val Ser Tyr Leu
          50          55          60

Val Ala Ser Tyr Ile Val Ser Thr Gly Asp Glu Thr Pro Gly Pro Ala
65          70          75          80

His Thr Gly Arg Glu Ala Val Arg Pro Asp Gly Ser Leu Asp Ile Gln
          85          90          95

Gly Ile Leu Pro Arg His Ser Gly Thr Tyr Ile Leu Gln Thr Phe Asn
          100          105          110

Arg Gln Leu Gln Thr Glu Val Gly Tyr Gly His Val Gln Val His Glu
          115          120          125

Ile Leu Ala Gln Pro Thr Val Leu Ala Asn Ser Thr Ala Leu Val Glu
          130          135          140

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Arg	Arg	Asp	Thr	Leu	Arg	Leu	Met	Cys	Ser	Ser	Pro	Ser	Pro	Thr	Ala
145					150					155					160
Glu	Val	Arg	Trp	Phe	Phe	Asn	Gly	Gly	Ala	Leu	Pro	Val	Ala	Leu	Arg
				165					170					175	
Leu	Gly	Leu	Ser	Pro	Asp	Gly	Arg	Val	Leu	Ala	Arg	His	Gly	Ile	Arg
			180					185					190		
Arg	Glu	Glu	Ala	Gly	Ala	Tyr	Gln	Cys	Glu	Val	Trp	Asn	Pro	Val	Ser
		195					200					205			
Val	Ser	Arg	Ser	Glu	Pro	Ile	Asn	Leu	Thr	Val	Tyr	Phe	Gly	Pro	Glu
	210					215					220				
Arg	Val	Ala	Ile	Leu	Gln	Asp	Ser	Thr	Thr	Arg	Thr	Gly	Cys	Thr	Ile
225					230					235					240
Lys	Val	Asp	Phe	Asn	Thr	Ser	Leu	Thr	Leu	Trp	Cys	Val	Ser	Arg	Ser
				245					250					255	
Cys	Pro	Glu	Pro	Glu	Tyr	Val	Trp	Thr	Phe	Asn	Gly	Gln	Ala	Leu	Lys
			260					265					270		
Asn	Gly	Gln	Asp	His	Leu	Asn	Ile	Ser	Ser	Met	Thr	Ala	Ala	Gln	Glu
		275					280					285			
Gly	Thr	Tyr	Thr	Cys	Ile	Ala	Lys	Asn	Thr	Lys	Thr	Leu	Leu	Ser	Gly
	290					295					300				
Ser	Ala	Ser	Val	Val	Val	Lys	Leu	Ser	Ala	Ala	Ala	Val	Ala	Thr	Met
305					310					315					320
Ile	Val	Pro	Val	Pro	Thr	Lys	Pro	Thr	Glu	Gly	Gln	Asp	Val	Thr	Leu
				325					330					335	
Thr	Val	Gln	Gly	Tyr	Pro	Lys	Asp	Leu	Leu	Val	Tyr	Ala	Trp	Tyr	Arg
			340					345					350		
Gly	Pro	Ala	Ser	Glu	Pro	Asn	Arg	Leu	Leu	Ser	Gln	Leu	Pro	Ser	Gly
		355					360					365			

Thr Trp Ile Ala Gly Pro Ala His Thr Gly Arg Glu Val Gly Phe Pro
370 375 380

Asn Cys Ser Leu Leu Val Gln Lys Leu Asn Leu Thr Asp Thr Gly Arg
385 390 395 400

Tyr Thr Leu Lys Thr Val Thr Val Gln Gly Lys Thr Glu Thr Leu Glu
405 410 415

Val Glu Leu Gln Val Ala Pro Leu Gly
420 425

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<223> /note="Uniprot ID: Q2WEN9"

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Met Ala Leu Thr Gly Tyr Ser Trp Leu Leu Leu Ser Ala Thr Phe Leu
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Asn Val Gly Ala Glu Ile Ser Ile Thr Leu Glu Pro Ala Gln Pro Ser
20 25 30

Glu Gly Asp Asn Val Thr Leu Val Val His Gly Leu Ser Gly Glu Leu
35 40 45

Leu Ala Tyr Ser Trp Tyr Ala Gly Pro Thr Leu Ser Val Ser Tyr Leu

50					55					60					
Val 65	Ala	Ser	Tyr	Ile	Val 70	Ser	Thr	Gly	Asp	Glu 75	Thr	Pro	Gly	Pro	Ala 80
His	Thr	Gly	Arg	Glu 85	Ala	Val	Arg	Pro	Asp 90	Gly	Ser	Leu	Asp	Ile 95	Gln
Gly	Ile	Leu	Pro 100	Arg	His	Ser	Gly	Thr 105	Tyr	Ile	Leu	Gln	Thr 110	Phe	Asn
Arg	Gln	Leu 115	Gln	Thr	Glu	Val	Gly 120	Tyr	Gly	His	Val	Gln 125	Val	His	Glu
Ile	Leu 130	Ala	Gln	Pro	Thr	Val 135	Leu	Ala	Asn	Ser	Thr 140	Ala	Leu	Val	Glu
Arg 145	Arg	Asp	Thr	Leu	Arg 150	Leu	Met	Cys	Ser	Ser 155	Pro	Ser	Pro	Thr	Ala 160
Glu	Val	Arg	Trp	Phe 165	Phe	Asn	Gly	Gly	Ala 170	Leu	Pro	Val	Ala	Leu 175	Arg
Leu	Gly	Leu	Ser 180	Pro	Asp	Gly	Arg	Val 185	Leu	Ala	Arg	His	Gly 190	Ile	Arg
Arg	Glu	Glu 195	Ala	Gly	Ala	Tyr	Gln 200	Cys	Glu	Val	Trp	Asn 205	Pro	Val	Ser
Val 210	Ser	Arg	Ser	Glu	Pro	Ile 215	Asn	Leu	Thr	Val	Tyr 220	Phe	Gly	Pro	Glu
Arg 225	Val	Ala	Ile	Leu	Gln 230	Asp	Ser	Thr	Thr	Arg 235	Thr	Gly	Cys	Thr	Ile 240
Lys	Val	Asp	Phe	Asn 245	Thr	Ser	Leu	Thr	Leu 250	Trp	Cys	Val	Ser	Arg 255	Ser
Cys	Pro	Glu	Pro 260	Glu	Tyr	Val	Trp	Thr 265	Phe	Asn	Gly	Gln	Ala 270	Leu	Lys
Asn	Gly 275	Gln	Asp	His	Leu	Asn	Ile 280	Ser	Ser	Met	Thr	Ala 285	Ala	Gln	Glu

Gly Thr Tyr Thr Cys Ile Ala Lys Asn Thr Lys Thr Leu Leu Ser Gly
 290 295 300

Ser Ala Ser Val Val Val Lys Leu Ser Ala Ala Ala Val Ala Thr Met
 305 310 315 320

Ile Val Pro Val Pro Thr Lys Pro Thr Glu Gly Gln Asp Val Thr Leu
 325 330 335

Thr Val Gln Gly Tyr Pro Lys Asp Leu Leu Val Tyr Ala Trp Tyr Arg
 340 345 350

Gly Pro Ala Ser Glu Pro Asn Arg Leu Leu Ser Gln Leu Pro Ser Gly
 355 360 365

Thr Trp Ile Ala Gly Pro Ala His Thr Gly Arg Glu Val Gly Phe Pro
 370 375 380

Asn Cys Ser Leu Leu Val Gln Lys Leu Asn Leu Thr Asp Thr Gly Arg
 385 390 395 400

Tyr Thr Leu Lys Thr Val Thr Val Gln Gly Lys Thr Glu Thr Leu Glu
 405 410 415

Val Glu Leu Gln Val Ala Pro Leu Gly
 420 425

<210> 11915
 <211> 384
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 molecule 18"

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Met Asp Leu Ser Arg Pro Arg Trp Ser Leu Trp Arg Arg Val Phe Leu
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Met Ala Ser Leu Leu Ala Cys Gly Ile Cys Gln Ala Ser Gly Gln Ile
 20 25 30

Phe Ile Thr Gln Thr Leu Gly Ile Lys Gly Tyr Arg Thr Val Val Ala
 35 40 45

Leu Asp Lys Val Pro Glu Asp Val Gln Glu Tyr Ser Trp Tyr Trp Gly
 50 55 60

Ala Asn Asp Ser Ala Gly Asn Met Ile Ile Ser His Lys Pro Pro Ser
 65 70 75 80

Ala Gln Gln Pro Gly Pro Met Tyr Thr Gly Arg Glu Arg Val Asn Arg
 85 90 95

Glu Gly Ser Leu Leu Ile Arg Pro Thr Ala Leu Asn Asp Thr Gly Asn
 100 105 110

Tyr Thr Val Arg Val Val Ala Gly Asn Glu Thr Gln Arg Ala Thr Gly
 115 120 125

Trp Leu Glu Val Leu Glu Leu Gly Ser Asn Leu Gly Ile Ser Val Asn
 130 135 140

Ala Ser Ser Leu Val Glu Asn Met Asp Ser Val Ala Ala Asp Cys Leu
 145 150 155 160

Thr Asn Val Thr Asn Ile Thr Trp Tyr Val Asn Asp Val Pro Thr Ser
 165 170 175

Ser Ser Asp Arg Met Thr Ile Ser Pro Asp Gly Lys Thr Leu Val Ile
 180 185 190

Leu Arg Val Ser Arg Tyr Asp Arg Thr Ile Gln Cys Met Ile Glu Ser
195 200 205

Phe Pro Glu Ile Phe Gln Arg Ser Glu Arg Ile Ser Leu Thr Val Ala
210 215 220

Tyr Gly Pro Asp Tyr Val Leu Leu Arg Ser Asn Pro Asp Asp Phe Asn
225 230 235 240

Gly Ile Val Thr Ala Glu Ile Gly Ser Gln Val Glu Met Glu Cys Ile
245 250 255

Cys Tyr Ser Phe Leu Asp Leu Lys Tyr His Trp Ile His Asn Gly Ser
260 265 270

Leu Leu Asn Phe Ser Asp Ala Lys Met Asn Leu Ser Ser Leu Ala Trp
275 280 285

Glu Gln Met Gly Arg Tyr Arg Cys Thr Val Glu Asn Pro Val Thr Gln
290 295 300

Leu Ile Met Tyr Met Asp Val Arg Ile Gln Ala Pro His Glu Asp Leu
305 310 315 320

Thr Cys Cys Pro Gln Arg Phe Leu His Leu Arg Ile His Gly Asp Val
325 330 335

Pro His His Ala Asp Ser Ala Gly Trp Arg Leu His Leu Trp Ser Pro
340 345 350

Asp Pro Cys Ser Asp Gln Pro Leu Leu Asn Gln Asp Lys Ser Gly Ser
355 360 365

Met Ser Val His Pro Arg Pro Glu Asp Lys Thr Arg Arg Ala Ser Arg
370 375 380

<210> 11916

<211> 299

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<223> /note="Uniprot ID: Q7Z692"

<220>
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Met Glu Ile Pro Met Gly Thr Gln Gly Cys Phe Ser Lys Ser Leu Leu
1 5 10 15

Leu Ser Ala Ser Ile Leu Val Leu Trp Met Leu Gln Gly Ser Gln Ala
20 25 30

Ala Leu Tyr Ile Gln Lys Ile Pro Glu Gln Pro Gln Lys Asn Gln Asp
35 40 45

Leu Leu Leu Ser Val Gln Gly Val Pro Asp Thr Phe Gln Asp Phe Asn
50 55 60

Trp Tyr Leu Gly Glu Glu Thr Tyr Gly Gly Thr Arg Leu Phe Thr Tyr
65 70 75 80

Ile Pro Gly Ile Gln Arg Pro Gln Arg Asp Gly Ser Ala Met Gly Gln
85 90 95

Arg Asp Ile Val Gly Phe Pro Asn Gly Ser Met Leu Leu Arg Arg Ala
100 105 110

Gln Pro Thr Asp Ser Gly Thr Tyr Gln Val Ala Ile Thr Ile Asn Ser
115 120 125

Glu Trp Thr Met Lys Ala Lys Thr Glu Val Gln Val Ala Glu Lys Asn
130 135 140

Lys Glu Leu Pro Ser Thr His Leu Pro Thr Asn Ala Gly Ile Leu Ala
145 150 155 160

Ala Thr Ile Ile Gly Ser Leu Ala Ala Gly Ala Leu Leu Ile Ser Cys
165 170 175

Ile Ala Tyr Leu Leu Val Thr Arg Asn Trp Arg Gly Gln Ser His Arg
180 185 190

Leu Pro Ala Pro Arg Gly Gln Gly Ser Leu Ser Ile Leu Cys Ser Ala
195 200 205

Val Ser Pro Val Pro Ser Val Thr Pro Ser Thr Trp Met Ala Thr Thr
210 215 220

Glu Lys Pro Glu Leu Gly Pro Ala His Asp Ala Gly Asp Asn Asn Ile
225 230 235 240

Tyr Glu Val Met Pro Ser Pro Val Leu Leu Val Ser Pro Ile Ser Asp
245 250 255

Thr Arg Ser Ile Asn Pro Ala Arg Pro Leu Pro Thr Pro Pro His Leu
260 265 270

Gln Ala Glu Pro Glu Asn His Gln Tyr Gln Asp Leu Leu Asn Pro Asp
275 280 285

Pro Ala Pro Tyr Cys Gln Leu Val Pro Thr Ser
290 295

<210> 11917

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<400> 11917

Met Glu Ile Pro Met Gly Thr Gln Gly Cys Phe Ser Lys Ser Leu Leu
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Leu Ser Ala Ser Ile Leu Val Leu Trp Met Leu Gln Gly Ser Gln Ala
 20 25 30

Ala Leu Tyr Ile Gln Lys Ile Pro Glu Gln Pro Gln Lys Asn Gln Asp
 35 40 45

Leu Leu Leu Ser Val Gln Gly Val Pro Asp Thr Phe Gln Asp Phe Asn
 50 55 60

Trp Tyr Leu Gly Glu Glu Thr Tyr Gly Gly Thr Arg Leu Phe Thr Tyr
 65 70 75 80

Ile Pro Gly Ile Gln Arg Pro Gln Arg Asp Gly Ser Ala Met Gly Gln
 85 90 95

Arg Asp Ile Val Gly Phe Pro Asn Gly Ser Met Leu Leu Arg Arg Ala
 100 105 110

Gln Pro Thr Asp Ser Gly Thr Tyr Gln Val Ala Ile Thr Ile Asn Ser
 115 120 125

Glu Trp Thr Met Lys Ala Lys Thr Glu Val Gln Val Ala Glu Lys Asn
 130 135 140

Lys Glu Leu Pro Ser Thr His Leu Pro Thr Asn Ala Gly Ile Leu Ala
 145 150 155 160

Ala Thr Ile Ile Gly Ser Leu Ala Ala Gly Ala Leu Leu Ile Ser Cys
 165 170 175

Ile Ala Tyr Leu Leu Val Thr Arg Asn Trp Arg Gly Gln Ser His Arg
 180 185 190

Leu Pro Ala Pro Arg Gly Gln Gly Ser Leu Ser Ile Leu Cys Ser Ala
195 200 205

Val Ser Pro Val Pro Ser Val Thr Pro Ser Thr Trp Met Ala Thr Thr
210 215 220

Glu Lys Pro Glu Leu Gly Pro Ala His Asp Ala Gly Asp Asn Asn Ile
225 230 235 240

Tyr Glu Val Met Pro Ser Pro Val Leu Leu Val Ser Pro Ile Ser Asp
245 250 255

Thr Arg Ser Ile Asn Pro Ala Arg Pro Leu Pro Thr Pro Pro His Leu
260 265 270

Gln Ala Glu Pro Glu Asn His Gln Tyr Gln Gln Asp Leu Leu Asn Pro
275 280 285

Asp Pro Ala Pro Tyr Cys Gln Leu Val Pro Thr Ser
290 295 300

<210> 11918
<211> 56
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Met Glu Ile Pro Met Gly Thr Gln Gly Cys Phe Ser Lys Ser Leu Leu
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Leu Ser Ala Ser Ile Leu Val Leu Trp Met Leu Gln Gly Ser Gln Ala

20

25

30

Ala Leu Tyr Ile Gln Lys Ile Pro Glu Gln Pro Gln Lys Asn Gln Asp
 35 40 45

Leu Leu Leu Ser Val Gln Gly Val
 50 55

<210> 11919

<211> 56

<212> PRT

<213> Homo sapiens

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<223> /note="Gene Name:
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<223> /note="ENSP ID: ENSP00000466592"

<400> 11919

Met Glu Ile Pro Met Gly Thr Gln Gly Cys Phe Ser Lys Ser Leu Leu
 1 5 10 15

Leu Ser Ala Ser Ile Leu Val Leu Trp Met Leu Gln Gly Ser Gln Ala
 20 25 30

Ala Leu Tyr Ile Gln Lys Ile Pro Glu Gln Pro Gln Lys Asn Gln Asp
 35 40 45

Leu Leu Leu Ser Val Gln Gly Val
 50 55

<210> 11920

<211> 54

<212> PRT

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Met Glu Ile Pro Met Gly Thr Gln Gly Cys Phe Ser Lys Ser Leu Leu
1          5          10          15

Leu Ser Ala Ser Ile Leu Val Leu Trp Met Leu Gln Gly Ser Gln Ala
          20          25          30

Ala Leu Tyr Ile Gln Lys Ile Pro Glu Gln Pro Gln Lys Asn Gln Asp
          35          40          45

Leu Leu Leu Ser Val Gln
          50

<210> 11921
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Met Glu Ile Pro Met Gly Thr Gln Gly Cys Phe Ser Lys Ser Leu Leu
1 5 10 15

Leu Ser Ala Ser Ile Leu Val Leu Trp Met Leu Gln Gly Ser Gln Ala
20 25 30

Ala Leu Tyr Ile Gln Lys Ile Pro Glu Gln Pro Gln Lys Asn Gln Asp
35 40 45

Leu Leu Leu Ser Val Gln Gly Val
50 55

<210> 11922
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<400> 11922
Met Glu Ile Pro Met Gly Thr Gln Gly Cys Phe Ser Lys Ser Leu Leu
1 5 10 15

Leu Ser Ala Ser Ile Leu Val Leu Trp Met Leu Gln Gly Ser Gln Ala
20 25 30

Ala Leu Tyr Ile Gln Lys Ile Pro Glu Gln Pro Gln Lys Asn Gln Asp
35 40 45

Leu Leu Leu Ser Val Gln Gly Val
50 55

<210> 11923
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molecule 20"

<220>
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<400> 11923
Met Gly Pro Ala Asp Ser Trp Gly His His Trp Met Gly Ile Leu Leu
1 5 10 15

Ser Ala Ser Leu Cys Thr Val Trp Ser Pro Pro Ala Ala Ala Gln Leu
20 25 30

Thr Leu Asn Ala Asn Pro Leu Asp Ala Thr Gln Ser Glu Asp Val Val
35 40 45

Leu Pro Val Phe Gly Thr Pro Arg Thr Pro Gln Ile His Gly Arg Ser
50 55 60

Arg Glu Leu Ala Lys Pro Ser Ile Ala Val Ser Pro Gly Thr Ala Ile
65 70 75 80

Glu Gln Lys Asp Met Val Thr Phe Tyr Cys Thr Thr Lys Asp Val Asn
85 90 95

Ile Thr Ile His Trp Val Ser Asn Asn Leu Ser Ile Val Phe His Glu
100 105 110

Arg Met Gln Leu Ser Lys Asp Gly Lys Ile Leu Thr Ile Leu Ile Val
115 120 125

Gln Arg Glu Asp Ser Gly Thr Tyr Gln Cys Glu Ala Arg Asp Ala Leu

130						135						140				
Leu	Ser	Gln	Arg	Ser	Asp	Pro	Ile	Phe	Leu	Asp	Val	Lys	Tyr	Gly	Pro	
145					150					155					160	
Asp	Pro	Val	Glu	Ile	Lys	Leu	Glu	Ser	Gly	Val	Ala	Ser	Gly	Glu	Val	
				165					170					175		
Val	Glu	Val	Met	Glu	Gly	Ser	Ser	Met	Thr	Phe	Leu	Ala	Glu	Thr	Lys	
			180					185					190			
Ser	His	Pro	Pro	Cys	Ala	Tyr	Thr	Trp	Phe	Leu	Leu	Asp	Ser	Ile	Leu	
		195					200					205				
Ser	His	Thr	Thr	Arg	Thr	Phe	Thr	Ile	His	Ala	Val	Ser	Arg	Glu	His	
	210					215					220					
Glu	Gly	Leu	Tyr	Arg	Cys	Leu	Val	Ser	Asn	Ser	Ala	Thr	His	Leu	Ser	
225					230					235					240	
Ser	Leu	Gly	Thr	Leu	Lys	Val	Arg	Val	Leu	Glu	Thr	Leu	Thr	Met	Pro	
				245					250					255		
Gln	Val	Val	Pro	Ser	Ser	Leu	Asn	Leu	Val	Glu	Asn	Ala	Arg	Ser	Val	
			260					265					270			
Asp	Leu	Thr	Cys	Gln	Thr	Val	Asn	Gln	Ser	Val	Asn	Val	Gln	Trp	Phe	
		275					280					285				
Leu	Ser	Gly	Gln	Pro	Leu	Leu	Pro	Ser	Glu	His	Leu	Gln	Leu	Ser	Ala	
	290					295					300					
Asp	Asn	Arg	Thr	Leu	Ile	Ile	His	Gly	Leu	Gln	Arg	Asn	Asp	Thr	Gly	
305					310					315					320	
Pro	Tyr	Ala	Cys	Glu	Val	Trp	Asn	Trp	Gly	Ser	Arg	Ala	Arg	Ser	Glu	
				325					330					335		
Pro	Leu	Glu	Leu	Thr	Ile	Asn	Tyr	Gly	Pro	Asp	Gln	Val	His	Ile	Thr	
			340					345					350			
Arg	Glu	Ser	Ala	Ser	Glu	Met	Ile	Ser	Thr	Ile	Glu	Ala	Glu	Leu	Asn	
		355					360					365				

Ser	Ser	Leu	Thr	Leu	Gln	Cys	Trp	Ala	Glu	Ser	Lys	Pro	Gly	Ala	Glu
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Tyr	Arg	Trp	Thr	Leu	Glu	His	Ser	Thr	Gly	Glu	His	Leu	Gly	Glu	Gln
385					390					395					400
Leu	Ile	Ile	Arg	Ala	Leu	Thr	Trp	Glu	His	Asp	Gly	Ile	Tyr	Asn	Cys
				405					410					415	
Thr	Ala	Ser	Asn	Ser	Leu	Thr	Gly	Leu	Ala	Arg	Ser	Thr	Ser	Val	Leu
			420					425					430		
Val	Lys	Val	Val	Gly	Pro	Gln	Ser	Ser	Ser	Leu	Ser	Ser	Gly	Ala	Ile
		435					440					445			
Ala	Gly	Ile	Val	Ile	Gly	Ile	Leu	Ala	Val	Ile	Ala	Val	Ala	Ser	Glu
	450					455					460				
Leu	Gly	Tyr	Phe	Leu	Cys	Ile	Arg	Asn	Ala	Arg	Arg	Pro	Ser	Arg	Lys
465					470					475					480
Thr	Thr	Glu	Asp	Pro	Ser	His	Glu	Thr	Ser	Gln	Pro	Ile	Pro	Lys	Glu
				485					490					495	
Glu	His	Pro	Thr	Glu	Pro	Ser	Ser	Glu	Ser	Leu	Ser	Pro	Glu	Tyr	Arg
			500					505					510		
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		515					520					525			
Pro	Asp	Leu	Pro	Glu	Glu	Thr	Tyr	Glu	Thr	Lys	Leu	Pro	Ser	Ala	Ser
	530					535					540				
Arg	Arg	Gly	Asn	Ser	Phe	Ser	Pro	Trp	Lys	Pro	Pro	Pro	Lys	Pro	Leu
545					550					555					560
Met	Pro	Pro	Leu	Arg	Leu	Val	Ser	Thr	Val	Pro	Lys	Asn	Met	Glu	Ser
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Ile	Tyr	Glu	Val	Leu	Gly	Met	Gln	Gln							
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<220>
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<220>
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Met Gly Pro Ala Asp Ser Trp Gly His His Trp Met Gly Ile Leu Leu
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Ser Ala Ser Leu Cys Thr Val Trp Ser Pro Pro Ala Ala Ala Gln Leu
          20              25              30

Thr Leu Asn Ala Asn Pro Leu Asp Ala Thr Gln Ser Glu Asp Val Val
          35              40              45

Leu Pro Val Phe Gly Thr Pro Arg Thr Pro Gln Ile His Gly Arg Ser
          50              55              60

Arg Glu Leu Ala Lys Pro Ser Ile Ala Val Ser Pro Gly Thr Ala Ile
65              70              75              80

Glu Gln Lys Asp Met Val Thr Phe Tyr Cys Thr Thr Lys Asp Val Asn
          85              90              95

Ile Thr Ile His Trp Val Ser Asn Asn Leu Ser Ile Val Phe His Glu
          100             105             110

Arg Met Gln Leu Ser Lys Asp Gly Lys Ile Leu Thr Ile Leu Ile Val
          115             120             125

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Gln	Arg	Glu	Asp	Ser	Gly	Thr	Tyr	Gln	Cys	Glu	Ala	Arg	Asp	Ala	Leu
	130					135					140				
Leu	Ser	Gln	Arg	Ser	Asp	Pro	Ile	Phe	Leu	Asp	Val	Lys	Tyr	Gly	Pro
145					150					155					160
Asp	Pro	Val	Glu	Ile	Lys	Leu	Glu	Ser	Gly	Val	Ala	Ser	Gly	Glu	Val
				165					170					175	
Val	Glu	Val	Met	Glu	Gly	Ser	Ser	Met	Thr	Phe	Leu	Ala	Glu	Thr	Lys
			180					185					190		
Ser	His	Pro	Pro	Cys	Ala	Tyr	Thr	Trp	Phe	Leu	Leu	Asp	Ser	Ile	Leu
		195					200					205			
Ser	His	Thr	Thr	Arg	Thr	Phe	Thr	Ile	His	Ala	Val	Ser	Arg	Glu	His
	210					215					220				
Glu	Gly	Leu	Tyr	Arg	Cys	Leu	Val	Ser	Asn	Ser	Ala	Thr	His	Leu	Ser
225					230					235					240
Ser	Leu	Gly	Thr	Leu	Lys	Val	Arg	Val	Leu	Glu	Thr	Leu	Thr	Met	Pro
				245					250					255	
Gln	Val	Val	Pro	Ser	Ser	Leu	Asn	Leu	Val	Glu	Asn	Ala	Arg	Ser	Val
			260					265					270		
Asp	Leu	Thr	Cys	Gln	Thr	Val	Asn	Gln	Ser	Val	Asn	Val	Gln	Trp	Phe
		275					280					285			
Leu	Ser	Gly	Gln	Pro	Leu	Leu	Pro	Ser	Glu	His	Leu	Gln	Leu	Ser	Ala
	290					295					300				
Asp	Asn	Arg	Thr	Leu	Ile	Ile	His	Gly	Leu	Gln	Arg	Asn	Asp	Thr	Gly
305					310					315					320
Pro	Tyr	Ala	Cys	Glu	Val	Trp	Asn	Trp	Gly	Ser	Arg	Ala	Arg	Ser	Glu
				325					330					335	
Pro	Leu	Glu	Leu	Thr	Ile	Asn	Cys	Pro	Gln	Ser	Ser	Ser	Leu	Ser	Ser
			340					345					350		
Gly	Ala	Ile	Ala	Gly	Ile	Val	Ile	Gly	Ile	Leu	Ala	Val	Ile	Ala	Val

355

360

365

Ala Ser Glu Leu Gly Tyr Phe Leu Cys Ile Arg Asn Ala Arg Arg Pro
 370 375 380

Ser Arg Lys Thr Thr Glu Asp Pro Ser His Glu Thr Ser Gln Pro Ile
 385 390 395 400

Pro Lys Glu Glu His Pro Thr Glu Pro Ser Ser Glu Ser Leu Ser Pro
 405 410 415

Glu Tyr Arg Asn Ile Ser Gln Leu Gln Gly Arg Ile Arg Val Glu Leu
 420 425 430

Thr Lys Leu Pro Ser Ala Ser Arg Arg Gly Asn Ser Phe Ser Pro Trp
 435 440 445

Lys Pro Pro Pro Lys Pro Leu Met Pro Pro Leu Arg Leu Val Ser Thr
 450 455 460

Val Pro Lys Asn Met Glu Ser Ile Tyr Glu Glu Leu Val Asn Pro Glu
 465 470 475 480

Pro Asn Thr Tyr Ile Gln Ile Asn Pro Ser Val
 485 490

<210> 11925

<211> 596

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2358"

<220>

<221> source

<223> /note="Gene Symbol: CEACAM20"

<220>

<221> source

<223> /note="Gene Name:
 carcinoembryonic antigen-related cell adhesion
 molecule 20"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000481937"

26502

<400> 11925

Met Gly Pro Ala Asp Ser Trp Gly His His Trp Met Gly Ile Leu Leu
1 5 10 15

Ser Ala Ser Leu Cys Thr Val Trp Ser Pro Pro Ala Ala Ala Gln Leu
20 25 30

Thr Leu Asn Ala Asn Pro Leu Asp Ala Thr Gln Ser Glu Asp Val Val
35 40 45

Leu Pro Val Phe Gly Thr Pro Arg Thr Pro Gln Ile His Gly Arg Ser
50 55 60

Arg Glu Leu Ala Lys Pro Ser Ile Ala Val Ser Pro Gly Thr Ala Ile
65 70 75 80

Glu Gln Lys Asp Met Val Thr Phe Tyr Cys Thr Thr Lys Asp Val Asn
85 90 95

Ile Thr Ile His Trp Val Ser Asn Asn Leu Ser Ile Val Phe His Glu
100 105 110

Arg Met Gln Leu Ser Lys Asp Gly Lys Ile Leu Thr Ile Leu Ile Val
115 120 125

Gln Arg Glu Asp Ser Gly Thr Tyr Gln Cys Glu Ala Arg Asp Ala Leu
130 135 140

Leu Ser Gln Arg Ser Asp Pro Ile Phe Leu Asp Val Lys Tyr Gly Pro
145 150 155 160

Asp Pro Val Glu Ile Lys Leu Glu Ser Gly Val Ala Ser Gly Glu Val
165 170 175

Val Glu Val Met Glu Gly Ser Ser Met Thr Phe Leu Ala Glu Thr Lys
180 185 190

Ser His Pro Pro Cys Ala Tyr Thr Trp Phe Leu Leu Asp Ser Ile Leu
195 200 205

Ser His Thr Thr Arg Thr Phe Thr Ile His Ala Val Ser Arg Glu His
210 215 220

26503

Glu	Gly	Leu	Tyr	Arg	Cys	Leu	Val	Ser	Asn	Ser	Ala	Thr	His	Leu	Ser	225	230	235	240
Ser	Leu	Gly	Thr	Leu	Lys	Val	Arg	Val	Leu	Glu	Thr	Leu	Thr	Met	Pro	245	250	255	
Gln	Val	Val	Pro	Ser	Ser	Leu	Asn	Leu	Val	Glu	Asn	Ala	Arg	Ser	Val	260	265	270	
Asp	Leu	Thr	Cys	Gln	Thr	Val	Asn	Gln	Ser	Val	Asn	Val	Gln	Trp	Phe	275	280	285	
Leu	Ser	Gly	Gln	Pro	Leu	Leu	Pro	Ser	Glu	His	Leu	Gln	Leu	Ser	Ala	290	295	300	
Asp	Asn	Arg	Thr	Leu	Ile	Ile	His	Gly	Leu	Gln	Arg	Asn	Asp	Thr	Gly	305	310	315	320
Pro	Tyr	Ala	Cys	Glu	Val	Trp	Asn	Trp	Gly	Ser	Arg	Ala	Arg	Ser	Glu	325	330	335	
Pro	Leu	Glu	Leu	Thr	Ile	Asn	Tyr	Gly	Pro	Asp	Gln	Val	His	Ile	Thr	340	345	350	
Arg	Glu	Ser	Ala	Ser	Glu	Met	Ile	Ser	Thr	Ile	Glu	Ala	Glu	Leu	Asn	355	360	365	
Ser	Ser	Leu	Thr	Leu	Gln	Cys	Trp	Ala	Glu	Ser	Lys	Pro	Gly	Ala	Glu	370	375	380	
Tyr	Arg	Trp	Thr	Leu	Glu	His	Ser	Thr	Gly	Glu	His	Leu	Gly	Glu	Gln	385	390	395	400
Leu	Ile	Ile	Arg	Ala	Leu	Thr	Trp	Glu	His	Asp	Gly	Ile	Tyr	Asn	Cys	405	410	415	
Thr	Ala	Ser	Asn	Ser	Leu	Thr	Gly	Leu	Ala	Arg	Ser	Thr	Ser	Val	Leu	420	425	430	
Val	Lys	Val	Val	Gly	Pro	Gln	Ser	Ser	Ser	Leu	Ser	Ser	Gly	Ala	Ile	435	440	445	

Ala Gly Ile Val Ile Gly Ile Leu Ala Val Ile Ala Val Ala Ser Glu
450 455 460

Leu Gly Tyr Phe Leu Cys Ile Arg Asn Ala Arg Arg Pro Ser Arg Lys
465 470 475 480

Thr Thr Glu Asp Pro Ser His Glu Thr Ser Gln Pro Ile Pro Lys Glu
485 490 495

Glu His Pro Thr Glu Pro Ser Ser Glu Ser Leu Ser Pro Glu Tyr Arg
500 505 510

Asn Ile Ser Gln Leu Gln Gly Arg Ile Arg Val Glu Leu Met Gln Pro
515 520 525

Pro Asp Leu Pro Glu Glu Thr Tyr Glu Thr Lys Leu Pro Ser Ala Ser
530 535 540

Arg Arg Gly Asn Ser Phe Ser Pro Trp Lys Pro Pro Pro Lys Pro Leu
545 550 555 560

Met Pro Pro Leu Arg Leu Val Ser Thr Val Pro Lys Asn Met Glu Ser
565 570 575

Ile Tyr Glu Glu Leu Val Asn Pro Glu Pro Asn Thr Tyr Ile Gln Ile
580 585 590

Asn Pro Ser Val
595

<210> 11926
<211> 503
<212> PRT
<213> Homo sapiens

<220>
<221> source
<223> /note="Payload ID: 2358"

<220>
<221> source
<223> /note="Gene Symbol: CEACAM20"

<220>
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<223> /note="Gene Name:
carcinoembryonic antigen-related cell adhesion

molecule 20"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000482943"

<400> 11926

Met Gly Pro Ala Asp Ser Trp Gly His His Trp Met Gly Ile Leu Leu
1 5 10 15

Ser Ala Ser Leu Cys Thr Val Trp Ser Pro Pro Ala Ala Ala Gln Leu
20 25 30

Thr Leu Asn Ala Asn Pro Leu Asp Ala Thr Gln Ser Glu Asp Val Val
35 40 45

Leu Pro Val Phe Gly Thr Pro Arg Thr Pro Gln Ile His Gly Arg Ser
50 55 60

Arg Glu Leu Ala Lys Pro Ser Ile Ala Val Ser Pro Gly Thr Ala Ile
65 70 75 80

Glu Gln Lys Asp Met Val Thr Phe Tyr Cys Thr Thr Lys Asp Val Asn
85 90 95

Ile Thr Ile His Trp Val Ser Asn Asn Leu Ser Ile Val Phe His Glu
100 105 110

Arg Met Gln Leu Ser Lys Asp Gly Lys Ile Leu Thr Ile Leu Ile Val
115 120 125

Gln Arg Glu Asp Ser Gly Thr Tyr Gln Cys Glu Ala Arg Asp Ala Leu
130 135 140

Leu Ser Gln Arg Ser Asp Pro Ile Phe Leu Asp Val Lys Tyr Gly Pro
145 150 155 160

Asp Pro Val Glu Ile Lys Leu Glu Ser Gly Val Ala Ser Gly Glu Val
165 170 175

Val Glu Val Met Glu Gly Ser Ser Met Thr Phe Leu Ala Glu Thr Lys
180 185 190

Ser His Pro Pro Cys Ala Tyr Thr Trp Phe Leu Leu Asp Ser Ile Leu
195 200 205

26506

Met Gln Pro Pro Asp Leu Pro Glu Glu Thr Tyr Glu Thr Lys Leu Pro
435 440 445

Ser Ala Ser Arg Arg Gly Asn Ser Phe Ser Pro Trp Lys Pro Pro Pro
450 455 460

Lys Pro Leu Met Pro Pro Leu Arg Leu Val Ser Thr Val Pro Lys Asn
465 470 475 480

Met Glu Ser Ile Tyr Glu Glu Leu Val Asn Pro Glu Pro Asn Thr Tyr
485 490 495

Ile Gln Ile Asn Pro Ser Val
500

<210> 11927
<211> 584
<212> PRT
<213> Homo sapiens

<220>
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<223> /note="Payload ID: 2358"

<220>
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<223> /note="Gene Symbol: CEACAM20"

<220>
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<223> /note="Gene Name:
carcinoembryonic antigen-related cell adhesion
molecule 20"

<220>
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<223> /note="ENSP ID: ENSP00000483639"

<400> 11927
Met Gly Pro Ala Asp Ser Trp Gly His His Trp Met Gly Ile Leu Leu
1 5 10 15

Ser Ala Ser Leu Cys Thr Val Trp Ser Pro Pro Ala Ala Ala Gln Leu
20 25 30

Thr Leu Asn Ala Asn Pro Leu Asp Ala Thr Gln Ser Glu Asp Val Val
35 40 45

Leu Pro Val Phe Gly Thr Pro Arg Thr Pro Gln Ile His Gly Arg Ser
 50 55 60

Arg Glu Leu Ala Lys Pro Ser Ile Ala Val Ser Pro Gly Thr Ala Ile
 65 70 75 80

Glu Gln Lys Asp Met Val Thr Phe Tyr Cys Thr Thr Lys Asp Val Asn
 85 90 95

Ile Thr Ile His Trp Val Ser Asn Asn Leu Ser Ile Val Phe His Glu
 100 105 110

Arg Met Gln Leu Ser Lys Asp Gly Lys Ile Leu Thr Ile Leu Ile Val
 115 120 125

Gln Arg Glu Asp Ser Gly Thr Tyr Gln Cys Glu Ala Arg Asp Ala Leu
 130 135 140

Leu Ser Gln Arg Ser Asp Pro Ile Phe Leu Asp Val Lys Tyr Gly Pro
 145 150 155 160

Asp Pro Val Glu Ile Lys Leu Glu Ser Gly Val Ala Ser Gly Glu Val
 165 170 175

Val Glu Val Met Glu Gly Ser Ser Met Thr Phe Leu Ala Glu Thr Lys
 180 185 190

Ser His Pro Pro Cys Ala Tyr Thr Trp Phe Leu Leu Asp Ser Ile Leu
 195 200 205

Ser His Thr Thr Arg Thr Phe Thr Ile His Ala Val Ser Arg Glu His
 210 215 220

Glu Gly Leu Tyr Arg Cys Leu Val Ser Asn Ser Ala Thr His Leu Ser
 225 230 235 240

Ser Leu Gly Thr Leu Lys Val Arg Val Leu Glu Thr Leu Thr Met Pro
 245 250 255

Gln Val Val Pro Ser Ser Leu Asn Leu Val Glu Asn Ala Arg Ser Val
 260 265 270

Asp Leu Thr Cys Gln Thr Val Asn Gln Ser Val Asn Val Gln Trp Phe

275							280						285			
Leu	Ser	Gly	Gln	Pro	Leu	Leu	Pro	Ser	Glu	His	Leu	Gln	Leu	Ser	Ala	
	290					295					300					
Asp	Asn	Arg	Thr	Leu	Ile	Ile	His	Gly	Leu	Gln	Arg	Asn	Asp	Thr	Gly	
305					310					315					320	
Pro	Tyr	Ala	Cys	Glu	Val	Trp	Asn	Trp	Gly	Ser	Arg	Ala	Arg	Ser	Glu	
				325					330					335		
Pro	Leu	Glu	Leu	Thr	Ile	Asn	Tyr	Gly	Pro	Asp	Gln	Val	His	Ile	Thr	
			340					345					350			
Arg	Glu	Ser	Ala	Ser	Glu	Met	Ile	Ser	Thr	Ile	Glu	Ala	Glu	Leu	Asn	
		355					360					365				
Ser	Ser	Leu	Thr	Leu	Gln	Cys	Trp	Ala	Glu	Ser	Lys	Pro	Gly	Ala	Glu	
	370					375					380					
Tyr	Arg	Trp	Thr	Leu	Glu	His	Ser	Thr	Gly	Glu	His	Leu	Gly	Glu	Gln	
385					390					395					400	
Leu	Ile	Ile	Arg	Ala	Leu	Thr	Trp	Glu	His	Asp	Gly	Ile	Tyr	Asn	Cys	
				405					410					415		
Thr	Ala	Ser	Asn	Ser	Leu	Thr	Gly	Leu	Ala	Arg	Ser	Thr	Ser	Val	Leu	
			420					425					430			
Val	Lys	Val	Val	Gly	Pro	Gln	Ser	Ser	Ser	Leu	Ser	Ser	Gly	Ala	Ile	
		435					440					445				
Ala	Gly	Ile	Val	Ile	Gly	Ile	Leu	Ala	Val	Ile	Ala	Val	Ala	Ser	Glu	
	450					455					460					
Leu	Gly	Tyr	Phe	Leu	Cys	Ile	Arg	Asn	Ala	Arg	Arg	Pro	Ser	Arg	Lys	
465					470					475					480	
Thr	Thr	Glu	Asp	Pro	Ser	His	Glu	Thr	Ser	Gln	Pro	Ile	Pro	Lys	Glu	
				485					490					495		
Glu	His	Pro	Thr	Glu	Pro	Ser	Ser	Glu	Ser	Leu	Ser	Pro	Glu	Tyr	Arg	
			500					505					510			

Asn Ile Ser Gln Leu Gln Gly Arg Ile Arg Val Glu Leu Met Gln Pro
515 520 525

Pro Asp Leu Pro Glu Glu Thr Tyr Glu Thr Lys Leu Pro Ser Ala Ser
530 535 540

Arg Arg Gly Asn Ser Phe Ser Pro Trp Lys Pro Pro Pro Lys Pro Leu
545 550 555 560

Met Pro Pro Leu Arg Leu Val Ser Thr Val Pro Lys Asn Met Glu Ser
565 570 575

Ile Tyr Glu Val Phe Met Pro His
580

<210> 11928
<211> 584
<212> PRT
<213> Homo sapiens

<220>
<221> source
<223> /note="Payload ID: 2358"

<220>
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<223> /note="Gene Symbol: CEACAM20"

<220>
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<223> /note="Gene Name:
carcinoembryonic antigen-related cell adhesion
molecule 20"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000483912"

<400> 11928
Met Gly Pro Ala Asp Ser Trp Gly His His Trp Met Gly Ile Leu Leu
1 5 10 15

Ser Ala Ser Leu Cys Thr Val Trp Ser Pro Pro Ala Ala Ala Gln Leu
20 25 30

Thr Leu Asn Ala Asn Pro Leu Asp Ala Thr Gln Ser Glu Asp Val Val
35 40 45

[illegible]

500	505	510
Asn Ile Ser Gln Leu Gln Gly Arg Ile Arg Val Glu Leu Thr Lys Leu		
515	520	525
Pro Ser Ala Ser Arg Arg Gly Asn Ser Phe Ser Pro Trp Lys Pro Pro		
530	535	540
Pro Lys Pro Leu Met Pro Pro Leu Arg Leu Val Ser Thr Val Pro Lys		
545	550	555
Asn Met Glu Ser Ile Tyr Glu Glu Leu Val Asn Pro Glu Pro Asn Thr		
565	570	575
Tyr Ile Gln Ile Asn Pro Ser Val		
580		

<210> 11929
 <211> 292
 <212> PRT
 <213> Homo sapiens

<220>
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 <223> /note="Payload ID: 2359"

<220>
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 <223> /note="Gene Symbol: CEACAM21"

<220>
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 <223> /note="Gene Name:
 carcinoembryonic antigen-related cell adhesion
 molecule 21"

<220>
 <221> source
 <223> /note="Uniprot ID: Q3KPI0"

<220>
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 <223> /note="ENSP ID: ENSP00000187608"

<400> 11929
Met Gly Pro Pro Ser Ala Cys Pro His Arg Glu Cys Ile Pro Trp Gln
1 5 10 15

Gly Leu Leu Leu Thr Ala Ser Leu Leu Thr Phe Trp Asn Ala Pro Thr
20 25 30

Thr	Ala	Trp	Leu	Phe	Ile	Ala	Ser	Ala	Pro	Phe	Glu	Val	Ala	Glu	Gly			
		35					40					45						
Glu	Asn	Val	His	Leu	Ser	Val	Val	Tyr	Leu	Pro	Glu	Asn	Leu	Tyr	Ser			
	50					55					60							
Tyr	Gly	Trp	Tyr	Lys	Gly	Lys	Thr	Val	Glu	Pro	Asn	Gln	Leu	Ile	Ala			
65					70					75					80			
Ala	Tyr	Val	Ile	Asp	Thr	His	Val	Arg	Thr	Pro	Gly	Pro	Ala	Tyr	Ser			
				85					90					95				
Gly	Arg	Glu	Thr	Ile	Ser	Pro	Ser	Gly	Asp	Leu	His	Phe	Gln	Asn	Val			
			100					105					110					
Thr	Leu	Glu	Asp	Thr	Gly	Tyr	Tyr	Asn	Leu	Gln	Val	Thr	Tyr	Arg	Asn			
		115					120					125						
Ser	Gln	Ile	Glu	Gln	Ala	Ser	His	His	Leu	Arg	Val	Tyr	Glu	Ser	Val			
	130					135					140							
Ala	Gln	Pro	Ser	Ile	Gln	Ala	Ser	Ser	Thr	Thr	Val	Thr	Glu	Lys	Gly			
145					150					155					160			
Ser	Val	Val	Leu	Thr	Cys	His	Thr	Asn	Asn	Thr	Gly	Thr	Ser	Phe	Gln			
				165					170					175				
Trp	Ile	Phe	Asn	Asn	Gln	Arg	Leu	Gln	Val	Thr	Lys	Arg	Met	Lys	Leu			
			180					185					190					
Ser	Trp	Phe	Asn	His	Val	Leu	Thr	Ile	Asp	Pro	Ile	Arg	Gln	Glu	Asp			
		195					200					205						
Ala	Gly	Glu	Tyr	Gln	Cys	Glu	Val	Ser	Asn	Pro	Val	Ser	Ser	Asn	Arg			
	210					215					220							
Ser	Asp	Pro	Leu	Lys	Leu	Thr	Val	Lys	Tyr	Asp	Asn	Thr	Leu	Gly	Ile			
225					230					235					240			
Leu	Ile	Gly	Val	Leu	Val	Gly	Ser	Leu	Leu	Val	Ala	Ala	Leu	Val	Cys			
				245					250					255				

Phe Leu Leu Leu Arg Lys Thr Gly Arg Ala Ser Asp Gln Ser Asp Phe
260 265 270

Arg Glu Gln Gln Pro Pro Ala Ser Thr Pro Gly His Gly Pro Ser Asp
275 280 285

Ser Ser Ile Ser
290

<210> 11930
<211> 165
<212> PRT
<213> Homo sapiens

<220>
<221> source
<223> /note="Payload ID: 2359"

<220>
<221> source
<223> /note="Gene Symbol: CEACAM21"

<220>
<221> source
<223> /note="Gene Name:
carcinoembryonic antigen-related cell adhesion
molecule 21"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000384380"

<400> 11930
Met Ala Pro Arg His Phe Leu Leu Val Thr Leu Ser Thr Glu Ser Val
1 5 10 15

Ala Gln Pro Ser Ile Gln Ala Ser Ser Thr Thr Val Thr Glu Lys Gly
20 25 30

Ser Val Val Leu Thr Cys His Thr Asn Asn Thr Gly Thr Ser Phe Gln
35 40 45

Trp Ile Phe Asn Asn Gln Arg Leu Gln Val Thr Lys Arg Met Lys Leu
50 55 60

Ser Trp Phe Asn His Val Leu Thr Ile Asp Pro Ile Arg Gln Glu Asp
65 70 75 80

Ala Gly Glu Tyr Gln Cys Glu Val Ser Asn Pro Val Ser Ser Asn Arg
85 90 95

Ser Asp Pro Leu Lys Leu Thr Val Lys Ser Asp Asp Asn Thr Leu Gly
100 105 110

Ile Leu Ile Gly Val Leu Val Gly Ser Leu Leu Val Ala Ala Leu Val
115 120 125

Cys Phe Leu Leu Leu Arg Lys Thr Gly Arg Ala Ser Asp Gln Ser Asp
130 135 140

Phe Arg Glu Gln Gln Pro Pro Ala Ser Thr Pro Gly His Gly Pro Ser
145 150 155 160

Asp Ser Ser Ile Ser
165

<210> 11931
<211> 293
<212> PRT
<213> Homo sapiens

<220>
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<223> /note="Payload ID: 2359"

<220>
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<223> /note="Gene Symbol: CEACAM21"

<220>
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<223> /note="Gene Name:
carcinoembryonic antigen-related cell adhesion
molecule 21"

<220>
<221> source
<223> /note="Uniprot ID: Q3KPI0"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000385739"

<400> 11931
Met Gly Pro Pro Ser Ala Cys Pro His Arg Glu Cys Ile Pro Trp Gln
1 5 10 15

Gly Leu Leu Leu Thr Ala Ser Leu Leu Thr Phe Trp Asn Ala Pro Thr

20							25					30				
Thr	Ala	Trp	Leu	Phe	Ile	Ala	Ser	Ala	Pro	Phe	Glu	Val	Ala	Glu	Gly	
		35					40					45				
Glu	Asn	Val	His	Leu	Ser	Val	Val	Tyr	Leu	Pro	Glu	Asn	Leu	Tyr	Ser	
	50					55					60					
Tyr	Gly	Trp	Tyr	Lys	Gly	Lys	Thr	Val	Glu	Pro	Asn	Gln	Leu	Ile	Ala	
65					70					75					80	
Ala	Tyr	Val	Ile	Asp	Thr	His	Val	Arg	Thr	Pro	Gly	Pro	Ala	Tyr	Ser	
				85					90					95		
Gly	Arg	Glu	Thr	Ile	Ser	Pro	Ser	Gly	Asp	Leu	His	Phe	Gln	Asn	Val	
			100					105					110			
Thr	Leu	Glu	Asp	Thr	Gly	Tyr	Tyr	Asn	Leu	Gln	Val	Thr	Tyr	Arg	Asn	
		115					120					125				
Ser	Gln	Ile	Glu	Gln	Ala	Ser	His	His	Leu	Arg	Val	Tyr	Glu	Ser	Val	
	130					135					140					
Ala	Gln	Pro	Ser	Ile	Gln	Ala	Ser	Ser	Thr	Thr	Val	Thr	Glu	Lys	Gly	
145					150					155					160	
Ser	Val	Val	Leu	Thr	Cys	His	Thr	Asn	Asn	Thr	Gly	Thr	Ser	Phe	Gln	
				165					170					175		
Trp	Ile	Phe	Asn	Asn	Gln	Arg	Leu	Gln	Val	Thr	Lys	Arg	Met	Lys	Leu	
			180					185					190			
Ser	Trp	Phe	Asn	His	Val	Leu	Thr	Ile	Asp	Pro	Ile	Arg	Gln	Glu	Asp	
		195					200					205				
Ala	Gly	Glu	Tyr	Gln	Cys	Glu	Val	Ser	Asn	Pro	Val	Ser	Ser	Asn	Arg	
	210					215					220					
Ser	Asp	Pro	Leu	Lys	Leu	Thr	Val	Lys	Ser	Asp	Asp	Asn	Thr	Leu	Gly	
225					230					235					240	
Ile	Leu	Ile	Gly	Val	Leu	Val	Gly	Ser	Leu	Leu	Val	Ala	Ala	Leu	Val	
				245					250					255		

Cys Phe Leu Leu Leu Arg Lys Thr Gly Arg Ala Ser Asp Gln Ser Asp
260 265 270

Phe Arg Glu Gln Gln Pro Pro Ala Ser Thr Pro Gly His Gly Pro Ser
275 280 285

Asp Ser Ser Ile Ser
290

<210> 11932

<211> 191

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2359"

<220>

<221> source

<223> /note="Gene Symbol: CEACAM21"

<220>

<221> source

<223> /note="Gene Name:
carcinoembryonic antigen-related cell adhesion
molecule 21"

<220>

<221> source

<223> /note="Uniprot ID: Q3KPI0"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000390697"

<400> 11932

Met Gly Pro Pro Ser Ala Cys Pro His Arg Glu Cys Ile Pro Trp Gln
1 5 10 15

Gly Leu Leu Leu Thr Ala Ser Leu Leu Thr Phe Trp Asn Ala Pro Thr
20 25 30

Thr Ala Trp Leu Phe Ile Ala Ser Ala Pro Phe Glu Val Ala Glu Gly
35 40 45

Glu Asn Val His Leu Ser Val Val Tyr Leu Pro Glu Asn Leu Tyr Ser
50 55 60

Tyr Gly Trp Tyr Lys Gly Lys Thr Val Glu Pro Asn Gln Leu Ile Ala
65 70 75 80

Ala Tyr Val Ile Asp Thr His Val Arg Thr Pro Gly Pro Ala Tyr Ser
85 90 95

Gly Arg Glu Thr Ile Ser Pro Ser Gly Asp Leu His Phe Gln Asn Val
100 105 110

Thr Leu Glu Asp Thr Gly Tyr Tyr Asn Leu Gln Val Thr Tyr Arg Asn
115 120 125

Ser Gln Ile Glu Gln Ala Ser His His Leu Arg Val Tyr Gly Glu Cys
130 135 140

Ser Lys Phe Asp Ser Glu Ile Ser Glu Asp Ala Ala Trp Pro Gln Asp
145 150 155 160

Thr Phe Cys Trp Ser Leu Tyr Pro Gln Ser Gln Trp Leu Ser Pro Pro
165 170 175

Ser Lys Pro Ala Ala Pro Gln Ser Gln Arg Arg Ala Pro Trp Ser
180 185 190

<210> 11933
<211> 165
<212> PRT
<213> Homo sapiens

<220>
<221> source
<223> /note="Payload ID: 2359"

<220>
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<223> /note="Gene Symbol: CEACAM21"

<220>
<221> source
<223> /note="Gene Name:
carcinoembryonic antigen-related cell adhesion
molecule 21"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000482379"

<400> 11933

Met Ala Pro Arg His Phe Leu Leu Val Thr Leu Ser Thr Glu Ser Val
1 5 10 15

Ala Gln Pro Ser Ile Gln Ala Ser Ser Thr Thr Val Thr Glu Lys Gly
20 25 30

Ser Val Val Leu Thr Cys His Thr Asn Asn Thr Gly Thr Ser Phe Gln
35 40 45

Trp Ile Phe Asn Asn Gln Arg Leu Gln Val Thr Lys Arg Met Lys Leu
50 55 60

Ser Trp Phe Asn His Val Leu Thr Ile Asp Pro Ile Arg Gln Glu Asp
65 70 75 80

Ala Gly Glu Tyr Gln Cys Glu Val Ser Asn Pro Val Ser Ser Asn Arg
85 90 95

Ser Asp Pro Leu Lys Leu Thr Val Lys Ser Asp Asp Asn Thr Leu Gly
100 105 110

Ile Leu Ile Gly Val Leu Val Gly Ser Leu Leu Val Ala Ala Leu Val
115 120 125

Cys Phe Leu Leu Leu Arg Lys Thr Gly Arg Ala Ser Asp Gln Ser Asp
130 135 140

Phe Arg Glu Gln Gln Pro Pro Ala Ser Thr Pro Gly His Gly Pro Ser
145 150 155 160

Asp Ser Ser Ile Ser
165

<210> 11934

<211> 292

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2359"

<220>

<221> source

<223> /note="Gene Symbol: CEACAM21"

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 carcinoembryonic antigen-related cell adhesion
 molecule 21"

<220>
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 <223> /note="Uniprot ID: Q3KPI0"

<220>
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<400> 11934
 Met Gly Pro Pro Ser Ala Cys Pro His Arg Glu Cys Ile Pro Trp Gln
 1 5 10 15

Gly Leu Leu Leu Thr Ala Ser Leu Leu Thr Phe Trp Asn Ala Pro Thr
 20 25 30

Thr Ala Trp Leu Phe Ile Ala Ser Ala Pro Phe Glu Val Ala Glu Gly
 35 40 45

Glu Asn Val His Leu Ser Val Val Tyr Leu Pro Glu Asn Leu Tyr Ser
 50 55 60

Tyr Gly Trp Tyr Lys Gly Lys Thr Val Glu Pro Asn Gln Leu Ile Ala
 65 70 75 80

Ala Tyr Val Ile Asp Thr His Val Arg Thr Pro Gly Pro Ala Tyr Ser
 85 90 95

Gly Arg Glu Thr Ile Ser Pro Ser Gly Asp Leu His Phe Gln Asn Val
 100 105 110

Thr Leu Glu Asp Thr Gly Tyr Tyr Asn Leu Gln Val Thr Tyr Arg Asn
 115 120 125

Ser Gln Ile Glu Gln Ala Ser His His Leu Arg Val Tyr Glu Ser Val
 130 135 140

Ala Gln Pro Ser Ile Gln Ala Ser Ser Thr Thr Val Thr Glu Lys Gly
 145 150 155 160

Ser Val Val Leu Thr Cys His Thr Asn Asn Thr Gly Thr Ser Phe Gln
 165 170 175

Trp Ile Phe Asn Asn Gln Arg Leu Gln Val Thr Lys Arg Met Lys Leu
180 185 190

Ser Trp Phe Asn His Val Leu Thr Ile Asp Pro Ile Arg Gln Glu Asp
195 200 205

Ala Gly Glu Tyr Gln Cys Glu Val Ser Asn Pro Val Ser Ser Asn Arg
210 215 220

Ser Asp Pro Leu Lys Leu Thr Val Lys Tyr Asp Asn Thr Leu Gly Ile
225 230 235 240

Leu Ile Gly Val Leu Val Gly Ser Leu Leu Val Ala Ala Leu Val Cys
245 250 255

Phe Leu Leu Leu Arg Lys Thr Gly Arg Ala Ser Asp Gln Ser Asp Phe
260 265 270

Arg Glu Gln Gln Pro Pro Ala Ser Thr Pro Gly His Gly Pro Ser Asp
275 280 285

Ser Ser Ile Ser
290

<210> 11935
<211> 191
<212> PRT
<213> Homo sapiens

<220>
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<223> /note="Payload ID: 2359"

<220>
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<223> /note="Gene Symbol: CEACAM21"

<220>
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<223> /note="Gene Name:
carcinoembryonic antigen-related cell adhesion
molecule 21"

<220>
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<223> /note="ENSP ID: ENSP00000487327"

<400> 11935

Met Gly Pro Pro Ser Ala Cys Pro His Arg Glu Cys Ile Pro Trp Gln
1 5 10 15

Gly Leu Leu Leu Thr Ala Ser Leu Leu Thr Phe Trp Asn Ala Pro Thr
20 25 30

Thr Ala Trp Leu Phe Ile Ala Ser Ala Pro Phe Glu Val Ala Glu Gly
35 40 45

Glu Asn Val His Leu Ser Val Val Tyr Leu Pro Glu Asn Leu Tyr Ser
50 55 60

Tyr Gly Trp Tyr Lys Gly Lys Thr Val Glu Pro Asn Gln Leu Ile Ala
65 70 75 80

Ala Tyr Val Ile Asp Thr His Val Arg Thr Pro Gly Pro Ala Tyr Ser
85 90 95

Gly Arg Glu Thr Ile Ser Pro Ser Gly Asp Leu His Phe Gln Asn Val
100 105 110

Thr Leu Glu Asp Thr Gly Tyr Tyr Asn Leu Gln Val Thr Tyr Arg Asn
115 120 125

Ser Gln Ile Glu Gln Ala Ser His His Leu Arg Val Tyr Gly Glu Cys
130 135 140

Ser Lys Phe Asp Ser Glu Ile Ser Glu Asp Ala Ala Trp Pro Gln Asp
145 150 155 160

Thr Phe Cys Trp Ser Leu Tyr Pro Gln Ser Gln Trp Leu Ser Pro Pro
165 170 175

Ser Lys Pro Ala Ala Pro Gln Ser Gln Arg Arg Ala Pro Trp Ser
180 185 190

<210> 11936

<211> 293

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2359"

26524

<220>
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<223> /note="Gene Name:
carcinoembryonic antigen-related cell adhesion
molecule 21"

<220>
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<223> /note="ENSP ID: ENSP00000487532"

<400> 11936

Met Gly Pro Pro Ser Ala Cys Pro His Arg Glu Cys Ile Pro Trp Gln
1 5 10 15

Gly Leu Leu Leu Thr Ala Ser Leu Leu Thr Phe Trp Asn Ala Pro Thr
20 25 30

Thr Ala Trp Leu Phe Ile Ala Ser Ala Pro Phe Glu Val Ala Glu Gly
35 40 45

Glu Asn Val His Leu Ser Val Val Tyr Leu Pro Glu Asn Leu Tyr Ser
50 55 60

Tyr Gly Trp Tyr Lys Gly Lys Thr Val Glu Pro Asn Gln Leu Ile Ala
65 70 75 80

Ala Tyr Val Ile Asp Thr His Val Arg Thr Pro Gly Pro Ala Tyr Ser
85 90 95

Gly Arg Glu Thr Ile Ser Pro Ser Gly Asp Leu His Phe Gln Asn Val
100 105 110

Thr Leu Glu Asp Thr Gly Tyr Tyr Asn Leu Gln Val Thr Tyr Arg Asn
115 120 125

Ser Gln Ile Glu Gln Ala Ser His His Leu Arg Val Tyr Glu Ser Val
130 135 140

Ala Gln Pro Ser Ile Gln Ala Ser Ser Thr Thr Val Thr Glu Lys Gly
145 150 155 160

Ser Val Val Leu Thr Cys His Thr Asn Asn Thr Gly Thr Ser Phe Gln

165

170

175

Trp Ile Phe Asn Asn Gln Arg Leu Gln Val Thr Lys Arg Met Lys Leu
 180 185 190

Ser Trp Phe Asn His Val Leu Thr Ile Asp Pro Ile Arg Gln Glu Asp
 195 200 205

Ala Gly Glu Tyr Gln Cys Glu Val Ser Asn Pro Val Ser Ser Asn Arg
 210 215 220

Ser Asp Pro Leu Lys Leu Thr Val Lys Ser Asp Asp Asn Thr Leu Gly
 225 230 235 240

Ile Leu Ile Gly Val Leu Val Gly Ser Leu Leu Val Ala Ala Leu Val
 245 250 255

Cys Phe Leu Leu Leu Arg Lys Thr Gly Arg Ala Ser Asp Gln Ser Asp
 260 265 270

Phe Arg Glu Gln Gln Pro Pro Ala Ser Thr Pro Gly His Gly Pro Ser
 275 280 285

Asp Ser Ser Ile Ser
 290

<210> 11937

<211> 95

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2359"

<220>

<221> source

<223> /note="Gene Symbol: CEACAM21"

<220>

<221> source

<223> /note="Gene Name:
 carcinoembryonic antigen-related cell adhesion
 molecule 21"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000488260"

26526

<220>
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 <222> (1)..(1)
 <223> Any amino acid

 <400> 11937
 Xaa Leu Thr Ile Asp Pro Ile Arg Gln Glu Asp Ala Gly Glu Tyr Gln
 1 5 10 15

 Cys Glu Val Ser Asn Pro Val Ser Ser Asn Arg Ser Asp Pro Leu Lys
 20 25 30

 Leu Thr Val Lys Tyr Asp Asn Thr Leu Gly Ile Leu Ile Gly Val Leu
 35 40 45

 Val Gly Ser Leu Leu Val Ala Ala Leu Val Cys Phe Leu Leu Leu Arg
 50 55 60

 Lys Thr Gly Arg Ala Ser Asp Gln Ser Asp Phe Arg Glu Gln Gln Pro
 65 70 75 80

 Pro Ala Ser Thr Pro Gly His Gly Pro Ser Asp Ser Ser Ile Ser
 85 90 95

<210> 11938
 <211> 212
 <212> PRT
 <213> Homo sapiens

<220>
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 <223> /note="Payload ID: 2360"

<220>
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 <223> /note="Gene Symbol: CEACAM3"

<220>
 <221> source
 <223> /note="Gene Name:
 carcinoembryonic antigen-related cell adhesion
 molecule 3"

<220>
 <221> source
 <223> /note="Uniprot ID: P40198"

<220>
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<223> /note="ENSP ID: ENSP00000341725"

<400> 11938

Met Gly Pro Pro Ser Ala Ser Pro His Arg Glu Cys Ile Pro Trp Gln
1 5 10 15

Gly Leu Leu Leu Thr Ala Ser Leu Leu Asn Phe Trp Asn Pro Pro Thr
20 25 30

Thr Ala Lys Leu Thr Ile Glu Ser Met Pro Leu Ser Val Ala Glu Gly
35 40 45

Lys Glu Val Leu Leu Leu Val His Asn Leu Pro Gln His Leu Phe Gly
50 55 60

Tyr Ser Trp Tyr Lys Gly Glu Arg Val Asp Gly Asn Ser Leu Ile Val
65 70 75 80

Gly Tyr Val Ile Gly Thr Gln Gln Ala Thr Pro Gly Ala Ala Tyr Ser
85 90 95

Gly Arg Glu Thr Ile Tyr Thr Asn Ala Ser Leu Leu Ile Gln Asn Val
100 105 110

Thr Gln Asn Asp Ile Gly Phe Tyr Thr Leu Gln Val Ile Lys Ser Asp
115 120 125

Leu Val Asn Glu Glu Ala Thr Gly Gln Phe His Val Tyr Gln Glu Asn
130 135 140

Ala Pro Gly Leu Pro Val Gly Ala Val Ala Gly Ile Val Thr Gly Val
145 150 155 160

Leu Val Gly Val Ala Leu Val Ala Ala Leu Val Cys Phe Leu Leu Leu
165 170 175

Ala Lys Thr Gly Arg Pro Trp Ser Leu Pro Gln Leu Cys Leu Leu Asp
180 185 190

Val Pro Ser Leu His Cys Pro Gly Pro Pro Thr Gln Pro Gln Asp Ser
195 200 205

Ser Phe His Leu
210


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<210> 11939
<211> 252
<212> PRT
<213> Homo sapiens

<220>
<221> source
<223> /note="Payload ID: 2360"

<220>
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<223> /note="Gene Symbol: CEACAM3"

<220>
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<223> /note="Gene Name:
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        molecule 3"

<220>
<221> source
<223> /note="Uniprot ID: P40198"

<220>
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<223> /note="ENSP ID: ENSP00000349971"

<400> 11939
Met Gly Pro Pro Ser Ala Ser Pro His Arg Glu Cys Ile Pro Trp Gln
1              5              10              15

Gly Leu Leu Leu Thr Ala Ser Leu Leu Asn Phe Trp Asn Pro Pro Thr
                20              25              30

Thr Ala Lys Leu Thr Ile Glu Ser Met Pro Leu Ser Val Ala Glu Gly
        35              40              45

Lys Glu Val Leu Leu Leu Val His Asn Leu Pro Gln His Leu Phe Gly
        50              55              60

Tyr Ser Trp Tyr Lys Gly Glu Arg Val Asp Gly Asn Ser Leu Ile Val
65              70              75              80

Gly Tyr Val Ile Gly Thr Gln Gln Ala Thr Pro Gly Ala Ala Tyr Ser
            85              90              95

Gly Arg Glu Thr Ile Tyr Thr Asn Ala Ser Leu Leu Ile Gln Asn Val
            100             105             110

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Thr Gln Asn Asp Ile Gly Phe Tyr Thr Leu Gln Val Ile Lys Ser Asp
115 120 125

Leu Val Asn Glu Glu Ala Thr Gly Gln Phe His Val Tyr Gln Glu Asn
130 135 140

Ala Pro Gly Leu Pro Val Gly Ala Val Ala Gly Ile Val Thr Gly Val
145 150 155 160

Leu Val Gly Val Ala Leu Val Ala Ala Leu Val Cys Phe Leu Leu Leu
165 170 175

Ala Lys Thr Gly Arg Thr Ser Ile Gln Arg Asp Leu Lys Glu Gln Gln
180 185 190

Pro Gln Ala Leu Ala Pro Gly Arg Gly Pro Ser His Ser Ser Ala Phe
195 200 205

Ser Met Ser Pro Leu Ser Thr Ala Gln Ala Pro Leu Pro Asn Pro Arg
210 215 220

Thr Ala Ala Ser Ile Tyr Glu Glu Leu Leu Lys His Asp Thr Asn Ile
225 230 235 240

Tyr Cys Arg Met Asp His Lys Ala Glu Val Ala Ser
245 250

<210> 11940
<211> 177
<212> PRT
<213> Homo sapiens

<220>
<221> source
<223> /note="Payload ID: 2360"

<220>
<221> source
<223> /note="Gene Symbol: CEACAM3"

<220>
<221> source
<223> /note="Gene Name:
carcinoembryonic antigen-related cell adhesion
molecule 3"

<220>

<221> source
<223> /note="Uniprot ID: P40198"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000411641"

<400> 11940

Met Gly Pro Pro Ser Ala Ser Pro His Arg Glu Cys Ile Pro Trp Gln
1 5 10 15

Gly Leu Leu Leu Thr Ala Ser Leu Leu Asn Phe Trp Asn Pro Pro Thr
20 25 30

Thr Ala Lys Leu Thr Ile Glu Ser Met Pro Leu Ser Val Ala Glu Gly
35 40 45

Lys Glu Val Leu Leu Leu Val His Asn Leu Pro Gln His Leu Phe Gly
50 55 60

Tyr Ser Trp Tyr Lys Gly Glu Arg Val Asp Gly Asn Ser Leu Ile Val
65 70 75 80

Gly Tyr Val Ile Gly Thr Gln Gln Ala Thr Pro Gly Ala Ala Tyr Ser
85 90 95

Gly Arg Glu Thr Ile Tyr Thr Asn Ala Ser Leu Leu Ile Gln Asn Val
100 105 110

Thr Gln Asn Asp Ile Gly Phe Tyr Thr Leu Gln Val Ile Lys Ser Asp
115 120 125

Leu Val Asn Glu Glu Ala Thr Gly Gln Phe His Val Tyr Pro Glu Leu
130 135 140

Pro Lys Pro Ser Ile Ser Ser Asn Asn Ser Asn Pro Lys Glu Asp Lys
145 150 155 160

Asp Ala Val Ala Phe Thr Cys Glu Pro Glu Ile His Ser Thr Thr Cys
165 170 175

Leu

<210> 11941

<211> 99
<212> PRT
<213> Homo sapiens

<220>
<221> source
<223> /note="Payload ID: 2360"

<220>
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<223> /note="Gene Symbol: CEACAM3"

<220>
<221> source
<223> /note="Gene Name:
carcinoembryonic antigen-related cell adhesion
molecule 3"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000469333"

<400> 11941
Met Pro Leu Ser Val Ala Glu Gly Lys Glu Val Leu Leu Leu Val His
1 5 10 15

Asn Leu Pro Gln His Leu Phe Gly Tyr Ser Trp Tyr Lys Gly Glu Arg
20 25 30

Val Asp Gly Asn Ser Leu Ile Val Gly Tyr Val Ile Gly Thr Gln Gln
35 40 45

Ala Thr Pro Gly Ala Ala Tyr Ser Gly Arg Glu Thr Ile Tyr Thr Asn
50 55 60

Ala Ser Leu Leu Ile Gln Asn Val Thr Gln Asn Asp Ile Gly Phe Tyr
65 70 75 80

Thr Leu Gln Val Ile Lys Ser Asp Leu Val Asn Glu Glu Ala Thr Gly
85 90 95

Gln Phe His

<210> 11942
<211> 212
<212> PRT
<213> Homo sapiens

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<221> source
<223> /note="Payload ID: 2360"

<220>
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<220>
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<223> /note="Gene Name:
      carcinoembryonic antigen-related cell adhesion
      molecule 3"

<220>
<221> source
<223> /note="Uniprot ID: P40198"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000485920"

<400> 11942
Met Gly Pro Pro Ser Ala Ser Pro His Arg Glu Cys Ile Pro Trp Gln
1          5          10          15

Gly Leu Leu Leu Thr Ala Ser Leu Leu Asn Phe Trp Asn Pro Pro Thr
      20          25          30

Thr Ala Lys Leu Thr Ile Glu Ser Met Pro Leu Ser Val Ala Glu Gly
      35          40          45

Lys Glu Val Leu Leu Leu Val His Asn Leu Pro Gln His Leu Phe Gly
      50          55          60

Tyr Ser Trp Tyr Lys Gly Glu Arg Val Asp Gly Asn Ser Leu Ile Val
65          70          75          80

Gly Tyr Val Ile Gly Thr Gln Gln Ala Thr Pro Gly Ala Ala Tyr Ser
      85          90          95

Gly Arg Glu Thr Ile Tyr Thr Asn Ala Ser Leu Leu Ile Gln Asn Val
      100          105          110

Thr Gln Asn Asp Ile Gly Phe Tyr Thr Leu Gln Val Ile Lys Ser Asp
      115          120          125

Leu Val Asn Glu Glu Ala Thr Gly Gln Phe His Val Tyr Gln Glu Asn
130          135          140

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Ala Pro Gly Leu Pro Val Gly Ala Val Ala Gly Ile Val Thr Gly Val
145 150 155 160

Leu Val Gly Val Ala Leu Val Ala Ala Leu Val Cys Phe Leu Leu Leu
165 170 175

Ala Lys Thr Gly Arg Pro Trp Ser Leu Pro Gln Leu Cys Leu Leu Asp
180 185 190

Val Pro Ser Leu His Cys Pro Gly Pro Pro Thr Gln Pro Gln Asp Ser
195 200 205

Ser Phe His Leu
210

<210> 11943
<211> 244
<212> PRT
<213> Homo sapiens

<220>
<221> source
<223> /note="Payload ID: 2361"

<220>
<221> source
<223> /note="Gene Symbol: CEACAM4"

<220>
<221> source
<223> /note="Gene Name:
carcinoembryonic antigen-related cell adhesion
molecule 4"

<220>
<221> source
<223> /note="Uniprot ID: O75871"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000221954"

<400> 11943
Met Gly Pro Pro Ser Ala Ala Pro Arg Gly Gly His Arg Pro Trp Gln
1 5 10 15

Gly Leu Leu Ile Thr Ala Ser Leu Leu Thr Phe Trp His Pro Pro Thr
20 25 30

Thr	Val	Gln	Phe	Thr	Ile	Glu	Ala	Leu	Pro	Ser	Ser	Ala	Ala	Glu	Gly				
		35					40					45							
Lys	Asp	Val	Leu	Leu	Leu	Ala	Cys	Asn	Ile	Ser	Glu	Thr	Ile	Gln	Ala				
	50					55					60								
Tyr	Tyr	Trp	His	Lys	Gly	Lys	Thr	Ala	Glu	Gly	Ser	Pro	Leu	Ile	Ala				
65					70					75					80				
Gly	Tyr	Ile	Thr	Asp	Ile	Gln	Ala	Asn	Ile	Pro	Gly	Ala	Ala	Tyr	Ser				
				85					90					95					
Gly	Arg	Glu	Thr	Val	Tyr	Pro	Asn	Gly	Ser	Leu	Leu	Phe	Gln	Asn	Ile				
			100					105					110						
Thr	Leu	Glu	Asp	Ala	Gly	Ser	Tyr	Thr	Leu	Arg	Thr	Ile	Asn	Ala	Ser				
		115					120					125							
Tyr	Asp	Ser	Asp	Gln	Ala	Thr	Gly	Gln	Leu	His	Val	His	Gln	Asn	Asn				
	130					135					140								
Val	Pro	Gly	Leu	Pro	Val	Gly	Ala	Val	Ala	Gly	Ile	Val	Thr	Gly	Val				
145					150					155					160				
Leu	Val	Gly	Val	Ala	Leu	Val	Ala	Ala	Leu	Val	Cys	Phe	Leu	Leu	Leu				
				165					170					175					
Ser	Arg	Thr	Gly	Arg	Ala	Ser	Ile	Gln	Arg	Asp	Leu	Arg	Glu	Gln	Pro				
			180					185					190						
Pro	Pro	Ala	Ser	Thr	Pro	Gly	His	Gly	Pro	Ser	His	Arg	Ser	Thr	Phe				
		195					200					205							
Ser	Ala	Pro	Leu	Pro	Ser	Pro	Arg	Thr	Ala	Thr	Pro	Ile	Tyr	Glu	Glu				
	210					215					220								
Leu	Leu	Tyr	Ser	Asp	Ala	Asn	Ile	Tyr	Cys	Gln	Ile	Asp	His	Lys	Ala				
225					230					235					240				
Asp	Val	Val	Ser																

<210> 11944

26535

<211> 254
<212> PRT
<213> Homo sapiens

<220>
<221> source
<223> /note="Payload ID: 2361"

<220>
<221> source
<223> /note="Gene Symbol: CEACAM4"

<220>
<221> source
<223> /note="Gene Name:
carcinoembryonic antigen-related cell adhesion
molecule 4"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000473018"

<400> 11944
Met Gly Pro Pro Ser Ala Ala Pro Arg Gly Gly His Arg Pro Trp Gln
1 5 10 15

Gly Leu Leu Ile Thr Ala Ser Leu Leu Thr Phe Trp His Pro Pro Thr
20 25 30

Thr Val Gln Phe Thr Ile Glu Ala Leu Pro Ser Ser Ala Ala Glu Gly
35 40 45

Lys Asp Val Leu Leu Leu Ala Cys Asn Ile Ser Glu Thr Ile Gln Ala
50 55 60

Tyr Tyr Trp His Lys Gly Lys Thr Ala Glu Gly Ser Pro Leu Ile Ala
65 70 75 80

Gly Tyr Ile Thr Asp Ile Gln Ala Asn Ile Pro Gly Ala Ala Tyr Ser
85 90 95

Gly Arg Glu Thr Val Tyr Pro Asn Gly Ser Leu Leu Phe Gln Asn Ile
100 105 110

Thr Leu Glu Asp Ala Gly Ser Tyr Thr Leu Arg Thr Ile Asn Ala Ser
115 120 125

Tyr Asp Ser Asp Gln Ala Thr Gly Gln Leu His Val His Gln Asn Asn
130 135 140

Val Pro Gly Leu Pro Val Gly Ala Val Ala Gly Ile Val Thr Gly Val
145 150 155 160

Leu Val Gly Val Ala Leu Val Ala Ala Leu Val Cys Phe Leu Leu Leu
165 170 175

Ser Arg Thr Gly Ser Ile Gln Arg Asp Leu Arg Glu Gln Pro Pro Pro
180 185 190

Ala Ser Thr Pro Gly His Gly Pro Ser His Arg Ser Thr Phe Ser Ala
195 200 205

Pro Leu Pro Ser Pro Arg Thr Ala Thr Pro Ile Tyr Glu Val Ser Val
210 215 220

Gly His Gly Cys Ser Gly Pro Ala Gly Ser Arg Gly Pro Arg Ile Cys
225 230 235 240

Pro His Gln His Leu Ala Glu Leu Arg Phe Arg Lys Met Gln
245 250

<210> 11945
<211> 244
<212> PRT
<213> Homo sapiens

<220>
<221> source
<223> /note="Payload ID: 2361"

<220>
<221> source
<223> /note="Gene Symbol: CEACAM4"

<220>
<221> source
<223> /note="Gene Name:
carcinoembryonic antigen-related cell adhesion
molecule 4"

<220>
<221> source
<223> /note="Uniprot ID: O75871"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000481247"

<400> 11945

Met Gly Pro Pro Ser Ala Ala Pro Arg Gly Gly His Arg Pro Trp Gln
1 5 10 15

Gly Leu Leu Ile Thr Ala Ser Leu Leu Thr Phe Trp His Pro Pro Thr
20 25 30

Thr Val Gln Phe Thr Ile Glu Ala Leu Pro Ser Ser Ala Ala Glu Gly
35 40 45

Lys Asp Val Leu Leu Leu Ala Cys Asn Ile Ser Glu Thr Ile Gln Ala
50 55 60

Tyr Tyr Trp His Lys Gly Lys Thr Ala Glu Gly Ser Pro Leu Ile Ala
65 70 75 80

Gly Tyr Ile Thr Asp Ile Gln Ala Asn Ile Pro Gly Ala Ala Tyr Ser
85 90 95

Gly Arg Glu Thr Val Tyr Pro Asn Gly Ser Leu Leu Phe Gln Asn Ile
100 105 110

Thr Leu Glu Asp Ala Gly Ser Tyr Thr Leu Arg Thr Ile Asn Ala Ser
115 120 125

Tyr Asp Ser Asp Gln Ala Thr Gly Gln Leu His Val His Gln Asn Asn
130 135 140

Val Pro Gly Leu Pro Val Gly Ala Val Ala Gly Ile Val Thr Gly Val
145 150 155 160

Leu Val Gly Val Ala Leu Val Ala Ala Leu Val Cys Phe Leu Leu Leu
165 170 175

Ser Arg Thr Gly Arg Ala Ser Ile Gln Arg Asp Leu Arg Glu Gln Pro
180 185 190

Pro Pro Ala Ser Thr Pro Gly His Gly Pro Ser His Arg Ser Thr Phe
195 200 205

Ser Ala Pro Leu Pro Ser Pro Arg Thr Ala Thr Pro Ile Tyr Glu Glu
210 215 220

Leu Leu Tyr Ser Asp Ala Asn Ile Tyr Cys Gln Ile Asp His Lys Ala
225 230 235 240

Asp Val Val Ser

<210> 11946

<211> 254

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2361"

<220>

<221> source

<223> /note="Gene Symbol: CEACAM4"

<220>

<221> source

<223> /note="Gene Name:
carcinoembryonic antigen-related cell adhesion
molecule 4"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000486872"

<400> 11946

Met Gly Pro Pro Ser Ala Ala Pro Arg Gly Gly His Arg Pro Trp Gln
1 5 10 15

Gly Leu Leu Ile Thr Ala Ser Leu Leu Thr Phe Trp His Pro Pro Thr
20 25 30

Thr Val Gln Phe Thr Ile Glu Ala Leu Pro Ser Ser Ala Ala Glu Gly
35 40 45

Lys Asp Val Leu Leu Leu Ala Cys Asn Ile Ser Glu Thr Ile Gln Ala
50 55 60

Tyr Tyr Trp His Lys Gly Lys Thr Ala Glu Gly Ser Pro Leu Ile Ala
65 70 75 80

Gly Tyr Ile Thr Asp Ile Gln Ala Asn Ile Pro Gly Ala Ala Tyr Ser
85 90 95

Gly Arg Glu Thr Val Tyr Pro Asn Gly Ser Leu Leu Phe Gln Asn Ile

26539

100	105	110
Thr Leu Glu Asp Ala Gly Ser Tyr Thr Leu Arg Thr Ile Asn Ala Ser		
115	120	125
Tyr Asp Ser Asp Gln Ala Thr Gly Gln Leu His Val His Gln Asn Asn		
130	135	140
Val Pro Gly Leu Pro Val Gly Ala Val Ala Gly Ile Val Thr Gly Val		
145	150	155
Leu Val Gly Val Ala Leu Val Ala Ala Leu Val Cys Phe Leu Leu Leu		
165	170	175
Ser Arg Thr Gly Ser Ile Gln Arg Asp Leu Arg Glu Gln Pro Pro Pro		
180	185	190
Ala Ser Thr Pro Gly His Gly Pro Ser His Arg Ser Thr Phe Ser Ala		
195	200	205
Pro Leu Pro Ser Pro Arg Thr Ala Thr Pro Ile Tyr Glu Val Ser Val		
210	215	220
Gly His Gly Cys Ser Gly Pro Ala Gly Ser Arg Gly Pro Arg Ile Cys		
225	230	235
Pro His Gln His Leu Ala Glu Leu Arg Phe Arg Lys Met Gln		
245	250	

<210> 11947

<211> 702

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2362"

<220>

<221> source

<223> /note="Gene Symbol: CEACAM5"

<220>

<221> source

<223> /note="Gene Name:
carcinoembryonic antigen-related cell adhesion
molecule 5"

<220>
 <221> source
 <223> /note="Uniprot ID: P06731"

<220>
 <221> source
 <223> /note="ENSP ID: ENSP00000221992"

<400> 11947

Met Glu Ser Pro Ser Ala Pro Pro His Arg Trp Cys Ile Pro Trp Gln
 1 5 10 15

Arg Leu Leu Leu Thr Ala Ser Leu Leu Thr Phe Trp Asn Pro Pro Thr
 20 25 30

Thr Ala Lys Leu Thr Ile Glu Ser Thr Pro Phe Asn Val Ala Glu Gly
 35 40 45

Lys Glu Val Leu Leu Leu Val His Asn Leu Pro Gln His Leu Phe Gly
 50 55 60

Tyr Ser Trp Tyr Lys Gly Glu Arg Val Asp Gly Asn Arg Gln Ile Ile
 65 70 75 80

Gly Tyr Val Ile Gly Thr Gln Gln Ala Thr Pro Gly Pro Ala Tyr Ser
 85 90 95

Gly Arg Glu Ile Ile Tyr Pro Asn Ala Ser Leu Leu Ile Gln Asn Ile
 100 105 110

Ile Gln Asn Asp Thr Gly Phe Tyr Thr Leu His Val Ile Lys Ser Asp
 115 120 125

Leu Val Asn Glu Glu Ala Thr Gly Gln Phe Arg Val Tyr Pro Glu Leu
 130 135 140

Pro Lys Pro Ser Ile Ser Ser Asn Asn Ser Lys Pro Val Glu Asp Lys
 145 150 155 160

Asp Ala Val Ala Phe Thr Cys Glu Pro Glu Thr Gln Asp Ala Thr Tyr
 165 170 175

Leu Trp Trp Val Asn Asn Gln Ser Leu Pro Val Ser Pro Arg Leu Gln
 180 185 190

Leu	Ser	Asn	Gly	Asn	Arg	Thr	Leu	Thr	Leu	Phe	Asn	Val	Thr	Arg	Asn	
		195					200					205				
Asp	Thr	Ala	Ser	Tyr	Lys	Cys	Glu	Thr	Gln	Asn	Pro	Val	Ser	Ala	Arg	
	210					215					220					
Arg	Ser	Asp	Ser	Val	Ile	Leu	Asn	Val	Leu	Tyr	Gly	Pro	Asp	Ala	Pro	
225					230					235					240	
Thr	Ile	Ser	Pro	Leu	Asn	Thr	Ser	Tyr	Arg	Ser	Gly	Glu	Asn	Leu	Asn	
				245					250					255		
Leu	Ser	Cys	His	Ala	Ala	Ser	Asn	Pro	Pro	Ala	Gln	Tyr	Ser	Trp	Phe	
			260					265					270			
Val	Asn	Gly	Thr	Phe	Gln	Gln	Ser	Thr	Gln	Glu	Leu	Phe	Ile	Pro	Asn	
		275					280					285				
Ile	Thr	Val	Asn	Asn	Ser	Gly	Ser	Tyr	Thr	Cys	Gln	Ala	His	Asn	Ser	
	290					295					300					
Asp	Thr	Gly	Leu	Asn	Arg	Thr	Thr	Val	Thr	Thr	Ile	Thr	Val	Tyr	Ala	
305					310					315					320	
Glu	Pro	Pro	Lys	Pro	Phe	Ile	Thr	Ser	Asn	Asn	Ser	Asn	Pro	Val	Glu	
				325					330					335		
Asp	Glu	Asp	Ala	Val	Ala	Leu	Thr	Cys	Glu	Pro	Glu	Ile	Gln	Asn	Thr	
			340					345					350			
Thr	Tyr	Leu	Trp	Trp	Val	Asn	Asn	Gln	Ser	Leu	Pro	Val	Ser	Pro	Arg	
		355					360					365				
Leu	Gln	Leu	Ser	Asn	Asp	Asn	Arg	Thr	Leu	Thr	Leu	Leu	Ser	Val	Thr	
	370					375					380					
Arg	Asn	Asp	Val	Gly	Pro	Tyr	Glu	Cys	Gly	Ile	Gln	Asn	Glu	Leu	Ser	
385					390					395					400	
Val	Asp	His	Ser	Asp	Pro	Val	Ile	Leu	Asn	Val	Leu	Tyr	Gly	Pro	Asp	
				405					410					415		

Asp	Pro	Thr	Ile	Ser	Pro	Ser	Tyr	Thr	Tyr	Tyr	Arg	Pro	Gly	Val	Asn		
			420					425					430				
Leu	Ser	Leu	Ser	Cys	His	Ala	Ala	Ser	Asn	Pro	Pro	Ala	Gln	Tyr	Ser		
		435					440					445					
Trp	Leu	Ile	Asp	Gly	Asn	Ile	Gln	Gln	His	Thr	Gln	Glu	Leu	Phe	Ile		
	450					455					460						
Ser	Asn	Ile	Thr	Glu	Lys	Asn	Ser	Gly	Leu	Tyr	Thr	Cys	Gln	Ala	Asn		
465					470					475					480		
Asn	Ser	Ala	Ser	Gly	His	Ser	Arg	Thr	Thr	Val	Lys	Thr	Ile	Thr	Val		
				485					490					495			
Ser	Ala	Glu	Leu	Pro	Lys	Pro	Ser	Ile	Ser	Ser	Asn	Asn	Ser	Lys	Pro		
			500					505					510				
Val	Glu	Asp	Lys	Asp	Ala	Val	Ala	Phe	Thr	Cys	Glu	Pro	Glu	Ala	Gln		
		515					520					525					
Asn	Thr	Thr	Tyr	Leu	Trp	Trp	Val	Asn	Gly	Gln	Ser	Leu	Pro	Val	Ser		
	530					535					540						
Pro	Arg	Leu	Gln	Leu	Ser	Asn	Gly	Asn	Arg	Thr	Leu	Thr	Leu	Phe	Asn		
545					550					555					560		
Val	Thr	Arg	Asn	Asp	Ala	Arg	Ala	Tyr	Val	Cys	Gly	Ile	Gln	Asn	Ser		
				565					570					575			
Val	Ser	Ala	Asn	Arg	Ser	Asp	Pro	Val	Thr	Leu	Asp	Val	Leu	Tyr	Gly		
			580					585					590				
Pro	Asp	Thr	Pro	Ile	Ile	Ser	Pro	Pro	Asp	Ser	Ser	Tyr	Leu	Ser	Gly		
		595					600					605					
Ala	Asn	Leu	Asn	Leu	Ser	Cys	His	Ser	Ala	Ser	Asn	Pro	Ser	Pro	Gln		
	610					615					620						
Tyr	Ser	Trp	Arg	Ile	Asn	Gly	Ile	Pro	Gln	Gln	His	Thr	Gln	Val	Leu		
625					630					635					640		
Phe	Ile	Ala	Lys	Ile	Thr	Pro	Asn	Asn	Asn	Gly	Thr	Tyr	Ala	Cys	Phe		

645

650

655

Val Ser Asn Leu Ala Thr Gly Arg Asn Asn Ser Ile Val Lys Ser Ile
 660 665 670

Thr Val Ser Ala Ser Gly Thr Ser Pro Gly Leu Ser Ala Gly Ala Thr
 675 680 685

Val Gly Ile Met Ile Gly Val Leu Val Gly Val Ala Leu Ile
 690 695 700

<210> 11948

<211> 701

<212> PRT

<213> Homo sapiens

<220>

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<223> /note="Payload ID: 2362"

<220>

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<223> /note="Gene Symbol: CEACAM5"

<220>

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<223> /note="Gene Name:
 carcinoembryonic antigen-related cell adhesion
 molecule 5"

<220>

<221> source

<223> /note="Uniprot ID: P06731"

<220>

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<223> /note="ENSP ID: ENSP00000381600"

<400> 11948

Met Glu Ser Pro Ser Ala Pro Pro His Arg Trp Cys Ile Pro Trp Gln
 1 5 10 15

Arg Leu Leu Leu Thr Ala Ser Leu Leu Thr Phe Trp Asn Pro Pro Thr
 20 25 30

Thr Ala Lys Leu Thr Ile Glu Ser Thr Pro Phe Asn Val Ala Glu Gly
 35 40 45

Lys Glu Val Leu Leu Leu Val His Asn Leu Pro Gln His Leu Phe Gly
 50 55 60

26544

Tyr	Ser	Trp	Tyr	Lys	Gly	Glu	Arg	Val	Asp	Gly	Asn	Arg	Gln	Ile	Ile	
65					70					75					80	
Gly	Tyr	Val	Ile	Gly	Thr	Gln	Gln	Ala	Thr	Pro	Gly	Pro	Ala	Tyr	Ser	
				85					90					95		
Gly	Arg	Glu	Ile	Ile	Tyr	Pro	Asn	Ala	Ser	Leu	Leu	Ile	Gln	Asn	Ile	
			100					105					110			
Ile	Gln	Asn	Asp	Thr	Gly	Phe	Tyr	Thr	Leu	His	Val	Ile	Lys	Ser	Asp	
		115					120					125				
Leu	Val	Asn	Glu	Glu	Ala	Thr	Gly	Gln	Phe	Arg	Val	Tyr	Pro	Glu	Leu	
	130					135					140					
Pro	Lys	Pro	Ser	Ile	Ser	Ser	Asn	Asn	Ser	Lys	Pro	Val	Glu	Asp	Lys	
145					150					155					160	
Asp	Ala	Val	Ala	Phe	Thr	Cys	Glu	Pro	Glu	Thr	Gln	Asp	Ala	Thr	Tyr	
				165					170					175		
Leu	Trp	Trp	Val	Asn	Asn	Gln	Ser	Leu	Pro	Val	Ser	Pro	Arg	Leu	Gln	
			180					185					190			
Leu	Ser	Asn	Gly	Asn	Arg	Thr	Leu	Thr	Leu	Phe	Asn	Val	Thr	Arg	Asn	
		195					200					205				
Asp	Thr	Ala	Ser	Tyr	Lys	Cys	Glu	Thr	Gln	Asn	Pro	Val	Ser	Ala	Arg	
	210					215					220					
Arg	Ser	Asp	Ser	Val	Ile	Leu	Asn	Val	Leu	Tyr	Gly	Pro	Asp	Ala	Pro	
225					230					235					240	
Thr	Ile	Ser	Pro	Leu	Asn	Thr	Ser	Tyr	Arg	Ser	Gly	Glu	Asn	Leu	Asn	
				245					250					255		
Leu	Ser	Cys	His	Ala	Ala	Ser	Asn	Pro	Pro	Ala	Gln	Tyr	Ser	Trp	Phe	
			260					265					270			
Val	Asn	Gly	Thr	Phe	Gln	Gln	Ser	Thr	Gln	Glu	Leu	Phe	Ile	Pro	Asn	
		275					280					285				

Ile	Thr	Val	Asn	Asn	Ser	Gly	Ser	Tyr	Thr	Cys	Gln	Ala	His	Asn	Ser	
	290					295					300					
Asp	Thr	Gly	Leu	Asn	Arg	Thr	Thr	Val	Thr	Thr	Ile	Thr	Val	Tyr	Glu	
305					310					315					320	
Pro	Pro	Lys	Pro	Phe	Ile	Thr	Ser	Asn	Asn	Ser	Asn	Pro	Val	Glu	Asp	
				325					330					335		
Glu	Asp	Ala	Val	Ala	Leu	Thr	Cys	Glu	Pro	Glu	Ile	Gln	Asn	Thr	Thr	
			340					345					350			
Tyr	Leu	Trp	Trp	Val	Asn	Asn	Gln	Ser	Leu	Pro	Val	Ser	Pro	Arg	Leu	
		355					360					365				
Gln	Leu	Ser	Asn	Asp	Asn	Arg	Thr	Leu	Thr	Leu	Leu	Ser	Val	Thr	Arg	
	370					375					380					
Asn	Asp	Val	Gly	Pro	Tyr	Glu	Cys	Gly	Ile	Gln	Asn	Glu	Leu	Ser	Val	
385					390					395					400	
Asp	His	Ser	Asp	Pro	Val	Ile	Leu	Asn	Val	Leu	Tyr	Gly	Pro	Asp	Asp	
				405					410					415		
Pro	Thr	Ile	Ser	Pro	Ser	Tyr	Thr	Tyr	Tyr	Arg	Pro	Gly	Val	Asn	Leu	
			420					425					430			
Ser	Leu	Ser	Cys	His	Ala	Ala	Ser	Asn	Pro	Pro	Ala	Gln	Tyr	Ser	Trp	
		435					440					445				
Leu	Ile	Asp	Gly	Asn	Ile	Gln	Gln	His	Thr	Gln	Glu	Leu	Phe	Ile	Ser	
	450					455					460					
Asn	Ile	Thr	Glu	Lys	Asn	Ser	Gly	Leu	Tyr	Thr	Cys	Gln	Ala	Asn	Asn	
465					470					475					480	
Ser	Ala	Ser	Gly	His	Ser	Arg	Thr	Thr	Val	Lys	Thr	Ile	Thr	Val	Ser	
				485					490					495		
Ala	Glu	Leu	Pro	Lys	Pro	Ser	Ile	Ser	Ser	Asn	Asn	Ser	Lys	Pro	Val	
			500					505					510			

Glu Asp Lys Asp Ala Val Ala Phe Thr Cys Glu Pro Glu Ala Gln Asn
 515 520 525
 Thr Thr Tyr Leu Trp Trp Val Asn Gly Gln Ser Leu Pro Val Ser Pro
 530 535 540
 Arg Leu Gln Leu Ser Asn Gly Asn Arg Thr Leu Thr Leu Phe Asn Val
 545 550 555 560
 Thr Arg Asn Asp Ala Arg Ala Tyr Val Cys Gly Ile Gln Asn Ser Val
 565 570 575
 Ser Ala Asn Arg Ser Asp Pro Val Thr Leu Asp Val Leu Tyr Gly Pro
 580 585 590
 Asp Thr Pro Ile Ile Ser Pro Pro Asp Ser Ser Tyr Leu Ser Gly Ala
 595 600 605
 Asn Leu Asn Leu Ser Cys His Ser Ala Ser Asn Pro Ser Pro Gln Tyr
 610 615 620
 Ser Trp Arg Ile Asn Gly Ile Pro Gln Gln His Thr Gln Val Leu Phe
 625 630 635 640
 Ile Ala Lys Ile Thr Pro Asn Asn Asn Gly Thr Tyr Ala Cys Phe Val
 645 650 655
 Ser Asn Leu Ala Thr Gly Arg Asn Asn Ser Ile Val Lys Ser Ile Thr
 660 665 670
 Val Ser Ala Ser Gly Thr Ser Pro Gly Leu Ser Ala Gly Ala Thr Val
 675 680 685
 Gly Ile Met Ile Gly Val Leu Val Gly Val Ala Leu Ile
 690 695 700

<210> 11949

<211> 702

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2362"

<220>
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<223> /note="Gene Symbol: CEACAM5"

<220>
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<223> /note="Gene Name:
carcinoembryonic antigen-related cell adhesion
molecule 5"

<220>
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<223> /note="Uniprot ID: P06731"

<220>
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<400> 11949
Met Glu Ser Pro Ser Ala Pro Pro His Arg Trp Cys Ile Pro Trp Gln
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Arg Leu Leu Leu Thr Ala Ser Leu Leu Thr Phe Trp Asn Pro Pro Thr
20 25 30

Thr Ala Lys Leu Thr Ile Glu Ser Thr Pro Phe Asn Val Ala Glu Gly
35 40 45

Lys Glu Val Leu Leu Leu Val His Asn Leu Pro Gln His Leu Phe Gly
50 55 60

Tyr Ser Trp Tyr Lys Gly Glu Arg Val Asp Gly Asn Arg Gln Ile Ile
65 70 75 80

Gly Tyr Val Ile Gly Thr Gln Gln Ala Thr Pro Gly Pro Ala Tyr Ser
85 90 95

Gly Arg Glu Ile Ile Tyr Pro Asn Ala Ser Leu Leu Ile Gln Asn Ile
100 105 110

Ile Gln Asn Asp Thr Gly Phe Tyr Thr Leu His Val Ile Lys Ser Asp
115 120 125

Leu Val Asn Glu Glu Ala Thr Gly Gln Phe Arg Val Tyr Pro Glu Leu
130 135 140

Pro Lys Pro Ser Ile Ser Ser Asn Asn Ser Lys Pro Val Glu Asp Lys
145 150 155 160

Asp	Ala	Val	Ala	Phe	Thr	Cys	Glu	Pro	Glu	Thr	Gln	Asp	Ala	Thr	Tyr	
				165					170					175		
Leu	Trp	Trp	Val	Asn	Asn	Gln	Ser	Leu	Pro	Val	Ser	Pro	Arg	Leu	Gln	
			180					185					190			
Leu	Ser	Asn	Gly	Asn	Arg	Thr	Leu	Thr	Leu	Phe	Asn	Val	Thr	Arg	Asn	
		195					200					205				
Asp	Thr	Ala	Ser	Tyr	Lys	Cys	Glu	Thr	Gln	Asn	Pro	Val	Ser	Ala	Arg	
	210					215					220					
Arg	Ser	Asp	Ser	Val	Ile	Leu	Asn	Val	Leu	Tyr	Gly	Pro	Asp	Ala	Pro	
225					230					235					240	
Thr	Ile	Ser	Pro	Leu	Asn	Thr	Ser	Tyr	Arg	Ser	Gly	Glu	Asn	Leu	Asn	
				245					250					255		
Leu	Ser	Cys	His	Ala	Ala	Ser	Asn	Pro	Pro	Ala	Gln	Tyr	Ser	Trp	Phe	
			260					265					270			
Val	Asn	Gly	Thr	Phe	Gln	Gln	Ser	Thr	Gln	Glu	Leu	Phe	Ile	Pro	Asn	
		275					280					285				
Ile	Thr	Val	Asn	Asn	Ser	Gly	Ser	Tyr	Thr	Cys	Gln	Ala	His	Asn	Ser	
	290					295					300					
Asp	Thr	Gly	Leu	Asn	Arg	Thr	Thr	Val	Thr	Thr	Ile	Thr	Val	Tyr	Ala	
305					310					315					320	
Glu	Pro	Pro	Lys	Pro	Phe	Ile	Thr	Ser	Asn	Asn	Ser	Asn	Pro	Val	Glu	
				325					330					335		
Asp	Glu	Asp	Ala	Val	Ala	Leu	Thr	Cys	Glu	Pro	Glu	Ile	Gln	Asn	Thr	
			340					345					350			
Thr	Tyr	Leu	Trp	Trp	Val	Asn	Asn	Gln	Ser	Leu	Pro	Val	Ser	Pro	Arg	
		355					360					365				
Leu	Gln	Leu	Ser	Asn	Asp	Asn	Arg	Thr	Leu	Thr	Leu	Leu	Ser	Val	Thr	
	370					375					380					

Arg	Asn	Asp	Val	Gly	Pro	Tyr	Glu	Cys	Gly	Ile	Gln	Asn	Glu	Leu	Ser	385	390	395	400
Val	Asp	His	Ser	Asp	Pro	Val	Ile	Leu	Asn	Val	Leu	Tyr	Gly	Pro	Asp	405	410	415	
Asp	Pro	Thr	Ile	Ser	Pro	Ser	Tyr	Thr	Tyr	Tyr	Arg	Pro	Gly	Val	Asn	420	425	430	
Leu	Ser	Leu	Ser	Cys	His	Ala	Ala	Ser	Asn	Pro	Pro	Ala	Gln	Tyr	Ser	435	440	445	
Trp	Leu	Ile	Asp	Gly	Asn	Ile	Gln	Gln	His	Thr	Gln	Glu	Leu	Phe	Ile	450	455	460	
Ser	Asn	Ile	Thr	Glu	Lys	Asn	Ser	Gly	Leu	Tyr	Thr	Cys	Gln	Ala	Asn	465	470	475	480
Asn	Ser	Ala	Ser	Gly	His	Ser	Arg	Thr	Thr	Val	Lys	Thr	Ile	Thr	Val	485	490	495	
Ser	Ala	Glu	Leu	Pro	Lys	Pro	Ser	Ile	Ser	Ser	Asn	Asn	Ser	Lys	Pro	500	505	510	
Val	Glu	Asp	Lys	Asp	Ala	Val	Ala	Phe	Thr	Cys	Glu	Pro	Glu	Ala	Gln	515	520	525	
Asn	Thr	Thr	Tyr	Leu	Trp	Trp	Val	Asn	Gly	Gln	Ser	Leu	Pro	Val	Ser	530	535	540	
Pro	Arg	Leu	Gln	Leu	Ser	Asn	Gly	Asn	Arg	Thr	Leu	Thr	Leu	Phe	Asn	545	550	555	560
Val	Thr	Arg	Asn	Asp	Ala	Arg	Ala	Tyr	Val	Cys	Gly	Ile	Gln	Asn	Ser	565	570	575	
Val	Ser	Ala	Asn	Arg	Ser	Asp	Pro	Val	Thr	Leu	Asp	Val	Leu	Tyr	Gly	580	585	590	
Pro	Asp	Thr	Pro	Ile	Ile	Ser	Pro	Pro	Asp	Ser	Ser	Tyr	Leu	Ser	Gly	595	600	605	

Ala Asn Leu Asn Leu Ser Cys His Ser Ala Ser Asn Pro Ser Pro Gln
610 615 620

Tyr Ser Trp Arg Ile Asn Gly Ile Pro Gln Gln His Thr Gln Val Leu
625 630 635 640

Phe Ile Ala Lys Ile Thr Pro Asn Asn Asn Gly Thr Tyr Ala Cys Phe
645 650 655

Val Ser Asn Leu Ala Thr Gly Arg Asn Asn Ser Ile Val Lys Ser Ile
660 665 670

Thr Val Ser Ala Ser Gly Thr Ser Pro Gly Leu Ser Ala Gly Ala Thr
675 680 685

Val Gly Ile Met Ile Gly Val Leu Val Gly Val Ala Leu Ile
690 695 700

<210> 11950
<211> 141
<212> PRT
<213> Homo sapiens

<220>
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<220>
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<220>
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<223> /note="Gene Name:
carcinoembryonic antigen-related cell adhesion
molecule 5"

<220>
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<223> /note="ENSP ID: ENSP00000468997"

<220>
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<222> (1)..(1)
<223> Any amino acid

<400> 11950
Xaa Lys Leu Thr Ile Glu Ser Thr Pro Phe Asn Val Ala Glu Gly Lys
1 5 10 15

Glu Val Leu Leu Leu Val His Asn Leu Pro Gln His Leu Phe Gly Tyr
 20 25 30
 Ser Trp Tyr Lys Gly Glu Arg Val Asp Gly Asn Arg Gln Ile Ile Gly
 35 40 45
 Tyr Val Ile Gly Thr Gln Gln Ala Thr Pro Gly Pro Ala Tyr Ser Gly
 50 55 60
 Arg Glu Ile Ile Tyr Pro Asn Ala Ser Leu Leu Ile Gln Asn Ile Ile
 65 70 75 80
 Gln Asn Asp Thr Gly Phe Tyr Thr Leu His Val Ile Lys Ser Asp Leu
 85 90 95
 Val Asn Glu Glu Ala Thr Gly Gln Phe Arg Val Tyr Pro Glu Leu Pro
 100 105 110
 Lys Pro Ser Ile Ser Ser Asn Asn Ser Lys Pro Val Glu Asp Lys Asp
 115 120 125
 Ala Val Ala Phe Thr Cys Glu Pro Glu Ala Gln Asn Thr
 130 135 140

<210> 11951

<211> 194

<212> PRT

<213> Homo sapiens

<220>

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<220>

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<223> /note="Gene Name:
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<223> /note="ENSP ID: ENSP00000473252"

<220>
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 <223> Any amino acid

 <400> 11951
 Xaa Ile Tyr Pro Asn Ala Ser Leu Leu Ile Gln Asn Ile Ile Gln Asn
 1 5 10 15

 Asp Thr Gly Phe Tyr Thr Leu His Val Ile Lys Ser Asp Leu Val Asn
 20 25 30

 Glu Glu Ala Thr Gly Gln Phe Arg Val Tyr Pro Glu Leu Pro Lys Pro
 35 40 45

 Ser Ile Ser Ser Asn Asn Ser Lys Pro Val Glu Asp Lys Asp Ala Val
 50 55 60

 Ala Phe Thr Cys Glu Pro Glu Thr Gln Asp Ala Thr Tyr Leu Trp Trp
 65 70 75 80

 Val Asn Asn Gln Ser Leu Pro Val Ser Pro Arg Leu Gln Leu Ser Asn
 85 90 95

 Gly Asn Arg Thr Leu Thr Leu Phe Asn Val Thr Arg Asn Asp Thr Ala
 100 105 110

 Ser Tyr Lys Cys Glu Thr Gln Asn Pro Val Ser Ala Arg Arg Ser Asp
 115 120 125

 Ser Val Ile Leu Asn Val Leu Ser Glu Pro Pro Lys Pro Phe Ile Thr
 130 135 140

 Ser Asn Asn Ser Asn Pro Val Glu Asp Glu Asp Ala Val Ala Leu Thr
 145 150 155 160

 Cys Glu Pro Glu Ile Gln Asn Thr Thr Tyr Leu Trp Trp Val Asn Asn
 165 170 175

 Gln Ser Leu Pro Val Ser Pro Arg Leu Gln Leu Ser Asn Asp Asn Arg
 180 185 190

 Thr Leu

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<210> 11952
<211> 346
<212> PRT
<213> Homo sapiens

<220>
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<223> /note="Gene Name:
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        molecule 5"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000480800"

<400> 11952
Met Glu Ser Pro Ser Ala Pro Pro His Arg Trp Cys Ile Pro Trp Gln
1                               5                               10                               15

Arg Leu Leu Leu Thr Ala Ser Leu Leu Thr Phe Trp Asn Pro Pro Thr
                               20                               25                               30

Thr Ala Lys Leu Thr Ile Glu Ser Thr Pro Phe Asn Val Ala Glu Gly
                               35                               40                               45

Lys Glu Val Leu Leu Leu Val His Asn Leu Pro Gln His Leu Phe Gly
                               50                               55                               60

Tyr Ser Trp Tyr Lys Gly Glu Arg Val Asp Gly Asn Arg Gln Ile Ile
65                               70                               75                               80

Gly Tyr Val Ile Gly Thr Gln Gln Ala Thr Pro Gly Pro Ala Tyr Ser
                               85                               90                               95

Gly Arg Glu Ile Ile Tyr Pro Asn Ala Ser Leu Leu Ile Gln Asn Ile
                               100                              105                              110

Ile Gln Asn Asp Thr Gly Phe Tyr Thr Leu His Val Ile Lys Ser Asp
                               115                              120                              125

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Leu Val Asn Glu Glu Ala Thr Gly Gln Phe Arg Val Tyr Pro Glu Leu
130 135 140

Pro Lys Pro Ser Ile Ser Ser Asn Asn Ser Lys Pro Val Glu Asp Lys
145 150 155 160

Asp Ala Val Ala Phe Thr Cys Glu Pro Glu Thr Gln Asp Ala Thr Tyr
165 170 175

Leu Trp Trp Val Asn Asn Gln Ser Leu Pro Val Ser Pro Arg Leu Gln
180 185 190

Leu Ser Asn Gly Asn Arg Thr Leu Thr Leu Phe Asn Val Thr Arg Asn
195 200 205

Asp Ala Arg Ala Tyr Val Cys Gly Ile Gln Asn Ser Val Ser Ala Asn
210 215 220

Arg Ser Asp Pro Val Thr Leu Asp Val Leu Tyr Gly Pro Asp Thr Pro
225 230 235 240

Ile Ile Ser Pro Pro Asp Ser Ser Tyr Leu Ser Gly Ala Asn Leu Asn
245 250 255

Leu Ser Cys His Ser Ala Ser Asn Pro Ser Pro Gln Tyr Ser Trp Arg
260 265 270

Ile Asn Gly Ile Pro Gln Gln His Thr Gln Val Leu Phe Ile Ala Lys
275 280 285

Ile Thr Pro Asn Asn Asn Gly Thr Tyr Ala Cys Phe Val Ser Asn Leu
290 295 300

Ala Thr Gly Arg Asn Asn Ser Ile Val Lys Ser Ile Thr Val Ser Ala
305 310 315 320

Ser Gly Thr Ser Pro Gly Leu Ser Ala Gly Ala Thr Val Gly Ile Met
325 330 335

Ile Gly Val Leu Val Gly Val Ala Leu Ile
340 345

<210> 11953

26555

<211> 524
<212> PRT
<213> Homo sapiens

<220>
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<220>
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<220>
<221> source
<223> /note="Gene Name:
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molecule 5"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000482157"

<400> 11953

Met Glu Ser Pro Ser Ala Pro Pro His Arg Trp Cys Ile Pro Trp Gln
1 5 10 15

Arg Leu Leu Leu Thr Ala Ser Leu Leu Thr Phe Trp Asn Pro Pro Thr
20 25 30

Thr Ala Lys Leu Thr Ile Glu Ser Thr Pro Phe Asn Val Ala Glu Gly
35 40 45

Lys Glu Val Leu Leu Leu Val His Asn Leu Pro Gln His Leu Phe Gly
50 55 60

Tyr Ser Trp Tyr Lys Gly Glu Arg Val Asp Gly Asn Arg Gln Ile Ile
65 70 75 80

Gly Tyr Val Ile Gly Thr Gln Gln Ala Thr Pro Gly Pro Ala Tyr Ser
85 90 95

Gly Arg Glu Ile Ile Tyr Pro Asn Ala Ser Leu Leu Ile Gln Asn Ile
100 105 110

Ile Gln Asn Asp Thr Gly Phe Tyr Thr Leu His Val Ile Lys Ser Asp
115 120 125

Leu Val Asn Glu Glu Ala Thr Gly Gln Phe Arg Val Tyr Pro Glu Pro
130 135 140

26556

Pro	Lys	Pro	Phe	Ile	Thr	Ser	Asn	Asn	Ser	Asn	Pro	Val	Glu	Asp	Glu
145					150					155					160
Asp	Ala	Val	Ala	Leu	Thr	Cys	Glu	Pro	Glu	Ile	Gln	Asn	Thr	Thr	Tyr
				165					170					175	
Leu	Trp	Trp	Val	Asn	Asn	Gln	Ser	Leu	Pro	Val	Ser	Pro	Arg	Leu	Gln
			180					185					190		
Leu	Ser	Asn	Asp	Asn	Arg	Thr	Leu	Thr	Leu	Leu	Ser	Val	Thr	Arg	Asn
		195					200					205			
Asp	Val	Gly	Pro	Tyr	Glu	Cys	Gly	Ile	Gln	Asn	Glu	Leu	Ser	Val	Asp
	210					215					220				
His	Ser	Asp	Pro	Val	Ile	Leu	Asn	Val	Leu	Tyr	Gly	Pro	Asp	Asp	Pro
225					230					235					240
Thr	Ile	Ser	Pro	Ser	Tyr	Thr	Tyr	Tyr	Arg	Pro	Gly	Val	Asn	Leu	Ser
				245					250					255	
Leu	Ser	Cys	His	Ala	Ala	Ser	Asn	Pro	Pro	Ala	Gln	Tyr	Ser	Trp	Leu
			260					265					270		
Ile	Asp	Gly	Asn	Ile	Gln	Gln	His	Thr	Gln	Glu	Leu	Phe	Ile	Ser	Asn
		275					280					285			
Ile	Thr	Glu	Lys	Asn	Ser	Gly	Leu	Tyr	Thr	Cys	Gln	Ala	Asn	Asn	Ser
	290					295					300				
Ala	Ser	Gly	His	Ser	Arg	Thr	Thr	Val	Lys	Thr	Ile	Thr	Val	Ser	Ala
305					310					315					320
Glu	Leu	Pro	Lys	Pro	Ser	Ile	Ser	Ser	Asn	Asn	Ser	Lys	Pro	Val	Glu
				325					330					335	
Asp	Lys	Asp	Ala	Val	Ala	Phe	Thr	Cys	Glu	Pro	Glu	Ala	Gln	Asn	Thr
			340					345					350		
Thr	Tyr	Leu	Trp	Trp	Val	Asn	Gly	Gln	Ser	Leu	Pro	Val	Ser	Pro	Arg
		355					360					365			

Leu Gln Leu Ser Asn Gly Asn Arg Thr Leu Thr Leu Phe Asn Val Thr
370 375 380

Arg Asn Asp Ala Arg Ala Tyr Val Cys Gly Ile Gln Asn Ser Val Ser
385 390 395 400

Ala Asn Arg Ser Asp Pro Val Thr Leu Asp Val Leu Tyr Gly Pro Asp
405 410 415

Thr Pro Ile Ile Ser Pro Pro Asp Ser Ser Tyr Leu Ser Gly Ala Asn
420 425 430

Leu Asn Leu Ser Cys His Ser Ala Ser Asn Pro Ser Pro Gln Tyr Ser
435 440 445

Trp Arg Ile Asn Gly Ile Pro Gln Gln His Thr Gln Val Leu Phe Ile
450 455 460

Ala Lys Ile Thr Pro Asn Asn Asn Gly Thr Tyr Ala Cys Phe Val Ser
465 470 475 480

Asn Leu Ala Thr Gly Arg Asn Asn Ser Ile Val Lys Ser Ile Thr Val
485 490 495

Ser Ala Ser Gly Thr Ser Pro Gly Leu Ser Ala Gly Ala Thr Val Gly
500 505 510

Ile Met Ile Gly Val Leu Val Gly Val Ala Leu Ile
515 520

<210> 11954
<211> 702
<212> PRT
<213> Homo sapiens

<220>
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<220>
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<223> /note="Gene Symbol: CEACAM5"

<220>
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<223> /note="Gene Name:

carcinoembryonic antigen-related cell adhesion
molecule 5"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000482303"

<400> 11954

Met Glu Ser Pro Ser Ala Pro Pro His Arg Trp Cys Ile Pro Trp Gln
1 5 10 15

Arg Leu Leu Leu Thr Ala Ser Leu Leu Thr Phe Trp Asn Pro Pro Thr
20 25 30

Thr Ala Lys Leu Thr Ile Glu Ser Thr Pro Phe Asn Val Ala Glu Gly
35 40 45

Lys Glu Val Leu Leu Leu Val His Asn Leu Pro Gln His Leu Phe Gly
50 55 60

Tyr Ser Trp Tyr Lys Gly Glu Arg Val Asp Gly Asn Arg Gln Ile Ile
65 70 75 80

Gly Tyr Val Ile Gly Thr Gln Gln Ala Thr Pro Gly Pro Ala Tyr Ser
85 90 95

Gly Arg Glu Ile Ile Tyr Pro Asn Ala Ser Leu Leu Ile Gln Asn Ile
100 105 110

Ile Gln Asn Asp Thr Gly Phe Tyr Thr Leu His Val Ile Lys Ser Asp
115 120 125

Leu Val Asn Glu Glu Ala Thr Gly Gln Phe Arg Val Tyr Pro Glu Leu
130 135 140

Pro Lys Pro Ser Ile Ser Ser Asn Asn Ser Lys Pro Val Glu Asp Lys
145 150 155 160

Asp Ala Val Ala Phe Thr Cys Glu Pro Glu Thr Gln Asp Ala Thr Tyr
165 170 175

Leu Trp Trp Val Asn Asn Gln Ser Leu Pro Val Ser Pro Arg Leu Gln
180 185 190

Leu Ser Asn Gly Asn Arg Thr Leu Thr Leu Phe Asn Val Thr Arg Asn

26559

195																
Asp	Thr	Ala	Ser	Tyr	Lys	Cys	Glu	Thr	Gln	Asn	Pro	Val	Ser	Ala	Arg	
210						215					220					
Arg	Ser	Asp	Ser	Val	Ile	Leu	Asn	Val	Leu	Tyr	Gly	Pro	Asp	Ala	Pro	
225					230					235					240	
Thr	Ile	Ser	Pro	Leu	Asn	Thr	Ser	Tyr	Arg	Ser	Gly	Glu	Asn	Leu	Asn	
				245					250					255		
Leu	Ser	Cys	His	Ala	Ala	Ser	Asn	Pro	Pro	Ala	Gln	Tyr	Ser	Trp	Phe	
			260					265					270			
Val	Asn	Gly	Thr	Phe	Gln	Gln	Ser	Thr	Gln	Glu	Leu	Phe	Ile	Pro	Asn	
		275					280					285				
Ile	Thr	Val	Asn	Asn	Ser	Gly	Ser	Tyr	Thr	Cys	Gln	Ala	His	Asn	Ser	
290						295					300					
Asp	Thr	Gly	Leu	Asn	Arg	Thr	Thr	Val	Thr	Thr	Ile	Thr	Val	Tyr	Ala	
305					310					315					320	
Glu	Pro	Pro	Lys	Pro	Phe	Ile	Thr	Ser	Asn	Asn	Ser	Asn	Pro	Val	Glu	
				325					330					335		
Asp	Glu	Asp	Ala	Val	Ala	Leu	Thr	Cys	Glu	Pro	Glu	Ile	Gln	Asn	Thr	
			340					345					350			
Thr	Tyr	Leu	Trp	Trp	Val	Asn	Asn	Gln	Ser	Leu	Pro	Val	Ser	Pro	Arg	
		355					360					365				
Leu	Gln	Leu	Ser	Asn	Asp	Asn	Arg	Thr	Leu	Thr	Leu	Leu	Ser	Val	Thr	
370						375					380					
Arg	Asn	Asp	Val	Gly	Pro	Tyr	Glu	Cys	Gly	Ile	Gln	Asn	Glu	Leu	Ser	
385					390					395					400	
Val	Asp	His	Ser	Asp	Pro	Val	Ile	Leu	Asn	Val	Leu	Tyr	Gly	Pro	Asp	
				405					410					415		
Asp	Pro	Thr	Ile	Ser	Pro	Ser	Tyr	Thr	Tyr	Tyr	Arg	Pro	Gly	Val	Asn	
			420					425					430			

Leu Ser Leu Ser Cys His Ala Ala Ser Asn Pro Pro Ala Gln Tyr Ser
 435 440 445
 Trp Leu Ile Asp Gly Asn Ile Gln Gln His Thr Gln Glu Leu Phe Ile
 450 455 460
 Ser Asn Ile Thr Glu Lys Asn Ser Gly Leu Tyr Thr Cys Gln Ala Asn
 465 470 475 480
 Asn Ser Ala Ser Gly His Ser Arg Thr Thr Val Lys Thr Ile Thr Val
 485 490 495
 Ser Ala Glu Leu Pro Lys Pro Ser Ile Ser Ser Asn Asn Ser Lys Pro
 500 505 510
 Val Glu Asp Lys Asp Ala Val Ala Phe Thr Cys Glu Pro Glu Ala Gln
 515 520 525
 Asn Thr Thr Tyr Leu Trp Trp Val Asn Gly Gln Ser Leu Pro Val Ser
 530 535 540
 Pro Arg Leu Gln Leu Ser Asn Gly Asn Arg Thr Leu Thr Leu Phe Asn
 545 550 555 560
 Val Thr Arg Asn Asp Ala Arg Ala Tyr Val Cys Gly Ile Gln Asn Ser
 565 570 575
 Val Ser Ala Asn Arg Ser Asp Pro Val Thr Leu Asp Val Leu Tyr Gly
 580 585 590
 Pro Asp Thr Pro Ile Ile Ser Pro Pro Asp Ser Ser Tyr Leu Ser Gly
 595 600 605
 Ala Asn Leu Asn Leu Ser Cys His Ser Ala Ser Asn Pro Ser Pro Gln
 610 615 620
 Tyr Ser Trp Arg Ile Asn Gly Ile Pro Gln Gln His Thr Gln Val Leu
 625 630 635 640
 Phe Ile Ala Lys Ile Thr Pro Asn Asn Asn Gly Thr Tyr Ala Cys Phe
 645 650 655

Val Ser Asn Leu Ala Thr Gly Arg Asn Asn Ser Ile Val Lys Ser Ile
660 665 670

Thr Val Ser Ala Ser Gly Thr Ser Pro Gly Leu Ser Ala Gly Ala Thr
675 680 685

Val Gly Ile Met Ile Gly Val Leu Val Gly Val Ala Leu Ile
690 695 700

<210> 11955

<211> 344

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2363"

<220>

<221> source

<223> /note="Gene Symbol: CEACAM6"

<220>

<221> source

<223> /note="Gene Name:
carcinoembryonic antigen-related cell adhesion
molecule 6 (non-specific cross reacting antigen)"

<220>

<221> source

<223> /note="Uniprot ID: P40199"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000199764"

<400> 11955

Met Gly Pro Pro Ser Ala Pro Pro Cys Arg Leu His Val Pro Trp Lys
1 5 10 15

Glu Val Leu Leu Thr Ala Ser Leu Leu Thr Phe Trp Asn Pro Pro Thr
20 25 30

Thr Ala Lys Leu Thr Ile Glu Ser Thr Pro Phe Asn Val Ala Glu Gly
35 40 45

Lys Glu Val Leu Leu Leu Ala His Asn Leu Pro Gln Asn Arg Ile Gly
50 55 60

Tyr	Ser	Trp	Tyr	Lys	Gly	Glu	Arg	Val	Asp	Gly	Asn	Ser	Leu	Ile	Val	
65					70					75					80	
Gly	Tyr	Val	Ile	Gly	Thr	Gln	Gln	Ala	Thr	Pro	Gly	Pro	Ala	Tyr	Ser	
				85					90					95		
Gly	Arg	Glu	Thr	Ile	Tyr	Pro	Asn	Ala	Ser	Leu	Leu	Ile	Gln	Asn	Val	
			100					105					110			
Thr	Gln	Asn	Asp	Thr	Gly	Phe	Tyr	Thr	Leu	Gln	Val	Ile	Lys	Ser	Asp	
		115					120					125				
Leu	Val	Asn	Glu	Glu	Ala	Thr	Gly	Gln	Phe	His	Val	Tyr	Pro	Glu	Leu	
	130					135					140					
Pro	Lys	Pro	Ser	Ile	Ser	Ser	Asn	Asn	Ser	Asn	Pro	Val	Glu	Asp	Lys	
145					150					155					160	
Asp	Ala	Val	Ala	Phe	Thr	Cys	Glu	Pro	Glu	Val	Gln	Asn	Thr	Thr	Tyr	
				165					170					175		
Leu	Trp	Trp	Val	Asn	Gly	Gln	Ser	Leu	Pro	Val	Ser	Pro	Arg	Leu	Gln	
			180					185					190			
Leu	Ser	Asn	Gly	Asn	Met	Thr	Leu	Thr	Leu	Leu	Ser	Val	Lys	Arg	Asn	
		195					200					205				
Asp	Ala	Gly	Ser	Tyr	Glu	Cys	Glu	Ile	Gln	Asn	Pro	Ala	Ser	Ala	Asn	
	210					215					220					
Arg	Ser	Asp	Pro	Val	Thr	Leu	Asn	Val	Leu	Tyr	Gly	Pro	Asp	Val	Pro	
225					230					235					240	
Thr	Ile	Ser	Pro	Ser	Lys	Ala	Asn	Tyr	Arg	Pro	Gly	Glu	Asn	Leu	Asn	
				245					250					255		
Leu	Ser	Cys	His	Ala	Ala	Ser	Asn	Pro	Pro	Ala	Gln	Tyr	Ser	Trp	Phe	
			260					265					270			
Ile	Asn	Gly	Thr	Phe	Gln	Gln	Ser	Thr	Gln	Glu	Leu	Phe	Ile	Pro	Asn	
	275						280					285				
Ile	Thr	Val	Asn	Asn	Ser	Gly	Ser	Tyr	Met	Cys	Gln	Ala	His	Asn	Ser	

290 295 300

Ala Thr Gly Leu Asn Arg Thr Thr Val Thr Met Ile Thr Val Ser Gly
 305 310 315 320

Ser Ala Pro Val Leu Ser Ala Val Ala Thr Val Gly Ile Thr Ile Gly
 325 330 335

Val Leu Ala Arg Val Ala Leu Ile
 340

<210> 11956
 <211> 33
 <212> PRT
 <213> Homo sapiens

<220>
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 <223> /note="Payload ID: 2363"

<220>
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 <223> /note="Gene Symbol: CEACAM6"

<220>
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 <223> /note="Gene Name:
 carcinoembryonic antigen-related cell adhesion
 molecule 6 (non-specific cross reacting antigen)"

<220>
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 <223> /note="ENSP ID: ENSP00000469752"

<400> 11956
 Met Gly Pro Pro Ser Ala Pro Pro Cys Arg Leu His Val Pro Trp Lys
 1 5 10 15

Glu Val Leu Leu Thr Ala Ser Leu Leu Thr Phe Trp Asn Pro Pro Thr
 20 25 30

Thr

<210> 11957
 <211> 265
 <212> PRT
 <213> Homo sapiens

<220>

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<221> source
<223> /note="Payload ID: 2364"

<220>
<221> source
<223> /note="Gene Symbol: CEACAM7"

<220>
<221> source
<223> /note="Gene Name:
      carcinoembryonic antigen-related cell adhesion
      molecule 7"

<220>
<221> source
<223> /note="Uniprot ID: Q14002"

<220>
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<223> /note="ENSP ID: ENSP00000006724"

<400> 11957
Met Gly Ser Pro Ser Ala Cys Pro Tyr Arg Val Cys Ile Pro Trp Gln
1          5          10          15

Gly Leu Leu Leu Thr Ala Ser Leu Leu Thr Phe Trp Asn Leu Pro Asn
20          25          30

Ser Ala Gln Thr Asn Ile Asp Val Val Pro Phe Asn Val Ala Glu Gly
35          40          45

Lys Glu Val Leu Leu Val Val His Asn Glu Ser Gln Asn Leu Tyr Gly
50          55          60

Tyr Asn Trp Tyr Lys Gly Glu Arg Val His Ala Asn Tyr Arg Ile Ile
65          70          75          80

Gly Tyr Val Lys Asn Ile Ser Gln Glu Asn Ala Pro Gly Pro Ala His
85          90          95

Asn Gly Arg Glu Thr Ile Tyr Pro Asn Gly Thr Leu Leu Ile Gln Asn
100         105         110

Val Thr His Asn Asp Ala Gly Ile Tyr Thr Leu His Val Ile Lys Glu
115         120         125

Asn Leu Val Asn Glu Glu Val Thr Arg Gln Phe Tyr Val Phe Ser Glu
130         135         140

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Pro Pro Lys Pro Ser Ile Thr Ser Asn Asn Phe Asn Pro Val Glu Asn
145 150 155 160

Lys Asp Ile Val Val Leu Thr Cys Gln Pro Glu Thr Gln Asn Thr Thr
165 170 175

Tyr Leu Trp Trp Val Asn Asn Gln Ser Leu Leu Val Ser Pro Arg Leu
180 185 190

Leu Leu Ser Thr Asp Asn Arg Thr Leu Val Leu Leu Ser Ala Thr Lys
195 200 205

Asn Asp Ile Gly Pro Tyr Glu Cys Glu Ile Gln Asn Pro Val Gly Ala
210 215 220

Ser Arg Ser Asp Pro Val Thr Leu Asn Val Arg Tyr Glu Ser Val Gln
225 230 235 240

Ala Ser Ser Pro Asp Leu Ser Ala Gly Thr Ala Val Ser Ile Met Ile
245 250 255

Gly Val Leu Ala Gly Met Ala Leu Ile
260 265

<210> 11958
<211> 265
<212> PRT
<213> Homo sapiens

<220>
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<220>
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<220>
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<223> /note="Gene Name:
carcinoembryonic antigen-related cell adhesion
molecule 7"

<220>
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<223> /note="Uniprot ID: Q14002"

<220>

<221> source
<223> /note="ENSP ID: ENSP00000385932"

<400> 11958

Met Gly Ser Pro Ser Ala Cys Pro Tyr Arg Val Cys Ile Pro Trp Gln
1 5 10 15

Gly Leu Leu Leu Thr Ala Ser Leu Leu Thr Phe Trp Asn Leu Pro Asn
20 25 30

Ser Ala Gln Thr Asn Ile Asp Val Val Pro Phe Asn Val Ala Glu Gly
35 40 45

Lys Glu Val Leu Leu Val Val His Asn Glu Ser Gln Asn Leu Tyr Gly
50 55 60

Tyr Asn Trp Tyr Lys Gly Glu Arg Val His Ala Asn Tyr Arg Ile Ile
65 70 75 80

Gly Tyr Val Lys Asn Ile Ser Gln Glu Asn Ala Pro Gly Pro Ala His
85 90 95

Asn Gly Arg Glu Thr Ile Tyr Pro Asn Gly Thr Leu Leu Ile Gln Asn
100 105 110

Val Thr His Asn Asp Ala Gly Ile Tyr Thr Leu His Val Ile Lys Glu
115 120 125

Asn Leu Val Asn Glu Glu Val Thr Arg Gln Phe Tyr Val Phe Ser Glu
130 135 140

Pro Pro Lys Pro Ser Ile Thr Ser Asn Asn Phe Asn Pro Val Glu Asn
145 150 155 160

Lys Asp Ile Val Val Leu Thr Cys Gln Pro Glu Thr Gln Asn Thr Thr
165 170 175

Tyr Leu Trp Trp Val Asn Asn Gln Ser Leu Leu Val Ser Pro Arg Leu
180 185 190

Leu Leu Ser Thr Asp Asn Arg Thr Leu Val Leu Leu Ser Ala Thr Lys
195 200 205

Asn Asp Ile Gly Pro Tyr Glu Cys Glu Ile Gln Asn Pro Val Gly Ala

210		215		220
Ser Arg Ser Asp Pro Val Thr Leu Asn Val Arg Tyr Glu Ser Val Gln				
225		230	235	240
Ala Ser Ser Pro Asp Leu Ser Ala Gly Thr Ala Val Ser Ile Met Ile				
	245	250	255	
Gly Val Leu Ala Gly Met Ala Leu Ile				
	260	265		

<210> 11959
 <211> 172
 <212> PRT
 <213> Homo sapiens

<220>
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<220>
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 <223> /note="Gene Symbol: CEACAM7"

<220>
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 <223> /note="Gene Name:
 carcinoembryonic antigen-related cell adhesion
 molecule 7"

<220>
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<400> 11959
Met Gly Ser Pro Ser Ala Cys Pro Tyr Arg Val Cys Ile Pro Trp Gln
1 5 10 15

Gly Leu Leu Leu Thr Ala Ser Leu Leu Thr Phe Trp Asn Leu Pro Asn
20 25 30

Ser Ala Gln Thr Asn Ile Asp Val Val Pro Phe Asn Val Ala Glu Gly
35 40 45

Lys Glu Val Leu Leu Val Val His Asn Glu Ser Gln Asn Leu Tyr Gly
50 55 60

Tyr Asn Trp Tyr Lys Gly Glu Arg Val His Ala Asn Tyr Arg Ile Ile
65 70 75 80

Gly Tyr Val Lys Asn Ile Ser Gln Glu Asn Ala Pro Gly Pro Ala His
85 90 95

Asn Gly Arg Glu Thr Ile Tyr Pro Asn Gly Thr Leu Leu Ile Gln Asn
100 105 110

Val Thr His Asn Asp Ala Gly Ile Tyr Thr Leu His Val Ile Lys Glu
115 120 125

Asn Leu Val Asn Glu Glu Val Thr Arg Gln Phe Tyr Val Phe Tyr Glu
130 135 140

Ser Val Gln Ala Ser Ser Pro Asp Leu Ser Ala Gly Thr Ala Val Ser
145 150 155 160

Ile Met Ile Gly Val Leu Ala Gly Met Ala Leu Ile
165 170

<210> 11960
<211> 30
<212> PRT
<213> Homo sapiens

<220>
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<220>
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<223> /note="Gene Symbol: CEACAM7"

<220>
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<223> /note="Gene Name:
carcinoembryonic antigen-related cell adhesion
molecule 7"

<220>
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<223> /note="ENSP ID: ENSP00000486147"

<220>
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<222> (1)..(1)
<223> Any amino acid

<400> 11960
Xaa Glu Ser Val Gln Ala Ser Ser Pro Asp Leu Ser Ala Gly Thr Ala

1 5 10 15

Val Ser Ile Met Ile Gly Val Leu Ala Gly Met Ala Leu Ile
20 25 30

<210> 11961
<211> 30
<212> PRT
<213> Homo sapiens

<220>
<221> source
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<220>
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<223> /note="Gene Symbol: CEACAM7"

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<223> /note="Gene Name:
carcinoembryonic antigen-related cell adhesion
molecule 7"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000486586"

<220>
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<222> (1)..(1)
<223> Any amino acid

<400> 11961
Xaa Glu Ser Val Gln Ala Ser Ser Pro Asp Leu Ser Ala Gly Thr Ala
1 5 10 15

Val Ser Ile Met Ile Gly Val Leu Ala Gly Met Ala Leu Ile
20 25 30

<210> 11962
<211> 30
<212> PRT
<213> Homo sapiens

<220>
<221> source
<223> /note="Payload ID: 2364"

<220>
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<223> /note="Gene Symbol: CEACAM7"

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<220>
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<223> /note="Gene Name:
      carcinoembryonic antigen-related cell adhesion
      molecule 7"

<220>
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<223> /note="ENSP ID: ENSP00000487273"

<220>
<221> MOD_RES
<222> (1)..(1)
<223> Any amino acid

<400> 11962
Xaa Glu Ser Val Gln Ala Ser Ser Pro Asp Leu Ser Ala Gly Thr Ala
1          5          10          15

Val Ser Ile Met Ile Gly Val Leu Ala Gly Met Ala Leu Ile
          20          25          30

<210> 11963
<211> 349
<212> PRT
<213> Homo sapiens

<220>
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<223> /note="Payload ID: 2365"

<220>
<221> source
<223> /note="Gene Symbol: CEACAM8"

<220>
<221> source
<223> /note="Gene Name:
      carcinoembryonic antigen-related cell adhesion
      molecule 8"

<220>
<221> source
<223> /note="Uniprot ID: P31997"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000244336"

<400> 11963
Met Gly Pro Ile Ser Ala Pro Ser Cys Arg Trp Arg Ile Pro Trp Gln
1          5          10          15

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Gly	Leu	Leu	Leu	Thr	Ala	Ser	Leu	Phe	Thr	Phe	Trp	Asn	Pro	Pro	Thr		
			20					25					30				
Thr	Ala	Gln	Leu	Thr	Ile	Glu	Ala	Val	Pro	Ser	Asn	Ala	Ala	Glu	Gly		
		35					40					45					
Lys	Glu	Val	Leu	Leu	Leu	Val	His	Asn	Leu	Pro	Gln	Asp	Pro	Arg	Gly		
	50					55					60						
Tyr	Asn	Trp	Tyr	Lys	Gly	Glu	Thr	Val	Asp	Ala	Asn	Arg	Arg	Ile	Ile		
65					70					75					80		
Gly	Tyr	Val	Ile	Ser	Asn	Gln	Gln	Ile	Thr	Pro	Gly	Pro	Ala	Tyr	Ser		
				85					90					95			
Asn	Arg	Glu	Thr	Ile	Tyr	Pro	Asn	Ala	Ser	Leu	Leu	Met	Arg	Asn	Val		
			100					105					110				
Thr	Arg	Asn	Asp	Thr	Gly	Ser	Tyr	Thr	Leu	Gln	Val	Ile	Lys	Leu	Asn		
		115					120					125					
Leu	Met	Ser	Glu	Glu	Val	Thr	Gly	Gln	Phe	Ser	Val	His	Pro	Glu	Thr		
	130					135					140						
Pro	Lys	Pro	Ser	Ile	Ser	Ser	Asn	Asn	Ser	Asn	Pro	Val	Glu	Asp	Lys		
145					150					155					160		
Asp	Ala	Val	Ala	Phe	Thr	Cys	Glu	Pro	Glu	Thr	Gln	Asn	Thr	Thr	Tyr		
				165					170					175			
Leu	Trp	Trp	Val	Asn	Gly	Gln	Ser	Leu	Pro	Val	Ser	Pro	Arg	Leu	Gln		
			180					185					190				
Leu	Ser	Asn	Gly	Asn	Arg	Thr	Leu	Thr	Leu	Leu	Ser	Val	Thr	Arg	Asn		
		195					200					205					
Asp	Val	Gly	Pro	Tyr	Glu	Cys	Glu	Ile	Gln	Asn	Pro	Ala	Ser	Ala	Asn		
	210					215					220						
Phe	Ser	Asp	Pro	Val	Thr	Leu	Asn	Val	Leu	Tyr	Gly	Pro	Asp	Ala	Pro		
225					230					235					240		

Thr Ile Ser Pro Ser Asp Thr Tyr Tyr His Ala Gly Val Asn Leu Asn
245 250 255

Leu Ser Cys His Ala Ala Ser Asn Pro Pro Ser Gln Tyr Ser Trp Ser
260 265 270

Val Asn Gly Thr Phe Gln Gln Tyr Thr Gln Lys Leu Phe Ile Pro Asn
275 280 285

Ile Thr Thr Lys Asn Ser Gly Ser Tyr Ala Cys His Thr Thr Asn Ser
290 295 300

Ala Thr Gly Arg Asn Arg Thr Thr Val Arg Met Ile Thr Val Ser Asp
305 310 315 320

Ala Leu Val Gln Gly Ser Ser Pro Gly Leu Ser Ala Arg Ala Thr Val
325 330 335

Ser Ile Met Ile Gly Val Leu Ala Arg Val Ala Leu Ile
340 345

<210> 11964

<211> 51

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2365"

<220>

<221> source

<223> /note="Gene Symbol: CEACAM8"

<220>

<221> source

<223> /note="Gene Name:
carcinoembryonic antigen-related cell adhesion
molecule 8"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000472166"

<400> 11964

Met Gly Pro Ile Ser Ala Pro Ser Cys Arg Trp Arg Ile Pro Trp Gln
1 5 10 15

Gly Leu Leu Leu Thr Asp Ala Leu Val Gln Gly Ser Ser Pro Gly Leu

26573

	20		25		30
Ser	Ala	Arg	Ala	Thr	Val
	35				
		Ser	Ile	Met	Ile
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				Gly	Val
				Leu	Ala
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					Val
Ala	Leu	Ile			
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 <223> /note="Gene Name:
 carcinoembryonic antigen-related cell adhesion
 molecule 8"

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 Gly Leu Leu Leu Thr Ala Ser Leu Phe Thr Phe Trp Asn Pro Pro Thr
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 Thr Ala Gln Leu Thr Ile Glu Ala Val Pro Ser Asn Ala Ala Glu Gly
 35 40 45

 Lys Glu Val Leu Leu Leu Val His Asn Leu Pro Gln Asp Pro Arg Gly
 50 55 60

 Tyr Asn Trp Tyr Lys Gly Glu Thr Val Asp Ala Asn Arg Arg Ile Ile
 65 70 75 80

 Gly Tyr Val Ile Ser Asn Gln Gln Ile Thr Pro Gly Pro Ala Tyr Ser
 85 90 95

Asn	Arg	Glu	Thr	Ile	Tyr	Pro	Asn	Ala	Ser	Leu	Leu	Met	Arg	Asn	Val	
			100					105					110			
Thr	Arg	Asn	Asp	Thr	Gly	Ser	Tyr	Thr	Leu	Gln	Val	Ile	Lys	Leu	Asn	
		115					120					125				
Leu	Met	Ser	Glu	Glu	Val	Thr	Gly	Gln	Phe	Ser	Val	His	Pro	Glu	Thr	
	130					135					140					
Pro	Lys	Pro	Ser	Ile	Ser	Ser	Asn	Asn	Ser	Asn	Pro	Val	Glu	Asp	Lys	
145					150					155					160	
Asp	Ala	Val	Ala	Phe	Thr	Cys	Glu	Pro	Glu	Thr	Gln	Asn	Thr	Thr	Tyr	
				165					170						175	
Leu	Trp	Trp	Val	Asn	Gly	Gln	Ser	Leu	Pro	Val	Ser	Pro	Arg	Leu	Gln	
			180					185					190			
Leu	Ser	Asn	Gly	Asn	Arg	Thr	Leu	Thr	Leu	Leu	Ser	Val	Thr	Arg	Asn	
		195					200					205				
Asp	Val	Gly	Pro	Tyr	Glu	Cys	Glu	Ile	Gln	Asn	Pro	Ala	Ser	Ala	Asn	
	210					215					220					
Phe	Ser	Asp	Pro	Val	Thr	Leu	Asn	Val	Leu	Tyr	Gly	Pro	Asp	Ala	Pro	
225					230					235					240	
Thr	Ile	Ser	Pro	Ser	Asp	Thr	Tyr	Tyr	His	Ala	Gly	Val	Asn	Leu	Asn	
				245					250					255		
Leu	Ser	Cys	His	Ala	Ala	Ser	Asn	Pro	Pro	Ser	Gln	Tyr	Ser	Trp	Ser	
			260					265					270			
Val	Asn	Gly	Thr	Phe	Gln	Gln	Tyr	Thr	Gln	Lys	Leu	Phe	Ile	Pro	Asn	
		275					280					285				
Ile	Thr	Thr	Lys	Asn	Ser	Gly	Ser	Tyr	Ala	Cys	His	Thr	Thr	Asn	Ser	
	290					295					300					
Ala	Thr	Gly	Arg	Asn	Arg	Thr	Thr	Val	Arg	Met	Ile	Thr	Val	Ser	Gly	
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Ser Ser Pro Gly Leu Ser Ala Arg Ala Thr Val Ser Ile Met Ile Gly
325 330 335

Val Leu Ala Arg Val Ala Leu Ile
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<210> 11966

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<213> Homo sapiens

<220>

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<223> /note="Payload ID: 2366"

<220>

<221> source

<223> /note="Gene Symbol: CRLS1"

<220>

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<223> /note="Gene Name:
cardiolipin synthase 1"

<220>

<221> source

<223> /note="Uniprot ID: Q9UJA2"

<220>

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<223> /note="ENSP ID: ENSP00000368140"

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Met Leu Ala Leu Arg Val Ala Arg Gly Ser Trp Gly Ala Leu Arg Gly
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Ala Ala Trp Ala Pro Gly Thr Arg Pro Ser Lys Arg Arg Ala Cys Trp
20 25 30

Ala Leu Leu Pro Pro Val Pro Cys Cys Leu Gly Cys Leu Ala Glu Arg
35 40 45

Trp Arg Leu Arg Pro Ala Ala Leu Gly Leu Arg Leu Pro Gly Ile Gly
50 55 60

Gln Arg Asn His Cys Ser Gly Ala Gly Lys Ala Ala Pro Arg Pro Ala
65 70 75 80

Ala Gly Ala Gly Ala Ala Ala Glu Ala Pro Gly Gly Gln Trp Gly Pro

26576

85

90

95

Ala Ser Thr Pro Ser Leu Tyr Glu Asn Pro Trp Thr Ile Pro Asn Met
100 105 110

Leu Ser Met Thr Arg Ile Gly Leu Ala Pro Val Leu Gly Tyr Leu Ile
115 120 125

Ile Glu Glu Asp Phe Asn Ile Ala Leu Gly Val Phe Ala Leu Ala Gly
130 135 140

Leu Thr Asp Leu Leu Asp Gly Phe Ile Ala Arg Asn Trp Ala Asn Gln
145 150 155 160

Arg Ser Ala Leu Gly Ser Ala Leu Asp Pro Leu Ala Asp Lys Ile Leu
165 170 175

Ile Ser Ile Leu Tyr Val Ser Leu Thr Tyr Ala Asp Leu Ile Pro Val
180 185 190

Pro Leu Thr Tyr Met Ile Ile Ser Arg Asp Val Met Leu Ile Ala Ala
195 200 205

Val Phe Tyr Val Arg Tyr Arg Thr Leu Pro Thr Pro Arg Thr Leu Ala
210 215 220

Lys Tyr Phe Asn Pro Cys Tyr Ala Thr Ala Arg Leu Lys Pro Thr Phe
225 230 235 240

Ile Ser Lys Val Asn Thr Ala Val Gln Leu Ile Leu Val Ala Ala Ser
245 250 255

Leu Ala Ala Pro Val Phe Asn Tyr Ala Asp Ser Ile Tyr Leu Gln Ile
260 265 270

Leu Trp Cys Phe Thr Ala Phe Thr Thr Ala Ala Ser Ala Tyr Ser Tyr
275 280 285

Tyr His Tyr Gly Arg Lys Thr Val Gln Val Ile Lys Asp
290 295 300

<210> 11967

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26577

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<212> PRT
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<220>
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<220>
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<220>
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Thr Arg Ile Gly Leu Ala Pro Val Leu Gly Tyr Leu Ile Ile Glu Glu
          20              25              30

Asp Phe Asn Ile Ala Leu Gly Val Phe Ala Leu Ala Gly Leu Thr Asp
          35              40              45

Leu Leu Asp Gly Phe Ile Ala Arg Asn Trp Ala Asn Gln Arg Ser Ala
          50              55              60

Leu Gly Ser Ala Leu Asp Pro Leu Ala Asp Lys Ile Leu Ile Ser Ile
65              70              75              80

Leu Tyr Val Ser Leu Thr Tyr Ala Asp Leu Ile Pro Val Pro Leu Thr
          85              90              95

Tyr Met Ile Ile Ser Arg Asp Val Met Leu Ile Ala Ala Val Phe Tyr
          100              105              110

Val Arg Tyr Arg Thr Leu Pro Thr Pro Arg Thr Leu Ala Lys Tyr Phe
          115              120              125

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Asn Pro Cys Tyr Ala Thr Ala Arg Leu Lys Pro Thr Phe Ile Ser Lys
130 135 140

Val Asn Thr Ala Val Gln Leu Ile Leu Val Ala Ala Ser Leu Ala Ala
145 150 155 160

Pro Val Phe Asn Tyr Ala Asp Ser Ile Tyr Leu Gln Ile Leu Trp Cys
165 170 175

Phe Thr Ala Phe Thr Thr Ala Ala Ser Ala Tyr Ser Tyr Tyr His Tyr
180 185 190

Gly Arg Lys Thr Val Gln Val Ile Lys Asp
195 200

<210> 11968
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<212> PRT
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<220>
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<220>
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<220>
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<400> 11968
Met Leu Ala Leu Arg Val Ala Arg Gly Ser Trp Gly Ala Leu Arg Gly
1 5 10 15

Ala Ala Trp Ala Pro Gly Thr Arg Pro Ser Lys Arg Arg Ala Cys Trp
20 25 30

Ala Leu Leu Pro Pro Val Pro Cys Cys Leu Gly Cys Leu Ala Glu Arg
35 40 45

Trp Arg Leu Arg Pro Ala Ala Leu Gly Leu Arg Leu Pro Gly Ile Gly
50 55 60

Gln Arg Asn His Cys Ser Gly Ala Gly Lys Ala Ala Pro Arg Pro Ala
65 70 75 80

Ala Gly Ala Gly Ala Ala Ala Glu Ala Pro Gly Gly Gln Trp Gly Pro
85 90 95

Ala Ser Thr Pro Ser Leu Tyr Glu Asn Pro Trp Thr Ile Pro Asn Met
100 105 110

Leu Ser Met Thr Arg Ile Gly Leu Ala Pro Val Leu Gly Tyr Leu Ile
115 120 125

Ile Glu Glu Asp Phe Asn Ile Ala Leu Gly Val Phe Ala Leu Ala Gly
130 135 140

Leu Thr Asp Leu Leu Asp Gly Phe Ile Ala Arg Asn Trp Ala Asn Gln
145 150 155 160

Arg Ser Ala Leu Gly Ser Ala Leu Asp Pro Leu Ala Asp Lys Ile Leu
165 170 175

Ile Ser Ile Leu Tyr Val Ser Leu Thr Tyr Ala Asp Leu Ile Pro Ala
180 185 190

Asn Thr Cys Gln Val Phe Gln Ser Leu Leu Cys His Cys
195 200 205

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<212> PRT

<213> Homo sapiens

<220>

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<223> /note="Gene Symbol: CMYA5"

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<223> /note="Gene Name:
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<220>

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<220>
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<400> 11969

Met Ala Ser Arg Asp Ser Asn His Ala Gly Glu Ser Phe Leu Gly Ser
1 5 10 15

Asp Gly Asp Glu Glu Ala Thr Arg Glu Leu Glu Thr Glu Glu Glu Ser
20 25 30

Glu Gly Glu Glu Asp Glu Thr Ala Ala Glu Ser Glu Glu Glu Pro Asp
35 40 45

Ser Arg Leu Ser Asp Gln Asp Glu Glu Gly Lys Ile Lys Gln Glu Tyr
50 55 60

Ile Ile Ser Asp Pro Ser Phe Ser Met Val Thr Val Gln Arg Glu Asp
65 70 75 80

Ser Gly Ile Thr Trp Glu Thr Asn Ser Ser Arg Ser Ser Thr Pro Trp
85 90 95

Ala Ser Glu Glu Ser Gln Thr Ser Gly Val Cys Ser Arg Glu Gly Ser
100 105 110

Thr Val Asn Ser Pro Pro Gly Asn Val Ser Phe Ile Val Asp Glu Val
115 120 125

Lys Lys Val Arg Lys Arg Thr His Lys Ser Lys His Gly Ser Pro Ser
130 135 140

Leu Arg Arg Lys Gly Asn Arg Lys Arg Asn Ser Phe Glu Ser Gln Asp
145 150 155 160

Val Pro Thr Asn Lys Lys Gly Ser Pro Leu Thr Ser Ala Ser Gln Val
165 170 175

Leu Thr Thr Glu Lys Glu Lys Ser Tyr Thr Gly Ile Tyr Asp Lys Ala
180 185 190

Arg Lys Lys Lys Thr Thr Ser Asn Thr Pro Pro Ile Thr Gly Ala Ile

195	200	205														
Tyr	Lys	Glu	His	Lys	Pro	Leu	Val	Leu	Arg	Pro	Val	Tyr	Ile	Gly	Thr	
210						215					220					
Val	Gln	Tyr	Lys	Ile	Lys	Met	Phe	Asn	Ser	Val	Lys	Glu	Glu	Leu	Ile	
225					230					235					240	
Pro	Leu	Gln	Phe	Tyr	Gly	Thr	Leu	Pro	Lys	Gly	Tyr	Val	Ile	Lys	Glu	
				245					250					255		
Ile	His	Tyr	Arg	Lys	Gly	Lys	Asp	Ala	Ser	Ile	Ser	Leu	Glu	Pro	Asp	
			260					265					270			
Leu	Asp	Asn	Ser	Gly	Ser	Asn	Thr	Val	Ser	Lys	Thr	Arg	Lys	Leu	Val	
		275					280					285				
Ala	Gln	Ser	Ile	Glu	Asp	Lys	Val	Lys	Glu	Val	Phe	Pro	Pro	Trp	Arg	
	290					295					300					
Gly	Ala	Leu	Ser	Lys	Gly	Ser	Glu	Ser	Leu	Thr	Leu	Met	Phe	Ser	His	
305					310					315					320	
Glu	Asp	Gln	Lys	Lys	Ile	Tyr	Ala	Asp	Ser	Pro	Leu	Asn	Ala	Thr	Ser	
				325					330					335		
Ala	Leu	Glu	His	Thr	Val	Pro	Ser	Tyr	Ser	Ser	Ser	Gly	Arg	Ala	Glu	
			340					345					350			
Gln	Gly	Ile	Gln	Leu	Arg	His	Ser	Gln	Ser	Val	Pro	Gln	Gln	Pro	Glu	
		355					360					365				
Asp	Glu	Ala	Lys	Pro	His	Glu	Val	Glu	Pro	Pro	Ser	Val	Thr	Pro	Asp	
	370					375					380					
Thr	Pro	Ala	Thr	Met	Phe	Leu	Arg	Thr	Thr	Lys	Glu	Glu	Cys	Glu	Leu	
385					390					395					400	
Ala	Ser	Pro	Gly	Thr	Ala	Ala	Ser	Glu	Asn	Asp	Ser	Ser	Val	Ser	Pro	
				405					410					415		
Ser	Phe	Ala	Asn	Glu	Val	Lys	Lys	Glu	Asp	Val	Tyr	Ser	Ala	His	His	
			420					425					430			

Ser	Ile	Ser	Leu	Glu	Ala	Ala	Ser	Pro	Gly	Leu	Ala	Ala	Ser	Thr	Gln	
		435					440					445				
Asp	Gly	Leu	Asp	Pro	Asp	Gln	Glu	Gln	Pro	Asp	Leu	Thr	Ser	Ile	Glu	
	450					455					460					
Arg	Ala	Glu	Pro	Val	Ser	Ala	Lys	Leu	Thr	Pro	Thr	His	Pro	Ser	Val	
465					470					475					480	
Lys	Gly	Glu	Lys	Glu	Glu	Asn	Met	Leu	Glu	Pro	Ser	Ile	Ser	Leu	Ser	
				485					490					495		
Glu	Pro	Leu	Met	Leu	Glu	Glu	Pro	Glu	Lys	Glu	Glu	Ile	Glu	Thr	Ser	
			500					505					510			
Leu	Pro	Ile	Ala	Ile	Thr	Pro	Glu	Pro	Glu	Asp	Ser	Asn	Leu	Val	Glu	
		515					520					525				
Glu	Glu	Ile	Val	Glu	Leu	Asp	Tyr	Pro	Glu	Ser	Pro	Leu	Val	Ser	Glu	
	530					535					540					
Lys	Pro	Phe	Pro	Pro	His	Met	Ser	Pro	Glu	Val	Glu	His	Lys	Glu	Glu	
545					550					555					560	
Glu	Leu	Ile	Leu	Pro	Leu	Leu	Ala	Ala	Ser	Ser	Pro	Glu	His	Val	Ala	
				565					570					575		
Leu	Ser	Glu	Glu	Glu	Arg	Glu	Glu	Ile	Ala	Ser	Val	Ser	Thr	Gly	Ser	
			580					585					590			
Ala	Phe	Val	Ser	Glu	Tyr	Ser	Val	Pro	Gln	Asp	Leu	Asn	His	Glu	Leu	
		595					600					605				
Gln	Glu	Gln	Glu	Gly	Glu	Pro	Val	Pro	Pro	Ser	Asn	Val	Glu	Ala	Ile	
	610					615					620					
Ala	Glu	His	Ala	Val	Leu	Ser	Glu	Glu	Glu	Asn	Glu	Glu	Phe	Glu	Ala	
625					630					635					640	
Tyr	Ser	Pro	Ala	Ala	Ala	Pro	Thr	Ser	Glu	Ser	Ser	Leu	Ser	Pro	Ser	
				645					650					655		

Thr	Thr	Glu	Lys	Thr	Ser	Glu	Asn	Gln	Ser	Pro	Leu	Phe	Ser	Thr	Val
			660					665					670		
Thr	Pro	Glu	Tyr	Met	Val	Leu	Ser	Gly	Asp	Glu	Ala	Ser	Glu	Ser	Gly
		675					680					685			
Cys	Tyr	Thr	Pro	Asp	Ser	Thr	Ser	Ala	Ser	Glu	Tyr	Ser	Val	Pro	Ser
	690					695					700				
Leu	Ala	Thr	Lys	Glu	Ser	Leu	Lys	Lys	Thr	Ile	Asp	Arg	Lys	Ser	Pro
705					710					715					720
Leu	Ile	Leu	Lys	Gly	Val	Ser	Glu	Tyr	Met	Ile	Pro	Ser	Glu	Glu	Lys
				725					730					735	
Glu	Asp	Thr	Gly	Ser	Phe	Thr	Pro	Ala	Val	Ala	Pro	Ala	Ser	Glu	Pro
			740					745					750		
Ser	Leu	Ser	Pro	Ser	Thr	Thr	Glu	Lys	Thr	Ser	Glu	Cys	Gln	Ser	Pro
		755					760					765			
Leu	Pro	Ser	Thr	Ala	Thr	Ser	Glu	His	Val	Val	Pro	Ser	Glu	Gly	Glu
	770					775					780				
Asp	Leu	Gly	Ser	Glu	Arg	Phe	Thr	Pro	Asp	Ser	Lys	Leu	Ile	Ser	Lys
785					790					795					800
Tyr	Ala	Ala	Pro	Leu	Asn	Ala	Thr	Gln	Glu	Ser	Gln	Lys	Lys	Ile	Ile
				805					810					815	
Asn	Glu	Ala	Ser	Gln	Phe	Lys	Pro	Lys	Gly	Ile	Ser	Glu	His	Thr	Val
			820					825					830		
Leu	Ser	Val	Asp	Gly	Lys	Glu	Val	Ile	Gly	Pro	Ser	Ser	Pro	Asp	Leu
		835					840					845			
Val	Val	Ala	Ser	Glu	His	Ser	Phe	Pro	Pro	His	Thr	Thr	Glu	Met	Thr
	850					855					860				
Ser	Glu	Cys	Gln	Ala	Pro	Pro	Leu	Ser	Ala	Thr	Pro	Ser	Glu	Tyr	Val
865					870					875					880

Val	Leu	Ser	Asp	Glu	Glu	Ala	Val	Glu	Leu	Glu	Arg	Tyr	Thr	Pro	Ser	
				885					890					895		
Ser	Thr	Ser	Ala	Ser	Glu	Phe	Ser	Val	Pro	Pro	Tyr	Ala	Thr	Pro	Glu	
			900					905					910			
Ala	Gln	Glu	Glu	Glu	Ile	Val	His	Arg	Ser	Leu	Asn	Leu	Lys	Gly	Ala	
		915					920					925				
Ser	Ser	Pro	Met	Asn	Leu	Ser	Glu	Glu	Asp	Gln	Glu	Asp	Ile	Gly	Pro	
	930					935						940				
Phe	Ser	Pro	Asp	Ser	Ala	Phe	Val	Ser	Glu	Phe	Ser	Phe	Pro	Pro	Tyr	
945					950					955					960	
Ala	Thr	Gln	Glu	Ala	Glu	Lys	Arg	Glu	Phe	Glu	Cys	Asp	Ser	Pro	Ile	
				965					970					975		
Cys	Leu	Thr	Ser	Pro	Ser	Glu	His	Thr	Ile	Leu	Ser	Asp	Glu	Asp	Thr	
			980					985					990			
Glu	Glu	Ala	Glu	Leu	Phe	Ser	Pro	Asp	Ser	Ala	Ser	Gln	Val	Ser		
Ile																
		995					1000					1005				
Pro	Pro	Phe	Arg	Ile	Ser	Glu	Thr	Glu	Lys	Asn	Glu	Leu	Glu	Pro		
	1010					1015					1020					
Asp	Ser	Leu	Leu	Thr	Ala	Val	Ser	Ala	Ser	Gly	Tyr	Ser	Cys	Phe		
	1025					1030					1035					
Ser	Glu	Ala	Asp	Glu	Glu	Asp	Ile	Gly	Ser	Thr	Ala	Ala	Thr	Pro		
	1040					1045					1050					
Val	Ser	Glu	Gln	Phe	Ser	Ser	Ser	Gln	Lys	Gln	Lys	Ala	Glu	Thr		
	1055					1060					1065					
Phe	Pro	Leu	Met	Ser	Pro	Leu	Glu	Asp	Leu	Ser	Leu	Pro	Pro	Ser		
	1070					1075					1080					
Thr	Asp	Lys	Ser	Glu	Lys	Ala	Glu	Ile	Lys	Pro	Glu	Ile	Pro	Thr		
	1085					1090					1095					

Thr	Ser	Thr	Ser	Val	Ser	Glu	Tyr	Leu	Ile	Leu	Ala	Gln	Lys	Gln
1100						1105					1110			
Lys	Thr	Gln	Ala	Tyr	Leu	Glu	Pro	Glu	Ser	Glu	Asp	Leu	Ile	Pro
1115						1120					1125			
Ser	His	Leu	Thr	Ser	Glu	Val	Glu	Lys	Gly	Glu	Arg	Glu	Ala	Ser
1130						1135					1140			
Ser	Ser	Val	Ala	Ala	Ile	Pro	Ala	Ala	Leu	Pro	Ala	Gln	Ser	Ser
1145						1150					1155			
Ile	Val	Lys	Glu	Glu	Thr	Lys	Pro	Ala	Ser	Pro	His	Ser	Val	Leu
1160						1165					1170			
Pro	Asp	Ser	Val	Pro	Ala	Ile	Lys	Lys	Glu	Gln	Glu	Pro	Thr	Ala
1175						1180					1185			
Ala	Leu	Thr	Leu	Lys	Ala	Ala	Asp	Glu	Gln	Met	Ala	Leu	Ser	Lys
1190						1195					1200			
Val	Arg	Lys	Glu	Glu	Ile	Val	Pro	Asp	Ser	Gln	Glu	Ala	Thr	Ala
1205						1210					1215			
His	Val	Ser	Gln	Asp	Gln	Lys	Met	Glu	Pro	Gln	Pro	Pro	Asn	Val
1220						1225					1230			
Pro	Glu	Ser	Glu	Met	Lys	Tyr	Ser	Val	Leu	Pro	Asp	Met	Val	Asp
1235						1240					1245			
Glu	Pro	Lys	Lys	Gly	Val	Lys	Pro	Lys	Leu	Val	Leu	Asn	Val	Thr
1250						1255					1260			
Ser	Glu	Leu	Glu	Gln	Arg	Lys	Leu	Ser	Lys	Asn	Glu	Pro	Glu	Val
1265						1270					1275			
Ile	Lys	Pro	Tyr	Ser	Pro	Leu	Lys	Glu	Thr	Ser	Leu	Ser	Gly	Pro
1280						1285					1290			
Glu	Ala	Leu	Ser	Ala	Val	Lys	Met	Glu	Met	Lys	His	Asp	Ser	Lys
1295						1300					1305			
Ile	Thr	Thr	Thr	Pro	Ile	Val	Leu	His	Ser	Ala	Ser	Ser	Gly	Val

1310						1315						1320			
Glu	Lys	Gln	Val	Glu	His	Gly	Pro	Pro	Ala	Leu	Ala	Phe	Ser	Ala	
1325						1330					1335				
Leu	Ser	Glu	Glu	Ile	Lys	Lys	Glu	Ile	Glu	Pro	Ser	Ser	Ser	Thr	
1340						1345					1350				
Thr	Thr	Ala	Ser	Val	Thr	Lys	Leu	Asp	Ser	Asn	Leu	Thr	Arg	Ala	
1355						1360					1365				
Val	Lys	Glu	Glu	Ile	Pro	Thr	Asp	Ser	Ser	Leu	Ile	Thr	Pro	Val	
1370						1375					1380				
Asp	Arg	Pro	Val	Leu	Thr	Lys	Val	Gly	Lys	Gly	Glu	Leu	Gly	Ser	
1385						1390					1395				
Gly	Leu	Pro	Pro	Leu	Val	Thr	Ser	Ala	Asp	Glu	His	Ser	Val	Leu	
1400						1405					1410				
Ala	Glu	Glu	Asp	Lys	Val	Ala	Ile	Lys	Gly	Ala	Ser	Pro	Ile	Glu	
1415						1420					1425				
Thr	Ser	Ser	Lys	His	Leu	Ala	Trp	Ser	Glu	Ala	Glu	Lys	Glu	Ile	
1430						1435					1440				
Lys	Phe	Asp	Ser	Leu	Pro	Ser	Val	Ser	Ser	Ile	Ala	Glu	His	Ser	
1445						1450					1455				
Val	Leu	Ser	Glu	Val	Glu	Ala	Lys	Glu	Val	Lys	Ala	Gly	Leu	Pro	
1460						1465					1470				
Val	Ile	Lys	Thr	Ser	Ser	Ser	Gln	His	Ser	Asp	Lys	Ser	Glu	Glu	
1475						1480					1485				
Ala	Arg	Val	Glu	Asp	Lys	Gln	Asp	Leu	Leu	Phe	Ser	Thr	Val	Cys	
1490						1495					1500				
Asp	Ser	Glu	Arg	Leu	Val	Ser	Ser	Gln	Lys	Lys	Ser	Leu	Met	Ser	
1505						1510					1515				
Thr	Ser	Glu	Val	Leu	Glu	Pro	Glu	His	Glu	Leu	Pro	Leu	Ser	Leu	
1520						1525					1530				

Trp	Gly	Glu	Ile	Lys	Lys	Lys	Glu	Thr	Glu	Leu	Pro	Ser	Ser	Gln
	1535					1540					1545			
Asn	Val	Ser	Pro	Ala	Ser	Lys	His	Ile	Ile	Pro	Lys	Gly	Lys	Asp
	1550					1555					1560			
Glu	Glu	Thr	Ala	Ser	Ser	Ser	Pro	Glu	Leu	Glu	Asn	Leu	Ala	Ser
	1565					1570					1575			
Gly	Leu	Ala	Pro	Thr	Leu	Leu	Leu	Leu	Ser	Asp	Asp	Lys	Asn	Lys
	1580					1585					1590			
Pro	Ala	Val	Glu	Val	Ser	Ser	Thr	Ala	Gln	Gly	Asp	Phe	Pro	Ser
	1595					1600					1605			
Glu	Lys	Gln	Asp	Val	Ala	Leu	Ala	Glu	Leu	Ser	Leu	Glu	Pro	Glu
	1610					1615					1620			
Lys	Lys	Asp	Lys	Pro	His	Gln	Pro	Leu	Glu	Leu	Pro	Asn	Ala	Gly
	1625					1630					1635			
Ser	Glu	Phe	Ser	Ser	Asp	Leu	Gly	Arg	Gln	Ser	Gly	Ser	Ile	Gly
	1640					1645					1650			
Thr	Lys	Gln	Ala	Lys	Ser	Pro	Ile	Thr	Glu	Thr	Glu	Asp	Ser	Val
	1655					1660					1665			
Leu	Glu	Lys	Gly	Pro	Ala	Glu	Leu	Arg	Ser	Arg	Glu	Gly	Lys	Glu
	1670					1675					1680			
Glu	Asn	Arg	Glu	Leu	Cys	Ala	Ser	Ser	Thr	Met	Pro	Ala	Ile	Ser
	1685					1690					1695			
Glu	Leu	Ser	Ser	Leu	Leu	Arg	Glu	Glu	Ser	Gln	Asn	Glu	Glu	Ile
	1700					1705					1710			
Lys	Pro	Phe	Ser	Pro	Lys	Ile	Ile	Ser	Leu	Glu	Ser	Lys	Glu	Pro
	1715					1720					1725			
Pro	Ala	Ser	Val	Ala	Glu	Gly	Gly	Asn	Pro	Glu	Glu	Phe	Gln	Pro
	1730					1735					1740			

Phe	Thr	Phe	Ser	Leu	Lys	Gly	Leu	Ser	Glu	Glu	Val	Ser	His	Pro
1745						1750					1755			
Ala	Asp	Phe	Lys	Lys	Gly	Gly	Asn	Gln	Glu	Ile	Gly	Pro	Leu	Pro
1760						1765					1770			
Pro	Thr	Gly	Asn	Leu	Lys	Ala	Gln	Val	Met	Gly	Asp	Ile	Leu	Asp
1775						1780					1785			
Lys	Leu	Ser	Glu	Glu	Thr	Gly	His	Pro	Asn	Ser	Ser	Gln	Val	Leu
1790						1795					1800			
Gln	Ser	Ile	Thr	Glu	Pro	Ser	Lys	Ile	Ala	Pro	Ser	Asp	Leu	Leu
1805						1810					1815			
Val	Glu	Gln	Lys	Lys	Thr	Glu	Lys	Ala	Leu	His	Ser	Asp	Gln	Thr
1820						1825					1830			
Val	Lys	Leu	Pro	Asp	Val	Ser	Thr	Ser	Ser	Glu	Asp	Lys	Gln	Asp
1835						1840					1845			
Leu	Gly	Ile	Lys	Gln	Phe	Ser	Leu	Met	Arg	Glu	Asn	Leu	Pro	Leu
1850						1855					1860			
Glu	Gln	Ser	Lys	Ser	Phe	Met	Thr	Thr	Lys	Pro	Ala	Asp	Val	Lys
1865						1870					1875			
Glu	Thr	Lys	Met	Glu	Glu	Phe	Phe	Ile	Ser	Pro	Lys	Asp	Glu	Asn
1880						1885					1890			
Trp	Met	Leu	Gly	Lys	Pro	Glu	Asn	Val	Ala	Ser	Gln	His	Glu	Gln
1895						1900					1905			
Arg	Ile	Ala	Gly	Ser	Val	Gln	Leu	Asp	Ser	Ser	Ser	Ser	Asn	Glu
1910						1915					1920			
Leu	Arg	Pro	Gly	Gln	Leu	Lys	Ala	Ala	Val	Ser	Ser	Lys	Asp	His
1925						1930					1935			
Thr	Cys	Glu	Val	Arg	Lys	Gln	Val	Leu	Pro	His	Ser	Ala	Glu	Glu
1940						1945					1950			

Ser	His	Leu	Ser	Ser	Gln	Glu	Ala	Val	Ser	Ala	Leu	Asp	Thr	Ser
	1955					1960					1965			
Ser	Gly	Asn	Thr	Glu	Thr	Leu	Ser	Ser	Lys	Ser	Tyr	Ser	Ser	Glu
	1970					1975					1980			
Glu	Val	Lys	Leu	Ala	Glu	Glu	Pro	Lys	Ser	Leu	Val	Leu	Ala	Gly
	1985					1990					1995			
Asn	Val	Glu	Arg	Asn	Ile	Ala	Glu	Gly	Lys	Glu	Ile	His	Ser	Leu
	2000					2005					2010			
Met	Glu	Ser	Glu	Ser	Leu	Leu	Leu	Glu	Lys	Ala	Asn	Thr	Glu	Leu
	2015					2020					2025			
Ser	Trp	Pro	Ser	Lys	Glu	Asp	Ser	Gln	Glu	Lys	Ile	Lys	Leu	Pro
	2030					2035					2040			
Pro	Glu	Arg	Phe	Phe	Gln	Lys	Pro	Val	Ser	Gly	Leu	Ser	Val	Glu
	2045					2050					2055			
Gln	Val	Lys	Ser	Glu	Thr	Ile	Ser	Ser	Ser	Val	Lys	Thr	Ala	His
	2060					2065					2070			
Phe	Pro	Ala	Glu	Gly	Val	Glu	Pro	Ala	Leu	Gly	Asn	Glu	Lys	Glu
	2075					2080					2085			
Ala	His	Arg	Ser	Thr	Pro	Pro	Phe	Pro	Glu	Glu	Lys	Pro	Leu	Glu
	2090					2095					2100			
Glu	Ser	Lys	Met	Val	Gln	Ser	Lys	Val	Ile	Asp	Asp	Ala	Asp	Glu
	2105					2110					2115			
Gly	Lys	Lys	Pro	Ser	Pro	Glu	Val	Lys	Ile	Pro	Thr	Gln	Arg	Lys
	2120					2125					2130			
Pro	Ile	Ser	Ser	Ile	His	Ala	Arg	Glu	Pro	Gln	Ser	Pro	Glu	Ser
	2135					2140					2145			
Pro	Glu	Val	Thr	Gln	Asn	Pro	Pro	Thr	Gln	Pro	Lys	Val	Ala	Lys
	2150					2155					2160			
Pro	Asp	Leu	Pro	Glu	Glu	Lys	Gly	Lys	Lys	Gly	Ile	Ser	Ser	Phe

2165						2170						2175			
Lys	Ser	Trp	Met	Ser	Ser	Leu	Phe	Phe	Gly	Ser	Ser	Thr	Pro	Asp	
2180						2185					2190				
Asn	Lys	Val	Ala	Glu	Gln	Glu	Asp	Leu	Glu	Thr	Gln	Pro	Ser	Pro	
2195						2200					2205				
Ser	Val	Glu	Lys	Ala	Val	Thr	Val	Ile	Asp	Pro	Glu	Gly	Thr	Ile	
2210						2215					2220				
Pro	Thr	Asn	Phe	Asn	Val	Ala	Glu	Lys	Pro	Ala	Asp	His	Ser	Leu	
2225						2230					2235				
Ser	Glu	Val	Lys	Leu	Lys	Thr	Ala	Asp	Glu	Pro	Arg	Gly	Thr	Leu	
2240						2245					2250				
Val	Lys	Ser	Gly	Asp	Gly	Gln	Asn	Val	Lys	Glu	Lys	Ser	Met	Ile	
2255						2260					2265				
Leu	Ser	Asn	Val	Glu	Asp	Leu	Gln	Gln	Pro	Lys	Phe	Ile	Ser	Glu	
2270						2275					2280				
Val	Ser	Arg	Glu	Asp	Tyr	Gly	Lys	Lys	Glu	Ile	Ser	Gly	Asp	Ser	
2285						2290					2295				
Glu	Glu	Met	Asn	Ile	Asn	Ser	Val	Val	Thr	Ser	Ala	Asp	Gly	Glu	
2300						2305					2310				
Asn	Leu	Glu	Ile	Gln	Ser	Tyr	Ser	Leu	Ile	Gly	Glu	Lys	Leu	Val	
2315						2320					2325				
Met	Glu	Glu	Ala	Lys	Thr	Ile	Val	Pro	Pro	His	Val	Thr	Asp	Ser	
2330						2335					2340				
Lys	Arg	Val	Gln	Lys	Pro	Ala	Ile	Ala	Pro	Pro	Ser	Lys	Trp	Asn	
2345						2350					2355				
Ile	Ser	Ile	Phe	Lys	Glu	Glu	Pro	Arg	Ser	Asp	Gln	Lys	Gln	Lys	
2360						2365					2370				
Ser	Leu	Leu	Ser	Phe	Asp	Val	Val	Asp	Lys	Val	Pro	Gln	Gln	Pro	
2375						2380					2385				

Lys	Ser	Ala	Ser	Ser	Asn	Phe	Ala	Ser	Lys	Asn	Ile	Thr	Lys	Glu
2390						2395					2400			
Ser	Glu	Lys	Pro	Glu	Ser	Ile	Ile	Leu	Pro	Val	Glu	Glu	Ser	Lys
2405						2410					2415			
Gly	Ser	Leu	Ile	Asp	Phe	Ser	Glu	Asp	Arg	Leu	Lys	Lys	Glu	Met
2420						2425					2430			
Gln	Asn	Pro	Thr	Ser	Leu	Lys	Ile	Ser	Glu	Glu	Glu	Thr	Lys	Leu
2435						2440					2445			
Arg	Ser	Val	Ser	Pro	Thr	Glu	Lys	Lys	Asp	Asn	Leu	Glu	Asn	Arg
2450						2455					2460			
Ser	Tyr	Thr	Leu	Ala	Glu	Lys	Lys	Val	Leu	Ala	Glu	Lys	Gln	Asn
2465						2470					2475			
Ser	Val	Ala	Pro	Leu	Glu	Leu	Arg	Asp	Ser	Asn	Glu	Ile	Gly	Lys
2480						2485					2490			
Thr	Gln	Ile	Thr	Leu	Gly	Ser	Arg	Ser	Thr	Glu	Leu	Lys	Glu	Ser
2495						2500					2505			
Lys	Ala	Asp	Ala	Met	Pro	Gln	His	Phe	Tyr	Gln	Asn	Glu	Asp	Tyr
2510						2515					2520			
Asn	Glu	Arg	Pro	Lys	Ile	Ile	Val	Gly	Ser	Glu	Lys	Glu	Lys	Gly
2525						2530					2535			
Glu	Glu	Lys	Glu	Asn	Gln	Val	Tyr	Val	Leu	Ser	Glu	Gly	Lys	Lys
2540						2545					2550			
Gln	Gln	Glu	His	Gln	Pro	Tyr	Ser	Val	Asn	Val	Ala	Glu	Ser	Met
2555						2560					2565			
Ser	Arg	Glu	Ser	Asp	Ile	Ser	Leu	Gly	His	Ser	Leu	Gly	Glu	Thr
2570						2575					2580			
Gln	Ser	Phe	Ser	Leu	Val	Lys	Ala	Thr	Ser	Val	Thr	Glu	Lys	Ser
2585						2590					2595			

Glu	Ala	Met	Leu	Ala	Glu	Ala	His	Pro	Glu	Ile	Arg	Glu	Ala	Lys
2600						2605					2610			
Ala	Val	Gly	Thr	Gln	Pro	His	Pro	Leu	Glu	Glu	Ser	Lys	Val	Leu
2615						2620					2625			
Val	Glu	Lys	Thr	Lys	Thr	Phe	Leu	Pro	Val	Ala	Leu	Ser	Cys	Arg
2630						2635					2640			
Asp	Glu	Ile	Glu	Asn	His	Ser	Leu	Ser	Gln	Glu	Gly	Asn	Leu	Val
2645						2650					2655			
Leu	Glu	Lys	Ser	Ser	Arg	Asp	Met	Pro	Asp	His	Ser	Glu	Glu	Lys
2660						2665					2670			
Glu	Gln	Phe	Arg	Glu	Ser	Glu	Leu	Ser	Lys	Gly	Gly	Ser	Val	Asp
2675						2680					2685			
Ile	Thr	Lys	Glu	Thr	Val	Lys	Gln	Gly	Phe	Gln	Glu	Lys	Ala	Val
2690						2695					2700			
Gly	Thr	Gln	Pro	Arg	Pro	Leu	Glu	Glu	Ser	Lys	Val	Leu	Val	Glu
2705						2710					2715			
Lys	Thr	Lys	Thr	Phe	Leu	Pro	Val	Val	Leu	Ser	Cys	His	Asp	Glu
2720						2725					2730			
Ile	Glu	Asn	His	Ser	Leu	Ser	Gln	Glu	Gly	Asn	Leu	Val	Leu	Glu
2735						2740					2745			
Lys	Ser	Ser	Arg	Asp	Met	Pro	Asp	His	Ser	Glu	Glu	Lys	Glu	Gln
2750						2755					2760			
Phe	Lys	Glu	Ser	Glu	Leu	Trp	Lys	Gly	Gly	Ser	Val	Asp	Ile	Thr
2765						2770					2775			
Lys	Glu	Ser	Met	Lys	Glu	Gly	Phe	Pro	Ser	Lys	Glu	Ser	Glu	Arg
2780						2785					2790			
Thr	Leu	Ala	Arg	Pro	Phe	Asp	Glu	Thr	Lys	Ser	Ser	Glu	Thr	Pro
2795						2800					2805			

Pro	Tyr	Leu	Leu	Ser	Pro	Val	Lys	Pro	Gln	Thr	Leu	Ala	Ser	Gly
	2810					2815					2820			
Ala	Ser	Pro	Glu	Ile	Asn	Ala	Val	Lys	Lys	Lys	Glu	Met	Pro	Arg
	2825					2830					2835			
Ser	Glu	Leu	Thr	Pro	Glu	Arg	His	Thr	Val	His	Thr	Ile	Gln	Thr
	2840					2845					2850			
Ser	Lys	Asp	Asp	Thr	Ser	Asp	Val	Pro	Lys	Gln	Ser	Val	Leu	Val
	2855					2860					2865			
Ser	Lys	His	His	Leu	Glu	Ala	Ala	Glu	Asp	Thr	Arg	Val	Lys	Glu
	2870					2875					2880			
Pro	Leu	Ser	Ser	Ala	Lys	Ser	Asn	Tyr	Ala	Gln	Phe	Ile	Ser	Asn
	2885					2890					2895			
Thr	Ser	Ala	Ser	Asn	Ala	Asp	Lys	Met	Val	Ser	Asn	Lys	Glu	Met
	2900					2905					2910			
Pro	Lys	Glu	Pro	Glu	Asp	Thr	Tyr	Ala	Lys	Gly	Glu	Asp	Phe	Thr
	2915					2920					2925			
Val	Thr	Ser	Lys	Pro	Ala	Gly	Leu	Ser	Glu	Asp	Gln	Lys	Thr	Ala
	2930					2935					2940			
Phe	Ser	Ile	Ile	Ser	Glu	Gly	Cys	Glu	Ile	Leu	Asn	Ile	His	Ala
	2945					2950					2955			
Pro	Ala	Phe	Ile	Ser	Ser	Ile	Asp	Gln	Glu	Glu	Ser	Glu	Gln	Met
	2960					2965					2970			
Gln	Asp	Lys	Leu	Glu	Tyr	Leu	Glu	Glu	Lys	Ala	Ser	Phe	Lys	Thr
	2975					2980					2985			
Ile	Pro	Leu	Pro	Asp	Asp	Ser	Glu	Thr	Val	Ala	Cys	His	Lys	Thr
	2990					2995					3000			
Leu	Lys	Ser	Arg	Leu	Glu	Asp	Glu	Lys	Val	Thr	Pro	Leu	Lys	Glu
	3005					3010					3015			
Asn	Lys	Gln	Lys	Glu	Thr	His	Lys	Thr	Lys	Glu	Glu	Ile	Ser	Thr

3020				3025				3030						
Asp	Ser	Glu	Thr	Asp	Leu	Ser	Phe	Ile	Gln	Pro	Thr	Ile	Pro	Ser
	3035					3040					3045			
Glu	Glu	Asp	Tyr	Phe	Glu	Lys	Tyr	Thr	Leu	Ile	Asp	Tyr	Asn	Ile
	3050					3055					3060			
Ser	Pro	Asp	Pro	Glu	Lys	Gln	Lys	Ala	Pro	Gln	Lys	Leu	Asn	Val
	3065					3070					3075			
Glu	Glu	Lys	Leu	Ser	Lys	Glu	Val	Thr	Glu	Glu	Thr	Ile	Ser	Phe
	3080					3085					3090			
Pro	Val	Ser	Ser	Val	Glu	Ser	Ala	Leu	Glu	His	Glu	Tyr	Asp	Leu
	3095					3100					3105			
Val	Lys	Leu	Asp	Glu	Ser	Phe	Tyr	Gly	Pro	Glu	Lys	Gly	His	Asn
	3110					3115					3120			
Ile	Leu	Ser	His	Pro	Glu	Thr	Gln	Ser	Gln	Asn	Ser	Ala	Asp	Arg
	3125					3130					3135			
Asn	Val	Ser	Lys	Asp	Thr	Lys	Arg	Asp	Val	Asp	Ser	Lys	Ser	Pro
	3140					3145					3150			
Gly	Met	Pro	Leu	Phe	Glu	Ala	Glu	Glu	Gly	Val	Leu	Ser	Arg	Thr
	3155					3160					3165			
Gln	Ile	Phe	Pro	Thr	Thr	Ile	Lys	Val	Ile	Asp	Pro	Glu	Phe	Leu
	3170					3175					3180			
Glu	Glu	Pro	Pro	Ala	Leu	Ala	Phe	Leu	Tyr	Lys	Asp	Leu	Tyr	Glu
	3185					3190					3195			
Glu	Ala	Val	Gly	Glu	Lys	Lys	Lys	Glu	Glu	Glu	Thr	Ala	Ser	Glu
	3200					3205					3210			
Gly	Asp	Ser	Val	Asn	Ser	Glu	Ala	Ser	Phe	Pro	Ser	Arg	Asn	Ser
	3215					3220					3225			
Asp	Thr	Asp	Asp	Gly	Thr	Gly	Ile	Tyr	Phe	Glu	Lys	Tyr	Ile	Leu
	3230					3235					3240			

Lys	Asp	Asp	Ile	Leu	His	Asp	Thr	Ser	Leu	Thr	Gln	Lys	Asp	Gln
	3245					3250					3255			
Gly	Gln	Gly	Leu	Glu	Glu	Lys	Arg	Val	Gly	Lys	Asp	Asp	Ser	Tyr
	3260					3265					3270			
Gln	Pro	Ile	Ala	Ala	Glu	Gly	Glu	Ile	Trp	Gly	Lys	Phe	Gly	Thr
	3275					3280					3285			
Ile	Cys	Arg	Glu	Lys	Ser	Leu	Glu	Glu	Gln	Lys	Gly	Val	Tyr	Gly
	3290					3295					3300			
Glu	Gly	Glu	Ser	Val	Asp	His	Val	Glu	Thr	Val	Gly	Asn	Val	Ala
	3305					3310					3315			
Met	Gln	Lys	Lys	Ala	Pro	Ile	Thr	Glu	Asp	Val	Arg	Val	Ala	Thr
	3320					3325					3330			
Gln	Lys	Ile	Ser	Tyr	Ala	Val	Pro	Phe	Glu	Asp	Thr	His	His	Val
	3335					3340					3345			
Leu	Glu	Arg	Ala	Asp	Glu	Ala	Gly	Ser	His	Gly	Asn	Glu	Val	Gly
	3350					3355					3360			
Asn	Ala	Ser	Pro	Glu	Val	Asn	Leu	Asn	Val	Pro	Val	Gln	Val	Ser
	3365					3370					3375			
Phe	Pro	Glu	Glu	Glu	Phe	Ala	Ser	Gly	Ala	Thr	His	Val	Gln	Glu
	3380					3385					3390			
Thr	Ser	Leu	Glu	Glu	Pro	Lys	Ile	Leu	Val	Pro	Pro	Glu	Pro	Ser
	3395					3400					3405			
Glu	Glu	Arg	Leu	Arg	Asn	Ser	Pro	Val	Gln	Asp	Glu	Tyr	Glu	Phe
	3410					3415					3420			
Thr	Glu	Ser	Leu	His	Asn	Glu	Val	Val	Pro	Gln	Asp	Ile	Leu	Ser
	3425					3430					3435			
Glu	Glu	Leu	Ser	Ser	Glu	Ser	Thr	Pro	Glu	Asp	Val	Leu	Ser	Gln
	3440					3445					3450			

Gly	Lys	Glu	Ser	Phe	Glu	His	Ile	Ser	Glu	Asn	Glu	Phe	Ala	Ser
3455						3460					3465			
Glu	Ala	Glu	Gln	Ser	Thr	Pro	Ala	Glu	Gln	Lys	Glu	Leu	Gly	Ser
3470						3475					3480			
Glu	Arg	Lys	Glu	Glu	Asp	Gln	Leu	Ser	Ser	Glu	Val	Val	Thr	Glu
3485						3490					3495			
Lys	Ala	Gln	Lys	Glu	Leu	Lys	Lys	Ser	Gln	Ile	Asp	Thr	Tyr	Cys
3500						3505					3510			
Tyr	Thr	Cys	Lys	Cys	Pro	Ile	Ser	Ala	Thr	Asp	Lys	Val	Phe	Gly
3515						3520					3525			
Thr	His	Lys	Asp	His	Glu	Val	Ser	Thr	Leu	Asp	Thr	Ala	Ile	Ser
3530						3535					3540			
Ala	Val	Lys	Val	Gln	Leu	Ala	Glu	Phe	Leu	Glu	Asn	Leu	Gln	Glu
3545						3550					3555			
Lys	Ser	Leu	Arg	Ile	Glu	Ala	Phe	Val	Ser	Glu	Ile	Glu	Ser	Phe
3560						3565					3570			
Phe	Asn	Thr	Ile	Glu	Glu	Asn	Cys	Ser	Lys	Asn	Glu	Lys	Arg	Leu
3575						3580					3585			
Glu	Glu	Gln	Asn	Glu	Glu	Met	Met	Lys	Lys	Val	Leu	Ala	Gln	Tyr
3590						3595					3600			
Asp	Glu	Lys	Ala	Gln	Ser	Phe	Glu	Glu	Val	Lys	Lys	Lys	Lys	Met
3605						3610					3615			
Glu	Phe	Leu	His	Glu	Gln	Met	Val	His	Phe	Leu	Gln	Ser	Met	Asp
3620						3625					3630			
Thr	Ala	Lys	Asp	Thr	Leu	Glu	Thr	Ile	Val	Arg	Glu	Ala	Glu	Glu
3635						3640					3645			
Leu	Asp	Glu	Ala	Val	Phe	Leu	Thr	Ser	Phe	Glu	Glu	Ile	Asn	Glu
3650						3655					3660			

Arg	Leu	Leu	Ser	Ala	Met	Glu	Ser	Thr	Ala	Ser	Leu	Glu	Lys	Met
	3665					3670					3675			
Pro	Ala	Ala	Phe	Ser	Leu	Phe	Glu	His	Tyr	Asp	Asp	Ser	Ser	Ala
	3680					3685					3690			
Arg	Ser	Asp	Gln	Met	Leu	Lys	Gln	Val	Ala	Val	Pro	Gln	Pro	Pro
	3695					3700					3705			
Arg	Leu	Glu	Pro	Gln	Glu	Pro	Asn	Ser	Ala	Thr	Ser	Thr	Thr	Ile
	3710					3715					3720			
Ala	Val	Tyr	Trp	Ser	Met	Asn	Lys	Glu	Asp	Val	Ile	Asp	Ser	Phe
	3725					3730					3735			
Gln	Val	Tyr	Cys	Met	Glu	Glu	Pro	Gln	Asp	Asp	Gln	Glu	Val	Asn
	3740					3745					3750			
Glu	Leu	Val	Glu	Glu	Tyr	Arg	Leu	Thr	Val	Lys	Glu	Ser	Tyr	Cys
	3755					3760					3765			
Ile	Phe	Glu	Asp	Leu	Glu	Pro	Asp	Arg	Cys	Tyr	Gln	Val	Trp	Val
	3770					3775					3780			
Met	Ala	Val	Asn	Phe	Thr	Gly	Cys	Ser	Leu	Pro	Ser	Glu	Arg	Ala
	3785					3790					3795			
Ile	Phe	Arg	Thr	Ala	Pro	Ser	Thr	Pro	Val	Ile	Arg	Ala	Glu	Asp
	3800					3805					3810			
Cys	Thr	Val	Cys	Trp	Asn	Thr	Ala	Thr	Ile	Arg	Trp	Arg	Pro	Thr
	3815					3820					3825			
Thr	Pro	Glu	Ala	Thr	Glu	Thr	Tyr	Thr	Leu	Glu	Tyr	Cys	Arg	Gln
	3830					3835					3840			
His	Ser	Pro	Glu	Gly	Glu	Gly	Leu	Arg	Ser	Phe	Ser	Gly	Ile	Lys
	3845					3850					3855			
Gly	Leu	Gln	Leu	Lys	Val	Asn	Leu	Gln	Pro	Asn	Asp	Asn	Tyr	Phe
	3860					3865					3870			
Phe	Tyr	Val	Arg	Ala	Ile	Asn	Ala	Phe	Gly	Thr	Ser	Glu	Gln	Ser

3875							3880						3885
Glu	Ala	Ala	Leu	Ile	Ser	Thr	Arg	Gly	Thr	Arg	Phe	Leu	Leu
3890						3895					3900		
Arg	Glu	Thr	Ala	His	Pro	Ala	Leu	His	Ile	Ser	Ser	Ser	Gly
3905						3910					3915		
Val	Ile	Ser	Phe	Gly	Glu	Arg	Arg	Arg	Leu	Thr	Glu	Ile	Pro
3920						3925					3930		
Val	Leu	Gly	Glu	Glu	Leu	Pro	Ser	Cys	Gly	Gln	His	Tyr	Trp
3935						3940					3945		
Thr	Thr	Val	Thr	Asp	Cys	Pro	Ala	Tyr	Arg	Leu	Gly	Ile	Cys
3950						3955					3960		
Ser	Ser	Ala	Val	Gln	Ala	Gly	Ala	Leu	Gly	Gln	Gly	Glu	Thr
3965						3970					3975		
Trp	Tyr	Met	His	Cys	Ser	Glu	Pro	Gln	Arg	Tyr	Thr	Phe	Phe
3980						3985					3990		
Ser	Gly	Ile	Val	Ser	Asp	Val	His	Val	Thr	Glu	Arg	Pro	Ala
3995						4000					4005		
Val	Gly	Ile	Leu	Leu	Asp	Tyr	Asn	Asn	Gln	Arg	Leu	Ile	Phe
4010						4015					4020		
Asn	Ala	Glu	Ser	Glu	Gln	Leu	Leu	Phe	Ile	Ile	Arg	His	Arg
4025						4030					4035		
Asn	Glu	Gly	Val	His	Pro	Ala	Phe	Ala	Leu	Glu	Lys	Pro	Gly
4040						4045					4050		
Cys	Thr	Leu	His	Leu	Gly	Ile	Glu	Pro	Pro	Asp	Ser	Val	Arg
4055						4060					4065		

Lys

<210> 11970

<211> 201

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<212> PRT
<213> Homo sapiens

<220>
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<223> /note="Payload ID: 2368"

<220>
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<223> /note="Gene Symbol: CTF1"

<220>
<221> source
<223> /note="Gene Name:
        cardiotrophin 1"

<220>
<221> source
<223> /note="Uniprot ID: Q16619"

<220>
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<223> /note="ENSP ID: ENSP00000279804"

<400> 11970
Met Ser Arg Arg Glu Gly Ser Leu Glu Asp Pro Gln Thr Asp Ser Ser
1          5          10          15

Val Ser Leu Leu Pro His Leu Glu Ala Lys Ile Arg Gln Thr His Ser
          20          25          30

Leu Ala His Leu Leu Thr Lys Tyr Ala Glu Gln Leu Leu Gln Glu Tyr
          35          40          45

Val Gln Leu Gln Gly Asp Pro Phe Gly Leu Pro Ser Phe Ser Pro Pro
          50          55          60

Arg Leu Pro Val Ala Gly Leu Ser Ala Pro Ala Pro Ser His Ala Gly
65          70          75          80

Leu Pro Val His Glu Arg Leu Arg Leu Asp Ala Ala Ala Leu Ala Ala
          85          90          95

Leu Pro Pro Leu Leu Asp Ala Val Cys Arg Arg Gln Ala Glu Leu Asn
          100          105          110

Pro Arg Ala Pro Arg Leu Leu Arg Arg Leu Glu Asp Ala Ala Arg Gln
          115          120          125

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Ala Arg Ala Leu Gly Ala Ala Val Glu Ala Leu Leu Ala Ala Leu Gly
130 135 140

Ala Ala Asn Arg Gly Pro Arg Ala Glu Pro Pro Ala Ala Thr Ala Ser
145 150 155 160

Ala Ala Ser Ala Thr Gly Val Phe Pro Ala Lys Val Leu Gly Leu Arg
165 170 175

Val Cys Gly Leu Tyr Arg Glu Trp Leu Ser Arg Thr Glu Gly Asp Leu
180 185 190

Gly Gln Leu Leu Pro Gly Gly Ser Ala
195 200

<210> 11971
<211> 200
<212> PRT
<213> Homo sapiens

<220>
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<220>
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<220>
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<220>
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<400> 11971
Met Ser Arg Arg Glu Gly Ser Leu Asp Pro Gln Thr Asp Ser Ser Val
1 5 10 15

Ser Leu Leu Pro His Leu Glu Ala Lys Ile Arg Gln Thr His Ser Leu
20 25 30

Ala His Leu Leu Thr Lys Tyr Ala Glu Gln Leu Leu Gln Glu Tyr Val
35 40 45

26601

Gln Leu Gln Gly Asp Pro Phe Gly Leu Pro Ser Phe Ser Pro Pro Arg
 50 55 60
 Leu Pro Val Ala Gly Leu Ser Ala Pro Ala Pro Ser His Ala Gly Leu
 65 70 75 80
 Pro Val His Glu Arg Leu Arg Leu Asp Ala Ala Ala Leu Ala Ala Leu
 85 90 95
 Pro Pro Leu Leu Asp Ala Val Cys Arg Arg Gln Ala Glu Leu Asn Pro
 100 105 110
 Arg Ala Pro Arg Leu Leu Arg Arg Leu Glu Asp Ala Ala Arg Gln Ala
 115 120 125
 Arg Ala Leu Gly Ala Ala Val Glu Ala Leu Leu Ala Ala Leu Gly Ala
 130 135 140
 Ala Asn Arg Gly Pro Arg Ala Glu Pro Pro Ala Ala Thr Ala Ser Ala
 145 150 155 160
 Ala Ser Ala Thr Gly Val Phe Pro Ala Lys Val Leu Gly Leu Arg Val
 165 170 175
 Cys Gly Leu Tyr Arg Glu Trp Leu Ser Arg Thr Glu Gly Asp Leu Gly
 180 185 190
 Gln Leu Leu Pro Gly Gly Ser Ala
 195 200

<210> 11972

<211> 225

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2369"

<220>

<221> source

<223> /note="Gene Symbol: CLCF1"

<220>

<221> source

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<223> /note="Gene Name:
cardiotrophin-like cytokine factor
1"

<220>
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<223> /note="Uniprot ID: Q9UBD9"

<220>
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<223> /note="ENSP ID: ENSP00000309338"

<400> 11972
Met Asp Leu Arg Ala Gly Asp Ser Trp Gly Met Leu Ala Cys Leu Cys
1          5          10          15

Thr Val Leu Trp His Leu Pro Ala Val Pro Ala Leu Asn Arg Thr Gly
          20          25          30

Asp Pro Gly Pro Gly Pro Ser Ile Gln Lys Thr Tyr Asp Leu Thr Arg
          35          40          45

Tyr Leu Glu His Gln Leu Arg Ser Leu Ala Gly Thr Tyr Leu Asn Tyr
50          55          60

Leu Gly Pro Pro Phe Asn Glu Pro Asp Phe Asn Pro Pro Arg Leu Gly
65          70          75          80

Ala Glu Thr Leu Pro Arg Ala Thr Val Asp Leu Glu Val Trp Arg Ser
          85          90          95

Leu Asn Asp Lys Leu Arg Leu Thr Gln Asn Tyr Glu Ala Tyr Ser His
          100          105          110

Leu Leu Cys Tyr Leu Arg Gly Leu Asn Arg Gln Ala Ala Thr Ala Glu
          115          120          125

Leu Arg Arg Ser Leu Ala His Phe Cys Thr Ser Leu Gln Gly Leu Leu
          130          135          140

Gly Ser Ile Ala Gly Val Met Ala Ala Leu Gly Tyr Pro Leu Pro Gln
145          150          155          160

Pro Leu Pro Gly Thr Glu Pro Thr Trp Thr Pro Gly Pro Ala His Ser
          165          170          175

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Asp Phe Leu Gln Lys Met Asp Asp Phe Trp Leu Leu Lys Glu Leu Gln
180 185 190

Thr Trp Leu Trp Arg Ser Ala Lys Asp Phe Asn Arg Leu Lys Lys Lys
195 200 205

Met Gln Pro Pro Ala Ala Ala Val Thr Leu His Leu Gly Ala His Gly
210 215 220

Phe
225

<210> 11973
<211> 215
<212> PRT
<213> Homo sapiens

<220>
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<220>
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<223> /note="Gene Symbol: CLCF1"

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<223> /note="Gene Name:
cardiotrophin-like cytokine factor
1"

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<223> /note="Uniprot ID: Q9UBD9"

<220>
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<223> /note="ENSP ID: ENSP00000434122"

<400> 11973
Met Leu Ala Cys Leu Cys Thr Val Leu Trp His Leu Pro Ala Val Pro
1 5 10 15

Ala Leu Asn Arg Thr Gly Asp Pro Gly Pro Gly Pro Ser Ile Gln Lys
20 25 30

Thr Tyr Asp Leu Thr Arg Tyr Leu Glu His Gln Leu Arg Ser Leu Ala
35 40 45

Gly Thr Tyr Leu Asn Tyr Leu Gly Pro Pro Phe Asn Glu Pro Asp Phe

26604

50		55		60											
Asn 65	Pro	Pro	Arg	Leu	Gly 70	Ala	Glu	Thr	Leu	Pro 75	Arg	Ala	Thr	Val	Asp 80
Leu	Glu	Val	Trp	Arg 85	Ser	Leu	Asn	Asp	Lys 90	Leu	Arg	Leu	Thr	Gln 95	Asn
Tyr	Glu	Ala	Tyr 100	Ser	His	Leu	Leu	Cys 105	Tyr	Leu	Arg	Gly	Leu 110	Asn	Arg
Gln	Ala	Ala 115	Thr	Ala	Glu	Leu	Arg 120	Arg	Ser	Leu	Ala	His 125	Phe	Cys	Thr
Ser	Leu 130	Gln	Gly	Leu	Leu	Gly 135	Ser	Ile	Ala	Gly	Val 140	Met	Ala	Ala	Leu
Gly 145	Tyr	Pro	Leu	Pro	Gln 150	Pro	Leu	Pro	Gly	Thr 155	Glu	Pro	Thr	Trp	Thr 160
Pro	Gly	Pro	Ala	His 165	Ser	Asp	Phe	Leu	Gln 170	Lys	Met	Asp	Asp	Phe 175	Trp
Leu	Leu	Lys	Glu 180	Leu	Gln	Thr	Trp	Leu 185	Trp	Arg	Ser	Ala	Lys 190	Asp	Phe
Asn	Arg	Leu 195	Lys	Lys	Lys	Met	Gln 200	Pro	Pro	Ala	Ala	Ala 205	Val	Thr	Leu
His 210	Leu	Gly	Ala	His	Gly	Phe 215									

<210> 11974

<211> 626

<212> PRT

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<220>

<221> source

<223> /note="Payload ID: 2370"

<220>

<221> source

<223> /note="Gene Symbol: CRAT"

<220>

26605

<221> source
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<220>
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 <223> /note="Uniprot ID: P43155"

<220>
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 <223> /note="ENSP ID: ENSP00000315013"

<400> 11974

Met Leu Ala Phe Ala Ala Arg Thr Val Val Lys Pro Leu Gly Phe Leu
 1 5 10 15

Lys Pro Phe Ser Leu Met Lys Ala Ser Ser Arg Phe Lys Ala His Gln
 20 25 30

Asp Ala Leu Pro Arg Leu Pro Val Pro Pro Leu Gln Gln Ser Leu Asp
 35 40 45

His Tyr Leu Lys Ala Leu Gln Pro Ile Val Ser Glu Glu Glu Trp Ala
 50 55 60

His Thr Lys Gln Leu Val Asp Glu Phe Gln Ala Ser Gly Gly Val Gly
 65 70 75 80

Glu Arg Leu Gln Lys Gly Leu Glu Arg Arg Ala Arg Lys Thr Glu Asn
 85 90 95

Trp Leu Ser Glu Trp Trp Leu Lys Thr Ala Tyr Leu Gln Tyr Arg Gln
 100 105 110

Pro Val Val Ile Tyr Ser Ser Pro Gly Val Met Leu Pro Lys Gln Asp
 115 120 125

Phe Val Asp Leu Gln Gly Gln Leu Arg Phe Ala Ala Lys Leu Ile Glu
 130 135 140

Gly Val Leu Asp Phe Lys Val Met Ile Asp Asn Glu Thr Leu Pro Val
 145 150 155 160

Glu Tyr Leu Gly Gly Lys Pro Leu Cys Met Asn Gln Tyr Tyr Gln Ile
 165 170 175

Leu	Ser	Ser	Cys	Arg	Val	Pro	Gly	Pro	Lys	Gln	Asp	Thr	Val	Ser	Asn	180	185	190
Phe	Ser	Lys	Thr	Lys	Lys	Pro	Pro	Thr	His	Ile	Thr	Val	Val	His	Asn	195	200	205
Tyr	Gln	Phe	Phe	Glu	Leu	Asp	Val	Tyr	His	Ser	Asp	Gly	Thr	Pro	Leu	210	215	220
Thr	Ala	Asp	Gln	Ile	Phe	Val	Gln	Leu	Glu	Lys	Ile	Trp	Asn	Ser	Ser	225	230	235
Leu	Gln	Thr	Asn	Lys	Glu	Pro	Val	Gly	Ile	Leu	Thr	Ser	Asn	His	Arg	245	250	255
Asn	Ser	Trp	Ala	Lys	Ala	Tyr	Asn	Thr	Leu	Ile	Lys	Asp	Lys	Val	Asn	260	265	270
Arg	Asp	Ser	Val	Arg	Ser	Ile	Gln	Lys	Ser	Ile	Phe	Thr	Val	Cys	Leu	275	280	285
Asp	Ala	Thr	Met	Pro	Arg	Val	Ser	Glu	Asp	Val	Tyr	Arg	Ser	His	Val	290	295	300
Ala	Gly	Gln	Met	Leu	His	Gly	Gly	Gly	Ser	Arg	Leu	Asn	Ser	Gly	Asn	305	310	315
Arg	Trp	Phe	Asp	Lys	Thr	Leu	Gln	Phe	Ile	Val	Ala	Glu	Asp	Gly	Ser	325	330	335
Cys	Gly	Leu	Val	Tyr	Glu	His	Ala	Ala	Ala	Glu	Gly	Pro	Pro	Ile	Val	340	345	350
Thr	Leu	Leu	Asp	Tyr	Val	Ile	Glu	Tyr	Thr	Lys	Lys	Pro	Glu	Leu	Val	355	360	365
Arg	Ser	Pro	Leu	Val	Pro	Leu	Pro	Met	Pro	Lys	Lys	Leu	Arg	Phe	Asn	370	375	380
Ile	Thr	Pro	Glu	Ile	Lys	Ser	Asp	Ile	Glu	Lys	Ala	Lys	Gln	Asn	Leu	385	390	395
Ser	Ile	Met	Ile	Gln	Asp	Leu	Asp	Ile	Thr	Val	Met	Val	Phe	His	His			

				405					410					415			
Phe	Gly	Lys	Asp	Phe	Pro	Lys	Ser	Glu	Lys	Leu	Ser	Pro	Asp	Ala	Phe		
			420					425					430				
Ile	Gln	Met	Ala	Leu	Gln	Leu	Ala	Tyr	Tyr	Arg	Ile	Tyr	Gly	Gln	Ala		
		435					440					445					
Cys	Ala	Thr	Tyr	Glu	Ser	Ala	Ser	Leu	Arg	Met	Phe	His	Leu	Gly	Arg		
	450					455					460						
Thr	Asp	Thr	Ile	Arg	Ser	Ala	Ser	Met	Asp	Ser	Leu	Thr	Phe	Val	Lys		
465					470					475					480		
Ala	Met	Asp	Asp	Ser	Ser	Val	Thr	Glu	His	Gln	Lys	Val	Glu	Leu	Leu		
				485					490					495			
Arg	Lys	Ala	Val	Gln	Ala	His	Arg	Gly	Tyr	Thr	Asp	Arg	Ala	Ile	Arg		
			500					505					510				
Gly	Glu	Ala	Phe	Asp	Arg	His	Leu	Leu	Gly	Leu	Lys	Leu	Gln	Ala	Ile		
		515					520					525					
Glu	Asp	Leu	Val	Ser	Met	Pro	Asp	Ile	Phe	Met	Asp	Thr	Ser	Tyr	Ala		
	530					535					540						
Ile	Ala	Met	His	Phe	His	Leu	Ser	Thr	Ser	Gln	Val	Pro	Ala	Lys	Thr		
545					550					555					560		
Asp	Cys	Val	Met	Phe	Phe	Gly	Pro	Val	Val	Pro	Asp	Gly	Tyr	Gly	Val		
				565					570					575			
Cys	Tyr	Asn	Pro	Met	Glu	Ala	His	Ile	Asn	Phe	Ser	Leu	Ser	Ala	Tyr		
			580					585					590				
Asn	Ser	Cys	Ala	Glu	Thr	Asn	Ala	Ala	Arg	Leu	Ala	His	Tyr	Leu	Glu		
		595					600					605					
Lys	Ala	Leu	Leu	Asp	Met	Arg	Ala	Leu	Leu	Gln	Ser	His	Pro	Arg	Ala		
	610					615					620						
Lys	Leu																
625																	


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<210> 11975
<211> 161
<212> PRT
<213> Homo sapiens

<220>
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<223> /note="Payload ID: 2370"

<220>
<221> source
<223> /note="Gene Symbol: CRAT"

<220>
<221> source
<223> /note="Gene Name:
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<220>
<221> source
<223> /note="ENSP ID: ENSP00000377045"

<400> 11975
Met Leu Ala Phe Ala Ala Arg Thr Val Val Lys Pro Leu Gly Phe Leu
1          5          10          15

Lys Pro Phe Ser Leu Met Lys Ala Ser Ser Arg Phe Lys Ala His Gln
          20          25          30

Asp Ala Leu Pro Arg Leu Pro Val Pro Pro Leu Gln Gln Ser Leu Asp
          35          40          45

His Tyr Leu Lys Ala Leu Gln Pro Ile Val Ser Glu Glu Glu Trp Ala
          50          55          60

His Thr Lys Gln Leu Val Asp Glu Phe Gln Ala Ser Gly Gly Val Gly
65          70          75          80

Glu Arg Leu Gln Lys Gly Leu Glu Arg Arg Ala Arg Lys Thr Glu Asn
          85          90          95

Trp Val Ser Glu Gly Ile Leu Thr Val Thr Cys Cys Trp Leu His Met
          100          105          110

His Ser Ser Pro Val Pro Thr Ala Leu Ala Arg Pro Phe Val Cys Cys
          115          120          125

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Pro Glu Phe Arg Glu His Ile Leu Cys Val Trp His Leu Ala Gly Cys
130 135 140

Trp Val Ile Lys Lys Asp Thr Val Thr Ser Ser Leu Glu Leu Thr Phe
145 150 155 160

Lys

<210> 11976
<211> 98
<212> PRT
<213> Homo sapiens

<220>
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<223> /note="Payload ID: 2370"

<220>
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<223> /note="Gene Symbol: CRAT"

<220>
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<223> /note="Gene Name:
carnitine O-acetyltransferase"

<220>
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<223> /note="ENSP ID: ENSP00000390571"

<400> 11976
Met Glu Glu Asp Gly Gln Gln Arg Glu Lys Val Lys Pro Leu Gly Phe
1 5 10 15

Leu Lys Pro Phe Ser Leu Met Lys Ala Ser Ser Arg Phe Lys Ala His
20 25 30

Gln Asp Ala Leu Pro Arg Leu Pro Val Pro Pro Leu Gln Gln Ser Leu
35 40 45

Asp His Tyr Leu Lys Ala Leu Gln Pro Ile Val Ser Glu Glu Glu Trp
50 55 60

Ala His Thr Lys Gln Leu Val Asp Glu Phe Gln Ala Ser Gly Gly Val
65 70 75 80

Gly Glu Arg Leu Gln Lys Gly Leu Glu Arg Arg Ala Arg Lys Thr Glu
85 90 95

26610

Asn Trp

<210> 11977
<211> 31
<212> PRT
<213> Homo sapiens

<220>
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<220>
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<220>
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<220>
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<223> /note="ENSP ID: ENSP00000394420"

<220>
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<222> (1)..(1)
<223> Any amino acid

<400> 11977
Xaa Arg Ser Gln Gly Cys Gly Val Thr Ser Ala Ala Arg Gln Ser Leu
1 5 10 15

Ser Ser Ser Gln Val Phe Pro His Gln Asn Asp Leu Arg Arg Phe
20 25 30

<210> 11978
<211> 201
<212> PRT
<213> Homo sapiens

<220>
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<220>
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<221> source
<223> /note="Gene Name:
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<220>
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<222> (1)..(1)
<223> Any amino acid

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<400> 11978
Xaa Met Ile Gln Asp Leu Asp Ile Thr Val Met Val Phe His His Phe
1          5          10          15

Gly Lys Asp Phe Pro Lys Ser Glu Lys Leu Ser Pro Asp Ala Phe Ile
          20          25          30

Gln Met Ala Leu Gln Leu Ala Tyr Tyr Arg Ile Tyr Gly Gln Ala Cys
          35          40          45

Ala Thr Tyr Glu Ser Ala Ser Leu Arg Met Phe His Leu Gly Arg Thr
          50          55          60

Asp Thr Ile Arg Ser Ala Ser Met Asp Ser Leu Thr Phe Val Lys Ala
65          70          75          80

Met Asp Asp Ser Ser Val Thr Glu His Gln Lys Val Glu Leu Leu Arg
          85          90          95

Lys Ala Val Gln Ala His Arg Gly Tyr Thr Asp Arg Ala Ile Arg Gly
          100          105          110

Glu Ala Phe Asp Arg His Leu Leu Gly Leu Lys Leu Gln Ala Ile Glu
          115          120          125

Asp Leu Val Pro Ala Lys Thr Asp Cys Val Met Phe Phe Gly Pro Val
          130          135          140

Val Pro Asp Gly Tyr Gly Val Cys Tyr Asn Pro Met Glu Ala His Ile
145          150          155          160

Asn Phe Ser Leu Ser Ala Tyr Asn Ser Cys Ala Glu Thr Asn Ala Ala
          165          170          175

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Arg Leu Ala His Tyr Leu Glu Lys Ala Leu Leu Asp Met Arg Ala Leu
180 185 190

Leu Gln Ser His Pro Arg Ala Lys Leu
195 200

<210> 11979
<211> 40
<212> PRT
<213> Homo sapiens

<220>
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<223> /note="Payload ID: 2370"

<220>
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<220>
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<223> /note="Gene Name:
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<220>
<221> source
<223> /note="ENSP ID: ENSP00000400367"

<400> 11979
Met Leu Ala Phe Ala Ala Arg Thr Val Asp Arg Ser Gln Gly Cys Gly
1 5 10 15

Val Thr Ser Ala Ala Arg Gln Ser Leu Ser Ser Ser Gln Val Phe Pro
20 25 30

His Gln Asn Asp Leu Arg Arg Phe
35 40

<210> 11980
<211> 40
<212> PRT
<213> Homo sapiens

<220>
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<223> /note="Payload ID: 2370"

<220>
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<223> /note="Gene Symbol: CRAT"

<220>
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 <223> /note="Gene Name:
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<220>
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 <223> /note="ENSP ID: ENSP00000404405"

<400> 11980
 Met Leu Ala Phe Ala Ala Arg Thr Val Asp Arg Ser Gln Gly Cys Gly
 1 5 10 15

 Val Thr Ser Ala Ala Arg Gln Ser Leu Ser Ser Ser Gln Val Phe Pro
 20 25 30

 His Gln Asn Asp Leu Arg Arg Phe
 35 40

<210> 11981
 <211> 612
 <212> PRT
 <213> Homo sapiens

<220>
 <221> source
 <223> /note="Payload ID: 2371"

<220>
 <221> source
 <223> /note="Gene Symbol: CROT"

<220>
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 <223> /note="Gene Name:
 carnitine O-octanoyltransferase"

<220>
 <221> source
 <223> /note="Uniprot ID: Q9UKG9"

<220>
 <221> source
 <223> /note="ENSP ID: ENSP00000331981"

<400> 11981
 Met Glu Asn Gln Leu Ala Lys Ser Thr Glu Glu Arg Thr Phe Gln Tyr
 1 5 10 15

 Gln Asp Ser Leu Pro Ser Leu Pro Val Pro Ser Leu Glu Glu Ser Leu
 20 25 30

Gly Leu Asp Pro Glu Asn Leu Ala Leu Leu Glu Lys Ile Gln Ser Ser
 260 265 270

Leu Leu Val Tyr Ser Met Glu Asp Ser Ser Pro His Val Thr Pro Glu
 275 280 285

Asp Tyr Ser Glu Ile Ile Ala Ala Ile Leu Ile Gly Asp Pro Thr Val
 290 295 300

Arg Trp Gly Asp Lys Ser Tyr Asn Leu Ile Ser Phe Ser Asn Gly Val
 305 310 315 320

Phe Gly Cys Asn Cys Asp His Ala Pro Phe Asp Ala Met Ile Met Val
 325 330 335

Asn Ile Ser Tyr Tyr Val Asp Glu Lys Ile Phe Gln Asn Glu Gly Arg
 340 345 350

Trp Lys Gly Ser Glu Lys Val Arg Asp Ile Pro Leu Pro Glu Glu Leu
 355 360 365

Ile Phe Ile Val Asp Glu Lys Val Leu Asn Asp Ile Asn Gln Ala Lys
 370 375 380

Ala Gln Tyr Leu Arg Glu Ala Ser Asp Leu Gln Ile Ala Ala Tyr Ala
 385 390 395 400

Phe Thr Ser Phe Gly Lys Lys Leu Thr Lys Asn Lys Met Leu His Pro
 405 410 415

Asp Thr Phe Ile Gln Leu Ala Leu Gln Leu Ala Tyr Tyr Arg Leu His
 420 425 430

Gly His Pro Gly Cys Cys Tyr Glu Thr Ala Met Thr Arg His Phe Tyr
 435 440 445

His Gly Arg Thr Glu Thr Met Arg Ser Cys Thr Val Glu Ala Val Arg
 450 455 460

Trp Cys Gln Ser Met Gln Asp Pro Ser Val Asn Leu Arg Glu Arg Gln
 465 470 475 480

Gln Lys Met Leu Gln Ala Phe Ala Lys His Asn Lys Met Met Lys Asp

485

490

495

Cys Ser Ala Gly Lys Gly Phe Asp Arg His Leu Leu Gly Leu Leu Leu
 500 505 510

Ile Ala Lys Glu Glu Gly Leu Pro Val Pro Glu Leu Phe Thr Asp Pro
 515 520 525

Leu Phe Ser Lys Ser Gly Gly Gly Gly Asn Phe Val Leu Ser Thr Ser
 530 535 540

Leu Val Gly Tyr Leu Arg Val Gln Gly Val Val Val Pro Met Val His
 545 550 555 560

Asn Gly Tyr Gly Phe Phe Tyr His Ile Arg Asp Asp Arg Phe Val Val
 565 570 575

Ala Cys Ser Ala Trp Lys Ser Cys Pro Glu Thr Asp Ala Glu Lys Leu
 580 585 590

Val Gln Leu Thr Phe Cys Ala Phe His Asp Met Ile Gln Leu Met Asn
 595 600 605

Ser Thr His Leu
 610

<210> 11982
 <211> 87
 <212> PRT
 <213> Homo sapiens

<220>
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 <223> /note="Payload ID: 2371"

<220>
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<220>
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<220>
 <221> source
 <223> /note="Uniprot ID: Q9UKG9"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000404867"

<400> 11982
Met Glu Asn Gln Leu Ala Lys Ser Thr Glu Glu Arg Thr Phe Gln Tyr
1 5 10 15

Gln Asp Ser Leu Pro Ser Leu Pro Val Pro Ser Leu Glu Glu Ser Leu
20 25 30

Lys Lys Tyr Leu Glu Ser Val Lys Pro Phe Ala Asn Gln Glu Glu Tyr
35 40 45

Lys Lys Thr Glu Glu Ile Val Gln Lys Phe Gln Ser Gly Ile Gly Glu
50 55 60

Lys Leu His Gln Lys Leu Leu Glu Arg Ala Lys Gly Lys Arg Asn Trp
65 70 75 80

Val Phe Val Val Ile Ile Glu
85

<210> 11983
<211> 574
<212> PRT
<213> Homo sapiens

<220>
<221> source
<223> /note="Payload ID: 2371"

<220>
<221> source
<223> /note="Gene Symbol: CROT"

<220>
<221> source
<223> /note="Gene Name:
carnitine O-octanoyltransferase"

<220>
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<223> /note="ENSP ID: ENSP00000411983"

<400> 11983
Met Glu Asn Gln Leu Ala Lys Ser Thr Glu Glu Arg Thr Phe Gln Tyr
1 5 10 15

Gln Asp Ser Leu Pro Ser Leu Pro Val Pro Ser Leu Glu Glu Ser Leu

20							25					30				
Lys	Lys	Tyr	Leu	Glu	Ser	Val	Lys	Pro	Phe	Ala	Asn	Gln	Glu	Glu	Tyr	
		35					40					45				
Lys	Lys	Thr	Glu	Glu	Ile	Val	Gln	Lys	Phe	Gln	Ser	Gly	Ile	Gly	Glu	
	50					55					60					
Lys	Leu	His	Gln	Lys	Leu	Leu	Glu	Arg	Ala	Lys	Gly	Lys	Arg	Asn	Trp	
65					70					75					80	
Leu	Glu	Glu	Trp	Trp	Leu	Asn	Val	Ala	Tyr	Leu	Asp	Val	Arg	Ile	Pro	
				85					90					95		
Ser	Gln	Leu	Asn	Val	Asn	Phe	Ala	Gly	Pro	Ala	Ala	His	Phe	Glu	His	
			100					105					110			
Tyr	Trp	Pro	Pro	Lys	Glu	Gly	Thr	Gln	Leu	Glu	Arg	Gly	Ser	Ile	Thr	
		115					120					125				
Leu	Trp	His	Asn	Leu	Asn	Tyr	Trp	Gln	Leu	Leu	Arg	Lys	Glu	Lys	Val	
	130					135					140					
Pro	Val	His	Lys	Val	Gly	Asn	Thr	Pro	Leu	Asp	Met	Asn	Gln	Phe	Arg	
145					150					155					160	
Met	Leu	Phe	Ser	Thr	Cys	Lys	Val	Pro	Gly	Ile	Thr	Arg	Asp	Ser	Ile	
				165					170					175		
Met	Asn	Tyr	Phe	Arg	Thr	Glu	Ser	Glu	Gly	Arg	Ser	Pro	Asn	His	Ile	
			180					185					190			
Val	Val	Leu	Cys	Arg	Gly	Arg	Ala	Phe	Val	Phe	Asp	Val	Ile	His	Glu	
		195					200					205				
Gly	Cys	Leu	Val	Thr	Pro	Pro	Glu	Leu	Leu	Arg	Gln	Leu	Thr	Tyr	Ile	
	210					215					220					
His	Lys	Lys	Cys	His	Ser	Glu	Pro	Asp	Gly	Pro	Gly	Ile	Ala	Ala	Leu	
225					230					235					240	
Thr	Ser	Glu	Glu	Arg	Thr	Arg	Trp	Ala	Lys	Ala	Arg	Glu	Tyr	Leu	Ile	
				245					250					255		

Gly	Leu	Asp	Pro	Glu	Asn	Leu	Ala	Leu	Leu	Glu	Lys	Ile	Gln	Ser	Ser		
			260					265					270				
Leu	Leu	Val	Tyr	Ser	Met	Glu	Asp	Ser	Ser	Pro	His	Val	Thr	Pro	Glu		
		275					280					285					
Asp	Tyr	Ser	Glu	Ile	Ile	Ala	Ala	Ile	Leu	Ile	Gly	Asp	Pro	Thr	Val		
	290					295					300						
Arg	Trp	Gly	Asp	Lys	Ser	Tyr	Asn	Leu	Ile	Ser	Phe	Ser	Asn	Gly	Val		
305					310					315					320		
Phe	Gly	Cys	Asn	Cys	Asp	His	Ala	Pro	Phe	Asp	Ala	Met	Ile	Met	Val		
				325					330					335			
Asn	Ile	Ser	Tyr	Tyr	Val	Asp	Glu	Lys	Ile	Phe	Gln	Asn	Glu	Gly	Arg		
			340					345					350				
Trp	Lys	Gly	Ser	Glu	Lys	Val	Arg	Asp	Ile	Pro	Leu	Pro	Glu	Glu	Leu		
		355					360					365					
Ile	Phe	Ile	Val	Asp	Glu	Lys	Val	Leu	Asn	Asp	Ile	Asn	Gln	Ala	Lys		
	370					375					380						
Ala	Gln	Tyr	Leu	Arg	Glu	Ala	Ser	Asp	Leu	Gln	Ile	Ala	Ala	Tyr	Ala		
385					390					395					400		
Phe	Thr	Ser	Phe	Gly	Lys	Lys	Leu	Thr	Lys	Asn	Lys	Met	Leu	His	Pro		
				405					410					415			
Asp	Thr	Phe	Ile	Gln	Leu	Ala	Leu	Gln	Leu	Ala	Tyr	Tyr	Arg	Leu	His		
			420					425					430				
Gly	His	Pro	Gly	Cys	Cys	Tyr	Glu	Thr	Ala	Met	Thr	Arg	His	Phe	Tyr		
		435					440					445					
His	Gly	Arg	Thr	Glu	Thr	Met	Arg	Ser	Cys	Thr	Val	Glu	Ala	Val	Arg		
	450					455					460						
Trp	Cys	Gln	Ser	Met	Gln	Asp	Pro	Ser	Val	Asn	Leu	Arg	Glu	Arg	Gln		
465					470					475					480		

Gln Lys Met Leu Gln Ala Phe Ala Lys His Asn Lys Met Met Lys Asp
485 490 495

Cys Ser Ala Gly Lys Gly Phe Asp Arg His Leu Leu Gly Leu Leu Leu
500 505 510

Ile Ala Lys Glu Glu Gly Leu Pro Val Pro Glu Leu Phe Thr Asp Pro
515 520 525

Leu Phe Ser Lys Ser Gly Gly Gly Gly Asn Phe Val Leu Ser Thr Ser
530 535 540

Leu Val Gly Tyr Leu Arg Val Gln Gly Val Val Val Pro Met Val His
545 550 555 560

Asn Gly Tyr Gly Phe Phe Tyr His Ile Arg Asp Asp Arg Cys
565 570

<210> 11984
<211> 640
<212> PRT
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<220>
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<223> /note="Payload ID: 2371"

<220>
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<223> /note="Gene Symbol: CROT"

<220>
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carnitine O-octanoyltransferase"

<220>
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<220>
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Gln Asp Ser Leu Pro Ser Leu Pro Val Pro Ser Leu Glu Glu Ser Leu

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Lys	Lys	Tyr	Leu	Glu	Ser	Val	Thr	Arg	Thr	Cys	Tyr	Gln	Ile	Arg	Gly			
		35					40					45						
Leu	Asp	Pro	Asp	Ala	Lys	Arg	Gly	Phe	Leu	Asp	Leu	Thr	Arg	Glu	Gly			
	50					55					60							
Ile	Gln	Val	Lys	Pro	Phe	Ala	Asn	Gln	Glu	Glu	Tyr	Lys	Lys	Thr	Glu			
65					70					75					80			
Glu	Ile	Val	Gln	Lys	Phe	Gln	Ser	Gly	Ile	Gly	Glu	Lys	Leu	His	Gln			
				85					90					95				
Lys	Leu	Leu	Glu	Arg	Ala	Lys	Gly	Lys	Arg	Asn	Trp	Leu	Glu	Glu	Trp			
			100					105					110					
Trp	Leu	Asn	Val	Ala	Tyr	Leu	Asp	Val	Arg	Ile	Pro	Ser	Gln	Leu	Asn			
		115					120					125						
Val	Asn	Phe	Ala	Gly	Pro	Ala	Ala	His	Phe	Glu	His	Tyr	Trp	Pro	Pro			
	130					135					140							
Lys	Glu	Gly	Thr	Gln	Leu	Glu	Arg	Gly	Ser	Ile	Thr	Leu	Trp	His	Asn			
145					150					155					160			
Leu	Asn	Tyr	Trp	Gln	Leu	Leu	Arg	Lys	Glu	Lys	Val	Pro	Val	His	Lys			
				165					170					175				
Val	Gly	Asn	Thr	Pro	Leu	Asp	Met	Asn	Gln	Phe	Arg	Met	Leu	Phe	Ser			
			180					185					190					
Thr	Cys	Lys	Val	Pro	Gly	Ile	Thr	Arg	Asp	Ser	Ile	Met	Asn	Tyr	Phe			
		195					200					205						
Arg	Thr	Glu	Ser	Glu	Gly	Arg	Ser	Pro	Asn	His	Ile	Val	Val	Leu	Cys			
	210					215					220							
Arg	Gly	Arg	Ala	Phe	Val	Phe	Asp	Val	Ile	His	Glu	Gly	Cys	Leu	Val			
225					230					235					240			
Thr	Pro	Pro	Glu	Leu	Leu	Arg	Gln	Leu	Thr	Tyr	Ile	His	Lys	Lys	Cys			
				245					250					255				

His	Ser	Glu	Pro	Asp	Gly	Pro	Gly	Ile	Ala	Ala	Leu	Thr	Ser	Glu	Glu		
			260					265					270				
Arg	Thr	Arg	Trp	Ala	Lys	Ala	Arg	Glu	Tyr	Leu	Ile	Gly	Leu	Asp	Pro		
		275					280					285					
Glu	Asn	Leu	Ala	Leu	Leu	Glu	Lys	Ile	Gln	Ser	Ser	Leu	Leu	Val	Tyr		
	290					295					300						
Ser	Met	Glu	Asp	Ser	Ser	Pro	His	Val	Thr	Pro	Glu	Asp	Tyr	Ser	Glu		
305					310					315					320		
Ile	Ile	Ala	Ala	Ile	Leu	Ile	Gly	Asp	Pro	Thr	Val	Arg	Trp	Gly	Asp		
				325					330					335			
Lys	Ser	Tyr	Asn	Leu	Ile	Ser	Phe	Ser	Asn	Gly	Val	Phe	Gly	Cys	Asn		
			340					345					350				
Cys	Asp	His	Ala	Pro	Phe	Asp	Ala	Met	Ile	Met	Val	Asn	Ile	Ser	Tyr		
		355					360					365					
Tyr	Val	Asp	Glu	Lys	Ile	Phe	Gln	Asn	Glu	Gly	Arg	Trp	Lys	Gly	Ser		
	370					375					380						
Glu	Lys	Val	Arg	Asp	Ile	Pro	Leu	Pro	Glu	Glu	Leu	Ile	Phe	Ile	Val		
385					390					395					400		
Asp	Glu	Lys	Val	Leu	Asn	Asp	Ile	Asn	Gln	Ala	Lys	Ala	Gln	Tyr	Leu		
				405					410					415			
Arg	Glu	Ala	Ser	Asp	Leu	Gln	Ile	Ala	Ala	Tyr	Ala	Phe	Thr	Ser	Phe		
			420					425					430				
Gly	Lys	Lys	Leu	Thr	Lys	Asn	Lys	Met	Leu	His	Pro	Asp	Thr	Phe	Ile		
		435					440					445					
Gln	Leu	Ala	Leu	Gln	Leu	Ala	Tyr	Tyr	Arg	Leu	His	Gly	His	Pro	Gly		
	450					455					460						
Cys	Cys	Tyr	Glu	Thr	Ala	Met	Thr	Arg	His	Phe	Tyr	His	Gly	Arg	Thr		
465					470					475					480		

Glu Thr Met Arg Ser Cys Thr Val Glu Ala Val Arg Trp Cys Gln Ser
485 490 495

Met Gln Asp Pro Ser Val Asn Leu Arg Glu Arg Gln Gln Lys Met Leu
500 505 510

Gln Ala Phe Ala Lys His Asn Lys Met Met Lys Asp Cys Ser Ala Gly
515 520 525

Lys Gly Phe Asp Arg His Leu Leu Gly Leu Leu Leu Ile Ala Lys Glu
530 535 540

Glu Gly Leu Pro Val Pro Glu Leu Phe Thr Asp Pro Leu Phe Ser Lys
545 550 555 560

Ser Gly Gly Gly Gly Asn Phe Val Leu Ser Thr Ser Leu Val Gly Tyr
565 570 575

Leu Arg Val Gln Gly Val Val Val Pro Met Val His Asn Gly Tyr Gly
580 585 590

Phe Phe Tyr His Ile Arg Asp Asp Arg Phe Val Val Ala Cys Ser Ala
595 600 605

Trp Lys Ser Cys Pro Glu Thr Asp Ala Glu Lys Leu Val Gln Leu Thr
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Phe Cys Ala Phe His Asp Met Ile Gln Leu Met Asn Ser Thr His Leu
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<223> /note="Gene Symbol: CPT1A"

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<223> /note="Gene Name:

carnitine palmitoyltransferase 1A (liver)"

<220>

<221> source

<223> /note="Uniprot ID: P50416"

<220>

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<223> /note="ENSP ID: ENSP00000265641"

<400> 11985

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Asp Gly Ile Asp Leu Arg Leu Ser His Glu Ala Leu Arg Gln Ile Tyr
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Leu Ser Gly Leu His Ser Trp Lys Lys Lys Phe Ile Arg Phe Lys Asn
35 40 45

Gly Ile Ile Thr Gly Val Tyr Pro Ala Ser Pro Ser Ser Trp Leu Ile
50 55 60

Val Val Val Gly Val Met Thr Thr Met Tyr Ala Lys Ile Asp Pro Ser
65 70 75 80

Leu Gly Ile Ile Ala Lys Ile Asn Arg Thr Leu Glu Thr Ala Asn Cys
85 90 95

Met Ser Ser Gln Thr Lys Asn Val Val Ser Gly Val Leu Phe Gly Thr
100 105 110

Gly Leu Trp Val Ala Leu Ile Val Thr Met Arg Tyr Ser Leu Lys Val
115 120 125

Leu Leu Ser Tyr His Gly Trp Met Phe Thr Glu His Gly Lys Met Ser
130 135 140

Arg Ala Thr Lys Ile Trp Met Gly Met Val Lys Ile Phe Ser Gly Arg
145 150 155 160

Lys Pro Met Leu Tyr Ser Phe Gln Thr Ser Leu Pro Arg Leu Pro Val
165 170 175

Pro Ala Val Lys Asp Thr Val Asn Arg Tyr Leu Gln Ser Val Arg Pro
180 185 190

Leu	Met	Lys	Glu	Glu	Asp	Phe	Lys	Arg	Met	Thr	Ala	Leu	Ala	Gln	Asp	
		195					200					205				
Phe	Ala	Val	Gly	Leu	Gly	Pro	Arg	Leu	Gln	Trp	Tyr	Leu	Lys	Leu	Lys	
	210					215					220					
Ser	Trp	Trp	Ala	Thr	Asn	Tyr	Val	Ser	Asp	Trp	Trp	Glu	Glu	Tyr	Ile	
225					230					235					240	
Tyr	Leu	Arg	Gly	Arg	Gly	Pro	Leu	Met	Val	Asn	Ser	Asn	Tyr	Tyr	Ala	
				245					250						255	
Met	Asp	Leu	Leu	Tyr	Ile	Leu	Pro	Thr	His	Ile	Gln	Ala	Ala	Arg	Ala	
			260					265					270			
Gly	Asn	Ala	Ile	His	Ala	Ile	Leu	Leu	Tyr	Arg	Arg	Lys	Leu	Asp	Arg	
		275					280					285				
Glu	Glu	Ile	Lys	Pro	Ile	Arg	Leu	Leu	Gly	Ser	Thr	Ile	Pro	Leu	Cys	
	290					295					300					
Ser	Ala	Gln	Trp	Glu	Arg	Met	Phe	Asn	Thr	Ser	Arg	Ile	Pro	Gly	Glu	
305					310					315					320	
Glu	Thr	Asp	Thr	Ile	Gln	His	Met	Arg	Asp	Ser	Lys	His	Ile	Val	Val	
				325					330					335		
Tyr	His	Arg	Gly	Arg	Tyr	Phe	Lys	Val	Trp	Leu	Tyr	His	Asp	Gly	Arg	
			340					345					350			
Leu	Leu	Lys	Pro	Arg	Glu	Met	Glu	Gln	Gln	Met	Gln	Arg	Ile	Leu	Asp	
		355					360					365				
Asn	Thr	Ser	Glu	Pro	Gln	Pro	Gly	Glu	Ala	Arg	Leu	Ala	Ala	Leu	Thr	
	370					375					380					
Ala	Gly	Asp	Arg	Val	Pro	Trp	Ala	Arg	Cys	Arg	Gln	Ala	Tyr	Phe	Gly	
385					390				395						400	
Arg	Gly	Lys	Asn	Lys	Gln	Ser	Leu	Asp	Ala	Val	Glu	Lys	Ala	Ala	Phe	
				405					410					415		

Phe	Val	Thr	Leu	Asp	Glu	Thr	Glu	Glu	Gly	Tyr	Arg	Ser	Glu	Asp	Pro	
			420					425					430			
Asp	Thr	Ser	Met	Asp	Ser	Tyr	Ala	Lys	Ser	Leu	Leu	His	Gly	Arg	Cys	
		435					440					445				
Tyr	Asp	Arg	Trp	Phe	Asp	Lys	Ser	Phe	Thr	Phe	Val	Val	Phe	Lys	Asn	
	450					455					460					
Gly	Lys	Met	Gly	Leu	Asn	Ala	Glu	His	Ser	Trp	Ala	Asp	Ala	Pro	Ile	
465					470					475					480	
Val	Ala	His	Leu	Trp	Glu	Tyr	Val	Met	Ser	Ile	Asp	Ser	Leu	Gln	Leu	
				485					490					495		
Gly	Tyr	Ala	Glu	Asp	Gly	His	Cys	Lys	Gly	Asp	Ile	Asn	Pro	Asn	Ile	
			500					505					510			
Pro	Tyr	Pro	Thr	Arg	Leu	Gln	Trp	Asp	Ile	Pro	Gly	Glu	Cys	Gln	Glu	
		515					520					525				
Val	Ile	Glu	Thr	Ser	Leu	Asn	Thr	Ala	Asn	Leu	Leu	Ala	Asn	Asp	Val	
	530					535					540					
Asp	Phe	His	Ser	Phe	Pro	Phe	Val	Ala	Phe	Gly	Lys	Gly	Ile	Ile	Lys	
545					550					555					560	
Lys	Cys	Arg	Thr	Ser	Pro	Asp	Ala	Phe	Val	Gln	Leu	Ala	Leu	Gln	Leu	
				565					570					575		
Ala	His	Tyr	Lys	Asp	Met	Gly	Lys	Phe	Cys	Leu	Thr	Tyr	Glu	Ala	Ser	
			580					585					590			
Met	Thr	Arg	Leu	Phe	Arg	Glu	Gly	Arg	Thr	Glu	Thr	Val	Arg	Ser	Cys	
		595					600					605				
Thr	Thr	Glu	Ser	Cys	Asp	Phe	Val	Arg	Ala	Met	Val	Asp	Pro	Ala	Gln	
	610					615					620					
Thr	Val	Glu	Gln	Arg	Leu	Lys	Leu	Phe	Lys	Leu	Ala	Ser	Glu	Lys	His	
625					630					635					640	

Gln His Met Tyr Arg Leu Ala Met Thr Gly Ser Gly Ile Asp Arg His
645 650 655

Leu Phe Cys Leu Tyr Val Val Ser Lys Tyr Leu Ala Val Glu Ser Pro
660 665 670

Phe Leu Lys Glu Val Leu Ser Glu Pro Trp Arg Leu Ser Thr Ser Gln
675 680 685

Thr Pro Gln Gln Gln Val Glu Leu Phe Asp Leu Glu Asn Asn Pro Glu
690 695 700

Tyr Val Ser Ser Gly Gly Gly Phe Gly Pro Val Ala Asp Asp Gly Tyr
705 710 715 720

Gly Val Ser Tyr Ile Leu Val Gly Glu Asn Leu Ile Asn Phe His Ile
725 730 735

Ser Ser Lys Phe Ser Cys Pro Glu Thr Asp Ser His Arg Phe Gly Arg
740 745 750

His Leu Lys Glu Ala Met Thr Asp Ile Ile Thr Leu Phe Gly Leu Ser
755 760 765

Ser Asn Ser Lys Lys
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<210> 11986
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<220>
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carnitine palmitoyltransferase 1A (liver)"

<220>
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Leu Ser Gly Leu His Ser Trp Lys Lys Lys Phe Ile Arg Phe Lys Asn
35 40 45

Gly Ile Ile Thr Gly Val Tyr Pro Ala Ser Pro Ser Ser Trp Leu Ile
50 55 60

Val Val Val Gly Val Met Thr Thr Met Tyr Ala Lys Ile Asp Pro Ser
65 70 75 80

Leu Gly Ile Ile Ala Lys Ile Asn Arg Thr Leu Glu Thr Ala Asn Cys
85 90 95

Met Ser Ser Gln Thr Lys Asn Val Val Ser Gly Val Leu Phe Gly Thr
100 105 110

Gly Leu Trp Val Ala Leu Ile Val Thr Met Arg Tyr Ser Leu Lys Val
115 120 125

Leu Leu Ser Tyr His Gly Trp Met Phe Thr Glu His Gly Lys Met Ser
130 135 140

Arg Ala Thr Lys Ile Trp Met Gly Met Val Lys Ile Phe Ser Gly Arg
145 150 155 160

Lys Pro Met Leu Tyr Ser Phe Gln Thr Ser Leu Pro Arg Leu Pro Val
165 170 175

Pro Ala Val Lys Asp Thr Val Asn Arg Tyr Leu Gln Ser Val Arg Pro
180 185 190

Leu Met Lys Glu Glu Asp Phe Lys Arg Met Thr Ala Leu Ala Gln Asp
195 200 205

Phe	Ala	Val	Gly	Leu	Gly	Pro	Arg	Leu	Gln	Trp	Tyr	Leu	Lys	Leu	Lys			
	210					215					220							
Ser	Trp	Trp	Ala	Thr	Asn	Tyr	Val	Ser	Asp	Trp	Trp	Glu	Glu	Tyr	Ile			
225					230					235					240			
Tyr	Leu	Arg	Gly	Arg	Gly	Pro	Leu	Met	Val	Asn	Ser	Asn	Tyr	Tyr	Ala			
				245					250					255				
Met	Asp	Leu	Leu	Tyr	Ile	Leu	Pro	Thr	His	Ile	Gln	Ala	Ala	Arg	Ala			
			260					265					270					
Gly	Asn	Ala	Ile	His	Ala	Ile	Leu	Leu	Tyr	Arg	Arg	Lys	Leu	Asp	Arg			
		275					280					285						
Glu	Glu	Ile	Lys	Pro	Ile	Arg	Leu	Leu	Gly	Ser	Thr	Ile	Pro	Leu	Cys			
	290					295					300							
Ser	Ala	Gln	Trp	Glu	Arg	Met	Phe	Asn	Thr	Ser	Arg	Ile	Pro	Gly	Glu			
305					310					315					320			
Glu	Thr	Asp	Thr	Ile	Gln	His	Met	Arg	Asp	Ser	Lys	His	Ile	Val	Val			
				325					330					335				
Tyr	His	Arg	Gly	Arg	Tyr	Phe	Lys	Val	Trp	Leu	Tyr	His	Asp	Gly	Arg			
			340					345					350					
Leu	Leu	Lys	Pro	Arg	Glu	Met	Glu	Gln	Gln	Met	Gln	Arg	Ile	Leu	Asp			
		355					360					365						
Asn	Thr	Ser	Glu	Pro	Gln	Pro	Gly	Glu	Ala	Arg	Leu	Ala	Ala	Leu	Thr			
	370					375					380							
Ala	Gly	Asp	Arg	Val	Pro	Trp	Ala	Arg	Cys	Arg	Gln	Ala	Tyr	Phe	Gly			
385					390					395					400			
Arg	Gly	Lys	Asn	Lys	Gln	Ser	Leu	Asp	Ala	Val	Glu	Lys	Ala	Ala	Phe			
			405						410					415				
Phe	Val	Thr	Leu	Asp	Glu	Thr	Glu	Glu	Gly	Tyr	Arg	Ser	Glu	Asp	Pro			
			420					425					430					

Asp	Thr	Ser	Met	Asp	Ser	Tyr	Ala	Lys	Ser	Leu	Leu	His	Gly	Arg	Cys	
		435					440					445				
Tyr	Asp	Arg	Trp	Phe	Asp	Lys	Ser	Phe	Thr	Phe	Val	Val	Phe	Lys	Asn	
	450					455					460					
Gly	Lys	Met	Gly	Leu	Asn	Ala	Glu	His	Ser	Trp	Ala	Asp	Ala	Pro	Ile	
465					470					475					480	
Val	Ala	His	Leu	Trp	Glu	Tyr	Val	Met	Ser	Ile	Asp	Ser	Leu	Gln	Leu	
				485					490					495		
Gly	Tyr	Ala	Glu	Asp	Gly	His	Cys	Lys	Gly	Asp	Ile	Asn	Pro	Asn	Ile	
			500					505					510			
Pro	Tyr	Pro	Thr	Arg	Leu	Gln	Trp	Asp	Ile	Pro	Gly	Glu	Cys	Gln	Glu	
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Val	Ile	Glu	Thr	Ser	Leu	Asn	Thr	Ala	Asn	Leu	Leu	Ala	Asn	Asp	Val	
	530					535					540					
Asp	Phe	His	Ser	Phe	Pro	Phe	Val	Ala	Phe	Gly	Lys	Gly	Ile	Ile	Lys	
545					550					555					560	
Lys	Cys	Arg	Thr	Ser	Pro	Asp	Ala	Phe	Val	Gln	Leu	Ala	Leu	Gln	Leu	
				565					570					575		
Ala	His	Tyr	Lys	Asp	Met	Gly	Lys	Phe	Cys	Leu	Thr	Tyr	Glu	Ala	Ser	
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Met	Thr	Arg	Leu	Phe	Arg	Glu	Gly	Arg	Thr	Glu	Thr	Val	Arg	Ser	Cys	
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Thr	Thr	Glu	Ser	Cys	Asp	Phe	Val	Arg	Ala	Met	Val	Asp	Pro	Ala	Gln	
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Thr	Val	Glu	Gln	Arg	Leu	Lys	Leu	Phe	Lys	Leu	Ala	Ser	Glu	Lys	His	
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Gln	His	Met	Tyr	Arg	Leu	Ala	Met	Thr	Gly	Ser	Gly	Ile	Asp	Arg	His	
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Leu	Phe	Cys	Leu	Tyr	Val	Val	Ser	Lys	Tyr	Leu	Ala	Val	Glu	Ser	Pro	

660 665 670
 Phe Leu Lys Glu Val Leu Ser Glu Pro Trp Arg Leu Ser Thr Ser Gln
 675 680 685
 Thr Pro Gln Gln Gln Val Glu Leu Phe Asp Leu Glu Asn Asn Pro Glu
 690 695 700
 Tyr Val Ser Ser Gly Gly Gly Phe Gly Pro Val Ala Asp Asp Gly Tyr
 705 710 715 720
 Gly Val Ser Tyr Ile Leu Val Gly Glu Asn Leu Ile Asn Phe His Ile
 725 730 735
 Ser Ser Lys Phe Ser Cys Pro Glu Thr Gly Ile Ile Ser Gln Gly Pro
 740 745 750
 Ser Ser Asp Thr
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 <223> /note="Gene Name:
 carnitine palmitoyltransferase 1A (liver)"

<220>
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 <223> /note="Uniprot ID: P50416"

<220>
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<400> 11987
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			20					25					30					
Leu	Ser	Gly	Leu	His	Ser	Trp	Lys	Lys	Lys	Phe	Ile	Arg	Phe	Lys	Asn			
		35					40					45						
Gly	Ile	Ile	Thr	Gly	Val	Tyr	Pro	Ala	Ser	Pro	Ser	Ser	Trp	Leu	Ile			
	50					55					60							
Val	Val	Val	Gly	Val	Met	Thr	Thr	Met	Tyr	Ala	Lys	Ile	Asp	Pro	Ser			
	65				70					75					80			
Leu	Gly	Ile	Ile	Ala	Lys	Ile	Asn	Arg	Thr	Leu	Glu	Thr	Ala	Asn	Cys			
				85					90					95				
Met	Ser	Ser	Gln	Thr	Lys	Asn	Val	Val	Ser	Gly	Val	Leu	Phe	Gly	Thr			
			100					105					110					
Gly	Leu	Trp	Val	Ala	Leu	Ile	Val	Thr	Met	Arg	Tyr	Ser	Leu	Lys	Val			
		115					120					125						
Leu	Leu	Ser	Tyr	His	Gly	Trp	Met	Phe	Thr	Glu	His	Gly	Lys	Met	Ser			
	130					135					140							
Arg	Ala	Thr	Lys	Ile	Trp	Met	Gly	Met	Val	Lys	Ile	Phe	Ser	Gly	Arg			
	145				150					155					160			
Lys	Pro	Met	Leu	Tyr	Ser	Phe	Gln	Thr	Ser	Leu	Pro	Arg	Leu	Pro	Val			
				165					170					175				
Pro	Ala	Val	Lys	Asp	Thr	Val	Asn	Arg	Tyr	Leu	Gln	Ser	Val	Arg	Pro			
			180					185					190					
Leu	Met	Lys	Glu	Glu	Asp	Phe	Lys	Arg	Met	Thr	Ala	Leu	Ala	Gln	Asp			
		195					200					205						
Phe	Ala	Val	Gly	Leu	Gly	Pro	Arg	Leu	Gln	Trp	Tyr	Leu	Lys	Leu	Lys			
	210					215					220							
Ser	Trp	Trp	Ala	Thr	Asn	Tyr	Val	Ser	Asp	Trp	Trp	Glu	Glu	Tyr	Ile			
	225				230					235					240			

Tyr Leu Arg Gly Arg Gly Pro Leu Met Val Asn Ser Asn Tyr Tyr Ala
245 250 255

Met Asp Leu Leu Tyr Ile Leu Pro Thr His Ile Gln Ala Ala Arg Ala
260 265 270

Gly Asn Ala Ile His Ala Ile Leu Leu Tyr Arg Arg Lys Leu Asp Arg
275 280 285

Glu Glu Ile Lys Pro Ile Arg Leu Leu Gly Ser Thr Ile Pro Leu Cys
290 295 300

Ser Ala Gln Trp Glu Arg Met Phe Asn Thr Ser Arg Ile Pro Gly Glu
305 310 315 320

Glu Thr Asp Thr Ile Gln His Met Arg Asp Ser Lys His Ile Val Val
325 330 335

Tyr His Arg Gly Arg Tyr Phe Lys Val Trp Leu Tyr His Asp Gly Arg
340 345 350

Leu Leu Lys Pro Arg Glu Met Glu Gln Gln Met Gln Arg Ile Leu Asp
355 360 365

Asn Thr Ser Glu Pro Gln Pro Gly Glu Ala Arg Leu Ala Ala Leu Thr
370 375 380

Ala Gly Asp Arg Val Pro Trp Ala Arg Cys Arg Gln Ala Tyr Phe Gly
385 390 395 400

Arg Gly Lys Asn Lys Gln Ser Leu Asp Ala Val Glu Lys Ala Ala Phe
405 410 415

Phe Val Thr Leu Asp Glu Thr Glu Glu Gly Tyr Arg Ser Glu Asp Pro
420 425 430

Asp Thr Ser Met Asp Ser Tyr Ala Lys Ser Leu Leu His Gly Arg Cys
435 440 445

Tyr Asp Arg Trp Phe Asp Lys Ser Phe Thr Phe Val Val Phe Lys Asn
450 455 460

Gly Lys Met Gly Leu Asn Ala Glu His Ser Trp Ala Asp Ala Pro Ile

465						470											475												480
Val	Ala	His	Leu	Trp	Glu	Tyr	Val	Met	Ser	Ile	Asp	Ser	Leu	Gln	Leu														
				485					490					495															
Gly	Tyr	Ala	Glu	Asp	Gly	His	Cys	Lys	Gly	Asp	Ile	Asn	Pro	Asn	Ile														
			500					505					510																
Pro	Tyr	Pro	Thr	Arg	Leu	Gln	Trp	Asp	Ile	Pro	Gly	Glu	Cys	Gln	Glu														
		515					520					525																	
Val	Ile	Glu	Thr	Ser	Leu	Asn	Thr	Ala	Asn	Leu	Leu	Ala	Asn	Asp	Val														
	530					535						540																	
Asp	Phe	His	Ser	Phe	Pro	Phe	Val	Ala	Phe	Gly	Lys	Gly	Ile	Ile	Lys														
545					550					555					560														
Lys	Cys	Arg	Thr	Ser	Pro	Asp	Ala	Phe	Val	Gln	Leu	Ala	Leu	Gln	Leu														
				565					570					575															
Ala	His	Tyr	Lys	Asp	Met	Gly	Lys	Phe	Cys	Leu	Thr	Tyr	Glu	Ala	Ser														
			580					585					590																
Met	Thr	Arg	Leu	Phe	Arg	Glu	Gly	Arg	Thr	Glu	Thr	Val	Arg	Ser	Cys														
		595					600					605																	
Thr	Thr	Glu	Ser	Cys	Asp	Phe	Val	Arg	Ala	Met	Val	Asp	Pro	Ala	Gln														
		610				615					620																		
Thr	Val	Glu	Gln	Arg	Leu	Lys	Leu	Phe	Lys	Leu	Ala	Ser	Glu	Lys	His														
625					630					635					640														
Gln	His	Met	Tyr	Arg	Leu	Ala	Met	Thr	Gly	Ser	Gly	Ile	Asp	Arg	His														
				645					650					655															
Leu	Phe	Cys	Leu	Tyr	Val	Val	Ser	Lys	Tyr	Leu	Ala	Val	Glu	Ser	Pro														
			660					665					670																
Phe	Leu	Lys	Glu	Val	Leu	Ser	Glu	Pro	Trp	Arg	Leu	Ser	Thr	Ser	Gln														
		675					680					685																	
Thr	Pro	Gln	Gln	Gln	Val	Glu	Leu	Phe	Asp	Leu	Glu	Asn	Asn	Pro	Glu														
		690				695					700																		

Tyr Val Ser Ser Gly Gly Gly Phe Gly Pro Val Ala Asp Asp Gly Tyr
 705 710 715 720

Gly Val Ser Tyr Ile Leu Val Gly Glu Asn Leu Ile Asn Phe His Ile
 725 730 735

Ser Ser Lys Phe Ser Cys Pro Glu Thr Gly Ile Ile Ser Gln Gly Pro
 740 745 750

Ser Ser Asp Thr
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<210> 11988
 <211> 773
 <212> PRT
 <213> Homo sapiens

<220>
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 <223> /note="Payload ID: 2372"

<220>
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 <223> /note="Gene Symbol: CPT1A"

<220>
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 <223> /note="Gene Name:
 carnitine palmitoyltransferase 1A (liver)"

<220>
 <221> source
 <223> /note="Uniprot ID: P50416"

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Asp Gly Ile Asp Leu Arg Leu Ser His Glu Ala Leu Arg Gln Ile Tyr
 20 25 30

Leu Ser Gly Leu His Ser Trp Lys Lys Lys Phe Ile Arg Phe Lys Asn
 35 40 45

Gly	Ile	Ile	Thr	Gly	Val	Tyr	Pro	Ala	Ser	Pro	Ser	Ser	Trp	Leu	Ile	50	55	60
Val	Val	Val	Gly	Val	Met	Thr	Thr	Met	Tyr	Ala	Lys	Ile	Asp	Pro	Ser	65	70	75
Leu	Gly	Ile	Ile	Ala	Lys	Ile	Asn	Arg	Thr	Leu	Glu	Thr	Ala	Asn	Cys	85	90	95
Met	Ser	Ser	Gln	Thr	Lys	Asn	Val	Val	Ser	Gly	Val	Leu	Phe	Gly	Thr	100	105	110
Gly	Leu	Trp	Val	Ala	Leu	Ile	Val	Thr	Met	Arg	Tyr	Ser	Leu	Lys	Val	115	120	125
Leu	Leu	Ser	Tyr	His	Gly	Trp	Met	Phe	Thr	Glu	His	Gly	Lys	Met	Ser	130	135	140
Arg	Ala	Thr	Lys	Ile	Trp	Met	Gly	Met	Val	Lys	Ile	Phe	Ser	Gly	Arg	145	150	155
Lys	Pro	Met	Leu	Tyr	Ser	Phe	Gln	Thr	Ser	Leu	Pro	Arg	Leu	Pro	Val	165	170	175
Pro	Ala	Val	Lys	Asp	Thr	Val	Asn	Arg	Tyr	Leu	Gln	Ser	Val	Arg	Pro	180	185	190
Leu	Met	Lys	Glu	Glu	Asp	Phe	Lys	Arg	Met	Thr	Ala	Leu	Ala	Gln	Asp	195	200	205
Phe	Ala	Val	Gly	Leu	Gly	Pro	Arg	Leu	Gln	Trp	Tyr	Leu	Lys	Leu	Lys	210	215	220
Ser	Trp	Trp	Ala	Thr	Asn	Tyr	Val	Ser	Asp	Trp	Trp	Glu	Glu	Tyr	Ile	225	230	235
Tyr	Leu	Arg	Gly	Arg	Gly	Pro	Leu	Met	Val	Asn	Ser	Asn	Tyr	Tyr	Ala	245	250	255
Met	Asp	Leu	Leu	Tyr	Ile	Leu	Pro	Thr	His	Ile	Gln	Ala	Ala	Arg	Ala	260	265	270
Gly	Asn	Ala	Ile	His	Ala	Ile	Leu	Leu	Tyr	Arg	Arg	Lys	Leu	Asp	Arg			

275					280					285					
Glu	Glu	Ile	Lys	Pro	Ile	Arg	Leu	Leu	Gly	Ser	Thr	Ile	Pro	Leu	Cys
290					295					300					
Ser	Ala	Gln	Trp	Glu	Arg	Met	Phe	Asn	Thr	Ser	Arg	Ile	Pro	Gly	Glu
305					310					315					320
Glu	Thr	Asp	Thr	Ile	Gln	His	Met	Arg	Asp	Ser	Lys	His	Ile	Val	Val
				325					330					335	
Tyr	His	Arg	Gly	Arg	Tyr	Phe	Lys	Val	Trp	Leu	Tyr	His	Asp	Gly	Arg
			340					345					350		
Leu	Leu	Lys	Pro	Arg	Glu	Met	Glu	Gln	Gln	Met	Gln	Arg	Ile	Leu	Asp
		355					360					365			
Asn	Thr	Ser	Glu	Pro	Gln	Pro	Gly	Glu	Ala	Arg	Leu	Ala	Ala	Leu	Thr
	370					375					380				
Ala	Gly	Asp	Arg	Val	Pro	Trp	Ala	Arg	Cys	Arg	Gln	Ala	Tyr	Phe	Gly
385					390					395					400
Arg	Gly	Lys	Asn	Lys	Gln	Ser	Leu	Asp	Ala	Val	Glu	Lys	Ala	Ala	Phe
				405					410					415	
Phe	Val	Thr	Leu	Asp	Glu	Thr	Glu	Glu	Gly	Tyr	Arg	Ser	Glu	Asp	Pro
			420				425						430		
Asp	Thr	Ser	Met	Asp	Ser	Tyr	Ala	Lys	Ser	Leu	Leu	His	Gly	Arg	Cys
		435					440					445			
Tyr	Asp	Arg	Trp	Phe	Asp	Lys	Ser	Phe	Thr	Phe	Val	Val	Phe	Lys	Asn
	450					455					460				
Gly	Lys	Met	Gly	Leu	Asn	Ala	Glu	His	Ser	Trp	Ala	Asp	Ala	Pro	Ile
465					470					475					480
Val	Ala	His	Leu	Trp	Glu	Tyr	Val	Met	Ser	Ile	Asp	Ser	Leu	Gln	Leu
				485					490					495	
Gly	Tyr	Ala	Glu	Asp	Gly	His	Cys	Lys	Gly	Asp	Ile	Asn	Pro	Asn	Ile
			500					505					510		

Ser Ser Lys Phe Ser Cys Pro Glu Thr Asp Ser His Arg Phe Gly Arg
740 745 750

His Leu Lys Glu Ala Met Thr Asp Ile Ile Thr Leu Phe Gly Leu Ser
755 760 765

Ser Asn Ser Lys Lys
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<210> 11989

<211> 78

<212> PRT

<213> Homo sapiens

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<223> /note="Payload ID: 2372"

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<223> /note="Gene Symbol: CPT1A"

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<223> /note="Gene Name:
carnitine palmitoyltransferase 1A (liver)"

<220>

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<223> /note="ENSP ID: ENSP00000454332"

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Met Val Asn Ser Asn Tyr Tyr Ala Met Asp Leu Leu Tyr Ile Leu Pro
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Thr His Ile Gln Ala Ala Arg Ala Gly Asn Ala Ile His Ala Ile Leu
20 25 30

Leu Tyr Arg Arg Lys Leu Asp Arg Glu Glu Ile Lys Pro Ile Arg Leu
35 40 45

Leu Gly Ser Thr Ile Pro Leu Cys Ser Ala Gln Trp Glu Arg Met Phe
50 55 60

Asn Thr Ser Arg Ile Pro Gly Glu Glu Thr Asp Asp Leu Pro
65 70 75

<210> 11990

26640

<211> 117
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carnitine palmitoyltransferase 1A (liver)"

<220>
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Met Ala Glu Ala His Gln Ala Val Ala Phe Gln Phe Thr Val Thr Pro
1 5 10 15

Asp Gly Ile Asp Leu Arg Leu Ser His Glu Ala Leu Arg Gln Ile Tyr
20 25 30

Leu Ser Gly Leu His Ser Trp Lys Lys Lys Phe Ile Arg Phe Lys Asn
35 40 45

Gly Ile Ile Thr Gly Val Tyr Pro Ala Ser Pro Ser Ser Trp Leu Ile
50 55 60

Val Val Val Gly Val Met Thr Thr Met Tyr Ala Lys Ile Asp Pro Ser
65 70 75 80

Leu Gly Ile Ile Ala Lys Ile Asn Arg Thr Leu Glu Thr Ala Asn Cys
85 90 95

Met Ser Ser Gln Thr Lys Asn Val Val Ser Gly Val Leu Phe Gly Thr
100 105 110

Gly Leu Trp Val Ala
115

<210> 11991
<211> 93
<212> PRT

<213> Homo sapiens

<220>

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<223> /note="Gene Name:
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<220>

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<223> /note="ENSP ID: ENSP00000457663"

<400> 11991

Met Ala Glu Ala His Gln Ala Val Ala Phe Gln Phe Thr Val Thr Pro
1 5 10 15

Asp Gly Ile Asp Leu Arg Leu Ser His Glu Ala Leu Arg Gln Ile Tyr
20 25 30

Leu Ser Gly Leu His Ser Trp Lys Lys Lys Phe Ile Arg Phe Lys Asn
35 40 45

Gly Ile Ile Thr Gly Val Tyr Pro Ala Ser Pro Ser Ser Trp Leu Ile
50 55 60

Val Val Val Gly Val Met Thr Thr Met Tyr Ala Lys Ile Asp Pro Ser
65 70 75 80

Leu Gly Ile Ile Ala Lys Ile Asn Arg Thr Leu Glu Thr
85 90

<210> 11992

<211> 134

<212> PRT

<213> Homo sapiens

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<223> /note="Gene Symbol: CPT1A"

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<400> 11992
Met Ala Glu Ala His Gln Ala Val Ala Phe Gln Phe Thr Val Thr Pro
1          5          10          15

Asp Gly Ile Asp Leu Arg Leu Ser His Glu Ala Leu Arg Gln Ile Tyr
20          25          30

Leu Ser Gly Leu His Ser Trp Lys Lys Lys Phe Ile Arg Phe Lys Asn
35          40          45

Gly Ile Ile Thr Gly Val Tyr Pro Ala Ser Pro Ser Ser Trp Leu Ile
50          55          60

Val Val Val Gly Val Met Thr Thr Met Tyr Ala Lys Ile Asp Pro Ser
65          70          75          80

Leu Gly Ile Ile Ala Lys Ile Asn Arg Thr Leu Glu Thr Ala Asn Cys
85          90          95

Met Ser Ser Gln Thr Lys Asn Val Val Ser Gly Val Leu Phe Gly Thr
100         105         110

Gly Leu Trp Val Ala Leu Ile Val Thr Met Arg Tyr Ser Leu Lys Val
115         120         125

Leu Leu Ser Tyr His Gly
130

<210> 11993
<211> 772
<212> PRT
<213> Homo sapiens

<220>
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<223> /note="Payload ID: 2373"

<220>
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<223> /note="Gene Symbol: CPT1B"

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<223> /note="Gene Name:
carnitine palmitoyltransferase 1B (muscle)"

<220>

<221> source

<223> /note="Uniprot ID: Q92523"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000312189"

<400> 11993

Met Ala Glu Ala His Gln Ala Val Ala Phe Gln Phe Thr Val Thr Pro
1 5 10 15

Asp Gly Val Asp Phe Arg Leu Ser Arg Glu Ala Leu Lys His Val Tyr
20 25 30

Leu Ser Gly Ile Asn Ser Trp Lys Lys Arg Leu Ile Arg Ile Lys Asn
35 40 45

Gly Ile Leu Arg Gly Val Tyr Pro Gly Ser Pro Thr Ser Trp Leu Val
50 55 60

Val Ile Met Ala Thr Val Gly Ser Ser Phe Cys Asn Val Asp Ile Ser
65 70 75 80

Leu Gly Leu Val Ser Cys Ile Gln Arg Cys Leu Pro Gln Gly Cys Gly
85 90 95

Pro Tyr Gln Thr Pro Gln Thr Arg Ala Leu Leu Ser Met Ala Ile Phe
100 105 110

Ser Thr Gly Val Trp Val Thr Gly Ile Phe Phe Phe Arg Gln Thr Leu
115 120 125

Lys Leu Leu Leu Cys Tyr His Gly Trp Met Phe Glu Met His Gly Lys
130 135 140

Thr Ser Asn Leu Thr Arg Ile Trp Ala Met Cys Ile Arg Leu Leu Ser
145 150 155 160

Ser Arg His Pro Met Leu Tyr Ser Phe Gln Thr Ser Leu Pro Lys Leu

165								170				175			
Pro	Val	Pro	Arg	Val	Ser	Ala	Thr	Ile	Gln	Arg	Tyr	Leu	Glu	Ser	Val
			180					185					190		
Arg	Pro	Leu	Leu	Asp	Asp	Glu	Glu	Tyr	Tyr	Arg	Met	Glu	Leu	Leu	Ala
		195					200					205			
Lys	Glu	Phe	Gln	Asp	Lys	Thr	Ala	Pro	Arg	Leu	Gln	Lys	Tyr	Leu	Val
	210					215					220				
Leu	Lys	Ser	Trp	Trp	Ala	Ser	Asn	Tyr	Val	Ser	Asp	Trp	Trp	Glu	Glu
225					230					235					240
Tyr	Ile	Tyr	Leu	Arg	Gly	Arg	Ser	Pro	Leu	Met	Val	Asn	Ser	Asn	Tyr
				245					250					255	
Tyr	Val	Met	Asp	Leu	Val	Leu	Ile	Lys	Asn	Thr	Asp	Val	Gln	Ala	Ala
			260					265					270		
Arg	Leu	Gly	Asn	Ile	Ile	His	Ala	Met	Ile	Met	Tyr	Arg	Arg	Lys	Leu
		275					280					285			
Asp	Arg	Glu	Glu	Ile	Lys	Pro	Val	Met	Ala	Leu	Gly	Ile	Val	Pro	Met
	290					295					300				
Cys	Ser	Tyr	Gln	Met	Glu	Arg	Met	Phe	Asn	Thr	Thr	Arg	Ile	Pro	Gly
305					310					315					320
Lys	Asp	Thr	Asp	Val	Leu	Gln	His	Leu	Ser	Asp	Ser	Arg	His	Val	Ala
				325					330					335	
Val	Tyr	His	Lys	Gly	Arg	Phe	Phe	Lys	Leu	Trp	Leu	Tyr	Glu	Gly	Ala
			340					345					350		
Arg	Leu	Leu	Lys	Pro	Gln	Asp	Leu	Glu	Met	Gln	Phe	Gln	Arg	Ile	Leu
		355					360					365			
Asp	Asp	Pro	Ser	Pro	Pro	Gln	Pro	Gly	Glu	Glu	Lys	Leu	Ala	Ala	Leu
	370					375					380				
Thr	Ala	Gly	Gly	Arg	Val	Glu	Trp	Ala	Gln	Ala	Arg	Gln	Ala	Phe	Phe
385					390					395					400

Ser	Ser	Gly	Lys	Asn	Lys	Ala	Ala	Leu	Glu	Ala	Ile	Glu	Arg	Ala	Ala		
				405					410					415			
Phe	Phe	Val	Ala	Leu	Asp	Glu	Glu	Ser	Tyr	Ser	Tyr	Asp	Pro	Glu	Asp		
			420					425					430				
Glu	Ala	Ser	Leu	Ser	Leu	Tyr	Gly	Lys	Ala	Leu	Leu	His	Gly	Asn	Cys		
		435					440					445					
Tyr	Asn	Arg	Trp	Phe	Asp	Lys	Ser	Phe	Thr	Leu	Ile	Ser	Phe	Lys	Asn		
	450					455					460						
Gly	Gln	Leu	Gly	Leu	Asn	Ala	Glu	His	Ala	Trp	Ala	Asp	Ala	Pro	Ile		
465					470					475					480		
Ile	Gly	His	Leu	Trp	Glu	Phe	Val	Leu	Gly	Thr	Asp	Ser	Phe	His	Leu		
				485					490					495			
Gly	Tyr	Thr	Glu	Thr	Gly	His	Cys	Leu	Gly	Lys	Pro	Asn	Pro	Ala	Leu		
			500					505					510				
Ala	Pro	Pro	Thr	Arg	Leu	Gln	Trp	Asp	Ile	Pro	Lys	Gln	Cys	Gln	Ala		
			515				520					525					
Val	Ile	Glu	Ser	Ser	Tyr	Gln	Val	Ala	Lys	Ala	Leu	Ala	Asp	Asp	Val		
	530					535					540						
Glu	Leu	Tyr	Cys	Phe	Gln	Phe	Leu	Pro	Phe	Gly	Lys	Gly	Leu	Ile	Lys		
545					550					555					560		
Lys	Cys	Arg	Thr	Ser	Pro	Asp	Ala	Phe	Val	Gln	Ile	Ala	Leu	Gln	Leu		
				565					570					575			
Ala	His	Phe	Arg	Asp	Arg	Gly	Lys	Phe	Cys	Leu	Thr	Tyr	Glu	Ala	Ser		
			580					585					590				
Met	Thr	Arg	Met	Phe	Arg	Glu	Gly	Arg	Thr	Glu	Thr	Val	Arg	Ser	Cys		
		595					600					605					
Thr	Ser	Glu	Ser	Thr	Ala	Phe	Val	Gln	Ala	Met	Met	Glu	Gly	Ser	His		
	610					615					620						

Thr Lys Ala Asp Leu Arg Asp Leu Phe Gln Lys Ala Ala Lys Lys His
625 630 635 640

Gln Asn Met Tyr Arg Leu Ala Met Thr Gly Ala Gly Ile Asp Arg His
645 650 655

Leu Phe Cys Leu Tyr Leu Val Ser Lys Tyr Leu Gly Val Ser Ser Pro
660 665 670

Phe Leu Ala Glu Val Leu Ser Glu Pro Trp Arg Leu Ser Thr Ser Gln
675 680 685

Ile Pro Gln Ser Gln Ile Arg Met Phe Asp Pro Glu Gln His Pro Asn
690 695 700

His Leu Gly Ala Gly Gly Gly Phe Gly Pro Val Ala Asp Asp Gly Tyr
705 710 715 720

Gly Val Ser Tyr Met Ile Ala Gly Glu Asn Thr Ile Phe Phe His Ile
725 730 735

Ser Ser Lys Phe Ser Ser Ser Glu Thr Asn Ala Gln Arg Phe Gly Asn
740 745 750

His Ile Arg Lys Ala Leu Leu Asp Ile Ala Asp Leu Phe Gln Val Pro
755 760 765

Lys Ala Tyr Ser
770

<210> 11994
<211> 772
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<223> /note="Gene Name:

carnitine palmitoyltransferase 1B (muscle) "

<220>

<221> source

<223> /note="Uniprot ID: Q92523"

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<223> /note="ENSP ID: ENSP00000353945"

<400> 11994

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1 5 10 15

Asp Gly Val Asp Phe Arg Leu Ser Arg Glu Ala Leu Lys His Val Tyr
20 25 30

Leu Ser Gly Ile Asn Ser Trp Lys Lys Arg Leu Ile Arg Ile Lys Asn
35 40 45

Gly Ile Leu Arg Gly Val Tyr Pro Gly Ser Pro Thr Ser Trp Leu Val
50 55 60

Val Ile Met Ala Thr Val Gly Ser Ser Phe Cys Asn Val Asp Ile Ser
65 70 75 80

Leu Gly Leu Val Ser Cys Ile Gln Arg Cys Leu Pro Gln Gly Cys Gly
85 90 95

Pro Tyr Gln Thr Pro Gln Thr Arg Ala Leu Leu Ser Met Ala Ile Phe
100 105 110

Ser Thr Gly Val Trp Val Thr Gly Ile Phe Phe Phe Arg Gln Thr Leu
115 120 125

Lys Leu Leu Leu Cys Tyr His Gly Trp Met Phe Glu Met His Gly Lys
130 135 140

Thr Ser Asn Leu Thr Arg Ile Trp Ala Met Cys Ile Arg Leu Leu Ser
145 150 155 160

Ser Arg His Pro Met Leu Tyr Ser Phe Gln Thr Ser Leu Pro Lys Leu
165 170 175

Pro Val Pro Arg Val Ser Ala Thr Ile Gln Arg Tyr Leu Glu Ser Val
180 185 190

Arg	Pro	Leu	Leu	Asp	Asp	Glu	Glu	Tyr	Tyr	Arg	Met	Glu	Leu	Leu	Ala
		195					200					205			
Lys	Glu	Phe	Gln	Asp	Lys	Thr	Ala	Pro	Arg	Leu	Gln	Lys	Tyr	Leu	Val
	210					215					220				
Leu	Lys	Ser	Trp	Trp	Ala	Ser	Asn	Tyr	Val	Ser	Asp	Trp	Trp	Glu	Glu
225					230					235					240
Tyr	Ile	Tyr	Leu	Arg	Gly	Arg	Ser	Pro	Leu	Met	Val	Asn	Ser	Asn	Tyr
				245					250					255	
Tyr	Val	Met	Asp	Leu	Val	Leu	Ile	Lys	Asn	Thr	Asp	Val	Gln	Ala	Ala
			260					265					270		
Arg	Leu	Gly	Asn	Ile	Ile	His	Ala	Met	Ile	Met	Tyr	Arg	Arg	Lys	Leu
		275					280					285			
Asp	Arg	Glu	Glu	Ile	Lys	Pro	Val	Met	Ala	Leu	Gly	Ile	Val	Pro	Met
	290					295					300				
Cys	Ser	Tyr	Gln	Met	Glu	Arg	Met	Phe	Asn	Thr	Thr	Arg	Ile	Pro	Gly
305					310					315					320
Lys	Asp	Thr	Asp	Val	Leu	Gln	His	Leu	Ser	Asp	Ser	Arg	His	Val	Ala
				325					330					335	
Val	Tyr	His	Lys	Gly	Arg	Phe	Phe	Lys	Leu	Trp	Leu	Tyr	Glu	Gly	Ala
			340					345					350		
Arg	Leu	Leu	Lys	Pro	Gln	Asp	Leu	Glu	Met	Gln	Phe	Gln	Arg	Ile	Leu
		355					360					365			
Asp	Asp	Pro	Ser	Pro	Pro	Gln	Pro	Gly	Glu	Glu	Lys	Leu	Ala	Ala	Leu
	370					375					380				
Thr	Ala	Gly	Gly	Arg	Val	Glu	Trp	Ala	Gln	Ala	Arg	Gln	Ala	Phe	Phe
385					390					395					400
Ser	Ser	Gly	Lys	Asn	Lys	Ala	Ala	Leu	Glu	Ala	Ile	Glu	Arg	Ala	Ala
				405					410					415	

Phe	Phe	Val	Ala	Leu	Asp	Glu	Glu	Ser	Tyr	Ser	Tyr	Asp	Pro	Glu	Asp		
			420					425					430				
Glu	Ala	Ser	Leu	Ser	Leu	Tyr	Gly	Lys	Ala	Leu	Leu	His	Gly	Asn	Cys		
		435					440					445					
Tyr	Asn	Arg	Trp	Phe	Asp	Lys	Ser	Phe	Thr	Leu	Ile	Ser	Phe	Lys	Asn		
	450					455					460						
Gly	Gln	Leu	Gly	Leu	Asn	Ala	Glu	His	Ala	Trp	Ala	Asp	Ala	Pro	Ile		
465					470					475					480		
Ile	Gly	His	Leu	Trp	Glu	Phe	Val	Leu	Gly	Thr	Asp	Ser	Phe	His	Leu		
				485					490					495			
Gly	Tyr	Thr	Glu	Thr	Gly	His	Cys	Leu	Gly	Lys	Pro	Asn	Pro	Ala	Leu		
			500					505					510				
Ala	Pro	Pro	Thr	Arg	Leu	Gln	Trp	Asp	Ile	Pro	Lys	Gln	Cys	Gln	Ala		
		515					520					525					
Val	Ile	Glu	Ser	Ser	Tyr	Gln	Val	Ala	Lys	Ala	Leu	Ala	Asp	Asp	Val		
	530					535					540						
Glu	Leu	Tyr	Cys	Phe	Gln	Phe	Leu	Pro	Phe	Gly	Lys	Gly	Leu	Ile	Lys		
545					550					555					560		
Lys	Cys	Arg	Thr	Ser	Pro	Asp	Ala	Phe	Val	Gln	Ile	Ala	Leu	Gln	Leu		
				565					570					575			
Ala	His	Phe	Arg	Asp	Arg	Gly	Lys	Phe	Cys	Leu	Thr	Tyr	Glu	Ala	Ser		
			580					585					590				
Met	Thr	Arg	Met	Phe	Arg	Glu	Gly	Arg	Thr	Glu	Thr	Val	Arg	Ser	Cys		
		595					600					605					
Thr	Ser	Glu	Ser	Thr	Ala	Phe	Val	Gln	Ala	Met	Met	Glu	Gly	Ser	His		
	610					615					620						
Thr	Lys	Ala	Asp	Leu	Arg	Asp	Leu	Phe	Gln	Lys	Ala	Ala	Lys	Lys	His		
625					630					635					640		

Gln Asn Met Tyr Arg Leu Ala Met Thr Gly Ala Gly Ile Asp Arg His
645 650 655

Leu Phe Cys Leu Tyr Leu Val Ser Lys Tyr Leu Gly Val Ser Ser Pro
660 665 670

Phe Leu Ala Glu Val Leu Ser Glu Pro Trp Arg Leu Ser Thr Ser Gln
675 680 685

Ile Pro Gln Ser Gln Ile Arg Met Phe Asp Pro Glu Gln His Pro Asn
690 695 700

His Leu Gly Ala Gly Gly Gly Phe Gly Pro Val Ala Asp Asp Gly Tyr
705 710 715 720

Gly Val Ser Tyr Met Ile Ala Gly Glu Asn Thr Ile Phe Phe His Ile
725 730 735

Ser Ser Lys Phe Ser Ser Ser Glu Thr Asn Ala Gln Arg Phe Gly Asn
740 745 750

His Ile Arg Lys Ala Leu Leu Asp Ile Ala Asp Leu Phe Gln Val Pro
755 760 765

Lys Ala Tyr Ser
770

<210> 11995
<211> 772
<212> PRT
<213> Homo sapiens

<220>
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<223> /note="Payload ID: 2373"

<220>
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<220>
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carnitine palmitoyltransferase 1B (muscle)"

<220>
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<400> 11995

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Asp Gly Val Asp Phe Arg Leu Ser Arg Glu Ala Leu Lys His Val Tyr
20 25 30

Leu Ser Gly Ile Asn Ser Trp Lys Lys Arg Leu Ile Arg Ile Lys Asn
35 40 45

Gly Ile Leu Arg Gly Val Tyr Pro Gly Ser Pro Thr Ser Trp Leu Val
50 55 60

Val Ile Met Ala Thr Val Gly Ser Ser Phe Cys Asn Val Asp Ile Ser
65 70 75 80

Leu Gly Leu Val Ser Cys Ile Gln Arg Cys Leu Pro Gln Gly Cys Gly
85 90 95

Pro Tyr Gln Thr Pro Gln Thr Arg Ala Leu Leu Ser Met Ala Ile Phe
100 105 110

Ser Thr Gly Val Trp Val Thr Gly Ile Phe Phe Phe Arg Gln Thr Leu
115 120 125

Lys Leu Leu Leu Cys Tyr His Gly Trp Met Phe Glu Met His Gly Lys
130 135 140

Thr Ser Asn Leu Thr Arg Ile Trp Ala Met Cys Ile Arg Leu Leu Ser
145 150 155 160

Ser Arg His Pro Met Leu Tyr Ser Phe Gln Thr Ser Leu Pro Lys Leu
165 170 175

Pro Val Pro Arg Val Ser Ala Thr Ile Gln Arg Tyr Leu Glu Ser Val
180 185 190

Arg Pro Leu Leu Asp Asp Glu Glu Tyr Tyr Arg Met Glu Leu Leu Ala
195 200 205

Glu	Ala	Ser	Leu	Ser	Leu	Tyr	Gly	Lys	Ala	Leu	Leu	His	Gly	Asn	Cys	
		435					440					445				
Tyr	Asn	Arg	Trp	Phe	Asp	Lys	Ser	Phe	Thr	Leu	Ile	Ser	Phe	Lys	Asn	
	450					455					460					
Gly	Gln	Leu	Gly	Leu	Asn	Ala	Glu	His	Ala	Trp	Ala	Asp	Ala	Pro	Ile	
465					470					475					480	
Ile	Gly	His	Leu	Trp	Glu	Phe	Val	Leu	Gly	Thr	Asp	Ser	Phe	His	Leu	
				485					490					495		
Gly	Tyr	Thr	Glu	Thr	Gly	His	Cys	Leu	Gly	Lys	Pro	Asn	Pro	Ala	Leu	
			500					505					510			
Ala	Pro	Pro	Thr	Arg	Leu	Gln	Trp	Asp	Ile	Pro	Lys	Gln	Cys	Gln	Ala	
		515					520					525				
Val	Ile	Glu	Ser	Ser	Tyr	Gln	Val	Ala	Lys	Ala	Leu	Ala	Asp	Asp	Val	
	530					535					540					
Glu	Leu	Tyr	Cys	Phe	Gln	Phe	Leu	Pro	Phe	Gly	Lys	Gly	Leu	Ile	Lys	
545					550					555					560	
Lys	Cys	Arg	Thr	Ser	Pro	Asp	Ala	Phe	Val	Gln	Ile	Ala	Leu	Gln	Leu	
				565					570					575		
Ala	His	Phe	Arg	Asp	Arg	Gly	Lys	Phe	Cys	Leu	Thr	Tyr	Glu	Ala	Ser	
			580					585					590			
Met	Thr	Arg	Met	Phe	Arg	Glu	Gly	Arg	Thr	Glu	Thr	Val	Arg	Ser	Cys	
		595					600					605				
Thr	Ser	Glu	Ser	Thr	Ala	Phe	Val	Gln	Ala	Met	Met	Glu	Gly	Ser	His	
	610					615					620					
Thr	Lys	Ala	Asp	Leu	Arg	Asp	Leu	Phe	Gln	Lys	Ala	Ala	Lys	Lys	His	
625					630					635					640	
Gln	Asn	Met	Tyr	Arg	Leu	Ala	Met	Thr	Gly	Ala	Gly	Ile	Asp	Arg	His	
				645					650					655		
Leu	Phe	Cys	Leu	Tyr	Leu	Val	Ser	Lys	Tyr	Leu	Gly	Val	Ser	Ser	Pro	

660

665

670

Phe Leu Ala Glu Val Leu Ser Glu Pro Trp Arg Leu Ser Thr Ser Gln
675 680 685

Ile Pro Gln Ser Gln Ile Arg Met Phe Asp Pro Glu Gln His Pro Asn
690 695 700

His Leu Gly Ala Gly Gly Gly Phe Gly Pro Val Ala Asp Asp Gly Tyr
705 710 715 720

Gly Val Ser Tyr Met Ile Ala Gly Glu Asn Thr Ile Phe Phe His Ile
725 730 735

Ser Ser Lys Phe Ser Ser Ser Glu Thr Asn Ala Gln Arg Phe Gly Asn
740 745 750

His Ile Arg Lys Ala Leu Leu Asp Ile Ala Asp Leu Phe Gln Val Pro
755 760 765

Lys Ala Tyr Ser
770

<210> 11996
<211> 772
<212> PRT
<213> Homo sapiens

<220>
<221> source
<223> /note="Payload ID: 2373"

<220>
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<223> /note="Gene Symbol: CPT1B"

<220>
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carnitine palmitoyltransferase 1B (muscle)"

<220>
<221> source
<223> /note="Uniprot ID: Q92523"

<220>
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26655

<400> 11996

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1 5 10 15

Asp Gly Val Asp Phe Arg Leu Ser Arg Glu Ala Leu Lys His Val Tyr
20 25 30

Leu Ser Gly Ile Asn Ser Trp Lys Lys Arg Leu Ile Arg Ile Lys Asn
35 40 45

Gly Ile Leu Arg Gly Val Tyr Pro Gly Ser Pro Thr Ser Trp Leu Val
50 55 60

Val Ile Met Ala Thr Val Gly Ser Ser Phe Cys Asn Val Asp Ile Ser
65 70 75 80

Leu Gly Leu Val Ser Cys Ile Gln Arg Cys Leu Pro Gln Gly Cys Gly
85 90 95

Pro Tyr Gln Thr Pro Gln Thr Arg Ala Leu Leu Ser Met Ala Ile Phe
100 105 110

Ser Thr Gly Val Trp Val Thr Gly Ile Phe Phe Phe Arg Gln Thr Leu
115 120 125

Lys Leu Leu Leu Cys Tyr His Gly Trp Met Phe Glu Met His Gly Lys
130 135 140

Thr Ser Asn Leu Thr Arg Ile Trp Ala Met Cys Ile Arg Leu Leu Ser
145 150 155 160

Ser Arg His Pro Met Leu Tyr Ser Phe Gln Thr Ser Leu Pro Lys Leu
165 170 175

Pro Val Pro Arg Val Ser Ala Thr Ile Gln Arg Tyr Leu Glu Ser Val
180 185 190

Arg Pro Leu Leu Asp Asp Glu Glu Tyr Tyr Arg Met Glu Leu Leu Ala
195 200 205

Lys Glu Phe Gln Asp Lys Thr Ala Pro Arg Leu Gln Lys Tyr Leu Val
210 215 220

Leu Lys Ser Trp Trp Ala Ser Asn Tyr Val Ser Asp Trp Trp Glu Glu
225 230 235 240

Tyr Ile Tyr Leu Arg Gly Arg Ser Pro Leu Met Val Asn Ser Asn Tyr
245 250 255

Tyr Val Met Asp Leu Val Leu Ile Lys Asn Thr Asp Val Gln Ala Ala
260 265 270

Arg Leu Gly Asn Ile Ile His Ala Met Ile Met Tyr Arg Arg Lys Leu
275 280 285

Asp Arg Glu Glu Ile Lys Pro Val Met Ala Leu Gly Ile Val Pro Met
290 295 300

Cys Ser Tyr Gln Met Glu Arg Met Phe Asn Thr Thr Arg Ile Pro Gly
305 310 315 320

Lys Asp Thr Asp Val Leu Gln His Leu Ser Asp Ser Arg His Val Ala
325 330 335

Val Tyr His Lys Gly Arg Phe Phe Lys Leu Trp Leu Tyr Glu Gly Ala
340 345 350

Arg Leu Leu Lys Pro Gln Asp Leu Glu Met Gln Phe Gln Arg Ile Leu
355 360 365

Asp Asp Pro Ser Pro Pro Gln Pro Gly Glu Glu Lys Leu Ala Ala Leu
370 375 380

Thr Ala Gly Gly Arg Val Glu Trp Ala Gln Ala Arg Gln Ala Phe Phe
385 390 395 400

Ser Ser Gly Lys Asn Lys Ala Ala Leu Glu Ala Ile Glu Arg Ala Ala
405 410 415

Phe Phe Val Ala Leu Asp Glu Glu Ser Tyr Ser Tyr Asp Pro Glu Asp
420 425 430

Glu Ala Ser Leu Ser Leu Tyr Gly Lys Ala Leu Leu His Gly Asn Cys
435 440 445

Tyr Asn Arg Trp Phe Asp Lys Ser Phe Thr Leu Ile Ser Phe Lys Asn

450						455						460				
Gly	Gln	Leu	Gly	Leu	Asn	Ala	Glu	His	Ala	Trp	Ala	Asp	Ala	Pro	Ile	
465					470					475					480	
Ile	Gly	His	Leu	Trp	Glu	Phe	Val	Leu	Gly	Thr	Asp	Ser	Phe	His	Leu	
				485					490					495		
Gly	Tyr	Thr	Glu	Thr	Gly	His	Cys	Leu	Gly	Lys	Pro	Asn	Pro	Ala	Leu	
			500					505					510			
Ala	Pro	Pro	Thr	Arg	Leu	Gln	Trp	Asp	Ile	Pro	Lys	Gln	Cys	Gln	Ala	
			515				520					525				
Val	Ile	Glu	Ser	Ser	Tyr	Gln	Val	Ala	Lys	Ala	Leu	Ala	Asp	Asp	Val	
	530					535					540					
Glu	Leu	Tyr	Cys	Phe	Gln	Phe	Leu	Pro	Phe	Gly	Lys	Gly	Leu	Ile	Lys	
545					550					555					560	
Lys	Cys	Arg	Thr	Ser	Pro	Asp	Ala	Phe	Val	Gln	Ile	Ala	Leu	Gln	Leu	
				565					570					575		
Ala	His	Phe	Arg	Asp	Arg	Gly	Lys	Phe	Cys	Leu	Thr	Tyr	Glu	Ala	Ser	
			580					585					590			
Met	Thr	Arg	Met	Phe	Arg	Glu	Gly	Arg	Thr	Glu	Thr	Val	Arg	Ser	Cys	
		595					600					605				
Thr	Ser	Glu	Ser	Thr	Ala	Phe	Val	Gln	Ala	Met	Met	Glu	Gly	Ser	His	
	610					615					620					
Thr	Lys	Ala	Asp	Leu	Arg	Asp	Leu	Phe	Gln	Lys	Ala	Ala	Lys	Lys	His	
625					630					635					640	
Gln	Asn	Met	Tyr	Arg	Leu	Ala	Met	Thr	Gly	Ala	Gly	Ile	Asp	Arg	His	
				645					650					655		
Leu	Phe	Cys	Leu	Tyr	Leu	Val	Ser	Lys	Tyr	Leu	Gly	Val	Ser	Ser	Pro	
			660					665					670			
Phe	Leu	Ala	Glu	Val	Leu	Ser	Glu	Pro	Trp	Arg	Leu	Ser	Thr	Ser	Gln	
		675					680					685				

Ile Pro Gln Ser Gln Ile Arg Met Phe Asp Pro Glu Gln His Pro Asn
690 695 700

His Leu Gly Ala Gly Gly Gly Phe Gly Pro Val Ala Asp Asp Gly Tyr
705 710 715 720

Gly Val Ser Tyr Met Ile Ala Gly Glu Asn Thr Ile Phe Phe His Ile
725 730 735

Ser Ser Lys Phe Ser Ser Ser Glu Thr Asn Ala Gln Arg Phe Gly Asn
740 745 750

His Ile Arg Lys Ala Leu Leu Asp Ile Ala Asp Leu Phe Gln Val Pro
755 760 765

Lys Ala Tyr Ser
770

<210> 11997
<211> 92
<212> PRT
<213> Homo sapiens

<220>
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<220>
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<223> /note="Gene Symbol: CPT1B"

<220>
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<223> /note="Gene Name:
carnitine palmitoyltransferase 1B (muscle)"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000396408"

<400> 11997
Leu Met Val Asn Ser Asn Tyr Tyr Val Met Asp Leu Val Leu Ile Lys
1 5 10 15

Asn Thr Asp Val Gln Ala Ala Arg Leu Gly Asn Ile Ile His Ala Met
20 25 30

Ile Met Tyr Arg Arg Lys Leu Asp Arg Glu Glu Ile Lys Pro Val Met
35 40 45

Ala Leu Gly Ile Val Pro Met Cys Ser Tyr Gln Met Glu Arg Met Phe
50 55 60

Asn Thr Thr Arg Ile Pro Gly Lys Asp Thr Gly Leu Leu Val Leu Arg
65 70 75 80

Glu Arg Glu Trp Lys His Pro Ala Gln Gly Leu Val
85 90

<210> 11998

<211> 125

<212> PRT

<213> Homo sapiens

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<220>

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<223> /note="Gene Name:
carnitine palmitoyltransferase 1B (muscle)"

<220>

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<223> /note="ENSP ID: ENSP00000406316"

<400> 11998

Met Ala Glu Ala His Gln Ala Val Ala Phe Gln Phe Thr Val Thr Pro
1 5 10 15

Asp Gly Val Asp Phe Arg Leu Ser Arg Glu Ala Leu Lys His Val Tyr
20 25 30

Leu Ser Gly Ile Asn Ser Trp Lys Lys Arg Leu Ile Arg Ile Lys Asn
35 40 45

Gly Ile Leu Arg Gly Val Tyr Pro Gly Ser Pro Thr Ser Trp Leu Val
50 55 60

Val Ile Met Ala Thr Val Gly Ser Ser Phe Cys Asn Val Asp Ile Ser
65 70 75 80

Leu Gly Leu Val Ser Cys Ile Gln Arg Cys Leu Pro Gln Gly Cys Gly
85 90 95

Pro Tyr Gln Thr Pro Gln Thr Arg Ala Leu Leu Ser Met Ala Ile Phe
100 105 110

Ser Thr Gly Val Trp Val Thr Gly Ile Phe Phe Phe Arg
115 120 125

<210> 11999

<211> 738

<212> PRT

<213> Homo sapiens

<220>

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carnitine palmitoyltransferase 1B (muscle)"

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<223> /note="Uniprot ID: Q92523"

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<223> /note="ENSP ID: ENSP00000409342"

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Met Ala Glu Ala His Gln Ala Val Ala Phe Gln Phe Thr Val Thr Pro
1 5 10 15

Asp Gly Val Asp Phe Arg Leu Ser Arg Glu Ala Leu Lys His Val Tyr
20 25 30

Leu Ser Gly Ile Asn Ser Trp Lys Lys Arg Leu Ile Arg Ile Lys Asn
35 40 45

Gly Ile Leu Arg Gly Val Tyr Pro Gly Ser Pro Thr Ser Trp Leu Val
50 55 60

Val Ile Met Ala Thr Val Gly Ser Ser Phe Cys Asn Val Asp Ile Ser
65 70 75 80

Leu Gly Leu Val Ser Cys Ile Gln Arg Cys Leu Pro Gln Gly Cys Gly
85 90 95

Pro Tyr Gln Thr Pro Gln Thr Arg Ala Leu Leu Ser Met Ala Ile Phe
100 105 110

Ser Thr Gly Val Trp Val Thr Gly Ile Phe Phe Phe Arg Gln Thr Leu
115 120 125

Lys Leu Leu Leu Cys Tyr His Gly Trp Met Phe Glu Met His Gly Lys
130 135 140

Thr Ser Asn Leu Thr Arg Ile Trp Ala Tyr Leu Glu Ser Val Arg Pro
145 150 155 160

Leu Leu Asp Asp Glu Glu Tyr Tyr Arg Met Glu Leu Leu Ala Lys Glu
165 170 175

Phe Gln Asp Lys Thr Ala Pro Arg Leu Gln Lys Tyr Leu Val Leu Lys
180 185 190

Ser Trp Trp Ala Ser Asn Tyr Val Ser Asp Trp Trp Glu Glu Tyr Ile
195 200 205

Tyr Leu Arg Gly Arg Ser Pro Leu Met Val Asn Ser Asn Tyr Tyr Val
210 215 220

Met Asp Leu Val Leu Ile Lys Asn Thr Asp Val Gln Ala Ala Arg Leu
225 230 235 240

Gly Asn Ile Ile His Ala Met Ile Met Tyr Arg Arg Lys Leu Asp Arg
245 250 255

Glu Glu Ile Lys Pro Val Met Ala Leu Gly Ile Val Pro Met Cys Ser
260 265 270

Tyr Gln Met Glu Arg Met Phe Asn Thr Thr Arg Ile Pro Gly Lys Asp
275 280 285

Thr Asp Val Leu Gln His Leu Ser Asp Ser Arg His Val Ala Val Tyr

290					295					300					
His 305	Lys	Gly	Arg	Phe	Phe 310	Lys	Leu	Trp	Leu	Tyr 315	Glu	Gly	Ala	Arg	Leu 320
Leu	Lys	Pro	Gln	Asp 325	Leu	Glu	Met	Gln	Phe 330	Gln	Arg	Ile	Leu	Asp 335	Asp
Pro	Ser	Pro	Pro	Gln 340	Pro	Gly	Glu	Glu 345	Lys	Leu	Ala	Ala	Leu 350	Thr	Ala
Gly	Gly	Arg	Val	Glu	Trp	Ala	Gln 360	Ala	Arg	Gln	Ala	Phe 365	Phe	Ser	Ser
Gly	Lys 370	Asn	Lys	Ala	Ala	Leu 375	Glu	Ala	Ile	Glu	Arg 380	Ala	Ala	Phe	Phe
Val 385	Ala	Leu	Asp	Glu	Glu 390	Ser	Tyr	Ser	Tyr	Asp 395	Pro	Glu	Asp	Glu	Ala 400
Ser	Leu	Ser	Leu	Tyr 405	Gly	Lys	Ala	Leu	Leu 410	His	Gly	Asn	Cys	Tyr 415	Asn
Arg	Trp	Phe	Asp 420	Lys	Ser	Phe	Thr	Leu 425	Ile	Ser	Phe	Lys	Asn 430	Gly	Gln
Leu	Gly 435	Leu	Asn	Ala	Glu	His 440	Ala	Trp	Ala	Asp	Ala 445	Pro	Ile	Ile	Gly
His 450	Leu	Trp	Glu	Phe	Val	Leu 455	Gly	Thr	Asp	Ser 460	Phe	His	Leu	Gly	Tyr
Thr 465	Glu	Thr	Gly	His	Cys 470	Leu	Gly	Lys	Pro	Asn 475	Pro	Ala	Leu	Ala	Pro 480
Pro	Thr	Arg	Leu	Gln 485	Trp	Asp	Ile	Pro	Lys 490	Gln	Cys	Gln	Ala	Val 495	Ile
Glu	Ser	Ser	Tyr 500	Gln	Val	Ala	Lys 505	Ala	Leu	Ala	Asp	Asp 510	Val	Glu	Leu
Tyr	Cys 515	Phe	Gln	Phe	Leu	Pro	Phe 520	Gly	Lys	Gly	Leu	Ile 525	Lys	Lys	Cys

Arg Thr Ser Pro Asp Ala Phe Val Gln Ile Ala Leu Gln Leu Ala His
530 535 540

Phe Arg Asp Arg Gly Lys Phe Cys Leu Thr Tyr Glu Ala Ser Met Thr
545 550 555 560

Arg Met Phe Arg Glu Gly Arg Thr Glu Thr Val Arg Ser Cys Thr Ser
565 570 575

Glu Ser Thr Ala Phe Val Gln Ala Met Met Glu Gly Ser His Thr Lys
580 585 590

Ala Asp Leu Arg Asp Leu Phe Gln Lys Ala Ala Lys Lys His Gln Asn
595 600 605

Met Tyr Arg Leu Ala Met Thr Gly Ala Gly Ile Asp Arg His Leu Phe
610 615 620

Cys Leu Tyr Leu Val Ser Lys Tyr Leu Gly Val Ser Ser Pro Phe Leu
625 630 635 640

Ala Glu Val Leu Ser Glu Pro Trp Arg Leu Ser Thr Ser Gln Ile Pro
645 650 655

Gln Ser Gln Ile Arg Met Phe Asp Pro Glu Gln His Pro Asn His Leu
660 665 670

Gly Ala Gly Gly Gly Phe Gly Pro Val Ala Asp Asp Gly Tyr Gly Val
675 680 685

Ser Tyr Met Ile Ala Gly Glu Asn Thr Ile Phe Phe His Ile Ser Ser
690 695 700

Lys Phe Ser Ser Ser Glu Thr Asn Ala Gln Arg Phe Gly Asn His Ile
705 710 715 720

Arg Lys Ala Leu Leu Asp Ile Ala Asp Leu Phe Gln Val Pro Lys Ala
725 730 735

Tyr Ser


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<210> 12000
<211> 803
<212> PRT
<213> Homo sapiens

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<220>
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<220>
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<223> /note="Gene Name:
      carnitine palmitoyltransferase 1C"

<220>
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<223> /note="Uniprot ID: Q8TCG5"

<220>
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1          5          10          15

Asp Gly Ala Glu Val Glu Leu Ser Ala Pro Val Leu Gln Glu Ile Tyr
          20          25          30

Leu Ser Gly Leu Arg Ser Trp Lys Arg His Leu Ser Arg Phe Trp Asn
          35          40          45

Asp Phe Leu Thr Gly Val Phe Pro Ala Ser Pro Leu Ser Trp Leu Phe
          50          55          60

Leu Phe Ser Ala Ile Gln Leu Ala Trp Phe Leu Gln Leu Asp Pro Ser
65          70          75          80

Leu Gly Leu Met Glu Lys Ile Lys Glu Leu Leu Pro Asp Trp Gly Gly
          85          90          95

Gln His His Gly Leu Arg Gly Val Leu Ala Ala Ala Leu Phe Ala Ser
          100          105          110

Cys Leu Trp Gly Ala Leu Ile Phe Thr Leu His Val Ala Leu Arg Leu

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115								120								125
Leu	Leu	Ser	Tyr	His	Gly	Trp	Leu	Leu	Glu	Pro	His	Gly	Ala	Met	Ser	
130						135					140					
Ser	Pro	Thr	Lys	Thr	Trp	Leu	Ala	Leu	Val	Arg	Ile	Phe	Ser	Gly	Arg	
145					150					155					160	
His	Pro	Met	Leu	Phe	Ser	Tyr	Gln	Arg	Ser	Leu	Pro	Arg	Gln	Pro	Val	
				165					170					175		
Pro	Ser	Val	Gln	Asp	Thr	Val	Arg	Lys	Tyr	Leu	Glu	Ser	Val	Arg	Pro	
			180					185					190			
Ile	Leu	Ser	Asp	Glu	Asp	Phe	Asp	Trp	Thr	Ala	Val	Leu	Ala	Gln	Glu	
		195					200					205				
Phe	Leu	Arg	Leu	Gln	Ala	Ser	Leu	Leu	Gln	Trp	Tyr	Leu	Arg	Leu	Lys	
	210					215					220					
Ser	Trp	Trp	Ala	Ser	Asn	Tyr	Val	Ser	Asp	Trp	Trp	Glu	Glu	Phe	Val	
225					230					235					240	
Tyr	Leu	Arg	Ser	Arg	Asn	Pro	Leu	Met	Val	Asn	Ser	Asn	Tyr	Tyr	Met	
				245					250					255		
Met	Asp	Phe	Leu	Tyr	Val	Thr	Pro	Thr	Pro	Leu	Gln	Ala	Ala	Arg	Ala	
			260					265					270			
Gly	Asn	Ala	Val	His	Ala	Leu	Leu	Leu	Tyr	Arg	His	Arg	Leu	Asn	Arg	
		275					280					285				
Gln	Glu	Ile	Pro	Pro	Thr	Leu	Leu	Met	Gly	Met	Arg	Pro	Leu	Cys	Ser	
	290					295					300					
Ala	Gln	Tyr	Glu	Lys	Ile	Phe	Asn	Thr	Thr	Arg	Ile	Pro	Gly	Val	Gln	
305					310					315					320	
Lys	Asp	Tyr	Ile	Arg	His	Leu	His	Asp	Ser	Gln	His	Val	Ala	Val	Phe	
				325					330					335		
His	Arg	Gly	Arg	Phe	Phe	Arg	Met	Gly	Thr	His	Ser	Arg	Asn	Ser	Leu	
			340					345					350			

Leu	Ser	Pro	Arg	Ala	Leu	Glu	Gln	Gln	Phe	Gln	Arg	Ile	Leu	Asp	Asp		
		355					360					365					
Pro	Ser	Pro	Ala	Cys	Pro	His	Glu	Glu	His	Leu	Ala	Ala	Leu	Thr	Ala		
	370					375					380						
Ala	Pro	Arg	Gly	Thr	Trp	Ala	Gln	Val	Arg	Thr	Ser	Leu	Lys	Thr	Gln		
385					390					395					400		
Ala	Ala	Glu	Ala	Leu	Glu	Ala	Val	Glu	Gly	Ala	Ala	Phe	Phe	Val	Ser		
				405					410					415			
Leu	Asp	Ala	Glu	Pro	Ala	Gly	Leu	Thr	Arg	Glu	Asp	Pro	Ala	Ala	Ser		
			420					425					430				
Leu	Asp	Ala	Tyr	Ala	His	Ala	Leu	Leu	Ala	Gly	Arg	Gly	His	Asp	Arg		
		435					440					445					
Trp	Phe	Asp	Lys	Ser	Phe	Thr	Leu	Ile	Val	Phe	Ser	Asn	Gly	Lys	Leu		
	450					455					460						
Gly	Leu	Ser	Val	Glu	His	Ser	Trp	Ala	Asp	Cys	Pro	Ile	Ser	Gly	His		
465					470					475					480		
Met	Trp	Glu	Phe	Thr	Leu	Ala	Thr	Glu	Cys	Phe	Gln	Leu	Gly	Tyr	Ser		
				485					490					495			
Thr	Asp	Gly	His	Cys	Lys	Gly	His	Pro	Asp	Pro	Thr	Leu	Pro	Gln	Pro		
			500					505					510				
Gln	Arg	Leu	Gln	Trp	Asp	Leu	Pro	Asp	Gln	Ile	His	Ser	Ser	Ile	Ser		
		515					520					525					
Leu	Ala	Leu	Arg	Gly	Ala	Lys	Ile	Leu	Ser	Glu	Asn	Val	Asp	Cys	His		
	530					535					540						
Val	Val	Pro	Phe	Ser	Leu	Phe	Gly	Lys	Ser	Phe	Ile	Arg	Arg	Cys	His		
545					550					555					560		
Leu	Ser	Ser	Asp	Ser	Phe	Ile	Gln	Ile	Ala	Leu	Gln	Leu	Ala	His	Phe		
				565					570					575			

Arg	Asp	Arg	Gly 580	Gln	Phe	Cys	Leu	Thr	Tyr	Glu	Ser	Ala	Met	Thr	Arg
Leu	Phe	Leu	Glu	Gly	Arg	Thr	Glu	Thr	Val	Arg	Ser	Cys	Thr	Arg	Glu
		595					600					605			
Ala	Cys	Asn	Phe	Val	Arg	Ala	Met	Glu	Asp	Lys	Glu	Lys	Thr	Asp	Pro
						615					620				
Gln	Cys	Leu	Ala	Leu	Phe	Arg	Val	Ala	Val	Asp	Lys	His	Gln	Ala	Leu
625					630					635					640
Leu	Lys	Ala	Ala	Met	Ser	Gly	Gln	Gly	Val	Asp	Arg	His	Leu	Phe	Ala
				645					650					655	
Leu	Tyr	Ile	Val	Ser	Arg	Phe	Leu	His	Leu	Gln	Ser	Pro	Phe	Leu	Thr
			660					665					670		
Gln	Val	His	Ser	Glu	Gln	Trp	Gln	Leu	Ser	Thr	Ser	Gln	Ile	Pro	Val
		675					680					685			
Gln	Gln	Met	His	Leu	Phe	Asp	Val	His	Asn	Tyr	Pro	Asp	Tyr	Val	Ser
		690				695					700				
Ser	Gly	Gly	Gly	Phe	Gly	Pro	Ala	Asp	Asp	His	Gly	Tyr	Gly	Val	Ser
705					710					715					720
Tyr	Ile	Phe	Met	Gly	Asp	Gly	Met	Ile	Thr	Phe	His	Ile	Ser	Ser	Lys
				725					730					735	
Lys	Ser	Ser	Thr	Lys	Thr	Asp	Ser	His	Arg	Leu	Gly	Gln	His	Ile	Glu
			740					745					750		
Asp	Ala	Leu	Leu	Asp	Val	Ala	Ser	Leu	Phe	Gln	Ala	Gly	Gln	His	Phe
		755					760					765			
Lys	Arg	Arg	Phe	Arg	Gly	Ser	Gly	Lys	Glu	Asn	Ser	Arg	His	Arg	Cys
		770				775					780				
Gly	Phe	Leu	Ser	Arg	Gln	Thr	Gly	Ala	Ser	Lys	Ala	Ser	Met	Thr	Ser
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Thr Asp Phe

<210> 12001

<211> 803

<212> PRT

<213> Homo sapiens

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<223> /note="Payload ID: 2374"

<220>

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<223> /note="Gene Symbol: CPT1C"

<220>

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<223> /note="Gene Name:
carnitine palmitoyltransferase 1C"

<220>

<221> source

<223> /note="Uniprot ID: Q8TCG5"

<220>

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<223> /note="ENSP ID: ENSP00000376303"

<400> 12001

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Asp Gly Ala Glu Val Glu Leu Ser Ala Pro Val Leu Gln Glu Ile Tyr
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Leu Ser Gly Leu Arg Ser Trp Lys Arg His Leu Ser Arg Phe Trp Asn
35 40 45

Asp Phe Leu Thr Gly Val Phe Pro Ala Ser Pro Leu Ser Trp Leu Phe
50 55 60

Leu Phe Ser Ala Ile Gln Leu Ala Trp Phe Leu Gln Leu Asp Pro Ser
65 70 75 80

Leu Gly Leu Met Glu Lys Ile Lys Glu Leu Leu Pro Asp Trp Gly Gly
85 90 95

Gln His His Gly Leu Arg Gly Val Leu Ala Ala Ala Leu Phe Ala Ser
100 105 110

26669

Cys	Leu	Trp	Gly	Ala	Leu	Ile	Phe	Thr	Leu	His	Val	Ala	Leu	Arg	Leu			
		115					120					125						
Leu	Leu	Ser	Tyr	His	Gly	Trp	Leu	Leu	Glu	Pro	His	Gly	Ala	Met	Ser			
	130					135					140							
Ser	Pro	Thr	Lys	Thr	Trp	Leu	Ala	Leu	Val	Arg	Ile	Phe	Ser	Gly	Arg			
145					150					155					160			
His	Pro	Met	Leu	Phe	Ser	Tyr	Gln	Arg	Ser	Leu	Pro	Arg	Gln	Pro	Val			
				165					170					175				
Pro	Ser	Val	Gln	Asp	Thr	Val	Arg	Lys	Tyr	Leu	Glu	Ser	Val	Arg	Pro			
			180					185					190					
Ile	Leu	Ser	Asp	Glu	Asp	Phe	Asp	Trp	Thr	Ala	Val	Leu	Ala	Gln	Glu			
		195					200					205						
Phe	Leu	Arg	Leu	Gln	Ala	Ser	Leu	Leu	Gln	Trp	Tyr	Leu	Arg	Leu	Lys			
	210					215					220							
Ser	Trp	Trp	Ala	Ser	Asn	Tyr	Val	Ser	Asp	Trp	Trp	Glu	Glu	Phe	Val			
225					230					235					240			
Tyr	Leu	Arg	Ser	Arg	Asn	Pro	Leu	Met	Val	Asn	Ser	Asn	Tyr	Tyr	Met			
				245					250					255				
Met	Asp	Phe	Leu	Tyr	Val	Thr	Pro	Thr	Pro	Leu	Gln	Ala	Ala	Arg	Ala			
			260					265					270					
Gly	Asn	Ala	Val	His	Ala	Leu	Leu	Leu	Tyr	Arg	His	Arg	Leu	Asn	Arg			
		275					280					285						
Gln	Glu	Ile	Pro	Pro	Thr	Leu	Leu	Met	Gly	Met	Arg	Pro	Leu	Cys	Ser			
	290					295					300							
Ala	Gln	Tyr	Glu	Lys	Ile	Phe	Asn	Thr	Thr	Arg	Ile	Pro	Gly	Val	Gln			
305					310					315					320			
Lys	Asp	Tyr	Ile	Arg	His	Leu	His	Asp	Ser	Gln	His	Val	Ala	Val	Phe			
				325					330					335				

His	Arg	Gly	Arg	Phe	Phe	Arg	Met	Gly	Thr	His	Ser	Arg	Asn	Ser	Leu			
			340					345					350					
Leu	Ser	Pro	Arg	Ala	Leu	Glu	Gln	Gln	Phe	Gln	Arg	Ile	Leu	Asp	Asp			
		355					360					365						
Pro	Ser	Pro	Ala	Cys	Pro	His	Glu	Glu	His	Leu	Ala	Ala	Leu	Thr	Ala			
	370					375					380							
Ala	Pro	Arg	Gly	Thr	Trp	Ala	Gln	Val	Arg	Thr	Ser	Leu	Lys	Thr	Gln			
385					390					395					400			
Ala	Ala	Glu	Ala	Leu	Glu	Ala	Val	Glu	Gly	Ala	Ala	Phe	Phe	Val	Ser			
				405					410					415				
Leu	Asp	Ala	Glu	Pro	Ala	Gly	Leu	Thr	Arg	Glu	Asp	Pro	Ala	Ala	Ser			
			420					425					430					
Leu	Asp	Ala	Tyr	Ala	His	Ala	Leu	Leu	Ala	Gly	Arg	Gly	His	Asp	Arg			
		435					440					445						
Trp	Phe	Asp	Lys	Ser	Phe	Thr	Leu	Ile	Val	Phe	Ser	Asn	Gly	Lys	Leu			
	450					455					460							
Gly	Leu	Ser	Val	Glu	His	Ser	Trp	Ala	Asp	Cys	Pro	Ile	Ser	Gly	His			
465					470					475					480			
Met	Trp	Glu	Phe	Thr	Leu	Ala	Thr	Glu	Cys	Phe	Gln	Leu	Gly	Tyr	Ser			
				485					490					495				
Thr	Asp	Gly	His	Cys	Lys	Gly	His	Pro	Asp	Pro	Thr	Leu	Pro	Gln	Pro			
			500					505					510					
Gln	Arg	Leu	Gln	Trp	Asp	Leu	Pro	Asp	Gln	Ile	His	Ser	Ser	Ile	Ser			
		515					520					525						
Leu	Ala	Leu	Arg	Gly	Ala	Lys	Ile	Leu	Ser	Glu	Asn	Val	Asp	Cys	His			
	530					535					540							
Val	Val	Pro	Phe	Ser	Leu	Phe	Gly	Lys	Ser	Phe	Ile	Arg	Arg	Cys	His			
545					550					555					560			

Leu Ser Ser Asp Ser Phe Ile Gln Ile Ala Leu Gln Leu Ala His Phe
565 570 575

Arg Asp Arg Gly Gln Phe Cys Leu Thr Tyr Glu Ser Ala Met Thr Arg
580 585 590

Leu Phe Leu Glu Gly Arg Thr Glu Thr Val Arg Ser Cys Thr Arg Glu
595 600 605

Ala Cys Asn Phe Val Arg Ala Met Glu Asp Lys Glu Lys Thr Asp Pro
610 615 620

Gln Cys Leu Ala Leu Phe Arg Val Ala Val Asp Lys His Gln Ala Leu
625 630 635 640

Leu Lys Ala Ala Met Ser Gly Gln Gly Val Asp Arg His Leu Phe Ala
645 650 655

Leu Tyr Ile Val Ser Arg Phe Leu His Leu Gln Ser Pro Phe Leu Thr
660 665 670

Gln Val His Ser Glu Gln Trp Gln Leu Ser Thr Ser Gln Ile Pro Val
675 680 685

Gln Gln Met His Leu Phe Asp Val His Asn Tyr Pro Asp Tyr Val Ser
690 695 700

Ser Gly Gly Gly Phe Gly Pro Ala Asp Asp His Gly Tyr Gly Val Ser
705 710 715 720

Tyr Ile Phe Met Gly Asp Gly Met Ile Thr Phe His Ile Ser Ser Lys
725 730 735

Lys Ser Ser Thr Lys Thr Asp Ser His Arg Leu Gly Gln His Ile Glu
740 745 750

Asp Ala Leu Leu Asp Val Ala Ser Leu Phe Gln Ala Gly Gln His Phe
755 760 765

Lys Arg Arg Phe Arg Gly Ser Gly Lys Glu Asn Ser Arg His Arg Cys
770 775 780

Gly Phe Leu Ser Arg Gln Thr Gly Ala Ser Lys Ala Ser Met Thr Ser

785

790

795

800

Thr Asp Phe

<210> 12002

<211> 792

<212> PRT

<213> Homo sapiens

<220>

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<223> /note="Payload ID: 2374"

<220>

<221> source

<223> /note="Gene Symbol: CPT1C"

<220>

<221> source

<223> /note="Gene Name:
carnitine palmitoyltransferase 1C"

<220>

<221> source

<223> /note="Uniprot ID: Q8TCG5"

<220>

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<223> /note="ENSP ID: ENSP00000384465"

<400> 12002

Met	Ala	Glu	Ala	His	Gln	Ala	Val	Gly	Phe	Arg	Pro	Ser	Leu	Thr	Ser
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Asp	Gly	Ala	Glu	Val	Glu	Leu	Ser	Ala	Pro	Val	Leu	Gln	Glu	Ile	Tyr
			20					25					30		

Leu	Ser	Gly	Leu	Arg	Ser	Trp	Lys	Arg	His	Leu	Ser	Arg	Phe	Trp	Asn
		35					40					45			

Asp	Phe	Leu	Thr	Gly	Val	Phe	Pro	Ala	Ser	Pro	Leu	Ser	Trp	Leu	Phe
	50					55					60				

Leu	Phe	Ser	Ala	Ile	Gln	Leu	Ala	Trp	Phe	Leu	Gln	Leu	Asp	Pro	Ser
65					70					75					80

Leu	Gly	Leu	Met	Glu	Lys	Ile	Lys	Glu	Leu	Leu	Pro	Asp	Trp	Gly	Gly
				85					90					95	

Gln	His	His	Gly	Leu	Arg	Gly	Val	Leu	Ala	Ala	Ala	Leu	Phe	Ala	Ser		
			100					105					110				
Cys	Leu	Trp	Gly	Ala	Leu	Ile	Phe	Thr	Leu	His	Val	Ala	Leu	Arg	Leu		
		115					120					125					
Leu	Leu	Ser	Tyr	His	Gly	Trp	Leu	Leu	Glu	Pro	His	Gly	Ala	Met	Ser		
	130					135					140						
Ser	Pro	Thr	Lys	Thr	Trp	Leu	Ala	Leu	Val	Arg	Ile	Phe	Ser	Gly	Arg		
145					150					155					160		
His	Pro	Met	Leu	Phe	Ser	Tyr	Gln	Arg	Ser	Leu	Pro	Arg	Gln	Pro	Val		
				165					170					175			
Pro	Ser	Val	Gln	Asp	Thr	Val	Arg	Lys	Tyr	Leu	Glu	Ser	Val	Arg	Pro		
			180					185					190				
Ile	Leu	Ser	Asp	Glu	Asp	Phe	Asp	Trp	Thr	Ala	Val	Leu	Ala	Gln	Glu		
		195					200					205					
Phe	Leu	Arg	Leu	Gln	Ala	Ser	Leu	Leu	Gln	Trp	Tyr	Leu	Arg	Leu	Lys		
	210					215					220						
Ser	Trp	Trp	Ala	Ser	Asn	Tyr	Val	Ser	Asp	Trp	Trp	Glu	Glu	Phe	Val		
225					230					235					240		
Tyr	Leu	Arg	Ser	Arg	Asn	Pro	Leu	Met	Val	Asn	Ser	Asn	Tyr	Tyr	Met		
				245					250					255			
Met	Ala	Ala	Arg	Ala	Gly	Asn	Ala	Val	His	Ala	Leu	Leu	Leu	Tyr	Arg		
			260					265					270				
His	Arg	Leu	Asn	Arg	Gln	Glu	Ile	Pro	Pro	Thr	Leu	Leu	Met	Gly	Met		
		275					280					285					
Arg	Pro	Leu	Cys	Ser	Ala	Gln	Tyr	Glu	Lys	Ile	Phe	Asn	Thr	Thr	Arg		
	290					295					300						
Ile	Pro	Gly	Val	Gln	Lys	Asp	Tyr	Ile	Arg	His	Leu	His	Asp	Ser	Gln		
305					310					315					320		

His Val Ala Val Phe His Arg Gly Arg Phe Phe Arg Met Gly Thr His
325 330 335

Ser Arg Asn Ser Leu Leu Ser Pro Arg Ala Leu Glu Gln Gln Phe Gln
340 345 350

Arg Ile Leu Asp Asp Pro Ser Pro Ala Cys Pro His Glu Glu His Leu
355 360 365

Ala Ala Leu Thr Ala Ala Pro Arg Gly Thr Trp Ala Gln Val Arg Thr
370 375 380

Ser Leu Lys Thr Gln Ala Ala Glu Ala Leu Glu Ala Val Glu Gly Ala
385 390 395 400

Ala Phe Phe Val Ser Leu Asp Ala Glu Pro Ala Gly Leu Thr Arg Glu
405 410 415

Asp Pro Ala Ala Ser Leu Asp Ala Tyr Ala His Ala Leu Leu Ala Gly
420 425 430

Arg Gly His Asp Arg Trp Phe Asp Lys Ser Phe Thr Leu Ile Val Phe
435 440 445

Ser Asn Gly Lys Leu Gly Leu Ser Val Glu His Ser Trp Ala Asp Cys
450 455 460

Pro Ile Ser Gly His Met Trp Glu Phe Thr Leu Ala Thr Glu Cys Phe
465 470 475 480

Gln Leu Gly Tyr Ser Thr Asp Gly His Cys Lys Gly His Pro Asp Pro
485 490 495

Thr Leu Pro Gln Pro Gln Arg Leu Gln Trp Asp Leu Pro Asp Gln Ile
500 505 510

His Ser Ser Ile Ser Leu Ala Leu Arg Gly Ala Lys Ile Leu Ser Glu
515 520 525

Asn Val Asp Cys His Val Val Pro Phe Ser Leu Phe Gly Lys Ser Phe
530 535 540

Ile Arg Arg Cys His Leu Ser Ser Asp Ser Phe Ile Gln Ile Ala Leu

545					550					555				560		
Gln	Leu	Ala	His	Phe	Arg	Asp	Arg	Gly	Gln	Phe	Cys	Leu	Thr	Tyr	Glu	
				565					570					575		
Ser	Ala	Met	Thr	Arg	Leu	Phe	Leu	Glu	Gly	Arg	Thr	Glu	Thr	Val	Arg	
			580					585					590			
Ser	Cys	Thr	Arg	Glu	Ala	Cys	Asn	Phe	Val	Arg	Ala	Met	Glu	Asp	Lys	
		595					600					605				
Glu	Lys	Thr	Asp	Pro	Gln	Cys	Leu	Ala	Leu	Phe	Arg	Val	Ala	Val	Asp	
	610					615					620					
Lys	His	Gln	Ala	Leu	Leu	Lys	Ala	Ala	Met	Ser	Gly	Gln	Gly	Val	Asp	
625					630					635					640	
Arg	His	Leu	Phe	Ala	Leu	Tyr	Ile	Val	Ser	Arg	Phe	Leu	His	Leu	Gln	
				645					650					655		
Ser	Pro	Phe	Leu	Thr	Gln	Val	His	Ser	Glu	Gln	Trp	Gln	Leu	Ser	Thr	
			660					665					670			
Ser	Gln	Ile	Pro	Val	Gln	Gln	Met	His	Leu	Phe	Asp	Val	His	Asn	Tyr	
		675					680					685				
Pro	Asp	Tyr	Val	Ser	Ser	Gly	Gly	Gly	Phe	Gly	Pro	Ala	Asp	Asp	His	
	690					695					700					
Gly	Tyr	Gly	Val	Ser	Tyr	Ile	Phe	Met	Gly	Asp	Gly	Met	Ile	Thr	Phe	
705					710					715					720	
His	Ile	Ser	Ser	Lys	Lys	Ser	Ser	Thr	Lys	Thr	Asp	Ser	His	Arg	Leu	
				725					730					735		
Gly	Gln	His	Ile	Glu	Asp	Ala	Leu	Leu	Asp	Val	Ala	Ser	Leu	Phe	Gln	
			740					745					750			
Ala	Gly	Gln	His	Phe	Lys	Arg	Arg	Phe	Arg	Gly	Ser	Gly	Lys	Glu	Asn	
		755					760					765				
Ser	Arg	His	Arg	Cys	Gly	Phe	Leu	Ser	Arg	Gln	Thr	Gly	Ala	Ser	Lys	
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Ala Ser Met Thr Ser Thr Asp Phe
785 790

<210> 12003
<211> 257
<212> PRT
<213> Homo sapiens

<220>
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<223> /note="Payload ID: 2374"

<220>
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<223> /note="Gene Symbol: CPT1C"

<220>
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<223> /note="Gene Name:
carnitine palmitoyltransferase 1C"

<220>
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Met Ala Glu Ala His Gln Ala Val Gly Phe Arg Pro Ser Leu Thr Ser
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Asp Gly Ala Glu Val Glu Leu Ser Ala Pro Val Leu Gln Glu Ile Tyr
20 25 30

Leu Ser Gly Leu Arg Ser Trp Lys Arg His Leu Ser Arg Phe Trp Asn
35 40 45

Asp Phe Leu Thr Gly Val Phe Pro Ala Ser Pro Leu Ser Trp Leu Phe
50 55 60

Leu Phe Ser Ala Ile Gln Leu Ala Trp Phe Leu Gln Leu Asp Pro Ser
65 70 75 80

Leu Gly Leu Met Glu Lys Ile Lys Glu Leu Leu Pro Asp Trp Gly Gly
85 90 95

Gln His His Gly Leu Arg Gly Val Leu Ala Ala Ala Leu Phe Ala Ser
100 105 110

Cys Leu Trp Gly Ala Leu Ile Phe Thr Leu His Val Ala Leu Arg Leu
 115 120 125
 Leu Leu Ser Tyr His Gly Trp Leu Leu Glu Pro His Gly Ala Met Ser
 130 135 140
 Ser Pro Thr Lys Thr Trp Leu Ala Leu Val Arg Ile Phe Ser Gly Arg
 145 150 155 160
 His Pro Met Leu Phe Ser Tyr Gln Arg Ser Leu Pro Arg Gln Pro Val
 165 170 175
 Pro Ser Val Gln Asp Thr Val Arg Lys Tyr Leu Glu Ser Val Arg Pro
 180 185 190
 Ile Leu Ser Asp Glu Asp Phe Asp Trp Thr Ala Val Leu Ala Gln Glu
 195 200 205
 Phe Leu Arg Leu Gln Ala Ser Leu Leu Gln Trp Tyr Leu Arg Leu Lys
 210 215 220
 Ser Trp Trp Ala Ser Asn Tyr Val Ser Asp Trp Trp Glu Glu Phe Val
 225 230 235 240
 Tyr Leu Arg Ser Arg Asn Pro Leu Met Val Asn Ser Asn Tyr Tyr Met
 245 250 255

Met

<210> 12004
 <211> 68
 <212> PRT
 <213> Homo sapiens

<220>
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<220>
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<220>
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 <223> /note="Gene Name:
 carnitine palmitoyltransferase 1C"

<220>
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 Met Ala Glu Ala His Gln Ala Val Gly Phe Arg Pro Ser Leu Thr Ser
 1 5 10 15

 Asp Gly Ala Glu Val Glu Leu Ser Ala Pro Val Leu Gln Glu Ile Tyr
 20 25 30

 Leu Ser Gly Leu Arg Ser Trp Lys Arg His Leu Ser Arg Phe Trp Gly
 35 40 45

 Leu Thr Tyr Phe Val Thr Gln Ala Gly Val Gln Cys His His His Ser
 50 55 60

 Ser Leu His Pro
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<210> 12005
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<220>
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<220>
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 1 5 10 15

 Asp Gly Ala Glu Val Glu Leu Ser Ala Pro Val Leu Gln Glu Ile Tyr
 20 25 30

Leu Ser Gly Leu Arg Ser Trp Lys Arg His Leu Ser Arg Phe Trp Gly
35 40 45

Leu Thr Tyr Phe Val Thr Gln Ala Gly Val Gln Cys His His His Ser
50 55 60

Ser Leu His Pro
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<210> 12006
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<400> 12006
Met Ala Glu Ala His Gln Ala Val Gly Phe Arg Pro Ser Leu Thr Ser
1 5 10 15

Asp Gly Ala Glu Val Glu Leu Ser Ala Pro Val Leu Gln Glu Ile Tyr
20 25 30

Leu Ser Gly Leu Arg Ser Trp Lys Arg His Leu Ser Arg Phe Trp Asn
35 40 45

Asp Phe Leu Thr Gly Val Phe Pro Ala Ser Pro Leu Ser Trp Leu Phe
50 55 60

Leu Phe Ser Ala Ile Gln Leu Ala Trp Phe Leu Gln Leu Asp Pro Ser
65 70 75 80

Leu Gly Leu Met Glu Lys Ile Lys Glu Leu Leu Pro Asp Trp Gly Gly
85 90 95

Gln His His Gly Leu Arg Gly Val Leu Ala Ala Ala Leu Phe Ala Ser
100 105 110

Cys Leu Trp Gly Ala Leu Ile Phe Thr Leu His Val Ala Leu Arg Leu
115 120 125

Leu Leu Ser Tyr His Gly Trp Leu Leu Glu Pro His Gly Ala Met Ser
130 135 140

Ser Pro Thr Lys Thr Trp Leu Ala Leu Val Arg Ile Phe Ser Gly Arg
145 150 155 160

His Pro Met Leu Phe Ser Tyr Gln Arg Ser Leu Pro Arg Gln Pro Val
165 170 175

Pro

<210> 12007
<211> 81
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<220>
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<400> 12007
Val Ser Tyr Ile Phe Met Gly Asp Gly Met Ile Thr Phe His Ile Ser
1 5 10 15

Ser Lys Lys Ser Ser Thr Lys Thr Asp Ser His Arg Leu Gly Gln His
20 25 30

Ile Glu Asp Ala Leu Leu Asp Val Ala Ser Leu Phe Gln Ala Gly Gln
35 40 45

His Phe Lys Arg Arg Phe Arg Gly Ser Gly Lys Glu Asn Ser Arg His
50 55 60

Ser Arg Gln Leu Ala Ser Pro Arg Asn Lys Gly Glu Ile Ala Thr Ala
65 70 75 80

Gly

<210> 12008
<211> 130
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<213> Homo sapiens

<220>
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<220>
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Met Ala Glu Ala His Gln Ala Val Gly Phe Arg Pro Ser Leu Thr Ser
1 5 10 15

Asp Gly Ala Glu Val Glu Leu Ser Ala Pro Val Leu Gln Glu Ile Tyr
20 25 30

Leu Ser Gly Leu Arg Ser Trp Lys Arg His Leu Ser Arg Phe Trp Asn
35 40 45

Asp Phe Leu Thr Gly Val Phe Pro Ala Ser Pro Leu Ser Trp Leu Phe
50 55 60

Leu Phe Ser Ala Ile Gln Leu Ala Trp Phe Leu Gln Leu Asp Pro Ser
65 70 75 80

Leu Gly Leu Met Glu Lys Ile Lys Glu Leu Leu Pro Asp Trp Pro Trp
85 90 95

Ser Ala Ser Ser Leu Ala Ala Thr Arg Cys Cys Ser Val Thr Ser Ala
100 105 110

Pro Cys His Ala Ser Pro Cys Pro Leu Cys Arg Thr Pro Cys Ala Ser
115 120 125

Thr Trp
130

<210> 12009
<211> 336
<212> PRT
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<220>
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<220>
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<220>
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<220>
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<400> 12009
Leu Ala Ala Leu Thr Ala Ala Pro Arg Gly Thr Trp Ala Gln Val Arg
1 5 10 15

Thr Ser Leu Lys Thr Gln Ala Ala Glu Ala Leu Glu Ala Val Glu Gly
20 25 30

Ala Ala Phe Phe Val Ser Leu Asp Ala Glu Pro Ala Gly Leu Thr Arg
35 40 45

Glu Asp Pro Ala Ala Ser Leu Asp Ala Tyr Ala His Ala Leu Leu Ala
50 55 60

Gly	Arg	Gly	His	Asp	Arg	Trp	Phe	Asp	Lys	Ser	Phe	Thr	Leu	Ile	Val	
65					70					75					80	
Phe	Ser	Asn	Gly	Lys	Leu	Gly	Leu	Ser	Val	Glu	His	Ser	Trp	Ala	Asp	
				85					90					95		
Cys	Pro	Ile	Ser	Gly	His	Met	Trp	Glu	Phe	Thr	Leu	Ala	Thr	Glu	Cys	
			100					105					110			
Phe	Gln	Leu	Gly	Tyr	Ser	Thr	Asp	Gly	His	Cys	Lys	Gly	His	Pro	Asp	
		115					120					125				
Pro	Thr	Leu	Pro	Gln	Pro	Gln	Arg	Leu	Gln	Trp	Asp	Leu	Pro	Asp	Gln	
	130					135					140					
Ile	His	Ser	Ser	Ile	Ser	Leu	Ala	Leu	Arg	Gly	Ala	Lys	Ile	Leu	Ser	
145					150					155					160	
Glu	Asn	Val	Asp	Cys	His	Val	Val	Pro	Phe	Ser	Leu	Phe	Gly	Lys	Ser	
				165					170					175		
Phe	Ile	Arg	Arg	Cys	His	Leu	Ser	Ser	Asp	Ser	Phe	Ile	Gln	Ile	Ala	
			180					185					190			
Leu	Gln	Leu	Ala	His	Phe	Arg	Asp	Arg	Gly	Gln	Phe	Cys	Leu	Thr	Tyr	
		195					200					205				
Glu	Ser	Ala	Met	Thr	Arg	Leu	Phe	Leu	Glu	Gly	Arg	Thr	Glu	Thr	Val	
	210					215					220					
Arg	Ser	Cys	Thr	Arg	Glu	Ala	Cys	Asn	Phe	Val	Arg	Ala	Met	Glu	Asp	
225					230					235					240	
Lys	Glu	Lys	Thr	Ala	Asp	Asp	His	Gly	Tyr	Gly	Val	Ser	Tyr	Ile	Phe	
				245					250					255		
Met	Gly	Asp	Gly	Met	Ile	Thr	Phe	His	Ile	Ser	Ser	Lys	Lys	Ser	Ser	
			260					265					270			
Thr	Lys	Thr	Asp	Ser	His	Arg	Leu	Gly	Gln	His	Ile	Glu	Asp	Ala	Leu	
		275					280					285				
Leu	Asp	Val	Ala	Ser	Leu	Phe	Gln	Ala	Gly	Gln	His	Phe	Lys	Arg	Arg	

290		295		300
Phe Arg Gly Ser Gly Lys Glu Asn Ser Arg His Arg Cys Gly Phe Leu				
305		310		315

Ser Arg Gln Thr Gly Ala Ser Lys Ala Ser Met Thr Ser Thr Asp Phe
325 330 335

<210> 12010
 <211> 68
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 <213> Homo sapiens

<220>
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<220>
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<220>
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 <223> /note="Gene Name:
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<220>
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<400> 12010
Met Ala Glu Ala His Gln Ala Val Gly Phe Arg Pro Ser Leu Thr Ser
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Asp Gly Ala Glu Val Glu Leu Ser Ala Pro Val Leu Gln Glu Ile Tyr
20 25 30

Leu Ser Gly Leu Arg Ser Trp Lys Arg His Leu Ser Arg Phe Trp Gly
35 40 45

Leu Thr Tyr Phe Val Thr Gln Ala Gly Val Gln Cys His His His Ser
50 55 60

Ser Leu His Pro
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<210> 12011
 <211> 95
 <212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2374"

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<223> /note="Gene Symbol: CPT1C"

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<223> /note="Gene Name:
carnitine palmitoyltransferase 1C"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000472828"

<400> 12011

Met Ala Glu Ala His Gln Ala Val Gly Phe Arg Pro Ser Leu Thr Ser
1 5 10 15

Asp Gly Ala Glu Val Glu Leu Ser Ala Pro Val Leu Gln Glu Ile Tyr
20 25 30

Leu Ser Gly Leu Arg Ser Trp Lys Arg His Leu Ser Arg Phe Trp Asn
35 40 45

Asp Phe Leu Thr Gly Val Phe Pro Ala Ser Pro Leu Ser Trp Leu Phe
50 55 60

Leu Phe Ser Ala Ile Gln Leu Ala Trp Phe Leu Gln Leu Asp Pro Ser
65 70 75 80

Leu Gly Leu Met Glu Lys Ile Lys Glu Leu Leu Pro Asp Trp Gly
85 90 95

<210> 12012

<211> 803

<212> PRT

<213> Homo sapiens

<220>

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<220>
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<223> /note="Uniprot ID: Q8TCG5"

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<400> 12012
Met Ala Glu Ala His Gln Ala Val Gly Phe Arg Pro Ser Leu Thr Ser
1          5          10

Asp Gly Ala Glu Val Glu Leu Ser Ala Pro Val Leu Gln Glu Ile Tyr
          20          25          30

Leu Ser Gly Leu Arg Ser Trp Lys Arg His Leu Ser Arg Phe Trp Asn
          35          40          45

Asp Phe Leu Thr Gly Val Phe Pro Ala Ser Pro Leu Ser Trp Leu Phe
          50          55          60

Leu Phe Ser Ala Ile Gln Leu Ala Trp Phe Leu Gln Leu Asp Pro Ser
65          70          75          80

Leu Gly Leu Met Glu Lys Ile Lys Glu Leu Leu Pro Asp Trp Gly Gly
          85          90          95

Gln His His Gly Leu Arg Gly Val Leu Ala Ala Ala Leu Phe Ala Ser
          100          105          110

Cys Leu Trp Gly Ala Leu Ile Phe Thr Leu His Val Ala Leu Arg Leu
          115          120          125

Leu Leu Ser Tyr His Gly Trp Leu Leu Glu Pro His Gly Ala Met Ser
          130          135          140

Ser Pro Thr Lys Thr Trp Leu Ala Leu Val Arg Ile Phe Ser Gly Arg
145          150          155          160

His Pro Met Leu Phe Ser Tyr Gln Arg Ser Leu Pro Arg Gln Pro Val
          165          170          175

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Pro	Ser	Val	Gln	Asp	Thr	Val	Arg	Lys	Tyr	Leu	Glu	Ser	Val	Arg	Pro	180	185	190
Ile	Leu	Ser	Asp	Glu	Asp	Phe	Asp	Trp	Thr	Ala	Val	Leu	Ala	Gln	Glu	195	200	205
Phe	Leu	Arg	Leu	Gln	Ala	Ser	Leu	Leu	Gln	Trp	Tyr	Leu	Arg	Leu	Lys	210	215	220
Ser	Trp	Trp	Ala	Ser	Asn	Tyr	Val	Ser	Asp	Trp	Trp	Glu	Glu	Phe	Val	225	230	235
Tyr	Leu	Arg	Ser	Arg	Asn	Pro	Leu	Met	Val	Asn	Ser	Asn	Tyr	Tyr	Met	245	250	255
Met	Asp	Phe	Leu	Tyr	Val	Thr	Pro	Thr	Pro	Leu	Gln	Ala	Ala	Arg	Ala	260	265	270
Gly	Asn	Ala	Val	His	Ala	Leu	Leu	Leu	Tyr	Arg	His	Arg	Leu	Asn	Arg	275	280	285
Gln	Glu	Ile	Pro	Pro	Thr	Leu	Leu	Met	Gly	Met	Arg	Pro	Leu	Cys	Ser	290	295	300
Ala	Gln	Tyr	Glu	Lys	Ile	Phe	Asn	Thr	Thr	Arg	Ile	Pro	Gly	Val	Gln	305	310	315
Lys	Asp	Tyr	Ile	Arg	His	Leu	His	Asp	Ser	Gln	His	Val	Ala	Val	Phe	325	330	335
His	Arg	Gly	Arg	Phe	Phe	Arg	Met	Gly	Thr	His	Ser	Arg	Asn	Ser	Leu	340	345	350
Leu	Ser	Pro	Arg	Ala	Leu	Glu	Gln	Gln	Phe	Gln	Arg	Ile	Leu	Asp	Asp	355	360	365
Pro	Ser	Pro	Ala	Cys	Pro	His	Glu	Glu	His	Leu	Ala	Ala	Leu	Thr	Ala	370	375	380
Ala	Pro	Arg	Gly	Thr	Trp	Ala	Gln	Val	Arg	Thr	Ser	Leu	Lys	Thr	Gln	385	390	395
																400		

Ala Ala Glu Ala Leu Glu Ala Val Glu Gly Ala Ala Phe Phe Val Ser
405 410 415

Leu Asp Ala Glu Pro Ala Gly Leu Thr Arg Glu Asp Pro Ala Ala Ser
420 425 430

Leu Asp Ala Tyr Ala His Ala Leu Leu Ala Gly Arg Gly His Asp Arg
435 440 445

Trp Phe Asp Lys Ser Phe Thr Leu Ile Val Phe Ser Asn Gly Lys Leu
450 455 460

Gly Leu Ser Val Glu His Ser Trp Ala Asp Cys Pro Ile Ser Gly His
465 470 475 480

Met Trp Glu Phe Thr Leu Ala Thr Glu Cys Phe Gln Leu Gly Tyr Ser
485 490 495

Thr Asp Gly His Cys Lys Gly His Pro Asp Pro Thr Leu Pro Gln Pro
500 505 510

Gln Arg Leu Gln Trp Asp Leu Pro Asp Gln Ile His Ser Ser Ile Ser
515 520 525

Leu Ala Leu Arg Gly Ala Lys Ile Leu Ser Glu Asn Val Asp Cys His
530 535 540

Val Val Pro Phe Ser Leu Phe Gly Lys Ser Phe Ile Arg Arg Cys His
545 550 555 560

Leu Ser Ser Asp Ser Phe Ile Gln Ile Ala Leu Gln Leu Ala His Phe
565 570 575

Arg Asp Arg Gly Gln Phe Cys Leu Thr Tyr Glu Ser Ala Met Thr Arg
580 585 590

Leu Phe Leu Glu Gly Arg Thr Glu Thr Val Arg Ser Cys Thr Arg Glu
595 600 605

Ala Cys Asn Phe Val Arg Ala Met Glu Asp Lys Glu Lys Thr Asp Pro
610 615 620

Gln Cys Leu Ala Leu Phe Arg Val Ala Val Asp Lys His Gln Ala Leu

625		630		635		640									
Leu	Lys	Ala	Ala	Met	Ser	Gly	Gln	Gly	Val	Asp	Arg	His	Leu	Phe	Ala
				645					650					655	
Leu	Tyr	Ile	Val	Ser	Arg	Phe	Leu	His	Leu	Gln	Ser	Pro	Phe	Leu	Thr
			660					665					670		
Gln	Val	His	Ser	Glu	Gln	Trp	Gln	Leu	Ser	Thr	Ser	Gln	Ile	Pro	Val
		675					680					685			
Gln	Gln	Met	His	Leu	Phe	Asp	Val	His	Asn	Tyr	Pro	Asp	Tyr	Val	Ser
	690					695					700				
Ser	Gly	Gly	Gly	Phe	Gly	Pro	Ala	Asp	Asp	His	Gly	Tyr	Gly	Val	Ser
705					710					715					720
Tyr	Ile	Phe	Met	Gly	Asp	Gly	Met	Ile	Thr	Phe	His	Ile	Ser	Ser	Lys
				725					730					735	
Lys	Ser	Ser	Thr	Lys	Thr	Asp	Ser	His	Arg	Leu	Gly	Gln	His	Ile	Glu
			740					745					750		
Asp	Ala	Leu	Leu	Asp	Val	Ala	Ser	Leu	Phe	Gln	Ala	Gly	Gln	His	Phe
		755					760					765			
Lys	Arg	Arg	Phe	Arg	Gly	Ser	Gly	Lys	Glu	Asn	Ser	Arg	His	Arg	Cys
	770					775					780				
Gly	Phe	Leu	Ser	Arg	Gln	Thr	Gly	Ala	Ser	Lys	Ala	Ser	Met	Thr	Ser
785					790					795					800

Thr Asp Phe

<210> 12013

<211> 72

<212> PRT

<213> Homo sapiens

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<223> /note="Payload ID: 2374"

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<223> /note="Gene Name:
carnitine palmitoyltransferase 1C"

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<223> /note="ENSP ID: ENSP00000473082"

<400> 12013
Met Ala Glu Ala His Gln Ala Val Gly Phe Arg Pro Ser Leu Thr Ser
1 5 10 15

Asp Gly Ala Glu Val Glu Leu Ser Ala Pro Val Leu Gln Glu Ile Tyr
20 25 30

Leu Ser Gly Leu Arg Ser Trp Lys Arg His Leu Ser Arg Phe Trp Cys
35 40 45

His Pro Ala Cys Leu Val Pro Pro Ala Gly Ser Phe Leu Arg Thr Asp
50 55 60

Gly Glu Asp Gln Arg Val Ala Ala
65 70

<210> 12014
<211> 658
<212> PRT
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<220>
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<223> /note="Payload ID: 2375"

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<223> /note="Gene Symbol: CPT2"

<220>
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<220>
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<223> /note="Uniprot ID: P23786"

<220>
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<223> /note="ENSP ID: ENSP00000360541"

<400> 12014

Met Val Pro Arg Leu Leu Leu Arg Ala Trp Pro Arg Gly Pro Ala Val
1 5 10 15

Gly Pro Gly Ala Pro Ser Arg Pro Leu Ser Ala Gly Ser Gly Pro Gly
20 25 30

Gln Tyr Leu Gln Arg Ser Ile Val Pro Thr Met His Tyr Gln Asp Ser
35 40 45

Leu Pro Arg Leu Pro Ile Pro Lys Leu Glu Asp Thr Ile Arg Arg Tyr
50 55 60

Leu Ser Ala Gln Lys Pro Leu Leu Asn Asp Gly Gln Phe Arg Lys Thr
65 70 75 80

Glu Gln Phe Cys Lys Ser Phe Glu Asn Gly Ile Gly Lys Glu Leu His
85 90 95

Glu Gln Leu Val Ala Leu Asp Lys Gln Asn Lys His Thr Ser Tyr Ile
100 105 110

Ser Gly Pro Trp Phe Asp Met Tyr Leu Ser Ala Arg Asp Ser Val Val
115 120 125

Leu Asn Phe Asn Pro Phe Met Ala Phe Asn Pro Asp Pro Lys Ser Glu
130 135 140

Tyr Asn Asp Gln Leu Thr Arg Ala Thr Asn Met Thr Val Ser Ala Ile
145 150 155 160

Arg Phe Leu Lys Thr Leu Arg Ala Gly Leu Leu Glu Pro Glu Val Phe
165 170 175

His Leu Asn Pro Ala Lys Ser Asp Thr Ile Thr Phe Lys Arg Leu Ile
180 185 190

Arg Phe Val Pro Ser Ser Leu Ser Trp Tyr Gly Ala Tyr Leu Val Asn
195 200 205

Ala Tyr Pro Leu Asp Met Ser Gln Tyr Phe Arg Leu Phe Asn Ser Thr
210 215 220

Arg Leu Pro Lys Pro Ser Arg Asp Glu Leu Phe Thr Asp Asp Lys Ala
225 230 235 240

Arg His Leu Leu Val Leu Arg Lys Gly Asn Phe Tyr Ile Phe Asp Val
245 250 255

Leu Asp Gln Asp Gly Asn Ile Val Ser Pro Ser Glu Ile Gln Ala His
260 265 270

Leu Lys Tyr Ile Leu Ser Asp Ser Ser Pro Ala Pro Glu Phe Pro Leu
275 280 285

Ala Tyr Leu Thr Ser Glu Asn Arg Asp Ile Trp Ala Glu Leu Arg Gln
290 295 300

Lys Leu Met Ser Ser Gly Asn Glu Glu Ser Leu Arg Lys Val Asp Ser
305 310 315 320

Ala Val Phe Cys Leu Cys Leu Asp Asp Phe Pro Ile Lys Asp Leu Val
325 330 335

His Leu Ser His Asn Met Leu His Gly Asp Gly Thr Asn Arg Trp Phe
340 345 350

Asp Lys Ser Phe Asn Leu Ile Ile Ala Lys Asp Gly Ser Thr Ala Val
355 360 365

His Phe Glu His Ser Trp Gly Asp Gly Val Ala Val Leu Arg Phe Phe
370 375 380

Asn Glu Val Phe Lys Asp Ser Thr Gln Thr Pro Ala Val Thr Pro Gln
385 390 395 400

Ser Gln Pro Ala Thr Thr Asp Ser Thr Val Thr Val Gln Lys Leu Asn
405 410 415

Phe Glu Leu Thr Asp Ala Leu Lys Thr Gly Ile Thr Ala Ala Lys Glu
420 425 430

Lys Phe Asp Ala Thr Met Lys Thr Leu Thr Ile Asp Cys Val Gln Phe
435 440 445

Gln	Arg	Gly	Gly	Lys	Glu	Phe	Leu	Lys	Lys	Gln	Lys	Leu	Ser	Pro	Asp	
450						455					460					
Ala	Val	Ala	Gln	Leu	Ala	Phe	Gln	Met	Ala	Phe	Leu	Arg	Gln	Tyr	Gly	
465					470					475					480	
Gln	Thr	Val	Ala	Thr	Tyr	Glu	Ser	Cys	Ser	Thr	Ala	Ala	Phe	Lys	His	
				485					490					495		
Gly	Arg	Thr	Glu	Thr	Ile	Arg	Pro	Ala	Ser	Val	Tyr	Thr	Lys	Arg	Cys	
			500					505					510			
Ser	Glu	Ala	Phe	Val	Arg	Glu	Pro	Ser	Arg	His	Ser	Ala	Gly	Glu	Leu	
		515					520					525				
Gln	Gln	Met	Met	Val	Glu	Cys	Ser	Lys	Tyr	His	Gly	Gln	Leu	Thr	Lys	
530						535					540					
Glu	Ala	Ala	Met	Gly	Gln	Gly	Phe	Asp	Arg	His	Leu	Phe	Ala	Leu	Arg	
545					550					555					560	
His	Leu	Ala	Ala	Ala	Lys	Gly	Ile	Ile	Leu	Pro	Glu	Leu	Tyr	Leu	Asp	
				565					570					575		
Pro	Ala	Tyr	Gly	Gln	Ile	Asn	His	Asn	Val	Leu	Ser	Thr	Ser	Thr	Leu	
			580					585					590			
Ser	Ser	Pro	Ala	Val	Asn	Leu	Gly	Gly	Phe	Ala	Pro	Val	Val	Ser	Asp	
		595					600					605				
Gly	Phe	Gly	Val	Gly	Tyr	Ala	Val	His	Asp	Asn	Trp	Ile	Gly	Cys	Asn	
610						615					620					
Val	Ser	Ser	Tyr	Pro	Gly	Arg	Asn	Ala	Arg	Glu	Phe	Leu	Gln	Cys	Val	
625					630					635					640	
Glu	Lys	Ala	Leu	Glu	Asp	Met	Phe	Asp	Ala	Leu	Glu	Gly	Lys	Ser	Ile	
				645					650					655		
Lys	Ser															

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<210> 12015
<211> 507
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<223> /note="Payload ID: 2376"

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<223> /note="Gene Symbol: CNDP1"

<220>
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<223> /note="Gene Name:
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<220>
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<223> /note="Uniprot ID: Q96KN2"

<220>
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<400> 12015
Met Asp Pro Lys Leu Gly Arg Met Ala Ala Ser Leu Leu Ala Val Leu
1          5          10          15

Leu Leu Leu Leu Glu Arg Gly Met Phe Ser Ser Pro Ser Pro Pro Pro
20          25          30

Ala Leu Leu Glu Lys Val Phe Gln Tyr Ile Asp Leu His Gln Asp Glu
35          40          45

Phe Val Gln Thr Leu Lys Glu Trp Val Ala Ile Glu Ser Asp Ser Val
50          55          60

Gln Pro Val Pro Arg Phe Arg Gln Glu Leu Phe Arg Met Met Ala Val
65          70          75          80

Ala Ala Asp Thr Leu Gln Arg Leu Gly Ala Arg Val Ala Ser Val Asp
85          90          95

Met Gly Pro Gln Gln Leu Pro Asp Gly Gln Ser Leu Pro Ile Pro Pro
100         105         110

Val Ile Leu Ala Glu Leu Gly Ser Asp Pro Thr Lys Gly Thr Val Cys
115         120         125

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Phe	Tyr	Gly	His	Leu	Asp	Val	Gln	Pro	Ala	Asp	Arg	Gly	Asp	Gly	Trp	130	135	140
Leu	Thr	Asp	Pro	Tyr	Val	Leu	Thr	Glu	Val	Asp	Gly	Lys	Leu	Tyr	Gly	145	150	155
Arg	Gly	Ala	Thr	Asp	Asn	Lys	Gly	Pro	Val	Leu	Ala	Trp	Ile	Asn	Ala	165	170	175
Val	Ser	Ala	Phe	Arg	Ala	Leu	Glu	Gln	Asp	Leu	Pro	Val	Asn	Ile	Lys	180	185	190
Phe	Ile	Ile	Glu	Gly	Met	Glu	Glu	Ala	Gly	Ser	Val	Ala	Leu	Glu	Glu	195	200	205
Leu	Val	Glu	Lys	Glu	Lys	Asp	Arg	Phe	Phe	Ser	Gly	Val	Asp	Tyr	Ile	210	215	220
Val	Ile	Ser	Asp	Asn	Leu	Trp	Ile	Ser	Gln	Arg	Lys	Pro	Ala	Ile	Thr	225	230	235
Tyr	Gly	Thr	Arg	Gly	Asn	Ser	Tyr	Phe	Met	Val	Glu	Val	Lys	Cys	Arg	245	250	255
Asp	Gln	Asp	Phe	His	Ser	Gly	Thr	Phe	Gly	Gly	Ile	Leu	His	Glu	Pro	260	265	270
Met	Ala	Asp	Leu	Val	Ala	Leu	Leu	Gly	Ser	Leu	Val	Asp	Ser	Ser	Gly	275	280	285
His	Ile	Leu	Val	Pro	Gly	Ile	Tyr	Asp	Glu	Val	Val	Pro	Leu	Thr	Glu	290	295	300
Glu	Glu	Ile	Asn	Thr	Tyr	Lys	Ala	Ile	His	Leu	Asp	Leu	Glu	Glu	Tyr	305	310	315
Arg	Asn	Ser	Ser	Arg	Val	Glu	Lys	Phe	Leu	Phe	Asp	Thr	Lys	Glu	Glu	325	330	335
Ile	Leu	Met	His	Leu	Trp	Arg	Tyr	Pro	Ser	Leu	Ser	Ile	His	Gly	Ile	340	345	350

Glu Gly Ala Phe Asp Glu Pro Gly Thr Lys Thr Val Ile Pro Gly Arg
355 360 365

Val Ile Gly Lys Phe Ser Ile Arg Leu Val Pro His Met Asn Val Ser
370 375 380

Ala Val Glu Lys Gln Val Thr Arg His Leu Glu Asp Val Phe Ser Lys
385 390 395 400

Arg Asn Ser Ser Asn Lys Met Val Val Ser Met Thr Leu Gly Leu His
405 410 415

Pro Trp Ile Ala Asn Ile Asp Asp Thr Gln Tyr Leu Ala Ala Lys Arg
420 425 430

Ala Ile Arg Thr Val Phe Gly Thr Glu Pro Asp Met Ile Arg Asp Gly
435 440 445

Ser Thr Ile Pro Ile Ala Lys Met Phe Gln Glu Ile Val His Lys Ser
450 455 460

Val Val Leu Ile Pro Leu Gly Ala Val Asp Asp Gly Glu His Ser Gln
465 470 475 480

Asn Glu Lys Ile Asn Arg Trp Asn Tyr Ile Glu Gly Thr Lys Leu Phe
485 490 495

Ala Ala Phe Phe Leu Glu Met Ala Gln Leu His
500 505

<210> 12016
<211> 464
<212> PRT
<213> Homo sapiens

<220>
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<223> /note="Payload ID: 2376"

<220>
<221> source
<223> /note="Gene Symbol: CNDP1"

<220>
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<223> /note="Gene Name:

carnosine dipeptidase 1 (metallopeptidase M20 family)"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000462096"

<400> 12016

Met Asp Pro Lys Leu Gly Arg Met Thr Leu Lys Glu Trp Val Ala Ile
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Glu Ser Asp Ser Val Gln Pro Val Pro Arg Phe Arg Gln Glu Leu Phe
20 25 30

Arg Met Met Ala Val Ala Ala Asp Thr Leu Gln Arg Leu Gly Ala Arg
35 40 45

Val Ala Ser Val Asp Met Gly Pro Gln Gln Leu Pro Asp Gly Gln Ser
50 55 60

Leu Pro Ile Pro Pro Val Ile Leu Ala Glu Leu Gly Ser Asp Pro Thr
65 70 75 80

Lys Gly Thr Val Cys Phe Tyr Gly His Leu Asp Val Gln Pro Ala Asp
85 90 95

Arg Gly Asp Gly Trp Leu Thr Asp Pro Tyr Val Leu Thr Glu Val Asp
100 105 110

Gly Lys Leu Tyr Gly Arg Gly Ala Thr Asp Asn Lys Gly Pro Val Leu
115 120 125

Ala Trp Ile Asn Ala Val Ser Ala Phe Arg Ala Leu Glu Gln Asp Leu
130 135 140

Pro Val Asn Ile Lys Phe Ile Ile Glu Gly Met Glu Glu Ala Gly Ser
145 150 155 160

Val Ala Leu Glu Glu Leu Val Glu Lys Glu Lys Asp Arg Phe Phe Ser
165 170 175

Gly Val Asp Tyr Ile Val Ile Ser Asp Asn Leu Trp Ile Ser Gln Arg
180 185 190

Lys Pro Ala Ile Thr Tyr Gly Thr Arg Gly Asn Ser Tyr Phe Met Val
195 200 205

Glu	Val	Lys	Cys	Arg	Asp	Gln	Asp	Phe	His	Ser	Gly	Thr	Phe	Gly	Gly			
210						215					220							
Ile	Leu	His	Glu	Pro	Met	Ala	Asp	Leu	Val	Ala	Leu	Leu	Gly	Ser	Leu			
225					230					235					240			
Val	Asp	Ser	Ser	Gly	His	Ile	Leu	Val	Pro	Gly	Ile	Tyr	Asp	Glu	Val			
				245					250					255				
Val	Pro	Leu	Thr	Glu	Glu	Glu	Ile	Asn	Thr	Tyr	Lys	Ala	Ile	His	Leu			
			260					265					270					
Asp	Leu	Glu	Glu	Tyr	Arg	Asn	Ser	Ser	Arg	Val	Glu	Lys	Phe	Leu	Phe			
	275						280					285						
Asp	Thr	Lys	Glu	Glu	Ile	Leu	Met	His	Leu	Trp	Arg	Tyr	Pro	Ser	Leu			
290						295					300							
Ser	Ile	His	Gly	Ile	Glu	Gly	Ala	Phe	Asp	Glu	Pro	Gly	Thr	Lys	Thr			
305					310					315					320			
Val	Ile	Pro	Gly	Arg	Val	Ile	Gly	Lys	Phe	Ser	Ile	Arg	Leu	Val	Pro			
				325					330					335				
His	Met	Asn	Val	Ser	Ala	Val	Glu	Lys	Gln	Val	Thr	Arg	His	Leu	Glu			
			340					345					350					
Asp	Val	Phe	Ser	Lys	Arg	Asn	Ser	Ser	Asn	Lys	Met	Val	Val	Ser	Met			
		355					360					365						
Thr	Leu	Gly	Leu	His	Pro	Trp	Ile	Ala	Asn	Ile	Asp	Asp	Thr	Gln	Tyr			
370						375					380							
Leu	Ala	Ala	Lys	Arg	Ala	Ile	Arg	Thr	Val	Phe	Gly	Thr	Glu	Pro	Asp			
385					390					395					400			
Met	Ile	Arg	Asp	Gly	Ser	Thr	Ile	Pro	Ile	Ala	Lys	Met	Phe	Gln	Glu			
				405					410					415				
Ile	Val	His	Lys	Ser	Val	Val	Leu	Ile	Pro	Leu	Gly	Ala	Val	Asp	Asp			
			420					425					430					

Gly Glu His Ser Gln Asn Glu Lys Ile Asn Arg Trp Asn Tyr Ile Glu
435 440 445

Gly Thr Lys Leu Phe Ala Ala Phe Phe Leu Glu Met Ala Gln Leu His
450 455 460

<210> 12017

<211> 38

<212> PRT

<213> Homo sapiens

<220>

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<220>

<221> source

<223> /note="Gene Symbol: CNDP1"

<220>

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<223> /note="Gene Name:
carnosine dipeptidase 1 (metallopeptidase M20 family)"

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<223> /note="ENSP ID: ENSP00000463807"

<220>

<221> MOD_RES

<222> (1)..(1)

<223> Any amino acid

<400> 12017

Xaa Ala Asp Arg Gly Asp Gly Trp Leu Thr Asp Pro Tyr Val Leu Thr
1 5 10 15

Glu Gly Asn Phe Met Asp Glu Glu Arg Pro Thr Thr Lys Ala Leu Ser
20 25 30

Trp Leu Gly Ser Met Leu
35

<210> 12018

<211> 153

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2377"

<220>

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<223> /note="Gene Symbol: CARNMT1"

<220>

<221> source

<223> /note="Gene Name:
carnosine N-methyltransferase 1"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000366026"

<400> 12018

Met Gln Arg Arg Arg Arg Pro Pro Pro Pro Thr Ser Arg Leu Pro Glu
1 5 10 15

Gly Cys Gly Gly Gly Gly Gly Gly Ser Glu Glu Val Glu Val Gln Phe
20 25 30

Ser Ala Gly Arg Trp Gly Ser Ala Ala Ala Val Ser Ala Ala Ala Ala
35 40 45

Ala Ala Thr Arg Ser Thr Glu Glu Glu Glu Arg Leu Glu Arg Glu
50 55 60

His Phe Trp Lys Ile Ile Asn Ala Phe Arg Tyr Tyr Gly Thr Ser Met
65 70 75 80

His Glu Arg Val Asn Arg Thr Glu Arg Gln Phe Arg Ser Leu Pro Ala
85 90 95

Asn Gln Gln Lys Leu Leu Pro Gln Phe Leu Leu His Leu Asp Lys Ile
100 105 110

Arg Lys Cys Ile Asp His Asn Gln Glu Ile Leu Leu Thr Ile Val Asn
115 120 125

Asp Cys Ile His Met Phe Glu Asn Lys Glu Tyr Gly Glu Asp Val Cys
130 135 140

Glu Ser Leu Phe Tyr Phe Cys Leu Phe
145 150

<210> 12019

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<211> 409
<212> PRT
<213> Homo sapiens

<220>
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<220>
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<220>
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<223> /note="Gene Name:
      carnosine N-methyltransferase 1"

<220>
<221> source
<223> /note="Uniprot ID: Q8N4J0"

<220>
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<223> /note="ENSP ID: ENSP00000366030"

<400> 12019
Met  Gln  Arg  Arg  Arg  Arg  Pro  Pro  Pro  Pro  Thr  Ser  Arg  Leu  Pro  Glu
1      5      10      15

Gly  Cys  Gly  Gly  Gly  Gly  Gly  Gly  Ser  Glu  Glu  Val  Glu  Val  Gln  Phe
      20      25      30

Ser  Ala  Gly  Arg  Trp  Gly  Ser  Ala  Ala  Ala  Val  Ser  Ala  Ala  Ala  Ala
      35      40      45

Ala  Ala  Thr  Arg  Ser  Thr  Glu  Glu  Glu  Glu  Glu  Arg  Leu  Glu  Arg  Glu
      50      55      60

His  Phe  Trp  Lys  Ile  Ile  Asn  Ala  Phe  Arg  Tyr  Tyr  Gly  Thr  Ser  Met
65      70      75      80

His  Glu  Arg  Val  Asn  Arg  Thr  Glu  Arg  Gln  Phe  Arg  Ser  Leu  Pro  Ala
      85      90      95

Asn  Gln  Gln  Lys  Leu  Leu  Pro  Gln  Phe  Leu  Leu  His  Leu  Asp  Lys  Ile
      100     105     110

Arg  Lys  Cys  Ile  Asp  His  Asn  Gln  Glu  Ile  Leu  Leu  Thr  Ile  Val  Asn
      115     120     125

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Asp	Cys	Ile	His	Met	Phe	Glu	Asn	Lys	Glu	Tyr	Gly	Glu	Asp	Gly	Asn		
	130					135					140						
Gly	Lys	Ile	Met	Pro	Ala	Ser	Thr	Phe	Asp	Met	Asp	Lys	Leu	Lys	Ser		
145					150					155					160		
Thr	Leu	Lys	Gln	Phe	Val	Arg	Asp	Trp	Ser	Glu	Thr	Gly	Lys	Ala	Glu		
				165					170					175			
Arg	Asp	Ala	Cys	Tyr	Gln	Pro	Ile	Ile	Lys	Glu	Ile	Leu	Lys	Asn	Phe		
			180					185					190				
Pro	Lys	Glu	Arg	Trp	Asp	Pro	Ser	Lys	Val	Asn	Ile	Leu	Val	Pro	Gly		
		195					200					205					
Ala	Gly	Leu	Gly	Arg	Leu	Ala	Trp	Glu	Ile	Ala	Met	Leu	Gly	Tyr	Ala		
	210					215					220						
Cys	Gln	Gly	Asn	Glu	Trp	Ser	Phe	Phe	Met	Leu	Phe	Ser	Ser	Asn	Phe		
225					230					235					240		
Val	Leu	Asn	Arg	Cys	Ser	Glu	Ile	Asn	Lys	Tyr	Lys	Leu	Tyr	Pro	Trp		
				245					250					255			
Ile	His	Gln	Phe	Ser	Asn	Asn	Arg	Arg	Ser	Ala	Asp	Gln	Ile	Arg	Pro		
			260					265					270				
Ile	Phe	Phe	Pro	Asp	Val	Asp	Pro	His	Ser	Leu	Pro	Pro	Gly	Ser	Asn		
		275					280					285					
Phe	Ser	Met	Thr	Ala	Gly	Asp	Phe	Gln	Glu	Ile	Tyr	Ser	Glu	Cys	Asn		
	290					295					300						
Thr	Trp	Asp	Cys	Ile	Ala	Thr	Cys	Phe	Phe	Ile	Asp	Thr	Ala	His	Asn		
305					310					315					320		
Val	Ile	Asp	Tyr	Ile	Asp	Thr	Ile	Trp	Lys	Ile	Leu	Lys	Pro	Gly	Gly		
				325					330					335			
Ile	Trp	Ile	Asn	Leu	Gly	Pro	Leu	Leu	Tyr	His	Phe	Glu	Asn	Leu	Ala		
			340					345					350				

Asn Glu Leu Ser Ile Glu Leu Ser Tyr Glu Asp Ile Lys Asn Val Val
355 360 365

Leu Gln Tyr Gly Phe Lys Val Glu Val Glu Lys Glu Ser Val Leu Ser
370 375 380

Thr Tyr Thr Val Asn Asp Leu Ser Met Met Lys Tyr Tyr Tyr Glu Cys
385 390 395 400

Val Leu Phe Val Val Arg Lys Pro Gln
405

<210> 12020
<211> 238
<212> PRT
<213> Homo sapiens

<220>
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<223> /note="Payload ID: 2377"

<220>
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<223> /note="Gene Symbol: CARNMT1"

<220>
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<223> /note="Gene Name:
carnosine N-methyltransferase 1"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000396353"

<400> 12020
Val Leu Arg Leu Gln Leu Glu Ser Asp Arg His Asp Leu Leu Arg Ser
1 5 10 15

Thr Ser Met His Glu Arg Val Asn Arg Thr Glu Arg Gln Phe Arg Ser
20 25 30

Leu Pro Ala Asn Gln Gln Lys Leu Leu Pro Gln Phe Leu Leu His Leu
35 40 45

Asp Lys Ile Arg Lys Cys Ile Asp His Asn Gln Glu Ile Leu Leu Thr
50 55 60

Ile Val Asn Asp Cys Ile His Met Phe Glu Asn Lys Glu Tyr Gly Glu
65 70 75 80

Asp Gly Asn Gly Lys Ile Met Pro Ala Ser Thr Phe Asp Met Asp Lys
85 90 95

Leu Lys Ser Thr Leu Lys Gln Phe Val Arg Asp Trp Ser Glu Thr Gly
100 105 110

Lys Ala Glu Arg Asp Ala Cys Tyr Gln Pro Ile Ile Lys Glu Ile Leu
115 120 125

Lys Asn Phe Pro Lys Glu Arg Trp Asp Pro Ser Lys Val Asn Ile Leu
130 135 140

Val Pro Gly Ala Gly Leu Gly Arg Leu Ala Trp Glu Ile Ala Met Leu
145 150 155 160

Gly Tyr Ala Cys Gln Gly Asn Glu Trp Ser Phe Phe Met Leu Phe Ser
165 170 175

Ser Asn Phe Val Leu Asn Arg Cys Ser Glu Ile Asn Lys Tyr Lys Leu
180 185 190

Tyr Pro Trp Ile His Gln Phe Ser Asn Asn Arg Arg Ser Ala Asp Gln
195 200 205

Ile Arg Pro Ile Phe Phe Pro Asp Val Asp Pro His Ser Leu Pro Pro
210 215 220

Gly Ser Asn Phe Ser Met Thr Ala Gly Asp Phe Gln Glu Ile
225 230 235

<210> 12021

<211> 827

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2378"

<220>

<221> source

<223> /note="Gene Symbol: CARNS1"

<220>

<221> source

<223> /note="Gene Name:
carnosine synthase 1"

<220>

<221> source

<223> /note="Uniprot ID: A5YM72"

<220>

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<223> /note="ENSP ID: ENSP00000308268"

<400> 12021

Met Leu Leu Cys Leu Ser Pro Ala Trp Leu Met Lys Val Pro Ala Pro
1 5 10 15

Gly Gln Pro Gly Glu Ala Ala Leu Leu Val Ser Lys Ala Val Ser Phe
20 25 30

His Pro Gly Gly Leu Thr Phe Leu Asp Asp Phe Val Pro Pro Arg Arg
35 40 45

Ala Thr Tyr Phe Leu Ala Gly Leu Gly Leu Gly Pro Gly Arg Gly Arg
50 55 60

Glu Ala Ala Glu Leu Ala Arg Asp Leu Thr Cys Pro Thr Gly Ala Ser
65 70 75 80

Ala Glu Leu Ala Arg Leu Leu Glu Asp Arg Leu Leu Thr Arg Gln Leu
85 90 95

Leu Ala Gln Gln Gly Gly Val Ala Val Pro Ala Thr Leu Ala Phe Thr
100 105 110

Tyr Lys Pro Pro Gly Leu Leu Arg Gly Gly Asp Ala Ser Leu Gly Leu
115 120 125

Arg Leu Val Glu Leu Ser Gly Lys Glu Gly Gln Glu Thr Leu Val Lys
130 135 140

Glu Glu Val Glu Ala Phe Leu Arg Ser Glu Ala Leu Gly Asp Ile Leu
145 150 155 160

Gln Val Ala Val Lys Leu Ser Gly Trp Arg Trp Arg Gly Arg Gln Ala
165 170 175

Trp Arg Leu His Pro Arg Ala Glu Leu Gly Ala Val Val Asp Thr Val

180						185						190					
Leu	Ala	Leu	Leu	Glu	Lys	Leu	Glu	Glu	Glu	Glu	Ser	Val	Leu	Val	Glu		
		195					200					205					
Ala	Val	Tyr	Pro	Pro	Ala	Gln	Leu	Pro	Cys	Ser	Asp	Gly	Pro	Ser	Pro		
	210					215					220						
Gly	Pro	Gly	Leu	Ala	Val	Arg	Ile	Cys	Ala	Val	Val	Cys	Arg	Thr	Gln		
225					230					235					240		
Gly	Asp	Arg	Pro	Leu	Leu	Ser	Lys	Val	Val	Cys	Gly	Val	Gly	Arg	Gly		
				245					250					255			
Asp	Arg	Pro	Leu	Arg	His	His	Asn	Ser	Leu	Pro	Arg	Thr	Leu	Glu	Val		
			260					265					270				
Ala	Leu	Ala	Gln	Cys	Gly	Leu	Gly	Glu	Glu	Ala	Gln	Val	Ala	Ala	Val		
		275					280					285					
Arg	Gln	Arg	Val	Lys	Ala	Ala	Ala	Glu	Ala	Ala	Leu	Ala	Ala	Val	Leu		
	290					295					300						
Ala	Leu	Glu	Ala	Gly	Leu	Ser	Ala	Glu	Gln	Arg	Gly	Gly	Arg	Arg	Ala		
305					310					315					320		
His	Thr	Asp	Phe	Leu	Gly	Val	Asp	Phe	Ala	Leu	Thr	Ala	Ala	Gly	Gly		
				325					330					335			
Val	Leu	Thr	Pro	Val	Ala	Leu	Glu	Leu	Asn	Gly	Gly	Leu	Cys	Leu	Glu		
			340					345					350				
Ala	Cys	Gly	Ala	Leu	Glu	Gly	Leu	Trp	Ala	Ala	Pro	Arg	Leu	Gly	Pro		
		355					360					365					
Ala	Ala	Asp	Glu	Ala	Val	Ala	Ala	Pro	Leu	Val	Glu	Thr	Met	Leu	Arg		
	370					375					380						
Arg	Ser	Ala	Arg	Cys	Leu	Met	Glu	Gly	Lys	Gln	Leu	Leu	Val	Val	Gly		
385					390					395					400		
Ala	Gly	Gly	Val	Ser	Lys	Lys	Phe	Val	Trp	Glu	Ala	Ala	Arg	Asp	Tyr		
				405					410					415			

Gly	Leu	Gln	Leu	His	Leu	Val	Glu	Ser	Asp	Pro	Asn	His	Phe	Ala	Ser	
			420					425					430			
Gln	Leu	Val	Gln	Thr	Phe	Ile	His	Phe	Asp	Met	Thr	Glu	His	Arg	Arg	
		435					440					445				
Asp	Glu	Glu	Asn	Ala	Arg	Leu	Leu	Ala	Glu	Leu	Val	Arg	Ala	Arg	Gly	
	450					455					460					
Leu	Lys	Leu	Asp	Gly	Cys	Phe	Ser	Tyr	Trp	Asp	Asp	Cys	Leu	Val	Leu	
465					470					475					480	
Thr	Ala	Leu	Leu	Cys	Gln	Glu	Leu	Gly	Leu	Pro	Cys	Ser	Ser	Pro	Ala	
				485					490					495		
Ala	Met	Arg	Leu	Ala	Lys	Gln	Lys	Ser	Leu	Thr	Gln	Leu	His	Leu	Leu	
			500					505					510			
His	His	His	Gly	Pro	Pro	Trp	Pro	Ala	Pro	Ser	Leu	His	Ala	Val	Pro	
		515					520					525				
Cys	Cys	Pro	Leu	Glu	Ser	Glu	Ala	Asp	Val	Glu	Arg	Ala	Val	His	Gln	
	530					535					540					
Val	Pro	Leu	Pro	Gly	Val	Met	Lys	Leu	Glu	Phe	Gly	Ala	Gly	Ala	Val	
545					550					555						560
Gly	Val	Arg	Leu	Val	Glu	Asp	Ala	Pro	Gln	Cys	His	Glu	His	Phe	Ser	
				565					570					575		
Arg	Ile	Thr	Arg	Asp	Leu	Gln	Gly	Glu	Ala	Asp	His	Pro	Gly	Ile	Gly	
			580					585					590			
Leu	Gly	Trp	Gly	Asn	Ala	Met	Leu	Leu	Met	Glu	Phe	Val	Glu	Gly	Thr	
		595					600					605				
Glu	His	Asp	Val	Asp	Leu	Val	Leu	Phe	Gly	Gly	Arg	Leu	Leu	Ala	Ala	
	610					615					620					
Phe	Val	Ser	Asp	Asn	Gly	Pro	Thr	Arg	Leu	Pro	Gly	Phe	Thr	Glu	Thr	
625					630					635					640	

Ala Ala Cys Met Pro Thr Gly Leu Ala Pro Glu Gln Glu Ala Gln Met
645 650 655

Val Gln Ala Ala Phe Arg Cys Cys Leu Gly Cys Gly Leu Leu Asp Gly
660 665 670

Val Phe Asn Val Glu Leu Lys Leu Thr Gly Ala Gly Pro Arg Leu Ile
675 680 685

Glu Ile Asn Pro Arg Met Gly Gly Phe Tyr Leu Arg Asp Trp Ile Leu
690 695 700

Glu Leu Tyr Gly Val Asp Leu Leu Leu Ala Ala Val Met Val Ala Cys
705 710 715 720

Gly Leu Arg Pro Ala Leu Pro Thr Arg Pro Arg Ala Arg Gly His Leu
725 730 735

Val Gly Val Met Cys Leu Val Ser Gln His Leu Gln Ala Leu Ser Ser
740 745 750

Thr Ala Ser Arg Glu Thr Leu Gln Ala Leu His Asp Arg Gly Leu Leu
755 760 765

Arg Leu Asn Leu Leu Glu Glu Ala Leu Val Pro Gly Glu Tyr Glu Glu
770 775 780

Pro Tyr Cys Ser Val Ala Cys Ala Gly Pro Ser Pro Thr Glu Ala Arg
785 790 795 800

Leu Arg Leu Leu Gly Leu Cys Gln Gly Leu Gly Ile Asp Gly Pro Ser
805 810 815

Tyr Pro Val Ala His Phe Leu Ser His Phe Lys
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<210> 12022

<211> 950

<212> PRT

<213> Homo sapiens

<220>

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<223> /note="Payload ID: 2378"

<220>
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<220>
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<220>
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 <223> /note="Uniprot ID: A5YM72"

<220>
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 20 25 30

Pro Pro Thr Gly Cys Phe Pro Gly Ser Trp Arg Gln Asp Val Gly Leu
 35 40 45

Asp Cys Lys Gly Ser Pro Glu Gly Ala Glu Ala Arg Ala Trp Thr Val
 50 55 60

Tyr Tyr Tyr Ser Leu Leu Gln Ser Cys Leu Gln Gln Ala Gly Leu Pro
 65 70 75 80

Glu Thr Gln Asp Arg Gly Gln Val Pro Arg Thr Gly Cys Pro Gly Ala
 85 90 95

Glu Val Thr Leu Cys Val Leu Gly Ser Pro Ser Thr Phe Leu Pro Val
 100 105 110

Leu Leu Glu Gly Gly Val Gln Ser Pro Gly Asn Met Leu Leu Cys Leu
 115 120 125

Ser Pro Ala Trp Leu Met Lys Val Pro Ala Pro Gly Gln Pro Gly Glu
 130 135 140

Ala Ala Leu Leu Val Ser Lys Ala Val Ser Phe His Pro Gly Gly Leu
 145 150 155 160

Thr	Phe	Leu	Asp	Asp	Phe	Val	Pro	Pro	Arg	Arg	Ala	Thr	Tyr	Phe	Leu			
				165					170					175				
Ala	Gly	Leu	Gly	Leu	Gly	Pro	Gly	Arg	Gly	Arg	Glu	Ala	Ala	Glu	Leu			
			180					185					190					
Ala	Arg	Asp	Leu	Thr	Cys	Pro	Thr	Gly	Ala	Ser	Ala	Glu	Leu	Ala	Arg			
		195					200					205						
Leu	Leu	Glu	Asp	Arg	Leu	Leu	Thr	Arg	Gln	Leu	Leu	Ala	Gln	Gln	Gly			
	210					215					220							
Gly	Val	Ala	Val	Pro	Ala	Thr	Leu	Ala	Phe	Thr	Tyr	Lys	Pro	Pro	Gly			
225					230					235					240			
Leu	Leu	Arg	Gly	Gly	Asp	Ala	Ser	Leu	Gly	Leu	Arg	Leu	Val	Glu	Leu			
				245					250					255				
Ser	Gly	Lys	Glu	Gly	Gln	Glu	Thr	Leu	Val	Lys	Glu	Glu	Val	Glu	Ala			
			260					265					270					
Phe	Leu	Arg	Ser	Glu	Ala	Leu	Gly	Asp	Ile	Leu	Gln	Val	Ala	Val	Lys			
		275					280					285						
Leu	Ser	Gly	Trp	Arg	Trp	Arg	Gly	Arg	Gln	Ala	Trp	Arg	Leu	His	Pro			
	290					295					300							
Arg	Ala	Glu	Leu	Gly	Ala	Val	Val	Asp	Thr	Val	Leu	Ala	Leu	Leu	Glu			
305					310					315					320			
Lys	Leu	Glu	Glu	Glu	Glu	Ser	Val	Leu	Val	Glu	Ala	Val	Tyr	Pro	Pro			
				325					330					335				
Ala	Gln	Leu	Pro	Cys	Ser	Asp	Gly	Pro	Ser	Pro	Gly	Pro	Gly	Leu	Ala			
			340					345					350					
Val	Arg	Ile	Cys	Ala	Val	Val	Cys	Arg	Thr	Gln	Gly	Asp	Arg	Pro	Leu			
		355					360					365						
Leu	Ser	Lys	Val	Val	Cys	Gly	Val	Gly	Arg	Gly	Asp	Arg	Pro	Leu	Arg			
	370					375					380							

His 385	His	Asn	Ser	Leu	Pro 390	Arg	Thr	Leu	Glu	Val 395	Ala	Leu	Ala	Gln	Cys 400
Gly	Leu	Gly	Glu	Glu 405	Ala	Gln	Val	Ala	Ala 410	Val	Arg	Gln	Arg	Val 415	Lys
Ala	Ala	Ala	Glu 420	Ala	Ala	Leu	Ala	Ala 425	Val	Leu	Ala	Leu	Glu 430	Ala	Gly
Leu	Ser	Ala 435	Glu	Gln	Arg	Gly	Gly 440	Arg	Arg	Ala	His	Thr 445	Asp	Phe	Leu
Gly 450	Val	Asp	Phe	Ala	Leu	Thr 455	Ala	Ala	Gly	Gly	Val 460	Leu	Thr	Pro	Val
Ala 465	Leu	Glu	Leu	Asn	Gly 470	Gly	Leu	Cys	Leu	Glu 475	Ala	Cys	Gly	Ala	Leu 480
Glu	Gly	Leu	Trp	Ala 485	Ala	Pro	Arg	Leu	Gly 490	Pro	Ala	Ala	Asp	Glu 495	Ala
Val	Ala	Ala	Pro 500	Leu	Val	Glu	Thr	Met 505	Leu	Arg	Arg	Ser	Ala 510	Arg	Cys
Leu	Met	Glu 515	Gly	Lys	Gln	Leu	Leu 520	Val	Val	Gly	Ala	Gly 525	Gly	Val	Ser
Lys 530	Lys	Phe	Val	Trp	Glu	Ala 535	Ala	Arg	Asp	Tyr	Gly 540	Leu	Gln	Leu	His
Leu 545	Val	Glu	Ser	Asp	Pro 550	Asn	His	Phe	Ala	Ser 555	Gln	Leu	Val	Gln	Thr 560
Phe	Ile	His	Phe	Asp 565	Met	Thr	Glu	His	Arg 570	Arg	Asp	Glu	Glu	Asn 575	Ala
Arg	Leu	Leu	Ala 580	Glu	Leu	Val	Arg	Ala 585	Arg	Gly	Leu	Lys	Leu 590	Asp	Gly
Cys	Phe	Ser 595	Tyr	Trp	Asp	Asp	Cys 600	Leu	Val	Leu	Thr	Ala 605	Leu	Leu	Cys

Gln 610	Glu	Leu	Gly	Leu	Pro	Cys 615	Ser	Ser	Pro	Ala	Ala 620	Met	Arg	Leu	Ala
Lys 625	Gln	Lys	Ser	Leu	Thr 630	Gln	Leu	His	Leu	Leu 635	His	His	His	Gly	Pro 640
Pro	Trp	Pro	Ala	Pro 645	Ser	Leu	His	Ala	Val 650	Pro	Cys	Cys	Pro	Leu 655	Glu
Ser	Glu	Ala	Asp 660	Val	Glu	Arg	Ala	Val 665	His	Gln	Val	Pro	Leu 670	Pro	Gly
Val	Met	Lys 675	Leu	Glu	Phe	Gly	Ala 680	Gly	Ala	Val	Gly	Val 685	Arg	Leu	Val
Glu 690	Asp	Ala	Pro	Gln	Cys	His 695	Glu	His	Phe	Ser	Arg 700	Ile	Thr	Arg	Asp
Leu 705	Gln	Gly	Glu	Ala	Asp 710	His	Pro	Gly	Ile	Gly 715	Leu	Gly	Trp	Gly	Asn 720
Ala	Met	Leu	Leu	Met 725	Glu	Phe	Val	Glu	Gly 730	Thr	Glu	His	Asp	Val 735	Asp
Leu	Val	Leu	Phe 740	Gly	Gly	Arg	Leu	Leu 745	Ala	Ala	Phe	Val	Ser 750	Asp	Asn
Gly	Pro	Thr 755	Arg	Leu	Pro	Gly	Phe 760	Thr	Glu	Thr	Ala	Ala 765	Cys	Met	Pro
Thr 770	Gly	Leu	Ala	Pro	Glu	Gln 775	Glu	Ala	Gln	Met	Val 780	Gln	Ala	Ala	Phe
Arg 785	Cys	Cys	Leu	Gly	Cys 790	Gly	Leu	Leu	Asp	Gly 795	Val	Phe	Asn	Val	Glu 800
Leu	Lys	Leu	Thr 805	Gly	Ala	Gly	Pro	Arg	Leu 810	Ile	Glu	Ile	Asn	Pro 815	Arg
Met	Gly	Gly	Phe 820	Tyr	Leu	Arg	Asp	Trp 825	Ile	Leu	Glu	Leu	Tyr 830	Gly	Val
Asp	Leu	Leu	Leu	Ala	Ala	Val	Met	Val	Ala	Cys	Gly	Leu	Arg	Pro	Ala

835		840		845											
Leu	Pro	Thr	Arg	Pro	Arg	Ala	Arg	Gly	His	Leu	Val	Gly	Val	Met	Cys
850						855					860				
Leu	Val	Ser	Gln	His	Leu	Gln	Ala	Leu	Ser	Ser	Thr	Ala	Ser	Arg	Glu
865					870					875					880
Thr	Leu	Gln	Ala	Leu	His	Asp	Arg	Gly	Leu	Leu	Arg	Leu	Asn	Leu	Leu
				885					890					895	
Glu	Glu	Ala	Leu	Val	Pro	Gly	Glu	Tyr	Glu	Glu	Pro	Tyr	Cys	Ser	Val
			900					905					910		
Ala	Cys	Ala	Gly	Pro	Ser	Pro	Thr	Glu	Ala	Arg	Leu	Arg	Leu	Leu	Gly
		915					920					925			
Leu	Cys	Gln	Gly	Leu	Gly	Ile	Asp	Gly	Pro	Ser	Tyr	Pro	Val	Ala	His
930						935					940				
Phe	Leu	Ser	His	Phe	Lys										
945					950										

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<210> 12023
<211> 924
<212> PRT
<213> Homo sapiens

<220>
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<223> /note="Payload ID: 2378"

<220>
<221> source
<223> /note="Gene Symbol: CARNS1"

<220>
<221> source
<223> /note="Gene Name:
      carnosine synthase 1"

<220>
<221> source
<223> /note="Uniprot ID: A5YM72"

<220>
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<223> /note="ENSP ID: ENSP00000431670"

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<400> 12023

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1 5 10 15

Ser Lys Asp Leu Glu Glu Glu Gly Pro Trp Gly Gly Gly Ser Gly Leu
20 25 30

Pro Pro Thr Gly Cys Phe Pro Gly Ser Trp Arg Gln Asp Val Gly Leu
35 40 45

Asp Cys Lys Gly Ser Pro Glu Gly Ala Glu Ala Arg Ala Trp Thr Val
50 55 60

Tyr Tyr Tyr Ser Leu Leu Gln Ser Cys Leu Gln Gln Ala Gly Leu Pro
65 70 75 80

Glu Thr Gln Asp Arg Gly Gln Val Pro Arg Thr Gly Cys Pro Gly Ala
85 90 95

Glu Val Thr Leu Cys Val Leu Gly Ser Pro Ser Thr Phe Leu Pro Val
100 105 110

Leu Leu Glu Gly Gly Val Gln Ser Pro Gly Asn Met Leu Leu Cys Leu
115 120 125

Ser Pro Ala Trp Leu Met Lys Val Pro Ala Pro Gly Gln Pro Gly Glu
130 135 140

Ala Ala Leu Leu Val Ser Lys Ala Val Ser Phe His Pro Gly Gly Leu
145 150 155 160

Thr Phe Leu Asp Asp Phe Val Pro Pro Arg Arg Ala Thr Tyr Phe Leu
165 170 175

Ala Gly Leu Gly Leu Gly Pro Gly Arg Gly Arg Glu Ala Ala Glu Leu
180 185 190

Ala Arg Asp Leu Thr Cys Pro Thr Gly Ala Ser Ala Glu Leu Ala Arg
195 200 205

Leu Leu Glu Asp Arg Leu Leu Thr Arg Gln Leu Leu Ala Gln Gln Gly
210 215 220

Gly	Val	Ala	Val	Pro	Ala	Thr	Leu	Ala	Phe	Thr	Tyr	Lys	Pro	Pro	Gly
225					230					235					240
Leu	Leu	Arg	Gly	Gly	Asp	Ala	Ser	Leu	Gly	Leu	Arg	Leu	Val	Glu	Leu
				245					250					255	
Ser	Gly	Lys	Glu	Gly	Gln	Glu	Thr	Leu	Val	Lys	Glu	Glu	Val	Glu	Ala
			260					265					270		
Phe	Leu	Arg	Ser	Glu	Ala	Leu	Gly	Asp	Ile	Leu	Gln	Val	Ala	Val	Lys
		275					280					285			
Leu	Ser	Gly	Trp	Arg	Trp	Arg	Gly	Arg	Gln	Ala	Trp	Arg	Leu	His	Pro
	290					295					300				
Arg	Ala	Glu	Leu	Gly	Ala	Val	Val	Asp	Thr	Val	Leu	Ala	Leu	Leu	Glu
305					310					315					320
Lys	Leu	Glu	Glu	Glu	Glu	Ser	Val	Leu	Val	Glu	Ala	Val	Tyr	Pro	Pro
				325					330					335	
Ala	Gln	Leu	Pro	Cys	Ser	Asp	Gly	Pro	Ser	Pro	Gly	Pro	Gly	Leu	Ala
			340					345					350		
Val	Arg	Ile	Cys	Ala	Val	Val	Cys	Arg	Thr	Gln	Gly	Asp	Arg	Pro	Leu
		355					360					365			
Leu	Ser	Lys	Val	Val	Cys	Gly	Val	Gly	Arg	Gly	Asp	Arg	Pro	Leu	Arg
	370					375					380				
His	His	Asn	Ser	Leu	Pro	Arg	Thr	Leu	Glu	Ala	Ala	Leu	Ala	Ala	Val
385					390					395					400
Leu	Ala	Leu	Glu	Ala	Gly	Leu	Ser	Ala	Glu	Gln	Arg	Gly	Gly	Arg	Arg
				405					410					415	
Ala	His	Thr	Asp	Phe	Leu	Gly	Val	Asp	Phe	Ala	Leu	Thr	Ala	Ala	Gly
			420					425					430		
Gly	Val	Leu	Thr	Pro	Val	Ala	Leu	Glu	Leu	Asn	Gly	Gly	Leu	Cys	Leu
		435					440					445			
Glu	Ala	Cys	Gly	Ala	Leu	Glu	Gly	Leu	Trp	Ala	Ala	Pro	Arg	Leu	Gly

450						455						460				
Pro	Ala	Ala	Asp	Glu	Ala	Val	Ala	Ala	Pro	Leu	Val	Glu	Thr	Met	Leu	
465					470					475					480	
Arg	Arg	Ser	Ala	Arg	Cys	Leu	Met	Glu	Gly	Lys	Gln	Leu	Leu	Val	Val	
				485					490					495		
Gly	Ala	Gly	Gly	Val	Ser	Lys	Lys	Phe	Val	Trp	Glu	Ala	Ala	Arg	Asp	
			500					505					510			
Tyr	Gly	Leu	Gln	Leu	His	Leu	Val	Glu	Ser	Asp	Pro	Asn	His	Phe	Ala	
		515					520					525				
Ser	Gln	Leu	Val	Gln	Thr	Phe	Ile	His	Phe	Asp	Met	Thr	Glu	His	Arg	
	530					535					540					
Arg	Asp	Glu	Glu	Asn	Ala	Arg	Leu	Leu	Ala	Glu	Leu	Val	Arg	Ala	Arg	
545					550					555					560	
Gly	Leu	Lys	Leu	Asp	Gly	Cys	Phe	Ser	Tyr	Trp	Asp	Asp	Cys	Leu	Val	
				565					570					575		
Leu	Thr	Ala	Leu	Leu	Cys	Gln	Glu	Leu	Gly	Leu	Pro	Cys	Ser	Ser	Pro	
			580					585					590			
Ala	Ala	Met	Arg	Leu	Ala	Lys	Gln	Lys	Ser	Leu	Thr	Gln	Leu	His	Leu	
		595					600					605				
Leu	His	His	His	Gly	Pro	Pro	Trp	Pro	Ala	Pro	Ser	Leu	His	Ala	Val	
	610					615					620					
Pro	Cys	Cys	Pro	Leu	Glu	Ser	Glu	Ala	Asp	Val	Glu	Arg	Ala	Val	His	
625					630					635					640	
Gln	Val	Pro	Leu	Pro	Gly	Val	Met	Lys	Leu	Glu	Phe	Gly	Ala	Gly	Ala	
				645					650					655		
Val	Gly	Val	Arg	Leu	Val	Glu	Asp	Ala	Pro	Gln	Cys	His	Glu	His	Phe	
			660					665					670			
Ser	Arg	Ile	Thr	Arg	Asp	Leu	Gln	Gly	Glu	Ala	Asp	His	Pro	Gly	Ile	
		675					680					685				

Gly	Leu	Gly	Trp	Gly	Asn	Ala	Met	Leu	Leu	Met	Glu	Phe	Val	Glu	Gly	690	695	700
Thr	Glu	His	Asp	Val	Asp	Leu	Val	Leu	Phe	Gly	Gly	Arg	Leu	Leu	Ala	705	710	715
Ala	Phe	Val	Ser	Asp	Asn	Gly	Pro	Thr	Arg	Leu	Pro	Gly	Phe	Thr	Glu	725	730	735
Thr	Ala	Ala	Cys	Met	Pro	Thr	Gly	Leu	Ala	Pro	Glu	Gln	Glu	Ala	Gln	740	745	750
Met	Val	Gln	Ala	Ala	Phe	Arg	Cys	Cys	Leu	Gly	Cys	Gly	Leu	Leu	Asp	755	760	765
Gly	Val	Phe	Asn	Val	Glu	Leu	Lys	Leu	Thr	Gly	Ala	Gly	Pro	Arg	Leu	770	775	780
Ile	Glu	Ile	Asn	Pro	Arg	Met	Gly	Gly	Phe	Tyr	Leu	Arg	Asp	Trp	Ile	785	790	795
Leu	Glu	Leu	Tyr	Gly	Val	Asp	Leu	Leu	Leu	Ala	Ala	Val	Met	Val	Ala	805	810	815
Cys	Gly	Leu	Arg	Pro	Ala	Leu	Pro	Thr	Arg	Pro	Arg	Ala	Arg	Gly	His	820	825	830
Leu	Val	Gly	Val	Met	Cys	Leu	Val	Ser	Gln	His	Leu	Gln	Ala	Leu	Ser	835	840	845
Ser	Thr	Ala	Ser	Arg	Glu	Thr	Leu	Gln	Ala	Leu	His	Asp	Arg	Gly	Leu	850	855	860
Leu	Arg	Leu	Asn	Leu	Leu	Glu	Glu	Ala	Leu	Val	Pro	Gly	Glu	Tyr	Glu	865	870	875
Glu	Pro	Tyr	Cys	Ser	Val	Ala	Cys	Ala	Gly	Pro	Ser	Pro	Thr	Glu	Ala	885	890	895
Arg	Leu	Arg	Leu	Leu	Gly	Leu	Cys	Gln	Gly	Leu	Gly	Ile	Asp	Gly	Pro	900	905	910

Ser Tyr Pro Val Ala His Phe Leu Ser His Phe Lys
915 920

<210> 12024
<211> 116
<212> PRT
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<223> /note="Payload ID: 2379"

<220>
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<223> /note="Gene Symbol: CARTPT"

<220>
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<223> /note="Gene Name:
CART prepropeptide"

<220>
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<223> /note="Uniprot ID: Q16568"

<220>
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<223> /note="ENSP ID: ENSP00000296777"

<400> 12024
Met Glu Ser Ser Arg Val Arg Leu Leu Pro Leu Leu Gly Ala Ala Leu
1 5 10 15

Leu Leu Met Leu Pro Leu Leu Gly Thr Arg Ala Gln Glu Asp Ala Glu
20 25 30

Leu Gln Pro Arg Ala Leu Asp Ile Tyr Ser Ala Val Asp Asp Ala Ser
35 40 45

His Glu Lys Glu Leu Ile Glu Ala Leu Gln Glu Val Leu Lys Lys Leu
50 55 60

Lys Ser Lys Arg Val Pro Ile Tyr Glu Lys Lys Tyr Gly Gln Val Pro
65 70 75 80

Met Cys Asp Ala Gly Glu Gln Cys Ala Val Arg Lys Gly Ala Arg Ile
85 90 95

Gly Lys Leu Cys Asp Cys Pro Arg Gly Thr Ser Cys Asn Ser Phe Leu

100

105

110

Leu Lys Cys Leu
115

<210> 12025

<211> 637

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2380"

<220>

<221> source

<223> /note="Gene Symbol: CRTAC1"

<220>

<221> source

<223> /note="Gene Name:
cartilage acidic protein 1"

<220>

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<223> /note="ENSP ID: ENSP00000310810"

<400> 12025

Met Ser Arg Met Leu Pro Phe Leu Leu Leu Trp Phe Leu Pro Ile
1 5 10 15

Thr Glu Gly Ser Gln Arg Ala Glu Pro Met Phe Thr Ala Val Thr Asn
20 25 30

Ser Val Leu Pro Pro Asp Tyr Asp Ser Asn Pro Thr Gln Leu Asn Tyr
35 40 45

Gly Val Ala Val Thr Asp Val Asp His Asp Gly Asp Phe Glu Ile Val
50 55 60

Val Ala Gly Tyr Asn Gly Pro Asn Leu Val Leu Lys Tyr Asp Arg Ala
65 70 75 80

Gln Lys Arg Leu Val Asn Ile Ala Val Asp Glu Arg Ser Ser Pro Tyr
85 90 95

Tyr Ala Leu Arg Asp Arg Gln Gly Asn Ala Ile Gly Val Thr Ala Cys
100 105 110

26720

Asp	Ile	Asp	Gly	Asp	Gly	Arg	Glu	Glu	Ile	Tyr	Phe	Leu	Asn	Thr	Asn	
		115					120					125				
Asn	Ala	Phe	Ser	Gly	Val	Ala	Thr	Tyr	Thr	Asp	Lys	Leu	Phe	Lys	Phe	
	130					135					140					
Arg	Asn	Asn	Arg	Trp	Glu	Asp	Ile	Leu	Ser	Asp	Glu	Val	Asn	Val	Ala	
145					150					155					160	
Arg	Gly	Val	Ala	Ser	Leu	Phe	Ala	Gly	Arg	Ser	Val	Ala	Cys	Val	Asp	
				165					170					175		
Arg	Lys	Gly	Ser	Gly	Arg	Tyr	Ser	Ile	Tyr	Ile	Ala	Asn	Tyr	Ala	Tyr	
			180					185					190			
Gly	Asn	Val	Gly	Pro	Asp	Ala	Leu	Ile	Glu	Met	Asp	Pro	Glu	Ala	Ser	
		195					200					205				
Asp	Leu	Ser	Arg	Gly	Ile	Leu	Ala	Leu	Arg	Asp	Val	Ala	Ala	Glu	Ala	
	210					215					220					
Gly	Val	Ser	Lys	Tyr	Thr	Gly	Gly	Arg	Gly	Val	Ser	Val	Gly	Pro	Ile	
225					230					235					240	
Leu	Ser	Ser	Ser	Ala	Ser	Asp	Ile	Phe	Cys	Asp	Asn	Glu	Asn	Gly	Pro	
				245					250					255		
Asn	Phe	Leu	Phe	His	Asn	Arg	Gly	Asp	Gly	Thr	Phe	Val	Asp	Ala	Ala	
			260					265					270			
Ala	Ser	Ala	Gly	Val	Asp	Asp	Pro	His	Gln	His	Gly	Arg	Gly	Val	Ala	
		275					280					285				
Leu	Ala	Asp	Phe	Asn	Arg	Asp	Gly	Lys	Val	Asp	Ile	Val	Tyr	Gly	Asn	
	290					295					300					
Trp	Asn	Gly	Pro	His	Arg	Leu	Tyr	Leu	Gln	Met	Ser	Thr	His	Gly	Lys	
305					310					315					320	
Val	Arg	Phe	Arg	Asp	Ile	Ala	Ser	Pro	Lys	Phe	Ser	Met	Pro	Ser	Pro	
				325					330					335		

Val Arg Thr Val Ile Thr Ala Asp Phe Asp Asn Asp Gln Glu Leu Glu
340 345 350
Ile Phe Phe Asn Asn Ile Ala Tyr Arg Ser Ser Ser Ala Asn Arg Leu
355 360 365
Phe Arg Val Ile Arg Arg Glu His Gly Asp Pro Leu Ile Glu Glu Leu
370 375 380
Asn Pro Gly Asp Ala Leu Glu Pro Glu Gly Arg Gly Thr Gly Gly Val
385 390 395 400
Val Thr Asp Phe Asp Gly Asp Gly Met Leu Asp Leu Ile Leu Ser His
405 410 415
Gly Glu Ser Met Ala Gln Pro Leu Ser Val Phe Arg Gly Asn Gln Gly
420 425 430
Phe Asn Asn Asn Trp Leu Arg Val Val Pro Arg Thr Arg Phe Gly Ala
435 440 445
Phe Ala Arg Gly Ala Lys Val Val Leu Tyr Thr Lys Lys Ser Gly Ala
450 455 460
His Leu Arg Ile Ile Asp Gly Gly Ser Gly Tyr Leu Cys Glu Met Glu
465 470 475 480
Pro Val Ala His Phe Gly Leu Gly Lys Asp Glu Ala Ser Ser Val Glu
485 490 495
Val Thr Trp Pro Asp Gly Lys Met Val Ser Arg Asn Val Ala Ser Gly
500 505 510
Glu Met Asn Ser Val Leu Glu Ile Leu Tyr Pro Arg Asp Glu Asp Thr
515 520 525
Leu Gln Asp Pro Ala Pro Leu Glu Cys Gly Gln Gly Phe Ser Gln Gln
530 535 540
Glu Asn Gly His Cys Met Asp Thr Asn Glu Cys Ile Gln Phe Pro Phe
545 550 555 560
Val Cys Pro Arg Asp Lys Pro Val Cys Val Asn Thr Tyr Gly Ser Tyr

565

570

575

Arg Cys Arg Thr Asn Lys Lys Cys Ser Arg Gly Tyr Glu Pro Asn Glu
580 585 590

Asp Gly Thr Ala Cys Val Ala Gln Val Ala Phe Leu Gly Gly Tyr Ser
595 600 605

Ser Ala Ala Ser Arg Ile Ser Glu Pro Leu Ser Arg Ala Ser Tyr Leu
610 615 620

Ser Leu Gly Leu Gly Leu Cys Leu Gln Leu Tyr Ala Leu
625 630 635

<210> 12026

<211> 645

<212> PRT

<213> Homo sapiens

<220>

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<223> /note="Payload ID: 2380"

<220>

<221> source

<223> /note="Gene Symbol: CRTAC1"

<220>

<221> source

<223> /note="Gene Name:
cartilage acidic protein 1"

<220>

<221> source

<223> /note="Uniprot ID: Q9NQ79"

<220>

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<223> /note="ENSP ID: ENSP00000359623"

<400> 12026

Met Ala Pro Ser Ala Asp Pro Gly Met Ser Arg Met Leu Pro Phe Leu
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Leu Leu Leu Trp Phe Leu Pro Ile Thr Glu Gly Ser Gln Arg Ala Glu
20 25 30

Pro Met Phe Thr Ala Val Thr Asn Ser Val Leu Pro Pro Asp Tyr Asp
35 40 45

Ser	Asn	Pro	Thr	Gln	Leu	Asn	Tyr	Gly	Val	Ala	Val	Thr	Asp	Val	Asp			
	50					55					60							
His	Asp	Gly	Asp	Phe	Glu	Ile	Val	Val	Ala	Gly	Tyr	Asn	Gly	Pro	Asn			
65					70					75					80			
Leu	Val	Leu	Lys	Tyr	Asp	Arg	Ala	Gln	Lys	Arg	Leu	Val	Asn	Ile	Ala			
				85					90					95				
Val	Asp	Glu	Arg	Ser	Ser	Pro	Tyr	Tyr	Ala	Leu	Arg	Asp	Arg	Gln	Gly			
			100					105					110					
Asn	Ala	Ile	Gly	Val	Thr	Ala	Cys	Asp	Ile	Asp	Gly	Asp	Gly	Arg	Glu			
		115					120					125						
Glu	Ile	Tyr	Phe	Leu	Asn	Thr	Asn	Asn	Ala	Phe	Ser	Gly	Val	Ala	Thr			
	130					135					140							
Tyr	Thr	Asp	Lys	Leu	Phe	Lys	Phe	Arg	Asn	Asn	Arg	Trp	Glu	Asp	Ile			
145					150					155					160			
Leu	Ser	Asp	Glu	Val	Asn	Val	Ala	Arg	Gly	Val	Ala	Ser	Leu	Phe	Ala			
				165					170					175				
Gly	Arg	Ser	Val	Ala	Cys	Val	Asp	Arg	Lys	Gly	Ser	Gly	Arg	Tyr	Ser			
			180					185					190					
Ile	Tyr	Ile	Ala	Asn	Tyr	Ala	Tyr	Gly	Asn	Val	Gly	Pro	Asp	Ala	Leu			
		195					200					205						
Ile	Glu	Met	Asp	Pro	Glu	Ala	Ser	Asp	Leu	Ser	Arg	Gly	Ile	Leu	Ala			
	210					215					220							
Leu	Arg	Asp	Val	Ala	Ala	Glu	Ala	Gly	Val	Ser	Lys	Tyr	Thr	Gly	Gly			
225					230					235					240			
Arg	Gly	Val	Ser	Val	Gly	Pro	Ile	Leu	Ser	Ser	Ser	Ala	Ser	Asp	Ile			
				245					250					255				
Phe	Cys	Asp	Asn	Glu	Asn	Gly	Pro	Asn	Phe	Leu	Phe	His	Asn	Arg	Gly			
			260					265					270					

Asp Gly Thr Phe Val Asp Ala Ala Ala Ser Ala Gly Val Asp Asp Pro
 275 280 285

His Gln His Gly Arg Gly Val Ala Leu Ala Asp Phe Asn Arg Asp Gly
 290 295 300

Lys Val Asp Ile Val Tyr Gly Asn Trp Asn Gly Pro His Arg Leu Tyr
 305 310 315 320

Leu Gln Met Ser Thr His Gly Lys Val Arg Phe Arg Asp Ile Ala Ser
 325 330 335

Pro Lys Phe Ser Met Pro Ser Pro Val Arg Thr Val Ile Thr Ala Asp
 340 345 350

Phe Asp Asn Asp Gln Glu Leu Glu Ile Phe Phe Asn Asn Ile Ala Tyr
 355 360 365

Arg Ser Ser Ser Ala Asn Arg Leu Phe Arg Val Ile Arg Arg Glu His
 370 375 380

Gly Asp Pro Leu Ile Glu Glu Leu Asn Pro Gly Asp Ala Leu Glu Pro
 385 390 395 400

Glu Gly Arg Gly Thr Gly Gly Val Val Thr Asp Phe Asp Gly Asp Gly
 405 410 415

Met Leu Asp Leu Ile Leu Ser His Gly Glu Ser Met Ala Gln Pro Leu
 420 425 430

Ser Val Phe Arg Gly Asn Gln Gly Phe Asn Asn Asn Trp Leu Arg Val
 435 440 445

Val Pro Arg Thr Arg Phe Gly Ala Phe Ala Arg Gly Ala Lys Val Val
 450 455 460

Leu Tyr Thr Lys Lys Ser Gly Ala His Leu Arg Ile Ile Asp Gly Gly
 465 470 475 480

Ser Gly Tyr Leu Cys Glu Met Glu Pro Val Ala His Phe Gly Leu Gly
 485 490 495

Lys Asp Glu Ala Ser Ser Val Glu Val Thr Trp Pro Asp Gly Lys Met

500	505	510
Val Ser Arg Asn Val Ala Ser Gly Glu Met Asn Ser Val Leu Glu Ile		
515	520	525
Leu Tyr Pro Arg Asp Glu Asp Thr Leu Gln Asp Pro Ala Pro Leu Glu		
530	535	540
Cys Gly Gln Gly Phe Ser Gln Gln Glu Asn Gly His Cys Met Asp Thr		
545	550	555
Asn Glu Cys Ile Gln Phe Pro Phe Val Cys Pro Arg Asp Lys Pro Val		
565	570	575
Cys Val Asn Thr Tyr Gly Ser Tyr Arg Cys Arg Thr Asn Lys Lys Cys		
580	585	590
Ser Arg Gly Tyr Glu Pro Asn Glu Asp Gly Thr Ala Cys Val Ala Gln		
595	600	605
Val Ala Phe Leu Gly Gly Tyr Ser Ser Ala Ala Ser Arg Ile Ser Glu		
610	615	620
Pro Leu Ser Arg Ala Ser Tyr Leu Ser Leu Gly Leu Gly Leu Cys Leu		
625	630	635
Gln Leu Tyr Ala Leu		
645		

<210> 12027

<211> 661

<212> PRT

<213> Homo sapiens

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<221> source

<223> /note="Payload ID: 2380"

<220>

<221> source

<223> /note="Gene Symbol: CRTAC1"

<220>

<221> source

<223> /note="Gene Name:
cartilage acidic protein 1"

<220>
 <221> source
 <223> /note="Uniprot ID: Q9NQ79"

<220>
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 <223> /note="ENSP ID: ENSP00000359629"

<400> 12027

Met Ala Pro Ser Ala Asp Pro Gly Met Ser Arg Met Leu Pro Phe Leu
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Leu Leu Leu Trp Phe Leu Pro Ile Thr Glu Gly Ser Gln Arg Ala Glu
 20 25 30

Pro Met Phe Thr Ala Val Thr Asn Ser Val Leu Pro Pro Asp Tyr Asp
 35 40 45

Ser Asn Pro Thr Gln Leu Asn Tyr Gly Val Ala Val Thr Asp Val Asp
 50 55 60

His Asp Gly Asp Phe Glu Ile Val Val Ala Gly Tyr Asn Gly Pro Asn
 65 70 75 80

Leu Val Leu Lys Tyr Asp Arg Ala Gln Lys Arg Leu Val Asn Ile Ala
 85 90 95

Val Asp Glu Arg Ser Ser Pro Tyr Tyr Ala Leu Arg Asp Arg Gln Gly
 100 105 110

Asn Ala Ile Gly Val Thr Ala Cys Asp Ile Asp Gly Asp Gly Arg Glu
 115 120 125

Glu Ile Tyr Phe Leu Asn Thr Asn Asn Ala Phe Ser Gly Val Ala Thr
 130 135 140

Tyr Thr Asp Lys Leu Phe Lys Phe Arg Asn Asn Arg Trp Glu Asp Ile
 145 150 155 160

Leu Ser Asp Glu Val Asn Val Ala Arg Gly Val Ala Ser Leu Phe Ala
 165 170 175

Gly Arg Ser Val Ala Cys Val Asp Arg Lys Gly Ser Gly Arg Tyr Ser
 180 185 190

Ile Tyr Ile Ala Asn Tyr Ala Tyr Gly Asn Val Gly Pro Asp Ala Leu
 195 200 205
 Ile Glu Met Asp Pro Glu Ala Ser Asp Leu Ser Arg Gly Ile Leu Ala
 210 215 220
 Leu Arg Asp Val Ala Ala Glu Ala Gly Val Ser Lys Tyr Thr Gly Gly
 225 230 235 240
 Arg Gly Val Ser Val Gly Pro Ile Leu Ser Ser Ser Ala Ser Asp Ile
 245 250 255
 Phe Cys Asp Asn Glu Asn Gly Pro Asn Phe Leu Phe His Asn Arg Gly
 260 265 270
 Asp Gly Thr Phe Val Asp Ala Ala Ala Ser Ala Gly Val Asp Asp Pro
 275 280 285
 His Gln His Gly Arg Gly Val Ala Leu Ala Asp Phe Asn Arg Asp Gly
 290 295 300
 Lys Val Asp Ile Val Tyr Gly Asn Trp Asn Gly Pro His Arg Leu Tyr
 305 310 315 320
 Leu Gln Met Ser Thr His Gly Lys Val Arg Phe Arg Asp Ile Ala Ser
 325 330 335
 Pro Lys Phe Ser Met Pro Ser Pro Val Arg Thr Val Ile Thr Ala Asp
 340 345 350
 Phe Asp Asn Asp Gln Glu Leu Glu Ile Phe Phe Asn Asn Ile Ala Tyr
 355 360 365
 Arg Ser Ser Ser Ala Asn Arg Leu Phe Arg Val Ile Arg Arg Glu His
 370 375 380
 Gly Asp Pro Leu Ile Glu Glu Leu Asn Pro Gly Asp Ala Leu Glu Pro
 385 390 395 400
 Glu Gly Arg Gly Thr Gly Gly Val Val Thr Asp Phe Asp Gly Asp Gly
 405 410 415
 Met Leu Asp Leu Ile Leu Ser His Gly Glu Ser Met Ala Gln Pro Leu

Cys Glu Pro Ser Cys
660

<210> 12028

<211> 79

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2380"

<220>

<221> source

<223> /note="Gene Symbol: CRTAC1"

<220>

<221> source

<223> /note="Gene Name:
cartilage acidic protein 1"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000404549"

<220>

<221> MOD_RES

<222> (1)..(1)

<223> Any amino acid

<400> 12028

Xaa	Asp	Glu	Asp	Thr	Leu	Gln	Asp	Pro	Ala	Pro	Leu	Glu	Thr	Pro	Met
1				5					10					15	

Asn	Ala	Ser	Ser	Ser	His	Ser	Cys	Ala	Leu	Glu	Thr	Ser	Pro	Tyr	Val
			20					25					30		

Ser	Thr	Pro	Met	Glu	Ala	Thr	Gly	Ala	Gly	Pro	Thr	Arg	Ser	Ala	Val
		35					40					45			

Gly	Ala	Thr	Ser	Pro	Thr	Arg	Met	Ala	Gln	Pro	Ala	Trp	Lys	Glu	Pro
	50					55					60				

Cys	Tyr	Leu	Val	Ser	Ala	Ile	Ser	Leu	Glu	Asn	Arg	Met	Leu	Leu
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<210> 12029

<211> 524

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<212> PRT
<213> Homo sapiens

<220>
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<220>
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<220>
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<223> /note="Gene Name:
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<220>
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<400> 12029
Tyr Ala Leu Arg Asp Arg Gln Gly Asn Ala Ile Gly Val Thr Ala Cys
1          5          10          15

Asp Ile Asp Gly Asp Gly Arg Glu Glu Ile Tyr Phe Leu Asn Thr Asn
20          25          30

Asn Ala Phe Ser Gly Val Ala Thr Tyr Thr Asp Lys Leu Phe Lys Phe
35          40          45

Arg Asn Asn Arg Trp Glu Asp Ile Leu Ser Asp Glu Val Asn Val Ala
50          55          60

Arg Gly Val Ala Ser Leu Phe Ala Gly Arg Ser Val Ala Cys Val Asp
65          70          75          80

Arg Lys Gly Ser Gly Arg Tyr Ser Ile Tyr Ile Ala Asn Tyr Ala Tyr
85          90          95

Gly Asn Val Gly Pro Asp Ala Leu Ile Glu Met Asp Pro Glu Ala Ser
100         105         110

Asp Leu Ser Arg Gly Ile Leu Ala Leu Arg Asp Val Ala Ala Glu Ala
115         120         125

Gly Val Ser Lys Tyr Thr Gly Gly Arg Gly Val Ser Val Gly Pro Ile
130         135         140

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Leu	Ser	Ser	Ser	Ala	Ser	Asp	Ile	Phe	Cys	Asp	Asn	Glu	Asn	Gly	Pro	145	150	155	160
Asn	Phe	Leu	Phe	His	Asn	Arg	Gly	Asp	Gly	Thr	Phe	Val	Asp	Ala	Ala	165	170	175	
Ala	Ser	Ala	Gly	Val	Asp	Asp	Pro	His	Gln	His	Gly	Arg	Gly	Val	Ala	180	185	190	
Leu	Ala	Asp	Phe	Asn	Arg	Asp	Gly	Lys	Val	Asp	Ile	Val	Tyr	Gly	Asn	195	200	205	
Trp	Asn	Gly	Pro	His	Arg	Leu	Tyr	Leu	Gln	Met	Ser	Thr	His	Gly	Lys	210	215	220	
Val	Arg	Phe	Arg	Asp	Ile	Ala	Ser	Pro	Lys	Phe	Ser	Met	Pro	Ser	Pro	225	230	235	240
Val	Arg	Thr	Val	Ile	Thr	Ala	Asp	Phe	Asp	Asn	Asp	Gln	Glu	Leu	Glu	245	250	255	
Ile	Phe	Phe	Asn	Asn	Ile	Ala	Tyr	Arg	Ser	Ser	Ser	Ala	Asn	Arg	Leu	260	265	270	
Phe	Arg	Val	Ile	Arg	Arg	Glu	His	Gly	Asp	Pro	Leu	Ile	Glu	Glu	Leu	275	280	285	
Asn	Pro	Gly	Asp	Ala	Leu	Glu	Pro	Glu	Gly	Arg	Gly	Thr	Gly	Gly	Val	290	295	300	
Val	Thr	Asp	Phe	Asp	Gly	Asp	Gly	Met	Leu	Asp	Leu	Ile	Leu	Ser	His	305	310	315	320
Gly	Glu	Ser	Met	Ala	Gln	Pro	Leu	Ser	Val	Phe	Arg	Gly	Asn	Gln	Gly	325	330	335	
Phe	Asn	Asn	Asn	Trp	Leu	Arg	Val	Val	Pro	Arg	Thr	Arg	Phe	Gly	Ala	340	345	350	
Phe	Ala	Arg	Gly	Ala	Lys	Val	Val	Leu	Tyr	Thr	Lys	Lys	Ser	Gly	Ala	355	360	365	
His	Leu	Arg	Ile	Ile	Asp	Gly	Gly	Ser	Gly	Tyr	Leu	Cys	Glu	Met	Glu				

370		375		380
Pro Val Ala His Phe Gly Leu Gly Lys Asp Glu Ala Ser Ser Val Glu				
385		390	395	400
Val Thr Trp Pro Asp Gly Lys Met Val Ser Arg Asn Val Ala Ser Gly				
	405		410	415
Glu Met Asn Ser Val Leu Glu Ile Leu Tyr Pro Arg Asp Glu Asp Thr				
	420		425	430
Leu Gln Asp Pro Ala Pro Leu Glu Thr Pro Met Asn Ala Ser Ser Ser				
	435		440	445
His Ser Cys Ala Leu Glu Thr Ser Pro Tyr Val Ser Thr Pro Met Glu				
	450		455	460
Ala Thr Gly Ala Gly Pro Thr Arg Ser Ala Val Gly Ala Thr Ser Pro				
465		470	475	480
Thr Arg Met Ala Gln Pro Ala Trp Gly Leu Ser Ala Ser His Arg Ala				
	485		490	495
Pro Ala Pro Pro Pro Pro Pro Leu Leu Leu Pro Leu Pro Leu Leu Leu				
	500		505	510
Pro Leu Leu Glu Leu Pro Leu Leu His Arg Ser Ser				
	515		520	

<210> 12030

<211> 401

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2381"

<220>

<221> source

<223> /note="Gene Symbol: CRTAP"

<220>

<221> source

<223> /note="Gene Name:
cartilage associated protein"

<220>
<221> source
<223> /note="Uniprot ID: O75718"

<220>
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<223> /note="ENSP ID: ENSP00000323696"

<400> 12030

Met Glu Pro Gly Arg Arg Gly Ala Ala Ala Leu Leu Ala Leu Leu Cys
1 5 10 15

Val Ala Cys Ala Leu Arg Ala Gly Arg Ala Gln Tyr Glu Arg Tyr Ser
20 25 30

Phe Arg Ser Phe Pro Arg Asp Glu Leu Met Pro Leu Glu Ser Ala Tyr
35 40 45

Arg His Ala Leu Asp Lys Tyr Ser Gly Glu His Trp Ala Glu Ser Val
50 55 60

Gly Tyr Leu Glu Ile Ser Leu Arg Leu His Arg Leu Leu Arg Asp Ser
65 70 75 80

Glu Ala Phe Cys His Arg Asn Cys Ser Ala Ala Pro Gln Pro Glu Pro
85 90 95

Ala Ala Gly Leu Ala Ser Tyr Pro Glu Leu Arg Leu Phe Gly Gly Leu
100 105 110

Leu Arg Arg Ala His Cys Leu Lys Arg Cys Lys Gln Gly Leu Pro Ala
115 120 125

Phe Arg Gln Ser Gln Pro Ser Arg Glu Val Leu Ala Asp Phe Gln Arg
130 135 140

Arg Glu Pro Tyr Lys Phe Leu Gln Phe Ala Tyr Phe Lys Ala Asn Asn
145 150 155 160

Leu Pro Lys Ala Ile Ala Ala Ala His Thr Phe Leu Leu Lys His Pro
165 170 175

Asp Asp Glu Met Met Lys Arg Asn Met Ala Tyr Tyr Lys Ser Leu Pro
180 185 190

Gly Ala Glu Asp Tyr Ile Lys Asp Leu Glu Thr Lys Ser Tyr Glu Ser
195 200 205

Leu Phe Ile Arg Ala Val Arg Ala Tyr Asn Gly Glu Asn Trp Arg Thr
210 215 220

Ser Ile Thr Asp Met Glu Leu Ala Leu Pro Asp Phe Phe Lys Ala Phe
225 230 235 240

Tyr Glu Cys Leu Ala Ala Cys Glu Gly Ser Arg Glu Ile Lys Asp Phe
245 250 255

Lys Asp Phe Tyr Leu Ser Ile Ala Asp His Tyr Val Glu Val Leu Glu
260 265 270

Cys Lys Ile Gln Cys Glu Glu Asn Leu Thr Pro Val Ile Gly Gly Tyr
275 280 285

Pro Val Glu Lys Phe Val Ala Thr Met Tyr His Tyr Leu Gln Phe Ala
290 295 300

Tyr Tyr Lys Leu Asn Asp Leu Lys Asn Ala Ala Pro Cys Ala Val Ser
305 310 315 320

Tyr Leu Leu Phe Asp Gln Asn Asp Lys Val Met Gln Gln Asn Leu Val
325 330 335

Tyr Tyr Gln Tyr His Arg Asp Thr Trp Gly Leu Ser Asp Glu His Phe
340 345 350

Gln Pro Arg Pro Glu Ala Val Gln Phe Phe Asn Val Thr Thr Leu Gln
355 360 365

Lys Glu Leu Tyr Asp Phe Ala Lys Glu Asn Ile Met Asp Asp Asp Glu
370 375 380

Gly Glu Val Val Glu Tyr Val Asp Asp Leu Leu Glu Leu Glu Glu Thr
385 390 395 400

Ser

<210> 12031

26735

<211> 358
<212> PRT
<213> Homo sapiens

<220>
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<223> /note="Payload ID: 2381"

<220>
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<223> /note="Gene Symbol: CRTAP"

<220>
<221> source
<223> /note="Gene Name:
cartilage associated protein"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000409997"

<400> 12031
Met Glu Pro Gly Arg Arg Gly Ala Ala Ala Leu Leu Ala Leu Leu Cys
1 5 10 15

Val Ala Cys Ala Leu Arg Ala Gly Arg Ala Gln Tyr Glu Arg Tyr Ser
20 25 30

Phe Arg Ser Phe Pro Arg Asp Glu Leu Met Pro Leu Glu Ser Ala Tyr
35 40 45

Arg His Ala Leu Asp Lys Tyr Ser Gly Glu His Trp Ala Glu Ser Val
50 55 60

Gly Tyr Leu Glu Ile Ser Leu Arg Leu His Arg Leu Leu Arg Asp Ser
65 70 75 80

Glu Ala Phe Cys His Arg Asn Cys Ser Ala Ala Pro Gln Pro Glu Pro
85 90 95

Ala Ala Gly Leu Ala Ser Tyr Pro Glu Leu Arg Leu Phe Gly Gly Leu
100 105 110

Leu Arg Arg Ala His Cys Leu Lys Arg Cys Lys Gln Gly Leu Pro Ala
115 120 125

Phe Arg Gln Ser Gln Pro Ser Arg Glu Val Leu Ala Asp Phe Gln Arg
130 135 140

Arg 145	Glu	Pro	Tyr	Lys	Phe 150	Leu	Gln	Phe	Ala	Tyr 155	Phe	Lys	Ala	Asn	Asn 160
Leu	Pro	Lys	Ala	Ile 165	Ala	Ala	Ala	His	Thr 170	Phe	Leu	Leu	Lys	His 175	Pro
Asp	Asp	Glu	Met 180	Met	Lys	Arg	Asn	Met 185	Ala	Tyr	Tyr	Lys	Ser 190	Leu	Pro
Gly	Ala	Glu 195	Asp	Tyr	Ile	Lys	Asp 200	Leu	Glu	Thr	Lys	Ser 205	Tyr	Glu	Ser
Leu	Phe 210	Ile	Arg	Ala	Val	Arg 215	Ala	Tyr	Asn	Gly	Glu 220	Asn	Trp	Arg	Thr
Ser 225	Ile	Thr	Asp	Met	Glu 230	Leu	Ala	Leu	Pro	Asp 235	Phe	Phe	Lys	Ala	Phe 240
Tyr	Glu	Cys	Leu	Ala 245	Ala	Cys	Glu	Gly	Ser 250	Arg	Glu	Ile	Lys	Asp 255	Phe
Lys	Asp	Phe	Tyr 260	Leu	Ser	Ile	Ala	Val 265	Asn	Asp	Leu	Lys	Asn 270	Ala	Ala
Pro	Cys	Ala 275	Val	Ser	Tyr	Leu	Leu 280	Phe	Asp	Gln	Asn	Asp 285	Lys	Val	Met
Gln 290	Gln	Asn	Leu	Val	Tyr	Tyr 295	Gln	Tyr	His	Arg	Asp 300	Thr	Trp	Gly	Leu
Ser 305	Asp	Glu	His	Phe	Gln 310	Pro	Arg	Pro	Glu	Ala 315	Val	Gln	Phe	Phe	Asn 320
Val	Thr	Thr	Leu	Gln 325	Lys	Glu	Leu	Tyr	Asp 330	Phe	Ala	Lys	Glu	Asn 335	Ile
Met	Asp	Asp	Asp 340	Glu	Gly	Glu	Val 345	Val	Glu	Tyr	Val	Asp	Asp 350	Leu	Leu
Glu	Leu	Glu	Glu	Thr	Ser										

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<210> 12032
<211> 1156
<212> PRT
<213> Homo sapiens

<220>
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<223> /note="Payload ID: 2382"

<220>
<221> source
<223> /note="Gene Symbol: CILP2"

<220>
<221> source
<223> /note="Gene Name:
        cartilage intermediate layer protein 2"

<220>
<221> source
<223> /note="Uniprot ID: Q8IUL8"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000291495"

<400> 12032
Met Ala Ser Leu Leu Pro Leu Leu Cys Leu Cys Val Val Ala Ala His
1          5          10          15

Leu Ala Gly Ala Arg Asp Ala Thr Pro Thr Glu Glu Pro Met Ala Thr
          20          25          30

Ala Leu Gly Leu Glu Arg Arg Ser Val Tyr Thr Gly Gln Pro Ser Pro
          35          40          45

Ala Leu Glu Asp Trp Glu Glu Ala Ser Glu Trp Thr Ser Trp Phe Asn
          50          55          60

Val Asp His Pro Gly Gly Asp Gly Asp Phe Glu Ser Leu Ala Ala Ile
65          70          75          80

Arg Phe Tyr Tyr Gly Pro Ala Arg Val Cys Pro Arg Pro Leu Ala Leu
          85          90          95

Glu Ala Arg Thr Thr Asp Trp Ala Leu Pro Ser Ala Val Gly Glu Arg
          100          105          110

Val His Leu Asn Pro Thr Arg Gly Phe Trp Cys Leu Asn Arg Glu Gln
          115          120          125

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Pro	Arg	Gly	Arg	Arg	Cys	Ser	Asn	Tyr	His	Val	Arg	Phe	Arg	Cys	Pro	130	135	140
Leu	Glu	Ala	Ser	Trp	Gly	Ala	Trp	Gly	Pro	Trp	Gly	Pro	Cys	Ser	Gly	145	150	155
Ser	Cys	Gly	Pro	Gly	Arg	Arg	Leu	Arg	Arg	Arg	His	Cys	Pro	Ser	Pro	165	170	175
Ala	Gly	Asp	Ala	Cys	Pro	Gly	Arg	Pro	Leu	Glu	Ala	Gln	Lys	Cys	Val	180	185	190
Arg	Pro	Arg	Cys	Pro	Gly	Cys	Ser	Leu	Asp	Thr	Cys	Glu	Cys	Pro	Asp	195	200	205
His	Ile	Leu	Leu	Gly	Ser	Val	Val	Thr	Pro	Ser	Gly	Gln	Pro	Leu	Leu	210	215	220
Gly	Ala	Arg	Val	Ser	Leu	Arg	Asp	Gln	Pro	Gly	Thr	Val	Ala	Thr	Ser	225	230	235
Asp	Ala	His	Gly	Thr	Phe	Arg	Val	Pro	Gly	Val	Cys	Ala	Asp	Ser	Arg	245	250	255
Ala	Asn	Ile	Arg	Ala	Gln	Met	Asp	Gly	Phe	Ser	Ala	Gly	Glu	Ala	Gln	260	265	270
Ala	Gln	Ala	Asn	Gly	Ser	Ile	Ser	Val	Val	Thr	Ile	Ile	Leu	Asp	Lys	275	280	285
Leu	Glu	Lys	Pro	Tyr	Leu	Val	Lys	His	Pro	Glu	Ser	Arg	Val	Arg	Glu	290	295	300
Ala	Gly	Gln	Asn	Val	Thr	Phe	Cys	Cys	Lys	Ala	Ser	Gly	Thr	Pro	Met	305	310	315
Pro	Lys	Lys	Tyr	Ser	Trp	Phe	His	Asn	Gly	Thr	Leu	Leu	Asp	Arg	Arg	325	330	335
Ala	His	Gly	Tyr	Gly	Ala	His	Leu	Glu	Leu	Arg	Gly	Leu	Arg	Pro	Asp	340	345	350

Gln	Ala	Gly	Ile	Tyr	His	Cys	Lys	Ala	Trp	Asn	Glu	Ala	Gly	Ala	Val			
		355					360					365						
Arg	Ser	Gly	Thr	Ala	Arg	Leu	Thr	Val	Leu	Ala	Pro	Gly	Gln	Pro	Ala			
	370					375					380							
Cys	Asp	Pro	Arg	Pro	Arg	Glu	Tyr	Leu	Ile	Lys	Leu	Pro	Glu	Asp	Cys			
385					390					395					400			
Gly	Gln	Pro	Gly	Ser	Gly	Pro	Ala	Tyr	Leu	Asp	Val	Gly	Leu	Cys	Pro			
				405					410					415				
Asp	Thr	Arg	Cys	Pro	Ser	Leu	Ala	Gly	Ser	Ser	Pro	Arg	Cys	Gly	Asp			
			420					425					430					
Ala	Ser	Ser	Arg	Cys	Cys	Ser	Val	Arg	Arg	Leu	Glu	Arg	Arg	Glu	Ile			
		435					440					445						
His	Cys	Pro	Gly	Tyr	Val	Leu	Pro	Val	Lys	Val	Val	Ala	Glu	Cys	Gly			
	450					455					460							
Cys	Gln	Lys	Cys	Leu	Pro	Pro	Arg	Gly	Leu	Val	Arg	Gly	Arg	Val	Val			
465					470					475					480			
Ala	Ala	Asp	Ser	Gly	Glu	Pro	Leu	Arg	Phe	Ala	Arg	Ile	Leu	Leu	Gly			
				485					490					495				
Gln	Glu	Pro	Ile	Gly	Phe	Thr	Ala	Tyr	Gln	Gly	Asp	Phe	Thr	Ile	Glu			
			500					505					510					
Val	Pro	Pro	Ser	Thr	Gln	Arg	Leu	Val	Val	Thr	Phe	Val	Asp	Pro	Ser			
		515					520					525						
Gly	Glu	Phe	Met	Asp	Ala	Val	Arg	Val	Leu	Pro	Phe	Asp	Pro	Arg	Gly			
	530					535					540							
Ala	Gly	Val	Tyr	His	Glu	Val	Lys	Ala	Met	Arg	Lys	Lys	Ala	Pro	Val			
545					550					555					560			
Ile	Leu	His	Thr	Ser	Gln	Ser	Asn	Thr	Ile	Pro	Leu	Gly	Glu	Leu	Glu			
				565					570					575				

Asp Glu Ala Pro Leu Gly Glu Leu Val Leu Pro Ser Gly Ala Phe Arg
 580 585 590

Arg Ala Asp Gly Lys Pro Tyr Ser Gly Pro Val Glu Ala Arg Val Thr
 595 600 605

Phe Val Asp Pro Arg Asp Leu Thr Ser Ala Ala Ser Ala Pro Ser Asp
 610 615 620

Leu Arg Phe Val Asp Ser Asp Gly Glu Leu Ala Pro Leu Arg Thr Tyr
 625 630 635 640

Gly Met Phe Ser Val Asp Leu Arg Ala Pro Gly Ser Ala Glu Gln Leu
 645 650 655

Gln Val Gly Pro Val Ala Val Arg Val Ala Ala Ser Gln Ile His Met
 660 665 670

Pro Gly His Val Glu Ala Leu Lys Leu Trp Ser Leu Asn Pro Glu Thr
 675 680 685

Gly Leu Trp Glu Glu Glu Ser Gly Phe Arg Arg Glu Gly Ser Ser Gly
 690 695 700

Pro Arg Val Arg Arg Glu Glu Arg Val Phe Leu Val Gly Asn Val Glu
 705 710 715 720

Ile Arg Glu Arg Arg Leu Phe Asn Leu Asp Val Pro Glu Arg Arg Arg
 725 730 735

Cys Phe Val Lys Val Arg Ala Tyr Ala Asn Asp Lys Phe Thr Pro Ser
 740 745 750

Glu Gln Val Glu Gly Val Val Val Thr Leu Val Asn Leu Glu Pro Ala
 755 760 765

Pro Gly Phe Ser Ala Asn Pro Arg Ala Trp Gly Arg Phe Asp Ser Ala
 770 775 780

Val Thr Gly Pro Asn Gly Ala Cys Leu Pro Ala Phe Cys Asp Ala Asp
 785 790 795 800

Arg Pro Asp Ala Tyr Thr Ala Leu Val Thr Ala Thr Leu Gly Gly Glu

805

810

815

Glu Leu Glu Pro Ala Pro Ser Leu Pro Arg Pro Leu Pro Ala Thr Val
820 825 830

Gly Val Thr Gln Pro Tyr Leu Asp Arg Leu Gly Tyr Arg Arg Thr Asp
835 840 845

His Asp Asp Pro Ala Phe Lys Arg Asn Gly Phe Arg Ile Asn Leu Ala
850 855 860

Lys Pro Arg Pro Gly Asp Pro Ala Glu Ala Asn Gly Pro Val Tyr Pro
865 870 875 880

Trp Arg Ser Leu Arg Glu Cys Gln Gly Ala Pro Val Thr Ala Ser His
885 890 895

Phe Arg Phe Ala Arg Val Glu Ala Asp Lys Tyr Glu Tyr Asn Val Val
900 905 910

Pro Phe Arg Glu Gly Thr Pro Ala Ser Trp Thr Gly Asp Leu Leu Ala
915 920 925

Trp Trp Pro Asn Pro Gln Glu Phe Arg Ala Cys Phe Leu Lys Val Lys
930 935 940

Ile Gln Gly Pro Gln Glu Tyr Met Val Arg Ser His Asn Ala Gly Gly
945 950 955 960

Ser His Pro Arg Thr Arg Gly Gln Leu Tyr Gly Leu Arg Asp Ala Arg
965 970 975

Ser Val Arg Asp Pro Glu Arg Pro Gly Thr Ser Ala Ala Cys Val Glu
980 985 990

Phe Lys Cys Ser Gly Met Leu Phe Asp Gln Arg Gln Val Asp Arg
Thr
995 1000 1005

Leu Val Thr Ile Met Pro Gln Gly Ser Cys Arg Arg Val Ala Val
1010 1015 1020

Asn Gly Leu Leu Arg Asp Tyr Leu Thr Arg His Pro Pro Pro Val

26742

1025		1030		1035
Pro Ala Glu Asp Pro Ala Ala Phe Ser Met Leu Ala Pro Leu Asp				
1040		1045		1050
Pro Leu Gly His Asn Tyr Gly Val Tyr Thr Val Thr Asp Gln Ser				
1055		1060		1065
Pro Arg Leu Ala Lys Glu Ile Ala Ile Gly Arg Cys Phe Asp Gly				
1070		1075		1080
Ser Ser Asp Gly Phe Ser Arg Glu Met Lys Ala Asp Ala Gly Thr				
1085		1090		1095
Ala Val Thr Phe Gln Cys Arg Glu Pro Pro Ala Gly Arg Pro Ser				
1100		1105		1110
Leu Phe Gln Arg Leu Leu Glu Ser Pro Ala Thr Ala Leu Gly Asp				
1115		1120		1125
Ile Arg Arg Glu Met Ser Glu Ala Ala Gln Ala Gln Ala Arg Ala				
1130		1135		1140
Ser Gly Pro Leu Arg Thr Arg Arg Gly Arg Val Arg Gln				
1145		1150		1155

<210> 12033
 <211> 1162
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<220>
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 <223> /note="Payload ID: 2382"

<220>
 <221> source
 <223> /note="Gene Symbol: CILP2"

<220>
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 <223> /note="Gene Name:
 cartilage intermediate layer protein 2"

<220>
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 <223> /note="ENSP ID: ENSP00000467413"

<400> 12033

Met Ala Ser Leu Leu Pro Leu Leu Cys Leu Cys Val Val Ala Ala His
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Leu Ala Gly Ala Arg Asp Ala Thr Pro Thr Glu Glu Pro Met Ala Thr
20 25 30

Ala Leu Gly Leu Glu Arg Arg Ser Val Tyr Thr Gly Gln Pro Ser Pro
35 40 45

Ala Leu Glu Asp Trp Glu Ala Arg Ala Val Pro Ala Glu Ala Ser Glu
50 55 60

Trp Thr Ser Trp Phe Asn Val Asp His Pro Gly Gly Asp Gly Asp Phe
65 70 75 80

Glu Ser Leu Ala Ala Ile Arg Phe Tyr Tyr Gly Pro Ala Arg Val Cys
85 90 95

Pro Arg Pro Leu Ala Leu Glu Ala Arg Thr Thr Asp Trp Ala Leu Pro
100 105 110

Ser Ala Val Gly Glu Arg Val His Leu Asn Pro Thr Arg Gly Phe Trp
115 120 125

Cys Leu Asn Arg Glu Gln Pro Arg Gly Arg Arg Cys Ser Asn Tyr His
130 135 140

Val Arg Phe Arg Cys Pro Leu Glu Ala Ser Trp Gly Ala Trp Gly Pro
145 150 155 160

Trp Gly Pro Cys Ser Gly Ser Cys Gly Pro Gly Arg Arg Leu Arg Arg
165 170 175

Arg His Cys Pro Ser Pro Ala Gly Asp Ala Cys Pro Gly Arg Pro Leu
180 185 190

Glu Ala Gln Lys Cys Val Arg Pro Arg Cys Pro Gly Cys Ser Leu Asp
195 200 205

Thr Cys Glu Cys Pro Asp His Ile Leu Leu Gly Ser Val Val Thr Pro
210 215 220

Ser Gly Gln Pro Leu Leu Gly Ala Arg Val Ser Leu Arg Asp Gln Pro
225 230 235 240

Gly Thr Val Ala Thr Ser Asp Ala His Gly Thr Phe Arg Val Pro Gly
245 250 255

Val Cys Ala Asp Ser Arg Ala Asn Ile Arg Ala Gln Met Asp Gly Phe
260 265 270

Ser Ala Gly Glu Ala Gln Ala Gln Ala Asn Gly Ser Ile Ser Val Val
275 280 285

Thr Ile Ile Leu Asp Lys Leu Glu Lys Pro Tyr Leu Val Lys His Pro
290 295 300

Glu Ser Arg Val Arg Glu Ala Gly Gln Asn Val Thr Phe Cys Cys Lys
305 310 315 320

Ala Ser Gly Thr Pro Met Pro Lys Lys Tyr Ser Trp Phe His Asn Gly
325 330 335

Thr Leu Leu Asp Arg Arg Ala His Gly Tyr Gly Ala His Leu Glu Leu
340 345 350

Arg Gly Leu Arg Pro Asp Gln Ala Gly Ile Tyr His Cys Lys Ala Trp
355 360 365

Asn Glu Ala Gly Ala Val Arg Ser Gly Thr Ala Arg Leu Thr Val Leu
370 375 380

Ala Pro Gly Gln Pro Ala Cys Asp Pro Arg Pro Arg Glu Tyr Leu Ile
385 390 395 400

Lys Leu Pro Glu Asp Cys Gly Gln Pro Gly Ser Gly Pro Ala Tyr Leu
405 410 415

Asp Val Gly Leu Cys Pro Asp Thr Arg Cys Pro Ser Leu Ala Gly Ser
420 425 430

Ser Pro Arg Cys Gly Asp Ala Ser Ser Arg Cys Cys Ser Val Arg Arg
435 440 445

Leu Glu Arg Arg Glu Ile His Cys Pro Gly Tyr Val Leu Pro Val Lys

450						455						460				
Val	Val	Ala	Glu	Cys	Gly	Cys	Gln	Lys	Cys	Leu	Pro	Pro	Arg	Gly	Leu	
465					470					475					480	
Val	Arg	Gly	Arg	Val	Val	Ala	Ala	Asp	Ser	Gly	Glu	Pro	Leu	Arg	Phe	
				485					490					495		
Ala	Arg	Ile	Leu	Leu	Gly	Gln	Glu	Pro	Ile	Gly	Phe	Thr	Ala	Tyr	Gln	
			500					505					510			
Gly	Asp	Phe	Thr	Ile	Glu	Val	Pro	Pro	Ser	Thr	Gln	Arg	Leu	Val	Val	
		515					520					525				
Thr	Phe	Val	Asp	Pro	Ser	Gly	Glu	Phe	Met	Asp	Ala	Val	Arg	Val	Leu	
	530					535					540					
Pro	Phe	Asp	Pro	Arg	Gly	Ala	Gly	Val	Tyr	His	Glu	Val	Lys	Ala	Met	
545					550					555					560	
Arg	Lys	Lys	Ala	Pro	Val	Ile	Leu	His	Thr	Ser	Gln	Ser	Asn	Thr	Ile	
				565					570					575		
Pro	Leu	Gly	Glu	Leu	Glu	Asp	Glu	Ala	Pro	Leu	Gly	Glu	Leu	Val	Leu	
			580					585					590			
Pro	Ser	Gly	Ala	Phe	Arg	Arg	Ala	Asp	Gly	Lys	Pro	Tyr	Ser	Gly	Pro	
		595					600					605				
Val	Glu	Ala	Arg	Val	Thr	Phe	Val	Asp	Pro	Arg	Asp	Leu	Thr	Ser	Ala	
	610					615					620					
Ala	Ser	Ala	Pro	Ser	Asp	Leu	Arg	Phe	Val	Asp	Ser	Asp	Gly	Glu	Leu	
625					630					635					640	
Ala	Pro	Leu	Arg	Thr	Tyr	Gly	Met	Phe	Ser	Val	Asp	Leu	Arg	Ala	Pro	
				645					650					655		
Gly	Ser	Ala	Glu	Gln	Leu	Gln	Val	Gly	Pro	Val	Ala	Val	Arg	Val	Ala	
			660					665					670			
Ala	Ser	Gln	Ile	His	Met	Pro	Gly	His	Val	Glu	Ala	Leu	Lys	Leu	Trp	
		675					680					685				

Ser	Leu	Asn	Pro	Glu	Thr	Gly	Leu	Trp	Glu	Glu	Glu	Ser	Gly	Phe	Arg	
690						695					700					
Arg	Glu	Gly	Ser	Ser	Gly	Pro	Arg	Val	Arg	Arg	Glu	Glu	Arg	Val	Phe	
705					710					715					720	
Leu	Val	Gly	Asn	Val	Glu	Ile	Arg	Glu	Arg	Arg	Leu	Phe	Asn	Leu	Asp	
				725					730					735		
Val	Pro	Glu	Arg	Arg	Arg	Cys	Phe	Val	Lys	Val	Arg	Ala	Tyr	Ala	Asn	
			740					745					750			
Asp	Lys	Phe	Thr	Pro	Ser	Glu	Gln	Val	Glu	Gly	Val	Val	Val	Thr	Leu	
		755					760					765				
Val	Asn	Leu	Glu	Pro	Ala	Pro	Gly	Phe	Ser	Ala	Asn	Pro	Arg	Ala	Trp	
	770					775					780					
Gly	Arg	Phe	Asp	Ser	Ala	Val	Thr	Gly	Pro	Asn	Gly	Ala	Cys	Leu	Pro	
785					790					795					800	
Ala	Phe	Cys	Asp	Ala	Asp	Arg	Pro	Asp	Ala	Tyr	Thr	Ala	Leu	Val	Thr	
				805					810					815		
Ala	Thr	Leu	Gly	Gly	Glu	Glu	Leu	Glu	Pro	Ala	Pro	Ser	Leu	Pro	Arg	
			820					825					830			
Pro	Leu	Pro	Ala	Thr	Val	Gly	Val	Thr	Gln	Pro	Tyr	Leu	Asp	Arg	Leu	
		835					840					845				
Gly	Tyr	Arg	Arg	Thr	Asp	His	Asp	Asp	Pro	Ala	Phe	Lys	Arg	Asn	Gly	
	850					855					860					
Phe	Arg	Ile	Asn	Leu	Ala	Lys	Pro	Arg	Pro	Gly	Asp	Pro	Ala	Glu	Ala	
865					870					875					880	
Asn	Gly	Pro	Val	Tyr	Pro	Trp	Arg	Ser	Leu	Arg	Glu	Cys	Gln	Gly	Ala	
				885					890					895		
Pro	Val	Thr	Ala	Ser	His	Phe	Arg	Phe	Ala	Arg	Val	Glu	Ala	Asp	Lys	
			900					905					910			

Tyr Glu Tyr Asn Val Val Pro Phe Arg Glu Gly Thr Pro Ala Ser Trp
915 920 925

Thr Gly Asp Leu Leu Ala Trp Trp Pro Asn Pro Gln Glu Phe Arg Ala
930 935 940

Cys Phe Leu Lys Val Lys Ile Gln Gly Pro Gln Glu Tyr Met Val Arg
945 950 955 960

Ser His Asn Ala Gly Gly Ser His Pro Arg Thr Arg Gly Gln Leu Tyr
965 970 975

Gly Leu Arg Asp Ala Arg Ser Val Arg Asp Pro Glu Arg Pro Gly Thr
980 985 990

Ser Ala Ala Cys Val Glu Phe Lys Cys Ser Gly Met Leu Phe Asp
Gln
995 1000 1005

Arg Gln Val Asp Arg Thr Leu Val Thr Ile Met Pro Gln Gly Ser
1010 1015 1020

Cys Arg Arg Val Ala Val Asn Gly Leu Leu Arg Asp Tyr Leu Thr
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Arg His Pro Pro Pro Val Pro Ala Glu Asp Pro Ala Ala Phe Ser
1040 1045 1050

Met Leu Ala Pro Leu Asp Pro Leu Gly His Asn Tyr Gly Val Tyr
1055 1060 1065

Thr Val Thr Asp Gln Ser Pro Arg Leu Ala Lys Glu Ile Ala Ile
1070 1075 1080

Gly Arg Cys Phe Asp Gly Ser Ser Asp Gly Phe Ser Arg Glu Met
1085 1090 1095

Lys Ala Asp Ala Gly Thr Ala Val Thr Phe Gln Cys Arg Glu Pro
1100 1105 1110

Pro Ala Gly Arg Pro Ser Leu Phe Gln Arg Leu Leu Glu Ser Pro
1115 1120 1125

Ala Thr Ala Leu Gly Asp Ile Arg Arg Glu Met Ser Glu Ala Ala
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Gln Ala Gln Ala Arg Ala Ser Gly Pro Leu Arg Thr Arg Arg Gly
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Arg Val Arg Gln
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Val Gln Pro Gly Lys Lys Asn Pro Ser Ile Phe Ala Lys Pro Ala Asp
 35 40 45

Thr Leu Glu Ser Pro Gly Glu Trp Thr Thr Trp Phe Asn Ile Asp Tyr
 50 55 60

Pro	Gly	Gly	Lys	Gly	Asp	Tyr	Glu	Arg	Leu	Asp	Ala	Ile	Arg	Phe	Tyr	
65					70					75					80	
Tyr	Gly	Asp	Arg	Val	Cys	Ala	Arg	Pro	Leu	Arg	Leu	Glu	Ala	Arg	Thr	
				85					90					95		
Thr	Asp	Trp	Thr	Pro	Ala	Gly	Ser	Thr	Gly	Gln	Val	Val	His	Gly	Ser	
			100					105					110			
Pro	Arg	Glu	Gly	Phe	Trp	Cys	Leu	Asn	Arg	Glu	Gln	Arg	Pro	Gly	Gln	
		115					120					125				
Asn	Cys	Ser	Asn	Tyr	Thr	Val	Arg	Phe	Leu	Cys	Pro	Pro	Gly	Ser	Leu	
	130					135					140					
Arg	Arg	Asp	Thr	Glu	Arg	Ile	Trp	Ser	Pro	Trp	Ser	Pro	Trp	Ser	Lys	
145					150					155					160	
Cys	Ser	Ala	Ala	Cys	Gly	Gln	Thr	Gly	Val	Gln	Thr	Arg	Thr	Arg	Ile	
				165					170					175		
Cys	Leu	Ala	Glu	Met	Val	Ser	Leu	Cys	Ser	Glu	Ala	Ser	Glu	Glu	Gly	
			180					185					190			
Gln	His	Cys	Met	Gly	Gln	Asp	Cys	Thr	Ala	Cys	Asp	Leu	Thr	Cys	Pro	
		195					200					205				
Met	Gly	Gln	Val	Asn	Ala	Asp	Cys	Asp	Ala	Cys	Met	Cys	Gln	Asp	Phe	
	210					215					220					
Met	Leu	His	Gly	Ala	Val	Ser	Leu	Pro	Gly	Gly	Ala	Pro	Ala	Ser	Gly	
225					230					235					240	
Ala	Ala	Ile	Tyr	Leu	Leu	Thr	Lys	Thr	Pro	Lys	Leu	Leu	Thr	Gln	Thr	
				245					250					255		
Asp	Ser	Asp	Gly	Arg	Phe	Arg	Ile	Pro	Gly	Leu	Cys	Pro	Asp	Gly	Lys	
			260					265					270			
Ser	Ile	Leu	Lys	Ile	Thr	Lys	Val	Lys	Phe	Ala	Pro	Ile	Val	Leu	Thr	
		275					280					285				
Met	Pro	Lys	Thr	Ser	Leu	Lys	Ala	Ala	Thr	Ile	Lys	Ala	Glu	Phe	Val	

290		295		300											
Arg 305	Ala	Glu	Thr	Pro	Tyr 310	Met	Val	Met	Asn	Pro 315	Glu	Thr	Lys	Ala	Arg 320
Arg	Ala	Gly	Gln	Ser 325	Val	Ser	Leu	Cys	Cys 330	Lys	Ala	Thr	Gly	Lys 335	Pro
Arg	Pro	Asp	Lys 340	Tyr	Phe	Trp	Tyr	His 345	Asn	Asp	Thr	Leu	Leu 350	Asp	Pro
Ser	Leu	Tyr 355	Lys	His	Glu	Ser	Lys 360	Leu	Val	Leu	Arg	Lys 365	Leu	Gln	Gln
His 370	Gln	Ala	Gly	Glu	Tyr	Phe 375	Cys	Lys	Ala	Gln	Ser 380	Asp	Ala	Gly	Ala
Val 385	Lys	Ser	Lys	Val	Ala 390	Gln	Leu	Ile	Val	Ile 395	Ala	Ser	Asp	Glu	Thr 400
Pro	Cys	Asn	Pro	Val 405	Pro	Glu	Ser	Tyr	Leu 410	Ile	Arg	Leu	Pro	His 415	Asp
Cys	Phe	Gln	Asn 420	Ala	Thr	Asn	Ser	Phe 425	Tyr	Tyr	Asp	Val	Gly 430	Arg	Cys
Pro	Val	Lys 435	Thr	Cys	Ala	Gly	Gln 440	Gln	Asp	Asn	Gly	Ile 445	Arg	Cys	Arg
Asp 450	Ala	Val	Gln	Asn	Cys	Cys 455	Gly	Ile	Ser	Lys	Thr 460	Glu	Glu	Arg	Glu
Ile 465	Gln	Cys	Ser	Gly	Tyr 470	Thr	Leu	Pro	Thr	Lys 475	Val	Ala	Lys	Glu	Cys 480
Ser	Cys	Gln	Arg	Cys 485	Thr	Glu	Thr	Arg	Ser 490	Ile	Val	Arg	Gly	Arg 495	Val
Ser	Ala	Ala	Asp 500	Asn	Gly	Glu	Pro	Met 505	Arg	Phe	Gly	His	Val 510	Tyr	Met
Gly	Asn 515	Ser	Arg	Val	Ser	Met	Thr 520	Gly	Tyr	Lys	Gly	Thr 525	Phe	Thr	Leu

26753

His Arg Gln Thr Val Gly Lys Leu Tyr Gly Ile Arg Asp Val Arg Ser
980 985 990

Thr Arg Asp Arg Asp Gln Pro Asn Val Ser Ala Ala Cys Leu Glu
Phe
995 1000 1005

Lys Cys Ser Gly Met Leu Tyr Asp Gln Asp Arg Val Asp Arg Thr
1010 1015 1020

Leu Val Lys Val Ile Pro Gln Gly Ser Cys Arg Arg Ala Ser Val
1025 1030 1035

Asn Pro Met Leu His Glu Tyr Leu Val Asn His Leu Pro Leu Ala
1040 1045 1050

Val Asn Asn Asp Thr Ser Glu Tyr Thr Met Leu Ala Pro Leu Asp
1055 1060 1065

Pro Leu Gly His Asn Tyr Gly Ile Tyr Thr Val Thr Asp Gln Asp
1070 1075 1080

Pro Arg Thr Ala Lys Glu Ile Ala Leu Gly Arg Cys Phe Asp Gly
1085 1090 1095

Thr Ser Asp Gly Ser Ser Arg Ile Met Lys Ser Asn Val Gly Val
1100 1105 1110

Ala Leu Thr Phe Asn Cys Val Glu Arg Gln Val Gly Arg Gln Ser
1115 1120 1125

Ala Phe Gln Tyr Leu Gln Ser Thr Pro Ala Gln Ser Pro Ala Ala
1130 1135 1140

Gly Thr Val Gln Gly Arg Val Pro Ser Arg Arg Gln Gln Arg Ala
1145 1150 1155

Ser Arg Gly Gly Gln Arg Gln Gly Gly Val Val Ala Ser Leu Arg
1160 1165 1170

Phe Pro Arg Val Ala Gln Gln Pro Leu Ile Asn
1175 1180

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Met Val Pro Asp Thr Ala Cys Val Leu Leu Leu Thr Leu Ala Ala Leu
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Gly Ala Ser Gly Gln Gly Gln Ser Pro Leu Gly Ser Asp Leu Gly Pro
                20              25              30

Gln Met Leu Arg Glu Leu Gln Glu Thr Asn Ala Ala Leu Gln Asp Val
        35              40              45

Arg Glu Leu Leu Arg Gln Gln Val Arg Glu Ile Thr Phe Leu Lys Asn
        50              55              60

Thr Val Met Glu Cys Asp Ala Cys Gly Met Gln Gln Ser Val Arg Thr
65              70              75              80

Gly Leu Pro Ser Val Arg Pro Leu Leu His Cys Ala Pro Gly Phe Cys
                85              90              95

Phe Pro Gly Val Ala Cys Ile Gln Thr Glu Ser Gly Ala Arg Cys Gly
                100              105              110

Pro Cys Pro Ala Gly Phe Thr Gly Asn Gly Ser His Cys Thr Asp Val
        115              120              125

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26755

Asn	Glu	Cys	Asn	Ala	His	Pro	Cys	Phe	Pro	Arg	Val	Arg	Cys	Ile	Asn	130	135	140
Thr	Ser	Pro	Gly	Phe	Arg	Cys	Glu	Ala	Cys	Pro	Pro	Gly	Tyr	Ser	Gly	145	150	155
Pro	Thr	His	Gln	Gly	Val	Gly	Leu	Ala	Phe	Ala	Lys	Ala	Asn	Lys	Gln	165	170	175
Val	Cys	Thr	Asp	Ile	Asn	Glu	Cys	Glu	Thr	Gly	Gln	His	Asn	Cys	Val	180	185	190
Pro	Asn	Ser	Val	Cys	Ile	Asn	Thr	Arg	Gly	Ser	Phe	Gln	Cys	Gly	Pro	195	200	205
Cys	Gln	Pro	Gly	Phe	Val	Gly	Asp	Gln	Ala	Ser	Gly	Cys	Gln	Arg	Arg	210	215	220
Ala	Gln	Arg	Phe	Cys	Pro	Asp	Gly	Ser	Pro	Ser	Glu	Cys	His	Glu	His	225	230	235
Ala	Asp	Cys	Val	Leu	Glu	Arg	Asp	Gly	Ser	Arg	Ser	Cys	Val	Cys	Ala	245	250	255
Val	Gly	Trp	Ala	Gly	Asn	Gly	Ile	Leu	Cys	Gly	Arg	Asp	Thr	Asp	Leu	260	265	270
Asp	Gly	Phe	Pro	Asp	Glu	Lys	Leu	Arg	Cys	Pro	Glu	Arg	Gln	Cys	Arg	275	280	285
Lys	Asp	Asn	Cys	Val	Thr	Val	Pro	Asn	Ser	Gly	Gln	Glu	Asp	Val	Asp	290	295	300
Arg	Asp	Gly	Ile	Gly	Asp	Ala	Cys	Asp	Pro	Asp	Ala	Asp	Gly	Asp	Gly	305	310	315
Val	Pro	Asn	Glu	Lys	Asp	Asn	Cys	Pro	Leu	Val	Arg	Asn	Pro	Asp	Gln	325	330	335
Arg	Asn	Thr	Asp	Glu	Asp	Lys	Trp	Gly	Asp	Ala	Cys	Asp	Asn	Cys	Arg	340	345	350

Ser Gln Lys Asn Asp Asp Gln Lys Asp Thr Asp Gln Asp Gly Arg Gly
 355 360 365

Asp Ala Cys Asp Asp Asp Ile Asp Gly Asp Arg Ile Arg Asn Gln Ala
 370 375 380

Asp Asn Cys Pro Arg Val Pro Asn Ser Asp Gln Lys Asp Ser Asp Gly
 385 390 395 400

Asp Gly Ile Gly Asp Ala Cys Asp Asn Cys Pro Gln Lys Ser Asn Pro
 405 410 415

Asp Gln Ala Asp Val Asp His Asp Phe Val Gly Asp Ala Cys Asp Ser
 420 425 430

Asp Gln Asp Gln Asp Gly Asp Gly His Gln Asp Ser Arg Asp Asn Cys
 435 440 445

Pro Thr Val Pro Asn Ser Ala Gln Glu Asp Ser Asp His Asp Gly Gln
 450 455 460

Gly Asp Ala Cys Asp Asp Asp Asp Asp Asn Asp Gly Val Pro Asp Ser
 465 470 475 480

Arg Asp Asn Cys Arg Leu Val Pro Asn Pro Gly Gln Glu Asp Ala Asp
 485 490 495

Arg Asp Gly Val Gly Asp Val Cys Gln Asp Asp Phe Asp Ala Asp Lys
 500 505 510

Val Val Asp Lys Ile Asp Val Cys Pro Glu Asn Ala Glu Val Thr Leu
 515 520 525

Thr Asp Phe Arg Ala Phe Gln Thr Val Val Leu Asp Pro Glu Gly Asp
 530 535 540

Ala Gln Ile Asp Pro Asn Trp Val Val Leu Asn Gln Gly Arg Glu Ile
 545 550 555 560

Val Gln Thr Met Asn Ser Asp Pro Gly Leu Ala Val Gly Tyr Thr Ala
 565 570 575

Phe Asn Gly Val Asp Phe Glu Gly Thr Phe His Val Asn Thr Val Thr
580 585 590

Asp Asp Asp Tyr Ala Gly Phe Ile Phe Gly Tyr Gln Asp Ser Ser Ser
595 600 605

Phe Tyr Val Val Met Trp Lys Gln Met Glu Gln Thr Tyr Trp Gln Ala
610 615 620

Asn Pro Phe Arg Ala Val Ala Glu Pro Gly Ile Gln Leu Lys Ala Val
625 630 635 640

Lys Ser Ser Thr Gly Pro Gly Glu Gln Leu Arg Asn Ala Leu Trp His
645 650 655

Thr Gly Asp Thr Glu Ser Gln Val Arg Leu Leu Trp Lys Asp Pro Arg
660 665 670

Asn Val Gly Trp Lys Asp Lys Lys Ser Tyr Arg Trp Phe Leu Gln His
675 680 685

Arg Pro Gln Val Gly Tyr Ile Arg Val Arg Phe Tyr Glu Gly Pro Glu
690 695 700

Leu Val Ala Asp Ser Asn Val Val Leu Asp Thr Thr Met Arg Gly Gly
705 710 715 720

Arg Leu Gly Val Phe Cys Phe Ser Gln Glu Asn Ile Ile Trp Ala Asn
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Leu Arg Tyr Arg Cys Asn Asp Thr Ile Pro Glu Asp Tyr Glu Thr His
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Gln Leu Arg Gln Ala
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Gly Ala Ser Gly Gln Gly Gln Ser Pro Leu Gly Ser Asp Leu Gly Pro
20          25          30

Gln Met Leu Arg Glu Leu Gln Glu Thr Asn Ala Ala Leu Gln Asp Val
35          40          45

Arg Glu Leu Leu Arg Gln Gln Val Arg Glu Ile Thr Phe Leu Lys Asn
50          55          60

Thr Val Met Glu Cys Asp Ala Cys Gly Met Gln Gln Ser Val Arg Thr
65          70          75          80

Gly Leu Pro Ser Val Arg Pro Leu Leu His Cys Ala Pro Gly Phe Cys
85          90          95

Phe Pro Gly Val Ala Cys Ile Gln Thr Glu Ser Gly Ala Arg Cys Gly
100         105         110

Pro Cys Pro Ala Gly Phe Thr Gly Asn Gly Ser His Cys Thr Asp Val
115         120         125

Asn Glu Cys Glu Thr Gly Gln His Asn Cys Val Pro Asn Ser Val Cys
130         135         140

Ile Asn Thr Arg Gly Ser Phe Gln Cys Gly Pro Cys Gln Pro Gly Phe
145         150         155         160

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Val	Gly	Asp	Gln	Ala	Ser	Gly	Cys	Gln	Arg	Arg	Ala	Gln	Arg	Phe	Cys		
				165					170					175			
Pro	Asp	Gly	Ser	Pro	Ser	Glu	Cys	His	Glu	His	Ala	Asp	Cys	Val	Leu		
			180					185					190				
Glu	Arg	Asp	Gly	Ser	Arg	Ser	Cys	Val	Cys	Ala	Val	Gly	Trp	Ala	Gly		
		195					200					205					
Asn	Gly	Ile	Leu	Cys	Gly	Arg	Asp	Thr	Asp	Leu	Asp	Gly	Phe	Pro	Asp		
	210					215					220						
Glu	Lys	Leu	Arg	Cys	Pro	Glu	Arg	Gln	Cys	Arg	Lys	Asp	Asn	Cys	Val		
225					230					235					240		
Thr	Val	Pro	Asn	Ser	Gly	Gln	Glu	Asp	Val	Asp	Arg	Asp	Gly	Ile	Gly		
				245					250					255			
Asp	Ala	Cys	Asp	Pro	Asp	Ala	Asp	Gly	Asp	Gly	Val	Pro	Asn	Glu	Lys		
			260					265					270				
Asp	Asn	Cys	Pro	Leu	Val	Arg	Asn	Pro	Asp	Gln	Arg	Asn	Thr	Asp	Glu		
		275					280					285					
Asp	Lys	Trp	Gly	Asp	Ala	Cys	Asp	Asn	Cys	Arg	Ser	Gln	Lys	Asn	Asp		
	290					295					300						
Asp	Gln	Lys	Asp	Thr	Asp	Gln	Asp	Gly	Arg	Gly	Asp	Ala	Cys	Asp	Asp		
305					310					315					320		
Asp	Ile	Asp	Gly	Asp	Arg	Ile	Arg	Asn	Gln	Ala	Asp	Asn	Cys	Pro	Arg		
				325					330					335			
Val	Pro	Asn	Ser	Asp	Gln	Lys	Asp	Ser	Asp	Gly	Asp	Gly	Ile	Gly	Asp		
			340					345					350				
Ala	Cys	Asp	Asn	Cys	Pro	Gln	Lys	Ser	Asn	Pro	Asp	Gln	Ala	Asp	Val		
		355					360					365					
Asp	His	Asp	Phe	Val	Gly	Asp	Ala	Cys	Asp	Ser	Asp	Gln	Asp	Gln	Asp		
	370					375					380						

Gly	Asp	Gly	His	Gln	Asp	Ser	Arg	Asp	Asn	Cys	Pro	Thr	Val	Pro	Asn	
385					390					395					400	
Ser	Ala	Gln	Glu	Asp	Ser	Asp	His	Asp	Gly	Gln	Gly	Asp	Ala	Cys	Asp	
				405					410					415		
Asp	Asp	Asp	Asp	Asn	Asp	Gly	Val	Pro	Asp	Ser	Arg	Asp	Asn	Cys	Arg	
			420					425					430			
Leu	Val	Pro	Asn	Pro	Gly	Gln	Glu	Asp	Ala	Asp	Arg	Asp	Gly	Val	Gly	
		435					440					445				
Asp	Val	Cys	Gln	Asp	Asp	Phe	Asp	Ala	Asp	Lys	Val	Val	Asp	Lys	Ile	
	450					455					460					
Asp	Val	Cys	Pro	Glu	Asn	Ala	Glu	Val	Thr	Leu	Thr	Asp	Phe	Arg	Ala	
465					470					475					480	
Phe	Gln	Thr	Val	Val	Leu	Asp	Pro	Glu	Gly	Asp	Ala	Gln	Ile	Asp	Pro	
				485					490					495		
Asn	Trp	Val	Val	Leu	Asn	Gln	Gly	Arg	Glu	Ile	Val	Gln	Thr	Met	Asn	
			500					505					510			
Ser	Asp	Pro	Gly	Leu	Ala	Val	Gly	Tyr	Thr	Ala	Phe	Asn	Gly	Val	Asp	
		515					520					525				
Phe	Glu	Gly	Thr	Phe	His	Val	Asn	Thr	Val	Thr	Asp	Asp	Asp	Tyr	Ala	
	530					535					540					
Gly	Phe	Ile	Phe	Gly	Tyr	Gln	Asp	Ser	Ser	Ser	Phe	Tyr	Val	Val	Met	
545					550					555					560	
Trp	Lys	Gln	Met	Glu	Gln	Thr	Tyr	Trp	Gln	Ala	Asn	Pro	Phe	Arg	Ala	
				565					570					575		
Val	Ala	Glu	Pro	Gly	Ile	Gln	Leu	Lys	Ala	Val	Lys	Ser	Ser	Thr	Gly	
			580					585					590			
Pro	Gly	Glu	Gln	Leu	Arg	Asn	Ala	Leu	Trp	His	Thr	Gly	Asp	Thr	Glu	
		595					600					605				
Ser	Gln	Val	Arg	Leu	Leu	Trp	Lys	Asp	Pro	Arg	Asn	Val	Gly	Trp	Lys	

610 615 620
 Asp Lys Lys Ser Tyr Arg Trp Phe Leu Gln His Arg Pro Gln Val Gly
 625 630 635 640
 Tyr Ile Arg Val Arg Phe Tyr Glu Gly Pro Glu Leu Val Ala Asp Ser
 645 650 655
 Asn Val Val Leu Asp Thr Thr Met Arg Gly Gly Arg Leu Gly Val Phe
 660 665 670
 Cys Phe Ser Gln Glu Asn Ile Ile Trp Ala Asn Leu Arg Tyr Arg Cys
 675 680 685
 Asn Asp Thr Ile Pro Glu Asp Tyr Glu Thr His Gln Leu Arg Gln Ala
 690 695 700

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 <220>
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 Glu Leu Leu Arg Gln Gln Val Arg Glu Ile Thr Phe Leu Lys Asn Thr
 20 25 30

 Val Met Glu Cys Asp Ala Cys Gly Met Gln Gln Ser Val Arg Thr Gly
 35 40 45

Leu	Pro	Ser	Val	Arg	Pro	Leu	Leu	His	Cys	Ala	Pro	Gly	Phe	Cys	Phe	
	50					55					60					
Pro	Gly	Val	Ala	Cys	Ile	Gln	Thr	Glu	Ser	Gly	Ala	Arg	Cys	Gly	Pro	
65					70					75					80	
Cys	Pro	Ala	Gly	Phe	Thr	Gly	Asn	Gly	Ser	His	Cys	Thr	Asp	Val	Asn	
				85					90					95		
Glu	Cys	Asn	Ala	His	Pro	Cys	Phe	Pro	Arg	Val	Arg	Cys	Ile	Asn	Thr	
			100					105					110			
Ser	Pro	Gly	Phe	Arg	Cys	Glu	Ala	Cys	Pro	Pro	Gly	Tyr	Ser	Gly	Pro	
		115					120					125				
Thr	His	Gln	Gly	Val	Gly	Leu	Ala	Phe	Ala	Lys	Ala	Asn	Lys	Gln	Val	
	130					135					140					
Cys	Thr	Asp	Ile	Asn	Glu	Cys	Glu	Thr	Gly	Gln	His	Asn	Cys	Val	Pro	
145					150					155					160	
Asn	Ser	Val	Cys	Ile	Asn	Thr	Arg	Gly	Ser	Phe	Gln	Cys	Gly	Pro	Cys	
				165					170					175		
Gln	Pro	Gly	Phe	Val	Gly	Asp	Gln	Ala	Ser	Gly	Cys	Gln	Arg	Arg	Ala	
			180					185					190			
Gln	Arg	Phe	Cys	Pro	Asp	Gly	Ser	Pro	Ser	Glu	Cys	His	Glu	His	Ala	
		195					200					205				
Asp	Cys	Val	Leu	Glu	Arg	Asp	Gly	Ser	Arg	Ser	Cys	Val	Cys	Ala	Val	
	210					215					220					
Gly	Trp	Ala	Gly	Asn	Gly	Ile	Leu	Cys	Gly	Arg	Asp	Thr	Asp	Leu	Asp	
225					230					235					240	
Gly	Phe	Pro	Asp	Glu	Lys	Leu	Arg	Cys	Pro	Glu	Arg	Gln	Cys	Arg	Lys	
				245					250					255		
Asp	Asn	Cys	Val	Thr	Val	Pro	Asn	Ser	Gly	Gln	Glu	Asp	Val	Asp	Arg	
			260					265					270			

Asp Gly Ile Gly Asp Ala Cys Asp Pro Asp Ala Asp Gly Asp Gly Val
 275 280 285

Pro Asn Glu Lys Asp Asn Cys Pro Leu Val Arg Asn Pro Asp Gln Arg
 290 295 300

Asn Thr Asp Glu Asp Lys Trp Gly Asp Ala Cys Asp Asn Cys Arg Ser
 305 310 315 320

Gln Lys Asn Asp Asp Gln Lys Asp Thr Asp Gln Asp Gly Arg Gly Asp
 325 330 335

Ala Cys Asp Asp Asp Ile Asp Gly Asp Arg Ile Arg Asn Gln Ala Asp
 340 345 350

Asn Cys Pro Arg Val Pro Asn Ser Asp Gln Lys Asp Ser Asp Gly Asp
 355 360 365

Gly Ile Gly Asp Ala Cys Asp Asn Cys Pro Gln Lys Ser Asn Pro Asp
 370 375 380

Gln Ala Asp Val Asp His Asp Phe Val Gly Asp Ala Cys Asp Ser Asp
 385 390 395 400

Gln Asp Gln Asp Gly Asp Gly His Gln Asp Ser Arg Asp Asn Cys Pro
 405 410 415

Thr Val Pro Asn Ser Ala Gln Glu Asp Ser Asp His Asp Gly Gln Gly
 420 425 430

Asp Ala Cys Asp Asp Asp Asp Asp Asn Asp Gly Val Pro Asp Ser Arg
 435 440 445

Asp Asn Cys Arg Leu Val Pro Asn Pro Gly Gln Glu Asp Ala Asp Arg
 450 455 460

Asp Gly Val Gly Asp Val Cys Gln Asp Asp Phe Asp Ala Asp Lys Val
 465 470 475 480

Val Asp Lys Ile Asp Val Cys Pro Glu Asn Ala Glu Val Thr Leu Thr
 485 490 495

Asp Phe Arg Ala Phe Gln Thr Val Val Leu Asp Pro Glu Gly Asp Ala

500								505				510			
Gln	Ile	Asp	Pro	Asn	Trp	Val	Val	Leu	Asn	Gln	Gly	Arg	Glu	Ile	Val
		515					520					525			
Gln	Thr	Met	Asn	Ser	Asp	Pro	Gly	Leu	Ala	Val	Gly	Tyr	Thr	Ala	Phe
	530					535					540				
Asn	Gly	Val	Asp	Phe	Glu	Gly	Thr	Phe	His	Val	Asn	Thr	Val	Thr	Asp
545					550					555					560
Asp	Asp	Tyr	Ala	Gly	Phe	Ile	Phe	Gly	Tyr	Gln	Asp	Ser	Ser	Ser	Phe
				565					570					575	
Tyr	Val	Val	Met	Trp	Lys	Gln	Met	Glu	Gln	Thr	Tyr	Trp	Gln	Ala	Asn
			580					585					590		
Pro	Phe	Arg	Ala	Val	Ala	Glu	Pro	Gly	Ile	Gln	Leu	Lys	Ala	Val	Lys
		595					600					605			
Ser	Ser	Thr	Gly	Pro	Gly	Glu	Gln	Leu	Arg	Asn	Ala	Leu	Trp	His	Thr
	610					615					620				
Gly	Asp	Thr	Glu	Ser	Gln	Val	Arg	Leu	Leu	Trp	Lys	Asp	Pro	Arg	Asn
625					630					635					640
Val	Gly	Trp	Lys	Asp	Lys	Lys	Ser	Tyr	Arg	Trp	Phe	Leu	Gln	His	Arg
				645					650					655	
Pro	Gln	Val	Gly	Tyr	Ile	Arg	Val	Arg	Phe	Tyr	Glu	Gly	Pro	Glu	Leu
			660					665					670		
Val	Ala	Asp	Ser	Asn	Val	Val	Leu	Asp	Thr	Thr	Met	Arg	Gly	Gly	Arg
		675					680					685			
Leu	Gly	Val	Phe	Cys	Phe	Ser	Gln	Glu	Asn	Ile	Ile	Trp	Ala	Asn	Leu
	690					695					700				
Arg	Tyr	Arg	Cys	Asn	Asp	Thr	Ile	Pro	Glu	Asp	Tyr	Glu	Thr	His	Gln
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Leu	Arg	Gln	Ala												

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<210> 12038
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<220>
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<220>
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<220>
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<223> /note="Gene Name:
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<220>
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<220>
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Ser Arg Gly Asp Ile Leu Thr Ile Leu Glu Gln His Val Pro Glu Ser
          35          40          45

Glu Gly Trp Trp Lys Cys Leu Leu His Gly Arg Gln Gly Leu Ala Pro
          50          55          60

Ala Asn Arg Leu Gln Ile Leu Thr Glu Val Ala Ala Asp Arg Pro Cys
65          70          75          80

Pro Pro Phe Leu Arg Gly Leu Glu Glu Ala Pro Ala Ser Ser Glu Glu
          85          90          95

Thr Tyr Gln Val Pro Thr Leu Pro Arg Pro Pro Thr Pro Gly Pro Val
          100          105          110

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Tyr Glu Gln Met Arg Ser Trp Ala Glu Gly Pro Gln Pro Pro Thr Ala
 115 120 125

Gln Val Tyr Glu Phe Pro Asp Pro Pro Thr Ser Ala Arg Ile Ile Cys
 130 135 140

Glu Lys Thr Leu Ser Phe Pro Lys Gln Ala Ile Leu Thr Leu Pro Arg
 145 150 155 160

Pro Val Arg Ala Ser Leu Pro Thr Leu Pro Ser Gln Val Tyr Asp Val
 165 170 175

Pro Thr Gln His Arg Gly Pro Val Val Leu Lys Glu Pro Glu Lys Gln
 180 185 190

Gln Leu Tyr Asp Ile Pro Ala Ser Pro Lys Lys Ala Gly Leu His Pro
 195 200 205

Pro Asp Ser Gln Ala Ser Gly Gln Gly Val Pro Leu Ile Ser Val Thr
 210 215 220

Thr Leu Arg Arg Gly Gly Tyr Ser Thr Leu Pro Asn Pro Gln Lys Ser
 225 230 235 240

Glu Trp Ile Tyr Asp Thr Pro Val Ser Pro Gly Lys Ala Ser Val Arg
 245 250 255

Asn Thr Pro Leu Thr Ser Phe Ala Glu Glu Ser Arg Pro His Ala Leu
 260 265 270

Pro Ser Ser Ser Ser Thr Phe Tyr Asn Pro Pro Ser Gly Arg Ser Arg
 275 280 285

Ser Leu Thr Pro Gln Leu Asn Asn Asn Val Pro Met Gln Lys Lys Leu
 290 295 300

Ser Leu Pro Glu Ile Pro Ser Tyr Gly Phe Leu Val Pro Arg Gly Thr
 305 310 315 320

Phe Pro Leu Asp Glu Asp Val Ser Tyr Lys Val Pro Ser Ser Phe Leu
 325 330 335

Ile Pro Arg Val Glu Gln Gln Asn Thr Lys Pro Asn Ile Tyr Asp Ile

				340					345							350			
Pro	Lys	Ala	Thr	Ser	Ser	Val	Ser	Gln	Ala	Gly	Lys	Glu	Leu	Glu	Lys				
		355					360					365							
Ala	Lys	Glu	Val	Ser	Glu	Asn	Ser	Ala	Gly	His	Asn	Ser	Ser	Trp	Phe				
	370					375					380								
Ser	Arg	Arg	Thr	Thr	Ser	Pro	Ser	Pro	Glu	Pro	Asp	Arg	Leu	Ser	Gly				
385					390					395					400				
Ser	Ser	Ser	Asp	Ser	Arg	Ala	Ser	Ile	Val	Ser	Ser	Cys	Ser	Thr	Thr				
				405					410					415					
Ser	Thr	Asp	Asp	Ser	Ser	Ser	Ser	Ser	Ser	Glu	Glu	Ser	Ala	Lys	Glu				
			420					425					430						
Leu	Ser	Leu	Asp	Leu	Asp	Val	Ala	Lys	Glu	Thr	Val	Met	Ala	Leu	Gln				
		435					440					445							
His	Lys	Val	Val	Ser	Ser	Val	Ala	Gly	Leu	Met	Leu	Phe	Val	Ser	Arg				
	450					455					460								
Lys	Trp	Arg	Phe	Arg	Asp	Tyr	Leu	Glu	Ala	Asn	Ile	Asp	Ala	Ile	His				
465					470					475					480				
Arg	Ser	Thr	Asp	His	Ile	Glu	Glu	Ser	Val	Arg	Glu	Phe	Leu	Asp	Phe				
				485					490					495					
Ala	Arg	Gly	Val	His	Gly	Thr	Ala	Cys	Asn	Leu	Thr	Asp	Ser	Asn	Leu				
			500					505					510						
Gln	Asn	Arg	Ile	Arg	Asp	Gln	Met	Gln	Thr	Ile	Ser	Asn	Ser	Tyr	Arg				
		515					520					525							
Ile	Leu	Leu	Glu	Thr	Lys	Glu	Ser	Leu	Asp	Asn	Arg	Asn	Trp	Pro	Leu				
	530					535					540								
Glu	Val	Leu	Val	Thr	Asp	Ser	Val	Gln	Asn	Ser	Pro	Asp	Asp	Leu	Glu				
545					550					555					560				
Arg	Phe	Val	Met	Val	Ala	Arg	Met	Leu	Pro	Glu	Asp	Ile	Lys	Arg	Phe				
				565					570					575					

Ala	Ser	Ile	Val	Ile	Ala	Asn	Gly	Arg	Leu	Leu	Phe	Lys	Arg	Asn	Cys	
			580					585					590			
Glu	Lys	Glu	Glu	Thr	Val	Gln	Leu	Thr	Pro	Asn	Ala	Glu	Phe	Lys	Cys	
		595					600					605				
Glu	Lys	Tyr	Ile	Gln	Pro	Pro	Gln	Arg	Glu	Thr	Glu	Ser	His	Gln	Lys	
	610					615					620					
Ser	Thr	Pro	Ser	Thr	Lys	Gln	Arg	Glu	Asp	Glu	His	Ser	Ser	Glu	Leu	
625					630					635					640	
Leu	Lys	Lys	Asn	Arg	Ala	Asn	Ile	Cys	Gly	Gln	Asn	Pro	Gly	Pro	Leu	
			645						650					655		
Ile	Pro	Gln	Pro	Ser	Ser	Gln	Gln	Thr	Pro	Glu	Arg	Lys	Pro	Arg	Leu	
			660					665					670			
Ser	Glu	His	Cys	Arg	Leu	Tyr	Phe	Gly	Ala	Leu	Phe	Lys	Ala	Ile	Ser	
		675					680					685				
Ala	Phe	His	Gly	Ser	Leu	Ser	Ser	Ser	Gln	Pro	Ala	Glu	Ile	Ile	Thr	
	690					695					700					
Gln	Ser	Lys	Leu	Val	Ile	Met	Val	Gly	Gln	Lys	Leu	Val	Asp	Thr	Leu	
705					710					715					720	
Cys	Met	Glu	Thr	Gln	Glu	Arg	Asp	Val	Arg	Asn	Glu	Ile	Leu	Arg	Gly	
				725					730					735		
Ser	Ser	His	Leu	Cys	Ser	Leu	Leu	Lys	Asp	Val	Ala	Leu	Ala	Thr	Lys	
			740					745					750			
Asn	Ala	Val	Leu	Thr	Tyr	Pro	Ser	Pro	Ala	Ala	Leu	Gly	His	Leu	Gln	
		755					760					765				
Ala	Glu	Ala	Glu	Lys	Leu	Glu	Gln	His	Thr	Arg	Gln	Phe	Arg	Gly	Thr	
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Leu	Gly															
785																

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<210> 12039
<211> 349
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<220>
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<220>
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<220>
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<223> /note="Gene Name:
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<220>
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<223> /note="Uniprot ID: Q9NQ75"

<220>
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          20          25          30

Ser Arg Gly Asp Ile Leu Thr Ile Leu Glu Gln His Val Pro Glu Ser
          35          40          45

Glu Gly Trp Trp Lys Cys Leu Leu His Gly Arg Gln Gly Leu Ala Pro
          50          55          60

Ala Asn Arg Leu Gln Ile Leu Thr Glu Val Ala Ala Asp Arg Pro Cys
65          70          75          80

Pro Pro Phe Leu Arg Gly Leu Glu Glu Ala Pro Ala Ser Ser Glu Glu
          85          90          95

Thr Tyr Gln Val Pro Thr Leu Pro Arg Pro Pro Thr Pro Gly Pro Val
          100          105          110

Tyr Glu Gln Met Arg Ser Trp Ala Glu Gly Pro Gln Pro Pro Thr Ala

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115								120							125
Gln	Val	Tyr	Glu	Phe	Pro	Asp	Pro	Pro	Thr	Ser	Ala	Arg	Ile	Ile	Cys
130						135					140				
Glu	Lys	Thr	Leu	Ser	Phe	Pro	Lys	Gln	Ala	Ile	Leu	Thr	Leu	Pro	Arg
145					150					155					160
Pro	Val	Arg	Ala	Ser	Leu	Pro	Thr	Leu	Pro	Ser	Gln	Val	Tyr	Asp	Val
				165					170					175	
Pro	Thr	Gln	His	Arg	Gly	Pro	Val	Val	Leu	Lys	Glu	Pro	Glu	Lys	Gln
			180					185					190		
Gln	Leu	Tyr	Asp	Ile	Pro	Ala	Ser	Pro	Lys	Lys	Ala	Gly	Leu	His	Pro
		195					200					205			
Pro	Asp	Ser	Gln	Ala	Ser	Asn	Pro	Gly	Pro	Leu	Ile	Pro	Gln	Pro	Ser
	210					215					220				
Ser	Gln	Gln	Thr	Pro	Glu	Arg	Lys	Pro	Arg	Leu	Ser	Glu	His	Cys	Arg
225					230					235					240
Leu	Tyr	Phe	Gly	Ala	Leu	Phe	Lys	Ala	Ile	Ser	Ala	Phe	His	Gly	Ser
				245					250					255	
Leu	Ser	Ser	Ser	Gln	Pro	Ala	Glu	Ile	Ile	Thr	Gln	Ser	Lys	Leu	Val
			260					265					270		
Ile	Met	Val	Gly	Gln	Lys	Leu	Val	Asp	Thr	Leu	Cys	Met	Glu	Thr	Gln
	275						280					285			
Glu	Arg	Asp	Val	Arg	Asn	Glu	Ile	Leu	Arg	Gly	Ser	Ser	His	Leu	Cys
	290					295					300				
Ser	Leu	Leu	Lys	Asp	Val	Ala	Leu	Ala	Thr	Lys	Asn	Ala	Val	Leu	Thr
305					310					315					320
Tyr	Pro	Ser	Pro	Ala	Ala	Leu	Gly	His	Leu	Gln	Ala	Glu	Ala	Glu	Lys
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Leu	Glu	Gln	His	Thr	Arg	Gln	Phe	Arg	Gly	Thr	Leu	Gly			
			340					345							

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<210> 12040
<211> 797
<212> PRT
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<220>
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<223> /note="Gene Symbol: CASD1"

<220>
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<223> /note="Gene Name:
        CAS1 domain containing 1"

<220>
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<220>
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Met Ala Ala Leu Ala Tyr Asn Leu Gly Lys Arg Glu Ile Asn His Tyr
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Phe Ser Val Arg Ser Ala Lys Val Leu Ala Leu Val Ala Val Leu Leu
              20              25              30

Leu Ala Ala Cys His Leu Ala Ser Arg Arg Tyr Arg Gly Asn Asp Ser
35              40              45

Cys Glu Tyr Leu Leu Ser Ser Gly Arg Phe Leu Gly Glu Lys Val Trp
50              55              60

Gln Pro His Ser Cys Met Met His Lys Tyr Lys Ile Ser Glu Ala Lys
65              70              75              80

Asn Cys Leu Val Asp Lys His Ile Ala Phe Ile Gly Asp Ser Arg Ile
85              90              95

Arg Gln Leu Phe Tyr Ser Phe Val Lys Ile Ile Asn Pro Gln Phe Lys
100             105             110

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Glu	Glu	Gly	Asn	Lys	His	Glu	Asn	Ile	Pro	Phe	Glu	Asp	Lys	Thr	Ala		
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Ser	Val	Lys	Val	Asp	Phe	Leu	Trp	His	Pro	Glu	Val	Asn	Gly	Ser	Met		
	130					135					140						
Lys	Gln	Cys	Ile	Lys	Val	Trp	Thr	Glu	Asp	Ser	Ile	Ala	Lys	Pro	His		
145					150					155					160		
Val	Ile	Val	Ala	Gly	Ala	Ala	Thr	Trp	Ser	Ile	Lys	Ile	His	Asn	Gly		
				165					170					175			
Ser	Ser	Glu	Ala	Leu	Ser	Gln	Tyr	Lys	Met	Asn	Ile	Thr	Ser	Ile	Ala		
			180					185					190				
Pro	Leu	Leu	Glu	Lys	Leu	Ala	Lys	Thr	Ser	Asp	Val	Tyr	Trp	Val	Leu		
		195					200					205					
Gln	Asp	Pro	Val	Tyr	Glu	Asp	Leu	Leu	Ser	Glu	Asn	Arg	Lys	Met	Ile		
	210					215					220						
Thr	Asn	Glu	Lys	Ile	Asp	Ala	Tyr	Asn	Glu	Ala	Ala	Val	Ser	Ile	Leu		
225					230					235					240		
Asn	Ser	Ser	Thr	Arg	Asn	Ser	Lys	Ser	Asn	Val	Lys	Met	Phe	Ser	Val		
				245					250					255			
Ser	Lys	Leu	Ile	Ala	Gln	Glu	Thr	Ile	Met	Glu	Ser	Leu	Asp	Gly	Leu		
			260					265					270				
His	Leu	Pro	Glu	Ser	Ser	Arg	Glu	Thr	Thr	Ala	Met	Ile	Leu	Met	Asn		
		275					280					285					
Val	Tyr	Cys	Asn	Lys	Ile	Leu	Lys	Pro	Val	Asp	Gly	Ser	Cys	Cys	Gln		
	290					295					300						
Pro	Arg	Pro	Pro	Val	Thr	Leu	Ile	Gln	Lys	Leu	Ala	Ala	Cys	Phe	Phe		
305					310					315					320		
Thr	Leu	Ser	Ile	Ile	Gly	Tyr	Leu	Ile	Phe	Tyr	Ile	Ile	His	Arg	Asn		
				325					330					335			
Ala	His	Arg	Lys	Asn	Lys	Pro	Cys	Thr	Asp	Leu	Glu	Ser	Gly	Glu	Glu		

				340					345					350					
Lys	Lys	Asn	Ile	Ile	Asn	Thr	Pro	Val	Ser	Ser	Leu	Glu	Ile	Leu	Leu				
		355					360					365							
Gln	Ser	Phe	Cys	Lys	Leu	Gly	Leu	Ile	Met	Ala	Tyr	Phe	Tyr	Met	Cys				
	370					375					380								
Asp	Arg	Ala	Asn	Leu	Phe	Met	Lys	Glu	Asn	Lys	Phe	Tyr	Thr	His	Ser				
385					390					395					400				
Ser	Phe	Phe	Ile	Pro	Ile	Ile	Tyr	Ile	Leu	Val	Leu	Gly	Val	Phe	Tyr				
				405					410					415					
Asn	Glu	Asn	Thr	Lys	Glu	Thr	Lys	Val	Leu	Asn	Arg	Glu	Gln	Thr	Asp				
			420				425						430						
Glu	Trp	Lys	Gly	Trp	Met	Gln	Leu	Val	Ile	Leu	Ile	Tyr	His	Ile	Ser				
		435					440					445							
Gly	Ala	Ser	Thr	Phe	Leu	Pro	Val	Tyr	Met	His	Ile	Arg	Val	Leu	Val				
	450					455					460								
Ala	Ala	Tyr	Leu	Phe	Gln	Thr	Gly	Tyr	Gly	His	Phe	Ser	Tyr	Phe	Trp				
465					470					475					480				
Ile	Lys	Gly	Asp	Phe	Gly	Ile	Tyr	Arg	Val	Cys	Gln	Val	Leu	Phe	Arg				
				485					490					495					
Leu	Asn	Phe	Leu	Val	Val	Val	Leu	Cys	Ile	Val	Met	Asp	Arg	Pro	Tyr				
			500					505					510						
Gln	Phe	Tyr	Tyr	Phe	Val	Pro	Leu	Val	Thr	Val	Trp	Phe	Met	Val	Ile				
		515					520					525							
Tyr	Val	Thr	Leu	Ala	Leu	Trp	Pro	Gln	Ile	Ile	Gln	Lys	Lys	Ala	Asn				
	530					535					540								
Gly	Asn	Cys	Phe	Trp	His	Phe	Gly	Leu	Leu	Leu	Lys	Leu	Gly	Phe	Leu				
545					550					555					560				
Leu	Leu	Phe	Ile	Cys	Phe	Leu	Ala	Tyr	Ser	Gln	Gly	Ala	Phe	Glu	Lys				
				565					570					575					

Ile	Phe	Ser	Leu	Trp	Pro	Leu	Ser	Lys	Cys	Phe	Glu	Leu	Lys	Gly	Asn		
			580					585					590				
Val	Tyr	Glu	Trp	Trp	Phe	Arg	Trp	Arg	Leu	Asp	Arg	Tyr	Val	Val	Phe		
		595					600					605					
His	Gly	Met	Leu	Phe	Ala	Phe	Ile	Tyr	Leu	Ala	Leu	Gln	Lys	Arg	Gln		
	610					615					620						
Ile	Leu	Ser	Glu	Gly	Lys	Gly	Glu	Pro	Leu	Phe	Ser	Asn	Lys	Ile	Ser		
625					630					635					640		
Asn	Phe	Leu	Leu	Phe	Ile	Ser	Val	Val	Ser	Phe	Leu	Thr	Tyr	Ser	Ile		
				645					650					655			
Trp	Ala	Ser	Ser	Cys	Lys	Asn	Lys	Ala	Glu	Cys	Asn	Glu	Leu	His	Pro		
			660					665					670				
Ser	Val	Ser	Val	Val	Gln	Ile	Leu	Ala	Phe	Ile	Leu	Ile	Arg	Asn	Ile		
		675					680					685					
Pro	Gly	Tyr	Ala	Arg	Ser	Val	Tyr	Ser	Ser	Phe	Phe	Ala	Trp	Phe	Gly		
	690					695					700						
Lys	Ile	Ser	Leu	Glu	Leu	Phe	Ile	Cys	Gln	Tyr	His	Ile	Trp	Leu	Ala		
705					710					715					720		
Ala	Asp	Thr	Arg	Gly	Ile	Leu	Val	Leu	Ile	Pro	Gly	Asn	Pro	Met	Leu		
				725					730					735			
Asn	Ile	Ile	Val	Ser	Thr	Phe	Ile	Phe	Val	Cys	Val	Ala	His	Glu	Ile		
			740					745					750				
Ser	Gln	Ile	Thr	Asn	Asp	Leu	Ala	Gln	Ile	Ile	Ile	Pro	Lys	Asp	Asn		
		755					760					765					
Ser	Ser	Leu	Leu	Lys	Arg	Leu	Ala	Cys	Ile	Ala	Ala	Phe	Phe	Cys	Gly		
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Leu	Leu	Ile	Leu	Ser	Ser	Ile	Gln	Asp	Lys	Ser	Lys	His					
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 <220>
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 Phe Ser Val Arg Ser Ala Lys Val Leu Ala Leu Val Ala Val Leu Leu
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 Leu Ala Ala Cys His Leu Ala Ser Arg Arg Tyr Arg Ala
 35 40 45

 <210> 12042
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 <212> PRT
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 <220>
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 <220>
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<400> 12042

Met Met His Lys Tyr Lys Ile Ser Glu Ala Lys Asn Cys Leu Val Asp
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Lys His Ile Ala Phe Ile Gly Asp Ser Arg Ile Arg Gln Leu Phe Tyr
20 25 30

Ser Phe Val Lys Ile Ile Asn Pro Gln Phe Lys Glu Glu Gly Asn Lys
35 40 45

His Glu Asn Ile Pro Phe Glu Asp Lys Thr Ala Ser Val Lys Val Asp
50 55 60

Phe Leu Trp His Pro Glu Val Asn Gly Ser Met Lys Gln Cys Ile Lys
65 70 75 80

Val Trp Thr Glu Asp Ser Ile Ala Lys Pro His Val Ile Val Ala Gly
85 90 95

Ala Ala Thr Trp Ser Ile Lys Ile His Asn Gly Ser Ser Glu Ala Leu
100 105 110

Ser Gln Tyr Lys Met Asn Ile Thr Ser Ile Ala Pro Leu
115 120 125

<210> 12043

<211> 103

<212> PRT

<213> Homo sapiens

<220>

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<223> /note="Payload ID: 2386"

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<223> /note="Gene Name:
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<220>

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<400> 12043

Met Ala Ala Leu Ala Tyr Asn Leu Gly Lys Arg Glu Ile Asn His Tyr
1 5 10 15

Phe Ser Val Arg Ser Ala Lys Val Leu Ala Leu Val Ala Val Leu Leu
20 25 30

Leu Ala Ala Cys His Leu Ala Ser Arg Arg Tyr Arg Gly Asn Asp Ser
35 40 45

Cys Glu Tyr Leu Leu Ser Ser Gly Arg Phe Leu Gly Glu Lys Val Trp
50 55 60

Gln Pro His Ser Cys Met Met His Lys Tyr Lys Ile Ser Met Lys Thr
65 70 75 80

Phe Leu Leu Lys Thr Arg Leu His Gln Leu Lys Trp Ile Phe Cys Gly
85 90 95

Ile Leu Lys Leu Met Val Leu
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<210> 12044
<211> 185
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<400> 12044
Met Arg Leu Leu Ile Leu Thr Cys Leu Val Ala Val Ala Leu Ala Arg
1 5 10 15

Pro Lys Leu Pro Leu Arg Tyr Pro Glu Arg Leu Gln Asn Pro Ser Glu
 20 25 30

 Ser Ser Glu Pro Ile Pro Leu Glu Ser Arg Glu Glu Tyr Met Asn Gly
 35 40 45

 Met Asn Arg Gln Arg Asn Ile Leu Arg Glu Lys Gln Thr Asp Glu Ile
 50 55 60

 Lys Asp Thr Arg Asn Glu Ser Thr Gln Asn Cys Val Val Ala Glu Pro
 65 70 75 80

 Glu Lys Met Glu Ser Ser Ile Ser Ser Ser Ser Glu Glu Met Ser Leu
 85 90 95

 Ser Lys Cys Ala Glu Gln Phe Cys Arg Leu Asn Glu Tyr Asn Gln Leu
 100 105 110

 Gln Leu Gln Ala Ala His Ala Gln Glu Gln Ile Arg Arg Met Asn Glu
 115 120 125

 Asn Ser His Val Gln Val Pro Phe Gln Gln Leu Asn Gln Leu Ala Ala
 130 135 140

 Tyr Pro Tyr Ala Val Trp Tyr Tyr Pro Gln Ile Met Gln Tyr Val Pro
 145 150 155 160

 Phe Pro Pro Phe Ser Asp Ile Ser Asn Pro Thr Ala His Glu Asn Tyr
 165 170 175

 Glu Lys Asn Asn Val Met Leu Gln Trp
 180 185

<210> 12045

<211> 76

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<220>

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<223> /note="Payload ID: 2387"

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<400> 12045

Lys Met Glu Ser Ser Ile Ser Ser Ser Ser Glu Glu Gln Ile Arg Arg
1 5 10 15

Met Asn Glu Asn Ser His Val Gln Val Pro Phe Gln Gln Leu Asn Gln
20 25 30

Leu Ala Ala Tyr Pro Tyr Ala Val Trp Tyr Tyr Pro Gln Ile Met Gln
35 40 45

Tyr Val Pro Phe Pro Pro Phe Ser Asp Ile Ser Asn Pro Thr Ala His
50 55 60

Glu Asn Tyr Glu Lys Asn Asn Val Met Leu Gln Trp
65 70 75

<210> 12046

<211> 176

<212> PRT

<213> Homo sapiens

<220>

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<400> 12046

Met Arg Leu Leu Ile Leu Thr Cys Leu Val Ala Val Ala Leu Ala Arg
1 5 10 15

Pro Lys Leu Pro Leu Arg Tyr Pro Glu Arg Leu Gln Asn Pro Ser Glu
20 25 30

Ser Ser Glu Pro Ile Pro Leu Glu Ser Arg Glu Glu Tyr Met Asn Gly
35 40 45

Met Asn Arg Arg Asn Ile Leu Arg Glu Lys Gln Thr Asp Glu Ile Lys
50 55 60

Asp Thr Arg Asn Glu Ser Thr Gln Asn Cys Val Val Ala Glu Pro Glu
65 70 75 80

Lys Met Glu Ser Ser Ile Ser Ser Ser Ser Glu Glu Gln Phe Cys Arg
85 90 95

Leu Asn Glu Tyr Asn Gln Leu Gln Leu Gln Ala Ala His Ala Gln Glu
100 105 110

Gln Ile Arg Arg Met Asn Glu Asn Ser His Val Gln Val Pro Phe Gln
115 120 125

Gln Leu Asn Gln Leu Ala Ala Tyr Pro Tyr Ala Val Trp Tyr Tyr Pro
130 135 140

Gln Ile Met Gln Tyr Val Pro Phe Pro Pro Phe Ser Asp Ile Ser Asn
145 150 155 160

Pro Thr Ala His Glu Asn Tyr Glu Lys Asn Asn Val Met Leu Gln Trp
165 170 175

<210> 12047

<211> 169

<212> PRT

<213> Homo sapiens

<220>

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<220>

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<400> 12047

Met Arg Leu Leu Ile Leu Thr Cys Leu Val Ala Val Ala Leu Ala Arg
1 5 10 15

Pro Lys Leu Pro Leu Arg Tyr Pro Glu Arg Leu Gln Asn Pro Ser Glu
20 25 30

Ser Ser Glu Pro Ile Pro Leu Glu Ser Arg Glu Glu Tyr Met Asn Gly
35 40 45

Met Asn Arg Gln Arg Asn Ile Leu Arg Glu Lys Gln Thr Asp Glu Ile
50 55 60

Lys Asn Cys Val Val Ala Glu Pro Glu Lys Met Glu Ser Ser Ile Ser
65 70 75 80

Ser Ser Ser Glu Glu Gln Phe Cys Arg Leu Asn Glu Tyr Asn Gln Leu
85 90 95

Gln Leu Gln Ala Ala His Ala Gln Glu Gln Ile Arg Arg Met Asn Glu
100 105 110

Asn Ser His Val Gln Val Pro Phe Gln Gln Leu Asn Gln Leu Ala Ala
115 120 125

Tyr Pro Tyr Ala Val Trp Tyr Tyr Pro Gln Ile Met Gln Tyr Val Pro
130 135 140

Phe Pro Pro Phe Ser Asp Ile Ser Asn Pro Thr Ala His Glu Asn Tyr
145 150 155 160

Glu Lys Asn Asn Val Met Leu Gln Trp
165

<210> 12048

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<211> 177
<212> PRT
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<220>
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<400> 12048
Met Arg Leu Leu Ile Leu Thr Cys Leu Val Ala Val Ala Leu Ala Arg
1          5          10          15

Pro Lys Leu Pro Leu Arg Tyr Pro Glu Arg Leu Gln Asn Pro Ser Glu
20          25          30

Ser Ser Glu Pro Ile Pro Leu Glu Ser Arg Glu Glu Tyr Met Asn Gly
35          40          45

Met Asn Arg Gln Arg Asn Ile Leu Arg Glu Lys Gln Thr Asp Glu Ile
50          55          60

Lys Asp Thr Arg Asn Glu Ser Thr Gln Asn Cys Val Val Ala Glu Pro
65          70          75          80

Glu Lys Met Glu Ser Ser Ile Ser Ser Ser Ser Glu Glu Gln Phe Cys
85          90          95

Arg Leu Asn Glu Tyr Asn Gln Leu Gln Leu Gln Ala Ala His Ala Gln
100         105         110

Glu Gln Ile Arg Arg Met Asn Glu Asn Ser His Val Gln Val Pro Phe
115         120         125

Gln Gln Leu Asn Gln Leu Ala Ala Tyr Pro Tyr Ala Val Trp Tyr Tyr
130         135         140

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Pro Gln Ile Met Gln Tyr Val Pro Phe Pro Pro Phe Ser Asp Ile Ser
 145 150 155 160

Asn Pro Thr Ala His Glu Asn Tyr Glu Lys Asn Asn Val Met Leu Gln
 165 170 175

Trp

<210> 12049
 <211> 55
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<220>
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<220>
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<400> 12049
 Gln Arg Asn Ile Leu Arg Glu Lys Gln Thr Asp Glu Ile Lys Asn Cys
 1 5 10 15

Val Val Ala Glu Pro Glu Lys Met Glu Ser Ser Ile Ser Ser Ser Ser
 20 25 30

Glu Glu Met Ser Leu Ser Lys Cys Ala Glu Gln Phe Cys Arg Leu Asn
 35 40 45

Glu Tyr Asn Gln Leu Gln Leu
 50 55

<210> 12050
 <211> 226
 <212> PRT
 <213> Homo sapiens


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<220>
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<223> /note="Payload ID: 2388"

<220>
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<223> /note="Gene Symbol: CSN2"

<220>
<221> source
<223> /note="Gene Name:
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<220>
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<223> /note="Uniprot ID: P05814"

<220>
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<223> /note="ENSP ID: ENSP00000341030"

<400> 12050
Met Lys Val Leu Ile Leu Ala Cys Leu Val Ala Leu Ala Leu Ala Arg
1          5          10          15

Glu Thr Ile Glu Ser Leu Ser Ser Ser Glu Glu Ser Ile Thr Glu Tyr
          20          25          30

Lys Gln Lys Val Glu Lys Val Lys His Glu Asp Gln Gln Gln Gly Glu
          35          40          45

Asp Glu His Gln Asp Lys Ile Tyr Pro Ser Phe Gln Pro Gln Pro Leu
          50          55          60

Ile Tyr Pro Phe Val Glu Pro Ile Pro Tyr Gly Phe Leu Pro Gln Asn
65          70          75          80

Ile Leu Pro Leu Ala Gln Pro Ala Val Val Leu Pro Val Pro Gln Pro
          85          90          95

Glu Ile Met Glu Val Pro Lys Ala Lys Asp Thr Val Tyr Thr Lys Gly
          100          105          110

Arg Val Met Pro Val Leu Lys Ser Pro Thr Ile Pro Phe Phe Asp Pro
          115          120          125

Gln Ile Pro Lys Leu Thr Asp Leu Glu Asn Leu His Leu Pro Leu Pro
          130          135          140

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Leu Leu Gln Pro Leu Met Gln Gln Val Pro Gln Pro Ile Pro Gln Thr
145 150 155 160

Leu Ala Leu Pro Pro Gln Pro Leu Trp Ser Val Pro Gln Pro Lys Val
165 170 175

Leu Pro Ile Pro Gln Gln Val Val Pro Tyr Pro Gln Arg Ala Val Pro
180 185 190

Val Gln Ala Leu Leu Leu Asn Gln Glu Leu Leu Leu Asn Pro Thr His
195 200 205

Gln Ile Tyr Pro Val Thr Gln Pro Leu Ala Pro Val His Asn Pro Ile
210 215 220

Ser Val
225

<210> 12051
<211> 226
<212> PRT
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<220>
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<220>
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<220>
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<223> /note="Gene Name:
casein beta"

<220>
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<223> /note="ENSP ID: ENSP00000489488"

<400> 12051
Met Lys Val Leu Ile Leu Ala Cys Leu Val Ala Leu Ala Leu Ala Arg
1 5 10 15

Glu Thr Ile Glu Ser Leu Ser Ser Ser Glu Glu Ser Ile Thr Glu Tyr
20 25 30

Lys Gln Lys Val Glu Lys Val Lys His Glu Asp Gln Gln Gln Gly Glu

35					40					45					
Asp	Glu	His	Gln	Asp	Lys	Ile	Tyr	Pro	Ser	Phe	Gln	Pro	Gln	Pro	Leu
50						55					60				
Ile	Tyr	Pro	Phe	Val	Glu	Pro	Ile	Pro	Tyr	Gly	Phe	Leu	Pro	Gln	Asn
65					70					75					80
Ile	Leu	Pro	Leu	Ala	Gln	Pro	Ala	Val	Val	Leu	Pro	Val	Pro	Gln	Pro
				85					90					95	
Glu	Ile	Met	Glu	Val	Pro	Lys	Ala	Lys	Asp	Thr	Val	Tyr	Thr	Lys	Gly
			100					105					110		
Arg	Val	Met	Pro	Val	Leu	Lys	Ser	Pro	Thr	Ile	Pro	Phe	Phe	Asp	Pro
		115					120					125			
Gln	Ile	Pro	Lys	Leu	Thr	Asp	Leu	Glu	Asn	Leu	His	Leu	Pro	Leu	Pro
	130					135					140				
Leu	Leu	Gln	Pro	Leu	Met	Gln	Gln	Val	Pro	Gln	Pro	Ile	Pro	Gln	Thr
145					150					155					160
Leu	Ala	Leu	Pro	Pro	Gln	Pro	Leu	Trp	Ser	Val	Pro	Gln	Pro	Lys	Val
				165					170					175	
Leu	Pro	Ile	Pro	Gln	Gln	Val	Val	Pro	Tyr	Pro	Gln	Arg	Ala	Val	Pro
			180					185					190		
Val	Gln	Ala	Leu	Leu	Leu	Asn	Gln	Glu	Leu	Leu	Leu	Asn	Pro	Thr	His
		195					200					205			
Gln	Ile	Tyr	Pro	Val	Thr	Gln	Pro	Leu	Ala	Pro	Val	His	Asn	Pro	Ile
	210					215					220				
Ser	Val														
225															

<210> 12052
 <211> 182
 <212> PRT
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<223> /note="Payload ID: 2389"

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<220>
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<220>
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<220>
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<223> /note="ENSP ID: ENSP00000304822"

<400> 12052
Met Lys Ser Phe Leu Leu Val Val Asn Ala Leu Ala Leu Thr Leu Pro
1          5          10          15

Phe Leu Ala Val Glu Val Gln Asn Gln Lys Gln Pro Ala Cys His Glu
          20          25          30

Asn Asp Glu Arg Pro Phe Tyr Gln Lys Thr Ala Pro Tyr Val Pro Met
          35          40          45

Tyr Tyr Val Pro Asn Ser Tyr Pro Tyr Tyr Gly Thr Asn Leu Tyr Gln
          50          55          60

Arg Arg Pro Ala Ile Ala Ile Asn Asn Pro Tyr Val Pro Arg Thr Tyr
65          70          75          80

Tyr Ala Asn Pro Ala Val Val Arg Pro His Ala Gln Ile Pro Gln Arg
          85          90          95

Gln Tyr Leu Pro Asn Ser His Pro Pro Thr Val Val Arg Arg Pro Asn
          100          105          110

Leu His Pro Ser Phe Ile Ala Ile Pro Pro Lys Lys Ile Gln Asp Lys
          115          120          125

Ile Ile Ile Pro Thr Ile Asn Thr Ile Ala Thr Val Glu Pro Thr Pro
130          135          140

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Ala Pro Ala Thr Glu Pro Thr Val Asp Ser Val Val Thr Pro Glu Ala
 145 150 155 160

Phe Ser Glu Ser Ile Ile Thr Ser Thr Pro Glu Thr Thr Thr Val Ala
 165 170 175

Val Thr Pro Pro Thr Ala
 180

<210> 12053
 <211> 325
 <212> PRT
 <213> Homo sapiens

<220>
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<220>
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<220>
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<220>
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<220>
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 <223> /note="ENSP ID: ENSP00000261798"

<400> 12053
 Met Ala Ser Ser Ser Gly Ser Lys Ala Glu Phe Ile Val Gly Gly Lys
 1 5 10 15

Tyr Lys Leu Val Arg Lys Ile Gly Ser Gly Ser Phe Gly Asp Ile Tyr
 20 25 30

Leu Ala Ile Asn Ile Thr Asn Gly Glu Glu Val Ala Val Lys Leu Glu
 35 40 45

Ser Gln Lys Ala Arg His Pro Gln Leu Leu Tyr Glu Ser Lys Leu Tyr
 50 55 60

Lys Ile Leu Gln Gly Gly Val Gly Ile Pro His Ile Arg Trp Tyr Gly
 65 70 75 80

Gln	Glu	Lys	Asp	Tyr	Asn	Val	Leu	Val	Met	Asp	Leu	Leu	Gly	Pro	Ser		
				85					90					95			
Leu	Glu	Asp	Leu	Phe	Asn	Phe	Cys	Ser	Arg	Arg	Phe	Thr	Met	Lys	Thr		
			100					105					110				
Val	Leu	Met	Leu	Ala	Asp	Gln	Met	Ile	Ser	Arg	Ile	Glu	Tyr	Val	His		
		115					120					125					
Thr	Lys	Asn	Phe	Ile	His	Arg	Asp	Ile	Lys	Pro	Asp	Asn	Phe	Leu	Met		
	130					135					140						
Gly	Ile	Gly	Arg	His	Cys	Asn	Lys	Leu	Phe	Leu	Ile	Asp	Phe	Gly	Leu		
145					150					155					160		
Ala	Lys	Lys	Tyr	Arg	Asp	Asn	Arg	Thr	Arg	Gln	His	Ile	Pro	Tyr	Arg		
				165					170					175			
Glu	Asp	Lys	Asn	Leu	Thr	Gly	Thr	Ala	Arg	Tyr	Ala	Ser	Ile	Asn	Ala		
			180					185					190				
His	Leu	Gly	Ile	Glu	Gln	Ser	Arg	Arg	Asp	Asp	Met	Glu	Ser	Leu	Gly		
		195					200					205					
Tyr	Val	Leu	Met	Tyr	Phe	Asn	Arg	Thr	Ser	Leu	Pro	Trp	Gln	Gly	Leu		
	210					215					220						
Lys	Ala	Ala	Thr	Lys	Lys	Gln	Lys	Tyr	Glu	Lys	Ile	Ser	Glu	Lys	Lys		
225					230					235					240		
Met	Ser	Thr	Pro	Val	Glu	Val	Leu	Cys	Lys	Gly	Phe	Pro	Ala	Glu	Phe		
				245					250					255			
Ala	Met	Tyr	Leu	Asn	Tyr	Cys	Arg	Gly	Leu	Arg	Phe	Glu	Glu	Ala	Pro		
			260					265					270				
Asp	Tyr	Met	Tyr	Leu	Arg	Gln	Leu	Phe	Arg	Ile	Leu	Phe	Arg	Thr	Leu		
		275					280					285					
Asn	His	Gln	Tyr	Asp	Tyr	Thr	Phe	Asp	Trp	Thr	Met	Leu	Lys	Gln	Lys		
	290					295					300						

Ala Ala Gln Gln Ala Ala Ser Ser Ser Gly Gln Gly Gln Gln Ala Gln
305 310 315 320

Thr Pro Thr Gly Phe
325

<210> 12054

<211> 337

<212> PRT

<213> Homo sapiens

<220>

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<223> /note="Gene Name:
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<220>

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<223> /note="Uniprot ID: P48729"

<220>

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<223> /note="ENSP ID: ENSP00000367074"

<400> 12054

Met Ala Ser Ser Ser Gly Ser Lys Ala Glu Phe Ile Val Gly Gly Lys
1 5 10 15

Tyr Lys Leu Val Arg Lys Ile Gly Ser Gly Ser Phe Gly Asp Ile Tyr
20 25 30

Leu Ala Ile Asn Ile Thr Asn Gly Glu Glu Val Ala Val Lys Leu Glu
35 40 45

Ser Gln Lys Ala Arg His Pro Gln Leu Leu Tyr Glu Ser Lys Leu Tyr
50 55 60

Lys Ile Leu Gln Gly Gly Val Gly Ile Pro His Ile Arg Trp Tyr Gly
65 70 75 80

Gln Glu Lys Asp Tyr Asn Val Leu Val Met Asp Leu Leu Gly Pro Ser

26791

85

90

95

Leu Glu Asp Leu Phe Asn Phe Cys Ser Arg Arg Phe Thr Met Lys Thr
100 105 110

Val Leu Met Leu Ala Asp Gln Met Ile Ser Arg Ile Glu Tyr Val His
115 120 125

Thr Lys Asn Phe Ile His Arg Asp Ile Lys Pro Asp Asn Phe Leu Met
130 135 140

Gly Ile Gly Arg His Cys Asn Lys Leu Phe Leu Ile Asp Phe Gly Leu
145 150 155 160

Ala Lys Lys Tyr Arg Asp Asn Arg Thr Arg Gln His Ile Pro Tyr Arg
165 170 175

Glu Asp Lys Asn Leu Thr Gly Thr Ala Arg Tyr Ala Ser Ile Asn Ala
180 185 190

His Leu Gly Ile Glu Gln Ser Arg Arg Asp Asp Met Glu Ser Leu Gly
195 200 205

Tyr Val Leu Met Tyr Phe Asn Arg Thr Ser Leu Pro Trp Gln Gly Leu
210 215 220

Lys Ala Ala Thr Lys Lys Gln Lys Tyr Glu Lys Ile Ser Glu Lys Lys
225 230 235 240

Met Ser Thr Pro Val Glu Val Leu Cys Lys Gly Phe Pro Ala Glu Phe
245 250 255

Ala Met Tyr Leu Asn Tyr Cys Arg Gly Leu Arg Phe Glu Glu Ala Pro
260 265 270

Asp Tyr Met Tyr Leu Arg Gln Leu Phe Arg Ile Leu Phe Arg Thr Leu
275 280 285

Asn His Gln Tyr Asp Tyr Thr Phe Asp Trp Thr Met Leu Lys Gln Lys
290 295 300

Ala Ala Gln Gln Ala Ala Ser Ser Ser Gly Gln Gly Gln Gln Ala Gln
305 310 315 320

26792

Thr Pro Thr Gly Lys Gln Thr Asp Lys Thr Lys Ser Asn Met Lys Gly
325 330 335

Phe

<210> 12055
<211> 89
<212> PRT
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<220>
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<220>
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<220>
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<223> /note="Gene Name:
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<220>
<221> source
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<400> 12055
Met Ala Ser Ser Ser Gly Ser Lys Ala Glu Phe Ile Val Gly Gly Lys
1 5 10 15

Tyr Lys Leu Val Arg Lys Ile Gly Ser Gly Ser Phe Gly Asp Ile Tyr
20 25 30

Leu Ala Ile Asn Ile Thr Asn Gly Glu Glu Val Ala Val Lys Leu Glu
35 40 45

Ser Gln Lys Ala Arg His Pro Gln Leu Leu Tyr Glu Ser Lys Leu Tyr
50 55 60

Lys Ile Leu Gln Gly Gly Val Gly Ile Pro His Ile Arg Ser Pro Glu
65 70 75 80

Trp Ile Lys Pro Leu Lys Ser Gln Glu
85

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<210> 12056
<211> 365
<212> PRT
<213> Homo sapiens

<220>
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<220>
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<220>
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<220>
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<400> 12056
Met Ala Ser Ser Gly Ser Lys Ala Glu Phe Ile Val Gly Gly Lys
1          5          10          15

Tyr Lys Leu Val Arg Lys Ile Gly Ser Gly Ser Phe Gly Asp Ile Tyr
          20          25          30

Leu Ala Ile Asn Ile Thr Asn Gly Glu Glu Val Ala Val Lys Leu Glu
          35          40          45

Ser Gln Lys Ala Arg His Pro Gln Leu Leu Tyr Glu Ser Lys Leu Tyr
          50          55          60

Lys Ile Leu Gln Gly Gly Val Gly Ile Pro His Ile Arg Trp Tyr Gly
65          70          75          80

Gln Glu Lys Asp Tyr Asn Val Leu Val Met Asp Leu Leu Gly Pro Ser
          85          90          95

Leu Glu Asp Leu Phe Asn Phe Cys Ser Arg Arg Phe Thr Met Lys Thr
          100          105          110

Val Leu Met Leu Ala Asp Gln Met Ile Ser Arg Ile Glu Tyr Val His
          115          120          125

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Thr	Lys	Asn	Phe	Ile	His	Arg	Asp	Ile	Lys	Pro	Asp	Asn	Phe	Leu	Met
	130					135					140				
Gly	Ile	Gly	Arg	His	Cys	Asn	Lys	Cys	Leu	Glu	Ser	Pro	Val	Gly	Lys
145					150					155					160
Arg	Lys	Arg	Ser	Met	Thr	Val	Ser	Thr	Ser	Gln	Asp	Pro	Ser	Phe	Ser
				165					170					175	
Gly	Leu	Asn	Gln	Leu	Phe	Leu	Ile	Asp	Phe	Gly	Leu	Ala	Lys	Lys	Tyr
			180					185					190		
Arg	Asp	Asn	Arg	Thr	Arg	Gln	His	Ile	Pro	Tyr	Arg	Glu	Asp	Lys	Asn
		195					200					205			
Leu	Thr	Gly	Thr	Ala	Arg	Tyr	Ala	Ser	Ile	Asn	Ala	His	Leu	Gly	Ile
	210					215					220				
Glu	Gln	Ser	Arg	Arg	Asp	Asp	Met	Glu	Ser	Leu	Gly	Tyr	Val	Leu	Met
225					230					235					240
Tyr	Phe	Asn	Arg	Thr	Ser	Leu	Pro	Trp	Gln	Gly	Leu	Lys	Ala	Ala	Thr
				245					250					255	
Lys	Lys	Gln	Lys	Tyr	Glu	Lys	Ile	Ser	Glu	Lys	Lys	Met	Ser	Thr	Pro
			260					265					270		
Val	Glu	Val	Leu	Cys	Lys	Gly	Phe	Pro	Ala	Glu	Phe	Ala	Met	Tyr	Leu
		275					280					285			
Asn	Tyr	Cys	Arg	Gly	Leu	Arg	Phe	Glu	Glu	Ala	Pro	Asp	Tyr	Met	Tyr
	290					295					300				
Leu	Arg	Gln	Leu	Phe	Arg	Ile	Leu	Phe	Arg	Thr	Leu	Asn	His	Gln	Tyr
305					310					315					320
Asp	Tyr	Thr	Phe	Asp	Trp	Thr	Met	Leu	Lys	Gln	Lys	Ala	Ala	Gln	Gln
				325					330					335	
Ala	Ala	Ser	Ser	Ser	Gly	Gln	Gly	Gln	Gln	Ala	Gln	Thr	Pro	Thr	Gly
			340					345					350		

Lys Gln Thr Asp Lys Thr Lys Ser Asn Met Lys Gly Phe
355 360 365

<210> 12057
<211> 167
<212> PRT
<213> Homo sapiens

<220>
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<220>
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<220>
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<223> /note="Gene Name:
casein kinase 1, alpha 1"

<220>
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<220>
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<222> (1)..(1)
<223> Any amino acid

<400> 12057
Xaa Gln His Ile Pro Tyr Arg Glu Asp Lys Asn Leu Thr Gly Thr Ala
1 5 10 15

Arg Tyr Ala Ser Ile Asn Ala His Leu Gly Ile Glu Gln Ser Arg Arg
20 25 30

Asp Asp Met Glu Ser Leu Gly Tyr Val Leu Met Tyr Phe Asn Arg Thr
35 40 45

Ser Leu Pro Trp Gln Gly Leu Lys Ala Ala Thr Lys Lys Gln Lys Tyr
50 55 60

Glu Lys Ile Ser Glu Lys Lys Met Ser Thr Pro Val Glu Val Leu Cys
65 70 75 80

Lys Gly Phe Pro Ala Glu Phe Ala Met Tyr Leu Asn Tyr Cys Arg Gly
85 90 95

Leu Arg Phe Glu Glu Ala Pro Asp Tyr Met Tyr Leu Arg Gln Leu Phe
100 105 110

Arg Ile Leu Phe Arg Thr Leu Asn His Gln Tyr Asp Tyr Thr Phe Asp
115 120 125

Trp Thr Met Leu Lys Gln Lys Ala Ala Gln Gln Ala Ala Ser Ser Ser
130 135 140

Gly Gln Gly Gln Gln Ala Gln Thr Pro Thr Gly Lys Gln Thr Asp Lys
145 150 155 160

Thr Lys Ser Asn Met Lys Gly
165

<210> 12058
<211> 236
<212> PRT
<213> Homo sapiens

<220>
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<220>
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<220>
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<223> /note="Gene Name:
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<220>
<221> source
<223> /note="ENSP ID: ENSP00000426747"

<400> 12058
Met Asp Leu Leu Gly Pro Ser Leu Glu Asp Leu Phe Asn Phe Cys Ser
1 5 10 15

Arg Arg Phe Thr Met Lys Thr Val Leu Met Leu Ala Asp Gln Met Ile
20 25 30

Ser Arg Ile Glu Tyr Val His Thr Lys Asn Phe Ile His Arg Asp Ile
35 40 45

Lys Pro Asp Asn Phe Leu Met Gly Ile Gly Arg His Cys Asn Lys Leu

50		55		60											
Phe 65	Leu 66	Ile 67	Asp 68	Phe 69	Gly 70	Leu 71	Ala 72	Lys 73	Lys 74	Tyr 75	Arg 76	Asp 77	Asn 78	Arg 79	Thr 80
Arg 81	Gln 82	His 83	Ile 84	Pro 85	Tyr 86	Arg 87	Glu 88	Asp 89	Lys 90	Asn 91	Leu 92	Thr 93	Gly 94	Thr 95	Ala 96
Arg 97	Tyr 98	Ala 99	Ser 100	Ile 101	Asn 102	Ala 103	His 104	Leu 105	Gly 106	Ile 107	Glu 108	Gln 109	Ser 110	Arg 111	Arg 112
Asp 113	Asp 114	Met 115	Glu 116	Ser 117	Leu 118	Gly 119	Tyr 120	Val 121	Leu 122	Met 123	Tyr 124	Phe 125	Asn 126	Arg 127	Thr 128
Ser 129	Leu 130	Pro 131	Trp 132	Gln 133	Gly 134	Leu 135	Lys 136	Ala 137	Ala 138	Thr 139	Lys 140	Lys 141	Gln 142	Lys 143	Tyr 144
Glu 145	Lys 146	Ile 147	Ser 148	Glu 149	Lys 150	Lys 151	Met 152	Ser 153	Thr 154	Pro 155	Val 156	Glu 157	Val 158	Leu 159	Cys 160
Lys 161	Gly 162	Phe 163	Pro 164	Ala 165	Glu 166	Phe 167	Ala 168	Met 169	Tyr 170	Leu 171	Asn 172	Tyr 173	Cys 174	Arg 175	Gly 176
Leu 177	Arg 178	Phe 179	Glu 180	Glu 181	Ala 182	Pro 183	Asp 184	Tyr 185	Met 186	Tyr 187	Leu 188	Arg 189	Gln 190	Leu 191	Phe 192
Arg 193	Ile 194	Leu 195	Phe 196	Arg 197	Thr 198	Leu 199	Asn 200	His 201	Gln 202	Tyr 203	Asp 204	Tyr 205	Thr 206	Phe 207	Asp 208
Trp 209	Thr 210	Met 211	Leu 212	Lys 213	Gln 214	Lys 215	Ala 216	Ala 217	Gln 218	Gln 219	Ala 220	Ala 221	Ser 222	Ser 223	Ser 224
Gly 225	Gln 226	Gly 227	Gln 228	Gln 229	Ala 230	Gln 231	Thr 232	Pro 233	Thr 234	Gly 235	Phe 236				

<210> 12059

<211> 264

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2390"

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<221> source
<223> /note="Gene Symbol: CSNK1A1"

<220>
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<223> /note="Gene Name:
        casein kinase 1, alpha 1"

<220>
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<223> /note="ENSP ID: ENSP00000427031"

<400> 12059
Met Asp Leu Leu Gly Pro Ser Leu Glu Asp Leu Phe Asn Phe Cys Ser
1          5          10          15

Arg Arg Phe Thr Met Lys Thr Val Leu Met Leu Ala Asp Gln Met Ile
          20          25          30

Ser Arg Ile Glu Tyr Val His Thr Lys Asn Phe Ile His Arg Asp Ile
          35          40          45

Lys Pro Asp Asn Phe Leu Met Gly Ile Gly Arg His Cys Asn Lys Cys
          50          55          60

Leu Glu Ser Pro Val Gly Lys Arg Lys Arg Ser Met Thr Val Ser Thr
65          70          75          80

Ser Gln Asp Pro Ser Phe Ser Gly Leu Asn Gln Leu Phe Leu Ile Asp
          85          90          95

Phe Gly Leu Ala Lys Lys Tyr Arg Asp Asn Arg Thr Arg Gln His Ile
          100          105          110

Pro Tyr Arg Glu Asp Lys Asn Leu Thr Gly Thr Ala Arg Tyr Ala Ser
          115          120          125

Ile Asn Ala His Leu Gly Ile Glu Gln Ser Arg Arg Asp Asp Met Glu
          130          135          140

Ser Leu Gly Tyr Val Leu Met Tyr Phe Asn Arg Thr Ser Leu Pro Trp
145          150          155          160

Gln Gly Leu Lys Ala Ala Thr Lys Lys Gln Lys Tyr Glu Lys Ile Ser
          165          170          175

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Glu Lys Lys Met Ser Thr Pro Val Glu Val Leu Cys Lys Gly Phe Pro
180 185 190

Ala Glu Phe Ala Met Tyr Leu Asn Tyr Cys Arg Gly Leu Arg Phe Glu
195 200 205

Glu Ala Pro Asp Tyr Met Tyr Leu Arg Gln Leu Phe Arg Ile Leu Phe
210 215 220

Arg Thr Leu Asn His Gln Tyr Asp Tyr Thr Phe Asp Trp Thr Met Leu
225 230 235 240

Lys Gln Lys Ala Ala Gln Gln Ala Ala Ser Ser Ser Gly Gln Gly Gln
245 250 255

Gln Ala Gln Thr Pro Thr Gly Phe
260

<210> 12060
<211> 78
<212> PRT
<213> Homo sapiens

<220>
<221> source
<223> /note="Payload ID: 2390"

<220>
<221> source
<223> /note="Gene Symbol: CSNK1A1"

<220>
<221> source
<223> /note="Gene Name:
casein kinase 1, alpha 1"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000430252"

<400> 12060
Met Ala Ser Ser Ser Gly Ser Lys Ala Glu Phe Ile Val Gly Gly Lys
1 5 10 15

Tyr Lys Leu Val Arg Lys Ile Gly Ser Gly Ser Phe Gly Asp Ile Tyr
20 25 30

Leu Ala Ile Asn Ile Thr Asn Gly Glu Glu Val Ala Val Lys Leu Glu
35 40 45

26800

Ser Gln Lys Ala Arg His Pro Gln Leu Leu Tyr Glu Ser Lys Leu Tyr
50 55 60

Lys Ile Leu Gln Gly Gly Val Gly Ile Pro His Ile Arg Met
65 70 75

<210> 12061

<211> 134

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2390"

<220>

<221> source

<223> /note="Gene Symbol: CSNK1A1"

<220>

<221> source

<223> /note="Gene Name:
casein kinase 1, alpha 1"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000475319"

<400> 12061

Met Glu Ser Leu Gly Tyr Val Leu Met Tyr Phe Asn Arg Thr Ser Leu
1 5 10 15

Pro Trp Gln Gly Leu Lys Ala Ala Thr Lys Lys Gln Lys Tyr Glu Lys
20 25 30

Ile Ser Glu Lys Lys Met Ser Thr Pro Val Glu Val Leu Cys Lys Gly
35 40 45

Phe Pro Ala Glu Phe Ala Met Tyr Leu Asn Tyr Cys Arg Gly Leu Arg
50 55 60

Phe Glu Glu Ala Pro Asp Tyr Met Tyr Leu Arg Gln Leu Phe Arg Ile
65 70 75 80

Leu Phe Arg Thr Leu Asn His Gln Tyr Asp Tyr Thr Phe Asp Trp Thr
85 90 95

Met Leu Lys Gln Lys Ala Ala Gln Gln Ala Ala Ser Ser Ser Gly Gln
100 105 110

Gly Gln Gln Ala Gln Thr Pro Thr Gly Lys Gln Thr Asp Lys Thr Lys
115 120 125

Ser Asn Met Lys Gly Phe
130

<210> 12062

<211> 96

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2390"

<220>

<221> source

<223> /note="Gene Symbol: CSNK1A1"

<220>

<221> source

<223> /note="Gene Name:
casein kinase 1, alpha 1"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000475633"

<400> 12062

Met Ser Thr Pro Val Glu Val Leu Cys Lys Gly Phe Pro Ala Glu Phe
1 5 10 15

Ala Met Tyr Leu Asn Tyr Cys Arg Gly Leu Arg Phe Glu Glu Ala Pro
20 25 30

Asp Tyr Met Tyr Leu Arg Gln Leu Phe Arg Ile Leu Phe Arg Thr Leu
35 40 45

Asn His Gln Tyr Asp Tyr Thr Phe Asp Trp Thr Met Leu Lys Gln Lys
50 55 60

Ala Ala Gln Gln Ala Ala Ser Ser Ser Gly Gln Gly Gln Gln Ala Gln
65 70 75 80

Thr Pro Thr Gly Lys Gln Thr Asp Lys Thr Lys Ser Asn Met Lys Gly
85 90 95

<210> 12063
<211> 184
<212> PRT
<213> Homo sapiens

<220>
<221> source
<223> /note="Payload ID: 2390"

<220>
<221> source
<223> /note="Gene Symbol: CSNK1A1"

<220>
<221> source
<223> /note="Gene Name:
casein kinase 1, alpha 1"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000475969"

<220>
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<222> (1)..(1)
<223> Any amino acid

<400> 12063
Xaa Gly Thr Ala Arg Tyr Ala Ser Ile Asn Ala His Leu Gly Ile Glu
1 5 10 15

Gln Ser Arg Arg Asp Asp Met Glu Ser Leu Gly Tyr Val Leu Met Tyr
20 25 30

Phe Asn Arg Thr Ser Leu Pro Trp Gln Gly Leu Lys Ala Ala Thr Lys
35 40 45

Lys Gln Lys Tyr Glu Lys Ile Ser Glu Lys Lys Met Ser Thr Pro Val
50 55 60

Glu Val Leu Cys Lys Gly Phe Pro Ala Glu Phe Ala Met Tyr Leu Asn
65 70 75 80

Tyr Cys Arg Gly Leu Arg Phe Glu Glu Ala Pro Asp Tyr Met Tyr Leu
85 90 95

Arg Gln Leu Phe Arg Ile Leu Phe Arg Thr Leu Asn His Gln Tyr Asp
100 105 110

26803

Tyr Thr Phe Asp Trp Thr Met Leu Lys Gln Lys Ala Ala Gln Gln Ala
115 120 125

Ala Ser Ser Ser Gly Gln Gly Gln Gln Ala Gln Thr Pro Thr Gly Lys
130 135 140

Gln Thr Asp Lys Thr Lys Ser Asn Met Lys Gly Asn Ala Asp Glu Ser
145 150 155 160

Ala Arg Val Gly Leu Trp Ser Ser Gly Val His Val Ser Lys Thr Ala
165 170 175

Gly Pro Ser Asn Ser Ala Thr Cys
180

<210> 12064
<211> 166
<212> PRT
<213> Homo sapiens

<220>
<221> source
<223> /note="Payload ID: 2390"

<220>
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<223> /note="Gene Symbol: CSNK1A1"

<220>
<221> source
<223> /note="Gene Name:
casein kinase 1, alpha 1"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000479826"

<400> 12064
Met Phe Leu Val Leu Lys Lys Lys His Ile Cys His Arg Asn Leu Val
1 5 10 15

Asn Ile Leu Gln Leu Asn Met Tyr Val Cys Cys Leu Asp Lys Cys Asn
20 25 30

His Cys Lys His Leu Tyr Asp Leu Gly Phe Cys Phe Tyr Phe Glu Met
35 40 45

Gly Ala Phe Leu Phe Thr Ser Ser Leu Lys Thr Lys Asn Cys Phe Cys
 50 55 60
 Lys Glu Met Arg Phe Phe Leu Asn Asn Lys Lys Cys Leu Ala Asp Ser
 65 70 75 80
 Leu Leu Asn Lys Asn Leu Pro Asn Phe Leu Ile Asp Tyr Phe Lys Pro
 85 90 95
 Phe Val Thr Trp Tyr Ser Phe Ala Ser Gln Phe Arg Phe Arg Val Ile
 100 105 110
 Thr Phe Pro Leu Phe Leu Arg Lys Met Lys Lys Val Ile Leu Leu Ser
 115 120 125
 Glu Gly Glu Arg His Ser Phe Ile Phe Phe Phe Phe Phe Phe Phe
 130 135 140
 Tyr Asp Leu Gln Ala Gln Tyr Leu Val Leu Gln Leu Pro Glu Leu Gly
 145 150 155 160
 Ile Val Ala Ala Ala Arg
 165

<210> 12065
 <211> 337
 <212> PRT
 <213> Homo sapiens

<220>
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 <223> /note="Payload ID: 2391"

<220>
 <221> source
 <223> /note="Gene Symbol: CSNK1A1L"

<220>
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 <223> /note="Gene Name:
 casein kinase 1, alpha 1-like"

<220>
 <221> source
 <223> /note="Uniprot ID: Q8N752"

<220>
 <221> source
 <223> /note="ENSP ID: ENSP00000369126"

<400> 12065

Met Thr Asn Asn Ser Gly Ser Lys Ala Glu Leu Val Val Gly Gly Lys
1 5 10 15

Tyr Lys Leu Val Arg Lys Ile Gly Ser Gly Ser Phe Gly Asp Val Tyr
20 25 30

Leu Gly Ile Thr Thr Thr Asn Gly Glu Asp Val Ala Val Lys Leu Glu
35 40 45

Ser Gln Lys Val Lys His Pro Gln Leu Leu Tyr Glu Ser Lys Leu Tyr
50 55 60

Thr Ile Leu Gln Gly Gly Val Gly Ile Pro His Met His Trp Tyr Gly
65 70 75 80

Gln Glu Lys Asp Asn Asn Val Leu Val Met Asp Leu Leu Gly Pro Ser
85 90 95

Leu Glu Asp Leu Phe Asn Phe Cys Ser Arg Arg Phe Thr Met Lys Thr
100 105 110

Val Leu Met Leu Ala Asp Gln Met Ile Ser Arg Ile Glu Tyr Val His
115 120 125

Thr Lys Asn Phe Leu His Arg Asp Ile Lys Pro Asp Asn Phe Leu Met
130 135 140

Gly Thr Gly Arg His Cys Asn Lys Leu Phe Leu Ile Asp Phe Gly Leu
145 150 155 160

Ala Lys Lys Tyr Arg Asp Asn Arg Thr Arg Gln His Ile Pro Tyr Arg
165 170 175

Glu Asp Lys His Leu Ile Gly Thr Val Arg Tyr Ala Ser Ile Asn Ala
180 185 190

His Leu Gly Ile Glu Gln Ser Arg Arg Asp Asp Met Glu Ser Leu Gly
195 200 205

Tyr Val Phe Met Tyr Phe Asn Arg Thr Ser Leu Pro Trp Gln Gly Leu
210 215 220

26806

Arg Ala Met Thr Lys Lys Gln Lys Tyr Glu Lys Ile Ser Glu Lys Lys
225 230 235 240

Met Ser Thr Pro Val Glu Val Leu Cys Lys Gly Phe Pro Ala Glu Phe
245 250 255

Ala Met Tyr Leu Asn Tyr Cys Arg Gly Leu Arg Phe Glu Glu Val Pro
260 265 270

Asp Tyr Met Tyr Leu Arg Gln Leu Phe Arg Ile Leu Phe Arg Thr Leu
275 280 285

Asn His Gln Tyr Asp Tyr Thr Phe Asp Trp Thr Met Leu Lys Gln Lys
290 295 300

Ala Ala Gln Gln Ala Ala Ser Ser Ser Gly Gln Gly Gln Gln Ala Gln
305 310 315 320

Thr Gln Thr Gly Lys Gln Thr Glu Lys Asn Lys Asn Asn Val Lys Asp
325 330 335

Asn

<210> 12066
<211> 120
<212> PRT
<213> Homo sapiens

<220>
<221> source
<223> /note="Payload ID: 2392"

<220>
<221> source
<223> /note="Gene Symbol: CSNK1D"

<220>
<221> source
<223> /note="Gene Name:
casein kinase 1, delta"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000269361"

<220>

<221> MOD_RES
 <222> (1)..(1)
 <223> Any amino acid

 <400> 12066
 Xaa Leu Leu Gly Pro Ser Leu Glu Asp Leu Phe Asn Phe Cys Ser Arg
 1 5 10 15

 Lys Phe Ser Leu Lys Thr Val Leu Leu Leu Ala Asp Gln Met Ile Ser
 20 25 30

 Arg Ile Glu Tyr Ile His Ser Lys Asn Phe Ile His Arg Asp Val Lys
 35 40 45

 Pro Asp Asn Phe Leu Met Gly Leu Gly Lys Lys Gly Asn Leu Val Tyr
 50 55 60

 Ile Ile Asp Phe Gly Leu Ala Lys Lys Tyr Arg Asp Ala Arg Thr His
 65 70 75 80

 Gln His Ile Pro Tyr Arg Glu Asn Lys Asn Leu Thr Gly Thr Ala Arg
 85 90 95

 Tyr Ala Ser Ile Asn Thr His Leu Gly Ile Gly Ala Glu Gly Cys His
 100 105 110

 Gln Glu Thr Glu Ile Arg Lys Asp
 115 120

<210> 12067
 <211> 415
 <212> PRT
 <213> Homo sapiens

 <220>
 <221> source
 <223> /note="Payload ID: 2392"

 <220>
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 <223> /note="Gene Symbol: CSNK1D"

 <220>
 <221> source
 <223> /note="Gene Name:
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 <220>
 <221> source

<223> /note="Uniprot ID: P48730"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000324464"

<400> 12067

Met Glu Leu Arg Val Gly Asn Arg Tyr Arg Leu Gly Arg Lys Ile Gly
1 5 10 15

Ser Gly Ser Phe Gly Asp Ile Tyr Leu Gly Thr Asp Ile Ala Ala Gly
20 25 30

Glu Glu Val Ala Ile Lys Leu Glu Cys Val Lys Thr Lys His Pro Gln
35 40 45

Leu His Ile Glu Ser Lys Ile Tyr Lys Met Met Gln Gly Gly Val Gly
50 55 60

Ile Pro Thr Ile Arg Trp Cys Gly Ala Glu Gly Asp Tyr Asn Val Met
65 70 75 80

Val Met Glu Leu Leu Gly Pro Ser Leu Glu Asp Leu Phe Asn Phe Cys
85 90 95

Ser Arg Lys Phe Ser Leu Lys Thr Val Leu Leu Leu Ala Asp Gln Met
100 105 110

Ile Ser Arg Ile Glu Tyr Ile His Ser Lys Asn Phe Ile His Arg Asp
115 120 125

Val Lys Pro Asp Asn Phe Leu Met Gly Leu Gly Lys Lys Gly Asn Leu
130 135 140

Val Tyr Ile Ile Asp Phe Gly Leu Ala Lys Lys Tyr Arg Asp Ala Arg
145 150 155 160

Thr His Gln His Ile Pro Tyr Arg Glu Asn Lys Asn Leu Thr Gly Thr
165 170 175

Ala Arg Tyr Ala Ser Ile Asn Thr His Leu Gly Ile Glu Gln Ser Arg
180 185 190

Arg Asp Asp Leu Glu Ser Leu Gly Tyr Val Leu Met Tyr Phe Asn Leu
195 200 205

26809

Gly	Ser	Leu	Pro	Trp	Gln	Gly	Leu	Lys	Ala	Ala	Thr	Lys	Arg	Gln	Lys			
210						215					220							
Tyr	Glu	Arg	Ile	Ser	Glu	Lys	Lys	Met	Ser	Thr	Pro	Ile	Glu	Val	Leu			
225					230					235					240			
Cys	Lys	Gly	Tyr	Pro	Ser	Glu	Phe	Ala	Thr	Tyr	Leu	Asn	Phe	Cys	Arg			
				245					250					255				
Ser	Leu	Arg	Phe	Asp	Asp	Lys	Pro	Asp	Tyr	Ser	Tyr	Leu	Arg	Gln	Leu			
			260					265					270					
Phe	Arg	Asn	Leu	Phe	His	Arg	Gln	Gly	Phe	Ser	Tyr	Asp	Tyr	Val	Phe			
		275					280					285						
Asp	Trp	Asn	Met	Leu	Lys	Phe	Gly	Ala	Ser	Arg	Ala	Ala	Asp	Asp	Ala			
290						295					300							
Glu	Arg	Glu	Arg	Arg	Asp	Arg	Glu	Glu	Arg	Leu	Arg	His	Ser	Arg	Asn			
305					310					315					320			
Pro	Ala	Thr	Arg	Gly	Leu	Pro	Ser	Thr	Ala	Ser	Gly	Arg	Leu	Arg	Gly			
				325					330					335				
Thr	Gln	Glu	Val	Ala	Pro	Pro	Thr	Pro	Leu	Thr	Pro	Thr	Ser	His	Thr			
			340					345					350					
Ala	Asn	Thr	Ser	Pro	Arg	Pro	Val	Ser	Gly	Met	Glu	Arg	Glu	Arg	Lys			
		355					360					365						
Val	Ser	Met	Arg	Leu	His	Arg	Gly	Ala	Pro	Val	Asn	Ile	Ser	Ser	Ser			
370						375					380							
Asp	Leu	Thr	Gly	Arg	Gln	Asp	Thr	Ser	Arg	Met	Ser	Thr	Ser	Gln	Ile			
385					390					395					400			
Pro	Gly	Arg	Val	Ala	Ser	Ser	Gly	Leu	Gln	Ser	Val	Val	His	Arg				
				405					410					415				

<210> 12068
 <211> 409
 <212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2392"

<220>

<221> source

<223> /note="Gene Symbol: CSNK1D"

<220>

<221> source

<223> /note="Gene Name:
casein kinase 1, delta"

<220>

<221> source

<223> /note="Uniprot ID: P48730"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000376146"

<400> 12068

Met Glu Leu Arg Val Gly Asn Arg Tyr Arg Leu Gly Arg Lys Ile Gly
1 5 10 15

Ser Gly Ser Phe Gly Asp Ile Tyr Leu Gly Thr Asp Ile Ala Ala Gly
20 25 30

Glu Glu Val Ala Ile Lys Leu Glu Cys Val Lys Thr Lys His Pro Gln
35 40 45

Leu His Ile Glu Ser Lys Ile Tyr Lys Met Met Gln Gly Gly Val Gly
50 55 60

Ile Pro Thr Ile Arg Trp Cys Gly Ala Glu Gly Asp Tyr Asn Val Met
65 70 75 80

Val Met Glu Leu Leu Gly Pro Ser Leu Glu Asp Leu Phe Asn Phe Cys
85 90 95

Ser Arg Lys Phe Ser Leu Lys Thr Val Leu Leu Leu Ala Asp Gln Met
100 105 110

Ile Ser Arg Ile Glu Tyr Ile His Ser Lys Asn Phe Ile His Arg Asp
115 120 125

Val Lys Pro Asp Asn Phe Leu Met Gly Leu Gly Lys Lys Gly Asn Leu

26811

130						135						140				
Val	Tyr	Ile	Ile	Asp	Phe	Gly	Leu	Ala	Lys	Lys	Tyr	Arg	Asp	Ala	Arg	
145					150					155					160	
Thr	His	Gln	His	Ile	Pro	Tyr	Arg	Glu	Asn	Lys	Asn	Leu	Thr	Gly	Thr	
				165					170					175		
Ala	Arg	Tyr	Ala	Ser	Ile	Asn	Thr	His	Leu	Gly	Ile	Glu	Gln	Ser	Arg	
			180					185					190			
Arg	Asp	Asp	Leu	Glu	Ser	Leu	Gly	Tyr	Val	Leu	Met	Tyr	Phe	Asn	Leu	
		195					200					205				
Gly	Ser	Leu	Pro	Trp	Gln	Gly	Leu	Lys	Ala	Ala	Thr	Lys	Arg	Gln	Lys	
	210					215					220					
Tyr	Glu	Arg	Ile	Ser	Glu	Lys	Lys	Met	Ser	Thr	Pro	Ile	Glu	Val	Leu	
225					230					235					240	
Cys	Lys	Gly	Tyr	Pro	Ser	Glu	Phe	Ala	Thr	Tyr	Leu	Asn	Phe	Cys	Arg	
				245					250					255		
Ser	Leu	Arg	Phe	Asp	Asp	Lys	Pro	Asp	Tyr	Ser	Tyr	Leu	Arg	Gln	Leu	
			260					265					270			
Phe	Arg	Asn	Leu	Phe	His	Arg	Gln	Gly	Phe	Ser	Tyr	Asp	Tyr	Val	Phe	
		275					280					285				
Asp	Trp	Asn	Met	Leu	Lys	Phe	Gly	Ala	Ser	Arg	Ala	Ala	Asp	Asp	Ala	
	290					295					300					
Glu	Arg	Glu	Arg	Arg	Asp	Arg	Glu	Glu	Arg	Leu	Arg	His	Ser	Arg	Asn	
305					310					315					320	
Pro	Ala	Thr	Arg	Gly	Leu	Pro	Ser	Thr	Ala	Ser	Gly	Arg	Leu	Arg	Gly	
				325					330					335		
Thr	Gln	Glu	Val	Ala	Pro	Pro	Thr	Pro	Leu	Thr	Pro	Thr	Ser	His	Thr	
			340					345					350			
Ala	Asn	Thr	Ser	Pro	Arg	Pro	Val	Ser	Gly	Met	Glu	Arg	Glu	Arg	Lys	
		355					360					365				

Val Ser Met Arg Leu His Arg Gly Ala Pro Val Asn Ile Ser Ser Ser
370 375 380

Asp Leu Thr Gly Arg Gln Asp Thr Ser Arg Met Ser Thr Ser Gln Asn
385 390 395 400

Ser Ile Pro Phe Glu His His Gly Lys
405

<210> 12069
<211> 427
<212> PRT
<213> Homo sapiens

<220>
<221> source
<223> /note="Payload ID: 2392"

<220>
<221> source
<223> /note="Gene Symbol: CSNK1D"

<220>
<221> source
<223> /note="Gene Name:
casein kinase 1, delta"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000381531"

<400> 12069
Met Glu Leu Arg Val Gly Asn Arg Tyr Arg Leu Gly Arg Lys Ile Gly
1 5 10 15

Ser Gly Ser Phe Gly Asp Ile Tyr Leu Gly Thr Asp Ile Ala Ala Gly
20 25 30

Glu Glu Val Ala Ile Lys Leu Glu Cys Val Lys Thr Lys His Pro Gln
35 40 45

Leu His Ile Glu Ser Lys Ile Tyr Lys Met Met Gln Gly Gly Val Gly
50 55 60

Ile Pro Thr Ile Arg Trp Cys Gly Ala Glu Gly Asp Tyr Asn Val Met
65 70 75 80

Val	Met	Glu	Leu	Leu	Gly	Pro	Ser	Leu	Glu	Asp	Leu	Phe	Asn	Phe	Cys	85	90	95
Ser	Arg	Lys	Phe	Ser	Leu	Lys	Thr	Val	Leu	Leu	Leu	Ala	Asp	Gln	Met	100	105	110
Ile	Ser	Arg	Ile	Glu	Tyr	Ile	His	Ser	Lys	Asn	Phe	Ile	His	Arg	Asp	115	120	125
Val	Lys	Pro	Asp	Asn	Phe	Leu	Met	Gly	Leu	Gly	Lys	Lys	Gly	Asn	Leu	130	135	140
Val	Tyr	Ile	Ile	Asp	Phe	Gly	Leu	Ala	Lys	Lys	Tyr	Arg	Asp	Ala	Arg	145	150	155
Thr	His	Gln	His	Ile	Pro	Tyr	Arg	Glu	Asn	Lys	Asn	Leu	Thr	Gly	Thr	165	170	175
Ala	Arg	Tyr	Ala	Ser	Ile	Asn	Thr	His	Leu	Gly	Ile	Glu	Gln	Ser	Arg	180	185	190
Arg	Asp	Asp	Leu	Glu	Ser	Leu	Gly	Tyr	Val	Leu	Met	Tyr	Phe	Asn	Leu	195	200	205
Gly	Ser	Leu	Pro	Trp	Gln	Gly	Leu	Lys	Ala	Ala	Thr	Lys	Arg	Gln	Lys	210	215	220
Tyr	Glu	Arg	Ile	Ser	Glu	Lys	Lys	Met	Ser	Thr	Pro	Ile	Glu	Val	Leu	225	230	235
Cys	Lys	Gly	Tyr	Pro	Ser	Glu	Phe	Ala	Thr	Tyr	Leu	Asn	Phe	Cys	Arg	245	250	255
Ser	Leu	Arg	Phe	Asp	Asp	Lys	Pro	Asp	Tyr	Ser	Tyr	Leu	Arg	Gln	Leu	260	265	270
Phe	Arg	Asn	Leu	Phe	His	Arg	Gln	Gly	Phe	Ser	Tyr	Asp	Tyr	Val	Phe	275	280	285
Asp	Trp	Asn	Met	Leu	Lys	Phe	Gly	Ala	Ser	Arg	Ala	Ala	Asp	Asp	Ala	290	295	300
Glu	Arg	Glu	Arg	Arg	Asp	Arg	Glu	Glu	Arg	Leu	Arg	His	Ser	Arg	Asn			

Ser Gly Ser Phe Gly Asp Ile Tyr Leu Gly Thr Asp Ile Ala Ala Gly
20 25 30

Glu Glu Val Ala Ile Lys Leu Glu Cys Val Lys Thr Lys His Pro Gln
35 40 45

Leu His Ile Glu Ser Lys Ile Tyr Lys Met Met Gln Gly Gly Val Gly
50 55 60

Ile Pro Thr Ile Arg Trp Cys Gly Ala Glu Gly Asp Tyr Asn Val Met
65 70 75 80

Val Met Glu Leu Leu Gly Pro Ser Leu Glu Asp Leu Phe Asn Phe Cys
85 90 95

Ser Arg Lys Phe Ser Leu Lys Thr Val Leu Leu Leu Ala Asp Gln Met
100 105 110

Asn Asn Pro Glu Glu Met Thr Trp Ser Leu Trp Ala Thr Cys
115 120 125

<210> 12071

<211> 64

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2392"

<220>

<221> source

<223> /note="Gene Symbol: CSNK1D"

<220>

<221> source

<223> /note="Gene Name:
casein kinase 1, delta"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000462079"

<220>

<221> MOD_RES

<222> (1)..(1)

<223> Any amino acid

<400> 12071

Xaa Arg Glu Arg Lys Val Ser Met Arg Leu His Arg Gly Ala Pro Val
1 5 10 15

Asn Ile Ser Ser Ser Asp Leu Thr Gly Arg Gln Asp Thr Ser Arg Met
20 25 30

Ser Thr Ser Gln Arg Ser Arg Asp Met Ala Ser Leu Arg Leu His Ala
35 40 45

Ala Arg Gln Gly Thr Arg Cys Arg Pro Gln Arg Pro Arg Arg Thr Tyr
50 55 60

<210> 12072

<211> 56

<212> PRT

<213> Homo sapiens

<220>

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<220>

<221> source

<223> /note="Gene Symbol: CSNK1D"

<220>

<221> source

<223> /note="Gene Name:
casein kinase 1, delta"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000462144"

<400> 12072

Met Glu Leu Arg Val Gly Asn Arg Tyr Arg Leu Gly Arg Lys Ile Gly
1 5 10 15

Ser Gly Ser Phe Gly Asp Ile Tyr Leu Gly Trp Ser Ala Val Ala Arg
20 25 30

Ser Arg Leu Thr Ala Ser Ser Ala Ser Gln Arg Trp Gly Phe Thr Val
35 40 45

Leu Ala Arg Met Val Ser Ile Ser
50 55

<210> 12073

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<211> 187
<212> PRT
<213> Homo sapiens

<220>
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<220>
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<220>
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<223> /note="Gene Name:
        casein kinase 1, delta"

<220>
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<223> /note="ENSP ID: ENSP00000463757"

<400> 12073
Met Glu Leu Arg Val Gly Asn Arg Tyr Arg Leu Gly Arg Lys Ile Gly
1          5          10          15

Ser Gly Ser Phe Gly Asp Ile Tyr Leu Val Gly Ile Pro Thr Ile Arg
          20          25          30

Trp Cys Gly Ala Glu Gly Asp Tyr Asn Val Met Val Met Glu Leu Leu
          35          40          45

Gly Pro Ser Leu Glu Asp Leu Phe Asn Phe Cys Ser Arg Lys Phe Ser
          50          55          60

Leu Lys Thr Val Leu Leu Leu Ala Asp Gln Met Ile Ser Arg Ile Glu
65          70          75          80

Tyr Ile His Ser Lys Asn Phe Ile His Arg Asp Val Lys Pro Asp Asn
          85          90          95

Phe Leu Met Gly Leu Gly Lys Lys Gly Asn Leu Val Tyr Ile Ile Asp
          100          105          110

Phe Gly Leu Ala Lys Lys Tyr Arg Asp Ala Arg Thr His Gln His Ile
          115          120          125

Pro Tyr Arg Glu Asn Lys Asn Leu Thr Gly Thr Ala Arg Tyr Ala Ser
          130          135          140

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Ile Asn Thr His Leu Gly Ile Glu Gln Ser Arg Arg Asp Asp Leu Glu
145 150 155 160

Ser Leu Gly Tyr Val Leu Met Tyr Phe Asn Leu Gly Ser Leu Pro Trp
165 170 175

Gln Gly Leu Lys Ala Ala Thr Lys Arg Gln Lys
180 185

<210> 12074
<211> 20
<212> PRT
<213> Homo sapiens

<220>
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<220>
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<223> /note="Gene Name:
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<220>
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<220>
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<222> (1)..(1)
<223> Any amino acid

<400> 12074
Xaa Met Thr Thr Cys Ser Thr Gly Thr Cys Ser Asn Leu Leu Leu Ser
1 5 10 15

Arg Leu Lys Ile
20

<210> 12075
<211> 43
<212> PRT
<213> Homo sapiens

<220>
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<220>
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 <223> /note="Gene Symbol: CSNK1D"

<220>
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 <223> /note="Gene Name:
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<220>
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 <223> /note="ENSP ID: ENSP00000464551"

<400> 12075
 Met Glu Leu Arg Val Gly Asn Arg Tyr Arg Leu Gly Arg Lys Ile Gly
 1 5 10 15

Ser Gly Ser Phe Gly Asp Ile Tyr Leu Val Glu Met Gly Phe His Arg
 20 25 30

Val Ser Gln Asp Gly Leu Asn Leu Leu Thr Leu
 35 40

<210> 12076
 <211> 416
 <212> PRT
 <213> Homo sapiens

<220>
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 <223> /note="Payload ID: 2393"

<220>
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 <223> /note="Gene Symbol: CSNK1E"

<220>
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 <223> /note="Gene Name:
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<220>
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 <223> /note="Uniprot ID: P49674"

<220>
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 <223> /note="ENSP ID: ENSP00000352929"

<400> 12076
 Met Glu Leu Arg Val Gly Asn Lys Tyr Arg Leu Gly Arg Lys Ile Gly
 1 5 10 15

Ser	Gly	Ser	Phe	Gly	Asp	Ile	Tyr	Leu	Gly	Ala	Asn	Ile	Ala	Ser	Gly			
			20					25					30					
Glu	Glu	Val	Ala	Ile	Lys	Leu	Glu	Cys	Val	Lys	Thr	Lys	His	Pro	Gln			
		35					40					45						
Leu	His	Ile	Glu	Ser	Lys	Phe	Tyr	Lys	Met	Met	Gln	Gly	Gly	Val	Gly			
	50					55					60							
Ile	Pro	Ser	Ile	Lys	Trp	Cys	Gly	Ala	Glu	Gly	Asp	Tyr	Asn	Val	Met			
65					70					75					80			
Val	Met	Glu	Leu	Leu	Gly	Pro	Ser	Leu	Glu	Asp	Leu	Phe	Asn	Phe	Cys			
				85					90					95				
Ser	Arg	Lys	Phe	Ser	Leu	Lys	Thr	Val	Leu	Leu	Leu	Ala	Asp	Gln	Met			
			100					105						110				
Ile	Ser	Arg	Ile	Glu	Tyr	Ile	His	Ser	Lys	Asn	Phe	Ile	His	Arg	Asp			
		115					120					125						
Val	Lys	Pro	Asp	Asn	Phe	Leu	Met	Gly	Leu	Gly	Lys	Lys	Gly	Asn	Leu			
	130					135					140							
Val	Tyr	Ile	Ile	Asp	Phe	Gly	Leu	Ala	Lys	Lys	Tyr	Arg	Asp	Ala	Arg			
145					150					155					160			
Thr	His	Gln	His	Ile	Pro	Tyr	Arg	Glu	Asn	Lys	Asn	Leu	Thr	Gly	Thr			
				165					170					175				
Ala	Arg	Tyr	Ala	Ser	Ile	Asn	Thr	His	Leu	Gly	Ile	Glu	Gln	Ser	Arg			
			180					185					190					
Arg	Asp	Asp	Leu	Glu	Ser	Leu	Gly	Tyr	Val	Leu	Met	Tyr	Phe	Asn	Leu			
		195					200					205						
Gly	Ser	Leu	Pro	Trp	Gln	Gly	Leu	Lys	Ala	Ala	Thr	Lys	Arg	Gln	Lys			
	210					215					220							
Tyr	Glu	Arg	Ile	Ser	Glu	Lys	Lys	Met	Ser	Thr	Pro	Ile	Glu	Val	Leu			
225					230					235					240			

Cys Lys Gly Tyr Pro Ser Glu Phe Ser Thr Tyr Leu Asn Phe Cys Arg
245 250 255

Ser Leu Arg Phe Asp Asp Lys Pro Asp Tyr Ser Tyr Leu Arg Gln Leu
260 265 270

Phe Arg Asn Leu Phe His Arg Gln Gly Phe Ser Tyr Asp Tyr Val Phe
275 280 285

Asp Trp Asn Met Leu Lys Phe Gly Ala Ala Arg Asn Pro Glu Asp Val
290 295 300

Asp Arg Glu Arg Arg Glu His Glu Arg Glu Glu Arg Met Gly Gln Leu
305 310 315 320

Arg Gly Ser Ala Thr Arg Ala Leu Pro Pro Gly Pro Pro Thr Gly Ala
325 330 335

Thr Ala Asn Arg Leu Arg Ser Ala Ala Glu Pro Val Ala Ser Thr Pro
340 345 350

Ala Ser Arg Ile Gln Pro Ala Gly Asn Thr Ser Pro Arg Ala Ile Ser
355 360 365

Arg Val Asp Arg Glu Arg Lys Val Ser Met Arg Leu His Arg Gly Ala
370 375 380

Pro Ala Asn Val Ser Ser Ser Asp Leu Thr Gly Arg Gln Glu Val Ser
385 390 395 400

Arg Ile Pro Ala Ser Gln Thr Ser Val Pro Phe Asp His Leu Gly Lys
405 410 415

<210> 12077

<211> 416

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2393"

<220>

<221> source

<223> /note="Gene Symbol: CSNK1E"

<220>
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 <223> /note="Gene Name:
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<220>
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 <223> /note="Uniprot ID: P49674"

<220>
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 <223> /note="ENSP ID: ENSP00000380044"

<400> 12077
 Met Glu Leu Arg Val Gly Asn Lys Tyr Arg Leu Gly Arg Lys Ile Gly
 1 5 10 15

Ser Gly Ser Phe Gly Asp Ile Tyr Leu Gly Ala Asn Ile Ala Ser Gly
 20 25 30

Glu Glu Val Ala Ile Lys Leu Glu Cys Val Lys Thr Lys His Pro Gln
 35 40 45

Leu His Ile Glu Ser Lys Phe Tyr Lys Met Met Gln Gly Gly Val Gly
 50 55 60

Ile Pro Ser Ile Lys Trp Cys Gly Ala Glu Gly Asp Tyr Asn Val Met
 65 70 75 80

Val Met Glu Leu Leu Gly Pro Ser Leu Glu Asp Leu Phe Asn Phe Cys
 85 90 95

Ser Arg Lys Phe Ser Leu Lys Thr Val Leu Leu Leu Ala Asp Gln Met
 100 105 110

Ile Ser Arg Ile Glu Tyr Ile His Ser Lys Asn Phe Ile His Arg Asp
 115 120 125

Val Lys Pro Asp Asn Phe Leu Met Gly Leu Gly Lys Lys Gly Asn Leu
 130 135 140

Val Tyr Ile Ile Asp Phe Gly Leu Ala Lys Lys Tyr Arg Asp Ala Arg
 145 150 155 160

Thr His Gln His Ile Pro Tyr Arg Glu Asn Lys Asn Leu Thr Gly Thr
 165 170 175

Ala	Arg	Tyr	Ala	Ser	Ile	Asn	Thr	His	Leu	Gly	Ile	Glu	Gln	Ser	Arg	180	185	190
Arg	Asp	Asp	Leu	Glu	Ser	Leu	Gly	Tyr	Val	Leu	Met	Tyr	Phe	Asn	Leu	195	200	205
Gly	Ser	Leu	Pro	Trp	Gln	Gly	Leu	Lys	Ala	Ala	Thr	Lys	Arg	Gln	Lys	210	215	220
Tyr	Glu	Arg	Ile	Ser	Glu	Lys	Lys	Met	Ser	Thr	Pro	Ile	Glu	Val	Leu	225	230	235
Cys	Lys	Gly	Tyr	Pro	Ser	Glu	Phe	Ser	Thr	Tyr	Leu	Asn	Phe	Cys	Arg	245	250	255
Ser	Leu	Arg	Phe	Asp	Asp	Lys	Pro	Asp	Tyr	Ser	Tyr	Leu	Arg	Gln	Leu	260	265	270
Phe	Arg	Asn	Leu	Phe	His	Arg	Gln	Gly	Phe	Ser	Tyr	Asp	Tyr	Val	Phe	275	280	285
Asp	Trp	Asn	Met	Leu	Lys	Phe	Gly	Ala	Ala	Arg	Asn	Pro	Glu	Asp	Val	290	295	300
Asp	Arg	Glu	Arg	Arg	Glu	His	Glu	Arg	Glu	Glu	Arg	Met	Gly	Gln	Leu	305	310	315
Arg	Gly	Ser	Ala	Thr	Arg	Ala	Leu	Pro	Pro	Gly	Pro	Pro	Thr	Gly	Ala	325	330	335
Thr	Ala	Asn	Arg	Leu	Arg	Ser	Ala	Ala	Glu	Pro	Val	Ala	Ser	Thr	Pro	340	345	350
Ala	Ser	Arg	Ile	Gln	Pro	Ala	Gly	Asn	Thr	Ser	Pro	Arg	Ala	Ile	Ser	355	360	365
Arg	Val	Asp	Arg	Glu	Arg	Lys	Val	Ser	Met	Arg	Leu	His	Arg	Gly	Ala	370	375	380
Pro	Ala	Asn	Val	Ser	Ser	Ser	Asp	Leu	Thr	Gly	Arg	Gln	Glu	Val	Ser	385	390	395

Arg	Ile	Pro	Ala	Ser	Gln	Thr	Ser	Val	Pro	Phe	Asp	His	Leu	Gly	Lys
				405					410					415	

<210> 12078

<211> 416

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2393"

<220>

<221> source

<223> /note="Gene Symbol: CSNK1E"

<220>

<221> source

<223> /note="Gene Name:
casein kinase 1, epsilon"

<220>

<221> source

<223> /note="Uniprot ID: P49674"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000383067"

<400> 12078

Met	Glu	Leu	Arg	Val	Gly	Asn	Lys	Tyr	Arg	Leu	Gly	Arg	Lys	Ile	Gly
1				5					10					15	

Ser	Gly	Ser	Phe	Gly	Asp	Ile	Tyr	Leu	Gly	Ala	Asn	Ile	Ala	Ser	Gly
			20					25					30		

Glu	Glu	Val	Ala	Ile	Lys	Leu	Glu	Cys	Val	Lys	Thr	Lys	His	Pro	Gln
		35				40						45			

Leu	His	Ile	Glu	Ser	Lys	Phe	Tyr	Lys	Met	Met	Gln	Gly	Gly	Val	Gly
	50					55					60				

Ile	Pro	Ser	Ile	Lys	Trp	Cys	Gly	Ala	Glu	Gly	Asp	Tyr	Asn	Val	Met
65					70					75					80

Val	Met	Glu	Leu	Leu	Gly	Pro	Ser	Leu	Glu	Asp	Leu	Phe	Asn	Phe	Cys
			85						90					95	

Ser	Arg	Lys	Phe	Ser	Leu	Lys	Thr	Val	Leu	Leu	Leu	Ala	Asp	Gln	Met
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

Thr Ala Asn Arg Leu Arg Ser Ala Ala Glu Pro Val Ala Ser Thr Pro
340 345 350

Ala Ser Arg Ile Gln Pro Ala Gly Asn Thr Ser Pro Arg Ala Ile Ser
355 360 365

Arg Val Asp Arg Glu Arg Lys Val Ser Met Arg Leu His Arg Gly Ala
370 375 380

Pro Ala Asn Val Ser Ser Ser Asp Leu Thr Gly Arg Gln Glu Val Ser
385 390 395 400

Arg Ile Pro Ala Ser Gln Thr Ser Val Pro Phe Asp His Leu Gly Lys
405 410 415

<210> 12079
<211> 416
<212> PRT
<213> Homo sapiens

<220>
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<223> /note="Payload ID: 2393"

<220>
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<223> /note="Gene Symbol: CSNK1E"

<220>
<221> source
<223> /note="Gene Name:
casein kinase 1, epsilon"

<220>
<221> source
<223> /note="Uniprot ID: P49674"

<220>
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<223> /note="ENSP ID: ENSP00000384074"

<400> 12079
Met Glu Leu Arg Val Gly Asn Lys Tyr Arg Leu Gly Arg Lys Ile Gly
1 5 10 15

Ser Gly Ser Phe Gly Asp Ile Tyr Leu Gly Ala Asn Ile Ala Ser Gly
20 25 30

Glu	Glu	Val	Ala	Ile	Lys	Leu	Glu	Cys	Val	Lys	Thr	Lys	His	Pro	Gln	
		35					40					45				
Leu	His	Ile	Glu	Ser	Lys	Phe	Tyr	Lys	Met	Met	Gln	Gly	Gly	Val	Gly	
	50					55					60					
Ile	Pro	Ser	Ile	Lys	Trp	Cys	Gly	Ala	Glu	Gly	Asp	Tyr	Asn	Val	Met	
65					70					75					80	
Val	Met	Glu	Leu	Leu	Gly	Pro	Ser	Leu	Glu	Asp	Leu	Phe	Asn	Phe	Cys	
				85					90					95		
Ser	Arg	Lys	Phe	Ser	Leu	Lys	Thr	Val	Leu	Leu	Leu	Ala	Asp	Gln	Met	
			100					105						110		
Ile	Ser	Arg	Ile	Glu	Tyr	Ile	His	Ser	Lys	Asn	Phe	Ile	His	Arg	Asp	
		115					120					125				
Val	Lys	Pro	Asp	Asn	Phe	Leu	Met	Gly	Leu	Gly	Lys	Lys	Gly	Asn	Leu	
	130					135					140					
Val	Tyr	Ile	Ile	Asp	Phe	Gly	Leu	Ala	Lys	Lys	Tyr	Arg	Asp	Ala	Arg	
145					150					155					160	
Thr	His	Gln	His	Ile	Pro	Tyr	Arg	Glu	Asn	Lys	Asn	Leu	Thr	Gly	Thr	
				165					170					175		
Ala	Arg	Tyr	Ala	Ser	Ile	Asn	Thr	His	Leu	Gly	Ile	Glu	Gln	Ser	Arg	
			180					185					190			
Arg	Asp	Asp	Leu	Glu	Ser	Leu	Gly	Tyr	Val	Leu	Met	Tyr	Phe	Asn	Leu	
		195					200					205				
Gly	Ser	Leu	Pro	Trp	Gln	Gly	Leu	Lys	Ala	Ala	Thr	Lys	Arg	Gln	Lys	
	210					215					220					
Tyr	Glu	Arg	Ile	Ser	Glu	Lys	Lys	Met	Ser	Thr	Pro	Ile	Glu	Val	Leu	
225					230					235					240	
Cys	Lys	Gly	Tyr	Pro	Ser	Glu	Phe	Ser	Thr	Tyr	Leu	Asn	Phe	Cys	Arg	
				245					250					255		
Ser	Leu	Arg	Phe	Asp	Asp	Lys	Pro	Asp	Tyr	Ser	Tyr	Leu	Arg	Gln	Leu	

260	265	270
Phe Arg Asn Leu Phe His Arg Gln Gly Phe Ser Tyr Asp Tyr Val Phe		
275	280	285
Asp Trp Asn Met Leu Lys Phe Gly Ala Ala Arg Asn Pro Glu Asp Val		
290	295	300
Asp Arg Glu Arg Arg Glu His Glu Arg Glu Glu Arg Met Gly Gln Leu		
305	310	315
Arg Gly Ser Ala Thr Arg Ala Leu Pro Pro Gly Pro Pro Thr Gly Ala		
325	330	335
Thr Ala Asn Arg Leu Arg Ser Ala Ala Glu Pro Val Ala Ser Thr Pro		
340	345	350
Ala Ser Arg Ile Gln Pro Ala Gly Asn Thr Ser Pro Arg Ala Ile Ser		
355	360	365
Arg Val Asp Arg Glu Arg Lys Val Ser Met Arg Leu His Arg Gly Ala		
370	375	380
Pro Ala Asn Val Ser Ser Ser Asp Leu Thr Gly Arg Gln Glu Val Ser		
385	390	395
Arg Ile Pro Ala Ser Gln Thr Ser Val Pro Phe Asp His Leu Gly Lys		
405	410	415

<210> 12080

<211> 311

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2393"

<220>

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<223> /note="Gene Symbol: CSNK1E"

<220>

<221> source

<223> /note="Gene Name:
casein kinase 1, epsilon"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000384426"

<400> 12080

Met Glu Leu Arg Val Gly Asn Lys Tyr Arg Leu Gly Arg Lys Ile Gly
1 5 10 15

Ser Gly Ser Phe Gly Asp Ile Tyr Leu Gly Ala Asn Ile Ala Ser Gly
20 25 30

Glu Glu Val Ala Ile Lys Leu Glu Cys Val Lys Thr Lys His Pro Gln
35 40 45

Leu His Ile Glu Ser Lys Phe Tyr Lys Met Met Gln Gly Gly Val Gly
50 55 60

Ile Pro Ser Ile Lys Trp Cys Gly Ala Glu Gly Asp Tyr Asn Val Met
65 70 75 80

Val Met Glu Leu Leu Gly Pro Ser Leu Glu Asp Leu Phe Asn Phe Cys
85 90 95

Ser Arg Lys Phe Ser Leu Lys Thr Val Leu Leu Leu Ala Asp Gln Met
100 105 110

Ile Ser Arg Ile Glu Tyr Ile His Ser Lys Asn Phe Ile His Arg Asp
115 120 125

Val Lys Pro Asp Asn Phe Leu Met Gly Leu Gly Lys Lys Gly Asn Leu
130 135 140

Val Tyr Ile Ile Asp Phe Gly Leu Ala Lys Lys Tyr Arg Asp Ala Arg
145 150 155 160

Thr His Gln His Ile Pro Tyr Arg Glu Asn Lys Asn Leu Thr Gly Thr
165 170 175

Ala Arg Tyr Ala Ser Ile Asn Thr His Leu Gly Ile Glu Gln Ser Arg
180 185 190

Arg Asp Asp Leu Glu Ser Leu Gly Tyr Val Leu Met Tyr Phe Asn Leu
195 200 205

26830

Gly Ser Leu Pro Trp Gln Gly Leu Lys Ala Ala Thr Lys Arg Gln Lys
210 215 220

Tyr Glu Arg Ile Ser Glu Lys Lys Met Ser Thr Pro Ile Glu Val Leu
225 230 235 240

Cys Lys Gly Tyr Pro Ser Glu Phe Ser Thr Tyr Leu Asn Phe Cys Arg
245 250 255

Ser Leu Arg Phe Asp Asp Lys Pro Asp Tyr Ser Tyr Leu Arg Gln Leu
260 265 270

Phe Arg Asn Leu Phe His Arg Gln Gly Phe Ser Tyr Asp Tyr Val Phe
275 280 285

Asp Trp Asn Met Leu Lys Phe Thr Asp Thr Val Gln Asp Gly Ser His
290 295 300

Trp Pro His Ala Thr His Phe
305 310

<210> 12081
<211> 91
<212> PRT
<213> Homo sapiens

<220>
<221> source
<223> /note="Payload ID: 2393"

<220>
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<223> /note="Gene Symbol: CSNK1E"

<220>
<221> source
<223> /note="Gene Name:
casein kinase 1, epsilon"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000397460"

<220>
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<222> (1)..(1)
<223> Any amino acid

<400> 12081

Xaa Ser Cys Thr Ser Thr Trp Ala Pro Cys Pro Gly Arg Gly Ser Lys
 1 5 10 15

Gln Pro Pro Ser Ala Arg Ser Met Asn Gly Ser Ala Arg Arg Arg Cys
 20 25 30

Gln Arg Pro Ser Arg Ser Ser Ala Lys Ala Ile Pro Pro Asn Ser Gln
 35 40 45

His Thr Ser Thr Ser Ala Ala Pro Cys Gly Leu Thr Thr Ser Pro Thr
 50 55 60

Thr Leu Thr Tyr Val Ser Ser Ser Ala Thr Ser Ser Thr Gly Arg Ala
 65 70 75 80

Ser Pro Met Thr Thr Ser Leu Thr Gly Thr Cys
 85 90

<210> 12082
 <211> 119
 <212> PRT
 <213> Homo sapiens

<220>
 <221> source
 <223> /note="Payload ID: 2393"

<220>
 <221> source
 <223> /note="Gene Symbol: CSNK1E"

<220>
 <221> source
 <223> /note="Gene Name:
 casein kinase 1, epsilon"

<220>
 <221> source
 <223> /note="ENSP ID: ENSP00000400494"

<220>
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 <222> (1)..(1)
 <223> Any amino acid

<400> 12082
 Xaa Arg Asn Pro Glu Asp Val Asp Arg Glu Arg Arg Glu His Glu Arg
 1 5 10 15

Glu Glu Arg Met Gly Gln Leu Arg Gly Ser Ala Thr Arg Ala Leu Pro
20 25 30

Pro Gly Pro Pro Thr Gly Ala Thr Ala Asn Arg Leu Arg Ser Ala Ala
35 40 45

Glu Pro Val Ala Ser Thr Pro Ala Ser Arg Ile Gln Pro Ala Gly Asn
50 55 60

Thr Ser Pro Arg Ala Ile Ser Arg Val Asp Arg Glu Arg Lys Val Ser
65 70 75 80

Met Arg Leu His Arg Gly Ala Pro Ala Asn Val Ser Ser Ser Asp Leu
85 90 95

Thr Gly Arg Gln Glu Val Ser Arg Ile Pro Ala Ser Gln Thr Ser Val
100 105 110

Pro Phe Asp His Leu Gly Lys
115

<210> 12083
<211> 270
<212> PRT
<213> Homo sapiens

<220>
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<223> /note="Payload ID: 2393"

<220>
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<223> /note="Gene Symbol: CSNK1E"

<220>
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<223> /note="Gene Name:
casein kinase 1, epsilon"

<220>
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<223> /note="ENSP ID: ENSP00000403057"

<220>
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<222> (1)..(1)
<223> Any amino acid

<400> 12083

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Val	Met	Val	Met	Glu	Leu	Leu	Gly	Pro	Ser	Leu	Glu	Asp	Leu	Phe	Asn		
			20					25					30				
Phe	Cys	Ser	Arg	Lys	Phe	Ser	Leu	Lys	Thr	Val	Leu	Leu	Leu	Ala	Asp		
		35					40					45					
Gln	Met	Ile	Ser	Arg	Ile	Glu	Tyr	Ile	His	Ser	Lys	Asn	Phe	Ile	His		
	50					55					60						
Arg	Asp	Val	Lys	Pro	Asp	Asn	Phe	Leu	Met	Gly	Leu	Gly	Lys	Lys	Gly		
65					70					75					80		
Asn	Leu	Val	Tyr	Ile	Ile	Asp	Phe	Gly	Leu	Ala	Lys	Lys	Tyr	Arg	Asp		
				85					90					95			
Ala	Arg	Thr	His	Gln	His	Ile	Pro	Tyr	Arg	Glu	Asn	Lys	Asn	Leu	Thr		
			100					105					110				
Gly	Thr	Ala	Arg	Tyr	Ala	Ser	Ile	Asn	Thr	His	Leu	Gly	Ile	Glu	Gln		
		115					120					125					
Ser	Arg	Arg	Asp	Asp	Leu	Glu	Ser	Leu	Gly	Tyr	Val	Leu	Met	Tyr	Phe		
	130					135					140						
Asn	Leu	Gly	Ser	Leu	Pro	Trp	Gln	Gly	Leu	Lys	Ala	Ala	Thr	Lys	Arg		
145					150					155					160		
Gln	Lys	Tyr	Glu	Arg	Ile	Ser	Glu	Lys	Lys	Met	Ser	Thr	Pro	Ile	Glu		
				165					170					175			
Val	Leu	Cys	Lys	Gly	Tyr	Pro	Ser	Glu	Phe	Ser	Thr	Tyr	Leu	Asn	Phe		
			180					185					190				
Cys	Arg	Ser	Leu	Arg	Phe	Asp	Asp	Lys	Pro	Asp	Tyr	Ser	Tyr	Leu	Arg		
		195					200					205					
Gln	Leu	Phe	Arg	Asn	Leu	Phe	His	Arg	Gln	Gly	Phe	Ser	Tyr	Asp	Tyr		
	210					215					220						
Val	Phe	Asp	Trp	Asn	Met	Leu	Lys	Phe	Gly	Ala	Ser	Ser	Ser	Gln	Ala		

225					230						235					240
Gln	Pro	Arg	Asp	Ser	Pro	Met	Thr	Ala	Lys	Gly	Pro	Phe	Cys	Pro	Arg	
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Pro	Cys	Pro	Cys	Ala	Gly	Pro	Thr	Tyr	Ser	Pro	Thr	Tyr	Trp			
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<211> 144																
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<400> 12084																
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Asp	Trp	Asn	Met	Leu	Lys	Phe	Gly	Ala	Ala	Arg	Asn	Pro	Glu	Asp	Val	
			20					25					30			
Asp	Arg	Glu	Arg	Arg	Glu	His	Glu	Arg	Glu	Glu	Arg	Met	Gly	Gln	Leu	
		35					40					45				
Arg	Gly	Ser	Ala	Thr	Arg	Ala	Leu	Pro	Pro	Gly	Pro	Pro	Thr	Gly	Ala	
	50					55					60					
Thr	Ala	Asn	Arg	Leu	Arg	Ser	Ala	Ala	Glu	Pro	Val	Ala	Ser	Thr	Pro	

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Ile	Pro	Ser	Ile	Lys	Trp	Cys	Gly	Ala	Glu	Gly	Asp	Tyr	Asn	Val	Met	
65					70					75					80	
Val	Met	Glu	Leu	Leu	Gly	Pro	Ser	Leu	Glu	Asp	Leu	Phe	Asn	Phe	Cys	
			85						90					95		
Ser	Arg	Lys	Phe	Ser	Leu	Lys	Thr	Val	Leu	Leu	Leu	Ala	Asp	Gln	Met	
			100					105					110			
Ile	Ser	Arg	Ile	Glu	Tyr	Ile	His	Ser	Lys	Asn	Phe	Ile	His	Arg	Asp	
		115					120					125				
Val	Lys	Pro	Asp	Asn	Phe	Leu	Met	Gly	Leu	Gly	Lys	Lys	Gly	Asn	Leu	
	130					135					140					
Val	Tyr	Ile	Ile	Asp	Phe	Gly	Leu	Ala	Lys	Lys	Tyr	Arg	Asp	Ala	Arg	
145					150					155					160	
Thr	His	Gln	His	Ile	Pro	Tyr	Arg	Glu	Asn	Lys	Asn	Leu	Thr	Gly	Thr	
				165					170					175		
Ala	Arg	Tyr	Ala	Ser	Ile	Asn	Thr	His	Leu	Gly	Ile	Glu	Gln	Ser	Arg	
			180					185					190			
Arg	Asp	Asp	Leu	Glu	Ser	Leu	Gly	Tyr	Val	Leu	Met	Tyr	Phe	Asn	Leu	
		195					200					205				
Gly	Ser	Leu	Pro	Trp	Gln	Gly	Leu	Lys	Ala	Ala	Thr	Lys	Arg	Gln	Lys	
	210					215					220					
Tyr	Glu	Arg	Ile	Ser	Glu	Lys	Lys	Met	Ser	Thr	Pro	Ile	Glu	Val	Leu	
225					230					235					240	
Cys	Lys	Gly	Tyr	Pro	Ser	Glu	Phe	Ser	Thr	Tyr	Leu	Asn	Phe	Cys	Arg	
				245					250					255		
Ser	Leu	Arg	Phe	Asp	Asp	Lys	Pro	Asp	Tyr	Ser	Tyr	Leu	Arg	Gln	Leu	
			260					265					270			
Phe	Arg	Asn	Leu	Phe	His	Arg	Gln	Gly	Phe	Ser	Tyr	Asp	Tyr	Val	Phe	
		275					280					285				

Asp Trp Asn Met Leu Lys Phe Ala Arg Ser Thr Ser Pro Pro Thr Ala
290 295 300

Ala Gly Leu Thr Ala Phe Leu Glu Val Pro Leu Glu Ala Gly Pro Gly
305 310 315 320

Val Arg Ser Trp Ala Glu Ala Pro Thr Ala Leu Ser Phe Ala Asn Leu
325 330 335

<210> 12086

<211> 118

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2393"

<220>

<221> source

<223> /note="Gene Symbol: CSNK1E"

<220>

<221> source

<223> /note="Gene Name:
casein kinase 1, epsilon"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000412194"

<220>

<221> MOD_RES

<222> (1)..(1)

<223> Any amino acid

<400> 12086

Xaa Arg Pro Ala Thr Leu Pro Ser Thr Arg Thr Trp Ala Leu Ser Lys
1 5 10 15

Ala Val Glu Met Thr Trp Arg Ala Trp Ala Thr Cys Ser Cys Thr Ser
20 25 30

Thr Trp Ala Pro Cys Pro Gly Arg Gly Ser Lys Gln Pro Pro Ser Ala
35 40 45

Arg Ser Met Asn Gly Ser Ala Arg Arg Arg Cys Gln Arg Pro Ser Arg
50 55 60

Ser Ser Ala Lys Ala Ile Pro Pro Asn Ser Gln His Thr Ser Thr Ser
65 70 75 80

Ala Ala Pro Cys Gly Leu Thr Thr Ser Pro Thr Thr Leu Thr Tyr Val
85 90 95

Ser Ser Ser Ala Thr Ser Ser Thr Gly Arg Ala Ser Pro Met Thr Thr
100 105 110

Ser Leu Thr Gly Thr Cys
115

<210> 12087
<211> 225
<212> PRT
<213> Homo sapiens

<220>
<221> source
<223> /note="Payload ID: 2393"

<220>
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<220>
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<223> /note="Gene Name:
casein kinase 1, epsilon"

<220>
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<223> /note="ENSP ID: ENSP00000412335"

<400> 12087
Met Glu Leu Arg Val Gly Asn Lys Tyr Arg Leu Gly Arg Lys Ile Gly
1 5 10 15

Ser Gly Ser Phe Gly Asp Ile Tyr Leu Gly Ala Asn Ile Ala Ser Gly
20 25 30

Glu Glu Val Ala Ile Lys Leu Glu Cys Val Lys Thr Lys His Pro Gln
35 40 45

Leu His Ile Glu Ser Lys Phe Tyr Lys Met Met Gln Gly Gly Val Gly
50 55 60

Ile Pro Ser Ile Lys Trp Cys Gly Ala Glu Gly Asp Tyr Asn Val Met
65 70 75 80

Val Met Glu Leu Leu Gly Pro Ser Leu Glu Asp Leu Phe Asn Phe Cys
85 90 95

Ser Arg Lys Phe Ser Leu Lys Thr Val Leu Leu Leu Ala Asp Gln Met
100 105 110

Ile Ser Arg Ile Glu Tyr Ile His Ser Lys Asn Phe Ile His Arg Asp
115 120 125

Val Lys Pro Asp Asn Phe Leu Met Gly Leu Gly Lys Lys Gly Asn Leu
130 135 140

Val Tyr Ile Ile Asp Phe Gly Leu Ala Lys Lys Tyr Arg Asp Ala Arg
145 150 155 160

Thr His Gln His Ile Pro Tyr Arg Glu Asn Lys Asn Leu Thr Gly Thr
165 170 175

Ala Arg Tyr Ala Ser Ile Asn Thr His Leu Gly Ile Glu Gln Ser Arg
180 185 190

Arg Asp Asp Leu Glu Ser Leu Gly Tyr Val Leu Met Tyr Phe Asn Leu
195 200 205

Gly Ser Leu Pro Trp Gln Gly Leu Lys Ala Ala Thr Lys Arg Gln Lys
210 215 220

Tyr
225

<210> 12088
<211> 422
<212> PRT
<213> Homo sapiens

<220>
<221> source
<223> /note="Payload ID: 2394"

<220>
<221> source
<223> /note="Gene Symbol: CSNK1G1"

<220>
<221> source

<223> /note="Gene Name:
casein kinase 1, gamma 1"

<220>

<221> source

<223> /note="Uniprot ID: Q9HCP0"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000305777"

<400> 12088

Met Asp His Pro Ser Arg Glu Lys Asp Glu Arg Gln Arg Thr Thr Lys
1 5 10 15

Pro Met Ala Gln Arg Ser Ala His Cys Ser Arg Pro Ser Gly Ser Ser
20 25 30

Ser Ser Ser Gly Val Leu Met Val Gly Pro Asn Phe Arg Val Gly Lys
35 40 45

Lys Ile Gly Cys Gly Asn Phe Gly Glu Leu Arg Leu Gly Lys Asn Leu
50 55 60

Tyr Thr Asn Glu Tyr Val Ala Ile Lys Leu Glu Pro Ile Lys Ser Arg
65 70 75 80

Ala Pro Gln Leu His Leu Glu Tyr Arg Phe Tyr Lys Gln Leu Gly Ser
85 90 95

Ala Gly Glu Gly Leu Pro Gln Val Tyr Tyr Phe Gly Pro Cys Gly Lys
100 105 110

Tyr Asn Ala Met Val Leu Glu Leu Leu Gly Pro Ser Leu Glu Asp Leu
115 120 125

Phe Asp Leu Cys Asp Arg Thr Phe Thr Leu Lys Thr Val Leu Met Ile
130 135 140

Ala Ile Gln Leu Leu Ser Arg Met Glu Tyr Val His Ser Lys Asn Leu
145 150 155 160

Ile Tyr Arg Asp Val Lys Pro Glu Asn Phe Leu Ile Gly Arg Gln Gly
165 170 175

Asn Lys Lys Glu His Val Ile His Ile Ile Asp Phe Gly Leu Ala Lys

					180						185						190
Glu	Tyr	Ile	Asp	Pro	Glu	Thr	Lys	Lys	His	Ile	Pro	Tyr	Arg	Glu	His		
		195					200					205					
Lys	Ser	Leu	Thr	Gly	Thr	Ala	Arg	Tyr	Met	Ser	Ile	Asn	Thr	His	Leu		
	210					215					220						
Gly	Lys	Glu	Gln	Ser	Arg	Arg	Asp	Asp	Leu	Glu	Ala	Leu	Gly	His	Met		
225					230					235					240		
Phe	Met	Tyr	Phe	Leu	Arg	Gly	Ser	Leu	Pro	Trp	Gln	Gly	Leu	Lys	Ala		
				245					250					255			
Asp	Thr	Leu	Lys	Glu	Arg	Tyr	Gln	Lys	Ile	Gly	Asp	Thr	Lys	Arg	Asn		
			260					265					270				
Thr	Pro	Ile	Glu	Ala	Leu	Cys	Glu	Asn	Phe	Pro	Glu	Glu	Met	Ala	Thr		
		275					280					285					
Tyr	Leu	Arg	Tyr	Val	Arg	Arg	Leu	Asp	Phe	Phe	Glu	Lys	Pro	Asp	Tyr		
	290					295					300						
Glu	Tyr	Leu	Arg	Thr	Leu	Phe	Thr	Asp	Leu	Phe	Glu	Lys	Lys	Gly	Tyr		
305					310					315					320		
Thr	Phe	Asp	Tyr	Ala	Tyr	Asp	Trp	Val	Gly	Arg	Pro	Ile	Pro	Thr	Pro		
				325					330					335			
Val	Gly	Ser	Val	His	Val	Asp	Ser	Gly	Ala	Ser	Ala	Ile	Thr	Arg	Glu		
			340					345					350				
Ser	His	Thr	His	Arg	Asp	Arg	Pro	Ser	Gln	Gln	Gln	Pro	Leu	Arg	Asn		
		355					360					365					
Gln	Val	Val	Ser	Ser	Thr	Asn	Gly	Glu	Leu	Asn	Val	Asp	Asp	Pro	Thr		
	370					375					380						
Gly	Ala	His	Ser	Asn	Ala	Pro	Ile	Thr	Ala	His	Ala	Glu	Val	Glu	Val		
385					390					395					400		
Val	Glu	Glu	Ala	Lys	Cys	Cys	Cys	Phe	Phe	Lys	Arg	Lys	Arg	Lys	Lys		
				405					410						415		

Thr Ala Gln Arg His Lys
420

<210> 12089

<211> 393

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2394"

<220>

<221> source

<223> /note="Gene Symbol: CSNK1G1"

<220>

<221> source

<223> /note="Gene Name:
casein kinase 1, gamma 1"

<220>

<221> source

<223> /note="Uniprot ID: Q9HCP0"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000475325"

<400> 12089

Met Asp His Pro Ser Arg Glu Lys Asp Glu Arg Gln Arg Thr Thr Lys
1 5 10 15

Pro Met Ala Gln Arg Ser Ala His Cys Ser Arg Pro Ser Gly Ser Ser
20 25 30

Ser Ser Ser Gly Val Leu Met Val Gly Pro Asn Phe Arg Val Gly Lys
35 40 45

Lys Ile Gly Cys Gly Asn Phe Gly Glu Leu Arg Leu Gly Lys Asn Leu
50 55 60

Tyr Thr Asn Glu Tyr Val Ala Ile Lys Leu Glu Pro Ile Lys Ser Arg
65 70 75 80

Ala Pro Gln Leu His Leu Glu Tyr Arg Phe Tyr Lys Gln Leu Gly Ser
85 90 95

Ala	Gly	Glu	Gly	Leu	Pro	Gln	Val	Tyr	Tyr	Phe	Gly	Pro	Cys	Gly	Lys		
			100					105					110				
Tyr	Asn	Ala	Met	Val	Leu	Glu	Leu	Leu	Gly	Pro	Ser	Leu	Glu	Asp	Leu		
		115					120					125					
Phe	Asp	Leu	Cys	Asp	Arg	Thr	Phe	Thr	Leu	Lys	Thr	Val	Leu	Met	Ile		
	130					135					140						
Ala	Ile	Gln	Leu	Leu	Ser	Arg	Met	Glu	Tyr	Val	His	Ser	Lys	Asn	Leu		
145					150					155					160		
Ile	Tyr	Arg	Asp	Val	Lys	Pro	Glu	Asn	Phe	Leu	Ile	Gly	Arg	Gln	Gly		
				165					170					175			
Asn	Lys	Lys	Glu	His	Val	Ile	His	Ile	Ile	Asp	Phe	Gly	Leu	Ala	Lys		
			180					185					190				
Glu	Tyr	Ile	Asp	Pro	Glu	Thr	Lys	Lys	His	Ile	Pro	Tyr	Arg	Glu	His		
		195					200					205					
Lys	Ser	Leu	Thr	Gly	Thr	Ala	Arg	Tyr	Met	Ser	Ile	Asn	Thr	His	Leu		
	210					215					220						
Gly	Lys	Glu	Gln	Ser	Arg	Arg	Asp	Asp	Leu	Glu	Ala	Leu	Gly	His	Met		
225					230					235					240		
Phe	Met	Tyr	Phe	Leu	Arg	Gly	Ser	Leu	Pro	Trp	Gln	Gly	Leu	Lys	Ala		
				245					250					255			
Asp	Thr	Leu	Lys	Glu	Arg	Tyr	Gln	Lys	Ile	Gly	Asp	Thr	Lys	Arg	Asn		
			260					265					270				
Thr	Pro	Ile	Glu	Ala	Leu	Cys	Glu	Asn	Phe	Pro	Glu	Glu	Met	Ala	Thr		
		275					280					285					
Tyr	Leu	Arg	Tyr	Val	Arg	Arg	Leu	Asp	Phe	Phe	Glu	Lys	Pro	Asp	Tyr		
	290					295					300						
Glu	Tyr	Leu	Arg	Thr	Leu	Phe	Thr	Asp	Leu	Phe	Glu	Lys	Lys	Gly	Tyr		
305					310					315					320		
Thr	Phe	Asp	Tyr	Ala	Tyr	Asp	Trp	Val	Gly	Arg	Pro	Ile	Pro	Thr	Pro		

325

330

335

Val Gly Ser Val His Val Asp Ser Gly Ala Ser Ala Ile Thr Arg Glu
 340 345 350

Ser His Thr His Arg Asp Arg Pro Ser Gln Gln Gln Pro Leu Arg Asn
 355 360 365

Gln Ser Leu Arg Thr Val Thr Ala Glu His Tyr Asp Val Asn Asn Ser
 370 375 380

Ala Ile Trp His Arg Gly Arg Gly Thr
 385 390

<210> 12090

<211> 422

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2394"

<220>

<221> source

<223> /note="Gene Symbol: CSNK1G1"

<220>

<221> source

<223> /note="Gene Name:
 casein kinase 1, gamma 1"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000475686"

<400> 12090

Met Asp His Pro Ser Arg Glu Lys Asp Glu Arg Gln Arg Thr Thr Lys
 1 5 10 15

Pro Met Ala Gln Arg Ser Ala His Cys Ser Arg Pro Ser Gly Ser Ser
 20 25 30

Ser Ser Ser Gly Val Leu Met Val Gly Pro Asn Phe Arg Val Gly Lys
 35 40 45

Lys Ile Gly Cys Gly Asn Phe Gly Glu Leu Arg Leu Gly Lys Asn Leu
 50 55 60

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Tyr	Thr	Asn	Glu	Tyr	Val	Ala	Ile	Lys	Leu	Glu	Pro	Ile	Lys	Ser	Arg	65	70	75	80
Ala	Pro	Gln	Leu	His	Leu	Glu	Tyr	Arg	Phe	Tyr	Lys	Gln	Leu	Gly	Ser	85	90	95	
Ala	Gly	Glu	Gly	Leu	Pro	Gln	Val	Tyr	Tyr	Phe	Gly	Pro	Cys	Gly	Lys	100	105	110	
Tyr	Asn	Ala	Met	Val	Leu	Glu	Leu	Leu	Gly	Pro	Ser	Leu	Glu	Asp	Leu	115	120	125	
Phe	Asp	Leu	Cys	Asp	Arg	Thr	Phe	Thr	Leu	Lys	Thr	Val	Leu	Met	Ile	130	135	140	
Ala	Ile	Gln	Leu	Leu	Ser	Arg	Met	Glu	Tyr	Val	His	Ser	Lys	Asn	Leu	145	150	155	160
Ile	Tyr	Arg	Asp	Val	Lys	Pro	Glu	Asn	Phe	Leu	Ile	Gly	Arg	Gln	Gly	165	170	175	
Asn	Lys	Lys	Glu	His	Val	Ile	His	Ile	Ile	Asp	Phe	Gly	Leu	Ala	Lys	180	185	190	
Glu	Tyr	Ile	Asp	Pro	Glu	Thr	Lys	Lys	His	Ile	Pro	Tyr	Arg	Glu	His	195	200	205	
Lys	Ser	Leu	Thr	Gly	Thr	Ala	Arg	Tyr	Met	Ser	Ile	Asn	Thr	His	Leu	210	215	220	
Gly	Lys	Glu	Gln	Ser	Arg	Arg	Asp	Asp	Leu	Glu	Ala	Leu	Gly	His	Met	225	230	235	240
Phe	Met	Tyr	Phe	Leu	Arg	Gly	Ser	Leu	Pro	Trp	Gln	Gly	Leu	Lys	Ala	245	250	255	
Asp	Thr	Leu	Lys	Glu	Arg	Tyr	Gln	Lys	Ile	Gly	Asp	Thr	Lys	Arg	Asn	260	265	270	
Thr	Pro	Ile	Glu	Ala	Leu	Cys	Glu	Asn	Phe	Pro	Glu	Glu	Met	Ala	Thr	275	280	285	

Tyr Leu Arg Tyr Val Arg Arg Leu Asp Phe Phe Glu Lys Pro Asp Tyr
 290 295 300
 Glu Tyr Leu Arg Thr Leu Phe Thr Asp Leu Phe Glu Lys Lys Gly Tyr
 305 310 315 320
 Thr Phe Asp Tyr Ala Tyr Asp Trp Val Gly Arg Pro Ile Pro Thr Pro
 325 330 335
 Val Gly Ser Val His Val Asp Ser Gly Ala Ser Ala Ile Thr Arg Glu
 340 345 350
 Ser His Thr His Arg Asp Arg Pro Ser Gln Gln Gln Pro Leu Arg Asn
 355 360 365
 Gln Pro Arg Ser Leu Thr Ser Arg Val Phe Cys Pro Ala Val Arg Pro
 370 375 380
 Leu Phe Pro Leu Pro Ser Thr His Ile Asn Arg Asn Asn Val Leu Glu
 385 390 395 400
 Met Lys Pro Gly Gly Arg Ser Ser Tyr Thr Cys Lys Arg Ser Leu Ile
 405 410 415
 Gly Ser Thr Leu Thr Arg
 420

<210> 12091

<211> 475

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2394"

<220>

<221> source

<223> /note="Gene Symbol: CSNK1G1"

<220>

<221> source

<223> /note="Gene Name:
casein kinase 1, gamma 1"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000475724"

<400> 12091

Met Asp His Pro Ser Arg Glu Lys Asp Glu Arg Gln Arg Thr Thr Lys
1 5 10 15

Pro Met Ala Gln Arg Ser Ala His Cys Ser Arg Pro Ser Gly Ser Ser
20 25 30

Ser Ser Ser Gly Val Leu Met Val Gly Pro Asn Phe Arg Val Gly Lys
35 40 45

Lys Ile Gly Cys Gly Asn Phe Gly Glu Leu Arg Leu Gly Lys Asn Leu
50 55 60

Tyr Thr Asn Glu Tyr Val Ala Ile Lys Leu Glu Pro Ile Lys Ser Arg
65 70 75 80

Ala Pro Gln Leu His Leu Glu Tyr Arg Phe Tyr Lys Gln Leu Gly Ser
85 90 95

Ala Gly Glu Gly Leu Pro Gln Val Tyr Tyr Phe Gly Pro Cys Gly Lys
100 105 110

Tyr Asn Ala Met Val Leu Glu Leu Leu Gly Pro Ser Leu Glu Asp Leu
115 120 125

Phe Asp Leu Cys Asp Arg Thr Phe Thr Leu Lys Thr Val Leu Met Ile
130 135 140

Ala Ile Gln Leu Leu Ser Arg Met Glu Tyr Val His Ser Lys Asn Leu
145 150 155 160

Ile Tyr Arg Asp Val Lys Pro Glu Asn Phe Leu Ile Gly Arg Gln Gly
165 170 175

Asn Lys Lys Glu His Val Ile His Ile Ile Asp Phe Gly Leu Ala Lys
180 185 190

Glu Tyr Ile Asp Pro Glu Thr Lys Lys His Ile Pro Tyr Arg Glu His
195 200 205

Lys Ser Leu Thr Gly Thr Ala Arg Tyr Met Ser Ile Asn Thr His Leu
210 215 220

Gly	Lys	Glu	Gln	Ser	Arg	Arg	Asp	Asp	Leu	Glu	Ala	Leu	Gly	His	Met	
225					230					235					240	
Phe	Met	Tyr	Phe	Leu	Arg	Gly	Ser	Leu	Pro	Trp	Gln	Gly	Leu	Lys	Ala	
				245					250					255		
Asp	Thr	Leu	Lys	Glu	Arg	Tyr	Gln	Lys	Ile	Gly	Asp	Thr	Lys	Arg	Asn	
			260					265					270			
Thr	Pro	Ile	Glu	Ala	Leu	Cys	Glu	Asn	Phe	Pro	Glu	Glu	Met	Ala	Thr	
		275					280					285				
Tyr	Leu	Arg	Tyr	Val	Arg	Arg	Leu	Asp	Phe	Phe	Glu	Lys	Pro	Asp	Tyr	
	290					295					300					
Glu	Tyr	Leu	Arg	Thr	Leu	Phe	Thr	Asp	Leu	Phe	Glu	Lys	Lys	Gly	Tyr	
305					310					315					320	
Thr	Phe	Asp	Tyr	Ala	Tyr	Asp	Trp	Val	Gly	Arg	Pro	Ile	Pro	Thr	Pro	
				325					330					335		
Val	Gly	Ser	Val	His	Val	Asp	Ser	Gly	Ala	Ser	Ala	Ile	Thr	Arg	Glu	
			340					345					350			
Ser	His	Thr	His	Arg	Asp	Arg	Pro	Ser	Gln	Gln	Gln	Pro	Leu	Arg	Asn	
		355					360					365				
Gln	Asn	Val	Ser	Ser	Glu	Arg	Arg	Gly	Glu	Trp	Glu	Ile	Gln	Pro	Ser	
	370					375					380					
Arg	Gln	Thr	Asn	Thr	Ser	Tyr	Leu	Thr	Ser	His	Leu	Ala	Ala	Asp	Arg	
385					390					395					400	
His	Gly	Gly	Ser	Val	Gln	Val	Val	Ser	Ser	Thr	Asn	Gly	Glu	Leu	Asn	
				405					410					415		
Val	Asp	Asp	Pro	Thr	Gly	Ala	His	Ser	Asn	Ala	Pro	Ile	Thr	Ala	His	
			420					425					430			
Ala	Glu	Val	Glu	Val	Val	Glu	Glu	Ala	Lys	Cys	Ile	Met	Phe	His	Lys	
		435					440					445				

Pro Trp His Trp Ser Gln Ser Ser Ala Val Lys Met Lys Phe Val Val
450 455 460

Phe Leu Asn Met Asn Val Asn Phe Lys Cys Ile
465 470 475

<210> 12092

<211> 438

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2394"

<220>

<221> source

<223> /note="Gene Symbol: CSNK1G1"

<220>

<221> source

<223> /note="Gene Name:
casein kinase 1, gamma 1"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000476088"

<400> 12092

Met Asp His Pro Ser Arg Glu Lys Asp Glu Arg Gln Arg Thr Thr Lys
1 5 10 15

Pro Met Ala Gln Arg Ser Ala His Cys Ser Arg Pro Ser Gly Ser Ser
20 25 30

Ser Ser Ser Gly Val Leu Met Val Gly Pro Asn Phe Arg Val Gly Lys
35 40 45

Lys Ile Gly Cys Gly Asn Phe Gly Glu Leu Arg Leu Gly Lys Asn Leu
50 55 60

Tyr Thr Asn Glu Tyr Val Ala Ile Lys Leu Glu Pro Ile Lys Ser Arg
65 70 75 80

Ala Pro Gln Leu His Leu Glu Tyr Arg Phe Tyr Lys Gln Leu Gly Ser
85 90 95

Ala Gly Glu Gly Leu Pro Gln Val Tyr Tyr Phe Gly Pro Cys Gly Lys
100 105 110

26850

Tyr	Asn	Ala	Met	Val	Leu	Glu	Leu	Leu	Gly	Pro	Ser	Leu	Glu	Asp	Leu		
		115					120					125					
Phe	Asp	Leu	Cys	Asp	Arg	Thr	Phe	Thr	Leu	Lys	Thr	Val	Leu	Met	Ile		
	130					135					140						
Ala	Ile	Gln	Leu	Leu	Ser	Arg	Met	Glu	Tyr	Val	His	Ser	Lys	Asn	Leu		
145					150					155					160		
Ile	Tyr	Arg	Asp	Val	Lys	Pro	Glu	Asn	Phe	Leu	Ile	Gly	Arg	Gln	Gly		
				165					170					175			
Asn	Lys	Lys	Glu	His	Val	Ile	His	Ile	Ile	Asp	Phe	Gly	Leu	Ala	Lys		
			180					185					190				
Glu	Tyr	Ile	Asp	Pro	Glu	Thr	Lys	Lys	His	Ile	Pro	Tyr	Arg	Glu	His		
		195					200					205					
Lys	Ser	Leu	Thr	Gly	Thr	Ala	Arg	Tyr	Met	Ser	Ile	Asn	Thr	His	Leu		
	210					215					220						
Gly	Lys	Glu	Gln	Ser	Arg	Arg	Asp	Asp	Leu	Glu	Ala	Leu	Gly	His	Met		
225					230					235					240		
Phe	Met	Tyr	Phe	Leu	Arg	Gly	Ser	Leu	Pro	Trp	Gln	Gly	Leu	Lys	Ala		
				245					250					255			
Asp	Thr	Leu	Lys	Glu	Arg	Tyr	Gln	Lys	Ile	Gly	Asp	Thr	Lys	Arg	Asn		
			260					265					270				
Thr	Pro	Ile	Glu	Ala	Leu	Cys	Glu	Asn	Phe	Pro	Glu	Glu	Met	Ala	Thr		
		275					280					285					
Tyr	Leu	Arg	Tyr	Val	Arg	Arg	Leu	Asp	Phe	Phe	Glu	Lys	Pro	Asp	Tyr		
	290					295					300						
Glu	Tyr	Leu	Arg	Thr	Leu	Phe	Thr	Asp	Leu	Phe	Glu	Lys	Lys	Gly	Tyr		
305					310					315					320		
Thr	Phe	Asp	Tyr	Ala	Tyr	Asp	Trp	Val	Gly	Arg	Pro	Ile	Pro	Thr	Pro		
				325					330					335			

Val Gly Ser Val His Val Asp Ser Gly Ala Ser Ala Ile Thr Arg Glu
340 345 350

Ser His Thr His Arg Asp Arg Pro Ser Gln Gln Gln Pro Leu Arg Asn
355 360 365

Gln Val Val Ser Ser Thr Asn Gly Glu Leu Asn Val Asp Asp Pro Thr
370 375 380

Gly Ala His Ser Asn Ala Pro Ile Thr Ala His Ala Glu Val Glu Val
385 390 395 400

Val Glu Glu Ala Lys Cys Ile Met Phe His Lys Pro Trp His Trp Ser
405 410 415

Gln Ser Ser Ala Val Lys Met Lys Phe Val Val Phe Leu Asn Met Asn
420 425 430

Val Asn Phe Lys Cys Ile
435

<210> 12093
<211> 173
<212> PRT
<213> Homo sapiens

<220>
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<223> /note="Payload ID: 2394"

<220>
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<223> /note="Gene Symbol: CSNK1G1"

<220>
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<223> /note="Gene Name:
casein kinase 1, gamma 1"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000488990"

<400> 12093
Ala Thr Tyr Leu Arg Tyr Val Arg Arg Leu Asp Phe Phe Glu Lys Pro
1 5 10 15

Asp Tyr Glu Tyr Leu Arg Thr Leu Phe Thr Asp Leu Phe Glu Lys Lys

<220>
<221> source
<223> /note="ENSP ID: ENSP00000489008"

<400> 12094
Met Asp His Pro Ser Arg Glu Lys Asp Glu Arg Gln Arg Thr Thr Lys
1 5 10 15

Pro Met Ala Gln Arg Ser Ala His Cys Ser Arg Pro Ser Gly Ser Ser
20 25 30

Ser Ser Ser Gly Val Leu Met Val Gly Pro Asn Phe Arg Val Gly Lys
35 40 45

Lys Ile Gly Cys Gly Asn Phe Gly Glu Leu Arg Leu Gly Lys Asn Leu
50 55 60

Tyr Thr Asn Glu Tyr Val Ala Ile Lys Leu Val Lys Val Ser His Arg
65 70 75 80

Cys Ile Thr Leu Asp His Val Gly Asn Ile Met Pro Trp Cys Trp Ser
85 90 95

Ser Leu Ala Leu Ala Trp Arg Thr Cys Leu Thr Ser Val Thr Glu His
100 105 110

Leu Leu

<210> 12095
<211> 138
<212> PRT
<213> Homo sapiens

<220>
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<223> /note="Payload ID: 2394"

<220>
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<223> /note="Gene Symbol: CSNK1G1"

<220>
<221> source
<223> /note="Gene Name:
casein kinase 1, gamma 1"

<220>
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<223> /note="ENSP ID: ENSP00000489046"

<400> 12095

Met Asp His Pro Ser Arg Glu Lys Asp Glu Arg Gln Arg Thr Thr Lys
1 5 10 15

Pro Met Ala Gln Arg Ser Ala His Cys Ser Arg Pro Ser Gly Ser Ser
20 25 30

Ser Ser Ser Gly Val Leu Met Val Gly Pro Asn Phe Arg Val Gly Lys
35 40 45

Lys Ile Gly Cys Gly Asn Phe Gly Glu Leu Arg Leu Gly Lys Asn Leu
50 55 60

Tyr Thr Asn Glu Tyr Val Ala Ile Lys Leu Glu Pro Ile Lys Ser Arg
65 70 75 80

Ala Pro Gln Leu His Leu Glu Tyr Arg Phe Tyr Lys Gln Leu Gly Ser
85 90 95

Ala Gly Glu Gly Leu Pro Gln Val Tyr Tyr Phe Gly Pro Cys Gly Lys
100 105 110

Tyr Asn Ala Met Val Leu Glu Leu Leu Gly Pro Ser Leu Glu Asp Leu
115 120 125

Phe Asp Leu Cys Asp Arg Thr Phe Thr Leu
130 135

<210> 12096

<211> 204

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2394"

<220>

<221> source

<223> /note="Gene Symbol: CSNK1G1"

<220>

<221> source

<223> /note="Gene Name:
casein kinase 1, gamma 1"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000489050"

<400> 12096

Gln Lys Ile Gly Asp Thr Lys Arg Asn Thr Pro Ile Glu Ala Leu Cys
1 5 10 15

Glu Asn Phe Pro Glu Glu Met Ala Thr Tyr Leu Arg Tyr Val Arg Arg
20 25 30

Leu Asp Phe Phe Glu Lys Pro Asp Tyr Glu Tyr Leu Arg Thr Leu Phe
35 40 45

Thr Asp Leu Phe Glu Lys Lys Gly Tyr Thr Phe Asp Tyr Ala Tyr Asp
50 55 60

Trp Val Gly Arg Pro Ile Pro Thr Pro Val Gly Ser Val His Val Asp
65 70 75 80

Ser Gly Ala Ser Ala Ile Thr Arg Glu Ser His Thr His Arg Asp Arg
85 90 95

Pro Ser Gln Gln Gln Pro Leu Arg Asn Gln Asn Val Ser Ser Glu Arg
100 105 110

Arg Gly Glu Trp Glu Ile Gln Pro Ser Arg Gln Thr Asn Thr Ser Tyr
115 120 125

Leu Thr Ser His Leu Ala Ala Asp Arg His Gly Gly Ser Val Gln Val
130 135 140

Val Ser Ser Thr Asn Gly Glu Leu Asn Val Asp Asp Pro Thr Gly Ala
145 150 155 160

His Ser Asn Ala Pro Ile Thr Ala His Ala Glu Val Glu Val Val Glu
165 170 175

Glu Ala Asn Cys Leu Lys Met Leu Asn Leu Trp Cys Cys Cys Phe Phe
180 185 190

Lys Arg Lys Arg Lys Lys Thr Ala Gln Arg His Lys
195 200

<210> 12097
<211> 67
<212> PRT
<213> Homo sapiens

<220>
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<223> /note="Payload ID: 2394"

<220>
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<220>
<221> source
<223> /note="Gene Name:
casein kinase 1, gamma 1"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000489090"

<400> 12097
Asp Leu Phe Glu Lys Lys Gly Tyr Thr Phe Asp Tyr Ala Tyr Asp Trp
1 5 10 15

Val Gly Arg Pro Ile Pro Thr Pro Val Gly Ser Val His Val Asp Ser
20 25 30

Gly Ala Ser Ala Ile Thr Arg Glu Ser His Thr His Arg Asp Arg Pro
35 40 45

Ser Gln Gln Gln Pro Leu Arg Asn Gln Val Asp Cys Ser Leu Ala Asn
50 55 60

Ser Pro Ile
65

<210> 12098
<211> 459
<212> PRT
<213> Homo sapiens

<220>
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<223> /note="Payload ID: 2394"

<220>
<221> source
<223> /note="Gene Symbol: CSNK1G1"

<220>

<221> source
 <223> /note="Gene Name:
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 <220>
 <221> source
 <223> /note="ENSP ID: ENSP00000489116"

 <400> 12098
 Met Asp His Pro Ser Arg Glu Lys Asp Glu Arg Gln Arg Thr Thr Lys
 1 5 10 15

 Pro Met Ala Gln Arg Ser Ala His Cys Ser Arg Pro Ser Gly Ser Ser
 20 25 30

 Ser Ser Ser Gly Val Leu Met Val Gly Pro Asn Phe Arg Val Gly Lys
 35 40 45

 Lys Ile Gly Cys Gly Asn Phe Gly Glu Leu Arg Leu Gly Lys Asn Leu
 50 55 60

 Tyr Thr Asn Glu Tyr Val Ala Ile Lys Leu Glu Pro Ile Lys Ser Arg
 65 70 75 80

 Ala Pro Gln Leu His Leu Glu Tyr Arg Phe Tyr Lys Gln Leu Gly Ser
 85 90 95

 Ala Gly Glu Gly Leu Pro Gln Val Tyr Tyr Phe Gly Pro Cys Gly Lys
 100 105 110

 Tyr Asn Ala Met Val Leu Glu Leu Leu Gly Pro Ser Leu Glu Asp Leu
 115 120 125

 Phe Asp Leu Cys Asp Arg Thr Phe Thr Leu Lys Thr Val Leu Met Ile
 130 135 140

 Ala Ile Gln Leu Leu Ser Arg Met Glu Tyr Val His Ser Lys Asn Leu
 145 150 155 160

 Ile Tyr Arg Asp Val Lys Pro Glu Asn Phe Leu Ile Gly Arg Gln Gly
 165 170 175

 Asn Lys Lys Glu His Val Ile His Ile Ile Asp Phe Gly Leu Ala Lys
 180 185 190

Glu	Tyr	Ile	Asp	Pro	Glu	Thr	Lys	Lys	His	Ile	Pro	Tyr	Arg	Glu	His
		195					200					205			
Lys	Ser	Leu	Thr	Gly	Thr	Ala	Arg	Tyr	Met	Ser	Ile	Asn	Thr	His	Leu
	210					215					220				
Gly	Lys	Glu	Gln	Ser	Arg	Arg	Asp	Asp	Leu	Glu	Ala	Leu	Gly	His	Met
225					230					235					240
Phe	Met	Tyr	Phe	Leu	Arg	Gly	Ser	Leu	Pro	Trp	Gln	Gly	Leu	Lys	Ala
				245					250					255	
Asp	Thr	Leu	Lys	Glu	Arg	Tyr	Gln	Lys	Ile	Gly	Asp	Thr	Lys	Arg	Asn
			260					265					270		
Thr	Pro	Ile	Glu	Ala	Leu	Cys	Glu	Asn	Phe	Pro	Glu	Glu	Met	Ala	Thr
		275					280					285			
Tyr	Leu	Arg	Tyr	Val	Arg	Arg	Leu	Asp	Phe	Phe	Glu	Lys	Pro	Asp	Tyr
	290					295					300				
Glu	Tyr	Leu	Arg	Thr	Leu	Phe	Thr	Asp	Leu	Phe	Glu	Lys	Lys	Gly	Tyr
305					310					315					320
Thr	Phe	Asp	Tyr	Ala	Tyr	Asp	Trp	Val	Gly	Arg	Pro	Ile	Pro	Thr	Pro
				325					330					335	
Val	Gly	Ser	Val	His	Val	Asp	Ser	Gly	Ala	Ser	Ala	Ile	Thr	Arg	Glu
			340					345					350		
Ser	His	Thr	His	Arg	Asp	Arg	Pro	Ser	Gln	Gln	Gln	Pro	Leu	Arg	Asn
		355					360					365			
Gln	Asn	Val	Ser	Ser	Glu	Arg	Arg	Gly	Glu	Trp	Glu	Ile	Gln	Pro	Ser
	370					375					380				
Arg	Gln	Thr	Asn	Thr	Ser	Tyr	Leu	Thr	Ser	His	Leu	Ala	Ala	Asp	Arg
385					390					395					400
His	Gly	Gly	Ser	Val	Gln	Val	Val	Ser	Ser	Thr	Asn	Gly	Glu	Leu	Asn
				405					410					415	
Val	Asp	Asp	Pro	Thr	Gly	Ala	His	Ser	Asn	Ala	Pro	Ile	Thr	Ala	His

420

425

430

Ala Glu Val Glu Val Val Glu Glu Ala Lys Cys Cys Cys Phe Phe Lys
 435 440 445

Arg Lys Arg Lys Lys Thr Ala Gln Arg His Lys
 450 455

<210> 12099

<211> 430

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2394"

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<221> source

<223> /note="Gene Symbol: CSNK1G1"

<220>

<221> source

<223> /note="Gene Name:
casein kinase 1, gamma 1"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000489165"

<400> 12099

Met Asp His Pro Ser Arg Glu Lys Asp Glu Arg Gln Arg Thr Thr Lys
 1 5 10 15

Pro Met Ala Gln Arg Ser Ala His Cys Ser Arg Pro Ser Gly Ser Ser
 20 25 30

Ser Ser Ser Gly Val Leu Met Val Gly Pro Asn Phe Arg Val Gly Lys
 35 40 45

Lys Ile Gly Cys Gly Asn Phe Gly Glu Leu Arg Leu Gly Lys Asn Leu
 50 55 60

Tyr Thr Asn Glu Tyr Val Ala Ile Lys Leu Glu Pro Ile Lys Ser Arg
 65 70 75 80

Ala Pro Gln Leu His Leu Glu Tyr Arg Phe Tyr Lys Gln Leu Gly Ser
 85 90 95

26860

Ala	Gly	Glu	Gly	Leu	Pro	Gln	Val	Tyr	Tyr	Phe	Gly	Pro	Cys	Gly	Lys	100	105	110
Tyr	Asn	Ala	Met	Val	Leu	Glu	Leu	Leu	Gly	Pro	Ser	Leu	Glu	Asp	Leu	115	120	125
Phe	Asp	Leu	Cys	Asp	Arg	Thr	Phe	Thr	Leu	Lys	Thr	Val	Leu	Met	Ile	130	135	140
Ala	Ile	Gln	Leu	Leu	Ser	Arg	Met	Glu	Tyr	Val	His	Ser	Lys	Asn	Leu	145	150	155
Ile	Tyr	Arg	Asp	Val	Lys	Pro	Glu	Asn	Phe	Leu	Ile	Gly	Arg	Gln	Gly	165	170	175
Asn	Lys	Lys	Glu	His	Val	Ile	His	Ile	Ile	Asp	Phe	Gly	Leu	Ala	Lys	180	185	190
Glu	Tyr	Ile	Asp	Pro	Glu	Thr	Lys	Lys	His	Ile	Pro	Tyr	Arg	Glu	His	195	200	205
Lys	Ser	Leu	Thr	Gly	Thr	Ala	Arg	Tyr	Met	Ser	Ile	Asn	Thr	His	Leu	210	215	220
Gly	Lys	Glu	Gln	Ser	Arg	Arg	Asp	Asp	Leu	Glu	Ala	Leu	Gly	His	Met	225	230	235
Phe	Met	Tyr	Phe	Leu	Arg	Gly	Ser	Leu	Pro	Trp	Gln	Gly	Leu	Lys	Ala	245	250	255
Asp	Thr	Leu	Lys	Glu	Arg	Tyr	Gln	Lys	Ile	Gly	Asp	Thr	Lys	Arg	Asn	260	265	270
Thr	Pro	Ile	Glu	Ala	Leu	Cys	Glu	Asn	Phe	Pro	Glu	Glu	Met	Ala	Thr	275	280	285
Tyr	Leu	Arg	Tyr	Val	Arg	Arg	Leu	Asp	Phe	Phe	Glu	Lys	Pro	Asp	Tyr	290	295	300
Glu	Tyr	Leu	Arg	Thr	Leu	Phe	Thr	Asp	Leu	Phe	Glu	Lys	Lys	Gly	Tyr	305	310	315
																		320

Thr Phe Asp Tyr Ala Tyr Asp Trp Val Gly Arg Pro Ile Pro Thr Pro
325 330 335

Val Gly Ser Val His Val Asp Ser Gly Ala Ser Ala Ile Thr Arg Glu
340 345 350

Ser His Thr His Arg Asp Arg Pro Ser Gln Gln Gln Pro Leu Arg Asn
355 360 365

Gln Val Val Ser Ser Thr Asn Gly Glu Leu Asn Val Asp Asp Pro Thr
370 375 380

Gly Ala His Ser Asn Ala Pro Ile Thr Ala His Ala Glu Val Glu Val
385 390 395 400

Val Glu Glu Ala Asn Cys Leu Lys Met Leu Asn Leu Trp Cys Cys Cys
405 410 415

Phe Phe Lys Arg Lys Arg Lys Lys Thr Ala Gln Arg His Lys
420 425 430

<210> 12100
<211> 36
<212> PRT
<213> Homo sapiens

<220>
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<223> /note="Payload ID: 2394"

<220>
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<220>
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<223> /note="Gene Name:
casein kinase 1, gamma 1"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000489172"

<220>
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<222> (1)..(1)
<223> Any amino acid

<400> 12100

Xaa Gly Ser Val His Val Asp Ser Gly Ala Ser Ala Ile Thr Arg Glu
1 5 10 15

Ser His Thr His Arg Asp Arg Pro Ser Gln Gln Gln Pro Leu Arg Asn
20 25 30

Gln Ser Thr Val
35

<210> 12101
<211> 459
<212> PRT
<213> Homo sapiens

<220>
<221> source
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<220>
<221> source
<223> /note="Gene Symbol: CSNK1G1"

<220>
<221> source
<223> /note="Gene Name:
casein kinase 1, gamma 1"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000489233"

<400> 12101
Met Asp His Pro Ser Arg Glu Lys Asp Glu Arg Gln Arg Thr Thr Lys
1 5 10 15

Pro Met Ala Gln Arg Ser Ala His Cys Ser Arg Pro Ser Gly Ser Ser
20 25 30

Ser Ser Ser Gly Val Leu Met Val Gly Pro Asn Phe Arg Val Gly Lys
35 40 45

Lys Ile Gly Cys Gly Asn Phe Gly Glu Leu Arg Leu Gly Lys Asn Leu
50 55 60

Tyr Thr Asn Glu Tyr Val Ala Ile Lys Leu Glu Pro Ile Lys Ser Arg
65 70 75 80

Ala Pro Gln Leu His Leu Glu Tyr Arg Phe Tyr Lys Gln Leu Gly Ser
85 90 95

Ala	Gly	Glu	Gly	Leu	Pro	Gln	Val	Tyr	Tyr	Phe	Gly	Pro	Cys	Gly	Lys	
			100					105					110			
Tyr	Asn	Ala	Met	Val	Leu	Glu	Leu	Leu	Gly	Pro	Ser	Leu	Glu	Asp	Leu	
		115					120					125				
Phe	Asp	Leu	Cys	Asp	Arg	Thr	Phe	Thr	Leu	Lys	Thr	Val	Leu	Met	Ile	
	130					135					140					
Ala	Ile	Gln	Leu	Leu	Ser	Arg	Met	Glu	Tyr	Val	His	Ser	Lys	Asn	Leu	
145					150					155					160	
Ile	Tyr	Arg	Asp	Val	Lys	Pro	Glu	Asn	Phe	Leu	Ile	Gly	Arg	Gln	Gly	
				165					170					175		
Asn	Lys	Lys	Glu	His	Val	Ile	His	Ile	Ile	Asp	Phe	Gly	Leu	Ala	Lys	
			180					185					190			
Glu	Tyr	Ile	Asp	Pro	Glu	Thr	Lys	Lys	His	Ile	Pro	Tyr	Arg	Glu	His	
		195					200					205				
Lys	Ser	Leu	Thr	Gly	Thr	Ala	Arg	Tyr	Met	Ser	Ile	Asn	Thr	His	Leu	
	210					215					220					
Gly	Lys	Glu	Gln	Ser	Arg	Arg	Asp	Asp	Leu	Glu	Ala	Leu	Gly	His	Met	
225					230					235					240	
Phe	Met	Tyr	Phe	Leu	Arg	Gly	Ser	Leu	Pro	Trp	Gln	Gly	Leu	Lys	Ala	
				245					250					255		
Asp	Thr	Leu	Lys	Glu	Arg	Tyr	Gln	Lys	Ile	Gly	Asp	Thr	Lys	Arg	Asn	
			260					265					270			
Thr	Pro	Ile	Glu	Ala	Leu	Cys	Glu	Asn	Phe	Pro	Glu	Glu	Met	Ala	Thr	
		275					280					285				
Tyr	Leu	Arg	Tyr	Val	Arg	Arg	Leu	Asp	Phe	Phe	Glu	Lys	Pro	Asp	Tyr	
	290					295					300					
Glu	Tyr	Leu	Arg	Thr	Leu	Phe	Thr	Asp	Leu	Phe	Glu	Lys	Lys	Gly	Tyr	
305					310					315					320	

Thr Phe Asp Tyr Ala Tyr Asp Trp Val Gly Arg Pro Ile Pro Thr Pro
 325 330 335
 Val Gly Ser Val His Val Asp Ser Gly Ala Ser Ala Ile Thr Arg Glu
 340 345 350
 Ser His Thr His Arg Asp Arg Pro Ser Gln Gln Gln Pro Leu Arg Asn
 355 360 365
 Gln Asn Val Ser Ser Glu Arg Arg Gly Glu Trp Glu Ile Gln Pro Ser
 370 375 380
 Arg Gln Thr Asn Thr Ser Tyr Leu Thr Ser His Leu Ala Ala Asp Arg
 385 390 395 400
 His Gly Gly Ser Val Gln Val Val Ser Ser Thr Asn Gly Glu Leu Asn
 405 410 415
 Val Asp Asp Pro Thr Gly Ala His Ser Asn Ala Pro Ile Thr Ala His
 420 425 430
 Ala Glu Val Glu Val Val Glu Glu Ala Lys Cys Cys Cys Phe Phe Lys
 435 440 445
 Arg Lys Arg Lys Lys Thr Ala Gln Arg His Lys
 450 455

<210> 12102
 <211> 183
 <212> PRT
 <213> Homo sapiens

<220>
 <221> source
 <223> /note="Payload ID: 2394"

<220>
 <221> source
 <223> /note="Gene Symbol: CSNK1G1"

<220>
 <221> source
 <223> /note="Gene Name:
 casein kinase 1, gamma 1"

<220>
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<223> /note="ENSP ID: ENSP00000489277"

<400> 12102

Met Asp His Pro Ser Arg Glu Lys Asp Glu Arg Gln Arg Thr Thr Lys
1 5 10 15

Pro Met Ala Gln Arg Ser Ala His Cys Ser Arg Pro Ser Gly Ser Ser
20 25 30

Ser Ser Ser Gly Val Leu Met Val Gly Pro Asn Phe Arg Val Gly Lys
35 40 45

Lys Ile Gly Cys Gly Asn Phe Gly Glu Leu Arg Leu Gly Lys Asn Leu
50 55 60

Tyr Thr Asn Glu Tyr Val Ala Ile Lys Leu Glu Pro Ile Lys Ser Arg
65 70 75 80

Ala Pro Gln Leu His Leu Glu Tyr Arg Phe Tyr Lys Gln Leu Gly Ser
85 90 95

Ala Gly Glu Gly Leu Pro Gln Val Tyr Tyr Phe Gly Pro Cys Gly Lys
100 105 110

Tyr Asn Ala Met Val Leu Glu Leu Leu Gly Pro Ser Leu Glu Asp Leu
115 120 125

Phe Asp Leu Cys Asp Arg Thr Phe Thr Leu Lys Thr Val Leu Met Ile
130 135 140

Ala Ile Gln Leu Leu Ser Arg Met Glu Tyr Val His Ser Lys Asn Leu
145 150 155 160

Ile Tyr Arg Asp Val Lys Pro Glu Asn Phe Leu Ile Gly Arg Gln Gly
165 170 175

Asn Lys Lys Glu His Val Ile
180

<210> 12103

<211> 158

<212> PRT

<213> Homo sapiens

<220>

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<221> source
<223> /note="Payload ID: 2394"

<220>
<221> source
<223> /note="Gene Symbol: CSNK1G1"

<220>
<221> source
<223> /note="Gene Name:
        casein kinase 1, gamma 1"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000489310"

<400> 12103
Phe Phe Glu Lys Pro Asp Tyr Glu Tyr Leu Arg Thr Leu Phe Thr Asp
1          5          10          15

Leu Phe Glu Lys Lys Gly Tyr Thr Phe Asp Tyr Ala Tyr Asp Trp Val
          20          25          30

Gly Arg Pro Ile Pro Thr Pro Val Gly Ser Val His Val Asp Ser Gly
          35          40          45

Ala Ser Ala Ile Thr Arg Glu Ser His Thr His Arg Asp Arg Pro Ser
          50          55          60

Gln Gln Gln Pro Leu Arg Asn Gln Val Val Ser Ser Thr Asn Gly Glu
65          70          75          80

Leu Asn Val Asp Asp Pro Thr Gly Ala His Ser Asn Ala Pro Ile Thr
          85          90          95

Ala His Ala Glu Val Glu Val Val Glu Glu Ala Lys Tyr Val His Leu
          100          105          110

Ser Arg Gly Leu Leu Ser His Gly Leu Lys Asn Leu Phe Cys Leu Phe
          115          120          125

Leu Ser Val Cys Cys Ser Ser Gln Thr Gly Phe Leu Met Leu Val Thr
          130          135          140

Thr Ala Phe Phe Leu Asn Cys Phe Asn Phe Cys Met Val Pro
145          150          155

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<210> 12104
<211> 422
<212> PRT
<213> Homo sapiens

<220>
<221> source
<223> /note="Payload ID: 2394"

<220>
<221> source
<223> /note="Gene Symbol: CSNK1G1"

<220>
<221> source
<223> /note="Gene Name:
        casein kinase 1, gamma 1"

<220>
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<223> /note="ENSP ID: ENSP00000489415"

<400> 12104
Met Asp His Pro Ser Arg Glu Lys Asp Glu Arg Gln Arg Thr Thr Lys
1                               5                10                15

Pro Met Ala Gln Arg Ser Ala His Cys Ser Arg Pro Ser Gly Ser Ser
                20                25                30

Ser Ser Ser Gly Val Leu Met Val Gly Pro Asn Phe Arg Val Gly Lys
        35                40                45

Lys Ile Gly Cys Gly Asn Phe Gly Glu Leu Arg Leu Gly Lys Asn Leu
        50                55                60

Tyr Thr Asn Glu Tyr Val Ala Ile Lys Leu Glu Pro Ile Lys Ser Arg
65                70                75                80

Ala Pro Gln Leu His Leu Glu Tyr Arg Phe Tyr Lys Gln Leu Gly Ser
                85                90                95

Ala Gly Glu Gly Leu Pro Gln Val Tyr Tyr Phe Gly Pro Cys Gly Lys
                100                105                110

Tyr Asn Ala Met Val Leu Glu Leu Leu Gly Pro Ser Leu Glu Asp Leu
                115                120                125

Phe Asp Leu Cys Asp Arg Thr Phe Thr Leu Lys Thr Val Leu Met Ile
130                135                140

```

Ala	Ile	Gln	Leu	Leu	Ser	Arg	Met	Glu	Tyr	Val	His	Ser	Lys	Asn	Leu
145					150					155					160

Ile	Tyr	Arg	Asp	Val	Lys	Pro	Glu	Asn	Phe	Leu	Ile	Gly	Arg	Gln	Gly
				165					170					175	

Asn	Lys	Lys	Glu	His	Val	Ile	His	Ile	Ile	Asp	Phe	Gly	Leu	Ala	Lys
			180					185					190		

Glu	Tyr	Ile	Asp	Pro	Glu	Thr	Lys	Lys	His	Ile	Pro	Tyr	Arg	Glu	His
		195					200					205			

Lys	Ser	Leu	Thr	Gly	Thr	Ala	Arg	Tyr	Met	Ser	Ile	Asn	Thr	His	Leu
	210					215					220				

Gly	Lys	Glu	Gln	Ser	Arg	Arg	Asp	Asp	Leu	Glu	Ala	Leu	Gly	His	Met
225					230					235					240

Phe	Met	Tyr	Phe	Leu	Arg	Gly	Ser	Leu	Pro	Trp	Gln	Gly	Leu	Lys	Ala
				245					250					255	

Asp	Thr	Leu	Lys	Glu	Arg	Tyr	Gln	Lys	Ile	Gly	Asp	Thr	Lys	Arg	Asn
			260					265					270		

Thr	Pro	Ile	Glu	Ala	Leu	Cys	Glu	Asn	Phe	Pro	Glu	Glu	Met	Ala	Thr
		275					280					285			

Tyr	Leu	Arg	Tyr	Val	Arg	Arg	Leu	Asp	Phe	Phe	Glu	Lys	Pro	Asp	Tyr
	290					295					300				

Glu	Tyr	Leu	Arg	Thr	Leu	Phe	Thr	Asp	Leu	Phe	Glu	Lys	Lys	Gly	Tyr
305					310					315					320

Thr	Phe	Asp	Tyr	Ala	Tyr	Asp	Trp	Val	Gly	Arg	Pro	Ile	Pro	Thr	Pro
				325					330					335	

Val	Gly	Ser	Val	His	Val	Asp	Ser	Gly	Ala	Ser	Ala	Ile	Thr	Arg	Glu
			340					345					350		

Ser	His	Thr	His	Arg	Asp	Arg	Pro	Ser	Gln	Gln	Gln	Pro	Leu	Arg	Asn
		355					360					365			

Gln Pro Arg Ser Leu Thr Ser Arg Val Phe Cys Pro Ala Val Arg Pro
370 375 380

Leu Phe Pro Leu Pro Ser Thr His Ile Asn Arg Asn Asn Val Leu Glu
385 390 395 400

Met Lys Pro Gly Gly Arg Ser Ser Tyr Thr Cys Lys Arg Ser Leu Ile
405 410 415

Gly Ser Thr Leu Thr Arg
420

<210> 12105
<211> 77
<212> PRT
<213> Homo sapiens

<220>
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<220>
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<220>
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<223> /note="Gene Name:
casein kinase 1, gamma 1"

<220>
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<223> /note="ENSP ID: ENSP00000489534"

<400> 12105
Met Asp His Pro Ser Arg Glu Lys Asp Glu Arg Gln Arg Thr Thr Lys
1 5 10 15

Pro Met Ala Gln Arg Ser Ala His Cys Ser Arg Pro Ser Gly Ser Ser
20 25 30

Ser Ser Ser Gly Val Leu Met Val Gly Pro Asn Phe Arg Val Gly Lys
35 40 45

Lys Ile Gly Cys Gly Asn Phe Gly Glu Leu Arg Leu Gly Thr Asn Lys
50 55 60

Ile Thr Cys Ser Thr Ala Ser Phe Arg Val Gln Ile Leu

65

70

75

<210> 12106

<211> 415

<212> PRT

<213> Homo sapiens

<220>

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<223> /note="Payload ID: 2395"

<220>

<221> source

<223> /note="Gene Symbol: CSNK1G2"

<220>

<221> source

<223> /note="Gene Name:
casein kinase 1, gamma 2"

<220>

<221> source

<223> /note="Uniprot ID: P78368"

<220>

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<223> /note="ENSP ID: ENSP00000255641"

<400> 12106

Met	Asp	Phe	Asp	Lys	Lys	Gly	Gly	Lys	Gly	Glu	Thr	Glu	Glu	Gly	Arg
1				5					10					15	

Arg	Met	Ser	Lys	Ala	Gly	Gly	Gly	Arg	Ser	Ser	His	Gly	Ile	Arg	Ser
			20					25					30		

Ser	Gly	Thr	Ser	Ser	Gly	Val	Leu	Met	Val	Gly	Pro	Asn	Phe	Arg	Val
		35					40					45			

Gly	Lys	Lys	Ile	Gly	Cys	Gly	Asn	Phe	Gly	Glu	Leu	Arg	Leu	Gly	Lys
	50					55					60				

Asn	Leu	Tyr	Thr	Asn	Glu	Tyr	Val	Ala	Ile	Lys	Leu	Glu	Pro	Ile	Lys
65					70					75					80

Ser	Arg	Ala	Pro	Gln	Leu	His	Leu	Glu	Tyr	Arg	Phe	Tyr	Lys	Gln	Leu
				85					90					95	

Ser	Ala	Thr	Glu	Gly	Val	Pro	Gln	Val	Tyr	Tyr	Phe	Gly	Pro	Cys	Gly
			100					105					110		

26871

Lys	Tyr	Asn	Ala	Met	Val	Leu	Glu	Leu	Leu	Gly	Pro	Ser	Leu	Glu	Asp	115	120	125
Leu	Phe	Asp	Leu	Cys	Asp	Arg	Thr	Phe	Thr	Leu	Lys	Thr	Val	Leu	Met	130	135	140
Ile	Ala	Ile	Gln	Leu	Ile	Thr	Arg	Met	Glu	Tyr	Val	His	Thr	Lys	Ser	145	150	155
Leu	Ile	Tyr	Arg	Asp	Val	Lys	Pro	Glu	Asn	Phe	Leu	Val	Gly	Arg	Pro	165	170	175
Gly	Thr	Lys	Arg	Gln	His	Ala	Ile	His	Ile	Ile	Asp	Phe	Gly	Leu	Ala	180	185	190
Lys	Glu	Tyr	Ile	Asp	Pro	Glu	Thr	Lys	Lys	His	Ile	Pro	Tyr	Arg	Glu	195	200	205
His	Lys	Ser	Leu	Thr	Gly	Thr	Ala	Arg	Tyr	Met	Ser	Ile	Asn	Thr	His	210	215	220
Leu	Gly	Lys	Glu	Gln	Ser	Arg	Arg	Asp	Asp	Leu	Glu	Ala	Leu	Gly	His	225	230	235
Met	Phe	Met	Tyr	Phe	Leu	Arg	Gly	Ser	Leu	Pro	Trp	Gln	Gly	Leu	Lys	245	250	255
Ala	Asp	Thr	Leu	Lys	Glu	Arg	Tyr	Gln	Lys	Ile	Gly	Asp	Thr	Lys	Arg	260	265	270
Ala	Thr	Pro	Ile	Glu	Val	Leu	Cys	Glu	Asn	Phe	Pro	Glu	Glu	Met	Ala	275	280	285
Thr	Tyr	Leu	Arg	Tyr	Val	Arg	Arg	Leu	Asp	Phe	Phe	Glu	Lys	Pro	Asp	290	295	300
Tyr	Asp	Tyr	Leu	Arg	Lys	Leu	Phe	Thr	Asp	Leu	Phe	Asp	Arg	Ser	Gly	305	310	315
Phe	Val	Phe	Asp	Tyr	Glu	Tyr	Asp	Trp	Ala	Gly	Lys	Pro	Leu	Pro	Thr	325	330	335

Pro Ile Gly Thr Val His Thr Asp Leu Pro Ser Gln Pro Gln Leu Arg
340 345 350

Asp Lys Thr Gln Pro His Ser Lys Asn Gln Ala Leu Asn Ser Thr Asn
355 360 365

Gly Glu Leu Asn Ala Asp Asp Pro Thr Ala Gly His Ser Asn Ala Pro
370 375 380

Ile Thr Ala Pro Ala Glu Val Glu Val Ala Asp Glu Thr Lys Cys Cys
385 390 395 400

Cys Phe Phe Lys Arg Arg Lys Arg Lys Ser Leu Gln Arg His Lys
405 410 415

<210> 12107
<211> 83
<212> PRT
<213> Homo sapiens

<220>
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<223> /note="Payload ID: 2395"

<220>
<221> source
<223> /note="Gene Symbol: CSNK1G2"

<220>
<221> source
<223> /note="Gene Name:
casein kinase 1, gamma 2"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000465106"

<400> 12107
Met Asp Phe Asp Lys Lys Gly Gly Lys Gly Glu Thr Glu Glu Gly Arg
1 5 10 15

Arg Met Ser Lys Ala Gly Gly Gly Arg Ser Ser His Gly Ile Arg Ser
20 25 30

Ser Gly Thr Ser Ser Gly Val Leu Met Val Gly Pro Asn Phe Arg Val
35 40 45

Gly Lys Lys Ile Gly Cys Gly Asn Phe Gly Glu Leu Arg Leu Gly Trp
50 55 60

Phe Gln Arg Cys Trp Gly Lys Ala Glu Gly Lys His Glu Arg Leu Gln
65 70 75 80

Gly Gln Gly

<210> 12108
<211> 76
<212> PRT
<213> Homo sapiens

<220>
<221> source
<223> /note="Payload ID: 2395"

<220>
<221> source
<223> /note="Gene Symbol: CSNK1G2"

<220>
<221> source
<223> /note="Gene Name:
casein kinase 1, gamma 2"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000467214"

<400> 12108
Met Asp Phe Asp Lys Lys Gly Gly Lys Gly Glu Thr Glu Glu Gly Arg
1 5 10 15

Arg Met Ser Lys Ala Gly Gly Gly Arg Ser Ser His Gly Ile Arg Ser
20 25 30

Ser Gly Thr Ser Ser Gly Val Leu Met Val Gly Pro Asn Phe Arg Val
35 40 45

Gly Lys Lys Ile Gly Cys Gly Asn Phe Gly Glu Leu Arg Leu Gly Lys
50 55 60

Asn Leu Tyr Thr Asn Glu Tyr Val Ala Ile Lys Leu
65 70 75

<210> 12109
<211> 299
<212> PRT
<213> Homo sapiens

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<220>
<221> source
<223> /note="Payload ID: 2395"

<220>
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<223> /note="Gene Symbol: CSNK1G2"

<220>
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<223> /note="Gene Name:
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<220>
<221> source
<223> /note="ENSP ID: ENSP00000468637"

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<220>
<221> MOD_RES
<222> (1)..(1)
<223> Any amino acid

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<400> 12109
Xaa Ser Lys Ala Gly Gly Gly Arg Ser Ser His Gly Ile Arg Ser Ser
1          5          10
Gly Thr Ser Ser Gly Val Leu Met Val Gly Pro Asn Phe Arg Val Gly
20          25          30
Lys Lys Ile Gly Cys Gly Asn Phe Gly Glu Leu Arg Leu Gly Lys Asn
35          40          45
Leu Tyr Thr Asn Glu Tyr Val Ala Ile Lys Leu Val Ser Arg Pro Leu
50          55          60
His Pro Thr Pro Ala Asp Val Pro Pro Arg Asp Phe Arg Ala Ala Thr
65          70          75
Arg Ser Pro Gly Asp Ser Leu Leu Cys Pro Gln Glu Pro Ile Lys Ser
85          90          95
Arg Ala Pro Gln Leu His Leu Glu Tyr Arg Phe Tyr Lys Gln Leu Ser
100         105         110
Ala Thr Glu Gly Val Pro Gln Val Tyr Tyr Phe Gly Pro Cys Gly Lys
115         120         125

```

Tyr Asn Ala Met Val Leu Glu Leu Leu Gly Pro Ser Leu Glu Asp Leu
130 135 140

Phe Asp Leu Cys Asp Arg Thr Phe Thr Leu Lys Thr Val Leu Met Ile
145 150 155 160

Ala Ile Gln Leu Ile Thr Arg Met Glu Tyr Val His Thr Lys Ser Leu
165 170 175

Ile Tyr Arg Asp Val Lys Pro Glu Asn Phe Leu Val Gly Arg Pro Gly
180 185 190

Thr Lys Arg Gln His Ala Ile His Ile Ile Asp Phe Gly Leu Ala Lys
195 200 205

Glu Tyr Ile Asp Pro Glu Thr Lys Lys His Ile Pro Tyr Arg Glu His
210 215 220

Lys Ser Leu Thr Gly Thr Ala Arg Tyr Met Ser Ile Asn Thr His Leu
225 230 235 240

Gly Lys Glu Gln Ser Arg Arg Asp Asp Leu Glu Ala Leu Gly His Met
245 250 255

Phe Met Tyr Phe Leu Arg Gly Ser Leu Pro Trp Gln Gly Leu Lys Ala
260 265 270

Asp Thr Leu Lys Glu Arg Tyr Gln Lys Ile Gly Asp Thr Lys Arg Ala
275 280 285

Thr Pro Ile Glu Val Leu Cys Glu Asn Phe Pro
290 295

<210> 12110

<211> 100

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2395"

<220>

<221> source

<223> /note="Gene Symbol: CSNK1G2"

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<220>
<221> source
<223> /note="Gene Name:
        casein kinase 1, gamma 2"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000480052"

<220>
<221> MOD_RES
<222> (1)..(1)
<223> Any amino acid

<400> 12110
Xaa Arg Pro Gly Arg Arg Ala Gly Thr Gln Gly Gly Ser Lys Ala Asp
1          5          10          15

His Arg Pro Pro Gln Ala Asp Thr Leu Lys Glu Arg Tyr Gln Lys Ile
          20          25          30

Gly Asp Thr Lys Arg Ala Thr Pro Ile Glu Val Leu Cys Glu Asn Phe
          35          40          45

Pro Glu Glu Met Ala Thr Tyr Leu Arg Tyr Val Arg Arg Leu Asp Phe
          50          55          60

Phe Glu Lys Pro Asp Tyr Asp Tyr Leu Arg Lys Leu Phe Thr Asp Leu
65          70          75          80

Phe Asp Arg Ser Gly Phe Val Phe Asp Tyr Glu Tyr Asp Trp Ala Gly
          85          90          95

Lys Pro Leu Pro
          100

<210> 12111
<211> 235
<212> PRT
<213> Homo sapiens

<220>
<221> source
<223> /note="Payload ID: 2395"

<220>
<221> source
<223> /note="Gene Symbol: CSNK1G2"

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<220>
<221> source
<223> /note="Gene Name:
        casein kinase 1, gamma 2"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000480185"

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<220>
<221> MOD_RES
<222> (1)..(1)
<223> Any amino acid

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<400> 12111
Xaa Ser Arg Ala Pro Gln Leu His Leu Glu Tyr Arg Phe Tyr Lys Gln
1          5          10          15

Leu Ser Ala Thr Gly Thr Gly Arg Pro Ala Gly Gly Ala Gly Ala Ala
          20          25          30

Gln Gly Gln Gly Gly Gly Cys Arg Arg Thr Pro Val Arg Leu Ser Ser
          35          40          45

Ala Ala Glu Gly Val Pro Gln Val Tyr Tyr Phe Gly Pro Cys Gly Lys
          50          55          60

Tyr Asn Ala Met Val Leu Glu Leu Leu Gly Pro Ser Leu Glu Asp Leu
65          70          75          80

Phe Asp Leu Cys Asp Arg Thr Phe Thr Leu Lys Thr Val Leu Met Ile
          85          90          95

Ala Ile Gln Leu Ile Thr Arg Met Glu Tyr Val His Thr Lys Ser Leu
          100          105          110

Ile Tyr Arg Asp Val Lys Pro Glu Asn Phe Leu Val Gly Arg Pro Gly
          115          120          125

Thr Lys Arg Gln His Ala Ile His Ile Ile Asp Phe Gly Leu Ala Lys
          130          135          140

Glu Tyr Ile Asp Pro Glu Thr Lys Lys His Ile Pro Tyr Arg Glu His
145          150          155          160

Lys Ser Leu Thr Gly Thr Ala Arg Tyr Met Ser Ile Asn Thr His Leu

```

165

170

175

Gly Lys Glu Gln Ser Arg Arg Asp Asp Leu Glu Ala Leu Gly His Met
 180 185 190

Phe Met Tyr Phe Leu Arg Gly Ser Leu Pro Trp Gln Gly Leu Lys Ala
 195 200 205

Asp Thr Leu Lys Glu Arg Tyr Gln Lys Ile Gly Asp Thr Lys Arg Ala
 210 215 220

Thr Pro Ile Glu Val Leu Cys Glu Asn Phe Pro
 225 230 235

<210> 12112

<211> 206

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2395"

<220>

<221> source

<223> /note="Gene Symbol: CSNK1G2"

<220>

<221> source

<223> /note="Gene Name:
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<220>

<221> source

<223> /note="ENSP ID: ENSP00000480929"

<220>

<221> MOD_RES

<222> (1)..(1)

<223> Any amino acid

<400> 12112

Xaa Ser Arg Ala Pro Gln Leu His Leu Glu Tyr Arg Phe Tyr Lys Gln
 1 5 10 15

Leu Ser Ala Thr Gly Thr Gly Arg Pro Ala Gly Gly Ala Gly Ala Ala
 20 25 30

Gln Gly Gln Gly Gly Gly Cys Arg Arg Thr Pro Val Arg Leu Ser Ser

26879

35	40	45
Ala Ala Glu Gly Val Pro Gln Val Tyr Tyr Phe Gly Pro Cys Gly Lys		
50	55	60
Tyr Asn Ala Met Val Leu Glu Leu Leu Gly Pro Ser Leu Glu Asp Leu		
65	70	75
Phe Asp Leu Cys Asp Arg Thr Phe Thr Leu Lys Thr Val Leu Met Ile		
85	90	95
Ala Ile Gln Leu Ile Thr Arg Met Glu Tyr Val His Thr Lys Ser Leu		
100	105	110
Ile Tyr Arg Asp Val Lys Pro Glu Asn Phe Leu Val Gly Arg Pro Gly		
115	120	125
Thr Lys Arg Gln His Ala Ile His Ile Ile Asp Phe Gly Leu Ala Lys		
130	135	140
Glu Tyr Ile Asp Pro Glu Thr Lys Lys His Ile Pro Tyr Arg Glu His		
145	150	155
Lys Ser Leu Thr Gly Thr Ala Arg Tyr Met Ser Ile Asn Thr His Leu		
165	170	175
Gly Lys Gly Arg His Ala Gln Gly Ala Val Pro Glu Asp Arg Gly His		
180	185	190
Gln Thr Arg His Ala His Arg Gly Ala Leu Arg Glu Leu Pro		
195	200	205

<210> 12113

<211> 114

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2395"

<220>

<221> source

<223> /note="Gene Symbol: CSNK1G2"

<220>

<221> source
 <223> /note="Gene Name:
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 <220>
 <221> source
 <223> /note="ENSP ID: ENSP00000482716"

 <400> 12113
 Phe Met Tyr Phe Leu Arg Gly Ser Leu Pro Trp Gln Gly Leu Lys Ala
 1 5 10 15

 Asp Thr Leu Lys Glu Arg Tyr Gln Lys Ile Gly Asp Thr Lys Arg Ala
 20 25 30

 Thr Pro Ile Glu Val Leu Cys Glu Asn Phe Pro Glu Glu Met Ala Thr
 35 40 45

 Tyr Leu Arg Tyr Val Arg Arg Leu Asp Phe Phe Glu Lys Pro Asp Tyr
 50 55 60

 Asp Tyr Leu Arg Lys Leu Phe Thr Asp Leu Phe Asp Arg Ser Gly Phe
 65 70 75 80

 Val Phe Asp Tyr Asp Arg Pro Pro Ser Ala Pro Ser Thr Pro Thr Cys
 85 90 95

 Pro Pro Ser Leu Ser Ser Gly Thr Lys Pro Ser Arg Thr Ala Lys Thr
 100 105 110

 Arg Arg

<210> 12114
 <211> 423
 <212> PRT
 <213> Homo sapiens

 <220>
 <221> source
 <223> /note="Payload ID: 2396"

 <220>
 <221> source
 <223> /note="Gene Symbol: CSNK1G3"

 <220>
 <221> source
 <223> /note="Gene Name:

casein kinase 1, gamma 3"

<220>

<221> source

<223> /note="Uniprot ID: Q9Y6M4"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000334735"

<400> 12114

Met Glu Asn Lys Lys Lys Asp Lys Asp Lys Ser Asp Asp Arg Met Ala
1 5 10 15

Arg Pro Ser Gly Arg Ser Gly His Asn Thr Arg Gly Thr Gly Ser Ser
20 25 30

Ser Ser Gly Val Leu Met Val Gly Pro Asn Phe Arg Val Gly Lys Lys
35 40 45

Ile Gly Cys Gly Asn Phe Gly Glu Leu Arg Leu Gly Lys Asn Leu Tyr
50 55 60

Thr Asn Glu Tyr Val Ala Ile Lys Leu Glu Pro Met Lys Ser Arg Ala
65 70 75 80

Pro Gln Leu His Leu Glu Tyr Arg Phe Tyr Lys Gln Leu Gly Ser Gly
85 90 95

Asp Gly Ile Pro Gln Val Tyr Tyr Phe Gly Pro Cys Gly Lys Tyr Asn
100 105 110

Ala Met Val Leu Glu Leu Leu Gly Pro Ser Leu Glu Asp Leu Phe Asp
115 120 125

Leu Cys Asp Arg Thr Phe Ser Leu Lys Thr Val Leu Met Ile Ala Ile
130 135 140

Gln Leu Ile Ser Arg Met Glu Tyr Val His Ser Lys Asn Leu Ile Tyr
145 150 155 160

Arg Asp Val Lys Pro Glu Asn Phe Leu Ile Gly Arg Pro Gly Asn Lys
165 170 175

Thr Gln Gln Val Ile His Ile Ile Asp Phe Gly Leu Ala Lys Glu Tyr
180 185 190

26882

Ile	Asp	Pro	Glu	Thr	Lys	Lys	His	Ile	Pro	Tyr	Arg	Glu	His	Lys	Ser			
		195					200					205						
Leu	Thr	Gly	Thr	Ala	Arg	Tyr	Met	Ser	Ile	Asn	Thr	His	Leu	Gly	Lys			
	210					215					220							
Glu	Gln	Ser	Arg	Arg	Asp	Asp	Leu	Glu	Ala	Leu	Gly	His	Met	Phe	Met			
225					230					235					240			
Tyr	Phe	Leu	Arg	Gly	Ser	Leu	Pro	Trp	Gln	Gly	Leu	Lys	Ala	Asp	Thr			
				245					250					255				
Leu	Lys	Glu	Arg	Tyr	Gln	Lys	Ile	Gly	Asp	Thr	Lys	Arg	Ala	Thr	Pro			
			260					265					270					
Ile	Glu	Val	Leu	Cys	Glu	Asn	Phe	Pro	Glu	Met	Ala	Thr	Tyr	Leu	Arg			
		275					280					285						
Tyr	Val	Arg	Arg	Leu	Asp	Phe	Phe	Glu	Lys	Pro	Asp	Tyr	Asp	Tyr	Leu			
	290					295					300							
Arg	Lys	Leu	Phe	Thr	Asp	Leu	Phe	Asp	Arg	Lys	Gly	Tyr	Met	Phe	Asp			
305					310					315					320			
Tyr	Glu	Tyr	Asp	Trp	Ile	Gly	Lys	Gln	Leu	Pro	Thr	Pro	Val	Gly	Ala			
				325					330					335				
Val	Gln	Gln	Asp	Pro	Ala	Leu	Ser	Ser	Asn	Arg	Glu	Ala	His	Gln	His			
			340					345					350					
Arg	Asp	Lys	Met	Gln	Gln	Ser	Lys	Asn	Gln	Val	Val	Ser	Ser	Thr	Asn			
		355					360					365						
Gly	Glu	Leu	Asn	Thr	Asp	Asp	Pro	Thr	Ala	Gly	Arg	Ser	Asn	Ala	Pro			
	370					375					380							
Ile	Thr	Ala	Pro	Thr	Glu	Val	Glu	Val	Met	Asp	Glu	Thr	Asn	Cys	Gln			
385					390					395					400			
Lys	Val	Leu	Asn	Met	Trp	Cys	Cys	Cys	Phe	Phe	Lys	Arg	Arg	Lys	Arg			
				405					410					415				

Lys Thr Ile Gln Arg His Lys
420

<210> 12115

<211> 455

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2396"

<220>

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<223> /note="Gene Symbol: CSNK1G3"

<220>

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<223> /note="Gene Name:
casein kinase 1, gamma 3"

<220>

<221> source

<223> /note="Uniprot ID: Q9Y6M4"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000353904"

<400> 12115

Met Glu Asn Lys Lys Lys Asp Lys Asp Lys Ser Asp Asp Arg Met Ala
1 5 10 15

Arg Pro Ser Gly Arg Ser Gly His Asn Thr Arg Gly Thr Gly Ser Ser
20 25 30

Ser Ser Gly Val Leu Met Val Gly Pro Asn Phe Arg Val Gly Lys Lys
35 40 45

Ile Gly Cys Gly Asn Phe Gly Glu Leu Arg Leu Gly Lys Asn Leu Tyr
50 55 60

Thr Asn Glu Tyr Val Ala Ile Lys Leu Glu Pro Met Lys Ser Arg Ala
65 70 75 80

Pro Gln Leu His Leu Glu Tyr Arg Phe Tyr Lys Gln Leu Gly Ser Gly
85 90 95

Asp Gly Ile Pro Gln Val Tyr Tyr Phe Gly Pro Cys Gly Lys Tyr Asn

26884

				100					105					110					
Ala	Met	Val	Leu	Glu	Leu	Leu	Gly	Pro	Ser	Leu	Glu	Asp	Leu	Phe	Asp				
		115					120					125							
Leu	Cys	Asp	Arg	Thr	Phe	Ser	Leu	Lys	Thr	Val	Leu	Met	Ile	Ala	Ile				
	130					135					140								
Gln	Leu	Ile	Ser	Arg	Met	Glu	Tyr	Val	His	Ser	Lys	Asn	Leu	Ile	Tyr				
145					150					155					160				
Arg	Asp	Val	Lys	Pro	Glu	Asn	Phe	Leu	Ile	Gly	Arg	Pro	Gly	Asn	Lys				
				165					170					175					
Thr	Gln	Gln	Val	Ile	His	Ile	Ile	Asp	Phe	Gly	Leu	Ala	Lys	Glu	Tyr				
			180					185					190						
Ile	Asp	Pro	Glu	Thr	Lys	Lys	His	Ile	Pro	Tyr	Arg	Glu	His	Lys	Ser				
		195					200					205							
Leu	Thr	Gly	Thr	Ala	Arg	Tyr	Met	Ser	Ile	Asn	Thr	His	Leu	Gly	Lys				
	210					215					220								
Glu	Gln	Ser	Arg	Arg	Asp	Asp	Leu	Glu	Ala	Leu	Gly	His	Met	Phe	Met				
225					230					235					240				
Tyr	Phe	Leu	Arg	Gly	Ser	Leu	Pro	Trp	Gln	Gly	Leu	Lys	Ala	Asp	Thr				
				245					250					255					
Leu	Lys	Glu	Arg	Tyr	Gln	Lys	Ile	Gly	Asp	Thr	Lys	Arg	Ala	Thr	Pro				
			260					265					270						
Ile	Glu	Val	Leu	Cys	Glu	Asn	Phe	Pro	Glu	Met	Ala	Thr	Tyr	Leu	Arg				
		275					280					285							
Tyr	Val	Arg	Arg	Leu	Asp	Phe	Phe	Glu	Lys	Pro	Asp	Tyr	Asp	Tyr	Leu				
	290					295					300								
Arg	Lys	Leu	Phe	Thr	Asp	Leu	Phe	Asp	Arg	Lys	Gly	Tyr	Met	Phe	Asp				
305					310					315					320				
Tyr	Glu	Tyr	Asp	Trp	Ile	Gly	Lys	Gln	Leu	Pro	Thr	Pro	Val	Gly	Ala				
				325					330					335					

Val Gln Gln Asp Pro Ala Leu Ser Ser Asn Arg Glu Ala His Gln His
340 345 350

Arg Asp Lys Met Gln Gln Ser Lys Asn Gln Ser Ala Asp His Arg Ala
355 360 365

Ala Trp Asp Ser Gln Gln Ala Asn Pro His His Leu Arg Ala His Leu
370 375 380

Ala Ala Asp Arg His Gly Gly Ser Val Gln Val Val Ser Ser Thr Asn
385 390 395 400

Gly Glu Leu Asn Thr Asp Asp Pro Thr Ala Gly Arg Ser Asn Ala Pro
405 410 415

Ile Thr Ala Pro Thr Glu Val Glu Val Met Asp Glu Thr Asn Cys Gln
420 425 430

Lys Val Leu Asn Met Trp Cys Cys Cys Phe Phe Lys Arg Arg Lys Arg
435 440 445

Lys Thr Ile Gln Arg His Lys
450 455

<210> 12116
<211> 447
<212> PRT
<213> Homo sapiens

<220>
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<220>
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<220>
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<223> /note="Gene Name:
casein kinase 1, gamma 3"

<220>
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<220>

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<400> 12116

Met Glu Asn Lys Lys Lys Asp Lys Asp Lys Ser Asp Asp Arg Met Ala
1 5 10 15

Arg Pro Ser Gly Arg Ser Gly His Asn Thr Arg Gly Thr Gly Ser Ser
20 25 30

Ser Ser Gly Val Leu Met Val Gly Pro Asn Phe Arg Val Gly Lys Lys
35 40 45

Ile Gly Cys Gly Asn Phe Gly Glu Leu Arg Leu Gly Lys Asn Leu Tyr
50 55 60

Thr Asn Glu Tyr Val Ala Ile Lys Leu Glu Pro Met Lys Ser Arg Ala
65 70 75 80

Pro Gln Leu His Leu Glu Tyr Arg Phe Tyr Lys Gln Leu Gly Ser Gly
85 90 95

Asp Gly Ile Pro Gln Val Tyr Tyr Phe Gly Pro Cys Gly Lys Tyr Asn
100 105 110

Ala Met Val Leu Glu Leu Leu Gly Pro Ser Leu Glu Asp Leu Phe Asp
115 120 125

Leu Cys Asp Arg Thr Phe Ser Leu Lys Thr Val Leu Met Ile Ala Ile
130 135 140

Gln Leu Ile Ser Arg Met Glu Tyr Val His Ser Lys Asn Leu Ile Tyr
145 150 155 160

Arg Asp Val Lys Pro Glu Asn Phe Leu Ile Gly Arg Pro Gly Asn Lys
165 170 175

Thr Gln Gln Val Ile His Ile Ile Asp Phe Gly Leu Ala Lys Glu Tyr
180 185 190

Ile Asp Pro Glu Thr Lys Lys His Ile Pro Tyr Arg Glu His Lys Ser
195 200 205

Leu Thr Gly Thr Ala Arg Tyr Met Ser Ile Asn Thr His Leu Gly Lys

26887

210																
Glu	Gln	Ser	Arg	Arg	Asp	Asp	Leu	Glu	Ala	Leu	Gly	His	Met	Phe	Met	
225					230					235					240	
Tyr	Phe	Leu	Arg	Gly	Ser	Leu	Pro	Trp	Gln	Gly	Leu	Lys	Ala	Asp	Thr	
				245					250					255		
Leu	Lys	Glu	Arg	Tyr	Gln	Lys	Ile	Gly	Asp	Thr	Lys	Arg	Ala	Thr	Pro	
			260					265					270			
Ile	Glu	Val	Leu	Cys	Glu	Asn	Phe	Pro	Glu	Met	Ala	Thr	Tyr	Leu	Arg	
		275					280					285				
Tyr	Val	Arg	Arg	Leu	Asp	Phe	Phe	Glu	Lys	Pro	Asp	Tyr	Asp	Tyr	Leu	
	290					295					300					
Arg	Lys	Leu	Phe	Thr	Asp	Leu	Phe	Asp	Arg	Lys	Gly	Tyr	Met	Phe	Asp	
305					310					315					320	
Tyr	Glu	Tyr	Asp	Trp	Ile	Gly	Lys	Gln	Leu	Pro	Thr	Pro	Val	Gly	Ala	
				325					330					335		
Val	Gln	Gln	Asp	Pro	Ala	Leu	Ser	Ser	Asn	Arg	Glu	Ala	His	Gln	His	
			340					345					350			
Arg	Asp	Lys	Met	Gln	Gln	Ser	Lys	Asn	Gln	Ser	Ala	Asp	His	Arg	Ala	
		355					360					365				
Ala	Trp	Asp	Ser	Gln	Gln	Ala	Asn	Pro	His	His	Leu	Arg	Ala	His	Leu	
	370					375					380					
Ala	Ala	Asp	Arg	His	Gly	Gly	Ser	Val	Gln	Val	Val	Ser	Ser	Thr	Asn	
385					390					395					400	
Gly	Glu	Leu	Asn	Thr	Asp	Asp	Pro	Thr	Ala	Gly	Arg	Ser	Asn	Ala	Pro	
				405					410					415		
Ile	Thr	Ala	Pro	Thr	Glu	Val	Glu	Val	Met	Asp	Glu	Thr	Lys	Cys	Cys	
			420				425						430			
Cys	Phe	Phe	Lys	Arg	Arg	Lys	Arg	Lys	Thr	Ile	Gln	Arg	His	Lys		
	435						440					445				

26888


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<210> 12117
<211> 311
<212> PRT
<213> Homo sapiens

<220>
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<223> /note="Payload ID: 2396"

<220>
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<220>
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<223> /note="Gene Name:
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<220>
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<223> /note="Uniprot ID: Q9Y6M4"

<220>
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<400> 12117
Met Val Leu Glu Leu Leu Gly Pro Ser Leu Glu Asp Leu Phe Asp Leu
1          5          10          15

Cys Asp Arg Thr Phe Ser Leu Lys Thr Val Leu Met Ile Ala Ile Gln
          20          25          30

Leu Ile Ser Arg Met Glu Tyr Val His Ser Lys Asn Leu Ile Tyr Arg
          35          40          45

Asp Val Lys Pro Glu Asn Phe Leu Ile Gly Arg Pro Gly Asn Lys Thr
          50          55          60

Gln Gln Val Ile His Ile Ile Asp Phe Gly Leu Ala Lys Glu Tyr Ile
65          70          75          80

Asp Pro Glu Thr Lys Lys His Ile Pro Tyr Arg Glu His Lys Ser Leu
          85          90          95

Thr Gly Thr Ala Arg Tyr Met Ser Ile Asn Thr His Leu Gly Lys Glu
          100          105          110

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Gln Ser Arg Arg Asp Asp Leu Glu Ala Leu Gly His Met Phe Met Tyr
 115 120 125
 Phe Leu Arg Gly Ser Leu Pro Trp Gln Gly Leu Lys Ala Asp Thr Leu
 130 135 140
 Lys Glu Arg Tyr Gln Lys Ile Gly Asp Thr Lys Arg Ala Thr Pro Ile
 145 150 155 160
 Glu Val Leu Cys Glu Asn Phe Pro Glu Glu Met Ala Thr Tyr Leu Arg
 165 170 175
 Tyr Val Arg Arg Leu Asp Phe Phe Glu Lys Pro Asp Tyr Asp Tyr Leu
 180 185 190
 Arg Lys Leu Phe Thr Asp Leu Phe Asp Arg Lys Gly Tyr Met Phe Asp
 195 200 205
 Tyr Glu Tyr Asp Trp Ile Gly Lys Gln Leu Pro Thr Pro Val Gly Ala
 210 215 220
 Val Gln Gln Asp Pro Ala Leu Ser Ser Asn Arg Glu Ala His Gln His
 225 230 235 240
 Arg Asp Lys Met Gln Gln Ser Lys Asn Gln Val Val Ser Ser Thr Asn
 245 250 255
 Gly Glu Leu Asn Thr Asp Asp Pro Thr Ala Gly Arg Ser Asn Ala Pro
 260 265 270
 Ile Thr Ala Pro Thr Glu Val Glu Val Met Asp Glu Thr Asn Cys Gln
 275 280 285
 Lys Val Leu Asn Met Trp Cys Cys Cys Phe Phe Lys Arg Arg Lys Arg
 290 295 300
 Lys Thr Ile Gln Arg His Lys
 305 310

<210> 12118

<211> 348

<212> PRT

<213> Homo sapiens

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<220>
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<223> /note="Payload ID: 2396"

<220>
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<220>
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<223> /note="Uniprot ID: Q9Y6M4"

<220>
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<400> 12118
Met Lys Ser Arg Ala Pro Gln Leu His Leu Glu Tyr Arg Phe Tyr Lys
1          5          10          15

Gln Leu Gly Ser Gly Asp Gly Ile Pro Gln Val Tyr Tyr Phe Gly Pro
          20          25          30

Cys Gly Lys Tyr Asn Ala Met Val Leu Glu Leu Leu Gly Pro Ser Leu
          35          40          45

Glu Asp Leu Phe Asp Leu Cys Asp Arg Thr Phe Ser Leu Lys Thr Val
          50          55          60

Leu Met Ile Ala Ile Gln Leu Ile Ser Arg Met Glu Tyr Val His Ser
65          70          75          80

Lys Asn Leu Ile Tyr Arg Asp Val Lys Pro Glu Asn Phe Leu Ile Gly
          85          90          95

Arg Pro Gly Asn Lys Thr Gln Gln Val Ile His Ile Ile Asp Phe Gly
          100          105          110

Leu Ala Lys Glu Tyr Ile Asp Pro Glu Thr Lys Lys His Ile Pro Tyr
          115          120          125

Arg Glu His Lys Ser Leu Thr Gly Thr Ala Arg Tyr Met Ser Ile Asn
130          135          140

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Thr His Leu Gly Lys Glu Gln Ser Arg Arg Asp Asp Leu Glu Ala Leu
145 150 155 160

Gly His Met Phe Met Tyr Phe Leu Arg Gly Ser Leu Pro Trp Gln Gly
165 170 175

Leu Lys Ala Asp Thr Leu Lys Glu Arg Tyr Gln Lys Ile Gly Asp Thr
180 185 190

Lys Arg Ala Thr Pro Ile Glu Val Leu Cys Glu Asn Phe Pro Glu Met
195 200 205

Ala Thr Tyr Leu Arg Tyr Val Arg Arg Leu Asp Phe Phe Glu Lys Pro
210 215 220

Asp Tyr Asp Tyr Leu Arg Lys Leu Phe Thr Asp Leu Phe Asp Arg Lys
225 230 235 240

Gly Tyr Met Phe Asp Tyr Glu Tyr Asp Trp Ile Gly Lys Gln Leu Pro
245 250 255

Thr Pro Val Gly Ala Val Gln Gln Asp Pro Ala Leu Ser Ser Asn Arg
260 265 270

Glu Ala His Gln His Arg Asp Lys Met Gln Gln Ser Lys Asn Gln Val
275 280 285

Val Ser Ser Thr Asn Gly Glu Leu Asn Thr Asp Asp Pro Thr Ala Gly
290 295 300

Arg Ser Asn Ala Pro Ile Thr Ala Pro Thr Glu Val Glu Val Met Asp
305 310 315 320

Glu Thr Asn Cys Gln Lys Val Leu Asn Met Trp Cys Cys Cys Phe Phe
325 330 335

Lys Arg Arg Lys Arg Lys Thr Ile Gln Arg His Lys
340 345

<210> 12119

<211> 424

<212> PRT

<213> Homo sapiens

<220>
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<220>
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<220>
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<220>
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<223> /note="Uniprot ID: Q9Y6M4"

<220>
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<223> /note="ENSP ID: ENSP00000423838"

<400> 12119
Met Glu Asn Lys Lys Lys Asp Lys Asp Lys Ser Asp Asp Arg Met Ala
1 5 10 15

Arg Pro Ser Gly Arg Ser Gly His Asn Thr Arg Gly Thr Gly Ser Ser
20 25 30

Ser Ser Gly Val Leu Met Val Gly Pro Asn Phe Arg Val Gly Lys Lys
35 40 45

Ile Gly Cys Gly Asn Phe Gly Glu Leu Arg Leu Gly Lys Asn Leu Tyr
50 55 60

Thr Asn Glu Tyr Val Ala Ile Lys Leu Glu Pro Met Lys Ser Arg Ala
65 70 75 80

Pro Gln Leu His Leu Glu Tyr Arg Phe Tyr Lys Gln Leu Gly Ser Gly
85 90 95

Asp Gly Ile Pro Gln Val Tyr Tyr Phe Gly Pro Cys Gly Lys Tyr Asn
100 105 110

Ala Met Val Leu Glu Leu Leu Gly Pro Ser Leu Glu Asp Leu Phe Asp
115 120 125

Leu Cys Asp Arg Thr Phe Ser Leu Lys Thr Val Leu Met Ile Ala Ile
130 135 140

Gln Leu Ile Ser Arg Met Glu Tyr Val His Ser Lys Asn Leu Ile Tyr
 145 150 155 160

Arg Asp Val Lys Pro Glu Asn Phe Leu Ile Gly Arg Pro Gly Asn Lys
 165 170 175

Thr Gln Gln Val Ile His Ile Ile Asp Phe Gly Leu Ala Lys Glu Tyr
 180 185 190

Ile Asp Pro Glu Thr Lys Lys His Ile Pro Tyr Arg Glu His Lys Ser
 195 200 205

Leu Thr Gly Thr Ala Arg Tyr Met Ser Ile Asn Thr His Leu Gly Lys
 210 215 220

Glu Gln Ser Arg Arg Asp Asp Leu Glu Ala Leu Gly His Met Phe Met
 225 230 235 240

Tyr Phe Leu Arg Gly Ser Leu Pro Trp Gln Gly Leu Lys Ala Asp Thr
 245 250 255

Leu Lys Glu Arg Tyr Gln Lys Ile Gly Asp Thr Lys Arg Ala Thr Pro
 260 265 270

Ile Glu Val Leu Cys Glu Asn Phe Pro Glu Glu Met Ala Thr Tyr Leu
 275 280 285

Arg Tyr Val Arg Arg Leu Asp Phe Phe Glu Lys Pro Asp Tyr Asp Tyr
 290 295 300

Leu Arg Lys Leu Phe Thr Asp Leu Phe Asp Arg Lys Gly Tyr Met Phe
 305 310 315 320

Asp Tyr Glu Tyr Asp Trp Ile Gly Lys Gln Leu Pro Thr Pro Val Gly
 325 330 335

Ala Val Gln Gln Asp Pro Ala Leu Ser Ser Asn Arg Glu Ala His Gln
 340 345 350

His Arg Asp Lys Met Gln Gln Ser Lys Asn Gln Val Val Ser Ser Thr
 355 360 365

Asn Gly Glu Leu Asn Thr Asp Asp Pro Thr Ala Gly Arg Ser Asn Ala
370 375 380

Pro Ile Thr Ala Pro Thr Glu Val Glu Val Met Asp Glu Thr Asn Cys
385 390 395 400

Gln Lys Val Leu Asn Met Trp Cys Cys Cys Phe Phe Lys Arg Arg Lys
405 410 415

Arg Lys Thr Ile Gln Arg His Lys
420

<210> 12120
<211> 423
<212> PRT
<213> Homo sapiens

<220>
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<223> /note="Payload ID: 2396"

<220>
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<220>
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<223> /note="Gene Name:
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<220>
<221> source
<223> /note="Uniprot ID: Q9Y6M4"

<220>
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<223> /note="ENSP ID: ENSP00000429412"

<400> 12120
Met Glu Asn Lys Lys Lys Asp Lys Asp Lys Ser Asp Asp Arg Met Ala
1 5 10 15

Arg Pro Ser Gly Arg Ser Gly His Asn Thr Arg Gly Thr Gly Ser Ser
20 25 30

Ser Ser Gly Val Leu Met Val Gly Pro Asn Phe Arg Val Gly Lys Lys
35 40 45

Ile Gly Cys Gly Asn Phe Gly Glu Leu Arg Leu Gly Lys Asn Leu Tyr
26895

50					55					60					
Thr 65	Asn	Glu	Tyr	Val	Ala 70	Ile	Lys	Leu	Glu	Pro 75	Met	Lys	Ser	Arg	Ala 80
Pro	Gln	Leu	His	Leu 85	Glu	Tyr	Arg	Phe	Tyr 90	Lys	Gln	Leu	Gly	Ser 95	Gly
Asp	Gly	Ile	Pro 100	Gln	Val	Tyr	Tyr	Phe 105	Gly	Pro	Cys	Gly	Lys 110	Tyr	Asn
Ala	Met	Val 115	Leu	Glu	Leu	Leu	Gly 120	Pro	Ser	Leu	Glu	Asp 125	Leu	Phe	Asp
Leu	Cys 130	Asp	Arg	Thr	Phe	Ser 135	Leu	Lys	Thr	Val	Leu 140	Met	Ile	Ala	Ile
Gln 145	Leu	Ile	Ser	Arg	Met 150	Glu	Tyr	Val	His	Ser 155	Lys	Asn	Leu	Ile	Tyr 160
Arg	Asp	Val	Lys	Pro 165	Glu	Asn	Phe	Leu	Ile 170	Gly	Arg	Pro	Gly	Asn 175	Lys
Thr	Gln	Gln	Val 180	Ile	His	Ile	Ile	Asp 185	Phe	Gly	Leu	Ala	Lys 190	Glu	Tyr
Ile	Asp 195	Pro	Glu	Thr	Lys	Lys	His 200	Ile	Pro	Tyr	Arg	Glu 205	His	Lys	Ser
Leu 210	Thr	Gly	Thr	Ala	Arg	Tyr 215	Met	Ser	Ile	Asn	Thr 220	His	Leu	Gly	Lys
Glu 225	Gln	Ser	Arg	Arg	Asp 230	Asp	Leu	Glu	Ala	Leu 235	Gly	His	Met	Phe	Met 240
Tyr	Phe	Leu	Arg	Gly 245	Ser	Leu	Pro	Trp	Gln 250	Gly	Leu	Lys	Ala	Asp 255	Thr
Leu	Lys	Glu	Arg 260	Tyr	Gln	Lys	Ile	Gly 265	Asp	Thr	Lys	Arg	Ala 270	Thr	Pro
Ile	Glu 275	Val	Leu	Cys	Glu	Asn	Phe 280	Pro	Glu	Met	Ala	Thr 285	Tyr	Leu	Arg

Tyr Val Arg Arg Leu Asp Phe Phe Glu Lys Pro Asp Tyr Asp Tyr Leu
290 295 300

Arg Lys Leu Phe Thr Asp Leu Phe Asp Arg Lys Gly Tyr Met Phe Asp
305 310 315 320

Tyr Glu Tyr Asp Trp Ile Gly Lys Gln Leu Pro Thr Pro Val Gly Ala
325 330 335

Val Gln Gln Asp Pro Ala Leu Ser Ser Asn Arg Glu Ala His Gln His
340 345 350

Arg Asp Lys Met Gln Gln Ser Lys Asn Gln Val Val Ser Ser Thr Asn
355 360 365

Gly Glu Leu Asn Thr Asp Asp Pro Thr Ala Gly Arg Ser Asn Ala Pro
370 375 380

Ile Thr Ala Pro Thr Glu Val Glu Val Met Asp Glu Thr Asn Cys Gln
385 390 395 400

Lys Val Leu Asn Met Trp Cys Cys Cys Phe Phe Lys Arg Arg Lys Arg
405 410 415

Lys Thr Ile Gln Arg His Lys
420

<210> 12121
<211> 164
<212> PRT
<213> Homo sapiens

<220>
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<220>
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casein kinase 1, gamma 3"

<220>

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<220>
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<222> (1)..(1)
<223> Any amino acid

<400> 12121

Xaa Ala Asp Thr Leu Lys Glu Arg Tyr Gln Lys Ile Gly Asp Thr Lys
1 5 10 15

Arg Ala Thr Pro Ile Glu Val Leu Cys Glu Asn Phe Pro Glu Glu Met
20 25 30

Ala Thr Tyr Leu Arg Tyr Val Arg Arg Leu Asp Phe Phe Glu Lys Pro
35 40 45

Asp Tyr Asp Tyr Leu Arg Lys Leu Phe Thr Asp Leu Phe Asp Arg Lys
50 55 60

Gly Tyr Met Phe Asp Tyr Glu Tyr Asp Trp Ile Gly Lys Gln Leu Pro
65 70 75 80

Thr Pro Val Gly Ala Val Gln Gln Asp Pro Ala Leu Ser Ser Asn Arg
85 90 95

Glu Ala His Gln His Arg Asp Lys Met Gln Gln Ser Lys Asn Gln Val
100 105 110

Val Ser Ser Thr Asn Gly Glu Leu Asn Thr Asp Asp Pro Thr Ala Gly
115 120 125

Arg Ser Asn Ala Pro Ile Thr Ala Pro Thr Glu Val Glu Val Met Asp
130 135 140

Glu Thr Lys Cys Cys Cys Phe Phe Lys Arg Arg Lys Arg Lys Thr Ile
145 150 155 160

Gln Arg His Lys

<210> 12122
<211> 391
<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2397"

<220>

<221> source

<223> /note="Gene Symbol: CSNK2A1"

<220>

<221> source

<223> /note="Gene Name:
casein kinase 2, alpha 1 polypeptide"

<220>

<221> source

<223> /note="Uniprot ID: P68400"

<220>

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<223> /note="ENSP ID: ENSP00000217244"

<400> 12122

Met Ser Gly Pro Val Pro Ser Arg Ala Arg Val Tyr Thr Asp Val Asn
1 5 10 15

Thr His Arg Pro Arg Glu Tyr Trp Asp Tyr Glu Ser His Val Val Glu
20 25 30

Trp Gly Asn Gln Asp Asp Tyr Gln Leu Val Arg Lys Leu Gly Arg Gly
35 40 45

Lys Tyr Ser Glu Val Phe Glu Ala Ile Asn Ile Thr Asn Asn Glu Lys
50 55 60

Val Val Val Lys Ile Leu Lys Pro Val Lys Lys Lys Lys Ile Lys Arg
65 70 75 80

Glu Ile Lys Ile Leu Glu Asn Leu Arg Gly Gly Pro Asn Ile Ile Thr
85 90 95

Leu Ala Asp Ile Val Lys Asp Pro Val Ser Arg Thr Pro Ala Leu Val
100 105 110

Phe Glu His Val Asn Asn Thr Asp Phe Lys Gln Leu Tyr Gln Thr Leu
115 120 125

Thr Asp Tyr Asp Ile Arg Phe Tyr Met Tyr Glu Ile Leu Lys Ala Leu

26899

130						135						140				
Asp	Tyr	Cys	His	Ser	Met	Gly	Ile	Met	His	Arg	Asp	Val	Lys	Pro	His	
145					150					155					160	
Asn	Val	Met	Ile	Asp	His	Glu	His	Arg	Lys	Leu	Arg	Leu	Ile	Asp	Trp	
				165					170					175		
Gly	Leu	Ala	Glu	Phe	Tyr	His	Pro	Gly	Gln	Glu	Tyr	Asn	Val	Arg	Val	
			180					185					190			
Ala	Ser	Arg	Tyr	Phe	Lys	Gly	Pro	Glu	Leu	Leu	Val	Asp	Tyr	Gln	Met	
		195					200					205				
Tyr	Asp	Tyr	Ser	Leu	Asp	Met	Trp	Ser	Leu	Gly	Cys	Met	Leu	Ala	Ser	
	210					215					220					
Met	Ile	Phe	Arg	Lys	Glu	Pro	Phe	Phe	His	Gly	His	Asp	Asn	Tyr	Asp	
225					230					235					240	
Gln	Leu	Val	Arg	Ile	Ala	Lys	Val	Leu	Gly	Thr	Glu	Asp	Leu	Tyr	Asp	
				245					250					255		
Tyr	Ile	Asp	Lys	Tyr	Asn	Ile	Glu	Leu	Asp	Pro	Arg	Phe	Asn	Asp	Ile	
			260					265					270			
Leu	Gly	Arg	His	Ser	Arg	Lys	Arg	Trp	Glu	Arg	Phe	Val	His	Ser	Glu	
		275					280					285				
Asn	Gln	His	Leu	Val	Ser	Pro	Glu	Ala	Leu	Asp	Phe	Leu	Asp	Lys	Leu	
	290					295					300					
Leu	Arg	Tyr	Asp	His	Gln	Ser	Arg	Leu	Thr	Ala	Arg	Glu	Ala	Met	Glu	
305					310					315					320	
His	Pro	Tyr	Phe	Tyr	Thr	Val	Val	Lys	Asp	Gln	Ala	Arg	Met	Gly	Ser	
				325					330					335		
Ser	Ser	Met	Pro	Gly	Gly	Ser	Thr	Pro	Val	Ser	Ser	Ala	Asn	Met	Met	
			340					345					350			
Ser	Gly	Ile	Ser	Ser	Val	Pro	Thr	Pro	Ser	Pro	Leu	Gly	Pro	Leu	Ala	
		355					360					365				

Gly Ser Pro Val Ile Ala Ala Ala Asn Pro Leu Gly Met Pro Val Pro
 370 375 380

Ala Ala Ala Gly Ala Gln Gln
 385 390

<210> 12123
 <211> 391
 <212> PRT
 <213> Homo sapiens

<220>
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 casein kinase 2, alpha 1 polypeptide"

<220>
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 <223> /note="Uniprot ID: P68400"

<220>
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<400> 12123
 Met Ser Gly Pro Val Pro Ser Arg Ala Arg Val Tyr Thr Asp Val Asn
 1 5 10 15

Thr His Arg Pro Arg Glu Tyr Trp Asp Tyr Glu Ser His Val Val Glu
 20 25 30

Trp Gly Asn Gln Asp Asp Tyr Gln Leu Val Arg Lys Leu Gly Arg Gly
 35 40 45

Lys Tyr Ser Glu Val Phe Glu Ala Ile Asn Ile Thr Asn Asn Glu Lys
 50 55 60

Val Val Val Lys Ile Leu Lys Pro Val Lys Lys Lys Lys Ile Lys Arg
 65 70 75 80

Glu	Ile	Lys	Ile	Leu	Glu	Asn	Leu	Arg	Gly	Gly	Pro	Asn	Ile	Ile	Thr		
				85					90					95			
Leu	Ala	Asp	Ile	Val	Lys	Asp	Pro	Val	Ser	Arg	Thr	Pro	Ala	Leu	Val		
			100					105					110				
Phe	Glu	His	Val	Asn	Asn	Thr	Asp	Phe	Lys	Gln	Leu	Tyr	Gln	Thr	Leu		
		115					120					125					
Thr	Asp	Tyr	Asp	Ile	Arg	Phe	Tyr	Met	Tyr	Glu	Ile	Leu	Lys	Ala	Leu		
	130					135					140						
Asp	Tyr	Cys	His	Ser	Met	Gly	Ile	Met	His	Arg	Asp	Val	Lys	Pro	His		
145					150					155					160		
Asn	Val	Met	Ile	Asp	His	Glu	His	Arg	Lys	Leu	Arg	Leu	Ile	Asp	Trp		
				165					170					175			
Gly	Leu	Ala	Glu	Phe	Tyr	His	Pro	Gly	Gln	Glu	Tyr	Asn	Val	Arg	Val		
			180					185					190				
Ala	Ser	Arg	Tyr	Phe	Lys	Gly	Pro	Glu	Leu	Leu	Val	Asp	Tyr	Gln	Met		
		195					200					205					
Tyr	Asp	Tyr	Ser	Leu	Asp	Met	Trp	Ser	Leu	Gly	Cys	Met	Leu	Ala	Ser		
	210					215					220						
Met	Ile	Phe	Arg	Lys	Glu	Pro	Phe	Phe	His	Gly	His	Asp	Asn	Tyr	Asp		
225					230					235					240		
Gln	Leu	Val	Arg	Ile	Ala	Lys	Val	Leu	Gly	Thr	Glu	Asp	Leu	Tyr	Asp		
				245					250					255			
Tyr	Ile	Asp	Lys	Tyr	Asn	Ile	Glu	Leu	Asp	Pro	Arg	Phe	Asn	Asp	Ile		
			260					265					270				
Leu	Gly	Arg	His	Ser	Arg	Lys	Arg	Trp	Glu	Arg	Phe	Val	His	Ser	Glu		
		275					280					285					
Asn	Gln	His	Leu	Val	Ser	Pro	Glu	Ala	Leu	Asp	Phe	Leu	Asp	Lys	Leu		
	290					295					300						
Leu	Arg	Tyr	Asp	His	Gln	Ser	Arg	Leu	Thr	Ala	Arg	Glu	Ala	Met	Glu		

305 310 315 320
 His Pro Tyr Phe Tyr Thr Val Val Lys Asp Gln Ala Arg Met Gly Ser
 325 330 335
 Ser Ser Met Pro Gly Gly Ser Thr Pro Val Ser Ser Ala Asn Met Met
 340 345 350
 Ser Gly Ile Ser Ser Val Pro Thr Pro Ser Pro Leu Gly Pro Leu Ala
 355 360 365
 Gly Ser Pro Val Ile Ala Ala Ala Asn Pro Leu Gly Met Pro Val Pro
 370 375 380
 Ala Ala Ala Gly Ala Gln Gln
 385 390

 <210> 12124
 <211> 255
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 <213> Homo sapiens

 <220>
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 <220>
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 <400> 12124
 Met Tyr Glu Ile Leu Lys Ala Leu Asp Tyr Cys His Ser Met Gly Ile
 1 5 10 15

 Met His Arg Asp Val Lys Pro His Asn Val Met Ile Asp His Glu His
 20 25 30

Arg	Lys	Leu	Arg	Leu	Ile	Asp	Trp	Gly	Leu	Ala	Glu	Phe	Tyr	His	Pro	
		35					40					45				
Gly	Gln	Glu	Tyr	Asn	Val	Arg	Val	Ala	Ser	Arg	Tyr	Phe	Lys	Gly	Pro	
	50					55					60					
Glu	Leu	Leu	Val	Asp	Tyr	Gln	Met	Tyr	Asp	Tyr	Ser	Leu	Asp	Met	Trp	
65					70					75					80	
Ser	Leu	Gly	Cys	Met	Leu	Ala	Ser	Met	Ile	Phe	Arg	Lys	Glu	Pro	Phe	
				85					90					95		
Phe	His	Gly	His	Asp	Asn	Tyr	Asp	Gln	Leu	Val	Arg	Ile	Ala	Lys	Val	
			100					105					110			
Leu	Gly	Thr	Glu	Asp	Leu	Tyr	Asp	Tyr	Ile	Asp	Lys	Tyr	Asn	Ile	Glu	
		115					120					125				
Leu	Asp	Pro	Arg	Phe	Asn	Asp	Ile	Leu	Gly	Arg	His	Ser	Arg	Lys	Arg	
	130					135					140					
Trp	Glu	Arg	Phe	Val	His	Ser	Glu	Asn	Gln	His	Leu	Val	Ser	Pro	Glu	
145					150					155					160	
Ala	Leu	Asp	Phe	Leu	Asp	Lys	Leu	Leu	Arg	Tyr	Asp	His	Gln	Ser	Arg	
				165					170					175		
Leu	Thr	Ala	Arg	Glu	Ala	Met	Glu	His	Pro	Tyr	Phe	Tyr	Thr	Val	Val	
			180					185					190			
Lys	Asp	Gln	Ala	Arg	Met	Gly	Ser	Ser	Ser	Met	Pro	Gly	Gly	Ser	Thr	
		195					200					205				
Pro	Val	Ser	Ser	Ala	Asn	Met	Met	Ser	Gly	Ile	Ser	Ser	Val	Pro	Thr	
	210					215					220					
Pro	Ser	Pro	Leu	Gly	Pro	Leu	Ala	Gly	Ser	Pro	Val	Ile	Ala	Ala	Ala	
225					230					235					240	
Asn	Pro	Leu	Gly	Met	Pro	Val	Pro	Ala	Ala	Ala	Gly	Ala	Gln	Gln		
				245					250					255		


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<210> 12125
<211> 385
<212> PRT
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<220>
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<220>
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<223> /note="Gene Name:
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<220>
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<400> 12125
Met Ser Gly Pro Val Pro Ser Arg Ala Arg Val Tyr Thr Asp Val Asn
 1              5              10              15

Thr His Arg Pro Arg Glu Tyr Trp Asp Tyr Glu Ser His Val Val Glu
          20              25              30

Trp Gly Asn Gln Asp Asp Tyr Gln Leu Val Arg Lys Leu Gly Arg Gly
          35              40              45

Lys Tyr Ser Glu Val Phe Glu Ala Ile Asn Ile Thr Asn Asn Glu Lys
          50              55              60

Val Val Val Lys Ile Leu Lys Pro Val Lys Lys Lys Lys Ile Lys Arg
65              70              75              80

Glu Ile Lys Ile Leu Glu Asn Leu Arg Gly Gly Pro Asn Ile Ile Thr
          85              90              95

Leu Ala Asp Ile Val Lys Asp Pro Val Ser Arg Thr Pro Ala Leu Val
          100              105              110

Phe Glu His Val Asn Asn Thr Asp Phe Lys Gln Leu Tyr Gln Thr Leu
          115              120              125

Thr Asp Tyr Asp Ile Arg Phe Tyr Met Tyr Glu Ile Leu Lys Ala Leu
130              135              140

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26905

Asp	Tyr	Cys	His	Ser	Met	Gly	Ile	Met	His	Arg	Asp	Val	Lys	Pro	His	
145					150					155					160	
Asn	Val	Met	Ile	Asp	His	Glu	His	Arg	Lys	Leu	Arg	Leu	Ile	Asp	Trp	
				165					170					175		
Gly	Leu	Ala	Glu	Phe	Tyr	His	Pro	Gly	Gln	Glu	Tyr	Asn	Val	Arg	Val	
			180					185					190			
Ala	Ser	Arg	Tyr	Phe	Lys	Gly	Pro	Glu	Leu	Leu	Val	Asp	Tyr	Gln	Met	
		195					200					205				
Tyr	Asp	Tyr	Ser	Leu	Asp	Met	Trp	Ser	Leu	Gly	Cys	Met	Leu	Ala	Ser	
	210					215					220					
Met	Ile	Phe	Arg	Lys	Glu	Pro	Phe	Phe	His	Gly	His	Asp	Asn	Tyr	Asp	
225					230					235					240	
Gln	Leu	Val	Arg	Ile	Ala	Lys	Val	Leu	Gly	Thr	Glu	Asp	Leu	Tyr	Asp	
				245					250					255		
Tyr	Ile	Asp	Lys	Tyr	Asn	Ile	Glu	Leu	Asp	Pro	Arg	Phe	Asn	Asp	Ile	
			260					265					270			
Leu	Gly	Arg	His	Ser	Arg	Lys	Arg	Trp	Glu	Arg	Phe	Val	His	Ser	Glu	
		275					280					285				
Asn	Gln	His	Leu	Val	Ser	Pro	Glu	Ala	Leu	Asp	Phe	Leu	Asp	Lys	Leu	
	290					295					300					
Leu	Arg	Tyr	Asp	His	Gln	Ser	Arg	Leu	Thr	Ala	Arg	Glu	Ala	Met	Glu	
305					310					315					320	
His	Pro	Tyr	Phe	Tyr	Thr	Val	Val	Lys	Asp	Gln	Ala	Arg	Met	Gly	Ser	
				325					330					335		
Ser	Ser	Met	Pro	Gly	Gly	Ser	Thr	Pro	Val	Ser	Ser	Ala	Asn	Met	Met	
			340					345					350			
Ser	Glu	Met	Lys	Phe	Cys	Arg	Val	Ala	Gln	Ala	Gly	Leu	Glu	Leu	Leu	
		355					360					365				

Ser Ser Thr Val Tyr Pro Pro Trp Pro Pro Lys Val Leu Arg Leu Glu
 370 375 380

Ala
 385

<210> 12126
 <211> 79
 <212> PRT
 <213> Homo sapiens

<220>
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<220>
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<220>
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 <223> /note="Gene Name:
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<220>
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 <223> /note="ENSP ID: ENSP00000476486"

<400> 12126
 Met Ser Gly Pro Val Pro Ser Arg Ala Arg Val Tyr Thr Asp Val Asn
 1 5 10 15

Thr His Arg Pro Arg Glu Tyr Trp Asp Tyr Glu Ser His Val Val Glu
 20 25 30

Trp Gly Asn Gln Asp Asp Tyr Gln Leu Val Arg Lys Leu Gly Arg Gly
 35 40 45

Lys Tyr Ser Glu Val Phe Glu Ala Ile Asn Ile Thr Asn Asn Glu Lys
 50 55 60

Val Val Val Lys Ile Leu Lys Pro Val Lys Lys Lys Lys Ile Lys
 65 70 75

<210> 12127
 <211> 74
 <212> PRT
 <213> Homo sapiens

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<220>
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<220>
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<220>
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<400> 12127
Met Ser Gly Pro Val Pro Ser Arg Ala Arg Val Tyr Thr Asp Val Asn
1          5          10          15

Thr His Arg Pro Arg Glu Tyr Trp Asp Tyr Glu Ser His Val Val Glu
          20          25          30

Trp Gly Asn Gln Asp Asp Tyr Gln Leu Val Arg Lys Leu Gly Arg Gly
          35          40          45

Lys Tyr Ser Glu Val Phe Glu Ala Ile Asn Ile Thr Asn Asn Glu Lys
          50          55          60

Val Val Val Lys Ile Leu Lys Pro Val Lys
65          70

<210> 12128
<211> 27
<212> PRT
<213> Homo sapiens

<220>
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<220>
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<223> /note="ENSP ID: ENSP00000477147"

<400> 12128
Met Tyr Glu Ile Leu Lys Ala Leu Asp Tyr Cys His Ser Met Gly Ile
1 5 10 15

Met His Arg Asp Val Lys Pro His Asn Val Met
20 25

<210> 12129
<211> 397
<212> PRT
<213> Homo sapiens

<220>
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<220>
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<220>
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<223> /note="Gene Name:
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<220>
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<223> /note="ENSP ID: ENSP00000479630"

<400> 12129
Met Ser Gly Pro Val Pro Ser Arg Ala Arg Val Tyr Thr Asp Val Asn
1 5 10 15

Thr His Arg Pro Arg Glu Tyr Trp Asp Tyr Glu Ser His Val Val Glu
20 25 30

Trp Gly Asn Gln Asp Asp Tyr Gln Leu Val Arg Lys Leu Gly Arg Gly
35 40 45

Lys Tyr Ser Glu Val Phe Glu Ala Ile Asn Ile Thr Asn Asn Glu Lys
50 55 60

Val Val Val Lys Ile Leu Lys Pro Val Lys Lys Lys Lys Ile Lys Arg
65 70 75 80

Glu Ile Lys Ile Leu Glu Asn Leu Arg Gly Gly Pro Asn Ile Ile Thr
85 90 95

Leu	Ala	Asp	Ile	Val	Lys	Asp	Pro	Val	Ser	Arg	Thr	Pro	Ala	Leu	Val			
			100					105					110					
Phe	Glu	His	Val	Asn	Asn	Thr	Asp	Phe	Lys	Gln	Leu	Tyr	Gln	Thr	Leu			
		115					120					125						
Thr	Asp	Tyr	Asp	Ile	Arg	Phe	Tyr	Met	Tyr	Glu	Ile	Leu	Lys	Ala	Leu			
	130					135					140							
Asp	Tyr	Cys	His	Ser	Met	Gly	Ile	Met	His	Arg	Asp	Val	Lys	Pro	His			
145					150					155					160			
Asn	Val	Met	Ile	Asp	His	Glu	His	Arg	Lys	Leu	Arg	Leu	Ile	Asp	Trp			
				165					170					175				
Gly	Leu	Ala	Glu	Phe	Tyr	His	Pro	Gly	Gln	Glu	Tyr	Asn	Val	Arg	Val			
			180					185					190					
Ala	Ser	Arg	Tyr	Phe	Lys	Gly	Pro	Glu	Leu	Leu	Val	Asp	Tyr	Gln	Met			
		195					200					205						
Tyr	Asp	Tyr	Ser	Leu	Asp	Met	Trp	Ser	Leu	Gly	Cys	Met	Leu	Ala	Ser			
	210					215					220							
Met	Ile	Phe	Arg	Lys	Glu	Pro	Phe	Phe	His	Gly	His	Asp	Asn	Tyr	Asp			
225					230					235					240			
Gln	Leu	Val	Arg	Ile	Ala	Lys	Val	Leu	Gly	Thr	Glu	Asp	Leu	Tyr	Asp			
				245					250					255				
Tyr	Ile	Asp	Lys	Tyr	Asn	Ile	Glu	Leu	Asp	Pro	Arg	Phe	Asn	Asp	Ile			
			260					265					270					
Leu	Gly	Arg	His	Ser	Arg	Lys	Arg	Trp	Glu	Arg	Phe	Val	His	Ser	Glu			
		275					280					285						
Asn	Gln	His	Leu	Val	Ser	Pro	Glu	Ala	Leu	Asp	Phe	Leu	Asp	Lys	Leu			
	290					295					300							
Leu	Arg	Tyr	Asp	His	Gln	Ser	Arg	Leu	Thr	Ala	Arg	Glu	Ala	Met	Glu			
305					310					315					320			

His Pro Tyr Phe Tyr Thr Val Val Lys Asp Gln Ala Arg Met Gly Ser
325 330 335

Ser Ser Met Pro Gly Gly Ser Thr Pro Val Ser Ser Ala Asn Met Met
340 345 350

Ser Gly Ile Ser Ser Val Pro Thr Pro Ser Pro Leu Gly Pro Leu Ala
355 360 365

Gly Ser Pro Val Ile Ala Ala Ala Asn Pro Leu Gly Cys Leu Phe Gln
370 375 380

Leu Pro Leu Arg Ser Ala Val Thr Ala Leu Ser Val Ser
385 390 395

<210> 12130
<211> 118
<212> PRT
<213> Homo sapiens

<220>
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<220>
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<220>
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<223> /note="Gene Name:
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<220>
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<400> 12130
Asp Tyr Ile Asp Lys Tyr Asn Ile Glu Leu Asp Pro Arg Phe Asn Asp
1 5 10 15

Ile Leu Gly Arg His Ser Arg Lys Arg Trp Glu Arg Phe Val His Ser
20 25 30

Glu Asn Gln His Leu Val Ser Pro Glu Ala Leu Asp Phe Leu Asp Lys
35 40 45

Leu Leu Arg Tyr Asp His Gln Ser Arg Leu Thr Ala Arg Glu Ala Met

50 55 60
 Glu His Pro Tyr Phe Tyr Thr Val Val Lys Asp Gln Ala Arg Met Gly
 65 70 75 80
 Ser Ser Ser Met Pro Gly Gly Ser Thr Pro Val Ser Ser Ala Asn Met
 85 90 95
 Met Ser Glu Pro Gln Phe Glu Gly Gln Arg Asp Ile His His Ala Ala
 100 105 110
 Val Arg Leu Gly Gln Leu
 115

<210> 12131
 <211> 391
 <212> PRT
 <213> Homo sapiens

<220>
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<220>
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<400> 12131
 Met Ser Gly Pro Val Pro Ser Arg Ala Arg Val Tyr Thr Asp Val Asn
 1 5 10 15

Thr His Arg Pro Arg Glu Tyr Trp Asp Tyr Glu Ser His Val Val Glu
 20 25 30

Trp Gly Asn Gln Asp Asp Tyr Gln Leu Val Arg Lys Leu Gly Arg Gly
 35 40 45

26913

Leu Gly Arg His Ser Arg Lys Arg Trp Glu Arg Phe Val His Ser Glu
275 280 285

Asn Gln His Leu Val Ser Pro Glu Ala Leu Asp Phe Leu Asp Lys Leu
290 295 300

Leu Arg Tyr Asp His Gln Ser Arg Leu Thr Ala Arg Glu Ala Met Glu
305 310 315 320

His Pro Tyr Phe Tyr Thr Val Val Lys Asp Gln Ala Arg Met Gly Ser
325 330 335

Ser Ser Met Pro Gly Gly Ser Thr Pro Val Ser Ser Ala Asn Val Met
340 345 350

Ser Gly Ile Ser Ser Val Pro Thr Pro Ser Pro Leu Gly Pro Leu Ala
355 360 365

Gly Ser Pro Val Ile Ala Ala Ala Asn Pro Leu Gly Met Pro Val Pro
370 375 380

Ala Ala Thr Gly Ala Gln Gln
385 390

<210> 12132
<211> 350
<212> PRT
<213> Homo sapiens

<220>
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<220>
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<223> /note="Gene Symbol: CSNK2A2"

<220>
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<223> /note="Gene Name:
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<220>
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<223> /note="Uniprot ID: P19784"

<220>
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<400> 12132

Met Pro Gly Pro Ala Ala Gly Ser Arg Ala Arg Val Tyr Ala Glu Val
1 5 10 15

Asn Ser Leu Arg Ser Arg Glu Tyr Trp Asp Tyr Glu Ala His Val Pro
20 25 30

Ser Trp Gly Asn Gln Asp Asp Tyr Gln Leu Val Arg Lys Leu Gly Arg
35 40 45

Gly Lys Tyr Ser Glu Val Phe Glu Ala Ile Asn Ile Thr Asn Asn Glu
50 55 60

Arg Val Val Val Lys Ile Leu Lys Pro Val Lys Lys Lys Lys Ile Lys
65 70 75 80

Arg Glu Val Lys Ile Leu Glu Asn Leu Arg Gly Gly Thr Asn Ile Ile
85 90 95

Lys Leu Ile Asp Thr Val Lys Asp Pro Val Ser Lys Thr Pro Ala Leu
100 105 110

Val Phe Glu Tyr Ile Asn Asn Thr Asp Phe Lys Gln Leu Tyr Gln Ile
115 120 125

Leu Thr Asp Phe Asp Ile Arg Phe Tyr Met Tyr Glu Leu Leu Lys Ala
130 135 140

Leu Asp Tyr Cys His Ser Lys Gly Ile Met His Arg Asp Val Lys Pro
145 150 155 160

His Asn Val Met Ile Asp His Gln Gln Lys Lys Leu Arg Leu Ile Asp
165 170 175

Trp Gly Leu Ala Glu Phe Tyr His Pro Ala Gln Glu Tyr Asn Val Arg
180 185 190

Val Ala Ser Arg Tyr Phe Lys Gly Pro Glu Leu Leu Val Asp Tyr Gln
195 200 205

Met Tyr Asp Tyr Ser Leu Asp Met Trp Ser Leu Gly Cys Met Leu Ala
210 215 220

Ser Met Ile Phe Arg Arg Glu Pro Phe Phe His Gly Gln Asp Asn Tyr
225 230 235 240

Asp Gln Leu Val Arg Ile Ala Lys Val Leu Gly Thr Glu Glu Leu Tyr
245 250 255

Gly Tyr Leu Lys Lys Tyr His Ile Asp Leu Asp Pro His Phe Asn Asp
260 265 270

Ile Leu Gly Gln His Ser Arg Lys Arg Trp Glu Asn Phe Ile His Ser
275 280 285

Glu Asn Arg His Leu Val Ser Pro Glu Ala Leu Asp Leu Leu Asp Lys
290 295 300

Leu Leu Arg Tyr Asp His Gln Gln Arg Leu Thr Ala Lys Glu Ala Met
305 310 315 320

Glu His Pro Tyr Phe Tyr Pro Val Val Lys Glu Gln Ser Gln Pro Cys
325 330 335

Ala Asp Asn Ala Val Leu Ser Ser Gly Leu Thr Ala Ala Arg
340 345 350

<210> 12133
<211> 135
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<220>
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<400> 12133
Met Pro Gly Pro Ala Ala Gly Ser Arg Ala Arg Val Tyr Ala Glu Val

1	5	10	15
Asn Ser Leu Arg Ser Arg Glu Tyr Trp Asp Tyr Glu Ala His Val Pro	20	25	30
Ser Trp Gly Asn Gln Asp Asp Tyr Gln Leu Val Arg Lys Leu Gly Arg	35	40	45
Gly Lys Tyr Ser Glu Val Phe Glu Ala Ile Asn Ile Thr Asn Asn Glu	50	55	60
Arg Val Val Val Lys Ile Leu Lys Pro Val Lys Lys Lys Lys Ile Lys	65	70	75
Arg Glu Val Lys Ile Leu Glu Asn Leu Arg Gly Gly Thr Asn Ile Ile	85	90	95
Lys Leu Ile Asp Thr Val Lys Asp Pro Val Ser Lys Thr Pro Ala Leu	100	105	110
Val Phe Glu Tyr Ile Asn Asn Thr Asp Phe Lys Gln Leu Tyr Gln Ile	115	120	125
Leu Thr Asp Phe Asp Ile Arg	130	135	

<210> 12134
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<220>
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<220>
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 <223> /note="ENSP ID: ENSP00000456606"

<400> 12134

Pro Val Lys Lys Lys Lys Ile Lys Arg Glu Val Lys Ile Leu Glu Asn
1 5 10 15

Leu Arg Gly Gly Thr Asn Ile Ile Lys Leu Ile Asp Thr Val Lys Asp
20 25 30

Pro Val Ser Lys Thr Pro Ala Leu Val Phe Glu Tyr Ile Asn Asn Thr
35 40 45

Asp Phe Lys Leu Arg Leu Ile Asp Trp Gly Leu Ala Glu Phe Tyr His
50 55 60

Pro Ala Gln Glu Tyr Asn Val Arg Val Ala Ser Arg Tyr Phe Lys Gly
65 70 75 80

Pro Glu Leu Leu Val Asp Tyr Gln Met Tyr Asp Tyr Ser Leu Asp Met
85 90 95

Trp Ser Leu Gly Cys Met Leu Ala Ser Met Ile Phe Arg Arg Glu Pro
100 105 110

Phe Phe His Gly Gln Asp Asn Tyr Asp Gln Leu Val Arg Ile Ala Lys
115 120 125

Val Leu Gly Thr Glu Glu Leu Tyr Gly Tyr Leu Lys Lys Tyr His Ile
130 135 140

Asp Leu Asp Pro His Phe Asn Asp Ile Leu Gly Gln His Ser Arg Lys
145 150 155 160

Arg Trp Glu Asn Phe Ile His Ser Glu Asn Arg His Leu Val Ser Pro
165 170 175

Glu Ala Leu Asp Leu Leu Asp Lys Leu Leu Arg Tyr Asp His Gln Gln
180 185 190

Arg Leu Thr Ala Lys Glu Ala Met Glu His Pro Tyr Phe Tyr Pro Val
195 200 205

Val Lys Glu Gln Ser Gln Pro Cys Ala Asp Asn Ala Val Leu Ser Ser
210 215 220

Gly Leu Thr Ala Ala Arg
225 230

<210> 12135

<211> 152

<212> PRT

<213> Homo sapiens

<220>

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<223> /note="Gene Symbol: CSNK2A2"

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<223> /note="Gene Name:
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<223> /note="ENSP ID: ENSP00000457911"

<220>

<221> MOD_RES

<222> (1)..(1)

<223> Any amino acid

<400> 12135

Xaa Gly Pro Glu Leu Leu Val Asp Tyr Gln Met Tyr Asp Tyr Ser Leu
1 5 10 15

Asp Met Trp Ser Leu Gly Cys Met Leu Ala Ser Met Ile Phe Arg Arg
20 25 30

Glu Pro Phe Phe His Gly Gln Asp Asn Tyr Asp Gln Leu Val Arg Ile
35 40 45

Ala Lys Val Leu Gly Thr Glu Glu Leu Tyr Gly Tyr Leu Lys Lys Tyr
50 55 60

His Ile Asp Leu Asp Pro His Phe Asn Asp Ile Leu Gly Gln His Ser
65 70 75 80

Arg Lys Arg Trp Glu Asn Phe Ile His Ser Glu Asn Arg His Leu Val
85 90 95

Ser Pro Glu Ala Leu Asp Leu Leu Asp Lys Leu Leu Arg Tyr Asp His
100 105 110

Gln Gln Arg Leu Thr Ala Lys Glu Ala Met Glu His Pro Tyr Phe Tyr
115 120 125

Pro Val Val Lys Glu Gln Ser Gln Pro Cys Ala Asp Asn Ala Val Leu
130 135 140

Ser Ser Gly Leu Thr Ala Ala Arg
145 150

<210> 12136

<211> 215

<212> PRT

<213> Homo sapiens

<220>

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<220>

<221> source

<223> /note="Gene Symbol: CSNK2B"

<220>

<221> source

<223> /note="Gene Name:
casein kinase 2, beta polypeptide"

<220>

<221> source

<223> /note="Uniprot ID: P67870"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000365025"

<400> 12136

Met Ser Ser Ser Glu Glu Val Ser Trp Ile Ser Trp Phe Cys Gly Leu
1 5 10 15

Arg Gly Asn Glu Phe Phe Cys Glu Val Asp Glu Asp Tyr Ile Gln Asp
20 25 30

Lys Phe Asn Leu Thr Gly Leu Asn Glu Gln Val Pro His Tyr Arg Gln
35 40 45

Ala Leu Asp Met Ile Leu Asp Leu Glu Pro Asp Glu Glu Leu Glu Asp
50 55 60

Asn Pro Asn Gln Ser Asp Leu Ile Glu Gln Ala Ala Glu Met Leu Tyr
65 70 75 80

Gly Leu Ile His Ala Arg Tyr Ile Leu Thr Asn Arg Gly Ile Ala Gln
85 90 95

Met Leu Glu Lys Tyr Gln Gln Gly Asp Phe Gly Tyr Cys Pro Arg Val
100 105 110

Tyr Cys Glu Asn Gln Pro Met Leu Pro Ile Gly Leu Ser Asp Ile Pro
115 120 125

Gly Glu Ala Met Val Lys Leu Tyr Cys Pro Lys Cys Met Asp Val Tyr
130 135 140

Thr Pro Lys Ser Ser Arg His His His Thr Asp Gly Ala Tyr Phe Gly
145 150 155 160

Thr Gly Phe Pro His Met Leu Phe Met Val His Pro Glu Tyr Arg Pro
165 170 175

Lys Arg Pro Ala Asn Gln Phe Val Pro Arg Leu Tyr Gly Phe Lys Ile
180 185 190

His Pro Met Ala Tyr Gln Leu Gln Leu Gln Ala Ala Ser Asn Phe Lys
195 200 205

Ser Pro Val Lys Thr Ile Arg
210 215

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Arg Gly Asn Glu Phe Phe Cys Glu Val Asp Glu Asp Tyr Ile Gln Asp
20 25 30

Lys Phe Asn Leu Thr Gly Leu Asn Glu Gln Val Pro His Tyr Arg Gln
35 40 45

Ala Leu Asp Met Ile Leu Asp Leu Glu Pro Asp Glu Glu Leu Glu Asp
50 55 60

Asn Pro Asn Gln Ser Asp Leu Ile Glu Gln Ala Ala Glu Met Leu Tyr
65 70 75 80

Gly Leu Ile His Ala Arg Tyr Ile Leu Thr Asn Arg Gly Ile Ala Gln
85 90 95

Met Leu Glu Lys Tyr Gln Gln Gly Asp Phe Gly Tyr Cys Pro Arg Val
100 105 110

Tyr Cys Glu Asn Gln Pro Met Leu Pro Ile Gly Leu Ser Asp Ile Pro
115 120 125

Gly Glu Ala Met Val Lys Leu Tyr Cys Pro Lys Cys Met Asp Val Tyr
130 135 140

Thr Pro Lys Ser Ser Arg His His His Thr Asp Gly Ala Tyr Phe Gly
145 150 155 160

Thr Gly Phe Pro His Met Leu Phe Met Val His Pro Glu Tyr Arg Pro
165 170 175

Lys Arg Pro Ala Asn Gln Phe Val Pro Arg Leu Tyr Gly Phe Lys Ile

180	185	190
His Pro Met Ala Tyr Gln Leu Gln Leu Gln Ala Ala Ser Asn Phe Lys		
195	200	205

Ser Pro Val Lys Thr Ile Arg
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Arg Gly Asn Glu Phe Phe Cys Glu Val Asp Glu Asp Tyr Ile Gln Asp
20 25 30

Lys Phe Asn Leu Thr Gly Leu Asn Glu Gln Val Pro His Tyr Arg Gln
35 40 45

Ala Leu Asp Met Ile Leu Asp Leu Glu Pro Asp Glu Glu Leu Glu Asp
50 55 60

Asn Pro Asn Gln Ser Asp Leu Ile Glu Gln Ala Ala Glu Met Leu Tyr
65 70 75 80

Gly Leu Ile His Ala Arg Tyr Ile Leu Thr Asn Arg Gly Ile Ala Gln
85 90 95

Met Leu Glu Lys Tyr Gln Gln Gly Asp Phe Gly Tyr Cys Pro Arg Val
100 105 110

Tyr Cys Glu Asn Gln Pro Met Leu Pro Ile Gly Leu Ser Asp Ile Pro
115 120 125

Gly Glu Ala Met Val Lys Leu Tyr Cys Pro Lys Cys Met Asp Val Tyr
130 135 140

Thr Pro Lys Ser Ser Arg His His His Thr Asp Gly Ala Tyr Phe Gly
145 150 155 160

Thr Gly Phe Pro His Met Leu Phe Met Val His Pro Glu Tyr Arg Pro
165 170 175

Lys Arg Pro Ala Asn Gln Phe Val Pro Arg Leu Tyr Gly Phe Lys Ile
180 185 190

His Pro Met Ala Tyr Gln Leu Gln Leu Gln Ala Ala Ser Asn Phe Lys
195 200 205

Ser Pro Val Lys Thr Ile Arg
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Met Glu Lys Cys Lys Gly Thr Ser Arg Met Ala Gly Thr Thr Ser Ala
1 5 10 15

Asp Val Lys Met Ser Ser Ser Glu Glu Val Ser Trp Ile Ser Trp Phe
20 25 30

Cys Gly Leu Arg Gly Asn Glu Phe Phe Cys Glu Val Asp Glu Asp Tyr
35 40 45

Ile Gln Asp Lys Phe Asn Leu Thr Gly Leu Asn Glu Gln Val Pro His
50 55 60

Tyr Arg Gln Ala Leu Asp Met Ile Leu Asp Leu Glu Pro Asp Glu Glu
65 70 75 80

Leu Glu Asp Asn Pro Asn Gln Ser Asp Leu Ile Glu Gln Ala Ala Glu
85 90 95

Met Leu Tyr Gly Leu Ile His Ala Arg Tyr Ile Leu Thr Asn Arg Gly
100 105 110

Ile Ala Gln Met Leu Glu Lys Tyr Gln Gln Gly Asp Phe Gly Tyr Cys
115 120 125

Pro Arg Val Tyr Cys Glu Asn Gln Pro Met Leu Pro Ile Gly Leu Ser
130 135 140

Asp Ile Pro Gly Glu Ala Met Val Lys Leu Tyr Cys Pro Lys Cys Met
145 150 155 160

Asp Val Tyr Thr Pro Lys Ser Ser Arg His His His Thr Asp Gly Ala
165 170 175

Tyr Phe Gly Thr Gly Phe Pro His Met Leu Phe Met Val His Pro Glu
180 185 190

Tyr Arg Pro Lys Arg Pro Ala Asn Gln Phe Val Pro Arg Leu Tyr Gly
195 200 205

Phe Lys Ile His Pro Met Ala Tyr Gln Leu Gln Leu Gln Ala Ala Ser
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Asn Phe Lys Ser Pro Val Lys Thr Ile Arg
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Arg Gly Asn Glu Phe Phe Cys Glu Val Asp Glu Asp Tyr Ile Gln Asp
20 25 30

Lys Phe Asn Leu Thr Gly Leu Asn Glu Gln Val Pro His Tyr Arg Gln
35 40 45

Ala Leu Asp Met Ile Leu Asp Leu Glu Pro Asp Glu Glu Leu Glu Asp
50 55 60

Asn Pro Asn Gln Ser Asp Leu Ile Glu Gln Ala Ala Glu Met Leu Tyr
65 70 75 80

Gly Leu Ile His Ala Arg Tyr Ile Leu Thr Asn Arg Gly Ile Ala Gln
85 90 95

Met Leu Glu Lys Tyr Gln Gln Gly Asp Phe Gly Tyr Cys Pro Arg Val
100 105 110

Tyr Cys Glu Asn Gln Pro Met Leu Pro Ile Gly Leu Ser Asp Ile Pro
115 120 125

Gly Glu Ala Met Val Lys Leu Tyr Cys Pro Lys Cys Met Asp Val Tyr
130 135 140

Thr Pro Lys Ser Ser Arg His His His Thr Asp Gly Ala Tyr Phe Gly
145 150 155 160

Thr Gly Phe Pro His Met Leu Phe Met Val His Pro Glu Tyr Arg Pro
165 170 175

Lys Arg Pro Ala Asn Gln Phe Val Pro Arg Leu Tyr Gly Phe Lys Ile
180 185 190

His Pro Met Ala Tyr Gln Leu Gln Leu Gln Ala Ala Ser Asn Phe Lys
195 200 205

Ser Pro Val Lys Thr Ile Arg
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Arg	Gly	Asn	Glu	Phe	Phe	Cys	Glu	Val	Asp	Glu	Asp	Tyr	Ile	Gln	Asp	
			20					25					30			
Lys	Phe	Asn	Leu	Thr	Gly	Leu	Asn	Glu	Gln	Val	Pro	His	Tyr	Arg	Gln	
		35					40					45				
Ala	Leu	Asp	Met	Ile	Leu	Asp	Leu	Glu	Pro	Asp	Glu	Glu	Leu	Glu	Asp	
	50					55					60					
Asn	Pro	Asn	Gln	Ser	Asp	Leu	Ile	Glu	Gln	Ala	Ala	Glu	Met	Leu	Tyr	
65					70					75					80	
Gly	Leu	Ile	His	Ala	Arg	Tyr	Ile	Leu	Thr	Asn	Arg	Gly	Ile	Ala	Gln	
				85					90					95		
Met	Leu	Glu	Lys	Tyr	Gln	Gln	Gly	Asp	Phe	Gly	Tyr	Cys	Pro	Arg	Val	
			100					105					110			
Tyr	Cys	Glu	Asn	Gln	Pro	Met	Leu	Pro	Ile	Gly	Leu	Ser	Asp	Ile	Pro	
		115					120					125				
Gly	Glu	Ala	Met	Val	Lys	Leu	Tyr	Cys	Pro	Lys	Cys	Met	Asp	Val	Tyr	
	130					135					140					
Thr	Pro	Lys	Ser	Ser	Arg	His	His	His	Thr	Asp	Gly	Ala	Tyr	Phe	Gly	
145					150					155					160	
Thr	Gly	Phe	Pro	His	Met	Leu	Phe	Met	Val	His	Pro	Glu	Tyr	Arg	Pro	
				165					170					175		
Lys	Arg	Pro	Ala	Asn	Gln	Phe	Val	Pro	Ser	Ser	Cys	Ser	Arg	His	Pro	
			180					185					190			
Asp	Val	Pro	Leu	Leu	Pro	Arg	Arg	Arg	Pro	Phe	Cys	Arg	Met	His	Phe	
		195					200					205				
Arg	Leu	Arg	Glu	Val	Tyr	His	Gln	Gln	Leu	Ile	Pro	Val	His	Gly	Asp	
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Arg Gly Asn Glu Phe Phe Cys Glu Val Asp Glu Asp Tyr Ile Gln Asp
          20          25          30

Lys Phe Asn Leu Thr Gly Leu Asn Glu Gln Val Pro His Tyr Arg Gln
          35          40          45

Ala Leu Asp Met Ile Leu Asp Leu Glu Pro Asp Glu Glu Leu Glu Asp
          50          55          60

Asn Pro Asn Gln Ser Asp Leu Ile Glu Gln Ala Ala Glu Met Leu Tyr
65          70          75          80

Gly Leu Ile His Ala Arg Tyr Ile Leu Thr Asn Arg Gly Ile Ala Gln
          85          90          95

Met Leu Glu Lys Tyr Gln Gln Gly Asp Phe Gly Tyr Cys Pro Arg Val
          100          105          110

Tyr Cys Glu Asn Gln Pro Met Leu Pro Ile Gly Leu Ser Asp Ile Pro

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115		120		125											
Gly	Glu	Ala	Met	Val	Lys	Leu	Tyr	Cys	Pro	Lys	Cys	Met	Asp	Val	Tyr
130						135					140				
Thr	Pro	Lys	Ser	Ser	Arg	His	His	His	Thr	Asp	Gly	Ala	Tyr	Phe	Gly
145					150					155					160
Thr	Gly	Phe	Pro	His	Met	Leu	Phe	Met	Val	His	Pro	Glu	Tyr	Arg	Pro
				165					170					175	
Lys	Arg	Pro	Ala	Asn	Gln	Phe	Val	Pro	Arg	Leu	Tyr	Gly	Phe	Lys	Ile
			180					185					190		
His	Pro	Met	Ala	Tyr	Gln	Leu	Gln	Leu	Gln	Ala	Ala	Ser	Asn	Phe	Lys
		195					200					205			
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			20					25					30			
Lys	Phe	Asn	Leu	Thr	Gly	Leu	Asn	Glu	Gln	Val	Pro	His	Tyr	Arg	Gln	
		35					40					45				
Ala	Leu	Asp	Met	Ile	Leu	Asp	Leu	Glu	Pro	Asp	Glu	Glu	Leu	Glu	Asp	
	50					55					60					
Asn	Pro	Asn	Gln	Ser	Asp	Leu	Ile	Glu	Gln	Ala	Ala	Glu	Met	Leu	Tyr	
65					70					75					80	
Gly	Leu	Ile	His	Ala	Arg	Tyr	Ile	Leu	Thr	Asn	Arg	Gly	Ile	Ala	Gln	
				85					90					95		
Met	Leu	Glu	Lys	Tyr	Gln	Gln	Gly	Asp	Phe	Gly	Tyr	Cys	Pro	Arg	Val	
			100					105					110			
Tyr	Cys	Glu	Asn	Gln	Pro	Met	Leu	Pro	Ile	Gly	Leu	Ser	Asp	Ile	Pro	
		115					120					125				
Gly	Glu	Ala	Met	Val	Lys	Leu	Tyr	Cys	Pro	Lys	Cys	Met	Asp	Val	Tyr	
	130					135					140					
Thr	Pro	Lys	Ser	Ser	Arg	His	His	His	Thr	Asp	Gly	Ala	Tyr	Phe	Gly	
145					150					155					160	
Thr	Gly	Phe	Pro	His	Met	Leu	Phe	Met	Val	His	Pro	Glu	Tyr	Arg	Pro	
				165					170					175		
Lys	Arg	Pro	Ala	Asn	Gln	Phe	Val	Pro	Arg	Leu	Tyr	Gly	Phe	Lys	Ile	
			180					185					190			
His	Pro	Met	Ala	Tyr	Gln	Leu	Gln	Leu	Gln	Ala	Ala	Ser	Asn	Phe	Lys	
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Ser	Pro	Val	Lys	Thr	Ile	Arg										
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Met Glu Lys Cys Lys Gly Thr Ser Arg Met Ala Gly Thr Thr Ser Ala
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Asp Val Lys Met Ser Ser Ser Glu Glu Val Ser Trp Ile Ser Trp Phe
          20          25          30

Cys Gly Leu Arg Gly Asn Glu Phe Phe Cys Glu Val Asp Glu Asp Tyr
          35          40          45

Ile Gln Asp Lys Phe Asn Leu Thr Gly Leu Asn Glu Gln Val Pro His
          50          55          60

Tyr Arg Gln Ala Leu Asp Met Ile Leu Asp Leu Glu Pro Asp Glu Glu
65          70          75          80

Leu Glu Asp Asn Pro Asn Gln Ser Asp Leu Ile Glu Gln Ala Ala Glu
          85          90          95

Met Leu Tyr Gly Leu Ile His Ala Arg Tyr Ile Leu Thr Asn Arg Gly
          100          105          110

Ile Ala Gln Met Leu Glu Lys Tyr Gln Gln Gly Asp Phe Gly Tyr Cys
          115          120          125

Pro Arg Val Tyr Cys Glu Asn Gln Pro Met Leu Pro Ile Gly Leu Ser
          130          135          140

Asp Ile Pro Gly Glu Ala Met Val Lys Leu Tyr Cys Pro Lys Cys Met
145          150          155          160

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Asp Val Tyr Thr Pro Lys Ser Ser Arg His His His Thr Asp Gly Ala
165 170 175

Tyr Phe Gly Thr Gly Phe Pro His Met Leu Phe Met Val His Pro Glu
180 185 190

Tyr Arg Pro Lys Arg Pro Ala Asn Gln Phe Val Pro Arg Leu Tyr Gly
195 200 205

Phe Lys Ile His Pro Met Ala Tyr Gln Leu Gln Leu Gln Ala Ala Ser
210 215 220

Asn Phe Lys Ser Pro Val Lys Thr Ile Arg
225 230

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Arg Gly Asn Glu Phe Phe Cys Glu Val Asp Glu Asp Tyr Ile Gln Asp
20 25 30

Lys Phe Asn Leu Thr Gly Leu Asn Glu Gln Val Pro His Tyr Arg Gln
35 40 45

Ala Leu Asp Met Ile Leu Asp Leu Glu Pro Asp Glu Glu Leu Glu Asp
 50 55 60
 Asn Pro Asn Gln Ser Asp Leu Ile Glu Gln Ala Ala Glu Met Leu Tyr
 65 70 75 80
 Gly Leu Ile His Ala Arg Tyr Ile Leu Thr Asn Arg Gly Ile Ala Gln
 85 90 95
 Met Leu Glu Lys Tyr Gln Gln Gly Asp Phe Gly Tyr Cys Pro Arg Val
 100 105 110
 Tyr Cys Glu Asn Gln Pro Met Leu Pro Ile Gly Leu Ser Asp Ile Pro
 115 120 125
 Gly Glu Ala Met Val Lys Leu Tyr Cys Pro Lys Cys Met Asp Val Tyr
 130 135 140
 Thr Pro Lys Ser Ser Arg His His His Thr Asp Gly Ala Tyr Phe Gly
 145 150 155 160
 Thr Gly Phe Pro His Met Leu Phe Met Val His Pro Glu Tyr Arg Pro
 165 170 175
 Lys Arg Pro Ala Asn Gln Phe Val Pro Ser Ser Cys Ser Arg His Pro
 180 185 190
 Asp Val Pro Leu Leu Pro Arg Arg Arg Pro Phe Cys Arg Met His Phe
 195 200 205
 Arg Leu Arg Glu Val Tyr His Gln Gln Leu Ile Pro Val His Gly Asp
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 His His Leu Leu
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<400> 12146
 Met Ser Ser Ser Glu Glu Val Ser Trp Ile Ser Trp Phe Cys Gly Leu
 1 5 10 15

Arg Gly Asn Glu Phe Phe Cys Glu Val Asp Glu Asp Tyr Ile Gln Asp
 20 25 30

Lys Phe Asn Leu Thr Gly Leu Asn Glu Gln Val Pro His Tyr Arg Gln
 35 40 45

Ala Leu Asp Met Ile Leu Asp Leu Glu Pro Asp Glu Glu Leu Glu Asp
 50 55 60

Asn Pro Asn Gln Ser Asp Leu Ile Glu Gln Ala Ala Glu Met Leu Tyr
 65 70 75 80

Gly Leu Ile His Ala Arg Tyr Ile Leu Thr Asn Arg Gly Ile Ala Gln
 85 90 95

Met Leu Glu Lys Tyr Gln Gln Gly Asp Phe Gly Tyr Cys Pro Arg Val
 100 105 110

Tyr Cys Glu Asn Gln Pro Met Leu Pro Ile Gly Leu Ser Asp Ile Pro
 115 120 125

Gly Glu Ala Met Val Lys Leu Tyr Cys Pro Lys Cys Met Asp Val Tyr
 130 135 140

Thr Pro Lys Ser Ser Arg His His His Thr Asp Gly Ala Tyr Phe Gly
 145 150 155 160

Thr Gly Phe Pro His Met Leu Phe Met Val His Pro Glu Tyr Arg Pro
165 170 175

Lys Arg Pro Ala Asn Gln Phe Val Pro Arg Leu Tyr Gly Phe Lys Ile
180 185 190

His Pro Met Ala Tyr Gln Leu Gln Leu Gln Ala Ala Ser Asn Phe Lys
195 200 205

Ser Pro Val Lys Thr Ile Arg
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Arg Gly Asn Glu Phe Phe Cys Glu Val Asp Glu Asp Tyr Ile Gln Asp
20 25 30

Lys Phe Asn Leu Thr Gly Leu Asn Glu Gln Val Pro His Tyr Arg Gln
35 40 45

Ala Leu Asp Met Ile Leu Asp Leu Glu Pro Asp Glu Glu Leu Glu Asp

26936

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Asn Pro Asn Gln Ser Asp Leu Ile Glu Gln Ala Ala Glu Met Leu Tyr		
65	70	75 80
Gly Leu Ile His Ala Arg Tyr Ile Leu Thr Asn Arg Gly Ile Ala Gln		
	85	90 95
Met Leu Glu Lys Tyr Gln Gln Gly Asp Phe Gly Tyr Cys Pro Arg Val		
	100	105 110
Tyr Cys Glu Asn Gln Pro Met Leu Pro Ile Gly Leu Ser Asp Ile Pro		
	115	120 125
Gly Glu Ala Met Val Lys Leu Tyr Cys Pro Lys Cys Met Asp Val Tyr		
	130	135 140
Thr Pro Lys Ser Ser Arg His His His Thr Asp Gly Ala Tyr Phe Gly		
	145	150 155 160
Thr Gly Phe Pro His Met Leu Phe Met Val His Pro Glu Tyr Arg Pro		
	165	170 175
Lys Arg Pro Ala Asn Gln Phe Val Pro Arg Leu Tyr Gly Phe Lys Ile		
	180	185 190
His Pro Met Ala Tyr Gln Leu Gln Leu Gln Ala Ala Ser Asn Phe Lys		
	195	200 205
Ser Pro Val Lys Thr Ile Arg		
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Met Ser Ser Ser Glu Glu Val Ser Trp Ile Ser Trp Phe Cys Gly Leu
 1 5 10 15

Arg Gly Asn Glu Phe Phe Cys Glu Val Asp Glu Asp Tyr Ile Gln Asp
 20 25 30

Lys Phe Asn Leu Thr Gly Leu Asn Glu Gln Val Pro His Tyr Arg Gln
 35 40 45

Ala Leu Asp Met Ile Leu Asp Leu Glu Pro Asp Glu Glu Leu Glu Asp
 50 55 60

Asn Pro Asn Gln Ser Asp Leu Ile Glu Gln Ala Ala Glu Met Leu Tyr
 65 70 75 80

Gly Leu Ile His Ala Arg Tyr Ile Leu Thr Asn Arg Gly Ile Ala Gln
 85 90 95

Met Leu Glu Lys Tyr Gln Gln Gly Asp Phe Gly Tyr Cys Pro Arg Val
 100 105 110

Tyr Cys Glu Asn Gln Pro Met Leu Pro Ile Gly Leu Ser Asp Ile Pro
 115 120 125

Gly Glu Ala Met Val Lys Leu Tyr Cys Pro Lys Cys Met Asp Val Tyr
 130 135 140

Thr Pro Lys Ser Ser Arg His His His Thr Asp Gly Ala Tyr Phe Gly
 145 150 155 160

Thr Gly Phe Pro His Met Leu Phe Met Val His Pro Glu Tyr Arg Pro
 165 170 175

Lys Arg Pro Ala Asn Gln Phe Val Pro Arg Leu Tyr Gly Phe Lys Ile
180 185 190

His Pro Met Ala Tyr Gln Leu Gln Leu Gln Ala Ala Ser Asn Phe Lys
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Ser Pro Val Lys Thr Ile Arg
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Met Ser Ser Ser Glu Glu Val Ser Trp Ile Ser Trp Phe Cys Gly Leu
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Arg Gly Asn Glu Phe Phe Cys Glu Val Asp Glu Asp Tyr Ile Gln Asp
20 25 30

Lys Phe Asn Leu Thr Gly Leu Asn Glu Gln Val Pro His Tyr Arg Gln
35 40 45

Ala Leu Asp Met Ile Leu Asp Leu Glu Pro Asp Glu Glu Leu Glu Asp
50 55 60

Asn Pro Asn Gln Ser Asp Leu Ile Glu Gln Ala Ala Glu Met Leu Tyr
65 70 75 80

Gly Leu Ile His Ala Arg Tyr Ile Leu Thr Asn Arg Gly Ile Ala Gln
85 90 95

Met Leu Glu Lys Tyr Gln Gln Gly Asp Phe Gly Tyr Cys Pro Arg Val
100 105 110

Tyr Cys Glu Asn Gln Pro Met Leu Pro Ile Gly Leu Ser Asp Ile Pro
115 120 125

Gly Glu Ala Met Val Lys Leu Tyr Cys Pro Lys Cys Met Asp Val Tyr
130 135 140

Thr Pro Lys Ser Ser Arg His His His Thr Asp Gly Ala Tyr Phe Gly
145 150 155 160

Thr Gly Phe Pro His Met Leu Phe Met Val His Pro Glu Tyr Arg Pro
165 170 175

Lys Arg Pro Ala Asn Gln Phe Val Pro Arg Leu Tyr Gly Phe Lys Ile
180 185 190

His Pro Met Ala Tyr Gln Leu Gln Leu Gln Ala Ala Ser Asn Phe Lys
195 200 205

Ser Pro Val Lys Thr Ile Arg
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Arg Gly Asn Glu Phe Phe Cys Glu Val Asp Glu Asp Tyr Ile Gln Asp
20 25 30

Lys Phe Asn Leu Thr Gly Leu Asn Glu Gln Val Pro His Tyr Arg Gln
35 40 45

Ala Leu Asp Met Ile Leu Asp Leu Glu Pro Asp Glu Glu Leu Glu Asp
50 55 60

Asn Pro Asn Gln Ser Asp Leu Ile Glu Gln Ala Ala Glu Met Leu Tyr
65 70 75 80

Gly Leu Ile His Ala Arg Tyr Ile Leu Thr Asn Arg Gly Ile Ala Gln
85 90 95

Met Leu Glu Lys Tyr Gln Gln Gly Asp Phe Gly Tyr Cys Pro Arg Val
100 105 110

Tyr Cys Glu Asn Gln Pro Met Leu Pro Ile Gly Leu Ser Asp Ile Pro
115 120 125

Gly Glu Ala Met Val Lys Leu Tyr Cys Pro Lys Cys Met Asp Val Tyr
130 135 140

Thr Pro Lys Ser Ser Arg His His His Thr Asp Gly Ala Tyr Phe Gly
145 150 155 160

Thr Gly Phe Pro His Met Leu Phe Met Val His Pro Glu Tyr Arg Pro
165 170 175

Lys Arg Pro Ala Asn Gln Phe Val Pro Arg Leu Tyr Gly Phe Lys Ile
180 185 190

His Pro Met Ala Tyr Gln Leu Gln Leu Gln Ala Ala Ser Asn Phe Lys

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Ser Pro Val Lys Thr Ile Arg
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Met Glu Lys Cys Lys Gly Thr Ser Arg Met Ala Gly Thr Thr Ser Ala
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Asp Val Lys Met Ser Ser Ser Glu Glu Val Ser Trp Ile Ser Trp Phe
20 25 30

Cys Gly Leu Arg Gly Asn Glu Phe Phe Cys Glu Val Asp Glu Asp Tyr
35 40 45

Ile Gln Asp Lys Phe Asn Leu Thr Gly Leu Asn Glu Gln Val Pro His
50 55 60

Tyr Arg Gln Ala Leu Asp Met Ile Leu Asp Leu Glu Pro Asp Glu Glu
65 70 75 80

Leu Glu Asp Asn Pro Asn Gln Ser Asp Leu Ile Glu Gln Ala Ala Glu
85 90 95

Met Leu Tyr Gly Leu Ile His Ala Arg Tyr Ile Leu Thr Asn Arg Gly
100 105 110

26942

Ile Ala Gln Met Leu Glu Lys Tyr Gln Gln Gly Asp Phe Gly Tyr Cys
115 120 125

Pro Arg Val Tyr Cys Glu Asn Gln Pro Met Leu Pro Ile Gly Leu Ser
130 135 140

Asp Ile Pro Gly Glu Ala Met Val Lys Leu Tyr Cys Pro Lys Cys Met
145 150 155 160

Asp Val Tyr Thr Pro Lys Ser Ser Arg His His His Thr Asp Gly Ala
165 170 175

Tyr Phe Gly Thr Gly Phe Pro His Met Leu Phe Met Val His Pro Glu
180 185 190

Tyr Arg Pro Lys Arg Pro Ala Asn Gln Phe Val Pro Arg Leu Tyr Gly
195 200 205

Phe Lys Ile His Pro Met Ala Tyr Gln Leu Gln Leu Gln Ala Ala Ser
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Asn Phe Lys Ser Pro Val Lys Thr Ile Arg
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Asp	Val	Lys	Met	Ser	Ser	Ser	Glu	Glu	Val	Ser	Trp	Ile	Ser	Trp	Phe	
			20					25					30			
Cys	Gly	Leu	Arg	Gly	Asn	Glu	Phe	Phe	Cys	Glu	Val	Asp	Glu	Asp	Tyr	
		35					40					45				
Ile	Gln	Asp	Lys	Phe	Asn	Leu	Thr	Gly	Leu	Asn	Glu	Gln	Val	Pro	His	
	50					55					60					
Tyr	Arg	Gln	Ala	Leu	Asp	Met	Ile	Leu	Asp	Leu	Glu	Pro	Asp	Glu	Glu	
65					70					75					80	
Leu	Glu	Asp	Asn	Pro	Asn	Gln	Ser	Asp	Leu	Ile	Glu	Gln	Ala	Ala	Glu	
				85					90					95		
Met	Leu	Tyr	Gly	Leu	Ile	His	Ala	Arg	Tyr	Ile	Leu	Thr	Asn	Arg	Gly	
			100					105					110			
Ile	Ala	Gln	Met	Leu	Glu	Lys	Tyr	Gln	Gln	Gly	Asp	Phe	Gly	Tyr	Cys	
		115					120					125				
Pro	Arg	Val	Tyr	Cys	Glu	Asn	Gln	Pro	Met	Leu	Pro	Ile	Gly	Leu	Ser	
	130					135					140					
Asp	Ile	Pro	Gly	Glu	Ala	Met	Val	Lys	Leu	Tyr	Cys	Pro	Lys	Cys	Met	
145					150					155					160	
Asp	Val	Tyr	Thr	Pro	Lys	Ser	Ser	Arg	His	His	His	Thr	Asp	Gly	Ala	
				165					170					175		
Tyr	Phe	Gly	Thr	Gly	Phe	Pro	His	Met	Leu	Phe	Met	Val	His	Pro	Glu	
			180					185					190			
Tyr	Arg	Pro	Lys	Arg	Pro	Ala	Asn	Gln	Phe	Val	Pro	Arg	Leu	Tyr	Gly	
		195					200					205				
Phe	Lys	Ile	His	Pro	Met	Ala	Tyr	Gln	Leu	Gln	Leu	Gln	Ala	Ala	Ser	
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Asn	Phe	Lys	Ser	Pro	Val	Lys	Thr	Ile	Arg							
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Met Ser Ser Ser Glu Val Ser Trp Ile Ser Trp Phe Cys Gly Leu
1          5          10          15

Arg Gly Asn Glu Phe Phe Cys Glu Val Asp Glu Asp Tyr Ile Gln Asp
          20          25          30

Lys Phe Asn Leu Thr Gly Leu Asn Glu Gln Val Pro His Tyr Arg Gln
          35          40          45

Ala Leu Asp Met Ile Leu Asp Leu Glu Pro Asp Glu Glu Leu Glu Asp
          50          55          60

Asn Pro Asn Gln Ser Asp Leu Ile Glu Gln Ala Ala Glu Met Leu Tyr
65          70          75          80

Gly Leu Ile His Ala Arg Tyr Ile Leu Thr Asn Arg Gly Ile Ala Gln
          85          90          95

Met Leu Glu Lys Tyr Gln Gln Gly Asp Phe Gly Tyr Cys Pro Arg Val
          100          105          110

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Tyr Cys Glu Asn Gln Pro Met Leu Pro Ile Gly Leu Ser Asp Ile Pro
115 120 125

Gly Glu Ala Met Val Lys Leu Tyr Cys Pro Lys Cys Met Asp Val Tyr
130 135 140

Thr Pro Lys Ser Ser Arg His His His Thr Asp Gly Ala Tyr Phe Gly
145 150 155 160

Thr Gly Phe Pro His Met Leu Phe Met Val His Pro Glu Tyr Arg Pro
165 170 175

Lys Arg Pro Ala Asn Gln Phe Val Pro Arg Leu Tyr Gly Phe Lys Ile
180 185 190

His Pro Met Ala Tyr Gln Leu Gln Leu Gln Ala Ala Ser Asn Phe Lys
195 200 205

Ser Pro Val Lys Thr Ile Arg
210 215

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Arg	Gly	Asn	Glu	Phe	Phe	Cys	Glu	Val	Asp	Glu	Asp	Tyr	Ile	Gln	Asp	
			20					25					30			
Lys	Phe	Asn	Leu	Thr	Gly	Leu	Asn	Glu	Gln	Val	Pro	His	Tyr	Arg	Gln	
		35					40					45				
Ala	Leu	Asp	Met	Ile	Leu	Asp	Leu	Glu	Pro	Asp	Glu	Glu	Leu	Glu	Asp	
	50					55					60					
Asn	Pro	Asn	Gln	Ser	Asp	Leu	Ile	Glu	Gln	Ala	Ala	Glu	Met	Leu	Tyr	
65					70					75					80	
Gly	Leu	Ile	His	Ala	Arg	Tyr	Ile	Leu	Thr	Asn	Arg	Gly	Ile	Ala	Gln	
				85					90					95		
Met	Leu	Glu	Lys	Tyr	Gln	Gln	Gly	Asp	Phe	Gly	Tyr	Cys	Pro	Arg	Val	
			100					105					110			
Tyr	Cys	Glu	Asn	Gln	Pro	Met	Leu	Pro	Ile	Gly	Leu	Ser	Asp	Ile	Pro	
		115					120					125				
Gly	Glu	Ala	Met	Val	Lys	Leu	Tyr	Cys	Pro	Lys	Cys	Met	Asp	Val	Tyr	
	130					135					140					
Thr	Pro	Lys	Ser	Ser	Arg	His	His	His	Thr	Asp	Gly	Ala	Tyr	Phe	Gly	
145					150					155					160	
Thr	Gly	Phe	Pro	His	Met	Leu	Phe	Met	Val	His	Pro	Glu	Tyr	Arg	Pro	
				165					170					175		
Lys	Arg	Pro	Ala	Asn	Gln	Phe	Val	Pro	Arg	Leu	Tyr	Gly	Phe	Lys	Ile	
			180					185					190			
His	Pro	Met	Ala	Tyr	Gln	Leu	Gln	Leu	Gln	Ala	Ala	Ser	Asn	Phe	Lys	
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Ser	Pro	Val	Lys	Thr	Ile	Arg										
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Arg Gly Asn Glu Phe Phe Cys Glu Val Asp Glu Asp Tyr Ile Gln Asp
20 25 30

Lys Phe Asn Leu Thr Gly Leu Asn Glu Gln Val Pro His Tyr Arg Gln
35 40 45

Ala Leu Asp Met Ile Leu Asp Leu Glu Pro Asp Glu Glu Leu Glu Asp
50 55 60

Asn Pro Asn Gln Ser Asp Leu Ile Glu Gln Ala Ala Glu Met Leu Tyr
65 70 75 80

Gly Leu Ile His Ala Arg Tyr Ile Leu Thr Asn Arg Gly Ile Ala Gln
85 90 95

Met Leu Glu Lys Tyr Gln Gln Gly Asp Phe Gly Tyr Cys Pro Arg Val
100 105 110

Tyr Cys Glu Asn Gln Pro Met Leu Pro Ile Gly Leu Ser Asp Ile Pro
115 120 125

Gly Glu Ala Met Val Lys Leu Tyr Cys Pro Lys Cys Met Asp Val Tyr

26948

130 135 140
 Thr Pro Lys Ser Ser Arg His His His Thr Asp Gly Ala Tyr Phe Gly
 145 150 155 160
 Thr Gly Phe Pro His Met Leu Phe Met Val His Pro Glu Tyr Arg Pro
 165 170 175
 Lys Arg Pro Ala Asn Gln Phe Val Pro Arg Leu Tyr Gly Phe Lys Ile
 180 185 190
 His Pro Met Ala Tyr Gln Leu Gln Leu Gln Ala Ala Ser Asn Phe Lys
 195 200 205
 Ser Pro Val Lys Thr Ile Arg
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 1 5 10 15

Arg Gly Asn Glu Phe Phe Cys Glu Val Asp Glu Asp Tyr Ile Gln Asp
 20 25 30

Lys Phe Asn Leu Thr Gly Leu Asn Glu Gln Val Pro His Tyr Arg Gln
 35 40 45

Ala Leu Asp Met Ile Leu Asp Leu Glu Pro Asp Glu Glu Leu Glu Asp
 50 55 60
 Asn Pro Asn Gln Ser Asp Leu Ile Glu Gln Ala Ala Glu Met Leu Tyr
 65 70 75 80
 Gly Leu Ile His Ala Arg Tyr Ile Leu Thr Asn Arg Gly Ile Ala Gln
 85 90 95
 Met Leu Glu Lys Tyr Gln Gln Gly Asp Phe Gly Tyr Cys Pro Arg Val
 100 105 110
 Tyr Cys Glu Asn Gln Pro Met Leu Pro Ile Gly Leu Ser Asp Ile Pro
 115 120 125
 Gly Glu Ala Met Val Lys Leu Tyr Cys Pro Lys Cys Met Asp Val Tyr
 130 135 140
 Thr Pro Lys Ser Ser Arg His His His Thr Asp Gly Ala Tyr Phe Gly
 145 150 155 160
 Thr Gly Phe Pro His Met Leu Phe Met Val His Pro Glu Tyr Arg Pro
 165 170 175
 Lys Arg Pro Ala Asn Gln Phe Val Pro Ser Ser Cys Ser Arg His Pro
 180 185 190
 Asp Val Pro Leu Leu Pro Arg Arg Arg Pro Phe Cys Arg Met His Phe
 195 200 205
 Arg Leu Arg Glu Val Tyr His Gln Gln Leu Ile Pro Val His Gly Asp
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 His His Leu Leu
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<210> 12157

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<212> PRT

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Met Ser Ser Ser Glu Glu Val Ser Trp Ile Ser Trp Phe Cys Gly Leu
1 5 10 15

Arg Gly Asn Glu Phe Phe Cys Glu Val Asp Glu Asp Tyr Ile Gln Asp
20 25 30

Lys Phe Asn Leu Thr Gly Leu Asn Glu Gln Val Pro His Tyr Arg Gln
35 40 45

Ala Leu Asp Met Ile Leu Asp Leu Glu Pro Asp Glu Glu Leu Glu Asp
50 55 60

Asn Pro Asn Gln Ser Asp Leu Ile Glu Gln Ala Ala Glu Met Leu Tyr
65 70 75 80

Gly Leu Ile His Ala Arg Tyr Ile Leu Thr Asn Arg Gly Ile Ala Gln
85 90 95

Met Leu Glu Lys Tyr Gln Gln Gly Asp Phe Gly Tyr Cys Pro Arg Val
100 105 110

Tyr Cys Glu Asn Gln Pro Met Leu Pro Ile Gly Leu Ser Asp Ile Pro
115 120 125

Gly Glu Ala Met Val Lys Leu Tyr Cys Pro Lys Cys Met Asp Val Tyr
130 135 140

Thr Pro Lys Ser Ser Arg His His His Thr Asp Gly Ala Tyr Phe Gly
145 150 155 160

Thr Gly Phe Pro His Met Leu Phe Met Val His Pro Glu Tyr Arg Pro
165 170 175

Lys Arg Pro Ala Asn Gln Phe Val Pro Ser Ser Cys Ser Arg His Pro
180 185 190

Asp Val Pro Leu Leu Pro Arg Arg Arg Pro Phe Cys Arg Met His Phe
195 200 205

Arg Leu Arg Glu Val Tyr His Gln Gln Leu Ile Pro Val His Gly Asp
210 215 220

His His Leu Leu
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1 5 10 15

Arg Gly Asn Glu Phe Phe Cys Glu Val Asp Glu Asp Tyr Ile Gln Asp
20 25 30

Lys Phe Asn Leu Thr Gly Leu Asn Glu Gln Val Pro His Tyr Arg Gln
35 40 45

Ala Leu Asp Met Ile Leu Asp Leu Glu Pro Asp Glu Glu Leu Glu Asp
 50 55 60

Asn Pro Asn Gln Ser Asp Leu Ile Glu Gln Ala Ala Glu Met Leu Tyr
 65 70 75 80

Gly Leu Ile His Ala Arg Tyr Ile Leu Thr Asn Arg Gly Ile Ala Gln
 85 90 95

Met Leu Glu Lys Tyr Gln Gln Gly Asp Phe Gly Tyr Cys Pro Arg Val
 100 105 110

Tyr Cys Glu Asn Gln Pro Met Leu Pro Ile Gly Leu Ser Asp Ile Pro
 115 120 125

Gly Glu Ala Met Val Lys Leu Tyr Cys Pro Lys Cys Met Asp Val Tyr
 130 135 140

Thr Pro Lys Ser Ser Arg His His His Thr Asp Gly Ala Tyr Phe Gly
 145 150 155 160

Thr Gly Phe Pro His Met Leu Phe Met Val His Pro Glu Tyr Arg Pro
 165 170 175

Lys Arg Pro Ala Asn Gln Phe Val Pro Arg Leu Tyr Gly Phe Lys Ile
 180 185 190

His Pro Met Ala Tyr Gln Leu Gln Leu Gln Ala Ala Ser Asn Phe Lys
 195 200 205

Ser Pro Val Lys Thr Ile Arg
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Arg Gly Asn Glu Phe Phe Cys Glu Val Asp Glu Asp Tyr Ile Gln Asp
 20 25 30

Lys Phe Asn Leu Thr Gly Leu Asn Glu Gln Val Pro His Tyr Arg Gln
 35 40 45

Ala Leu Asp Met Ile Leu Asp Leu Glu Pro Asp Glu Glu Leu Glu Asp
 50 55 60

Asn Pro Asn Gln Ser Asp Leu Ile Glu Gln Ala Ala Glu Met Leu Tyr
 65 70 75 80

Gly Leu Ile His Ala Arg Tyr Ile Leu Thr Asn Arg Gly Ile Ala Gln
 85 90 95

Met Leu Glu Lys Tyr Gln Gln Gly Asp Phe Gly Tyr Cys Pro Arg Val
 100 105 110

Tyr Cys Glu Asn Gln Pro Met Leu Pro Ile Gly Leu Ser Asp Ile Pro
 115 120 125

Gly Glu Ala Met Val Lys Leu Tyr Cys Pro Lys Cys Met Asp Val Tyr
 130 135 140

Thr Pro Lys Ser Ser Arg His His His Thr Asp Gly Ala Tyr Phe Gly
 145 150 155 160

Thr Gly Phe Pro His Met Leu Phe Met Val His Pro Glu Tyr Arg Pro
 165 170 175

Lys Arg Pro Ala Asn Gln Phe Val Pro Arg Leu Tyr Gly Phe Lys Ile
180 185 190

His Pro Met Ala Tyr Gln Leu Gln Leu Gln Ala Ala Ser Asn Phe Lys
195 200 205

Ser Pro Val Lys Thr Ile Arg
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Met Glu Lys Cys Lys Gly Thr Ser Arg Met Ala Gly Thr Thr Ser Ala
1 5 10 15

Asp Val Lys Met Ser Ser Ser Glu Glu Val Ser Trp Ile Ser Trp Phe
20 25 30

Cys Gly Leu Arg Gly Asn Glu Phe Phe Cys Glu Val Asp Glu Asp Tyr
35 40 45

Ile Gln Asp Lys Phe Asn Leu Thr Gly Leu Asn Glu Gln Val Pro His
50 55 60

Tyr Arg Gln Ala Leu Asp Met Ile Leu Asp Leu Glu Pro Asp Glu Glu
65 70 75 80

Leu Glu Asp Asn Pro Asn Gln Ser Asp Leu Ile Glu Gln Ala Ala Glu
26955

85

90

95

Met Leu Tyr Gly Leu Ile His Ala Arg Tyr Ile Leu Thr Asn Arg Gly
 100 105 110

Ile Ala Gln Met Leu Glu Lys Tyr Gln Gln Gly Asp Phe Gly Tyr Cys
 115 120 125

Pro Arg Val Tyr Cys Glu Asn Gln Pro Met Leu Pro Ile Gly Leu Ser
 130 135 140

Asp Ile Pro Gly Glu Ala Met Val Lys Leu Tyr Cys Pro Lys Cys Met
 145 150 155 160

Asp Val Tyr Thr Pro Lys Ser Ser Arg His His His Thr Asp Gly Ala
 165 170 175

Tyr Phe Gly Thr Gly Phe Pro His Met Leu Phe Met Val His Pro Glu
 180 185 190

Tyr Arg Pro Lys Arg Pro Ala Asn Gln Phe Val Pro Arg Leu Tyr Gly
 195 200 205

Phe Lys Ile His Pro Met Ala Tyr Gln Leu Gln Leu Gln Ala Ala Ser
 210 215 220

Asn Phe Lys Ser Pro Val Lys Thr Ile Arg
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<210> 12161

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Arg Gly Asn Glu Phe Phe Cys Glu Val Asp Glu Asp Tyr Ile Gln Asp
 20 25 30

Lys Phe Asn Leu Thr Gly Leu Asn Glu Gln Val Pro His Tyr Arg Gln
 35 40 45

Ala Leu Asp Met Ile Leu Asp Leu Glu Pro Asp Glu Glu Leu Glu Asp
 50 55 60

Asn Pro Asn Gln Ser Asp Leu Ile Glu Gln Ala Ala Glu Met Leu Tyr
 65 70 75 80

Gly Leu Ile His Ala Arg Tyr Ile Leu Thr Asn Arg Gly Ile Ala Gln
 85 90 95

Met Leu Glu Lys Tyr Gln Gln Gly Asp Phe Gly Tyr Cys Pro Arg Val
 100 105 110

Tyr Cys Glu Asn Gln Pro Met Leu Pro Ile Gly Leu Ser Asp Ile Pro
 115 120 125

Gly Glu Ala Met Val Lys Leu Tyr Cys Pro Lys Cys Met Asp Val Tyr
 130 135 140

Thr Pro Lys Ser Ser Arg His His His Thr Asp Gly Ala Tyr Phe Gly
 145 150 155 160

Thr Gly Phe Pro His Met Leu Phe Met Val His Pro Glu Tyr Arg Pro
 165 170 175

Lys Arg Pro Ala Asn Gln Phe Val Pro Arg Leu Tyr Gly Phe Lys Ile
 180 185 190

His Pro Met Ala Tyr Gln Leu Gln Leu Gln Ala Ala Ser Asn Phe Lys
195 200 205

Ser Pro Val Lys Thr Ile Arg
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Arg Gly Asn Glu Phe Phe Cys Glu Val Asp Glu Asp Tyr Ile Gln Asp
20 25 30

Lys Phe Asn Leu Thr Gly Leu Asn Glu Gln Val Pro His Tyr Arg Gln
35 40 45

Ala Leu Asp Met Ile Leu Asp Leu Glu Pro Asp Glu Glu Leu Glu Asp
50 55 60

Asn Pro Asn Gln Ser Asp Leu Ile Glu Gln Ala Ala Glu Met Leu Tyr
65 70 75 80

Gly Leu Ile His Ala Arg Tyr Ile Leu Thr Asn Arg Gly Ile Ala Gln
85 90 95

26958

Met Leu Glu Lys Tyr Gln Gln Gly Asp Phe Gly Tyr Cys Pro Arg Val
100 105 110

Tyr Cys Glu Asn Gln Pro Met Leu Pro Ile Gly Leu Ser Asp Ile Pro
115 120 125

Gly Glu Ala Met Val Lys Leu Tyr Cys Pro Lys Cys Met Asp Val Tyr
130 135 140

Thr Pro Lys Ser Ser Arg His His His Thr Asp Gly Ala Tyr Phe Gly
145 150 155 160

Thr Gly Phe Pro His Met Leu Phe Met Val His Pro Glu Tyr Arg Pro
165 170 175

Lys Arg Pro Ala Asn Gln Phe Val Pro Arg Leu Tyr Gly Phe Lys Ile
180 185 190

His Pro Met Ala Tyr Gln Leu Gln Leu Gln Ala Ala Ser Asn Phe Lys
195 200 205

Ser Pro Val Lys Thr Ile Arg
210 215

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<223> /note="ENSP ID: ENSP00000413092"

<400> 12163

Met	Glu	Lys	Cys	Lys	Gly	Thr	Ser	Arg	Met	Ala	Gly	Thr	Thr	Ser	Ala			
1				5					10					15				
Asp	Val	Lys	Met	Ser	Ser	Ser	Glu	Glu	Val	Ser	Trp	Ile	Ser	Trp	Phe			
			20					25					30					
Cys	Gly	Leu	Arg	Gly	Asn	Glu	Phe	Phe	Cys	Glu	Val	Asp	Glu	Asp	Tyr			
		35					40					45						
Ile	Gln	Asp	Lys	Phe	Asn	Leu	Thr	Gly	Leu	Asn	Glu	Gln	Val	Pro	His			
	50					55					60							
Tyr	Arg	Gln	Ala	Leu	Asp	Met	Ile	Leu	Asp	Leu	Glu	Pro	Asp	Glu	Glu			
65					70					75					80			
Leu	Glu	Asp	Asn	Pro	Asn	Gln	Ser	Asp	Leu	Ile	Glu	Gln	Ala	Ala	Glu			
				85					90					95				
Met	Leu	Tyr	Gly	Leu	Ile	His	Ala	Arg	Tyr	Ile	Leu	Thr	Asn	Arg	Gly			
			100					105					110					
Ile	Ala	Gln	Met	Leu	Glu	Lys	Tyr	Gln	Gln	Gly	Asp	Phe	Gly	Tyr	Cys			
		115					120					125						
Pro	Arg	Val	Tyr	Cys	Glu	Asn	Gln	Pro	Met	Leu	Pro	Ile	Gly	Leu	Ser			
	130					135					140							
Asp	Ile	Pro	Gly	Glu	Ala	Met	Val	Lys	Leu	Tyr	Cys	Pro	Lys	Cys	Met			
145					150					155					160			
Asp	Val	Tyr	Thr	Pro	Lys	Ser	Ser	Arg	His	His	His	Thr	Asp	Gly	Ala			
				165					170					175				
Tyr	Phe	Gly	Thr	Gly	Phe	Pro	His	Met	Leu	Phe	Met	Val	His	Pro	Glu			
			180					185					190					
Tyr	Arg	Pro	Lys	Arg	Pro	Ala	Asn	Gln	Phe	Val	Pro	Arg	Leu	Tyr	Gly			
		195					200					205						
Phe	Lys	Ile	His	Pro	Met	Ala	Tyr	Gln	Leu	Gln	Leu	Gln	Ala	Ala	Ser			
	210					215					220							
Asn	Phe	Lys	Ser	Pro	Val	Lys	Thr	Ile	Arg									

225

230

<210> 12164

<211> 215

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<213> Homo sapiens

<220>

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<223> /note="Payload ID: 2400"

<220>

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<223> /note="Gene Symbol: CSNK2B"

<220>

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<223> /note="Gene Name:
casein kinase 2, beta polypeptide"

<220>

<221> source

<223> /note="Uniprot ID: P67870"

<220>

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<223> /note="ENSP ID: ENSP00000413469"

<400> 12164

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1				5				10					15	

Arg	Gly	Asn	Glu	Phe	Phe	Cys	Glu	Val	Asp	Glu	Asp	Tyr	Ile	Gln	Asp
			20					25					30		

Lys	Phe	Asn	Leu	Thr	Gly	Leu	Asn	Glu	Gln	Val	Pro	His	Tyr	Arg	Gln
		35					40					45			

Ala	Leu	Asp	Met	Ile	Leu	Asp	Leu	Glu	Pro	Asp	Glu	Glu	Leu	Glu	Asp
	50					55					60				

Asn	Pro	Asn	Gln	Ser	Asp	Leu	Ile	Glu	Gln	Ala	Ala	Glu	Met	Leu	Tyr
65					70					75					80

Gly	Leu	Ile	His	Ala	Arg	Tyr	Ile	Leu	Thr	Asn	Arg	Gly	Ile	Ala	Gln
				85					90					95	

Met	Leu	Glu	Lys	Tyr	Gln	Gln	Gly	Asp	Phe	Gly	Tyr	Cys	Pro	Arg	Val
			100					105					110		

26961

Tyr Cys Glu Asn Gln Pro Met Leu Pro Ile Gly Leu Ser Asp Ile Pro
115 120 125

Gly Glu Ala Met Val Lys Leu Tyr Cys Pro Lys Cys Met Asp Val Tyr
130 135 140

Thr Pro Lys Ser Ser Arg His His His Thr Asp Gly Ala Tyr Phe Gly
145 150 155 160

Thr Gly Phe Pro His Met Leu Phe Met Val His Pro Glu Tyr Arg Pro
165 170 175

Lys Arg Pro Ala Asn Gln Phe Val Pro Arg Leu Tyr Gly Phe Lys Ile
180 185 190

His Pro Met Ala Tyr Gln Leu Gln Leu Gln Ala Ala Ser Asn Phe Lys
195 200 205

Ser Pro Val Lys Thr Ile Arg
210 215

<210> 12165
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<213> Homo sapiens

<220>
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<220>
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<220>
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<223> /note="Gene Name:
casein kinase 2, beta polypeptide"

<220>
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<223> /note="Uniprot ID: P67870"

<220>
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<400> 12165
Met Ser Ser Ser Glu Glu Val Ser Trp Ile Ser Trp Phe Cys Gly Leu

1	5	10	15
Arg Gly Asn Glu Phe Phe Cys Glu Val Asp Glu Asp Tyr Ile Gln Asp	20	25	30
Lys Phe Asn Leu Thr Gly Leu Asn Glu Gln Val Pro His Tyr Arg Gln	35	40	45
Ala Leu Asp Met Ile Leu Asp Leu Glu Pro Asp Glu Glu Leu Glu Asp	50	55	60
Asn Pro Asn Gln Ser Asp Leu Ile Glu Gln Ala Ala Glu Met Leu Tyr	65	70	75
Gly Leu Ile His Ala Arg Tyr Ile Leu Thr Asn Arg Gly Ile Ala Gln	85	90	95
Met Leu Glu Lys Tyr Gln Gln Gly Asp Phe Gly Tyr Cys Pro Arg Val	100	105	110
Tyr Cys Glu Asn Gln Pro Met Leu Pro Ile Gly Leu Ser Asp Ile Pro	115	120	125
Gly Glu Ala Met Val Lys Leu Tyr Cys Pro Lys Cys Met Asp Val Tyr	130	135	140
Thr Pro Lys Ser Ser Arg His His His Thr Asp Gly Ala Tyr Phe Gly	145	150	155
Thr Gly Phe Pro His Met Leu Phe Met Val His Pro Glu Tyr Arg Pro	165	170	175
Lys Arg Pro Ala Asn Gln Phe Val Pro Arg Leu Tyr Gly Phe Lys Ile	180	185	190
His Pro Met Ala Tyr Gln Leu Gln Leu Gln Ala Ala Ser Asn Phe Lys	195	200	205
Ser Pro Val Lys Thr Ile Arg	210	215	

<210> 12166
<211> 215

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<212> PRT
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<220>
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<223> /note="Gene Name:
        casein kinase 2, beta polypeptide"

<220>
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<220>
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<223> /note="ENSP ID: ENSP00000415303"

<400> 12166
Met Ser Ser Ser Glu Val Ser Trp Ile Ser Trp Phe Cys Gly Leu
1          5          10          15

Arg Gly Asn Glu Phe Phe Cys Glu Val Asp Glu Asp Tyr Ile Gln Asp
          20          25          30

Lys Phe Asn Leu Thr Gly Leu Asn Glu Gln Val Pro His Tyr Arg Gln
          35          40          45

Ala Leu Asp Met Ile Leu Asp Leu Glu Pro Asp Glu Glu Leu Glu Asp
          50          55          60

Asn Pro Asn Gln Ser Asp Leu Ile Glu Gln Ala Ala Glu Met Leu Tyr
65          70          75          80

Gly Leu Ile His Ala Arg Tyr Ile Leu Thr Asn Arg Gly Ile Ala Gln
          85          90          95

Met Leu Glu Lys Tyr Gln Gln Gly Asp Phe Gly Tyr Cys Pro Arg Val
          100          105          110

Tyr Cys Glu Asn Gln Pro Met Leu Pro Ile Gly Leu Ser Asp Ile Pro
          115          120          125

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Gly Glu Ala Met Val Lys Leu Tyr Cys Pro Lys Cys Met Asp Val Tyr
130 135 140

Thr Pro Lys Ser Ser Arg His His His Thr Asp Gly Ala Tyr Phe Gly
145 150 155 160

Thr Gly Phe Pro His Met Leu Phe Met Val His Pro Glu Tyr Arg Pro
165 170 175

Lys Arg Pro Ala Asn Gln Phe Val Pro Arg Leu Tyr Gly Phe Lys Ile
180 185 190

His Pro Met Ala Tyr Gln Leu Gln Leu Gln Ala Ala Ser Asn Phe Lys
195 200 205

Ser Pro Val Lys Thr Ile Arg
210 215

<210> 12167
<211> 234
<212> PRT
<213> Homo sapiens

<220>
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<220>
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casein kinase 2, beta polypeptide"

<220>
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<400> 12167
Met Glu Lys Cys Lys Gly Thr Ser Arg Met Ala Gly Thr Thr Ser Ala
1 5 10 15

Asp Val Lys Met Ser Ser Ser Glu Glu Val Ser Trp Ile Ser Trp Phe
20 25 30

Cys Gly Leu Arg Gly Asn Glu Phe Phe Cys Glu Val Asp Glu Asp Tyr
35 40 45

Ile	Gln	Asp	Lys	Phe	Asn	Leu	Thr	Gly	Leu	Asn	Glu	Gln	Val	Pro	His			
50						55					60							
Tyr	Arg	Gln	Ala	Leu	Asp	Met	Ile	Leu	Asp	Leu	Glu	Pro	Asp	Glu	Glu			
65					70					75					80			
Leu	Glu	Asp	Asn	Pro	Asn	Gln	Ser	Asp	Leu	Ile	Glu	Gln	Ala	Ala	Glu			
				85					90					95				
Met	Leu	Tyr	Gly	Leu	Ile	His	Ala	Arg	Tyr	Ile	Leu	Thr	Asn	Arg	Gly			
			100					105					110					
Ile	Ala	Gln	Met	Leu	Glu	Lys	Tyr	Gln	Gln	Gly	Asp	Phe	Gly	Tyr	Cys			
		115					120					125						
Pro	Arg	Val	Tyr	Cys	Glu	Asn	Gln	Pro	Met	Leu	Pro	Ile	Gly	Leu	Ser			
	130					135					140							
Asp	Ile	Pro	Gly	Glu	Ala	Met	Val	Lys	Leu	Tyr	Cys	Pro	Lys	Cys	Met			
145					150					155					160			
Asp	Val	Tyr	Thr	Pro	Lys	Ser	Ser	Arg	His	His	His	Thr	Asp	Gly	Ala			
				165					170					175				
Tyr	Phe	Gly	Thr	Gly	Phe	Pro	His	Met	Leu	Phe	Met	Val	His	Pro	Glu			
			180					185					190					
Tyr	Arg	Pro	Lys	Arg	Pro	Ala	Asn	Gln	Phe	Val	Pro	Arg	Leu	Tyr	Gly			
		195					200					205						
Phe	Lys	Ile	His	Pro	Met	Ala	Tyr	Gln	Leu	Gln	Leu	Gln	Ala	Ala	Ser			
	210					215					220							
Asn	Phe	Lys	Ser	Pro	Val	Lys	Thr	Ile	Arg									
225					230													

<210> 12168

<211> 228

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2400"

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<223> /note="Gene Symbol: CSNK2B"

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<221> source

<223> /note="Gene Name:
casein kinase 2, beta polypeptide"

<220>

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<223> /note="ENSP ID: ENSP00000477593"

<400> 12168

Met Ser Ser Ser Glu Glu Val Ser Trp Ile Ser Trp Phe Cys Gly Leu
1 5 10 15

Arg Gly Asn Glu Phe Phe Cys Glu Val Asp Glu Asp Tyr Ile Gln Asp
20 25 30

Lys Phe Asn Leu Thr Gly Leu Asn Glu Gln Val Pro His Tyr Arg Gln
35 40 45

Ala Leu Asp Met Ile Leu Asp Leu Glu Pro Asp Glu Glu Leu Glu Asp
50 55 60

Asn Pro Asn Gln Ser Asp Leu Ile Glu Gln Ala Ala Glu Met Leu Tyr
65 70 75 80

Gly Leu Ile His Ala Arg Tyr Ile Leu Thr Asn Arg Gly Ile Ala Gln
85 90 95

Met Leu Glu Lys Tyr Gln Gln Gly Asp Phe Gly Tyr Cys Pro Arg Val
100 105 110

Tyr Cys Glu Asn Gln Pro Met Leu Pro Ile Gly Leu Ser Asp Ile Pro
115 120 125

Gly Glu Ala Met Val Lys Leu Tyr Cys Pro Lys Cys Met Asp Val Tyr
130 135 140

Thr Pro Lys Ser Ser Arg His His His Thr Asp Gly Ala Tyr Phe Gly
145 150 155 160

Thr Gly Phe Pro His Met Leu Phe Met Val His Pro Glu Tyr Arg Pro

	165		170		175										
Lys	Arg	Pro	Ala	Asn	Gln	Phe	Val	Pro	Ser	Ser	Cys	Ser	Arg	His	Pro
			180					185					190		
Asp	Val	Pro	Leu	Leu	Pro	Arg	Arg	Arg	Pro	Phe	Cys	Arg	Met	His	Phe
		195					200					205			
Arg	Leu	Arg	Glu	Val	Tyr	His	Gln	Gln	Leu	Ile	Pro	Val	His	Gly	Asp
	210					215					220				
His	His	Leu	Leu												
225															

<210> 12169
 <211> 161
 <212> PRT
 <213> Homo sapiens

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 <223> /note="Gene Name:
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 <400> 12169
 Met Ser Ser Ser Glu Glu Val Ser Trp Ile Ser Trp Phe Cys Gly Leu
 1 5 10 15

 Arg Gly Asn Glu Phe Phe Cys Glu Val Asp Glu Asp Tyr Ile Gln Asp
 20 25 30

 Lys Phe Asn Leu Thr Gly Leu Asn Glu Gln Val Pro His Tyr Arg Gln
 35 40 45

 Ala Leu Asp Met Ile Leu Asp Leu Glu Pro Asp Glu Glu Leu Glu Asp
 50 55 60

Asn Pro Asn Gln Ser Asp Leu Ile Glu Gln Ala Ala Glu Met Leu Tyr
65 70 75 80

Gly Leu Ile His Ala Leu Pro Leu Ser Asp Ser Gln Ile Gln Trp Phe
85 90 95

Tyr Gln Ala Leu Asn Leu Ser Leu Pro Leu Pro Asn Phe His Ala Gly
100 105 110

Thr Glu Pro Asp Gly Leu Asp Pro Met Val Thr Leu Ser Leu Asn Leu
115 120 125

Gly Leu Ser Phe Ala Glu Leu Arg Arg Met Tyr Leu Phe Leu Asn Ser
130 135 140

Ser Gly Leu Leu Val Leu Pro Gln Ala Gly Leu Leu Thr Pro His Pro
145 150 155 160

Ser

<210> 12170
<211> 304
<212> PRT
<213> Homo sapiens

<220>
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<220>
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<220>
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<223> /note="Gene Name:
casein kinase 2, beta polypeptide"

<220>
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<223> /note="ENSP ID: ENSP00000478364"

<400> 12170
Met Ser Ser Ser Glu Glu Val Ser Trp Ile Ser Trp Phe Cys Gly Leu
1 5 10 15

Arg Gly Asn Glu Phe Phe Cys Glu Val Asp Glu Asp Tyr Ile Gln Asp

20					25					30					
Lys	Phe	Asn	Leu	Thr	Gly	Leu	Asn	Glu	Gln	Val	Pro	His	Tyr	Arg	Gln
		35					40					45			
Ala	Leu	Asp	Met	Ile	Leu	Asp	Leu	Glu	Pro	Asp	Glu	Glu	Leu	Glu	Asp
	50					55					60				
Asn	Pro	Asn	Gln	Ser	Asp	Leu	Ile	Glu	Gln	Ala	Ala	Glu	Met	Leu	Tyr
65					70					75					80
Gly	Leu	Ile	His	Ala	Arg	Tyr	Ile	Leu	Thr	Asn	Arg	Gly	Ile	Ala	Gln
				85					90					95	
Met	Leu	Glu	Lys	Tyr	Gln	Gln	Gly	Asp	Phe	Gly	Tyr	Cys	Pro	Arg	Val
			100					105					110		
Tyr	Cys	Glu	Asn	Gln	Pro	Met	Leu	Pro	Ile	Val	Pro	Val	Pro	Asp	Ile
		115					120					125			
Arg	Thr	Cys	His	Phe	Cys	Leu	Val	Glu	Asp	Pro	Ser	Val	Gly	Cys	Ile
	130					135					140				
Ser	Gly	Ser	Glu	Lys	Cys	Thr	Ile	Ser	Ser	Ser	Ser	Leu	Cys	Met	Val
145					150					155					160
Ile	Thr	Ile	Tyr	Tyr	Asp	Val	Lys	Val	Arg	Phe	Ile	Val	Arg	Gly	Cys
				165					170					175	
Gly	Gln	Tyr	Ile	Ser	Tyr	Arg	Cys	Gln	Glu	Lys	Arg	Asn	Thr	Tyr	Phe
			180					185					190		
Ala	Glu	Tyr	Trp	Tyr	Gln	Ala	Gln	Cys	Cys	Gln	Tyr	Asp	Tyr	Cys	Asn
		195					200					205			
Ser	Trp	Ser	Ser	Pro	Gln	Leu	Gln	Ser	Ser	Leu	Pro	Glu	Pro	His	Asp
	210					215					220				
Arg	Pro	Leu	Ala	Leu	Pro	Leu	Ser	Asp	Ser	Gln	Ile	Gln	Trp	Phe	Tyr
225					230					235					240
Gln	Ala	Leu	Asn	Leu	Ser	Leu	Pro	Leu	Pro	Asn	Phe	His	Ala	Gly	Thr
			245						250					255	

Glu Pro Asp Gly Leu Asp Pro Met Val Thr Leu Ser Leu Asn Leu Gly
260 265 270

Leu Ser Phe Ala Glu Leu Cys Arg Met Tyr Leu Phe Leu Asn Ser Ser
275 280 285

Gly Leu Leu Val Leu Pro Gln Ala Gly Leu Leu Thr Pro His Pro Ser
290 295 300

<210> 12171

<211> 161

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2400"

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<223> /note="Gene Symbol: CSNK2B"

<220>

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<223> /note="Gene Name:
casein kinase 2, beta polypeptide"

<220>

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<223> /note="ENSP ID: ENSP00000478586"

<400> 12171

Met Ser Ser Ser Glu Glu Val Ser Trp Ile Ser Trp Phe Cys Gly Leu
1 5 10 15

Arg Gly Asn Glu Phe Phe Cys Glu Val Asp Glu Asp Tyr Ile Gln Asp
20 25 30

Lys Phe Asn Leu Thr Gly Leu Asn Glu Gln Val Pro His Tyr Arg Gln
35 40 45

Ala Leu Asp Met Ile Leu Asp Leu Glu Pro Asp Glu Glu Leu Glu Asp
50 55 60

Asn Pro Asn Gln Ser Asp Leu Ile Glu Gln Ala Ala Glu Met Leu Tyr
65 70 75 80

Gly Leu Ile His Ala Leu Pro Leu Ser Asp Ser Gln Ile Gln Trp Phe
85 90 95

Tyr Gln Ala Leu Asn Leu Ser Leu Pro Leu Pro Asn Phe His Ala Gly
100 105 110

Thr Glu Pro Asp Gly Leu Asp Pro Met Val Thr Leu Ser Leu Asn Leu
115 120 125

Gly Leu Ser Phe Ala Glu Leu Cys Arg Met Tyr Leu Phe Leu Asn Ser
130 135 140

Ser Gly Leu Leu Val Leu Pro Gln Ala Gly Leu Leu Thr Pro His Pro
145 150 155 160

Ser

<210> 12172
<211> 304
<212> PRT
<213> Homo sapiens

<220>
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<223> /note="Payload ID: 2400"

<220>
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<220>
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<223> /note="Gene Name:
casein kinase 2, beta polypeptide"

<220>
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<223> /note="ENSP ID: ENSP00000478717"

<400> 12172
Met Ser Ser Ser Glu Glu Val Ser Trp Ile Ser Trp Phe Cys Gly Leu
1 5 10 15

Arg Gly Asn Glu Phe Phe Cys Glu Val Asp Glu Asp Tyr Ile Gln Asp
20 25 30

Lys Phe Asn Leu Thr Gly Leu Asn Glu Gln Val Pro His Tyr Arg Gln
35 40 45

Ala	Leu	Asp	Met	Ile	Leu	Asp	Leu	Glu	Pro	Asp	Glu	Glu	Leu	Glu	Asp	
50						55					60					
Asn	Pro	Asn	Gln	Ser	Asp	Leu	Ile	Glu	Gln	Ala	Ala	Glu	Met	Leu	Tyr	
65					70					75					80	
Gly	Leu	Ile	His	Ala	Arg	Tyr	Ile	Leu	Thr	Asn	Arg	Gly	Ile	Ala	Gln	
				85					90					95		
Met	Leu	Glu	Lys	Tyr	Gln	Gln	Gly	Asp	Phe	Gly	Tyr	Cys	Pro	Arg	Val	
			100					105					110			
Tyr	Cys	Glu	Asn	Gln	Pro	Met	Leu	Pro	Ile	Val	Pro	Val	Pro	Asp	Ile	
		115					120					125				
Arg	Thr	Cys	His	Phe	Cys	Leu	Val	Glu	Asp	Pro	Ser	Val	Gly	Cys	Ile	
	130					135					140					
Ser	Gly	Ser	Glu	Lys	Cys	Thr	Ile	Ser	Ser	Ser	Ser	Leu	Cys	Met	Val	
145					150					155					160	
Ile	Thr	Ile	Tyr	Tyr	Asp	Val	Lys	Val	Arg	Phe	Ile	Val	Arg	Gly	Cys	
				165					170					175		
Gly	Gln	Tyr	Ile	Ser	Tyr	Arg	Cys	Gln	Glu	Lys	Arg	Asn	Thr	Tyr	Phe	
			180					185					190			
Ala	Glu	Tyr	Trp	Tyr	Gln	Ala	Gln	Cys	Cys	Gln	Tyr	Asp	Tyr	Cys	Asn	
		195					200					205				
Ser	Trp	Ser	Ser	Pro	Gln	Leu	Gln	Ser	Ser	Leu	Pro	Glu	Pro	His	Asp	
	210					215					220					
Arg	Pro	Leu	Ala	Leu	Pro	Leu	Ser	Asp	Ser	Gln	Ile	Gln	Trp	Phe	Tyr	
225					230					235					240	
Gln	Ala	Leu	Asn	Leu	Ser	Leu	Pro	Leu	Pro	Asn	Phe	His	Ala	Gly	Thr	
				245					250					255		
Glu	Pro	Asp	Gly	Leu	Asp	Pro	Met	Val	Thr	Leu	Ser	Leu	Asn	Leu	Gly	
			260					265					270			

Leu Ser Phe Ala Glu Leu Cys Arg Met Tyr Leu Phe Leu Asn Ser Ser
275 280 285

Gly Leu Leu Val Leu Pro Gln Ala Gly Leu Leu Thr Pro His Pro Ser
290 295 300

<210> 12173

<211> 161

<212> PRT

<213> Homo sapiens

<220>

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<223> /note="Payload ID: 2400"

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<221> source

<223> /note="Gene Symbol: CSNK2B"

<220>

<221> source

<223> /note="Gene Name:
casein kinase 2, beta polypeptide"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000478919"

<400> 12173

Met Ser Ser Ser Glu Glu Val Ser Trp Ile Ser Trp Phe Cys Gly Leu
1 5 10 15

Arg Gly Asn Glu Phe Phe Cys Glu Val Asp Glu Asp Tyr Ile Gln Asp
20 25 30

Lys Phe Asn Leu Thr Gly Leu Asn Glu Gln Val Pro His Tyr Arg Gln
35 40 45

Ala Leu Asp Met Ile Leu Asp Leu Glu Pro Asp Glu Glu Leu Glu Asp
50 55 60

Asn Pro Asn Gln Ser Asp Leu Ile Glu Gln Ala Ala Glu Met Leu Tyr
65 70 75 80

Gly Leu Ile His Ala Leu Pro Leu Ser Asp Ser Gln Ile Gln Trp Phe
85 90 95

Tyr Gln Ala Leu Asn Leu Ser Leu Pro Leu Pro Asn Phe His Ala Gly

26974

100 105 110
 Thr Glu Pro Asp Gly Leu Asp Pro Met Val Thr Leu Ser Leu Asn Leu
 115 120 125
 Gly Leu Ser Phe Ala Glu Leu Arg Arg Met Tyr Leu Phe Leu Asn Ser
 130 135 140
 Ser Gly Leu Leu Val Leu Pro Gln Ala Gly Leu Leu Thr Pro His Pro
 145 150 155 160

Ser

<210> 12174
 <211> 304
 <212> PRT
 <213> Homo sapiens

<220>
 <221> source
 <223> /note="Payload ID: 2400"

<220>
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 <223> /note="Gene Symbol: CSNK2B"

<220>
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 <223> /note="Gene Name:
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<220>
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 <223> /note="ENSP ID: ENSP00000480237"

<400> 12174
 Met Ser Ser Ser Glu Glu Val Ser Trp Ile Ser Trp Phe Cys Gly Leu
 1 5 10 15

Arg Gly Asn Glu Phe Phe Cys Glu Val Asp Glu Asp Tyr Ile Gln Asp
 20 25 30

Lys Phe Asn Leu Thr Gly Leu Asn Glu Gln Val Pro His Tyr Arg Gln
 35 40 45

Ala Leu Asp Met Ile Leu Asp Leu Glu Pro Asp Glu Glu Leu Glu Asp
 50 55 60

Asn	Pro	Asn	Gln	Ser	Asp	Leu	Ile	Glu	Gln	Ala	Ala	Glu	Met	Leu	Tyr	
65					70					75					80	
Gly	Leu	Ile	His	Ala	Arg	Tyr	Ile	Leu	Thr	Asn	Arg	Gly	Ile	Ala	Gln	
				85					90					95		
Met	Leu	Glu	Lys	Tyr	Gln	Gln	Gly	Asp	Phe	Gly	Tyr	Cys	Pro	Arg	Val	
			100					105					110			
Tyr	Cys	Glu	Asn	Gln	Pro	Met	Leu	Pro	Ile	Val	Pro	Val	Pro	Asp	Ile	
		115					120					125				
Arg	Thr	Cys	His	Phe	Cys	Leu	Val	Glu	Asp	Pro	Ser	Val	Gly	Cys	Ile	
	130					135					140					
Ser	Gly	Ser	Glu	Lys	Cys	Thr	Ile	Ser	Ser	Ser	Ser	Leu	Cys	Met	Val	
145					150					155					160	
Ile	Thr	Ile	Tyr	Tyr	Asp	Val	Lys	Val	Arg	Phe	Ile	Val	Arg	Gly	Cys	
				165					170					175		
Gly	Gln	Tyr	Ile	Ser	Tyr	Arg	Cys	Gln	Glu	Lys	Arg	Asn	Thr	Tyr	Phe	
			180					185					190			
Ala	Glu	Tyr	Trp	Tyr	Gln	Ala	Gln	Cys	Cys	Gln	Tyr	Asp	Tyr	Cys	Asn	
		195					200					205				
Ser	Trp	Ser	Ser	Pro	Gln	Leu	Gln	Ser	Ser	Leu	Pro	Glu	Pro	His	Asp	
	210					215					220					
Arg	Pro	Leu	Ala	Leu	Pro	Leu	Ser	Asp	Ser	Gln	Ile	Gln	Trp	Phe	Tyr	
225					230					235					240	
Gln	Ala	Leu	Asn	Leu	Ser	Leu	Pro	Leu	Pro	Asn	Phe	His	Ala	Gly	Thr	
				245					250					255		
Glu	Pro	Asp	Gly	Leu	Asp	Pro	Met	Val	Thr	Leu	Ser	Leu	Asn	Leu	Gly	
			260					265					270			
Leu	Ser	Phe	Ala	Glu	Leu	Arg	Arg	Met	Tyr	Leu	Phe	Leu	Asn	Ser	Ser	
		275					280					285				

Gly Leu Leu Val Leu Pro Gln Ala Gly Leu Leu Thr Pro His Pro Ser
 290 295 300

<210> 12175

<211> 228

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<220>

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<223> /note="Payload ID: 2400"

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<223> /note="Gene Symbol: CSNK2B"

<220>

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<223> /note="Gene Name:
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<220>

<221> source

<223> /note="ENSP ID: ENSP00000480787"

<400> 12175

Met Ser Ser Ser Glu Val Ser Trp Ile Ser Trp Phe Cys Gly Leu
 1 5 10 15

Arg Gly Asn Glu Phe Phe Cys Glu Val Asp Glu Asp Tyr Ile Gln Asp
 20 25 30

Lys Phe Asn Leu Thr Gly Leu Asn Glu Gln Val Pro His Tyr Arg Gln
 35 40 45

Ala Leu Asp Met Ile Leu Asp Leu Glu Pro Asp Glu Glu Leu Glu Asp
 50 55 60

Asn Pro Asn Gln Ser Asp Leu Ile Glu Gln Ala Ala Glu Met Leu Tyr
 65 70 75 80

Gly Leu Ile His Ala Arg Tyr Ile Leu Thr Asn Arg Gly Ile Ala Gln
 85 90 95

Met Leu Glu Lys Tyr Gln Gln Gly Asp Phe Gly Tyr Cys Pro Arg Val
 100 105 110

Tyr Cys Glu Asn Gln Pro Met Leu Pro Ile Gly Leu Ser Asp Ile Pro
 115 120 125

Gly Glu Ala Met Val Lys Leu Tyr Cys Pro Lys Cys Met Asp Val Tyr
 130 135 140

Thr Pro Lys Ser Ser Arg His His His Thr Asp Gly Ala Tyr Phe Gly
 145 150 155 160

Thr Gly Phe Pro His Met Leu Phe Met Val His Pro Glu Tyr Arg Pro
 165 170 175

Lys Arg Pro Ala Asn Gln Phe Val Pro Ser Ser Cys Ser Arg His Pro
 180 185 190

Asp Val Pro Leu Leu Pro Arg Arg Arg Pro Phe Cys Arg Met His Phe
 195 200 205

Arg Leu Arg Glu Val Tyr His Gln Gln Leu Ile Pro Val His Gly Asp
 210 215 220

His His Leu Leu
 225

<210> 12176
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<220>
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<220>
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 <223> /note="Gene Name:
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<220>
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<400> 12176
 Met Ser Ser Ser Glu Glu Val Ser Trp Ile Ser Trp Phe Cys Gly Leu
 1 5 10 15

Arg Gly Asn Glu Phe Phe Cys Glu Val Asp Glu Asp Tyr Ile Gln Asp
20 25 30

Lys Phe Asn Leu Thr Gly Leu Asn Glu Gln Val Pro His Tyr Arg Gln
35 40 45

Ala Leu Asp Met Ile Leu Asp Leu Glu Pro Asp Glu Glu Leu Glu Asp
50 55 60

Asn Pro Asn Gln Ser Asp Leu Ile Glu Gln Ala Ala Glu Met Leu Tyr
65 70 75 80

Gly Leu Ile His Ala Leu Pro Leu Ser Asp Ser Gln Ile Gln Trp Phe
85 90 95

Tyr Gln Ala Leu Asn Leu Ser Leu Pro Leu Pro Asn Phe His Ala Gly
100 105 110

Thr Glu Pro Asp Gly Leu Asp Pro Met Val Thr Leu Ser Leu Asn Leu
115 120 125

Gly Leu Ser Phe Ala Glu Leu Cys Arg Met Tyr Leu Phe Leu Asn Ser
130 135 140

Ser Gly Leu Leu Val Leu Pro Gln Ala Gly Leu Leu Thr Pro His Pro
145 150 155 160

Ser

<210> 12177
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<220>
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<220>

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<400> 12177

Met Ser Ser Ser Glu Glu Val Ser Trp Ile Ser Trp Phe Cys Gly Leu
1 5 10 15

Arg Gly Asn Glu Phe Phe Cys Glu Val Asp Glu Asp Tyr Ile Gln Asp
20 25 30

Lys Phe Asn Leu Thr Gly Leu Asn Glu Gln Val Pro His Tyr Arg Gln
35 40 45

Ala Leu Asp Met Ile Leu Asp Leu Glu Pro Asp Glu Glu Leu Glu Asp
50 55 60

Asn Pro Asn Gln Ser Asp Leu Ile Glu Gln Ala Ala Glu Met Leu Tyr
65 70 75 80

Gly Leu Ile His Ala Arg Tyr Ile Leu Thr Asn Arg Gly Ile Ala Gln
85 90 95

Met Leu Glu Lys Tyr Gln Gln Gly Asp Phe Gly Tyr Cys Pro Arg Val
100 105 110

Tyr Cys Glu Asn Gln Pro Met Leu Pro Ile Val Pro Val Pro Asp Ile
115 120 125

Arg Thr Cys His Phe Cys Leu Val Glu Asp Pro Ser Val Gly Cys Ile
130 135 140

Ser Gly Ser Glu Lys Cys Thr Ile Ser Ser Ser Ser Leu Cys Met Val
145 150 155 160

Ile Thr Ile Tyr Tyr Asp Val Lys Val Arg Phe Ile Val Arg Gly Cys
165 170 175

Gly Gln Tyr Ile Ser Tyr Arg Cys Gln Glu Lys Arg Asn Thr Tyr Phe
180 185 190

Ala Glu Tyr Trp Tyr Gln Ala Gln Cys Cys Gln Tyr Asp Tyr Cys Asn
195 200 205

Ser Trp Ser Ser Pro Gln Leu Gln Ser Ser Leu Pro Glu Pro His Asp
210 215 220

Arg Pro Leu Ala Leu Pro Leu Ser Asp Ser Gln Ile Gln Trp Phe Tyr
225 230 235 240

Gln Ala Leu Asn Leu Ser Leu Pro Leu Pro Asn Phe His Ala Gly Thr
245 250 255

Glu Pro Asp Gly Leu Asp Pro Met Val Thr Leu Ser Leu Asn Leu Gly
260 265 270

Leu Ser Phe Ala Glu Leu Arg Arg Met Tyr Leu Phe Leu Asn Ser Ser
275 280 285

Gly Leu Leu Val Leu Pro Gln Ala Gly Leu Leu Thr Pro His Pro Ser
290 295 300

<210> 12178
<211> 228
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<220>
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<220>
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casein kinase 2, beta polypeptide"

<220>
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<223> /note="ENSP ID: ENSP00000484115"

<400> 12178
Met Ser Ser Ser Glu Glu Val Ser Trp Ile Ser Trp Phe Cys Gly Leu
1 5 10 15

Arg Gly Asn Glu Phe Phe Cys Glu Val Asp Glu Asp Tyr Ile Gln Asp
20 25 30

Lys Phe Asn Leu Thr Gly Leu Asn Glu Gln Val Pro His Tyr Arg Gln

35					40					45					
Ala	Leu	Asp	Met	Ile	Leu	Asp	Leu	Glu	Pro	Asp	Glu	Glu	Leu	Glu	Asp
50						55					60				
Asn	Pro	Asn	Gln	Ser	Asp	Leu	Ile	Glu	Gln	Ala	Ala	Glu	Met	Leu	Tyr
65					70					75					80
Gly	Leu	Ile	His	Ala	Arg	Tyr	Ile	Leu	Thr	Asn	Arg	Gly	Ile	Ala	Gln
				85					90					95	
Met	Leu	Glu	Lys	Tyr	Gln	Gln	Gly	Asp	Phe	Gly	Tyr	Cys	Pro	Arg	Val
			100					105					110		
Tyr	Cys	Glu	Asn	Gln	Pro	Met	Leu	Pro	Ile	Gly	Leu	Ser	Asp	Ile	Pro
		115					120					125			
Gly	Glu	Ala	Met	Val	Lys	Leu	Tyr	Cys	Pro	Lys	Cys	Met	Asp	Val	Tyr
	130					135					140				
Thr	Pro	Lys	Ser	Ser	Arg	His	His	His	Thr	Asp	Gly	Ala	Tyr	Phe	Gly
145					150					155					160
Thr	Gly	Phe	Pro	His	Met	Leu	Phe	Met	Val	His	Pro	Glu	Tyr	Arg	Pro
				165					170					175	
Lys	Arg	Pro	Ala	Asn	Gln	Phe	Val	Pro	Ser	Ser	Cys	Ser	Arg	His	Pro
			180					185					190		
Asp	Val	Pro	Leu	Leu	Pro	Arg	Arg	Arg	Pro	Phe	Cys	Arg	Met	His	Phe
		195					200					205			
Arg	Leu	Arg	Glu	Val	Tyr	His	Gln	Gln	Leu	Ile	Pro	Val	His	Gly	Asp
	210					215					220				
His	His	Leu	Leu												
225															

<210> 12179

<211> 228

<212> PRT

<213> Homo sapiens

<220>

26982

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<220>
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<400> 12179
Met Ser Ser Ser Glu Glu Val Ser Trp Ile Ser Trp Phe Cys Gly Leu
1          5          10          15

Arg Gly Asn Glu Phe Phe Cys Glu Val Asp Glu Asp Tyr Ile Gln Asp
          20          25          30

Lys Phe Asn Leu Thr Gly Leu Asn Glu Gln Val Pro His Tyr Arg Gln
          35          40          45

Ala Leu Asp Met Ile Leu Asp Leu Glu Pro Asp Glu Glu Leu Glu Asp
          50          55          60

Asn Pro Asn Gln Ser Asp Leu Ile Glu Gln Ala Ala Glu Met Leu Tyr
65          70          75          80

Gly Leu Ile His Ala Arg Tyr Ile Leu Thr Asn Arg Gly Ile Ala Gln
          85          90          95

Met Leu Glu Lys Tyr Gln Gln Gly Asp Phe Gly Tyr Cys Pro Arg Val
          100          105          110

Tyr Cys Glu Asn Gln Pro Met Leu Pro Ile Gly Leu Ser Asp Ile Pro
          115          120          125

Gly Glu Ala Met Val Lys Leu Tyr Cys Pro Lys Cys Met Asp Val Tyr
          130          135          140

Thr Pro Lys Ser Ser Arg His His His Thr Asp Gly Ala Tyr Phe Gly
145          150          155          160

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Thr Gly Phe Pro His Met Leu Phe Met Val His Pro Glu Tyr Arg Pro
165 170 175

Lys Arg Pro Ala Asn Gln Phe Val Pro Ser Ser Cys Ser Arg His Pro
180 185 190

Asp Val Pro Leu Leu Pro Arg Arg Arg Pro Phe Cys Arg Met His Phe
195 200 205

Arg Leu Arg Glu Val Tyr His Gln Gln Leu Ile Pro Val His Gly Asp
210 215 220

His His Leu Leu
225

<210> 12180
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<213> Homo sapiens

<220>
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<223> /note="Payload ID: 2401"

<220>
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<220>
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<223> /note="Gene Name:
caseinolytic mitochondrial matrix peptidase chaperone
subunit"

<220>
<221> source
<223> /note="Uniprot ID: O76031"

<220>
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<223> /note="ENSP ID: ENSP00000300107"

<400> 12180
Met Pro Ser Cys Gly Ala Cys Thr Cys Gly Ala Ala Ala Val Arg Leu
1 5 10 15

Ile Thr Ser Ser Leu Ala Ser Ala Gln Arg Gly Ile Ser Gly Gly Arg
20 25 30

Ile His Met Ser Val Leu Gly Arg Leu Gly Thr Phe Glu Thr Gln Ile

35					40					45					
Leu	Gln	Arg	Ala	Pro	Leu	Arg	Ser	Phe	Thr	Glu	Thr	Pro	Ala	Tyr	Phe
50					55					60					
Ala	Ser	Lys	Asp	Gly	Ile	Ser	Lys	Asp	Gly	Ser	Gly	Asp	Gly	Asn	Lys
65				70					75					80	
Lys	Ser	Ala	Ser	Glu	Gly	Ser	Ser	Lys	Lys	Ser	Gly	Ser	Gly	Asn	Ser
				85					90					95	
Gly	Lys	Gly	Gly	Asn	Gln	Leu	Arg	Cys	Pro	Lys	Cys	Gly	Asp	Leu	Cys
			100					105					110		
Thr	His	Val	Glu	Thr	Phe	Val	Ser	Ser	Thr	Arg	Phe	Val	Lys	Cys	Glu
		115					120					125			
Lys	Cys	His	His	Phe	Phe	Val	Val	Leu	Ser	Glu	Ala	Asp	Ser	Lys	Lys
	130					135					140				
Ser	Ile	Ile	Lys	Glu	Pro	Glu	Ser	Ala	Ala	Glu	Ala	Val	Lys	Leu	Ala
145				150						155					160
Phe	Gln	Gln	Lys	Pro	Pro	Pro	Pro	Pro	Lys	Lys	Ile	Tyr	Asn	Tyr	Leu
				165					170					175	
Asp	Lys	Tyr	Val	Val	Gly	Gln	Ser	Phe	Ala	Lys	Lys	Val	Leu	Ser	Val
			180					185					190		
Ala	Val	Tyr	Asn	His	Tyr	Lys	Arg	Ile	Tyr	Asn	Asn	Ile	Pro	Ala	Asn
		195					200					205			
Leu	Arg	Gln	Gln	Ala	Glu	Val	Glu	Lys	Gln	Thr	Ser	Leu	Thr	Pro	Arg
	210					215					220				
Glu	Leu	Glu	Ile	Arg	Arg	Arg	Glu	Asp	Glu	Tyr	Arg	Phe	Thr	Lys	Leu
225				230					235						240
Leu	Gln	Ile	Ala	Gly	Ile	Ser	Pro	His	Gly	Asn	Ala	Leu	Gly	Ala	Ser
				245					250					255	
Met	Gln	Gln	Gln	Val	Asn	Gln	Gln	Ile	Pro	Gln	Glu	Lys	Arg	Gly	Gly
			260					265					270		

Glu	Val	Leu	Asp	Ser	Ser	His	Asp	Asp	Ile	Lys	Leu	Glu	Lys	Ser	Asn	
		275					280					285				
Ile	Leu	Leu	Leu	Gly	Pro	Thr	Gly	Ser	Gly	Lys	Thr	Leu	Leu	Ala	Gln	
	290					295					300					
Thr	Leu	Ala	Lys	Cys	Leu	Asp	Val	Pro	Phe	Ala	Ile	Cys	Asp	Cys	Thr	
305					310					315					320	
Thr	Leu	Thr	Gln	Ala	Gly	Tyr	Val	Gly	Glu	Asp	Ile	Glu	Ser	Val	Ile	
				325					330					335		
Ala	Lys	Leu	Leu	Gln	Asp	Ala	Asn	Tyr	Asn	Val	Glu	Lys	Ala	Gln	Gln	
			340					345					350			
Gly	Ile	Val	Phe	Leu	Asp	Glu	Val	Asp	Lys	Ile	Gly	Ser	Val	Pro	Gly	
		355					360					365				
Ile	His	Gln	Leu	Arg	Asp	Val	Gly	Gly	Glu	Gly	Val	Gln	Gln	Gly	Leu	
	370					375					380					
Leu	Lys	Leu	Leu	Glu	Gly	Thr	Ile	Val	Asn	Val	Pro	Glu	Lys	Asn	Ser	
385					390					395					400	
Arg	Lys	Leu	Arg	Gly	Glu	Thr	Val	Gln	Val	Asp	Thr	Thr	Asn	Ile	Leu	
				405					410					415		
Phe	Val	Ala	Ser	Gly	Ala	Phe	Asn	Gly	Leu	Asp	Arg	Ile	Ile	Ser	Arg	
			420					425					430			
Arg	Lys	Asn	Glu	Lys	Tyr	Leu	Gly	Phe	Gly	Thr	Pro	Ser	Asn	Leu	Gly	
		435					440					445				
Lys	Gly	Arg	Arg	Ala	Ala	Ala	Ala	Ala	Asp	Leu	Ala	Asn	Arg	Ser	Gly	
	450					455					460					
Glu	Ser	Asn	Thr	His	Gln	Asp	Ile	Glu	Glu	Lys	Asp	Arg	Leu	Leu	Arg	
465					470					475					480	
His	Val	Glu	Ala	Arg	Asp	Leu	Ile	Glu	Phe	Gly	Met	Ile	Pro	Glu	Phe	
				485					490					495		

Val Gly Arg Leu Pro Val Val Val Pro Leu His Ser Leu Asp Glu Lys
500 505 510

Thr Leu Val Gln Ile Leu Thr Glu Pro Arg Asn Ala Val Ile Pro Gln
515 520 525

Tyr Gln Ala Leu Phe Ser Met Asp Lys Cys Glu Leu Asn Val Thr Glu
530 535 540

Asp Ala Leu Lys Ala Ile Ala Arg Leu Ala Leu Glu Arg Lys Thr Gly
545 550 555 560

Ala Arg Gly Leu Arg Ser Ile Met Glu Lys Leu Leu Leu Glu Pro Met
565 570 575

Phe Glu Val Pro Asn Ser Asp Ile Val Cys Val Glu Val Asp Lys Glu
580 585 590

Val Val Glu Gly Lys Lys Glu Pro Gly Tyr Ile Arg Ala Pro Thr Lys
595 600 605

Glu Ser Ser Glu Glu Glu Tyr Asp Ser Gly Val Glu Glu Glu Gly Trp
610 615 620

Pro Arg Gln Ala Asp Ala Ala Asn Ser
625 630

<210> 12181
<211> 130
<212> PRT
<213> Homo sapiens

<220>
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<223> /note="Payload ID: 2401"

<220>
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<223> /note="Gene Symbol: CLPX"

<220>
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<223> /note="Gene Name:
caseinolytic mitochondrial matrix peptidase chaperone
subunit"

<220>

<221> source
<223> /note="ENSP ID: ENSP00000452611"

<400> 12181

Met Ser Val Leu Gly Arg Leu Gly Thr Phe Glu Thr Gln Ile Leu Gln
1 5 10 15

Arg Ala Pro Leu Arg Ser Phe Thr Glu Thr Pro Ala Tyr Phe Ala Ser
20 25 30

Lys Asp Gly Ile Ser Lys Asp Gly Ser Gly Asp Gly Asn Lys Lys Ser
35 40 45

Ala Ser Glu Gly Ser Ser Lys Lys Ser Gly Ser Gly Asn Ser Gly Lys
50 55 60

Gly Gly Asn Gln Leu Arg Cys Pro Lys Cys Gly Asp Leu Cys Thr His
65 70 75 80

Val Glu Thr Phe Val Ser Ser Thr Arg Phe Val Lys Cys Glu Lys Cys
85 90 95

His His Phe Phe Val Val Leu Ser Glu Ala Asp Ser Lys Lys Ser Ile
100 105 110

Ile Lys Glu Pro Glu Ser Ala Ala Glu Ala Val Lys Leu Ala Phe Gln
115 120 125

Gln Lys
130

<210> 12182

<211> 268

<212> PRT

<213> Homo sapiens

<220>

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<223> /note="Payload ID: 2401"

<220>

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<223> /note="Gene Symbol: CLPX"

<220>

<221> source

<223> /note="Gene Name:
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subunit"

<220>

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<223> /note="ENSP ID: ENSP00000453461"

<400> 12182

Met Pro Ser Cys Gly Ala Cys Thr Cys Gly Ala Ala Ala Val Arg Leu
1 5 10 15

Ile Thr Ser Ser Leu Ala Ser Ala Gln Arg Gly Ile Ser Gly Gly Arg
20 25 30

Ile His Met Ser Val Leu Gly Arg Leu Gly Thr Phe Glu Thr Gln Ile
35 40 45

Leu Gln Arg Ala Pro Leu Arg Ser Phe Thr Glu Thr Pro Ala Tyr Phe
50 55 60

Ala Ser Lys Asp Gly Ile Ser Lys Asp Gly Ser Gly Asp Gly Asn Lys
65 70 75 80

Lys Ser Ala Ser Glu Gly Ser Ser Lys Lys Ser Gly Ser Gly Asn Ser
85 90 95

Gly Lys Gly Gly Asn Gln Leu Arg Cys Pro Lys Cys Gly Asp Leu Cys
100 105 110

Thr His Val Glu Thr Phe Val Ser Ser Thr Arg Phe Val Lys Cys Glu
115 120 125

Lys Cys His His Phe Phe Val Val Leu Ser Glu Ala Asp Ser Lys Lys
130 135 140

Ser Ile Ile Lys Glu Pro Glu Ser Ala Ala Glu Ala Val Lys Leu Ala
145 150 155 160

Phe Gln Gln Lys Pro Pro Pro Pro Pro Lys Lys Ile Tyr Asn Tyr Leu
165 170 175

Asp Lys Tyr Val Val Gly Gln Ser Phe Ala Lys Lys Val Leu Ser Val
180 185 190

Ala Val Tyr Asn His Tyr Lys Arg Ile Tyr Asn Asn Ile Pro Ala Asn
195 200 205

26989

Leu Arg Gln Gln Ala Glu Val Glu Lys Gln Thr Ser Leu Thr Pro Arg
 210 215 220

Glu Leu Glu Ile Arg Arg Arg Glu Asp Glu Tyr Arg Phe Thr Lys Leu
 225 230 235 240

Leu Gln Ile Ala Gly Ile Ser Pro His Gly Asn Ala Leu Gly Ala Ser
 245 250 255

Met Gln Gln Gln Val Lys Leu Cys Trp His Lys Pro
 260 265

<210> 12183
 <211> 277
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<220>
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<220>
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 <223> /note="Gene Symbol: CLPP"

<220>
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 <223> /note="Gene Name:
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 subunit"

<220>
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 <223> /note="Uniprot ID: Q16740"

<220>
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<400> 12183
 Met Trp Pro Gly Ile Leu Val Gly Gly Ala Arg Val Ala Ser Cys Arg
 1 5 10 15

Tyr Pro Ala Leu Gly Pro Arg Leu Ala Ala His Phe Pro Ala Gln Arg
 20 25 30

Pro Pro Gln Arg Thr Leu Gln Asn Gly Leu Ala Leu Gln Arg Cys Leu
 35 40 45

His	Ala	Thr	Ala	Thr	Arg	Ala	Leu	Pro	Leu	Ile	Pro	Ile	Val	Val	Glu			
	50					55					60							
Gln	Thr	Gly	Arg	Gly	Glu	Arg	Ala	Tyr	Asp	Ile	Tyr	Ser	Arg	Leu	Leu			
65					70					75					80			
Arg	Glu	Arg	Ile	Val	Cys	Val	Met	Gly	Pro	Ile	Asp	Asp	Ser	Val	Ala			
				85					90					95				
Ser	Leu	Val	Ile	Ala	Gln	Leu	Leu	Phe	Leu	Gln	Ser	Glu	Ser	Asn	Lys			
			100					105					110					
Lys	Pro	Ile	His	Met	Tyr	Ile	Asn	Ser	Pro	Gly	Gly	Val	Val	Thr	Ala			
		115					120					125						
Gly	Leu	Ala	Ile	Tyr	Asp	Thr	Met	Gln	Tyr	Ile	Leu	Asn	Pro	Ile	Cys			
	130					135					140							
Thr	Trp	Cys	Val	Gly	Gln	Ala	Ala	Ser	Met	Gly	Ser	Leu	Leu	Leu	Ala			
145					150					155					160			
Ala	Gly	Thr	Pro	Gly	Met	Arg	His	Ser	Leu	Pro	Asn	Ser	Arg	Ile	Met			
				165					170					175				
Ile	His	Gln	Pro	Ser	Gly	Gly	Ala	Arg	Gly	Gln	Ala	Thr	Asp	Ile	Ala			
			180					185					190					
Ile	Gln	Ala	Glu	Glu	Ile	Met	Lys	Leu	Lys	Lys	Gln	Leu	Tyr	Asn	Ile			
	195						200					205						
Tyr	Ala	Lys	His	Thr	Lys	Gln	Ser	Leu	Gln	Val	Ile	Glu	Ser	Ala	Met			
	210					215					220							
Glu	Arg	Asp	Arg	Tyr	Met	Ser	Pro	Met	Glu	Ala	Gln	Glu	Phe	Gly	Ile			
225					230					235					240			
Leu	Asp	Lys	Val	Leu	Val	His	Pro	Pro	Gln	Asp	Gly	Glu	Asp	Glu	Pro			
				245					250					255				
Thr	Leu	Val	Gln	Lys	Glu	Pro	Val	Glu	Ala	Ala	Pro	Ala	Ala	Glu	Pro			
			260					265					270					

Val Pro Ala Ser Thr
275

<210> 12184

<211> 56

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2402"

<220>

<221> source

<223> /note="Gene Symbol: CLPP"

<220>

<221> source

<223> /note="Gene Name:
caseinolytic mitochondrial matrix peptidase proteolytic
subunit"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000469124"

<400> 12184

Met Gly Pro Ile Asp Asp Ser Val Ala Ser Leu Val Ile Ala Gln Leu
1 5 10 15

Leu Phe Leu Gln Ser Glu Ser Asn Lys Lys Pro Ile His Met Tyr Ile
20 25 30

Asn Ser Pro Gly Pro Ser His Arg His Cys His Pro Gly Arg Gly Asp
35 40 45

His Glu Ala Gln Glu Ala Ala Leu
50 55

<210> 12185

<211> 160

<212> PRT

<213> Homo sapiens

<220>

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<223> /note="Payload ID: 2402"

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<220>
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 caseinolytic mitochondrial matrix peptidase proteolytic
 subunit"

 <220>
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 <223> /note="ENSP ID: ENSP00000470098"

 <400> 12185
 Ser Phe Pro Ser Trp Trp Ser Arg Arg Val Ala Ala Ser Ala Pro Met
 1 5 10 15

 Thr Ser Thr Arg Gly Cys Cys Gly Ser Ala Ser Cys Ala Ser Trp Ala
 20 25 30

 Arg Ser Met Thr Ala Leu Pro Ala Leu Leu Ser His Ser Ser Ser Ser
 35 40 45

 Cys Asn Pro Arg Ala Thr Arg Ser Pro Ser Thr Cys Gly Val Val Thr
 50 55 60

 Ala Gly Leu Ala Ile Tyr Asp Thr Met Gln Tyr Ile Leu Asn Pro Ile
 65 70 75 80

 Cys Thr Trp Cys Val Gly Gln Ala Ala Ser Met Gly Ser Leu Leu Leu
 85 90 95

 Ala Ala Gly Thr Pro Gly Met Arg His Ser Leu Pro Asn Ser Arg Ile
 100 105 110

 Met Ile His Gln Pro Ser Gly Gly Ala Arg Gly Gln Ala Thr Asp Ile
 115 120 125

 Ala Ile Gln Ala Glu Glu Ile Met Lys Leu Lys Lys Gln Leu Tyr Asn
 130 135 140

 Ile Tyr Ala Lys His Thr Lys Gln Ser Leu Gln Val Ile Glu Ser Ala
 145 150 155 160

 <210> 12186
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 <213> Homo sapiens

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<223> /note="Gene Symbol: CLPP"

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<223> /note="Gene Name:
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1          5          10          15

Leu Phe Leu Gln Ser Glu Ser Asn Lys Lys Pro Ile His Met Tyr Ile
          20          25          30

Asn Ser Pro Gly Gly Val Val Thr Ala Gly Leu Ala Ile Tyr Asp Thr
          35          40          45

Met Gln Tyr Ile Leu Asn Pro Ile Cys Thr Trp Cys Val Gly Gln Ala
          50          55          60

Ala Ser Met Gly Ser Leu Leu Leu Ala Ala Gly Thr Pro Gly Met Arg
65          70          75          80

His Ser Leu Pro Asn Ser Arg Ile Met Ile His Gln Pro Ser Gly Gly
          85          90          95

Ala Arg Gly Gln Ala Thr Asp Ile Ala Ile Gln Ala Glu Glu Ile Met
          100          105          110

Lys Leu Lys Lys Gln Leu Tyr Asn Ile Tyr Ala Lys His Thr Lys Gln
          115          120          125

Ser Leu Gln Val Ile Glu Ser Ala Met Glu Arg Asp Arg Tyr Met Ser
          130          135          140

Pro Met Glu Ala Gln Glu Phe Gly Ile Leu Asp Lys Val Leu Val His
145          150          155          160

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Pro Pro Gln Asp Gly Glu Asp Glu Pro Thr Leu Val Gln Lys Glu Pro
165 170 175

Val Glu Ala Ala Pro Ala Ala Glu Pro Val Pro Ala Ser Thr
180 185 190

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CASK interacting protein 1"

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<223> /note="Uniprot ID: Q8WXD9"

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Met Gly Lys Glu Gln Glu Leu Val Gln Ala Val Lys Ala Glu Asp Val
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Gly Thr Ala Gln Arg Leu Leu Gln Arg Pro Arg Pro Gly Lys Ala Lys
20 25 30

Leu Leu Gly Ser Thr Lys Lys Ile Asn Val Asn Phe Gln Asp Pro Asp
35 40 45

Gly Phe Ser Ala Leu His His Ala Ala Leu Asn Gly Asn Thr Glu Leu
50 55 60

Ile Ser Leu Leu Leu Glu Ala Gln Ala Ala Val Asp Ile Lys Asp Asn
65 70 75 80

Lys Gly Met Arg Pro Leu His Tyr Ala Ala Trp Gln Gly Arg Lys Glu

26995

85

90

95

Pro Met Lys Leu Val Leu Lys Ala Gly Ser Ala Val Asn Ile Pro Ser
100 105 110

Asp Glu Gly His Ile Pro Leu His Leu Ala Ala Gln His Gly His Tyr
115 120 125

Asp Val Ser Glu Met Leu Leu Gln His Gln Ser Asn Pro Cys Met Val
130 135 140

Asp Asn Ser Gly Lys Thr Pro Leu Asp Leu Ala Cys Glu Phe Gly Arg
145 150 155 160

Val Gly Val Val Gln Leu Leu Leu Ser Ser Asn Met Cys Ala Ala Leu
165 170 175

Leu Glu Pro Arg Pro Gly Asp Ala Thr Asp Pro Asn Gly Thr Ser Pro
180 185 190

Leu His Leu Ala Ala Lys Asn Gly His Ile Asp Ile Ile Arg Leu Leu
195 200 205

Leu Gln Ala Gly Ile Asp Ile Asn Arg Gln Thr Lys Ser Gly Thr Ala
210 215 220

Leu His Glu Ala Ala Leu Cys Gly Lys Thr Glu Val Val Arg Leu Leu
225 230 235 240

Leu Asp Ser Gly Ile Asn Ala His Val Arg Asn Thr Tyr Ser Gln Thr
245 250 255

Ala Leu Asp Ile Val His Gln Phe Thr Thr Ser Gln Ala Ser Arg Glu
260 265 270

Ile Lys Gln Leu Leu Arg Glu Ala Ser Ala Ala Leu Gln Val Arg Ala
275 280 285

Thr Lys Asp Tyr Cys Asn Asn Tyr Asp Leu Thr Ser Leu Asn Val Lys
290 295 300

Ala Gly Asp Ile Ile Thr Val Leu Glu Gln His Pro Asp Gly Arg Trp
305 310 315 320

26996

Lys Gly Cys Ile His Asp Asn Arg Thr Gly Asn Asp Arg Val Gly Tyr
 325 330 335
 Phe Pro Ser Ser Leu Gly Glu Ala Ile Val Lys Arg Ala Gly Ser Arg
 340 345 350
 Ala Gly Thr Glu Pro Ser Leu Pro Gln Gly Ser Ser Ser Ser Gly Pro
 355 360 365
 Ser Ala Pro Pro Glu Glu Ile Trp Val Leu Arg Lys Pro Phe Ala Gly
 370 375 380
 Gly Asp Arg Ser Gly Ser Ile Ser Gly Met Ala Gly Gly Arg Gly Ser
 385 390 395 400
 Gly Gly His Ala Leu His Ala Gly Ser Glu Gly Val Lys Leu Leu Ala
 405 410 415
 Thr Val Leu Ser Gln Lys Ser Val Ser Glu Ser Gly Pro Gly Asp Ser
 420 425 430
 Pro Ala Lys Pro Pro Glu Gly Ser Ala Gly Val Ala Arg Ser Gln Pro
 435 440 445
 Pro Val Ala His Ala Gly Gln Val Tyr Gly Glu Gln Pro Pro Lys Lys
 450 455 460
 Leu Glu Pro Ala Ser Glu Gly Lys Ser Ser Glu Ala Val Ser Gln Trp
 465 470 475 480
 Leu Thr Ala Phe Gln Leu Gln Leu Tyr Ala Pro Asn Phe Ile Ser Ala
 485 490 495
 Gly Tyr Asp Leu Pro Thr Ile Ser Arg Met Thr Pro Glu Asp Leu Thr
 500 505 510
 Ala Ile Gly Val Thr Lys Pro Gly His Arg Lys Lys Ile Ala Ala Glu
 515 520 525
 Ile Ser Gly Leu Ser Ile Pro Asp Trp Leu Pro Glu His Lys Pro Ala
 530 535 540

Asn	Leu	Ala	Val	Trp	Leu	Ser	Met	Ile	Gly	Leu	Ala	Gln	Tyr	Tyr	Lys	545	550	555	560
Val	Leu	Val	Asp	Asn	Gly	Tyr	Glu	Asn	Ile	Asp	Phe	Ile	Thr	Asp	Ile	565	570	575	
Thr	Trp	Glu	Asp	Leu	Gln	Glu	Ile	Gly	Ile	Thr	Lys	Leu	Gly	His	Gln	580	585	590	
Lys	Lys	Leu	Met	Leu	Ala	Val	Arg	Lys	Leu	Ala	Glu	Leu	Gln	Lys	Ala	595	600	605	
Glu	Tyr	Ala	Lys	Tyr	Glu	Gly	Gly	Pro	Leu	Arg	Arg	Lys	Ala	Pro	Gln	610	615	620	
Ser	Leu	Glu	Val	Met	Ala	Ile	Glu	Ser	Pro	Pro	Pro	Pro	Glu	Pro	Thr	625	630	635	640
Pro	Ala	Asp	Cys	Gln	Ser	Pro	Lys	Met	Thr	Thr	Phe	Gln	Asp	Ser	Glu	645	650	655	
Leu	Ser	Asp	Glu	Leu	Gln	Ala	Ala	Met	Thr	Gly	Pro	Ala	Glu	Val	Gly	660	665	670	
Pro	Thr	Thr	Glu	Lys	Pro	Ser	Ser	His	Leu	Pro	Pro	Thr	Pro	Arg	Ala	675	680	685	
Thr	Thr	Arg	Gln	Asp	Ser	Ser	Leu	Gly	Gly	Arg	Ala	Arg	His	Met	Ser	690	695	700	
Ser	Ser	Gln	Glu	Leu	Leu	Gly	Asp	Gly	Pro	Pro	Gly	Pro	Ser	Ser	Pro	705	710	715	720
Met	Ser	Arg	Ser	Gln	Glu	Tyr	Leu	Leu	Asp	Glu	Gly	Pro	Ala	Pro	Gly	725	730	735	
Thr	Pro	Pro	Arg	Glu	Ala	Arg	Pro	Gly	Arg	His	Gly	His	Ser	Ile	Lys	740	745	750	
Arg	Ala	Ser	Val	Pro	Pro	Val	Pro	Gly	Lys	Pro	Arg	Gln	Val	Leu	Pro	755	760	765	

Pro Gly Thr Ser His Phe Thr Pro Pro Gln Thr Pro Thr Lys Thr Arg
770 775 780

Pro Gly Ser Pro Gln Ala Leu Gly Gly Pro His Gly Pro Ala Pro Ala
785 790 795 800

Thr Ala Lys Val Lys Pro Thr Pro Gln Leu Leu Pro Pro Thr Glu Arg
805 810 815

Pro Met Ser Pro Arg Ser Leu Pro Gln Ser Pro Thr His Arg Gly Phe
820 825 830

Ala Tyr Val Leu Pro Gln Pro Val Glu Gly Glu Val Gly Pro Ala Ala
835 840 845

Pro Gly Pro Ala Pro Pro Pro Val Pro Thr Ala Val Pro Thr Leu Cys
850 855 860

Leu Pro Pro Glu Ala Asp Ala Glu Pro Gly Arg Pro Lys Lys Arg Ala
865 870 875 880

His Ser Leu Asn Arg Tyr Ala Ala Ser Asp Ser Glu Pro Glu Arg Asp
885 890 895

Glu Leu Leu Val Pro Ala Ala Ala Gly Pro Tyr Ala Thr Val Gln Arg
900 905 910

Arg Val Gly Arg Ser His Ser Val Arg Ala Pro Ala Gly Ala Asp Lys
915 920 925

Asn Val Asn Arg Ser Gln Ser Phe Ala Val Arg Pro Arg Lys Lys Gly
930 935 940

Pro Pro Pro Pro Pro Pro Lys Arg Ser Ser Ser Ala Leu Ala Ser Ala
945 950 955 960

Asn Leu Ala Asp Glu Pro Val Pro Asp Ala Glu Pro Glu Asp Gly Leu
965 970 975

Leu Gly Val Arg Ala Gln Cys Arg Arg Ala Ser Asp Leu Ala Gly Ser
980 985 990

Val Asp Thr Gly Ser Ala Gly Ser Val Lys Ser Ile Ala Ala Met

Leu	995	1000	1005
Glu	Leu 1010	Ser Ser Ile Gly Gly 1015	Gly Gly Arg Ala Ala 1020 Arg Arg Pro
Pro	Glu 1025	Gly His Pro Thr Pro 1030	Arg Pro Ala Ser Pro 1035 Glu Pro Gly
Arg	Val 1040	Ala Thr Val Leu Ala 1045	Ser Val Lys His Lys 1050 Glu Ala Ile
Gly	Pro 1055	Gly Gly Glu Val Val 1060	Asn Arg Arg Arg Thr 1065 Leu Ser Gly
Pro	Val 1070	Thr Gly Leu Leu Ala 1075	Thr Ala Arg Arg Gly 1080 Pro Gly Glu
Ser	Ala 1085	Asp Pro Gly Pro Phe 1090	Val Glu Asp Gly Thr 1095 Gly Arg Gln
Arg	Pro 1100	Arg Gly Pro Ser Lys 1105	Gly Glu Ala Gly Val 1110 Glu Gly Pro
Pro	Leu 1115	Ala Lys Val Glu Ala 1120	Ser Ala Thr Leu Lys 1125 Arg Arg Ile
Arg	Ala 1130	Lys Gln Asn Gln Gln 1135	Glu Asn Val Lys Phe 1140 Ile Leu Thr
Glu	Ser 1145	Asp Thr Val Lys Arg 1150	Arg Pro Lys Ala Lys 1155 Glu Arg Glu
Ala	Gly 1160	Pro Glu Pro Pro Pro 1165	Pro Leu Ser Val Tyr 1170 His Asn Gly
Thr	Gly 1175	Thr Val Arg Arg Arg 1180	Pro Ala Ser Glu Gln 1185 Ala Gly Pro
Pro	Glu 1190	Leu Pro Pro Pro Pro 1195	Pro Pro Ala Glu Pro 1200 Pro Pro Thr
Asp	Leu	Ala His Leu Pro Pro	Leu Pro Pro Pro Glu Gly Glu Ala

27000

1205						1210						1215			
Arg	Lys	Pro	Ala	Lys	Pro	Pro	Val	Ser	Pro	Lys	Pro	Val	Leu	Thr	
1220						1225					1230				
Gln	Pro	Val	Pro	Lys	Leu	Gln	Gly	Ser	Pro	Thr	Pro	Thr	Ser	Lys	
1235						1240					1245				
Lys	Val	Pro	Leu	Pro	Gly	Pro	Gly	Ser	Pro	Glu	Val	Lys	Arg	Ala	
1250						1255					1260				
His	Gly	Thr	Pro	Pro	Pro	Val	Ser	Pro	Lys	Pro	Pro	Pro	Pro	Pro	
1265						1270					1275				
Thr	Ala	Pro	Lys	Pro	Val	Lys	Ala	Val	Ala	Gly	Leu	Pro	Ser	Gly	
1280						1285					1290				
Ser	Ala	Gly	Pro	Ser	Pro	Ala	Pro	Ser	Pro	Ala	Arg	Gln	Pro	Pro	
1295						1300					1305				
Ala	Ala	Leu	Ala	Lys	Pro	Pro	Gly	Thr	Pro	Pro	Ser	Leu	Gly	Ala	
1310						1315					1320				
Ser	Pro	Ala	Lys	Pro	Pro	Ser	Pro	Gly	Ala	Pro	Ala	Leu	His	Val	
1325						1330					1335				
Pro	Ala	Lys	Pro	Pro	Arg	Ala	Ala	Ala	Ala	Ala	Ala	Ala	Ala	Ala	
1340						1345					1350				
Ala	Ala	Pro	Pro	Ala	Pro	Pro	Glu	Gly	Ala	Ser	Pro	Gly	Asp	Ser	
1355						1360					1365				
Ala	Arg	Gln	Lys	Leu	Glu	Glu	Thr	Ser	Ala	Cys	Leu	Ala	Ala	Ala	
1370						1375					1380				
Leu	Gln	Ala	Val	Glu	Glu	Lys	Ile	Arg	Gln	Glu	Asp	Ala	Gln	Gly	
1385						1390					1395				
Pro	Arg	Asp	Ser	Ala	Ala	Glu	Lys	Ser	Thr	Gly	Ser	Ile	Leu	Asp	
1400						1405					1410				
Asp	Ile	Gly	Ser	Met	Phe	Asp	Asp	Leu	Ala	Asp	Gln	Leu	Asp	Ala	
1415						1420					1425				

27001

Met Leu Glu
1430

<210> 12188
<211> 1202
<212> PRT
<213> Homo sapiens

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<220>
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CASK interacting protein 2"

<220>
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<223> /note="Uniprot ID: Q8WXE0"

<220>
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Met Gly Arg Glu Gln Asp Leu Ile Leu Ala Val Lys Asn Gly Asp Val
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Thr Gly Val Gln Lys Leu Val Ala Lys Val Lys Ala Thr Lys Thr Lys
20 25 30

Leu Leu Gly Ser Thr Lys Arg Leu Asn Val Asn Tyr Gln Asp Ala Asp
35 40 45

Gly Phe Ser Ala Leu His His Ala Ala Leu Gly Gly Ser Leu Glu Leu
50 55 60

Ile Ala Leu Leu Leu Glu Ala Gln Ala Thr Val Asp Ile Lys Asp Ser
65 70 75 80

Asn Gly Met Arg Pro Leu His Tyr Ala Ala Trp Gln Gly Arg Leu Glu
85 90 95

Pro	Val	Arg	Leu	Leu	Leu	Arg	Ala	Ser	Ala	Ala	Val	Asn	Ala	Ala	Ser	
			100					105					110			
Leu	Asp	Gly	Gln	Ile	Pro	Leu	His	Leu	Ala	Ala	Gln	Tyr	Gly	His	Tyr	
		115					120					125				
Glu	Val	Ser	Glu	Met	Leu	Leu	Gln	His	Gln	Ser	Asn	Pro	Cys	Leu	Val	
	130					135					140					
Asn	Lys	Ala	Lys	Lys	Thr	Pro	Leu	Asp	Leu	Ala	Cys	Glu	Phe	Gly	Arg	
145					150					155					160	
Leu	Lys	Val	Ala	Gln	Leu	Leu	Leu	Asn	Ser	His	Leu	Cys	Val	Ala	Leu	
				165					170						175	
Leu	Glu	Gly	Glu	Ala	Lys	Asp	Pro	Cys	Asp	Pro	Asn	Tyr	Thr	Thr	Pro	
			180					185					190			
Leu	His	Leu	Ala	Ala	Lys	Asn	Gly	His	Arg	Glu	Val	Ile	Arg	Gln	Leu	
		195					200					205				
Leu	Arg	Ala	Gly	Ile	Glu	Ile	Asn	Arg	Gln	Thr	Lys	Thr	Gly	Thr	Ala	
	210					215					220					
Leu	His	Glu	Ala	Ala	Leu	Tyr	Gly	Lys	Thr	Glu	Val	Val	Arg	Leu	Leu	
225					230					235					240	
Leu	Glu	Gly	Gly	Val	Asp	Val	Asn	Ile	Arg	Asn	Thr	Tyr	Asn	Gln	Thr	
				245					250					255		
Ala	Leu	Asp	Ile	Val	Asn	Gln	Phe	Thr	Thr	Ser	Gln	Ala	Ser	Arg	Glu	
			260					265					270			
Ile	Lys	Gln	Leu	Leu	Arg	Glu	Ala	Ser	Gly	Ile	Leu	Lys	Val	Arg	Ala	
		275					280					285				
Leu	Lys	Asp	Phe	Trp	Asn	Leu	His	Asp	Pro	Thr	Ala	Leu	Asn	Val	Arg	
	290					295					300					
Ala	Gly	Asp	Val	Ile	Thr	Val	Leu	Glu	Gln	His	Pro	Asp	Gly	Arg	Trp	
305					310					315					320	
Lys	Gly	His	Ile	His	Glu	Ser	Gln	Arg	Gly	Thr	Asp	Arg	Ile	Gly	Tyr	

				325					330					335		
Phe	Pro	Pro	Gly	Ile	Val	Glu	Val	Val	Ser	Lys	Arg	Val	Gly	Ile	Pro	
			340					345					350			
Ala	Ala	Arg	Leu	Pro	Ser	Ala	Pro	Thr	Pro	Leu	Arg	Pro	Gly	Phe	Ser	
		355					360					365				
Arg	Thr	Pro	Gln	Pro	Pro	Ala	Glu	Glu	Pro	Pro	His	Pro	Leu	Thr	Tyr	
	370					375					380					
Ser	Gln	Leu	Pro	Arg	Val	Gly	Leu	Ser	Pro	Asp	Ser	Pro	Ala	Gly	Asp	
385					390					395					400	
Arg	Asn	Ser	Val	Gly	Ser	Glu	Gly	Ser	Val	Gly	Ser	Ile	Arg	Ser	Ala	
				405					410					415		
Gly	Ser	Gly	Gln	Ser	Ser	Glu	Gly	Thr	Asn	Gly	His	Gly	Pro	Gly	Leu	
			420					425					430			
Leu	Ile	Glu	Asn	Ala	Gln	Pro	Leu	Pro	Ser	Ala	Gly	Glu	Asp	Gln	Val	
		435					440					445				
Leu	Pro	Gly	Leu	His	Pro	Pro	Ser	Leu	Ala	Asp	Asn	Leu	Ser	His	Arg	
	450					455					460					
Pro	Leu	Ala	Asn	Cys	Arg	Ser	Gly	Glu	Gln	Ile	Phe	Thr	Gln	Asp	Val	
465					470					475					480	
Arg	Pro	Glu	Gln	Leu	Leu	Glu	Gly	Lys	Asp	Ala	Gln	Ala	Ile	His	Asn	
				485					490					495		
Trp	Leu	Ser	Glu	Phe	Gln	Leu	Glu	Gly	Tyr	Thr	Ala	His	Phe	Leu	Gln	
			500					505					510			
Ala	Gly	Tyr	Asp	Val	Pro	Thr	Ile	Ser	Arg	Met	Thr	Pro	Glu	Asp	Leu	
		515					520					525				
Thr	Ala	Ile	Gly	Val	Thr	Lys	Pro	Gly	His	Arg	Lys	Lys	Ile	Ala	Ser	
	530					535					540					
Glu	Ile	Ala	Gln	Leu	Ser	Ile	Ala	Glu	Trp	Leu	Pro	Ser	Tyr	Ile	Pro	
545					550					555					560	

Thr	Asp	Leu	Leu	Glu	Trp	Leu	Cys	Ala	Leu	Gly	Leu	Pro	Gln	Tyr	His		
				565					570					575			
Lys	Gln	Leu	Val	Ser	Ser	Gly	Tyr	Asp	Ser	Met	Gly	Leu	Val	Ala	Asp		
			580					585					590				
Leu	Thr	Trp	Glu	Glu	Leu	Gln	Glu	Ile	Gly	Val	Asn	Lys	Leu	Gly	His		
		595					600					605					
Gln	Lys	Lys	Leu	Met	Leu	Gly	Val	Lys	Arg	Leu	Ala	Glu	Leu	Arg	Arg		
	610					615					620						
Gly	Leu	Leu	Gln	Gly	Glu	Ala	Leu	Ser	Glu	Gly	Gly	Arg	Arg	Leu	Ala		
625					630					635					640		
Lys	Gly	Pro	Glu	Leu	Met	Ala	Ile	Glu	Gly	Leu	Glu	Asn	Gly	Glu	Gly		
				645					650					655			
Pro	Ala	Thr	Ala	Gly	Pro	Arg	Leu	Leu	Thr	Phe	Gln	Gly	Ser	Glu	Leu		
			660					665					670				
Ser	Pro	Glu	Leu	Gln	Ala	Ala	Met	Ala	Gly	Gly	Gly	Pro	Glu	Pro	Leu		
		675					680					685					
Pro	Leu	Pro	Pro	Ala	Arg	Ser	Pro	Ser	Gln	Glu	Ser	Ile	Gly	Ala	Arg		
	690					695					700						
Ser	Arg	Gly	Ser	Gly	His	Ser	Gln	Glu	Gln	Pro	Ala	Pro	Gln	Pro	Ser		
705					710					715					720		
Gly	Gly	Asp	Pro	Ser	Pro	Pro	Gln	Glu	Arg	Asn	Leu	Pro	Glu	Gly	Thr		
				725					730					735			
Glu	Arg	Pro	Pro	Lys	Leu	Cys	Ser	Ser	Leu	Pro	Gly	Gln	Gly	Pro	Pro		
			740				745						750				
Pro	Tyr	Val	Phe	Met	Tyr	Pro	Gln	Gly	Ser	Pro	Ser	Ser	Pro	Ala	Pro		
		755					760					765					
Gly	Pro	Pro	Pro	Gly	Ala	Pro	Trp	Ala	Phe	Ser	Tyr	Leu	Ala	Gly	Pro		
	770					775					780						

Pro Ala Thr Pro Pro Asp Pro Pro Arg Pro Lys Arg Arg Ser His Ser
785 790 795 800

Leu Ser Arg Pro Gly Pro Thr Glu Gly Asp Ala Glu Gly Glu Ala Glu
805 810 815

Gly Pro Val Gly Ser Thr Leu Gly Ser Tyr Ala Thr Leu Thr Arg Arg
820 825 830

Pro Gly Arg Ser Ala Leu Val Arg Thr Ser Pro Ser Val Thr Pro Thr
835 840 845

Pro Ala Arg Gly Thr Pro Arg Ser Gln Ser Phe Ala Leu Arg Ala Arg
850 855 860

Arg Lys Gly Pro Pro Pro Pro Pro Pro Lys Arg Leu Ser Ser Val Ser
865 870 875 880

Gly Pro Ser Pro Glu Pro Pro Pro Leu Asp Glu Ser Pro Gly Pro Lys
885 890 895

Glu Gly Ala Thr Gly Pro Arg Arg Arg Thr Leu Ser Glu Pro Ala Gly
900 905 910

Pro Ser Glu Pro Pro Gly Pro Pro Ala Pro Ala Gly Pro Ala Ser Asp
915 920 925

Thr Glu Glu Glu Glu Pro Gly Pro Glu Gly Thr Pro Pro Ser Arg Gly
930 935 940

Ser Ser Gly Glu Gly Leu Pro Phe Ala Glu Glu Gly Asn Leu Thr Ile
945 950 955 960

Lys Gln Arg Pro Lys Pro Ala Gly Pro Pro Pro Arg Glu Thr Pro Val
965 970 975

Pro Pro Gly Leu Asp Phe Asn Leu Thr Glu Ser Asp Thr Val Lys Arg
980 985 990

Arg Pro Lys Cys Arg Glu Arg Glu Pro Leu Gln Thr Ala Leu Leu
Ala
995 1000 1005

Phe	Gly	Val	Ala	Ser	Ala	Thr	Pro	Gly	Pro	Ala	Ala	Pro	Leu	Pro
	1010					1015					1020			
Ser	Pro	Thr	Pro	Gly	Glu	Ser	Pro	Pro	Ala	Ser	Ser	Leu	Pro	Gln
	1025					1030					1035			
Pro	Glu	Pro	Ser	Ser	Leu	Pro	Ala	Gln	Gly	Val	Pro	Thr	Pro	Leu
	1040					1045					1050			
Ala	Pro	Ser	Pro	Ala	Met	Gln	Pro	Pro	Val	Pro	Pro	Cys	Pro	Gly
	1055					1060					1065			
Pro	Gly	Leu	Glu	Ser	Ser	Ala	Ala	Ser	Arg	Trp	Asn	Gly	Glu	Thr
	1070					1075					1080			
Glu	Pro	Pro	Ala	Ala	Pro	Ala	Ala	Leu	Leu	Lys	Val	Pro	Gly	Ala
	1085					1090					1095			
Gly	Thr	Ala	Pro	Lys	Pro	Val	Ser	Val	Ala	Cys	Thr	Gln	Leu	Ala
	1100					1105					1110			
Phe	Ser	Gly	Pro	Lys	Leu	Ala	Pro	Arg	Leu	Gly	Pro	Arg	Pro	Val
	1115					1120					1125			
Pro	Pro	Pro	Arg	Pro	Glu	Ser	Thr	Gly	Thr	Val	Gly	Pro	Gly	Gln
	1130					1135					1140			
Ala	Gln	Gln	Arg	Leu	Glu	Gln	Thr	Ser	Ser	Ser	Leu	Ala	Ala	Ala
	1145					1150					1155			
Leu	Arg	Ala	Ala	Glu	Lys	Ser	Ile	Gly	Thr	Lys	Glu	Gln	Glu	Gly
	1160					1165					1170			
Thr	Pro	Ser	Ala	Ser	Thr	Lys	His	Ile	Leu	Asp	Asp	Ile	Ser	Thr
	1175					1180					1185			
Met	Phe	Asp	Ala	Leu	Ala	Asp	Gln	Leu	Asp	Ala	Met	Leu	Asp	
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<220>
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<223> /note="Uniprot ID: Q8WXE0"

<220>
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Met Arg Pro Leu His Tyr Ala Ala Trp Gln Gly Arg Leu Glu Pro Val
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Arg Leu Leu Leu Arg Ala Ser Ala Ala Val Asn Ala Ala Ser Leu Asp
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Gly Gln Ile Pro Leu His Leu Ala Ala Gln Tyr Gly His Tyr Glu Val
          35          40          45

Ser Glu Met Leu Leu Gln His Gln Ser Asn Pro Cys Leu Val Asn Lys
          50          55          60

Ala Lys Lys Thr Pro Leu Asp Leu Ala Cys Glu Phe Gly Arg Leu Lys
65          70          75          80

Val Ala Gln Leu Leu Leu Asn Ser His Leu Cys Val Ala Leu Leu Glu
          85          90          95

Gly Glu Ala Lys Asp Pro Cys Asp Pro Asn Tyr Thr Thr Pro Leu His
          100          105          110

Leu Ala Ala Lys Asn Gly His Arg Glu Val Ile Arg Gln Leu Leu Arg
          115          120          125

Ala Gly Ile Glu Ile Asn Arg Gln Thr Lys Thr Gly Thr Ala Leu His
130          135          140

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Glu	Ala	Ala	Leu	Tyr	Gly	Lys	Thr	Glu	Val	Val	Arg	Leu	Leu	Leu	Glu
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Gly	Gly	Val	Asp	Val	Asn	Ile	Arg	Asn	Thr	Tyr	Asn	Gln	Thr	Ala	Leu
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Asp	Ile	Val	Asn	Gln	Phe	Thr	Thr	Ser	Gln	Ala	Ser	Arg	Glu	Ile	Lys
			180					185					190		
Gln	Leu	Leu	Arg	Glu	Ala	Ser	Gly	Ile	Leu	Lys	Val	Arg	Ala	Leu	Lys
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Asp	Phe	Trp	Asn	Leu	His	Asp	Pro	Thr	Ala	Leu	Asn	Val	Arg	Ala	Gly
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Asp	Val	Ile	Thr	Val	Leu	Glu	Gln	His	Pro	Asp	Gly	Arg	Trp	Lys	Gly
225					230					235					240
His	Ile	His	Glu	Ser	Gln	Arg	Gly	Thr	Asp	Arg	Ile	Gly	Tyr	Phe	Pro
				245					250					255	
Pro	Gly	Ile	Val	Glu	Val	Val	Ser	Lys	Arg	Val	Gly	Ile	Pro	Ala	Ala
			260					265					270		
Arg	Leu	Pro	Ser	Ala	Pro	Thr	Pro	Leu	Arg	Pro	Gly	Phe	Ser	Arg	Thr
		275					280					285			
Pro	Gln	Pro	Pro	Ala	Glu	Glu	Pro	Pro	His	Pro	Leu	Thr	Tyr	Ser	Gln
	290					295					300				
Leu	Pro	Arg	Val	Gly	Leu	Ser	Pro	Asp	Ser	Pro	Ala	Gly	Asp	Arg	Asn
305					310					315					320
Ser	Val	Gly	Ser	Glu	Gly	Ser	Val	Gly	Ser	Ile	Arg	Ser	Ala	Gly	Ser
				325					330					335	
Gly	Gln	Ser	Ser	Glu	Gly	Thr	Asn	Gly	His	Gly	Pro	Gly	Leu	Leu	Ile
			340					345					350		
Glu	Asn	Ala	Gln	Pro	Leu	Pro	Ser	Ala	Gly	Glu	Asp	Gln	Val	Leu	Pro
		355					360					365			

Gly	Leu	His	Pro	Pro	Ser	Leu	Ala	Asp	Asn	Leu	Ser	His	Arg	Pro	Leu			
	370					375					380							
Ala	Asn	Cys	Arg	Ser	Gly	Glu	Gln	Ile	Phe	Thr	Gln	Asp	Val	Arg	Pro			
385					390					395					400			
Glu	Gln	Leu	Leu	Glu	Gly	Lys	Asp	Ala	Gln	Ala	Ile	His	Asn	Trp	Leu			
				405					410					415				
Ser	Glu	Phe	Gln	Leu	Glu	Gly	Tyr	Thr	Ala	His	Phe	Leu	Gln	Ala	Gly			
			420					425					430					
Tyr	Asp	Val	Pro	Thr	Ile	Ser	Arg	Met	Thr	Pro	Glu	Asp	Leu	Thr	Ala			
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	450					455					460							
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465					470					475					480			
Leu	Leu	Glu	Trp	Leu	Cys	Ala	Leu	Gly	Leu	Pro	Gln	Tyr	His	Lys	Gln			
				485					490					495				
Leu	Val	Ser	Ser	Gly	Tyr	Asp	Ser	Met	Gly	Leu	Val	Ala	Asp	Leu	Thr			
			500					505					510					
Trp	Glu	Glu	Leu	Gln	Glu	Ile	Gly	Val	Asn	Lys	Leu	Gly	His	Gln	Lys			
		515					520					525						
Lys	Leu	Met	Leu	Gly	Val	Lys	Arg	Leu	Ala	Glu	Leu	Arg	Arg	Gly	Leu			
	530					535					540							
Leu	Gln	Gly	Glu	Ala	Leu	Ser	Glu	Gly	Gly	Arg	Arg	Leu	Ala	Lys	Gly			
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Pro	Glu	Leu	Met	Ala	Ile	Glu	Gly	Leu	Glu	Asn	Gly	Glu	Gly	Pro	Ala			
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Thr	Ala	Gly	Pro	Arg	Leu	Leu	Thr	Phe	Gln	Gly	Ser	Glu	Leu	Ser	Pro			
			580					585					590					

Glu Leu Gln Ala Ala Met Ala Gly Gly Gly Pro Glu Pro Leu Pro Leu
 595 600 605

Pro Pro Ala Arg Ser Pro Ser Gln Glu Ser Ile Gly Ala Arg Ser Arg
 610 615 620

Gly Ser Gly His Ser Gln Glu Gln Pro Ala Pro Gln Pro Ser Gly Gly
 625 630 635 640

Asp Pro Ser Pro Pro Gln Glu Arg Asn Leu Pro Glu Gly Thr Glu Arg
 645 650 655

Pro Pro Lys Leu Cys Ser Ser Leu Pro Gly Gln Gly Pro Pro Pro Tyr
 660 665 670

Val Phe Met Tyr Pro Gln Gly Ser Pro Ser Ser Pro Ala Pro Gly Pro
 675 680 685

Pro Pro Gly Ala Pro Trp Ala Phe Ser Tyr Leu Ala Gly Pro Pro Ala
 690 695 700

Thr Pro Pro Asp Pro Pro Arg Pro Lys Arg Arg Ser His Ser Leu Ser
 705 710 715 720

Arg Pro Gly Pro Thr Glu Gly Asp Ala Glu Gly Glu Ala Glu Gly Pro
 725 730 735

Val Gly Ser Thr Leu Gly Ser Tyr Ala Thr Leu Thr Arg Arg Pro Gly
 740 745 750

Arg Ser Ala Leu Val Arg Thr Ser Pro Ser Val Thr Pro Thr Pro Ala
 755 760 765

Arg Gly Thr Pro Arg Ser Gln Ser Phe Ala Leu Arg Ala Arg Arg Lys
 770 775 780

Gly Pro Pro Pro Pro Pro Pro Lys Arg Leu Ser Ser Val Ser Gly Pro
 785 790 795 800

Ser Pro Glu Pro Pro Pro Leu Asp Glu Ser Pro Gly Pro Lys Glu Gly
 805 810 815

Ala Thr Gly Pro Arg Arg Arg Thr Leu Ser Glu Pro Ala Gly Pro Ser

	820		825		830												
Glu	Pro	Pro	Gly	Pro	Pro	Ala	Pro	Ala	Gly	Pro	Ala	Ser	Asp	Thr	Glu		
	835						840					845					
Glu	Glu	Glu	Pro	Gly	Pro	Glu	Gly	Thr	Pro	Pro	Ser	Arg	Gly	Ser	Ser		
	850					855					860						
Gly	Glu	Gly	Leu	Pro	Phe	Ala	Glu	Glu	Gly	Asn	Leu	Thr	Ile	Lys	Gln		
865					870					875					880		
Arg	Pro	Lys	Pro	Ala	Gly	Pro	Pro	Pro	Arg	Glu	Thr	Pro	Val	Pro	Pro		
				885					890					895			
Gly	Leu	Asp	Phe	Asn	Leu	Thr	Glu	Ser	Asp	Thr	Val	Lys	Arg	Arg	Pro		
			900					905					910				
Lys	Cys	Arg	Glu	Arg	Glu	Pro	Leu	Gln	Thr	Ala	Leu	Leu	Ala	Phe	Gly		
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Val	Ala	Ser	Ala	Thr	Pro	Gly	Pro	Ala	Ala	Pro	Leu	Pro	Ser	Pro	Thr		
	930					935					940						
Pro	Gly	Glu	Ser	Pro	Pro	Ala	Ser	Ser	Leu	Pro	Gln	Pro	Glu	Pro	Ser		
945					950					955					960		
Ser	Leu	Pro	Ala	Gln	Gly	Val	Pro	Thr	Pro	Leu	Ala	Pro	Ser	Pro	Ala		
				965					970					975			
Met	Gln	Pro	Pro	Val	Pro	Pro	Cys	Pro	Gly	Pro	Gly	Leu	Glu	Ser	Ser		
			980					985					990				
Ala	Ala	Ser	Arg	Trp	Asn	Gly	Glu	Thr	Glu	Pro	Pro	Ala	Ala	Pro			
Ala																	
		995					1000					1005					
Ala	Leu	Leu	Lys	Val	Pro	Gly	Ala	Gly	Thr	Ala	Pro	Lys	Pro	Val			
	1010					1015					1020						
Ser	Val	Ala	Cys	Thr	Gln	Leu	Ala	Phe	Ser	Gly	Pro	Lys	Leu	Ala			
	1025					1030					1035						
Pro	Arg	Leu	Gly	Pro	Arg	Pro	Val	Pro	Pro	Pro	Arg	Pro	Glu	Ser			

1040 1045 1050
 Thr Gly Thr Val Gly Pro Gly Gln Ala Gln Gln Arg Leu Glu Gln
 1055 1060 1065
 Thr Ser Ser Ser Leu Ala Ala Ala Leu Arg Ala Ala Glu Lys Ser
 1070 1075 1080
 Ile Gly Thr Lys Glu Gln Glu Gly Thr Pro Ser Ala Ser Thr Lys
 1085 1090 1095
 His Ile Leu Asp Asp Ile Ser Thr Met Phe Asp Ala Leu Ala Asp
 1100 1105 1110
 Gln Leu Asp Ala Met Leu Asp
 1115 1120

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<220>
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 <223> /note="Gene Name:
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<220>
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 Met Gly Arg Glu Gln Asp Leu Ile Leu Ala Val Lys Asn Gly Asp Val
 1 5 10 15

Thr Gly Val Gln Lys Leu Val Ala Lys
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<220>

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<223> /note="Gene Name:
CASK interacting protein 2"

<220>

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<223> /note="ENSP ID: ENSP00000464300"

<400> 12191

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Thr Gly Val Gln Lys Leu Val Ala Lys Val Lys Ala Thr Lys Thr Lys
20 25 30

Leu Leu Gly Ser Thr Lys Arg Leu Asn Val Asn Tyr Gln Asp Ala Asp
35 40 45

Gly Phe Ser Ala Leu His His Ala Ala Leu Gly Gly Ser Leu Glu Leu
50 55 60

Ile Ala Leu Leu Leu Glu Ala Gln Ala Thr Val Asp Ile Lys Asp Ser
65 70 75 80

Asn Gly Met Arg Pro Leu His Tyr Ala Ala Trp Gln Gly Arg Leu Glu
85 90 95

Pro Val Arg Leu Leu Leu Arg Ala Ser Ala Ala Val Asn Ala Ala Ser
100 105 110

Leu Asp Gly Gln Ile Pro Leu His Leu Ala Ala Gln Tyr Gly His Tyr
115 120 125

Glu Val Ser Glu Met Leu Leu Gln His Gln Ser Asn Pro Cys Leu Val
130 135 140

Asn Lys Ala Lys Lys Thr Pro Leu Asp Leu Ala Cys Glu Phe Gly Arg

27014

145		150		155		160									
Leu	Lys	Val	Ala	Gln	Leu	Leu	Leu	Asn	Ser	His	Leu	Cys	Val	Ala	Leu
				165					170					175	
Leu	Glu	Gly	Glu	Ala	Lys	Asp	Pro	Cys	Asp	Pro	Asn	Tyr	Thr	Thr	Pro
			180					185					190		
Leu	His	Leu	Ala	Ala	Lys	Asn	Gly	His	Arg	Glu	Val	Ile	Arg	Gln	Leu
		195					200					205			
Leu	Arg	Ala	Gly	Ile	Glu	Ile	Asn	Arg	Gln	Thr	Lys	Thr	Gly	Thr	Ala
	210					215					220				
Leu	His	Glu	Ala	Ala	Leu	Tyr	Gly	Lys	Thr	Glu	Val	Val	Arg	Leu	Leu
225					230					235					240
Leu	Glu	Gly	Gly	Val	Asp	Val	Asn	Ile	Arg	Asn	Thr	Tyr	Asn	Gln	Thr
				245					250					255	
Ala	Leu	Asp	Ile	Val	Asn	Gln	Phe	Thr	Thr	Ser	Gln	Ala	Ser	Arg	Glu
			260					265					270		
Ile	Lys	Gln	Leu	Leu	Arg	Glu	Ala	Ser	Gly	Ile	Leu	Lys	Val	Arg	Ala
		275					280					285			
Leu	Lys	Asp	Phe	Trp	Asn	Leu	His	Asp	Pro	Thr	Ala	Leu	Asn	Val	Arg
	290					295					300				
Ala	Gly	Asp	Val	Ile	Thr	Val	Arg	Asp	Pro	Lys	Gln	Ala	Phe	Leu	Cys
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Lys Tyr Lys

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<220>
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        CASP2 and RIPK1 domain containing adaptor with death
        domain"

<220>
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<220>
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Met Glu Ala Arg Asp Lys Gln Val Leu Arg Ser Leu Arg Leu Glu Leu
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Gly Ala Glu Val Leu Val Glu Gly Leu Val Leu Gln Tyr Leu Tyr Gln
          20          25          30

Glu Gly Ile Leu Thr Glu Asn His Ile Gln Glu Ile Asn Ala Gln Thr
          35          40          45

Thr Gly Leu Arg Lys Thr Met Leu Leu Leu Asp Ile Leu Pro Ser Arg
          50          55          60

Gly Pro Lys Ala Phe Asp Thr Phe Leu Asp Ser Leu Gln Glu Phe Pro
65          70          75          80

Trp Val Arg Glu Lys Leu Lys Lys Ala Arg Glu Glu Ala Met Thr Asp
          85          90          95

Leu Pro Ala Gly Asp Arg Leu Thr Gly Ile Pro Ser His Ile Leu Asn
          100          105          110

Ser Ser Pro Ser Asp Arg Gln Ile Asn Gln Leu Ala Gln Arg Leu Gly
          115          120          125

Pro Glu Trp Glu Pro Met Val Leu Ser Leu Gly Leu Ser Gln Thr Asp
          130          135          140

Ile Tyr Arg Cys Lys Ala Asn His Pro His Asn Val Gln Ser Gln Val
145          150          155          160

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Val Glu Ala Phe Ile Arg Trp Arg Gln Arg Phe Gly Lys Gln Ala Thr
165 170 175

Phe Gln Ser Leu His Asn Gly Leu Arg Ala Val Glu Val Asp Pro Ser
180 185 190

Leu Leu Leu His Met Leu Glu
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<210> 12193
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<212> PRT
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CASP2 and RIPK1 domain containing adaptor with death
domain"

<220>
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<220>
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<400> 12193
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Gly Ala Glu Val Leu Val Glu Gly Leu Val Leu Gln Tyr Leu Tyr Gln
20 25 30

Glu Gly Ile Leu Thr Glu Asn His Ile Gln Glu Ile Asn Ala Gln Thr
35 40 45

Thr Gly Leu Arg Lys Thr Met Leu Leu Leu Asp Ile Leu Pro Ser Arg
50 55 60

Gly Pro Lys Ala Phe Asp Thr Phe Leu Asp Ser Leu Gln Glu Phe Pro
65 70 75 80

Trp Val Arg Glu Lys Leu Lys Lys Ala Arg Glu Glu Ala Met Thr Asp
85 90 95

Leu Pro Ala Gly Asp Arg Leu Thr Gly Ile Pro Ser His Ile Leu Asn
100 105 110

Ser Ser Pro Ser Asp Arg Gln Ile Asn Gln Leu Ala Gln Arg Leu Gly
115 120 125

Pro Glu Trp Glu Pro Met Val Leu Ser Leu Gly Leu Ser Gln Thr Asp
130 135 140

Ile Tyr Arg Cys Lys Ala Asn His Pro His Asn Val Gln Ser Gln Val
145 150 155 160

Val Glu Ala Phe Ile Arg Trp Arg Gln Arg Phe Gly Lys Gln Ala Thr
165 170 175

Phe Gln Ser Leu His Asn Gly Leu Arg Ala Val Glu Val Asp Pro Ser
180 185 190

Leu Leu Leu His Met Leu Glu
195

<210> 12194
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CASP2 and RIPK1 domain containing adaptor with death
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<220>
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<223> /note="Uniprot ID: P78560"

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<223> /note="ENSP ID: ENSP00000448425"

<400> 12194

Met Glu Ala Arg Asp Lys Gln Val Leu Arg Ser Leu Arg Leu Glu Leu
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Gly Ala Glu Val Leu Val Glu Gly Leu Val Leu Gln Tyr Leu Tyr Gln
20 25 30

Glu Gly Ile Leu Thr Glu Asn His Ile Gln Glu Ile Asn Ala Gln Thr
35 40 45

Thr Gly Leu Arg Lys Thr Met Leu Leu Leu Asp Ile Leu Pro Ser Arg
50 55 60

Gly Pro Lys Ala Phe Asp Thr Phe Leu Asp Ser Leu Gln Glu Phe Pro
65 70 75 80

Trp Val Arg Glu Lys Leu Lys Lys Ala Arg Glu Glu Ala Met Thr Asp
85 90 95

Leu Pro Ala Gly Cys Trp Pro
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<223> /note="ENSP ID: ENSP00000448685"

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Met Glu Ala Arg Asp Lys Gln Val Leu Arg Ser Leu Arg Leu Glu Leu
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Gly Ala Glu Val Leu Val Glu Gly Leu Val Leu Gln Tyr Leu Tyr Gln
20 25 30
Glu Gly Ile Leu Thr Glu Asn His Ile Gln Glu Ile Asn Ala Gln Thr
35 40 45
Thr Gly Leu Arg Lys Thr Met Leu Leu Leu Asp Ile Leu Pro Ser Arg
50 55 60
Gly Pro Lys Ala Phe Asp Thr Phe Leu Asp Ser Leu Gln Glu Phe Pro
65 70 75 80
Trp Val Arg Glu Lys Leu Lys Lys Ala Arg Glu Glu Ala Met Thr Asp
85 90 95
Leu Pro Ala Glu Met Arg Lys Leu Arg Pro Lys Asp Ser Val Thr Cys
100 105 110
Leu Ala Ser Gln Leu Thr Trp Arg Phe
115 120

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<220>
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CASP2 and RIPK1 domain containing adaptor with death
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<220>
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<400> 12196
Met Glu Ala Arg Asp Lys Gln Val Leu Arg Ser Leu Arg Leu Glu Leu
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Gly Ala Glu Val Leu Val Glu Gly Leu Val Leu Gln Tyr Leu Tyr Gln
20 25 30
Glu Gly Ile Leu Thr Glu Asn His Ile Gln Glu Ile Asn Ala Gln Thr
35 40 45
Thr Gly Leu Arg Lys Thr Met Leu Leu Leu Asp Ile Leu Pro Ser Arg
50 55 60
Gly Pro Lys Ala Phe Asp Thr Phe Leu Asp Ser Leu Gln Glu Phe Pro
65 70 75 80
Trp Val Arg Glu Lys Leu Lys Lys Ala Arg Glu Glu Ala Met Thr Asp
85 90 95
Leu Pro Ala Gly Leu Glu Glu Lys Gly Arg Thr Gly Arg Arg Met Gly
100 105 110
Trp Gly Ala Gly Glu Glu Lys Gly Gln Lys Cys Gln Thr Val Gly Met
115 120 125
Arg Thr
130

<210> 12197
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 Met Glu Ala Arg Asp Lys Gln Val Leu Arg Ser Leu Arg Leu Glu Leu
 1 5 10 15

 Gly Ala Glu Val Leu Val Glu Gly Leu Val Leu Gln Tyr Leu Tyr Gln
 20 25 30

 Glu Gly Ile Leu Thr Glu Asn His Ile Gln Glu Ile Asn Ala Gln Thr
 35 40 45

 Thr Gly Leu Arg Lys Thr Met Leu Leu Leu Asp Ile Leu Pro Ser Arg
 50 55 60

 Gly Pro Lys Ala Phe Asp Thr Phe Leu Asp Ser Leu Gln Glu Phe Pro
 65 70 75 80

 Trp Val Arg Glu Lys Leu Lys Lys Ala Arg Glu Glu Ala Met Thr Asp
 85 90 95

 Leu Pro Ala Val Ala Ile Ile Arg Leu Pro Arg Glu Leu Ser Leu Pro
 100 105 110

 Thr Leu Leu
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<220>
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<220>
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 <223> /note="Gene Symbol: CFLAR"

<220>
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 <223> /note="Gene Name:
 CASP8 and FADD-like apoptosis regulator"

<220>
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 <223> /note="Uniprot ID: O15519"

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<223> /note="ENSP ID: ENSP00000312455"

<400> 12198

Met Ser Ala Glu Val Ile His Gln Val Glu Glu Ala Leu Asp Thr Asp
1 5 10 15

Glu Lys Glu Met Leu Leu Phe Leu Cys Arg Asp Val Ala Ile Asp Val
20 25 30

Val Pro Pro Asn Val Arg Asp Leu Leu Asp Ile Leu Arg Glu Arg Gly
35 40 45

Lys Leu Ser Val Gly Asp Leu Ala Glu Leu Leu Tyr Arg Val Arg Arg
50 55 60

Phe Asp Leu Leu Lys Arg Ile Leu Lys Met Asp Arg Lys Ala Val Glu
65 70 75 80

Thr His Leu Leu Arg Asn Pro His Leu Val Ser Asp Tyr Arg Val Leu
85 90 95

Met Ala Glu Ile Gly Glu Asp Leu Asp Lys Ser Asp Val Ser Ser Leu
100 105 110

Ile Phe Leu Met Lys Asp Tyr Met Gly Arg Gly Lys Ile Ser Lys Glu
115 120 125

Lys Ser Phe Leu Asp Leu Val Val Glu Leu Glu Lys Leu Asn Leu Val
130 135 140

Ala Pro Asp Gln Leu Asp Leu Leu Glu Lys Cys Leu Lys Asn Ile His
145 150 155 160

Arg Ile Asp Leu Lys Thr Lys Ile Gln Lys Tyr Lys Gln Ser Val Gln
165 170 175

Gly Ala Gly Thr Ser Tyr Arg Asn Val Leu Gln Ala Ala Ile Gln Lys
180 185 190

Ser Leu Lys Asp Pro Ser Asn Asn Phe Arg Leu His Asn Gly Arg Ser
195 200 205

Lys	Glu	Gln	Arg	Leu	Lys	Glu	Gln	Leu	Gly	Ala	Gln	Gln	Glu	Pro	Val			
210						215					220							
Lys	Lys	Ser	Ile	Gln	Glu	Ser	Glu	Ala	Phe	Leu	Pro	Gln	Ser	Ile	Pro			
225					230					235					240			
Glu	Glu	Arg	Tyr	Lys	Met	Lys	Ser	Lys	Pro	Leu	Gly	Ile	Cys	Leu	Ile			
				245					250					255				
Ile	Asp	Cys	Ile	Gly	Asn	Glu	Thr	Glu	Leu	Leu	Arg	Asp	Thr	Phe	Thr			
			260					265					270					
Ser	Leu	Gly	Tyr	Glu	Val	Gln	Lys	Phe	Leu	His	Leu	Ser	Met	His	Gly			
		275					280					285						
Ile	Ser	Gln	Ile	Leu	Gly	Gln	Phe	Ala	Cys	Met	Pro	Glu	His	Arg	Asp			
	290					295					300							
Tyr	Asp	Ser	Phe	Val	Cys	Val	Leu	Val	Ser	Arg	Gly	Gly	Ser	Gln	Ser			
305					310					315					320			
Val	Tyr	Gly	Val	Asp	Gln	Thr	His	Ser	Gly	Leu	Pro	Leu	His	His	Ile			
				325					330					335				
Arg	Arg	Met	Phe	Met	Gly	Asp	Ser	Cys	Pro	Tyr	Leu	Ala	Gly	Lys	Pro			
			340					345					350					
Lys	Met	Phe	Phe	Ile	Gln	Asn	Tyr	Val	Val	Ser	Glu	Gly	Gln	Leu	Glu			
		355					360					365						
Asp	Ser	Ser	Leu	Leu	Glu	Val	Asp	Gly	Pro	Ala	Met	Lys	Asn	Val	Glu			
	370					375					380							
Phe	Lys	Ala	Gln	Lys	Arg	Gly	Leu	Cys	Thr	Val	His	Arg	Glu	Ala	Asp			
385					390					395					400			
Phe	Phe	Trp	Ser	Leu	Cys	Thr	Ala	Asp	Met	Ser	Leu	Leu	Glu	Gln	Ser			
				405					410					415				
His	Ser	Ser	Pro	Ser	Leu	Tyr	Leu	Gln	Cys	Leu	Ser	Gln	Lys	Leu	Arg			
			420					425					430					

Gln Glu Arg Lys Arg Pro Leu Leu Asp Leu His Ile Glu Leu Asn Gly
435 440 445

Tyr Met Tyr Asp Trp Asn Ser Arg Val Ser Ala Lys Glu Lys Tyr Tyr
450 455 460

Val Trp Leu Gln His Thr Leu Arg Lys Lys Leu Ile Leu Ser Tyr Thr
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<223> /note="Payload ID: 2406"

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<223> /note="Gene Symbol: CFLAR"

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<223> /note="Gene Name:
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<220>

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Ile Phe Leu Met Lys Asp Tyr Met Gly Arg Gly Lys Ile Ser Lys Glu
20 25 30

Lys Ser Phe Leu Asp Leu Val Val Glu Leu Glu Lys Leu Asn Leu Val
35 40 45

Ala Pro Asp Gln Leu Asp Leu Leu Glu Lys Cys Leu Lys Asn Ile His
50 55 60

Arg Ile Asp Leu Lys Thr Lys Ile Gln Lys Tyr Lys Gln Ser Val Gln
65 70 75 80

Gly Ala Gly Thr Ser Tyr Arg Asn Val Leu Gln Ala Ala Ile Gln Lys
85 90 95

Ser	Leu	Lys	Asp	Pro	Ser	Asn	Asn	Phe	Arg	Glu	Glu	Pro	Val	Lys	Lys			
			100					105					110					
Ser	Ile	Gln	Glu	Ser	Glu	Ala	Phe	Leu	Pro	Gln	Ser	Ile	Pro	Glu	Glu			
		115					120					125						
Arg	Tyr	Lys	Met	Lys	Ser	Lys	Pro	Leu	Gly	Ile	Cys	Leu	Ile	Ile	Asp			
	130					135					140							
Cys	Ile	Gly	Asn	Glu	Thr	Glu	Leu	Leu	Arg	Asp	Thr	Phe	Thr	Ser	Leu			
145					150					155					160			
Gly	Tyr	Glu	Val	Gln	Lys	Phe	Leu	His	Leu	Ser	Met	His	Gly	Ile	Ser			
				165					170					175				
Gln	Ile	Leu	Gly	Gln	Phe	Ala	Cys	Met	Pro	Glu	His	Arg	Asp	Tyr	Asp			
			180					185					190					
Ser	Phe	Val	Cys	Val	Leu	Val	Ser	Arg	Gly	Gly	Ser	Gln	Ser	Val	Tyr			
		195					200					205						
Gly	Val	Asp	Gln	Thr	His	Ser	Gly	Leu	Pro	Leu	His	His	Ile	Arg	Arg			
	210					215					220							
Met	Phe	Met	Gly	Asp	Ser	Cys	Pro	Tyr	Leu	Ala	Gly	Lys	Pro	Lys	Met			
225					230					235					240			
Phe	Phe	Ile	Gln	Asn	Tyr	Val	Val	Ser	Glu	Gly	Gln	Leu	Glu	Asp	Ser			
				245					250					255				
Ser	Leu	Leu	Glu	Val	Asp	Gly	Pro	Ala	Met	Lys	Asn	Val	Glu	Phe	Lys			
			260					265					270					
Ala	Gln	Lys	Arg	Gly	Leu	Cys	Thr	Val	His	Arg	Glu	Ala	Asp	Phe	Phe			
		275					280					285						
Trp	Ser	Leu	Cys	Thr	Ala	Asp	Met	Ser	Leu	Leu	Glu	Gln	Ser	His	Ser			
	290					295					300							
Ser	Pro	Ser	Leu	Tyr	Leu	Gln	Cys	Leu	Ser	Gln	Lys	Leu	Arg	Gln	Glu			
305					310					315					320			

Arg

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<212> PRT

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<223> /note="Payload ID: 2406"

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<223> /note="Gene Symbol: CFLAR"

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<223> /note="Gene Name:
CASP8 and FADD-like apoptosis regulator"

<220>

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<223> /note="Uniprot ID: O15519"

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Met Ser Ala Glu Val Ile His Gln Val Glu Glu Ala Leu Asp Thr Asp
1 5 10 15

Glu Lys Glu Met Leu Leu Phe Leu Cys Arg Asp Val Ala Ile Asp Val
20 25 30

Val Pro Pro Asn Val Arg Asp Leu Leu Asp Ile Leu Arg Glu Arg Gly
35 40 45

Lys Leu Ser Val Gly Asp Leu Ala Glu Leu Leu Tyr Arg Val Arg Arg
50 55 60

Phe Asp Leu Leu Lys Arg Ile Leu Lys Met Asp Arg Lys Ala Val Glu
65 70 75 80

Thr His Leu Leu Arg Asn Pro His Leu Val Ser Asp Tyr Arg Val Leu
85 90 95

Met Ala Glu Ile Gly Glu Asp Leu Asp Lys Ser Asp Val Ser Ser Leu

27027

100	105	110
Ile Phe Leu Met Lys Asp Tyr Met Gly Arg Gly Lys Ile Ser Lys Glu		
115	120	125
Lys Ser Phe Leu Asp Leu Val Val Glu Leu Glu Lys Leu Asn Leu Val		
130	135	140
Ala Pro Asp Gln Leu Asp Leu Leu Glu Lys Cys Leu Lys Asn Ile His		
145	150	155
Arg Ile Asp Leu Lys Thr Lys Ile Gln Lys Tyr Lys Gln Ser Val Gln		
165	170	175
Gly Ala Gly Thr Ser Tyr Arg Asn Val Leu Gln Ala Ala Ile Gln Lys		
180	185	190
Ser Leu Lys Asp Pro Ser Asn Asn Phe Arg Met Ile Thr Pro Tyr Ala		
195	200	205
His Cys Pro Asp Leu Lys Ile Leu Gly Asn Cys Ser Met		
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<400> 12201

Met Ser Ala Glu Val Ile His Gln Val Glu Glu Ala Leu Asp Thr Asp
1 5 10 15

Glu Lys Glu Met Leu Leu Phe Leu Cys Arg Asp Val Ala Ile Asp Val
20 25 30

Val Pro Pro Asn Val Arg Asp Leu Leu Asp Ile Leu Arg Glu Arg Gly
35 40 45

Lys Leu Ser Val Gly Asp Leu Ala Glu Leu Leu Tyr Arg Val Arg Arg
50 55 60

Phe Asp Leu Leu Lys Arg Ile Leu Lys Met Asp Arg Lys Ala Val Glu
65 70 75 80

Thr His Leu Leu Arg Asn Pro His Leu Val Ser Asp Tyr Arg Val Leu
85 90 95

Met Ala Glu Ile Gly Glu Asp Leu Asp Lys Ser Asp Val Ser Ser Leu
100 105 110

Ile Phe Leu Met Lys Asp Tyr Met Gly Arg Gly Lys Ile Ser Lys Glu
115 120 125

Lys Ser Phe Leu Asp Leu Val Val Glu Leu Glu Lys Leu Asn Leu Val
130 135 140

Ala Pro Asp Gln Leu Asp Leu Leu Glu Lys Cys Leu Lys Asn Ile His
145 150 155 160

Arg Ile Asp Leu Lys Thr Lys Ile Gln Lys Tyr Lys Gln Ser Val Gln
165 170 175

Gly Ala Gly Thr Ser Tyr Arg Asn Val Leu Gln Ala Ala Ile Gln Lys
180 185 190

Ser Leu Lys Asp Pro Ser Asn Asn Phe Arg Leu His Asn Gly Arg Ser
195 200 205

Lys Glu Gln Arg Leu Lys Glu Gln Leu Gly Ala Gln Gln Glu Pro Val
210 215 220

Lys Lys Ser Ile Gln Glu Ser Glu Ala Phe Leu Pro Gln Ser Ile Pro
225 230 235 240

Glu Glu Arg Tyr Lys Met Lys Ser Lys Pro Leu Gly Ile Cys Leu Ile
245 250 255

Ile Asp Cys Ile Gly Asn Glu Thr Gly Trp Ser Ala Met Ala Gln Ser
260 265 270

Gln Leu Thr Ala Ile Ser Thr Ser Gln Val Gln Ala Ile Leu Leu Pro
275 280 285

Gln Pro Pro Glu
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CASP8 and FADD-like apoptosis regulator"

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<400> 12202
Met Ser Ala Glu Val Ile His Gln Val Glu Glu Ala Leu Asp Thr Asp
1 5 10 15

Glu Lys Glu Met Leu Leu Phe Leu Cys Arg Asp Val Ala Ile Asp Val
20 25 30

Val Pro Pro Asn Val Arg Asp Leu Leu Asp Ile Leu Arg Glu Arg Gly
35 40 45

27030

Lys	Leu	Ser	Val	Gly	Asp	Leu	Ala	Glu	Leu	Leu	Tyr	Arg	Val	Arg	Arg
50						55					60				
Phe	Asp	Leu	Leu	Lys	Arg	Ile	Leu	Lys	Met	Asp	Arg	Lys	Ala	Val	Glu
65					70					75					80
Thr	His	Leu	Leu	Arg	Asn	Pro	His	Leu	Val	Ser	Asp	Tyr	Arg	Val	Leu
				85					90					95	
Met	Ala	Glu	Ile	Gly	Glu	Asp	Leu	Asp	Lys	Ser	Asp	Val	Ser	Ser	Leu
			100					105					110		
Ile	Phe	Leu	Met	Lys	Asp	Tyr	Met	Gly	Arg	Gly	Lys	Ile	Ser	Lys	Glu
		115					120					125			
Lys	Ser	Phe	Leu	Asp	Leu	Val	Val	Glu	Leu	Glu	Lys	Leu	Asn	Leu	Val
	130					135					140				
Ala	Pro	Asp	Gln	Leu	Asp	Leu	Leu	Glu	Lys	Cys	Leu	Lys	Asn	Ile	His
145					150					155					160
Arg	Ile	Asp	Leu	Lys	Thr	Lys	Ile	Gln	Lys	Tyr	Lys	Gln	Ser	Val	Gln
				165					170					175	
Gly	Ala	Gly	Thr	Ser	Tyr	Arg	Asn	Val	Leu	Gln	Ala	Ala	Ile	Gln	Lys
			180					185					190		
Ser	Leu	Lys	Asp	Pro	Ser	Asn	Asn	Phe	Arg	Ser	Ile	Pro	Glu	Glu	Arg
		195					200					205			
Tyr	Lys	Met	Lys	Ser	Lys	Pro	Leu	Gly	Ile	Cys	Leu	Ile	Ile	Asp	Cys
	210					215					220				
Ile	Gly	Asn	Glu	Thr	Glu	Leu	Leu	Arg	Asp	Thr	Phe	Thr	Ser	Leu	Gly
225					230					235					240
Tyr	Glu	Val	Gln	Lys	Phe	Leu	His	Leu	Ser	Met	His	Gly	Ile	Ser	Gln
				245					250					255	
Ile	Leu	Gly	Gln	Phe	Ala	Cys	Met	Pro	Glu	His	Arg	Asp	Tyr	Asp	Ser
			260					265					270		

Phe Val Cys Val Leu Val Ser Arg Gly Gly Ser Gln Ser Val Tyr Gly
275 280 285

Val Asp Gln Thr His Ser Gly Leu Pro Leu His His Ile Arg Arg Met
290 295 300

Phe Met Gly Asp Ser Cys Pro Tyr Leu Ala Gly Lys Pro Lys Met Phe
305 310 315 320

Phe Ile Gln Asn Tyr Val Val Ser Glu Gly Gln Leu Glu Asp Ser Ser
325 330 335

Leu Leu Glu Val Asp Gly Pro Ala Met Lys Asn Val Glu Phe Lys Ala
340 345 350

Gln Lys Arg Gly Leu Cys Thr Val His Arg Glu Ala Asp Phe Phe Trp
355 360 365

Ser Leu Cys Thr Ala Asp Met Ser Leu Leu Glu Gln Ser His Ser Ser
370 375 380

Pro Ser Leu Tyr Leu Gln Cys Leu Ser Gln Lys Leu Arg Gln Glu Arg
385 390 395 400

Lys Arg Pro Leu Leu Asp Leu His Ile Glu Leu Asn Gly Tyr Met Tyr
405 410 415

Asp Trp Asn Ser Arg Val Ser Ala Lys Glu Lys Tyr Tyr Val Trp Leu
420 425 430

Gln His Thr Leu Arg Lys Lys Leu Ile Leu Ser Tyr Thr
435 440 445

<210> 12203

<211> 250

<212> PRT

<213> Homo sapiens

<220>

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<220>
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 <223> /note="Gene Name:
 CASP8 and FADD-like apoptosis regulator"

<220>
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<400> 12203

Met Ser Ala Glu Val Ile His Gln Val Glu Glu Ala Leu Asp Thr Asp
 1 5 10 15

Glu Lys Glu Met Leu Leu Phe Leu Cys Arg Asp Val Ala Ile Asp Val
 20 25 30

Val Pro Pro Asn Val Arg Asp Leu Leu Asp Ile Leu Arg Glu Arg Gly
 35 40 45

Lys Leu Ser Val Gly Asp Leu Ala Glu Leu Leu Tyr Arg Val Arg Arg
 50 55 60

Phe Asp Leu Leu Lys Arg Ile Leu Lys Met Asp Arg Lys Ala Val Glu
 65 70 75 80

Thr His Leu Leu Arg Asn Pro His Leu Val Ser Asp Tyr Arg Val Leu
 85 90 95

Met Ala Glu Ile Gly Glu Asp Leu Asp Lys Ser Asp Val Ser Ser Leu
 100 105 110

Ile Phe Leu Met Lys Asp Tyr Met Gly Arg Gly Lys Ile Ser Lys Glu
 115 120 125

Lys Ser Phe Leu Asp Leu Val Val Glu Leu Glu Lys Leu Asn Leu Val
 130 135 140

Ala Pro Asp Gln Leu Asp Leu Leu Glu Lys Cys Leu Lys Asn Ile His
 145 150 155 160

Arg Ile Asp Leu Lys Thr Lys Ile Gln Lys Tyr Lys Gln Ser Gly Gly
 165 170 175

Trp Asn Gly Thr Trp Met Thr Lys Ala Ser Phe Ser Leu Trp Leu Glu
 180 185 190

Ile Ala Ser Leu Tyr Ile Leu His Ile Pro Asp Leu Pro Thr Pro Leu
195 200 205

Pro Cys Ile Phe Met Ile Ser Ala Lys Cys Cys Gln Ala Val Leu Asn
210 215 220

Ile Ser Val Phe Lys Lys Glu Ser Gly Ile Cys Thr Gly Trp Gln Ser
225 230 235 240

Tyr Gly His Ser Gly Val Leu His Val Cys
245 250

<210> 12204
<211> 64
<212> PRT
<213> Homo sapiens

<220>
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<223> /note="Gene Name:
CASP8 and FADD-like apoptosis regulator"

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<400> 12204
Met Ser Ala Glu Val Ile His Gln Val Glu Glu Ala Leu Asp Thr Asp
1 5 10 15

Glu Lys Glu Met Leu Leu Phe Leu Cys Arg Asp Val Ala Ile Asp Val
20 25 30

Val Pro Pro Asn Val Arg Asp Leu Leu Asp Ile Leu Arg Glu Arg Gly
35 40 45

Lys Leu Ser Val Gly Asp Leu Ala Glu Leu Leu Tyr Arg Val Arg Arg
50 55 60

<210> 12205
<211> 243
<212> PRT
<213> Homo sapiens

<220>
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<223> /note="Gene Name:
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<400> 12205
Met Ser Ala Glu Val Ile His Gln Val Glu Glu Ala Leu Asp Thr Asp
1 5 10 15

Glu Lys Glu Met Leu Leu Phe Leu Cys Arg Asp Val Ala Ile Asp Val
20 25 30

Val Pro Pro Asn Val Arg Asp Leu Leu Asp Ile Leu Arg Glu Arg Gly
35 40 45

Lys Leu Ser Val Gly Asp Leu Ala Glu Leu Leu Tyr Arg Val Arg Arg
50 55 60

Phe Asp Leu Leu Lys Arg Ile Leu Lys Met Asp Arg Lys Ala Val Glu
65 70 75 80

Thr His Leu Leu Arg Asn Pro His Leu Val Ser Asp Tyr Arg Val Leu
85 90 95

Met Ala Glu Ile Gly Glu Asp Leu Asp Lys Ser Asp Val Ser Ser Leu
100 105 110

Ile Phe Leu Met Lys Asp Tyr Met Gly Arg Gly Lys Ile Ser Lys Glu
115 120 125

Lys Ser Phe Leu Asp Leu Val Val Glu Leu Glu Lys Leu Asn Leu Val
130 135 140

Ala Pro Asp Gln Leu Asp Leu Leu Glu Lys Cys Leu Lys Asn Ile His
145 150 155 160

Arg Ile Asp Leu Lys Thr Lys Ile Gln Lys Tyr Lys Gln Ser Val Gln
165 170 175

Gly Ala Gly Thr Ser Tyr Arg Asn Val Leu Gln Ala Ala Ile Gln Lys
180 185 190

Ser Leu Lys Asp Pro Ser Asn Asn Phe Arg Ala Gly Val Gln Trp Arg
195 200 205

Asp Leu Gly Ser Pro Gln Pro Pro Pro Pro Gly Phe Lys Arg Phe Ser
210 215 220

His Leu Ser Leu Pro Ser Ser Trp Asp Tyr Arg Asn Val Pro Pro Arg
225 230 235 240

Pro Ala Pro

<210> 12206
<211> 480
<212> PRT
<213> Homo sapiens

<220>
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CASP8 and FADD-like apoptosis regulator"

<220>
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<400> 12206

Met	Ser	Ala	Glu	Val	Ile	His	Gln	Val	Glu	Glu	Ala	Leu	Asp	Thr	Asp	
1				5					10					15		
Glu	Lys	Glu	Met	Leu	Leu	Phe	Leu	Cys	Arg	Asp	Val	Ala	Ile	Asp	Val	
			20					25					30			
Val	Pro	Pro	Asn	Val	Arg	Asp	Leu	Leu	Asp	Ile	Leu	Arg	Glu	Arg	Gly	
			35				40					45				
Lys	Leu	Ser	Val	Gly	Asp	Leu	Ala	Glu	Leu	Leu	Tyr	Arg	Val	Arg	Arg	
	50					55					60					
Phe	Asp	Leu	Leu	Lys	Arg	Ile	Leu	Lys	Met	Asp	Arg	Lys	Ala	Val	Glu	
65					70					75					80	
Thr	His	Leu	Leu	Arg	Asn	Pro	His	Leu	Val	Ser	Asp	Tyr	Arg	Val	Leu	
				85					90					95		
Met	Ala	Glu	Ile	Gly	Glu	Asp	Leu	Asp	Lys	Ser	Asp	Val	Ser	Ser	Leu	
			100					105					110			
Ile	Phe	Leu	Met	Lys	Asp	Tyr	Met	Gly	Arg	Gly	Lys	Ile	Ser	Lys	Glu	
		115					120					125				
Lys	Ser	Phe	Leu	Asp	Leu	Val	Val	Glu	Leu	Glu	Lys	Leu	Asn	Leu	Val	
	130					135					140					
Ala	Pro	Asp	Gln	Leu	Asp	Leu	Leu	Glu	Lys	Cys	Leu	Lys	Asn	Ile	His	
145					150					155					160	
Arg	Ile	Asp	Leu	Lys	Thr	Lys	Ile	Gln	Lys	Tyr	Lys	Gln	Ser	Val	Gln	
				165					170					175		
Gly	Ala	Gly	Thr	Ser	Tyr	Arg	Asn	Val	Leu	Gln	Ala	Ala	Ile	Gln	Lys	
			180					185					190			
Ser	Leu	Lys	Asp	Pro	Ser	Asn	Asn	Phe	Arg	Leu	His	Asn	Gly	Arg	Ser	
		195					200					205				
Lys	Glu	Gln	Arg	Leu	Lys	Glu	Gln	Leu	Gly	Ala	Gln	Gln	Glu	Pro	Val	
	210					215					220					
Lys	Lys	Ser	Ile	Gln	Glu	Ser	Glu	Ala	Phe	Leu	Pro	Gln	Ser	Ile	Pro	

225					230					235				240			
Glu	Glu	Arg	Tyr	Lys	Met	Lys	Ser	Lys	Pro	Leu	Gly	Ile	Cys	Leu	Ile		
				245					250					255			
Ile	Asp	Cys	Ile	Gly	Asn	Glu	Thr	Glu	Leu	Leu	Arg	Asp	Thr	Phe	Thr		
			260					265					270				
Ser	Leu	Gly	Tyr	Glu	Val	Gln	Lys	Phe	Leu	His	Leu	Ser	Met	His	Gly		
		275					280					285					
Ile	Ser	Gln	Ile	Leu	Gly	Gln	Phe	Ala	Cys	Met	Pro	Glu	His	Arg	Asp		
	290					295					300						
Tyr	Asp	Ser	Phe	Val	Cys	Val	Leu	Val	Ser	Arg	Gly	Gly	Ser	Gln	Ser		
305					310					315					320		
Val	Tyr	Gly	Val	Asp	Gln	Thr	His	Ser	Gly	Leu	Pro	Leu	His	His	Ile		
				325					330					335			
Arg	Arg	Met	Phe	Met	Gly	Asp	Ser	Cys	Pro	Tyr	Leu	Ala	Gly	Lys	Pro		
			340					345					350				
Lys	Met	Phe	Phe	Ile	Gln	Asn	Tyr	Val	Val	Ser	Glu	Gly	Gln	Leu	Glu		
		355					360					365					
Asp	Ser	Ser	Leu	Leu	Glu	Val	Asp	Gly	Pro	Ala	Met	Lys	Asn	Val	Glu		
	370					375					380						
Phe	Lys	Ala	Gln	Lys	Arg	Gly	Leu	Cys	Thr	Val	His	Arg	Glu	Ala	Asp		
385					390					395					400		
Phe	Phe	Trp	Ser	Leu	Cys	Thr	Ala	Asp	Met	Ser	Leu	Leu	Glu	Gln	Ser		
				405					410					415			
His	Ser	Ser	Pro	Ser	Leu	Tyr	Leu	Gln	Cys	Leu	Ser	Gln	Lys	Leu	Arg		
			420					425					430				
Gln	Glu	Arg	Lys	Arg	Pro	Leu	Leu	Asp	Leu	His	Ile	Glu	Leu	Asn	Gly		
		435					440					445					
Tyr	Met	Tyr	Asp	Trp	Asn	Ser	Arg	Val	Ser	Ala	Lys	Glu	Lys	Tyr	Tyr		
	450					455					460						

Val Trp Leu Gln His Thr Leu Arg Lys Lys Leu Ile Leu Ser Tyr Thr
 465 470 475 480

<210> 12207

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<213> Homo sapiens

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<223> /note="Gene Name:
 CASP8 and FADD-like apoptosis regulator"

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<223> /note="Uniprot ID: O15519"

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<223> /note="ENSP ID: ENSP00000406775"

<400> 12207

Met Ser Ala Glu Val Ile His Gln Val Glu Glu Ala Leu Asp Thr Asp
 1 5 10 15

Glu Lys Glu Met Leu Leu Phe Leu Cys Arg Asp Val Ala Ile Asp Val
 20 25 30

Val Pro Pro Asn Val Arg Asp Leu Leu Asp Ile Leu Arg Glu Arg Gly
 35 40 45

Lys Leu Ser Val Gly Asp Leu Ala Glu Leu Leu Tyr Arg Val Arg Arg
 50 55 60

Phe Asp Leu Leu Lys Arg Ile Leu Lys Met Asp Arg Lys Ala Val Glu
 65 70 75 80

Thr His Leu Leu Arg Asn Pro His Leu Val Ser Asp Tyr Arg Val Leu
 85 90 95

Met Ala Glu Ile Gly Glu Asp Leu Asp Lys Ser Asp Val Ser Ser Leu
100 105 110

Ile Phe Leu Met Lys Asp Tyr Met Gly Arg Gly Lys Ile Ser Lys Glu
115 120 125

Lys Ser Phe Leu Asp Leu Val Val Glu Leu Glu Lys Leu Asn Leu Val
130 135 140

Ala Pro Asp Gln Leu Asp Leu Leu Glu Lys Cys Leu Lys Asn Ile His
145 150 155 160

Arg Ile Asp Leu Lys Thr Lys Ile Gln Lys Tyr Lys Gln Ser Val Gln
165 170 175

Gly Ala Gly Thr Ser Tyr Arg Asn Val Leu Gln Ala Ala Ile Gln Lys
180 185 190

Ser Leu Lys Asp Pro Ser Asn Asn Phe Arg Met Ile Thr Pro Tyr Ala
195 200 205

His Cys Pro Asp Leu Lys Ile Leu Gly Asn Cys Ser Met
210 215 220

<210> 12208
<211> 62
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<213> Homo sapiens

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<400> 12208
Met Ser Ala Glu Val Ile His Gln Val Glu Glu Ala Leu Asp Thr Asp
1 5 10 15

Glu Lys Glu Met Leu Leu Phe Leu Cys Arg Asp Val Ala Ile Asp Val
20 25 30

Val Pro Pro Asn Val Arg Asp Leu Leu Asp Ile Leu Arg Glu Arg Gly
35 40 45

Lys Leu Ser Val Gly Asp Leu Ala Glu Leu Leu Tyr Arg Val
50 55 60

<210> 12209

<211> 462

<212> PRT

<213> Homo sapiens

<220>

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CASP8 and FADD-like apoptosis regulator"

<220>

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<223> /note="Uniprot ID: O15519"

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<223> /note="ENSP ID: ENSP00000411535"

<400> 12209

Met Ser Ala Glu Val Ile His Gln Val Glu Glu Ala Leu Asp Thr Asp
1 5 10 15

Glu Lys Glu Met Leu Leu Phe Leu Cys Arg Asp Val Ala Ile Asp Val
20 25 30

Val Pro Pro Asn Val Arg Asp Leu Leu Asp Ile Leu Arg Glu Arg Gly
35 40 45

Lys Leu Ser Val Gly Asp Leu Ala Glu Leu Leu Tyr Arg Val Arg Arg
50 55 60

Phe	Asp	Leu	Leu	Lys	Arg	Ile	Leu	Lys	Met	Asp	Arg	Lys	Ala	Val	Glu	65	70	75	80
Thr	His	Leu	Leu	Arg	Asn	Pro	His	Leu	Val	Ser	Asp	Tyr	Arg	Val	Leu	85	90	95	
Met	Ala	Glu	Ile	Gly	Glu	Asp	Leu	Asp	Lys	Ser	Asp	Val	Ser	Ser	Leu	100	105	110	
Ile	Phe	Leu	Met	Lys	Asp	Tyr	Met	Gly	Arg	Gly	Lys	Ile	Ser	Lys	Glu	115	120	125	
Lys	Ser	Phe	Leu	Asp	Leu	Val	Val	Glu	Leu	Glu	Lys	Leu	Asn	Leu	Val	130	135	140	
Ala	Pro	Asp	Gln	Leu	Asp	Leu	Leu	Glu	Lys	Cys	Leu	Lys	Asn	Ile	His	145	150	155	160
Arg	Ile	Asp	Leu	Lys	Thr	Lys	Ile	Gln	Lys	Tyr	Lys	Gln	Ser	Val	Gln	165	170	175	
Gly	Ala	Gly	Thr	Ser	Tyr	Arg	Asn	Val	Leu	Gln	Ala	Ala	Ile	Gln	Lys	180	185	190	
Ser	Leu	Lys	Asp	Pro	Ser	Asn	Asn	Phe	Arg	Leu	His	Asn	Gly	Arg	Ser	195	200	205	
Lys	Glu	Gln	Arg	Leu	Lys	Glu	Gln	Leu	Gly	Ala	Gln	Gln	Glu	Pro	Val	210	215	220	
Lys	Lys	Ser	Ile	Gln	Glu	Ser	Glu	Ala	Phe	Leu	Pro	Gln	Ser	Ile	Pro	225	230	235	240
Glu	Glu	Arg	Tyr	Lys	Met	Lys	Ser	Lys	Pro	Leu	Gly	Ile	Cys	Leu	Ile	245	250	255	
Ile	Asp	Cys	Ile	Gly	Asn	Glu	Thr	Glu	Leu	Leu	Arg	Asp	Thr	Phe	Thr	260	265	270	
Ser	Leu	Gly	Tyr	Glu	Val	Gln	Lys	Phe	Leu	His	Leu	Ser	Met	His	Gly	275	280	285	
Ile	Ser	Gln	Ile	Leu	Gly	Gln	Phe	Ala	Cys	Met	Pro	Glu	His	Arg	Asp				

290					295					300					
Tyr	Asp	Ser	Phe	Val	Cys	Val	Leu	Val	Ser	Arg	Gly	Gly	Ser	Gln	Ser
305					310					315					320
Val	Tyr	Gly	Val	Asp	Gln	Thr	His	Ser	Gly	Leu	Pro	Leu	His	His	Ile
				325					330					335	
Arg	Arg	Met	Phe	Met	Gly	Asp	Ser	Cys	Pro	Tyr	Leu	Ala	Gly	Lys	Pro
			340					345					350		
Lys	Met	Phe	Phe	Ile	Gln	Asn	Tyr	Val	Val	Ser	Glu	Gly	Gln	Leu	Glu
		355					360					365			
Asp	Ser	Ser	Leu	Leu	Glu	Val	Asp	Gly	Pro	Ala	Met	Lys	Asn	Val	Glu
	370					375					380				
Phe	Lys	Ala	Gln	Lys	Arg	Gly	Leu	Cys	Thr	Val	His	Arg	Glu	Ala	Asp
385					390					395					400
Phe	Phe	Trp	Ser	Leu	Cys	Thr	Ala	Asp	Met	Ser	Leu	Leu	Glu	Gln	Ser
				405					410					415	
His	Ser	Ser	Pro	Ser	Leu	Tyr	Leu	Gln	Cys	Leu	Ser	Gln	Lys	Leu	Arg
			420					425					430		
Gln	Glu	Arg	Gly	Thr	Ile	Pro	Gly	Ser	Gly	Ile	Thr	Glu	Ser	Lys	Asp
		435					440					445			
Met	His	Phe	Ser	Ser	Leu	Gly	Cys	Ile	Leu	Leu	Asp	Val	Leu		
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<210> 12210

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<223> /note="Gene Symbol: CFLAR"

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<221> source
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<220>
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<400> 12210
Met Ser Ala Glu Val Ile His Gln Val Glu Glu Ala Leu Asp Thr Asp
1          5          10
Glu Lys Glu Met Leu Leu Phe Leu Cys Arg Asp Val Ala Ile Asp Val
20         25         30
Val Pro Pro Asn Val Arg Asp Leu Leu Asp Ile Leu Arg Glu Arg Gly
35         40         45
Lys Leu Ser Val Gly Asp Leu Ala Glu Leu Leu Tyr Arg Val Arg Arg
50         55         60
Phe Asp Leu Leu Lys Arg Ile Leu Lys Met Asp Arg Lys Ala Val Glu
65         70         75         80
Thr His Leu Leu Arg Asn Pro His Leu Val Ser Asp Tyr Arg Val Leu
85         90         95
Met Ala Glu Ile Gly Glu Asp Leu Asp Lys Ser Asp Val Ser Ser Leu
100        105        110
Ile Phe Leu Met Lys Asp Tyr Met Gly Arg Gly Lys Ile Ser Lys Glu
115        120        125

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Lys

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<210> 12211
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<220>
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<400> 12211
Met Ser Ala Glu Val Ile His Gln Val Glu Glu Ala Leu Asp Thr Asp
1          5          10          15

Glu Lys Glu Met Leu Leu Phe Leu Cys Arg Asp Val Ala Ile Asp Val
          20          25          30

Val Pro Pro Asn Val Arg Asp Leu Leu Asp Ile Leu Arg Glu Arg Gly
          35          40          45

Lys Leu Ser Val Gly Asp Leu Ala Glu Leu Leu Tyr Arg Val Arg Arg
50          55          60

Phe Asp Leu Leu Lys Arg Ile Leu Lys Met Asp Arg Lys Ala Val Glu
65          70          75          80

Thr His Leu Leu Arg Asn Pro His Leu Val Ser Asp Tyr Arg Val Leu
          85          90          95

Met Ala Glu Ile Gly Glu Asp Leu Asp Lys Ser Asp Val Ser Ser Leu
          100          105          110

Ile Phe Leu Met Lys Asp
          115

<210> 12212
<211> 384
<212> PRT
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<220>
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<220>
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<400> 12212
Met Ala Glu Ile Gly Glu Asp Leu Asp Lys Ser Asp Val Ser Ser Leu
1          5          10          15

Ile Phe Leu Met Lys Asp Tyr Met Gly Arg Gly Lys Ile Ser Lys Glu
          20          25          30

Lys Ser Phe Leu Asp Leu Val Val Glu Leu Glu Lys Leu Asn Leu Val
          35          40          45

Ala Pro Asp Gln Leu Asp Leu Leu Glu Lys Cys Leu Lys Asn Ile His
          50          55          60

Arg Ile Asp Leu Lys Thr Lys Ile Gln Lys Tyr Lys Gln Ser Val Gln
65          70          75          80

Gly Ala Gly Thr Ser Tyr Arg Asn Val Leu Gln Ala Ala Ile Gln Lys
          85          90          95

Ser Leu Lys Asp Pro Ser Asn Asn Phe Arg Leu His Asn Gly Arg Ser
          100          105          110

Lys Glu Gln Arg Leu Lys Glu Gln Leu Gly Ala Gln Gln Glu Pro Val
          115          120          125

Lys Lys Ser Ile Gln Glu Ser Glu Ala Phe Leu Pro Gln Ser Ile Pro
          130          135          140

Glu Glu Arg Tyr Lys Met Lys Ser Lys Pro Leu Gly Ile Cys Leu Ile
145          150          155          160

Ile Asp Cys Ile Gly Asn Glu Thr Glu Leu Leu Arg Asp Thr Phe Thr
          165          170          175

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Ser Leu Gly Tyr Glu Val Gln Lys Phe Leu His Leu Ser Met His Gly
180 185 190

Ile Ser Gln Ile Leu Gly Gln Phe Ala Cys Met Pro Glu His Arg Asp
195 200 205

Tyr Asp Ser Phe Val Cys Val Leu Val Ser Arg Gly Gly Ser Gln Ser
210 215 220

Val Tyr Gly Val Asp Gln Thr His Ser Gly Leu Pro Leu His His Ile
225 230 235 240

Arg Arg Met Phe Met Gly Asp Ser Cys Pro Tyr Leu Ala Gly Lys Pro
245 250 255

Lys Met Phe Phe Ile Gln Asn Tyr Val Val Ser Glu Gly Gln Leu Glu
260 265 270

Asp Ser Ser Leu Leu Glu Val Asp Gly Pro Ala Met Lys Asn Val Glu
275 280 285

Phe Lys Ala Gln Lys Arg Gly Leu Cys Thr Val His Arg Glu Ala Asp
290 295 300

Phe Phe Trp Ser Leu Cys Thr Ala Asp Met Ser Leu Leu Glu Gln Ser
305 310 315 320

His Ser Ser Pro Ser Leu Tyr Leu Gln Cys Leu Ser Gln Lys Leu Arg
325 330 335

Gln Glu Arg Lys Arg Pro Leu Leu Asp Leu His Ile Glu Leu Asn Gly
340 345 350

Tyr Met Tyr Asp Trp Asn Ser Arg Val Ser Ala Lys Glu Lys Tyr Tyr
355 360 365

Val Trp Leu Gln His Thr Leu Arg Lys Lys Leu Ile Leu Ser Tyr Thr
370 375 380

<210> 12213

<211> 117

<212> PRT

<213> Homo sapiens

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<220>
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<220>
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<220>
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<223> /note="ENSP ID: ENSP00000469608"

<400> 12213
Met Ala Glu Ile Gly Glu Asp Leu Asp Lys Ser Asp Val Ser Ser Leu
1          5          10          15

Ile Phe Leu Met Lys Asp Tyr Met Gly Arg Gly Lys Ile Ser Lys Glu
          20          25          30

Lys Ser Phe Leu Asp Leu Val Val Glu Leu Glu Lys Leu Asn Leu Val
          35          40          45

Ala Pro Asp Gln Leu Asp Leu Leu Glu Lys Cys Leu Lys Asn Ile His
          50          55          60

Arg Ile Asp Leu Lys Thr Lys Ile Gln Lys Tyr Lys Gln Ser Val Gln
65          70          75          80

Gly Ala Gly Thr Ser Tyr Arg Asn Val Leu Gln Ala Ala Ile Gln Lys
          85          90          95

Ser Leu Lys Asp Pro Ser Asn Asn Phe Arg Val Ser Leu Glu Lys Thr
          100          105          110

Tyr Gly Ile Pro Ala
          115

<210> 12214
<211> 168
<212> PRT
<213> Homo sapiens

<220>
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<223> /note="Payload ID: 2406"

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CASP8 and FADD-like apoptosis regulator"

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<400> 12214

Met Ala Glu Ile Gly Glu Asp Leu Asp Lys Ser Asp Val Ser Ser Leu
1 5 10 15

Ile Phe Leu Met Lys Asp Tyr Met Gly Arg Gly Lys Ile Ser Lys Glu
20 25 30

Lys Ser Phe Leu Asp Leu Val Val Glu Leu Glu Lys Leu Asn Leu Val
35 40 45

Ala Pro Asp Gln Leu Asp Leu Leu Glu Lys Cys Leu Lys Asn Ile His
50 55 60

Arg Ile Asp Leu Lys Thr Lys Ile Gln Lys Tyr Lys Gln Ser Val Gln
65 70 75 80

Gly Ala Gly Thr Ser Tyr Arg Asn Val Leu Gln Ala Ala Ile Gln Lys
85 90 95

Ser Leu Lys Asp Pro Ser Asn Asn Phe Arg Leu His Asn Gly Arg Ser
100 105 110

Lys Glu Gln Arg Leu Lys Glu Gln Leu Gly Ala Gln Gln Glu Pro Val
115 120 125

Lys Lys Ser Ile Gln Glu Ser Glu Ala Phe Leu Pro Gln Ser Ile Pro
130 135 140

Glu Glu Arg Tyr Lys Met Lys Ser Lys Pro Leu Gly Ile Cys Leu Ile
145 150 155 160

Ile Asp Cys Ile Gly Asn Glu Thr

<210> 12215

<211> 117

<212> PRT

<213> Homo sapiens

<220>

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<223> /note="Gene Name:
CASP8 and FADD-like apoptosis regulator"

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<223> /note="ENSP ID: ENSP00000471749"

<400> 12215

Met Ala Glu Ile Gly Glu Asp Leu Asp Lys Ser Asp Val Ser Ser Leu
1 5 10 15

Ile Phe Leu Met Lys Asp Tyr Met Gly Arg Gly Lys Ile Ser Lys Glu
20 25 30

Lys Ser Phe Leu Asp Leu Val Val Glu Leu Glu Lys Leu Asn Leu Val
35 40 45

Ala Pro Asp Gln Leu Asp Leu Leu Glu Lys Cys Leu Lys Asn Ile His
50 55 60

Arg Ile Asp Leu Lys Thr Lys Ile Gln Lys Tyr Lys Gln Ser Val Gln
65 70 75 80

Gly Ala Gly Thr Ser Tyr Arg Asn Val Leu Gln Ala Ala Ile Gln Lys
85 90 95

Ser Leu Lys Asp Pro Ser Asn Asn Phe Arg Met Ile Thr Pro Tyr Ala
100 105 110

His Cys Pro Asp Leu
115

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<210> 12216
<211> 366
<212> PRT
<213> Homo sapiens

<220>
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<223> /note="Gene Name:
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<220>
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<220>
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<223> /note="ENSP ID: ENSP00000471805"

<400> 12216
Met Ala Glu Ile Gly Glu Asp Leu Asp Lys Ser Asp Val Ser Ser Leu
1              5              10              15

Ile Phe Leu Met Lys Asp Tyr Met Gly Arg Gly Lys Ile Ser Lys Glu
      20              25              30

Lys Ser Phe Leu Asp Leu Val Val Glu Leu Glu Lys Leu Asn Leu Val
      35              40              45

Ala Pro Asp Gln Leu Asp Leu Leu Glu Lys Cys Leu Lys Asn Ile His
      50              55              60

Arg Ile Asp Leu Lys Thr Lys Ile Gln Lys Tyr Lys Gln Ser Val Gln
65              70              75              80

Gly Ala Gly Thr Ser Tyr Arg Asn Val Leu Gln Ala Ala Ile Gln Lys
      85              90              95

Ser Leu Lys Asp Pro Ser Asn Asn Phe Arg Leu His Asn Gly Arg Ser
      100              105              110

Lys Glu Gln Arg Leu Lys Glu Gln Leu Gly Ala Gln Gln Glu Pro Val

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115					120					125					
Lys	Lys	Ser	Ile	Gln	Glu	Ser	Glu	Ala	Phe	Leu	Pro	Gln	Ser	Ile	Pro
	130					135					140				
Glu	Glu	Arg	Tyr	Lys	Met	Lys	Ser	Lys	Pro	Leu	Gly	Ile	Cys	Leu	Ile
145					150					155					160
Ile	Asp	Cys	Ile	Gly	Asn	Glu	Thr	Glu	Leu	Leu	Arg	Asp	Thr	Phe	Thr
				165					170					175	
Ser	Leu	Gly	Tyr	Glu	Val	Gln	Lys	Phe	Leu	His	Leu	Ser	Met	His	Gly
			180					185					190		
Ile	Ser	Gln	Ile	Leu	Gly	Gln	Phe	Ala	Cys	Met	Pro	Glu	His	Arg	Asp
		195					200					205			
Tyr	Asp	Ser	Phe	Val	Cys	Val	Leu	Val	Ser	Arg	Gly	Gly	Ser	Gln	Ser
	210					215					220				
Val	Tyr	Gly	Val	Asp	Gln	Thr	His	Ser	Gly	Leu	Pro	Leu	His	His	Ile
225					230					235					240
Arg	Arg	Met	Phe	Met	Gly	Asp	Ser	Cys	Pro	Tyr	Leu	Ala	Gly	Lys	Pro
				245					250					255	
Lys	Met	Phe	Phe	Ile	Gln	Asn	Tyr	Val	Val	Ser	Glu	Gly	Gln	Leu	Glu
			260					265					270		
Asp	Ser	Ser	Leu	Leu	Glu	Val	Asp	Gly	Pro	Ala	Met	Lys	Asn	Val	Glu
		275					280					285			
Phe	Lys	Ala	Gln	Lys	Arg	Gly	Leu	Cys	Thr	Val	His	Arg	Glu	Ala	Asp
	290					295					300				
Phe	Phe	Trp	Ser	Leu	Cys	Thr	Ala	Asp	Met	Ser	Leu	Leu	Glu	Gln	Ser
305					310					315					320
His	Ser	Ser	Pro	Ser	Leu	Tyr	Leu	Gln	Cys	Leu	Ser	Gln	Lys	Leu	Arg
				325					330					335	
Gln	Glu	Arg	Gly	Thr	Ile	Pro	Gly	Ser	Gly	Ile	Thr	Glu	Ser	Lys	Asp
			340					345					350		

Met His Phe Ser Ser Leu Gly Cys Ile Leu Leu Asp Val Leu
355 360 365

<210> 12217

<211> 88

<212> PRT

<213> Homo sapiens

<220>

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<223> /note="Payload ID: 2407"

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<223> /note="Gene Symbol: CASP1"

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<223> /note="Gene Name:
caspase 1, apoptosis-related cysteine peptidase"

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<223> /note="Uniprot ID: P29466"

<220>

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<223> /note="ENSP ID: ENSP00000344132"

<400> 12217

Met Ala Asp Lys Val Leu Lys Glu Lys Arg Lys Leu Phe Ile Arg Ser
1 5 10 15

Met Gly Glu Asp Asn Val Ser Trp Arg His Pro Thr Met Gly Ser Val
20 25 30

Phe Ile Gly Arg Leu Ile Glu His Met Gln Glu Tyr Ala Cys Ser Cys
35 40 45

Asp Val Glu Glu Ile Phe Arg Lys Val Arg Phe Ser Phe Glu Gln Pro
50 55 60

Asp Gly Arg Ala Gln Met Pro Thr Thr Glu Arg Val Thr Leu Thr Arg
65 70 75 80

Cys Phe Tyr Leu Phe Pro Gly His
85

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<210> 12218
<211> 263
<212> PRT
<213> Homo sapiens

<220>
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<220>
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<223> /note="Gene Name:
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<220>
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<220>
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<223> /note="ENSP ID: ENSP00000403260"

<400> 12218
Met Ala Asp Lys Val Leu Lys Glu Lys Arg Lys Leu Phe Ile Arg Ser
1              5              10              15

Met Gly Glu Ala Pro Gln Ala Val Gln Asp Asn Pro Ala Met Pro Thr
              20              25              30

Ser Ser Gly Ser Glu Gly Asn Val Lys Leu Cys Ser Leu Glu Glu Ala
35              40              45

Gln Arg Ile Trp Lys Gln Lys Ser Ala Glu Ile Tyr Pro Ile Met Asp
50              55              60

Lys Ser Ser Arg Thr Arg Leu Ala Leu Ile Ile Cys Asn Glu Glu Phe
65              70              75              80

Asp Ser Ile Pro Arg Arg Thr Gly Ala Glu Val Asp Ile Thr Gly Met
85              90              95

Thr Met Leu Leu Gln Asn Leu Gly Tyr Ser Val Asp Val Lys Lys Asn
100             105             110

Leu Thr Ala Ser Asp Met Thr Thr Glu Leu Glu Ala Phe Ala His Arg
115             120             125

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Pro Glu His Lys Thr Ser Asp Ser Thr Phe Leu Val Phe Met Ser His
130 135 140

Gly Ile Arg Glu Gly Ile Cys Gly Lys Lys His Ser Glu Gln Val Pro
145 150 155 160

Asp Ile Leu Gln Leu Asn Ala Ile Phe Asn Met Leu Asn Thr Lys Asn
165 170 175

Cys Pro Ser Leu Lys Asp Lys Pro Lys Val Ile Ile Ile Gln Ala Cys
180 185 190

Arg Gly Asp Asn Val Ser Trp Arg His Pro Thr Met Gly Ser Val Phe
195 200 205

Ile Gly Arg Leu Ile Glu His Met Gln Glu Tyr Ala Cys Ser Cys Asp
210 215 220

Val Glu Glu Ile Phe Arg Lys Val Arg Phe Ser Phe Glu Gln Pro Asp
225 230 235 240

Gly Arg Ala Gln Met Pro Thr Thr Glu Arg Val Thr Leu Thr Arg Cys
245 250 255

Phe Tyr Leu Phe Pro Gly His
260

<210> 12219

<211> 404

<212> PRT

<213> Homo sapiens

<220>

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<223> /note="Payload ID: 2407"

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<223> /note="Gene Symbol: CASP1"

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<223> /note="Gene Name:
caspase 1, apoptosis-related cysteine peptidase"

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<223> /note="Uniprot ID: P29466"

<220>
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<223> /note="ENSP ID: ENSP00000410076"

<400> 12219

Met Ala Asp Lys Val Leu Lys Glu Lys Arg Lys Leu Phe Ile Arg Ser
1 5 10 15

Met Gly Glu Gly Thr Ile Asn Gly Leu Leu Asp Glu Leu Leu Gln Thr
20 25 30

Arg Val Leu Asn Lys Glu Glu Met Glu Lys Val Lys Arg Glu Asn Ala
35 40 45

Thr Val Met Asp Lys Thr Arg Ala Leu Ile Asp Ser Val Ile Pro Lys
50 55 60

Gly Ala Gln Ala Cys Gln Ile Cys Ile Thr Tyr Ile Cys Glu Glu Asp
65 70 75 80

Ser Tyr Leu Ala Gly Thr Leu Gly Leu Ser Ala Asp Gln Thr Ser Gly
85 90 95

Asn Tyr Leu Asn Met Gln Asp Ser Gln Gly Val Leu Ser Ser Phe Pro
100 105 110

Ala Pro Gln Ala Val Gln Asp Asn Pro Ala Met Pro Thr Ser Ser Gly
115 120 125

Ser Glu Gly Asn Val Lys Leu Cys Ser Leu Glu Glu Ala Gln Arg Ile
130 135 140

Trp Lys Gln Lys Ser Ala Glu Ile Tyr Pro Ile Met Asp Lys Ser Ser
145 150 155 160

Arg Thr Arg Leu Ala Leu Ile Ile Cys Asn Glu Glu Phe Asp Ser Ile
165 170 175

Pro Arg Arg Thr Gly Ala Glu Val Asp Ile Thr Gly Met Thr Met Leu
180 185 190

Leu Gln Asn Leu Gly Tyr Ser Val Asp Val Lys Lys Asn Leu Thr Ala

195					200					205					
Ser	Asp	Met	Thr	Thr	Glu	Leu	Glu	Ala	Phe	Ala	His	Arg	Pro	Glu	His
	210					215					220				
Lys	Thr	Ser	Asp	Ser	Thr	Phe	Leu	Val	Phe	Met	Ser	His	Gly	Ile	Arg
225					230					235					240
Glu	Gly	Ile	Cys	Gly	Lys	Lys	His	Ser	Glu	Gln	Val	Pro	Asp	Ile	Leu
				245					250					255	
Gln	Leu	Asn	Ala	Ile	Phe	Asn	Met	Leu	Asn	Thr	Lys	Asn	Cys	Pro	Ser
			260					265					270		
Leu	Lys	Asp	Lys	Pro	Lys	Val	Ile	Ile	Ile	Gln	Ala	Cys	Arg	Gly	Asp
		275					280					285			
Ser	Pro	Gly	Val	Val	Trp	Phe	Lys	Asp	Ser	Val	Gly	Val	Ser	Gly	Asn
	290					295					300				
Leu	Ser	Leu	Pro	Thr	Thr	Glu	Glu	Phe	Glu	Asp	Asp	Ala	Ile	Lys	Lys
305					310					315					320
Ala	His	Ile	Glu	Lys	Asp	Phe	Ile	Ala	Phe	Cys	Ser	Ser	Thr	Pro	Asp
				325					330					335	
Asn	Val	Ser	Trp	Arg	His	Pro	Thr	Met	Gly	Ser	Val	Phe	Ile	Gly	Arg
			340					345					350		
Leu	Ile	Glu	His	Met	Gln	Glu	Tyr	Ala	Cys	Ser	Cys	Asp	Val	Glu	Glu
		355					360					365			
Ile	Phe	Arg	Lys	Val	Arg	Phe	Ser	Phe	Glu	Gln	Pro	Asp	Gly	Arg	Ala
	370					375					380				
Gln	Met	Pro	Thr	Thr	Glu	Arg	Val	Thr	Leu	Thr	Arg	Cys	Phe	Tyr	Leu
385					390					395					400
Phe	Pro	Gly	His												

<210> 12220
 <211> 110

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<212> PRT
<213> Homo sapiens

<220>
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<220>
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<223> /note="Gene Symbol: CASP1"

<220>
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<223> /note="Gene Name:
        caspase 1, apoptosis-related cysteine peptidase"

<220>
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<223> /note="ENSP ID: ENSP00000431947"

<400> 12220
Met Ala Asp Lys Val Leu Lys Glu Lys Arg Lys Leu Phe Ile Arg Ser
1          5          10          15

Met Gly Glu Gly Thr Ile Asn Gly Leu Leu Asp Glu Leu Leu Gln Thr
          20          25          30

Arg Val Leu Asn Lys Glu Glu Met Glu Lys Val Lys Arg Glu Asn Ala
          35          40          45

Thr Val Met Asp Lys Thr Arg Ala Leu Ile Asp Ser Val Ile Pro Lys
          50          55          60

Gly Ala Gln Ala Cys Gln Ile Cys Ile Thr Tyr Ile Cys Glu Glu Asp
65          70          75          80

Ser Tyr Leu Ala Gly Thr Leu Gly Leu Ser Ala Asp Leu Ser Asn Asn
          85          90          95

Gly Gln Val Lys Pro His Thr Ser Cys Ser His Tyr Leu Gln
          100          105          110

<210> 12221
<211> 367
<212> PRT
<213> Homo sapiens

<220>
<221> source
<223> /note="Payload ID: 2407"

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<220>
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 <223> /note="Gene Symbol: CASP1"

<220>
 <221> source
 <223> /note="Gene Name:
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<220>
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<400> 12221

Met Gly Glu Gly Thr Ile Asn Gly Leu Leu Asp Glu Leu Leu Gln Thr
 1 5 10 15

Arg Val Leu Asn Lys Glu Glu Met Glu Lys Val Lys Arg Glu Asn Ala
 20 25 30

Thr Val Met Asp Lys Thr Arg Ala Leu Ile Asp Ser Val Ile Pro Lys
 35 40 45

Gly Ala Gln Ala Cys Gln Ile Cys Ile Thr Tyr Ile Cys Glu Glu Asp
 50 55 60

Ser Tyr Leu Ala Gly Thr Leu Gly Leu Ser Ala Ala Pro Gln Ala Val
 65 70 75 80

Gln Asp Asn Pro Ala Met Pro Thr Ser Ser Gly Ser Glu Gly Asn Val
 85 90 95

Lys Leu Cys Ser Leu Glu Glu Ala Gln Arg Ile Trp Lys Gln Lys Ser
 100 105 110

Ala Glu Ile Tyr Pro Ile Met Asp Lys Ser Ser Arg Thr Arg Leu Ala
 115 120 125

Leu Ile Ile Cys Asn Glu Glu Phe Asp Ser Ile Pro Arg Arg Thr Gly
 130 135 140

Ala Glu Val Asp Ile Thr Gly Met Thr Met Leu Leu Gln Asn Leu Gly
 145 150 155 160

Tyr Ser Val Asp Val Lys Lys Asn Leu Thr Ala Ser Asp Met Thr Thr
 165 170 175

Glu	Leu	Glu	Ala	Phe	Ala	His	Arg	Pro	Glu	His	Lys	Thr	Ser	Asp	Ser			
			180					185					190					
Thr	Phe	Leu	Val	Phe	Met	Ser	His	Gly	Ile	Arg	Glu	Gly	Ile	Cys	Gly			
		195					200					205						
Lys	Lys	His	Ser	Glu	Gln	Val	Pro	Asp	Ile	Leu	Gln	Leu	Asn	Ala	Ile			
	210					215					220							
Phe	Asn	Met	Leu	Asn	Thr	Lys	Asn	Cys	Pro	Ser	Leu	Lys	Asp	Lys	Pro			
225					230					235					240			
Lys	Val	Ile	Ile	Ile	Gln	Ala	Cys	Arg	Gly	Asp	Ser	Pro	Gly	Val	Val			
				245					250					255				
Trp	Phe	Lys	Asp	Ser	Val	Gly	Val	Ser	Gly	Asn	Leu	Ser	Leu	Pro	Thr			
			260					265					270					
Thr	Glu	Glu	Phe	Glu	Asp	Asp	Ala	Ile	Lys	Lys	Ala	His	Ile	Glu	Lys			
		275					280					285						
Asp	Phe	Ile	Ala	Phe	Cys	Ser	Ser	Thr	Pro	Asp	Asn	Val	Ser	Trp	Arg			
	290					295					300							
His	Pro	Thr	Met	Gly	Ser	Val	Phe	Ile	Gly	Arg	Leu	Ile	Glu	His	Met			
305					310					315					320			
Gln	Glu	Tyr	Ala	Cys	Ser	Cys	Asp	Val	Glu	Glu	Ile	Phe	Arg	Lys	Val			
				325					330					335				
Arg	Phe	Ser	Phe	Glu	Gln	Pro	Asp	Gly	Arg	Ala	Gln	Met	Pro	Thr	Thr			
			340					345					350					
Glu	Arg	Val	Thr	Leu	Thr	Arg	Cys	Phe	Tyr	Leu	Phe	Pro	Gly	His				
		355					360					365						

<210> 12222
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<220>
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<223> /note="Payload ID: 2407"

<220>

<221> source

<223> /note="Gene Symbol: CASP1"

<220>

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<223> /note="Gene Name:
caspase 1, apoptosis-related cysteine peptidase"

<220>

<221> source

<223> /note="Uniprot ID: P29466"

<220>

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<223> /note="ENSP ID: ENSP00000433138"

<400> 12222

Met Ala Asp Lys Val Leu Lys Glu Lys Arg Lys Leu Phe Ile Arg Ser
1 5 10 15

Met Gly Glu Gly Thr Ile Asn Gly Leu Leu Asp Glu Leu Leu Gln Thr
20 25 30

Arg Val Leu Asn Lys Glu Glu Met Glu Lys Val Lys Arg Glu Asn Ala
35 40 45

Thr Val Met Asp Lys Thr Arg Ala Leu Ile Asp Ser Val Ile Pro Lys
50 55 60

Gly Ala Gln Ala Cys Gln Ile Cys Ile Thr Tyr Ile Cys Glu Glu Asp
65 70 75 80

Ser Tyr Leu Ala Gly Thr Leu Gly Leu Ser Ala Asp Gln Thr Ser Gly
85 90 95

Asn Tyr Leu Asn Met Gln Asp Ser Gln Gly Val Leu Ser Ser Phe Pro
100 105 110

Ala Pro Gln Ala Val Gln Asp Asn Pro Ala Met Pro Thr Ser Ser Gly
115 120 125

Ser Glu Gly Asn Val Lys Leu Cys Ser Leu Glu Glu Ala Gln Arg Ile
130 135 140

Trp Lys Gln Lys Ser Ala Glu Ile Tyr Pro Ile Met Asp Lys Ser Ser

145					150					155				160		
Arg	Thr	Arg	Leu	Ala	Leu	Ile	Ile	Cys	Asn	Glu	Glu	Phe	Asp	Ser	Ile	
				165					170					175		
Pro	Arg	Arg	Thr	Gly	Ala	Glu	Val	Asp	Ile	Thr	Gly	Met	Thr	Met	Leu	
			180					185					190			
Leu	Gln	Asn	Leu	Gly	Tyr	Ser	Val	Asp	Val	Lys	Lys	Asn	Leu	Thr	Ala	
		195					200					205				
Ser	Asp	Met	Thr	Thr	Glu	Leu	Glu	Ala	Phe	Ala	His	Arg	Pro	Glu	His	
	210					215					220					
Lys	Thr	Ser	Asp	Ser	Thr	Phe	Leu	Val	Phe	Met	Ser	His	Gly	Ile	Arg	
225					230					235					240	
Glu	Gly	Ile	Cys	Gly	Lys	Lys	His	Ser	Glu	Gln	Val	Pro	Asp	Ile	Leu	
				245					250					255		
Gln	Leu	Asn	Ala	Ile	Phe	Asn	Met	Leu	Asn	Thr	Lys	Asn	Cys	Pro	Ser	
			260					265					270			
Leu	Lys	Asp	Lys	Pro	Lys	Val	Ile	Ile	Ile	Gln	Ala	Cys	Arg	Gly	Asp	
		275					280					285				
Ser	Pro	Gly	Val	Val	Trp	Phe	Lys	Asp	Ser	Val	Gly	Val	Ser	Gly	Asn	
	290					295					300					
Leu	Ser	Leu	Pro	Thr	Thr	Glu	Glu	Phe	Glu	Asp	Asp	Ala	Ile	Lys	Lys	
305					310					315					320	
Ala	His	Ile	Glu	Lys	Asp	Phe	Ile	Ala	Phe	Cys	Ser	Ser	Thr	Pro	Asp	
				325					330					335		
Asn	Val	Ser	Trp	Arg	His	Pro	Thr	Met	Gly	Ser	Val	Phe	Ile	Gly	Arg	
			340					345					350			
Leu	Ile	Glu	His	Met	Gln	Glu	Tyr	Ala	Cys	Ser	Cys	Asp	Val	Glu	Glu	
		355					360					365				
Ile	Phe	Arg	Lys	Val	Arg	Phe	Ser	Phe	Glu	Gln	Pro	Asp	Gly	Arg	Ala	
	370					375					380					

Gln Met Pro Thr Thr Glu Arg Val Thr Leu Thr Arg Cys Phe Tyr Leu
 385 390 395 400

Phe Pro Gly His

<210> 12223
 <211> 311
 <212> PRT
 <213> Homo sapiens

<220>
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<220>
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 <223> /note="Gene Symbol: CASP1"

<220>
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 <223> /note="Gene Name:
 caspase 1, apoptosis-related cysteine peptidase"

<220>
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 <223> /note="Uniprot ID: P29466"

<220>
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 <223> /note="ENSP ID: ENSP00000434250"

<400> 12223
 Met Ala Asp Lys Val Leu Lys Glu Lys Arg Lys Leu Phe Ile Arg Ser
 1 5 10 15

Met Gly Glu Ala Pro Gln Ala Val Gln Asp Asn Pro Ala Met Pro Thr
 20 25 30

Ser Ser Gly Ser Glu Gly Asn Val Lys Leu Cys Ser Leu Glu Glu Ala
 35 40 45

Gln Arg Ile Trp Lys Gln Lys Ser Ala Glu Ile Tyr Pro Ile Met Asp
 50 55 60

Lys Ser Ser Arg Thr Arg Leu Ala Leu Ile Ile Cys Asn Glu Glu Phe
 65 70 75 80

Asp	Ser	Ile	Pro	Arg	Arg	Thr	Gly	Ala	Glu	Val	Asp	Ile	Thr	Gly	Met		
				85					90					95			
Thr	Met	Leu	Leu	Gln	Asn	Leu	Gly	Tyr	Ser	Val	Asp	Val	Lys	Lys	Asn		
			100					105					110				
Leu	Thr	Ala	Ser	Asp	Met	Thr	Thr	Glu	Leu	Glu	Ala	Phe	Ala	His	Arg		
		115					120					125					
Pro	Glu	His	Lys	Thr	Ser	Asp	Ser	Thr	Phe	Leu	Val	Phe	Met	Ser	His		
	130					135					140						
Gly	Ile	Arg	Glu	Gly	Ile	Cys	Gly	Lys	Lys	His	Ser	Glu	Gln	Val	Pro		
145					150					155					160		
Asp	Ile	Leu	Gln	Leu	Asn	Ala	Ile	Phe	Asn	Met	Leu	Asn	Thr	Lys	Asn		
				165					170					175			
Cys	Pro	Ser	Leu	Lys	Asp	Lys	Pro	Lys	Val	Ile	Ile	Ile	Gln	Ala	Cys		
			180					185					190				
Arg	Gly	Asp	Ser	Pro	Gly	Val	Val	Trp	Phe	Lys	Asp	Ser	Val	Gly	Val		
		195					200					205					
Ser	Gly	Asn	Leu	Ser	Leu	Pro	Thr	Thr	Glu	Glu	Phe	Glu	Asp	Asp	Ala		
	210					215					220						
Ile	Lys	Lys	Ala	His	Ile	Glu	Lys	Asp	Phe	Ile	Ala	Phe	Cys	Ser	Ser		
225					230					235					240		
Thr	Pro	Asp	Asn	Val	Ser	Trp	Arg	His	Pro	Thr	Met	Gly	Ser	Val	Phe		
				245					250					255			
Ile	Gly	Arg	Leu	Ile	Glu	His	Met	Gln	Glu	Tyr	Ala	Cys	Ser	Cys	Asp		
			260					265					270				
Val	Glu	Glu	Ile	Phe	Arg	Lys	Val	Arg	Phe	Ser	Phe	Glu	Gln	Pro	Asp		
		275					280					285					
Gly	Arg	Ala	Gln	Met	Pro	Thr	Thr	Glu	Arg	Val	Thr	Leu	Thr	Arg	Cys		
	290					295					300						
Phe	Tyr	Leu	Phe	Pro	Gly	His											

305

310

<210> 12224

<211> 301

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2407"

<220>

<221> source

<223> /note="Gene Symbol: CASP1"

<220>

<221> source

<223> /note="Gene Name:
caspase 1, apoptosis-related cysteine peptidase"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000434259"

<400> 12224

Met	Glu	Lys	Val	Lys	Arg	Glu	Asn	Ala	Thr	Val	Met	Asp	Lys	Thr	Arg
1				5					10					15	

Ala	Leu	Ile	Asp	Ser	Val	Ile	Pro	Lys	Gly	Ala	Gln	Ala	Cys	Gln	Ile
			20					25					30		

Cys	Ile	Thr	Tyr	Ile	Cys	Glu	Glu	Asp	Ser	Tyr	Leu	Ala	Gly	Thr	Leu
		35					40					45			

Gly	Leu	Ser	Ala	Asp	Gln	Thr	Ser	Gly	Asn	Tyr	Leu	Asn	Met	Gln	Asp
	50					55					60				

Ser	Gln	Gly	Val	Leu	Ser	Ser	Phe	Pro	Ala	Pro	Gln	Ala	Val	Gln	Asp
65					70					75					80

Asn	Pro	Ala	Met	Pro	Thr	Ser	Ser	Gly	Ser	Glu	Gly	Asn	Val	Lys	Leu
			85						90					95	

Cys	Ser	Leu	Glu	Glu	Ala	Gln	Arg	Ile	Trp	Lys	Gln	Lys	Ser	Ala	Glu
			100					105					110		

Ile	Tyr	Pro	Ile	Met	Asp	Lys	Ser	Ser	Arg	Thr	Arg	Leu	Ala	Leu	Ile
		115					120					125			

27065

Ile Cys Asn Glu Glu Phe Asp Ser Ile Pro Arg Arg Thr Gly Ala Glu
 130 135 140
 Val Asp Ile Thr Gly Met Thr Met Leu Leu Gln Asn Leu Gly Tyr Ser
 145 150 155 160
 Val Asp Val Lys Lys Asn Leu Thr Ala Ser Asp Met Thr Thr Glu Leu
 165 170 175
 Glu Ala Phe Ala His Arg Pro Glu His Lys Thr Ser Asp Ser Thr Phe
 180 185 190
 Leu Val Phe Met Ser His Gly Ile Arg Glu Gly Ile Cys Gly Lys Lys
 195 200 205
 His Ser Glu Gln Val Pro Asp Ile Leu Gln Leu Asn Ala Ile Phe Asn
 210 215 220
 Met Leu Asn Thr Lys Asn Cys Pro Ser Leu Lys Asp Lys Pro Lys Val
 225 230 235 240
 Ile Ile Ile Gln Ala Cys Arg Gly Asp Ser Pro Gly Val Val Trp Phe
 245 250 255
 Lys Asp Ser Val Gly Val Ser Gly Asn Leu Ser Leu Pro Thr Thr Glu
 260 265 270
 Glu Phe Glu Asp Asp Ala Ile Lys Lys Ala His Ile Glu Lys Asp Phe
 275 280 285
 Ile Ala Phe Cys Ser Ser Thr Pro Gly Lys Ser Gln Ser
 290 295 300

<210> 12225

<211> 88

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2407"

<220>

<221> source

<223> /note="Gene Symbol: CASP1"

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<220>
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<223> /note="Gene Name:
        caspase 1, apoptosis-related cysteine peptidase"

<220>
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<223> /note="Uniprot ID: P29466"

<220>
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<223> /note="ENSP ID: ENSP00000434303"

<400> 12225
Met Ala Asp Lys Val Leu Lys Glu Lys Arg Lys Leu Phe Ile Arg Ser
1          5          10          15

Met Gly Glu Asp Asn Val Ser Trp Arg His Pro Thr Met Gly Ser Val
          20          25          30

Phe Ile Gly Arg Leu Ile Glu His Met Gln Glu Tyr Ala Cys Ser Cys
          35          40          45

Asp Val Glu Glu Ile Phe Arg Lys Val Arg Phe Ser Phe Glu Gln Pro
          50          55          60

Asp Gly Arg Ala Gln Met Pro Thr Thr Glu Arg Val Thr Leu Thr Arg
65          70          75          80

Cys Phe Tyr Leu Phe Pro Gly His
          85

<210> 12226
<211> 383
<212> PRT
<213> Homo sapiens

<220>
<221> source
<223> /note="Payload ID: 2407"

<220>
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<223> /note="Gene Symbol: CASP1"

<220>
<221> source
<223> /note="Gene Name:
        caspase 1, apoptosis-related cysteine peptidase"

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<220>
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 <223> /note="Uniprot ID: P29466"

<220>
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 <223> /note="ENSP ID: ENSP00000434779"

<400> 12226

Met Ala Asp Lys Val Leu Lys Glu Lys Arg Lys Leu Phe Ile Arg Ser
 1 5 10 15

Met Gly Glu Gly Thr Ile Asn Gly Leu Leu Asp Glu Leu Leu Gln Thr
 20 25 30

Arg Val Leu Asn Lys Glu Glu Met Glu Lys Val Lys Arg Glu Asn Ala
 35 40 45

Thr Val Met Asp Lys Thr Arg Ala Leu Ile Asp Ser Val Ile Pro Lys
 50 55 60

Gly Ala Gln Ala Cys Gln Ile Cys Ile Thr Tyr Ile Cys Glu Glu Asp
 65 70 75 80

Ser Tyr Leu Ala Gly Thr Leu Gly Leu Ser Ala Ala Pro Gln Ala Val
 85 90 95

Gln Asp Asn Pro Ala Met Pro Thr Ser Ser Gly Ser Glu Gly Asn Val
 100 105 110

Lys Leu Cys Ser Leu Glu Glu Ala Gln Arg Ile Trp Lys Gln Lys Ser
 115 120 125

Ala Glu Ile Tyr Pro Ile Met Asp Lys Ser Ser Arg Thr Arg Leu Ala
 130 135 140

Leu Ile Ile Cys Asn Glu Glu Phe Asp Ser Ile Pro Arg Arg Thr Gly
 145 150 155 160

Ala Glu Val Asp Ile Thr Gly Met Thr Met Leu Leu Gln Asn Leu Gly
 165 170 175

Tyr Ser Val Asp Val Lys Lys Asn Leu Thr Ala Ser Asp Met Thr Thr
 180 185 190

Glu Leu Glu Ala Phe Ala His Arg Pro Glu His Lys Thr Ser Asp Ser
 195 200 205
 Thr Phe Leu Val Phe Met Ser His Gly Ile Arg Glu Gly Ile Cys Gly
 210 215 220
 Lys Lys His Ser Glu Gln Val Pro Asp Ile Leu Gln Leu Asn Ala Ile
 225 230 235 240
 Phe Asn Met Leu Asn Thr Lys Asn Cys Pro Ser Leu Lys Asp Lys Pro
 245 250 255
 Lys Val Ile Ile Ile Gln Ala Cys Arg Gly Asp Ser Pro Gly Val Val
 260 265 270
 Trp Phe Lys Asp Ser Val Gly Val Ser Gly Asn Leu Ser Leu Pro Thr
 275 280 285
 Thr Glu Glu Phe Glu Asp Asp Ala Ile Lys Lys Ala His Ile Glu Lys
 290 295 300
 Asp Phe Ile Ala Phe Cys Ser Ser Thr Pro Asp Asn Val Ser Trp Arg
 305 310 315 320
 His Pro Thr Met Gly Ser Val Phe Ile Gly Arg Leu Ile Glu His Met
 325 330 335
 Gln Glu Tyr Ala Cys Ser Cys Asp Val Glu Glu Ile Phe Arg Lys Val
 340 345 350
 Arg Phe Ser Phe Glu Gln Pro Asp Gly Arg Ala Gln Met Pro Thr Thr
 355 360 365
 Glu Arg Val Thr Leu Thr Arg Cys Phe Tyr Leu Phe Pro Gly His
 370 375 380

<210> 12227

<211> 236

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2407"

<220>
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<220>
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 <223> /note="Gene Name:
 caspase 1, apoptosis-related cysteine peptidase"

<220>
 <221> source
 <223> /note="ENSP ID: ENSP00000435536"

<400> 12227

Ile Tyr Pro Ile Met Asp Lys Ser Ser Arg Thr Arg Leu Ala Leu Ile
 1 5 10 15

Ile Cys Asn Glu Glu Phe Asp Ser Ile Pro Arg Arg Thr Gly Ala Glu
 20 25 30

Val Asp Ile Thr Gly Met Thr Met Leu Leu Gln Asn Leu Gly Tyr Ser
 35 40 45

Val Asp Val Lys Lys Asn Leu Thr Ala Ser Asp Met Thr Thr Glu Leu
 50 55 60

Glu Ala Phe Ala His Arg Pro Glu His Lys Thr Ser Asp Ser Thr Phe
 65 70 75 80

Leu Val Phe Met Ser His Gly Ile Arg Glu Gly Ile Cys Gly Lys Lys
 85 90 95

His Ser Glu Gln Val Pro Asp Ile Leu Gln Leu Asn Ala Ile Phe Asn
 100 105 110

Met Leu Asn Thr Lys Asn Cys Pro Ser Leu Lys Asp Lys Pro Lys Val
 115 120 125

Ile Ile Ile Gln Ala Cys Arg Gly Asp Ser Pro Gly Val Val Trp Phe
 130 135 140

Lys Asp Ser Val Gly Val Ser Gly Asn Leu Ser Leu Pro Thr Thr Glu
 145 150 155 160

Glu Phe Glu Asp Asp Ala Ile Lys Lys Ala His Ile Glu Lys Asp Phe
 165 170 175

Ile Ala Phe Cys Ser Ser Thr Pro Asp Asn Val Ser Trp Arg His Pro
180 185 190

Thr Met Gly Ser Val Phe Ile Gly Arg Leu Ile Glu His Met Gln Glu
195 200 205

Tyr Ala Cys Ser Cys Asp Val Glu Glu Ile Phe Arg Lys Glu Val Lys
210 215 220

Arg Ser Phe Cys Lys Gly Phe Trp Asn Tyr Val Cys
225 230 235

<210> 12228

<211> 263

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2407"

<220>

<221> source

<223> /note="Gene Symbol: CASP1"

<220>

<221> source

<223> /note="Gene Name:
caspase 1, apoptosis-related cysteine peptidase"

<220>

<221> source

<223> /note="Uniprot ID: P29466"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000436875"

<400> 12228

Met Ala Asp Lys Val Leu Lys Glu Lys Arg Lys Leu Phe Ile Arg Ser
1 5 10 15

Met Gly Glu Ala Pro Gln Ala Val Gln Asp Asn Pro Ala Met Pro Thr
20 25 30

Ser Ser Gly Ser Glu Gly Asn Val Lys Leu Cys Ser Leu Glu Glu Ala
35 40 45

Gln Arg Ile Trp Lys Gln Lys Ser Ala Glu Ile Tyr Pro Ile Met Asp

50						55						60				
Lys	Ser	Ser	Arg	Thr	Arg	Leu	Ala	Leu	Ile	Ile	Cys	Asn	Glu	Glu	Phe	
65					70					75					80	
Asp	Ser	Ile	Pro	Arg	Arg	Thr	Gly	Ala	Glu	Val	Asp	Ile	Thr	Gly	Met	
				85					90					95		
Thr	Met	Leu	Leu	Gln	Asn	Leu	Gly	Tyr	Ser	Val	Asp	Val	Lys	Lys	Asn	
			100					105					110			
Leu	Thr	Ala	Ser	Asp	Met	Thr	Thr	Glu	Leu	Glu	Ala	Phe	Ala	His	Arg	
		115						120					125			
Pro	Glu	His	Lys	Thr	Ser	Asp	Ser	Thr	Phe	Leu	Val	Phe	Met	Ser	His	
	130					135					140					
Gly	Ile	Arg	Glu	Gly	Ile	Cys	Gly	Lys	Lys	His	Ser	Glu	Gln	Val	Pro	
145					150					155					160	
Asp	Ile	Leu	Gln	Leu	Asn	Ala	Ile	Phe	Asn	Met	Leu	Asn	Thr	Lys	Asn	
				165					170					175		
Cys	Pro	Ser	Leu	Lys	Asp	Lys	Pro	Lys	Val	Ile	Ile	Ile	Gln	Ala	Cys	
			180					185					190			
Arg	Gly	Asp	Asn	Val	Ser	Trp	Arg	His	Pro	Thr	Met	Gly	Ser	Val	Phe	
		195					200					205				
Ile	Gly	Arg	Leu	Ile	Glu	His	Met	Gln	Glu	Tyr	Ala	Cys	Ser	Cys	Asp	
	210					215					220					
Val	Glu	Glu	Ile	Phe	Arg	Lys	Val	Arg	Phe	Ser	Phe	Glu	Gln	Pro	Asp	
225					230					235					240	
Gly	Arg	Ala	Gln	Met	Pro	Thr	Thr	Glu	Arg	Val	Thr	Leu	Thr	Arg	Cys	
				245					250					255		
Phe	Tyr	Leu	Phe	Pro	Gly	His										
			260													

<210> 12229
 <211> 479


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<212> PRT
<213> Homo sapiens

<220>
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<223> /note="Payload ID: 2408"

<220>
<221> source
<223> /note="Gene Symbol: CASP10"

<220>
<221> source
<223> /note="Gene Name:
      caspase 10, apoptosis-related cysteine peptidase"

<220>
<221> source
<223> /note="Uniprot ID: Q92851"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000237865"

<400> 12229
Met Lys Ser Gln Gly Gln His Trp Tyr Ser Ser Ser Asp Lys Asn Cys
1          5          10          15

Lys Val Ser Phe Arg Glu Lys Leu Leu Ile Ile Asp Ser Asn Leu Gly
          20          25          30

Val Gln Asp Val Glu Asn Leu Lys Phe Leu Cys Ile Gly Leu Val Pro
          35          40          45

Asn Lys Lys Leu Glu Lys Ser Ser Ser Ala Ser Asp Val Phe Glu His
          50          55          60

Leu Leu Ala Glu Asp Leu Leu Ser Glu Glu Asp Pro Phe Phe Leu Ala
65          70          75          80

Glu Leu Leu Tyr Ile Ile Arg Gln Lys Lys Leu Leu Gln His Leu Asn
          85          90          95

Cys Thr Lys Glu Glu Val Glu Arg Leu Leu Pro Thr Arg Gln Arg Val
          100          105          110

Ser Leu Phe Arg Asn Leu Leu Tyr Glu Leu Ser Glu Gly Ile Asp Ser
          115          120          125

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Glu	Asn	Leu	Lys	Asp	Met	Ile	Phe	Leu	Leu	Lys	Asp	Ser	Leu	Pro	Lys	130	135	140
Thr	Glu	Met	Thr	Ser	Leu	Ser	Phe	Leu	Ala	Phe	Leu	Glu	Lys	Gln	Gly	145	150	155
Lys	Ile	Asp	Glu	Asp	Asn	Leu	Thr	Cys	Leu	Glu	Asp	Leu	Cys	Lys	Thr	165	170	175
Val	Val	Pro	Lys	Leu	Leu	Arg	Asn	Ile	Glu	Lys	Tyr	Lys	Arg	Glu	Lys	180	185	190
Ala	Ile	Gln	Ile	Val	Thr	Pro	Pro	Val	Asp	Lys	Glu	Ala	Glu	Ser	Tyr	195	200	205
Gln	Gly	Glu	Glu	Glu	Leu	Val	Ser	Gln	Thr	Asp	Val	Lys	Thr	Phe	Leu	210	215	220
Glu	Ala	Leu	Pro	Arg	Ala	Ala	Val	Tyr	Arg	Met	Asn	Arg	Asn	His	Arg	225	230	235
Gly	Leu	Cys	Val	Ile	Val	Asn	Asn	His	Ser	Phe	Thr	Ser	Leu	Lys	Asp	245	250	255
Arg	Gln	Gly	Thr	His	Lys	Asp	Ala	Glu	Ile	Leu	Ser	His	Val	Phe	Gln	260	265	270
Trp	Leu	Gly	Phe	Thr	Val	His	Ile	His	Asn	Asn	Val	Thr	Lys	Val	Glu	275	280	285
Met	Glu	Met	Val	Leu	Gln	Lys	Gln	Lys	Cys	Asn	Pro	Ala	His	Ala	Asp	290	295	300
Gly	Asp	Cys	Phe	Val	Phe	Cys	Ile	Leu	Thr	His	Gly	Arg	Phe	Gly	Ala	305	310	315
Val	Tyr	Ser	Ser	Asp	Glu	Ala	Leu	Ile	Pro	Ile	Arg	Glu	Ile	Met	Ser	325	330	335
His	Phe	Thr	Ala	Leu	Gln	Cys	Pro	Arg	Leu	Ala	Glu	Lys	Pro	Lys	Leu	340	345	350
Phe	Phe	Ile	Gln	Ala	Cys	Gln	Gly	Glu	Glu	Ile	Gln	Pro	Ser	Val	Ser			

355

360

365

Ile Glu Ala Asp Ala Leu Asn Pro Glu Gln Ala Pro Thr Ser Leu Gln
 370 375 380

Asp Ser Ile Pro Ala Glu Ala Asp Phe Leu Leu Gly Leu Ala Thr Val
 385 390 395 400

Pro Gly Tyr Val Ser Phe Arg His Val Glu Glu Gly Ser Trp Tyr Ile
 405 410 415

Gln Ser Leu Cys Asn His Leu Lys Lys Leu Val Pro Arg His Glu Asp
 420 425 430

Ile Leu Ser Ile Leu Thr Ala Val Asn Asp Asp Val Ser Arg Arg Val
 435 440 445

Asp Lys Gln Gly Thr Lys Lys Gln Met Pro Gln Pro Ala Phe Thr Leu
 450 455 460

Arg Lys Lys Leu Val Phe Pro Val Pro Leu Asp Ala Leu Ser Leu
 465 470 475

<210> 12230

<211> 521

<212> PRT

<213> Homo sapiens

<220>

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<223> /note="Payload ID: 2408"

<220>

<221> source

<223> /note="Gene Symbol: CASP10"

<220>

<221> source

<223> /note="Gene Name:
 caspase 10, apoptosis-related cysteine peptidase"

<220>

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<223> /note="Uniprot ID: Q92851"

<220>

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<223> /note="ENSP ID: ENSP00000272879"

<400> 12230

Met Lys Ser Gln Gly Gln His Trp Tyr Ser Ser Ser Asp Lys Asn Cys
1 5 10 15

Lys Val Ser Phe Arg Glu Lys Leu Leu Ile Ile Asp Ser Asn Leu Gly
20 25 30

Val Gln Asp Val Glu Asn Leu Lys Phe Leu Cys Ile Gly Leu Val Pro
35 40 45

Asn Lys Lys Leu Glu Lys Ser Ser Ser Ala Ser Asp Val Phe Glu His
50 55 60

Leu Leu Ala Glu Asp Leu Leu Ser Glu Glu Asp Pro Phe Phe Leu Ala
65 70 75 80

Glu Leu Leu Tyr Ile Ile Arg Gln Lys Lys Leu Leu Gln His Leu Asn
85 90 95

Cys Thr Lys Glu Glu Val Glu Arg Leu Leu Pro Thr Arg Gln Arg Val
100 105 110

Ser Leu Phe Arg Asn Leu Leu Tyr Glu Leu Ser Glu Gly Ile Asp Ser
115 120 125

Glu Asn Leu Lys Asp Met Ile Phe Leu Leu Lys Asp Ser Leu Pro Lys
130 135 140

Thr Glu Met Thr Ser Leu Ser Phe Leu Ala Phe Leu Glu Lys Gln Gly
145 150 155 160

Lys Ile Asp Glu Asp Asn Leu Thr Cys Leu Glu Asp Leu Cys Lys Thr
165 170 175

Val Val Pro Lys Leu Leu Arg Asn Ile Glu Lys Tyr Lys Arg Glu Lys
180 185 190

Ala Ile Gln Ile Val Thr Pro Pro Val Asp Lys Glu Ala Glu Ser Tyr
195 200 205

Gln Gly Glu Glu Glu Leu Val Ser Gln Thr Asp Val Lys Thr Phe Leu
210 215 220

Glu Ala Leu Pro Gln Glu Ser Trp Gln Asn Lys His Ala Gly Ser Asn
225 230 235 240

Gly Asn Arg Ala Thr Asn Gly Ala Pro Ser Leu Val Ser Arg Gly Met
245 250 255

Gln Gly Ala Ser Ala Asn Thr Leu Asn Ser Glu Thr Ser Thr Lys Arg
260 265 270

Ala Ala Val Tyr Arg Met Asn Arg Asn His Arg Gly Leu Cys Val Ile
275 280 285

Val Asn Asn His Ser Phe Thr Ser Leu Lys Asp Arg Gln Gly Thr His
290 295 300

Lys Asp Ala Glu Ile Leu Ser His Val Phe Gln Trp Leu Gly Phe Thr
305 310 315 320

Val His Ile His Asn Asn Val Thr Lys Val Glu Met Glu Met Val Leu
325 330 335

Gln Lys Gln Lys Cys Asn Pro Ala His Ala Asp Gly Asp Cys Phe Val
340 345 350

Phe Cys Ile Leu Thr His Gly Arg Phe Gly Ala Val Tyr Ser Ser Asp
355 360 365

Glu Ala Leu Ile Pro Ile Arg Glu Ile Met Ser His Phe Thr Ala Leu
370 375 380

Gln Cys Pro Arg Leu Ala Glu Lys Pro Lys Leu Phe Phe Ile Gln Ala
385 390 395 400

Cys Gln Gly Glu Glu Ile Gln Pro Ser Val Ser Ile Glu Ala Asp Ala
405 410 415

Leu Asn Pro Glu Gln Ala Pro Thr Ser Leu Gln Asp Ser Ile Pro Ala
420 425 430

Glu Ala Asp Phe Leu Leu Gly Leu Ala Thr Val Pro Gly Tyr Val Ser
435 440 445

Phe Arg His Val Glu Glu Gly Ser Trp Tyr Ile Gln Ser Leu Cys Asn

450 455 460
 His Leu Lys Lys Leu Val Pro Arg Met Leu Lys Phe Leu Glu Lys Thr
 465 470 475 480
 Met Glu Ile Arg Gly Arg Lys Arg Thr Val Trp Gly Ala Lys Gln Ile
 485 490 495
 Ser Ala Thr Ser Leu Pro Thr Ala Ile Ser Ala Gln Thr Pro Arg Pro
 500 505 510
 Pro Met Arg Arg Trp Ser Ser Val Ser
 515 520

<210> 12231
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<220>
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<220>
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 <223> /note="Gene Name:
 caspase 10, apoptosis-related cysteine peptidase"

<220>
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 <223> /note="Uniprot ID: Q92851"

<220>
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Lys Val Ser Phe Arg Glu Lys Leu Leu Ile Ile Asp Ser Asn Leu Gly
 20 25 30

Val Gln Asp Val Glu Asn Leu Lys Phe Leu Cys Ile Gly Leu Val Pro
 35 40 45

Asn	Lys	Lys	Leu	Glu	Lys	Ser	Ser	Ser	Ala	Ser	Asp	Val	Phe	Glu	His
50						55					60				
Leu	Leu	Ala	Glu	Asp	Leu	Leu	Ser	Glu	Glu	Asp	Pro	Phe	Phe	Leu	Ala
65					70					75					80
Glu	Leu	Leu	Tyr	Ile	Ile	Arg	Gln	Lys	Lys	Leu	Leu	Gln	His	Leu	Asn
				85					90					95	
Cys	Thr	Lys	Glu	Glu	Val	Glu	Arg	Leu	Leu	Pro	Thr	Arg	Gln	Arg	Val
			100					105					110		
Ser	Leu	Phe	Arg	Asn	Leu	Leu	Tyr	Glu	Leu	Ser	Glu	Gly	Ile	Asp	Ser
		115					120					125			
Glu	Asn	Leu	Lys	Asp	Met	Ile	Phe	Leu	Leu	Lys	Asp	Ser	Leu	Pro	Lys
	130					135					140				
Thr	Glu	Met	Thr	Ser	Leu	Ser	Phe	Leu	Ala	Phe	Leu	Glu	Lys	Gln	Gly
145					150					155					160
Lys	Ile	Asp	Glu	Asp	Asn	Leu	Thr	Cys	Leu	Glu	Asp	Leu	Cys	Lys	Thr
				165					170					175	
Val	Val	Pro	Lys	Leu	Leu	Arg	Asn	Ile	Glu	Lys	Tyr	Lys	Arg	Glu	Lys
			180					185					190		
Ala	Ile	Gln	Ile	Val	Thr	Pro	Pro	Val	Asp	Lys	Glu	Ala	Glu	Ser	Tyr
		195					200					205			
Gln	Gly	Glu	Glu	Glu	Leu	Val	Ser	Gln	Thr	Asp	Val	Lys	Thr	Phe	Leu
	210					215					220				
Glu	Ala	Leu	Pro	Gln	Glu	Ser	Trp	Gln	Asn	Lys	His	Ala	Gly	Ser	Asn
225					230					235					240
Gly	Asn	Arg	Ala	Thr	Asn	Gly	Ala	Pro	Ser	Leu	Val	Ser	Arg	Gly	Met
				245					250					255	
Gln	Gly	Ala	Ser	Ala	Asn	Thr	Leu	Asn	Ser	Glu	Thr	Ser	Thr	Lys	Arg
			260					265						270	

Ala	Ala	Val	Tyr	Arg	Met	Asn	Arg	Asn	His	Arg	Gly	Leu	Cys	Val	Ile		
		275					280					285					
Val	Asn	Asn	His	Ser	Phe	Thr	Ser	Leu	Lys	Asp	Arg	Gln	Gly	Thr	His		
	290					295					300						
Lys	Asp	Ala	Glu	Ile	Leu	Ser	His	Val	Phe	Gln	Trp	Leu	Gly	Phe	Thr		
305					310					315					320		
Val	His	Ile	His	Asn	Asn	Val	Thr	Lys	Val	Glu	Met	Glu	Met	Val	Leu		
				325					330					335			
Gln	Lys	Gln	Lys	Cys	Asn	Pro	Ala	His	Ala	Asp	Gly	Asp	Cys	Phe	Val		
			340					345					350				
Phe	Cys	Ile	Leu	Thr	His	Gly	Arg	Phe	Gly	Ala	Val	Tyr	Ser	Ser	Asp		
		355					360					365					
Glu	Ala	Leu	Ile	Pro	Ile	Arg	Glu	Ile	Met	Ser	His	Phe	Thr	Ala	Leu		
	370					375					380						
Gln	Cys	Pro	Arg	Leu	Ala	Glu	Lys	Pro	Lys	Leu	Phe	Phe	Ile	Gln	Ala		
385					390					395					400		
Cys	Gln	Gly	Glu	Glu	Ile	Gln	Pro	Ser	Val	Ser	Ile	Glu	Ala	Asp	Ala		
				405					410					415			
Leu	Asn	Pro	Glu	Gln	Ala	Pro	Thr	Ser	Leu	Gln	Asp	Ser	Ile	Pro	Ala		
			420					425						430			
Glu	Ala	Asp	Phe	Leu	Leu	Gly	Leu	Ala	Thr	Val	Pro	Gly	Tyr	Val	Ser		
		435					440					445					
Phe	Arg	His	Val	Glu	Glu	Gly	Ser	Trp	Tyr	Ile	Gln	Ser	Leu	Cys	Asn		
	450					455					460						
His	Leu	Lys	Lys	Leu	Val	Pro	Arg	His	Glu	Asp	Ile	Leu	Ser	Ile	Leu		
465					470					475					480		
Thr	Ala	Val	Asn	Asp	Asp	Val	Ser	Arg	Arg	Val	Asp	Lys	Gln	Gly	Thr		
				485					490					495			
Lys	Lys	Gln	Met	Pro	Gln	Pro	Ala	Phe	Thr	Leu	Arg	Lys	Lys	Leu	Val		

500

505

510

Phe Pro Val Pro Leu Asp Ala Leu Ser Leu
515 520

<210> 12232

<211> 455

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2408"

<220>

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<223> /note="Gene Symbol: CASP10"

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<223> /note="Gene Name:
caspase 10, apoptosis-related cysteine peptidase"

<220>

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<223> /note="Uniprot ID: Q92851"

<220>

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<223> /note="ENSP ID: ENSP00000314599"

<400> 12232

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Lys Val Ser Phe Arg Glu Lys Leu Leu Ile Ile Asp Ser Asn Leu Gly
20 25 30

Val Gln Asp Val Glu Asn Leu Lys Phe Leu Cys Ile Gly Leu Val Pro
35 40 45

Asn Lys Lys Leu Glu Lys Ser Ser Ser Ala Ser Asp Val Phe Glu His
50 55 60

Leu Leu Ala Glu Asp Leu Leu Ser Glu Glu Asp Pro Phe Phe Leu Ala
65 70 75 80

Glu Leu Leu Tyr Ile Ile Arg Gln Lys Lys Leu Leu Gln His Leu Asn
85 90 95

27081

Cys	Thr	Lys	Glu	Glu	Val	Glu	Arg	Leu	Leu	Pro	Thr	Arg	Gln	Arg	Val	100	105	110
Ser	Leu	Phe	Arg	Asn	Leu	Leu	Tyr	Glu	Leu	Ser	Glu	Gly	Ile	Asp	Ser	115	120	125
Glu	Asn	Leu	Lys	Asp	Met	Ile	Phe	Leu	Leu	Lys	Asp	Ser	Leu	Pro	Lys	130	135	140
Thr	Glu	Met	Thr	Ser	Leu	Ser	Phe	Leu	Ala	Phe	Leu	Glu	Lys	Gln	Gly	145	150	155
Lys	Ile	Asp	Glu	Asp	Asn	Leu	Thr	Cys	Leu	Glu	Asp	Leu	Cys	Lys	Thr	165	170	175
Val	Val	Pro	Lys	Leu	Leu	Arg	Asn	Ile	Glu	Lys	Tyr	Lys	Arg	Glu	Lys	180	185	190
Ala	Ile	Gln	Ile	Val	Thr	Pro	Pro	Val	Asp	Lys	Glu	Ala	Glu	Ser	Tyr	195	200	205
Gln	Gly	Glu	Glu	Glu	Leu	Val	Ser	Gln	Thr	Asp	Val	Lys	Thr	Phe	Leu	210	215	220
Glu	Ala	Leu	Pro	Gln	Glu	Ser	Trp	Gln	Asn	Lys	His	Ala	Gly	Ser	Asn	225	230	235
Glu	Ile	Leu	Ser	His	Val	Phe	Gln	Trp	Leu	Gly	Phe	Thr	Val	His	Ile	245	250	255
His	Asn	Asn	Val	Thr	Lys	Val	Glu	Met	Glu	Met	Val	Leu	Gln	Lys	Gln	260	265	270
Lys	Cys	Asn	Pro	Ala	His	Ala	Asp	Gly	Asp	Cys	Phe	Val	Phe	Cys	Ile	275	280	285
Leu	Thr	His	Gly	Arg	Phe	Gly	Ala	Val	Tyr	Ser	Ser	Asp	Glu	Ala	Leu	290	295	300
Ile	Pro	Ile	Arg	Glu	Ile	Met	Ser	His	Phe	Thr	Ala	Leu	Gln	Cys	Pro	305	310	315
																		320

Arg Leu Ala Glu Lys Pro Lys Leu Phe Phe Ile Gln Ala Cys Gln Gly
 325 330 335
 Glu Glu Ile Gln Pro Ser Val Ser Ile Glu Ala Asp Ala Leu Asn Pro
 340 345 350
 Glu Gln Ala Pro Thr Ser Leu Gln Asp Ser Ile Pro Ala Glu Ala Asp
 355 360 365
 Phe Leu Leu Gly Leu Ala Thr Val Pro Gly Tyr Val Ser Phe Arg His
 370 375 380
 Val Glu Glu Gly Ser Trp Tyr Ile Gln Ser Leu Cys Asn His Leu Lys
 385 390 395 400
 Lys Leu Val Pro Arg His Glu Asp Ile Leu Ser Ile Leu Thr Ala Val
 405 410 415
 Asn Asp Asp Val Ser Arg Arg Val Asp Lys Gln Gly Thr Lys Lys Gln
 420 425 430
 Met Pro Gln Pro Ala Phe Thr Leu Arg Lys Lys Leu Val Phe Pro Val
 435 440 445
 Pro Leu Asp Ala Leu Ser Leu
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<210> 12233
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 <213> Homo sapiens

<220>
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<220>
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<220>
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 <223> /note="Uniprot ID: Q92851"

<220>
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<400> 12233

Met	Lys	Ser	Gln	Gly	Gln	His	Trp	Tyr	Ser	Ser	Ser	Asp	Lys	Asn	Cys
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Lys	Val	Ser	Phe	Arg	Glu	Lys	Leu	Leu	Ile	Ile	Asp	Ser	Asn	Leu	Gly
			20					25					30		
Val	Gln	Asp	Val	Glu	Asn	Leu	Lys	Phe	Leu	Cys	Ile	Gly	Leu	Val	Pro
		35					40					45			
Asn	Lys	Lys	Leu	Glu	Lys	Ser	Ser	Ser	Ala	Ser	Asp	Val	Phe	Glu	His
	50					55					60				
Leu	Leu	Ala	Glu	Asp	Leu	Leu	Ser	Glu	Glu	Asp	Pro	Phe	Phe	Leu	Ala
65					70					75					80
Glu	Leu	Leu	Tyr	Ile	Ile	Arg	Gln	Lys	Lys	Leu	Leu	Gln	His	Leu	Asn
				85					90					95	
Cys	Thr	Lys	Glu	Glu	Val	Glu	Arg	Leu	Leu	Pro	Thr	Arg	Gln	Arg	Val
			100					105					110		
Ser	Leu	Phe	Arg	Asn	Leu	Leu	Tyr	Glu	Leu	Ser	Glu	Gly	Ile	Asp	Ser
		115					120					125			
Glu	Asn	Leu	Lys	Asp	Met	Ile	Phe	Leu	Leu	Lys	Asp	Ser	Leu	Pro	Lys
	130					135					140				
Thr	Glu	Met	Thr	Ser	Leu	Ser	Phe	Leu	Ala	Phe	Leu	Glu	Lys	Gln	Gly
145					150					155					160
Lys	Ile	Asp	Glu	Asp	Asn	Leu	Thr	Cys	Leu	Glu	Asp	Leu	Cys	Lys	Thr
				165					170					175	
Val	Val	Pro	Lys	Leu	Leu	Arg	Asn	Ile	Glu	Lys	Tyr	Lys	Arg	Glu	Lys
			180					185					190		
Ala	Ile	Gln	Ile	Val	Thr	Pro	Pro	Val	Asp	Lys	Glu	Ala	Glu	Ser	Tyr
		195					200					205			

Gln Gly Glu Glu Glu Leu Val Ser Gln Thr Asp Val Lys Thr Phe Leu
210 215 220

Glu Ala Leu Pro Gln Glu Ser Trp Gln Asn Lys His Ala Gly Ser Asn
225 230 235 240

Glu Gly Ser Cys Val Gln Asp Glu Ser Glu Pro Gln Arg Pro Leu Cys
245 250 255

His Cys Gln Gln Pro Gln Leu Tyr Leu Pro Glu Gly Gln Thr Arg Asn
260 265 270

Pro

<210> 12234
<211> 247
<212> PRT
<213> Homo sapiens

<220>
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<220>
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<220>
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Met Lys Ser Gln Gly Gln His Trp Tyr Ser Ser Ser Asp Lys Asn Cys
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Lys Val Ser Phe Arg Glu Lys Leu Leu Ile Ile Asp Ser Asn Leu Gly
20 25 30

Val Gln Asp Val Glu Asn Leu Lys Phe Leu Cys Ile Gly Leu Val Pro

27085

35					40					45					
Asn	Lys	Lys	Leu	Glu	Lys	Ser	Ser	Ser	Ala	Ser	Asp	Val	Phe	Glu	His
	50					55					60				
Leu	Leu	Ala	Glu	Asp	Leu	Leu	Ser	Glu	Glu	Asp	Pro	Phe	Phe	Leu	Ala
65					70					75					80
Glu	Leu	Leu	Tyr	Ile	Ile	Arg	Gln	Lys	Lys	Leu	Leu	Gln	His	Leu	Asn
				85					90					95	
Cys	Thr	Lys	Glu	Glu	Val	Glu	Arg	Leu	Leu	Pro	Thr	Arg	Gln	Arg	Val
			100					105					110		
Ser	Leu	Phe	Arg	Asn	Leu	Leu	Tyr	Glu	Leu	Ser	Glu	Gly	Ile	Asp	Ser
		115					120					125			
Glu	Asn	Leu	Lys	Asp	Met	Ile	Phe	Leu	Leu	Lys	Asp	Ser	Leu	Pro	Lys
	130					135					140				
Thr	Glu	Met	Thr	Ser	Leu	Ser	Phe	Leu	Ala	Phe	Leu	Glu	Lys	Gln	Gly
145					150					155					160
Lys	Ile	Asp	Glu	Asp	Asn	Leu	Thr	Cys	Leu	Glu	Asp	Leu	Cys	Lys	Thr
				165					170					175	
Val	Val	Pro	Lys	Leu	Leu	Arg	Asn	Ile	Glu	Lys	Tyr	Lys	Arg	Glu	Lys
			180					185					190		
Ala	Ile	Gln	Ile	Val	Thr	Pro	Pro	Val	Asp	Lys	Glu	Ala	Glu	Ser	Tyr
		195					200					205			
Gln	Gly	Glu	Glu	Glu	Leu	Val	Ser	Gln	Thr	Asp	Val	Lys	Thr	Phe	Leu
	210					215					220				
Glu	Ala	Leu	Pro	Glu	Gly	Val	Phe	Val	Phe	Leu	Asn	Glu	Gly	Asp	Arg
225					230					235					240
Gly	Asn	Ser	Pro	Asp	Asp	Leu									
				245											
<210> 12235															
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<212> PRT
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<220>
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<220>
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<220>
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<400> 12235
Met Lys Ser Gln Gly Gln His Trp Tyr Ser Ser Ser Asp Lys Asn Cys
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Lys Val Ser Phe Arg Glu Lys Leu Leu Ile Ile Asp Ser Asn Leu Gly
          20          25          30

Val Gln Asp Val Glu Asn Leu Lys Phe Leu Cys Ile Gly Leu Val Pro
          35          40          45

Asn Lys Lys Leu Glu Lys Ser Ser Ser Ala Ser Asp Val Phe Glu His
          50          55          60

Leu Leu Ala Glu Asp Leu Leu Ser Glu Glu Asp Pro Phe Phe Leu Ala
65          70          75          80

Glu Leu Leu Tyr Ile Ile Arg Gln Lys Lys Leu Leu Gln His Leu Asn
          85          90          95

Cys Thr Lys Glu Glu Val Glu Arg Leu Leu Pro Thr Arg Gln Arg Val
          100          105          110

Ser Leu Phe Arg Asn Leu Leu Tyr Glu Leu Ser Glu Gly Ile Asp Ser
          115          120          125

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Glu	Asn	Leu	Lys	Asp	Met	Ile	Phe	Leu	Leu	Lys	Asp	Ser	Leu	Pro	Lys	130	135	140
Thr	Glu	Met	Thr	Ser	Leu	Ser	Phe	Leu	Ala	Phe	Leu	Glu	Lys	Gln	Gly	145	150	155
Lys	Ile	Asp	Glu	Asp	Asn	Leu	Thr	Cys	Leu	Glu	Asp	Leu	Cys	Lys	Thr	165	170	175
Val	Val	Pro	Lys	Leu	Leu	Arg	Asn	Ile	Glu	Lys	Tyr	Lys	Arg	Glu	Lys	180	185	190
Ala	Ile	Gln	Ile	Val	Thr	Pro	Pro	Val	Asp	Lys	Glu	Ala	Glu	Ser	Tyr	195	200	205
Gln	Gly	Glu	Glu	Glu	Leu	Val	Ser	Gln	Thr	Asp	Val	Lys	Thr	Phe	Leu	210	215	220
Glu	Ala	Leu	Pro	Arg	Ala	Ala	Val	Tyr	Arg	Met	Asn	Arg	Asn	His	Arg	225	230	235
Gly	Leu	Cys	Val	Ile	Val	Asn	Asn	His	Ser	Phe	Thr	Ser	Leu	Lys	Asp	245	250	255
Arg	Gln	Gly	Thr	His	Lys	Asp	Ala	Glu	Ile	Leu	Ser	His	Val	Phe	Gln	260	265	270
Trp	Leu	Gly	Phe	Thr	Val	His	Ile	His	Asn	Asn	Val	Thr	Lys	Val	Glu	275	280	285
Met	Glu	Met	Val	Leu	Gln	Lys	Gln	Lys	Cys	Asn	Pro	Ala	His	Ala	Asp	290	295	300
Gly	Asp	Cys	Phe	Val	Phe	Cys	Ile	Leu	Thr	His	Gly	Arg	Phe	Gly	Ala	305	310	315
Val	Tyr	Ser	Ser	Asp	Glu	Ala	Leu	Ile	Pro	Ile	Arg	Glu	Ile	Met	Ser	325	330	335
His	Phe	Thr	Ala	Leu	Gln	Cys	Pro	Arg	Leu	Ala	Glu	Lys	Pro	Lys	Leu	340	345	350
Phe	Phe	Ile	Gln	Ala	Cys	Gln	Gly	Glu	Glu	Ile	Gln	Pro	Ser	Val	Ser			

355 360 365
 Ile Glu Ala Asp Ala Leu Asn Pro Glu Gln Ala Pro Thr Ser Leu Gln
 370 375 380
 Asp Ser Ile Pro Ala Glu Ala Asp Phe Leu Leu Gly Leu Ala Thr Val
 385 390 395 400
 Pro Gly Tyr Val Ser Phe Arg His Val Glu Glu Gly Ser Trp Tyr Ile
 405 410 415
 Gln Ser Leu Cys Asn His Leu Lys Lys Leu Val Pro Arg Met Leu Lys
 420 425 430
 Phe Leu Glu Lys Thr Met Glu Ile Arg Gly Arg Lys Arg Thr Val Trp
 435 440 445
 Gly Ala Lys Gln Ile Ser Ala Thr Ser Leu Pro Thr Ala Ile Ser Ala
 450 455 460
 Gln Thr Pro Arg Pro Pro Met Arg Arg Trp Ser Ser Val Ser
 465 470 475

 <210> 12236
 <211> 118
 <212> PRT
 <213> Homo sapiens

 <220>
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 <220>
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 <223> /note="Gene Name:
 caspase 10, apoptosis-related cysteine peptidase"

 <220>
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 <400> 12236
 Met Lys Ser Gln Gly Gln His Trp Tyr Ser Ser Ser Asp Lys Asn Cys
 1 5 10 15

Lys Val Ser Phe Arg Glu Lys Leu Leu Ile Ile Asp Ser Asn Leu Gly
 20 25 30

 Val Gln Asp Val Glu Asn Leu Lys Phe Leu Cys Ile Gly Leu Val Pro
 35 40 45

 Asn Lys Lys Leu Glu Lys Ser Ser Ser Ala Ser Asp Val Phe Glu His
 50 55 60

 Leu Leu Ala Glu Asp Leu Leu Ser Glu Glu Asp Pro Phe Phe Leu Ala
 65 70 75 80

 Glu Leu Leu Tyr Ile Ile Arg Gln Lys Lys Leu Leu Gln His Leu Asn
 85 90 95

 Cys Thr Lys Glu Glu Val Glu Arg Leu Leu Pro Thr Arg Gln Arg Val
 100 105 110

 Ser Leu Phe Arg Pro Pro
 115

<210> 12237

<211> 168

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2409"

<220>

<221> source

<223> /note="Gene Symbol: CASP12"

<220>

<221> source

<223> /note="Gene Name:
 caspase 12 (gene/pseudogene) "

<220>

<221> source

<223> /note="Uniprot ID: Q6UXS9"

<220>

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<223> /note="ENSP ID: ENSP00000421408"

<400> 12237

Met Ala Asp Glu Lys Pro Ser Asn Gly Val Leu Val His Met Val Lys

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Leu	Leu	Ile	Lys	Thr	Phe	Leu	Asp	Gly	Ile	Phe	Asp	Asp	Leu	Met	Glu		
			20					25					30				
Asn	Asn	Val	Leu	Asn	Thr	Asp	Glu	Ile	His	Leu	Ile	Gly	Lys	Cys	Leu		
		35					40					45					
Lys	Phe	Val	Val	Ser	Asn	Ala	Glu	Asn	Leu	Val	Asp	Asp	Ile	Thr	Glu		
	50					55					60						
Thr	Ala	Gln	Ile	Ala	Gly	Lys	Ile	Phe	Arg	Glu	His	Leu	Trp	Asn	Ser		
65					70					75					80		
Lys	Lys	Gln	Leu	Ser	Ser	Ala	Phe	Leu	Glu	Ile	Gln	Gly	Ala	Gln	Pro		
				85					90					95			
Ser	Gly	Lys	Leu	Lys	Leu	Cys	Pro	His	Ala	His	Phe	His	Glu	Leu	Lys		
			100					105					110				
Thr	Lys	Arg	Ala	Asp	Glu	Ile	Tyr	Pro	Val	Met	Glu	Lys	Glu	Arg	Arg		
		115					120					125					
Thr	Cys	Leu	Ala	Ser	Thr	Ser	Ala	Thr	Lys	Asn	Ser	Thr	Ile	Phe	Ile		
	130						135				140						
Ile	Glu	Met	Val	Leu	Asn	Leu	Thr	Phe	Trp	Gly	Cys	Glu	Ile	Tyr	Leu		
145					150					155					160		
Lys	Thr	Leu	Asp	Thr	Gln	Trp	Leu										
				165													

<210> 12238

<211> 225

<212> PRT

<213> Homo sapiens

<220>

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<223> /note="Payload ID: 2409"

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<223> /note="Gene Symbol: CASP12"

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 <223> /note="Gene Name:
 caspase 12 (gene/pseudogene)"

<220>
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<400> 12238

Met Ala Asp Glu Lys Pro Ser Asn Gly Val Leu Val His Met Val Lys
 1 5 10 15

Leu Leu Ile Lys Thr Phe Leu Asp Gly Ile Phe Asp Asp Leu Met Glu
 20 25 30

Asn Asn Val Leu Asn Thr Asp Glu Ile His Leu Ile Gly Lys Cys Leu
 35 40 45

Lys Phe Val Val Ser Asn Ala Glu Asn Leu Val Asp Asp Ile Thr Glu
 50 55 60

Thr Ala Gln Ile Ala Gly Lys Ile Phe Arg Glu His Leu Trp Asn Ser
 65 70 75 80

Lys Lys Gln Leu Ser Ser Asp Ile Ser Ser Asp Gly Glu Arg Glu Ala
 85 90 95

Asn Met Pro Gly Leu Asn Ile Arg Asn Lys Glu Phe Asn Tyr Leu His
 100 105 110

Asn Arg Asn Gly Ser Glu Leu Asp Leu Leu Gly Met Asp Leu Leu Glu
 115 120 125

Asn Leu Gly Tyr Ser Val Val Ile Lys Glu Asn Leu Thr Ala Gln Met
 130 135 140

Val Leu Gly Leu Phe Gly Ser Pro Leu Thr Val Glu Lys Pro Val Gln
 145 150 155 160

Ile Leu Met Val Gly Ser Cys Lys Val Thr Ser Val Met Met Leu Leu
 165 170 175

Gln Arg Leu Met Trp Lys Arg Thr Ser Leu Leu Ser Asn Leu Pro His
 180 185 190

His Val Gln His Ser Phe Glu Thr Pro Asn Ile Leu Thr Gln Leu Pro
195 200 205

Thr Ile Glu Arg Leu Ser Met Thr Arg Tyr Phe Tyr Leu Phe Pro Gly
210 215 220

Asn
225

<210> 12239
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<220>
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<220>
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<220>
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<220>
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<400> 12239
Met Ala Asp Glu Lys Pro Ser Asn Gly Val Leu Val His Met Val Lys
1 5 10 15

Leu Leu Ile Lys Thr Phe Leu Asp Gly Ile Phe Asp Asp Leu Met Glu
20 25 30

Asn Asn Val Leu Asn Thr Asp Glu Ile His Leu Ile Gly Lys Cys Leu
35 40 45

Lys Phe Val Val Ser Asn Ala Glu Asn Leu Val Asp Asp Ile Thr Glu
50 55 60

Thr Ala Gln Ile Ala Gly Lys Ile Phe Arg Glu His Leu Trp Asn Ser
65 70 75 80

Lys Lys Gln Leu Ser Ser Asp Ile Ser Ser Asp Gly Glu Arg Glu Ala
85 90 95

27093

Asn Met Pro Gly Leu Asn Ile Arg Asn Lys Glu Phe Asn Tyr Leu His
100 105 110

Asn Arg Asn Gly Ser Glu Leu Asp Leu Leu Gly Met Asp Leu Leu Glu
115 120 125

Asn Leu Gly Tyr Ser Val Val Ile Lys Glu Asn Leu Thr Ala Gln Met
130 135 140

Val Leu Gly Leu Phe Gly Ser Pro Leu Thr Val Glu Lys Pro Val Gln
145 150 155 160

Ile Leu Met Val Gly Ser Cys Lys Val Thr Ser Val Met Met Leu Leu
165 170 175

Gln Arg Leu Met Trp Lys Arg Thr Ser Leu Leu Ser Asn Leu Pro His
180 185 190

His Ile Met Phe Leu Gly Asp Met Lys Gln Met Ala Leu Ser Ser Phe
195 200 205

Pro Lys Leu Ser Thr Thr Ser Glu Ser Ile Leu Gly Val Ile Ile
210 215 220

<210> 12240
<211> 294
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<220>
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<400> 12240

Met	Ala	Asp	Glu	Lys	Pro	Ser	Asn	Gly	Val	Leu	Val	His	Met	Val	Lys			
1				5					10					15				
Leu	Leu	Ile	Lys	Thr	Phe	Leu	Asp	Gly	Ile	Phe	Asp	Asp	Leu	Met	Glu			
			20					25					30					
Asn	Asn	Val	Leu	Asn	Thr	Asp	Glu	Ile	His	Leu	Ile	Gly	Lys	Cys	Leu			
		35					40					45						
Lys	Phe	Val	Val	Ser	Asn	Ala	Glu	Asn	Leu	Val	Asp	Asp	Ile	Thr	Glu			
	50					55					60							
Thr	Ala	Gln	Ile	Ala	Gly	Lys	Ile	Phe	Arg	Glu	His	Leu	Trp	Asn	Ser			
65					70					75					80			
Lys	Lys	Gln	Leu	Ser	Ser	Asp	Ile	Ser	Ser	Asp	Gly	Glu	Arg	Glu	Ala			
				85					90					95				
Asn	Met	Pro	Gly	Leu	Asn	Ile	Arg	Asn	Lys	Glu	Phe	Asn	Tyr	Leu	His			
			100					105					110					
Asn	Arg	Asn	Gly	Ser	Glu	Leu	Asp	Leu	Leu	Gly	Met	Asp	Leu	Leu	Glu			
			115				120					125						
Asn	Leu	Gly	Tyr	Ser	Val	Val	Ile	Lys	Glu	Asn	Leu	Thr	Ala	Gln	Glu			
	130					135					140							
Met	Glu	Thr	Ala	Leu	Arg	Gln	Phe	Ala	Ala	His	Pro	Glu	His	Gln	Ser			
145					150					155					160			
Ser	Asp	Ser	Thr	Phe	Leu	Val	Phe	Met	Ser	His	Ser	Ile	Leu	Asn	Gly			
				165					170					175				
Ile	Cys	Gly	Thr	Lys	His	Trp	Asp	Gln	Glu	Pro	Asp	Val	Leu	His	Asp			
			180					185					190					
Asp	Thr	Ile	Phe	Glu	Ile	Phe	Asn	Asn	Arg	Asn	Cys	Gln	Ser	Leu	Lys			
		195					200					205						
Asp	Lys	Pro	Lys	Met	Val	Leu	Gly	Leu	Phe	Gly	Ser	Pro	Leu	Thr	Val			
	210					215					220							
Glu	Lys	Pro	Val	Gln	Ile	Leu	Met	Val	Gly	Ser	Cys	Lys	Val	Thr	Ser			

225						230						235						240
Val	Met	Met	Leu	Leu	Gln	Arg	Leu	Met	Trp	Lys	Arg	Thr	Ser	Leu	Leu			
				245					250					255				
Ser	Asn	Leu	Pro	His	His	Val	Gln	His	Ser	Phe	Glu	Thr	Pro	Asn	Ile			
				260					265					270				
Leu	Thr	Gln	Leu	Pro	Thr	Ile	Glu	Arg	Leu	Ser	Met	Thr	Arg	Tyr	Phe			
				275					280					285				
Tyr	Leu	Phe	Pro	Gly	Asn													
290																		

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<400> 12241
Met  Ala  Asp  Glu  Lys  Pro  Ser  Asn  Gly  Val  Leu  Val  His  Met  Val  Lys
 1          5          10          15

Leu  Leu  Ile  Lys  Thr  Phe  Leu  Asp  Gly  Ile  Phe  Asp  Asp  Leu  Met  Glu
          20          25          30

Asn  Asn  Val  Leu  Asn  Thr  Asp  Glu  Ile  His  Leu  Ile  Gly  Lys  Cys  Leu
          35          40          45

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Asn Val Ser Trp Arg His Glu Thr Asn Gly Ser Val Phe Ile Ser Gln
 275 280 285

Ile Ile Tyr Tyr Phe Arg Glu Tyr Ser Trp Ser His His Leu Glu Glu
 290 295 300

Ile Phe Gln Lys Val Gln His Ser Phe Glu Thr Pro Asn Ile Leu Thr
 305 310 315 320

Gln Leu Pro Thr Ile Glu Arg Leu Ser Met Thr Arg Tyr Phe Tyr Leu
 325 330 335

Phe Pro Gly Asn
 340

<210> 12242
 <211> 168
 <212> PRT
 <213> Homo sapiens

<220>
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 <223> /note="Payload ID: 2409"

<220>
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<220>
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 <223> /note="Gene Name:
 caspase 12 (gene/pseudogene) "

<220>
 <221> source
 <223> /note="Uniprot ID: Q6UXS9"

<220>
 <221> source
 <223> /note="ENSP ID: ENSP00000424963"

<400> 12242
 Met Ala Asp Glu Lys Pro Ser Asn Gly Val Leu Val His Met Val Lys
 1 5 10 15

Leu Leu Ile Lys Thr Phe Leu Asp Gly Ile Phe Asp Asp Leu Met Glu
 20 25 30

Asn Asn Val Leu Asn Thr Asp Glu Ile His Leu Ile Gly Lys Cys Leu
 35 40 45

Lys Phe Val Val Ser Asn Ala Glu Asn Leu Val Asp Asp Ile Thr Glu
50 55 60

Thr Ala Gln Ile Ala Gly Lys Ile Phe Arg Glu His Leu Trp Asn Ser
65 70 75 80

Lys Lys Gln Leu Ser Ser Ala Phe Leu Glu Ile Gln Gly Ala Gln Pro
85 90 95

Ser Gly Lys Leu Lys Leu Cys Pro His Ala His Phe His Glu Leu Lys
100 105 110

Thr Lys Arg Ala Asp Glu Ile Tyr Pro Val Met Glu Lys Glu Arg Arg
115 120 125

Thr Cys Leu Ala Ser Thr Ser Ala Thr Lys Asn Ser Thr Ile Phe Ile
130 135 140

Ile Glu Met Val Leu Asn Leu Thr Phe Trp Gly Cys Glu Ile Tyr Leu
145 150 155 160

Lys Thr Leu Asp Thr Gln Trp Leu
165

<210> 12243
<211> 276
<212> PRT
<213> Homo sapiens

<220>
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<220>
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<220>
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<223> /note="Gene Name:
caspase 12 (gene/pseudogene) "

<220>
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<223> /note="ENSP ID: ENSP00000425652"

<400> 12243

Met	Ala	Asp	Glu	Lys	Pro	Ser	Asn	Gly	Val	Leu	Val	His	Met	Val	Lys			
1				5					10					15				
Leu	Leu	Ile	Lys	Thr	Phe	Leu	Asp	Gly	Ile	Phe	Asp	Asp	Leu	Met	Glu			
			20					25					30					
Asn	Asn	Val	Leu	Asn	Thr	Asp	Glu	Ile	His	Leu	Ile	Gly	Lys	Cys	Leu			
		35					40					45						
Lys	Phe	Val	Val	Ser	Asn	Ala	Glu	Asn	Leu	Val	Asp	Asp	Ile	Thr	Glu			
	50					55					60							
Thr	Ala	Gln	Ile	Ala	Gly	Lys	Ile	Phe	Arg	Glu	His	Leu	Trp	Asn	Ser			
65					70					75					80			
Lys	Lys	Gln	Leu	Ser	Ser	Asp	Ile	Ser	Ser	Asp	Gly	Glu	Arg	Glu	Ala			
				85					90					95				
Asn	Met	Pro	Gly	Leu	Asn	Ile	Arg	Asn	Lys	Glu	Phe	Asn	Tyr	Leu	His			
			100					105					110					
Asn	Arg	Asn	Gly	Ser	Glu	Leu	Asp	Leu	Leu	Gly	Met	Asp	Leu	Leu	Glu			
			115				120					125						
Asn	Leu	Gly	Tyr	Ser	Val	Val	Ile	Lys	Glu	Asn	Leu	Thr	Ala	Gln	Glu			
	130					135					140							
Met	Glu	Thr	Ala	Leu	Arg	Gln	Phe	Ala	Ala	His	Pro	Glu	His	Gln	Ser			
145					150					155					160			
Ser	Asp	Ser	Thr	Phe	Leu	Val	Phe	Met	Ser	His	Ser	Ile	Leu	Asn	Gly			
				165					170					175				
Ile	Cys	Gly	Thr	Lys	His	Trp	Asp	Gln	Glu	Pro	Asp	Val	Leu	His	Asp			
			180					185					190					
Asp	Thr	Ile	Phe	Glu	Ile	Phe	Asn	Asn	Arg	Asn	Cys	Gln	Ser	Leu	Lys			
		195					200					205						
Asp	Lys	Pro	Lys	Val	Ile	Ile	Met	Gln	Ala	Cys	Arg	Gly	Asn	Gly	Ala			
	210					215					220							
Gly	Ile	Val	Trp	Phe	Thr	Thr	Asp	Ser	Gly	Lys	Ala	Ser	Ala	Asp	Thr			

[illegible]

Gly Ser Cys Lys Val Thr Ser Val Met Met Leu Leu Gln Arg Leu Met
85 90 95

Trp Lys Arg Thr Ser Leu Leu Ser Asn Leu Pro His His Ile Met Phe
100 105 110

Leu Gly Asp Met Lys Gln Met Ala Leu Ser Ser Phe Pro Lys Leu Ser
115 120 125

Thr Thr Ser Glu Ser Ile Leu Gly Val Ile Ile
130 135

<210> 12245
<211> 256
<212> PRT
<213> Homo sapiens

<220>
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<220>
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<220>
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<223> /note="Gene Name:
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<220>
<221> source
<223> /note="Uniprot ID: Q6UXS9"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000426566"

<400> 12245
Met Ala Asp Ile Ser Ser Asp Gly Glu Arg Glu Ala Asn Met Pro Gly
1 5 10 15

Leu Asn Ile Arg Asn Lys Glu Phe Asn Tyr Leu His Asn Arg Asn Gly
20 25 30

Ser Glu Leu Asp Leu Leu Gly Met Asp Leu Leu Glu Asn Leu Gly Tyr
35 40 45

Ser Val Val Ile Lys Glu Asn Leu Thr Ala Gln Glu Met Glu Thr Ala

50						55						60				
Leu	Arg	Gln	Phe	Ala	Ala	His	Pro	Glu	His	Gln	Ser	Ser	Asp	Ser	Thr	
65					70					75					80	
Phe	Leu	Val	Phe	Met	Ser	His	Ser	Ile	Leu	Asn	Gly	Ile	Cys	Gly	Thr	
				85					90					95		
Lys	His	Trp	Asp	Gln	Glu	Pro	Asp	Val	Leu	His	Asp	Asp	Thr	Ile	Phe	
			100					105					110			
Glu	Ile	Phe	Asn	Asn	Arg	Asn	Cys	Gln	Ser	Leu	Lys	Asp	Lys	Pro	Lys	
		115					120					125				
Val	Ile	Ile	Met	Gln	Ala	Cys	Arg	Gly	Asn	Gly	Ala	Gly	Ile	Val	Trp	
	130					135					140					
Phe	Thr	Thr	Asp	Ser	Gly	Lys	Ala	Ser	Ala	Asp	Thr	His	Gly	Arg	Leu	
145					150					155					160	
Leu	Gln	Gly	Asn	Ile	Cys	Asn	Asp	Ala	Val	Thr	Lys	Ala	His	Val	Glu	
				165					170					175		
Lys	Asp	Phe	Ile	Ala	Phe	Lys	Ser	Ser	Thr	Pro	His	Asn	Val	Ser	Trp	
			180					185					190			
Arg	His	Glu	Thr	Asn	Gly	Ser	Val	Phe	Ile	Ser	Gln	Ile	Ile	Tyr	Tyr	
		195					200					205				
Phe	Arg	Glu	Tyr	Ser	Trp	Ser	His	His	Leu	Glu	Glu	Ile	Phe	Gln	Lys	
	210					215					220					
Val	Gln	His	Ser	Phe	Glu	Thr	Pro	Asn	Ile	Leu	Thr	Gln	Leu	Pro	Thr	
225					230					235					240	
Ile	Glu	Arg	Leu	Ser	Met	Thr	Arg	Tyr	Phe	Tyr	Leu	Phe	Pro	Gly	Asn	
				245					250					255		

<210> 12246

<211> 340

<212> PRT

<213> Homo sapiens

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<221> source
<223> /note="Payload ID: 2409"

<220>
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<220>
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<223> /note="Gene Name:
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<220>
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<223> /note="Uniprot ID: Q6UXS9"

<220>
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<223> /note="ENSP ID: ENSP00000427128"

<400> 12246
Met Ala Asp Glu Lys Pro Ser Asn Gly Val Leu Val His Met Val Lys
1          5          10          15

Leu Leu Ile Lys Thr Phe Leu Asp Gly Ile Phe Asp Asp Leu Met Glu
20          25          30

Asn Asn Val Leu Asn Thr Asp Glu Ile His Leu Ile Gly Lys Cys Leu
35          40          45

Lys Phe Val Val Ser Asn Ala Glu Asn Leu Val Asp Asp Ile Thr Glu
50          55          60

Thr Ala Gln Ile Ala Gly Lys Ile Phe Arg Glu His Leu Trp Asn Ser
65          70          75          80

Lys Lys Gln Leu Ser Ser Asp Ile Ser Ser Asp Gly Glu Arg Glu Ala
85          90          95

Asn Met Pro Gly Leu Asn Ile Arg Asn Lys Glu Phe Asn Tyr Leu His
100         105         110

Asn Arg Asn Gly Ser Glu Leu Asp Leu Leu Gly Met Asp Leu Leu Glu
115         120         125

Asn Leu Gly Tyr Ser Val Val Ile Lys Glu Asn Leu Thr Ala Gln Glu
130         135         140

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Met Glu Thr Ala Leu Arg Gln Phe Ala Ala His Pro Glu His Gln Ser
 145 150 155 160

Ser Asp Ser Thr Phe Leu Val Phe Met Ser His Ser Ile Leu Asn Gly
 165 170 175

Ile Cys Gly Thr Lys His Trp Asp Gln Glu Pro Asp Val Leu His Asp
 180 185 190

Asp Thr Ile Phe Glu Ile Phe Asn Asn Arg Asn Cys Gln Ser Leu Lys
 195 200 205

Asp Lys Pro Lys Val Ile Ile Met Gln Ala Cys Arg Gly Asn Gly Ala
 210 215 220

Gly Ile Val Trp Phe Thr Thr Asp Ser Gly Lys Ala Ser Ala Asp Thr
 225 230 235 240

His Gly Arg Leu Leu Gln Gly Asn Ile Cys Asn Asp Ala Val Thr Lys
 245 250 255

Ala His Val Glu Lys Asp Phe Ile Ala Phe Lys Ser Ser Thr Pro His
 260 265 270

Asn Val Ser Trp Arg His Glu Thr Asn Gly Ser Val Phe Ile Ser Gln
 275 280 285

Ile Ile Tyr Tyr Phe Arg Glu Tyr Ser Trp Ser His His Leu Glu Glu
 290 295 300

Ile Phe Gln Lys Val Gln His Ser Phe Glu Thr Pro Asn Ile Leu Thr
 305 310 315 320

Gln Leu Pro Thr Ile Glu Arg Leu Ser Met Thr Arg Tyr Phe Tyr Leu
 325 330 335

Phe Pro Gly Asn
 340

<210> 12247

<211> 141

<212> PRT

<213> Homo sapiens

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<220>
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<223> /note="Payload ID: 2409"

<220>
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<223> /note="Gene Symbol: CASP12"

<220>
<221> source
<223> /note="Gene Name:
        caspase 12 (gene/pseudogene) "

<220>
<221> source
<223> /note="ENSP ID: ENSP00000427437"

<400> 12247
Met Ala Asp Ile Ser Ser Asp Gly Glu Arg Glu Ala Asn Met Pro Gly
1          5          10          15

Leu Asn Ile Arg Asn Lys Glu Phe Asn Tyr Leu His Asn Arg Asn Gly
          20          25          30

Ser Glu Leu Asp Leu Leu Gly Met Asp Leu Leu Glu Asn Leu Gly Tyr
          35          40          45

Ser Val Val Ile Lys Glu Asn Leu Thr Ala Gln Met Val Leu Gly Leu
          50          55          60

Phe Gly Ser Pro Leu Thr Val Glu Lys Pro Val Gln Ile Leu Met Val
65          70          75          80

Gly Ser Cys Lys Val Thr Ser Val Met Met Leu Leu Gln Arg Leu Met
          85          90          95

Trp Lys Arg Thr Ser Leu Leu Ser Asn Leu Pro His His Val Gln His
          100          105          110

Ser Phe Glu Thr Pro Asn Ile Leu Thr Gln Leu Pro Thr Ile Glu Arg
          115          120          125

Leu Ser Met Thr Arg Tyr Phe Tyr Leu Phe Pro Gly Asn
          130          135          140

<210> 12248
<211> 340
<212> PRT

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<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2409"

<220>

<221> source

<223> /note="Gene Symbol: CASP12"

<220>

<221> source

<223> /note="Gene Name:
caspase 12 (gene/pseudogene) "

<220>

<221> source

<223> /note="ENSP ID: ENSP00000482745"

<400> 12248

Met Ala Asp Glu Lys Pro Ser Asn Gly Val Leu Val His Met Val Lys
1 5 10 15

Leu Leu Ile Lys Thr Phe Leu Asp Gly Ile Phe Asp Asp Leu Met Glu
20 25 30

Asn Asn Val Leu Asn Thr Asp Glu Ile His Leu Ile Gly Lys Cys Leu
35 40 45

Lys Phe Val Val Ser Asn Ala Glu Asn Leu Val Asp Asp Ile Thr Glu
50 55 60

Thr Ala Gln Ile Ala Gly Lys Ile Phe Arg Glu His Leu Trp Asn Ser
65 70 75 80

Lys Lys Gln Leu Ser Ser Asp Ile Ser Ser Asp Gly Glu Arg Glu Ala
85 90 95

Asn Met Pro Gly Leu Asn Ile Arg Asn Lys Glu Phe Asn Tyr Leu His
100 105 110

Asn Arg Asn Gly Ser Glu Leu Asp Leu Leu Gly Met Asp Leu Leu Glu
115 120 125

Asn Leu Gly Tyr Ser Val Val Ile Lys Glu Asn Leu Thr Ala Gln Glu
130 135 140

Met Glu Thr Ala Leu Arg Gln Phe Ala Ala His Pro Glu His Gln Ser

27107

145						150						155				160
Ser	Asp	Ser	Thr	Phe	Leu	Val	Phe	Met	Ser	His	Ser	Ile	Leu	Asn	Gly	
				165					170					175		
Ile	Cys	Gly	Thr	Lys	His	Trp	Asp	Gln	Glu	Pro	Asp	Val	Leu	His	Asp	
			180					185					190			
Asp	Thr	Ile	Phe	Glu	Ile	Phe	Asn	Asn	Arg	Asn	Cys	Gln	Ser	Leu	Lys	
		195					200					205				
Asp	Lys	Pro	Lys	Val	Ile	Ile	Met	Gln	Ala	Cys	Arg	Gly	Asn	Gly	Ala	
	210					215					220					
Gly	Ile	Val	Trp	Phe	Thr	Thr	Asp	Ser	Gly	Lys	Ala	Ser	Ala	Asp	Thr	
225					230					235					240	
His	Gly	Arg	Leu	Leu	Gln	Gly	Asn	Ile	Cys	Asn	Asp	Ala	Val	Thr	Lys	
			245						250					255		
Ala	His	Val	Glu	Lys	Asp	Phe	Ile	Ala	Phe	Lys	Ser	Ser	Thr	Pro	His	
			260					265					270			
Asn	Val	Ser	Trp	Arg	His	Glu	Thr	Asn	Gly	Ser	Val	Phe	Ile	Ser	Gln	
		275					280					285				
Ile	Ile	Tyr	Tyr	Phe	Arg	Glu	Tyr	Ser	Trp	Ser	His	His	Leu	Glu	Glu	
	290					295					300					
Ile	Phe	Gln	Lys	Val	Gln	His	Ser	Phe	Glu	Thr	Pro	Asn	Ile	Leu	Thr	
305					310					315					320	
Gln	Leu	Pro	Thr	Ile	Glu	Arg	Leu	Ser	Met	Thr	Arg	Tyr	Phe	Tyr	Leu	
				325					330					335		
Phe	Pro	Gly	Asn													
			340													

<210> 12249
 <211> 242
 <212> PRT
 <213> Homo sapiens
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<221> source
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<220>
<221> source
<223> /note="Gene Symbol: CASP14"

<220>
<221> source
<223> /note="Gene Name:
      caspase 14, apoptosis-related cysteine peptidase"

<220>
<221> source
<223> /note="Uniprot ID: P31944"

<220>
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<400> 12249
Met Ser Asn Pro Arg Ser Leu Glu Glu Glu Lys Tyr Asp Met Ser Gly
1          5          10          15

Ala Arg Leu Ala Leu Ile Leu Cys Val Thr Lys Ala Arg Glu Gly Ser
20          25          30

Glu Glu Asp Leu Asp Ala Leu Glu His Met Phe Arg Gln Leu Arg Phe
35          40          45

Glu Ser Thr Met Lys Arg Asp Pro Thr Ala Glu Gln Phe Gln Glu Glu
50          55          60

Leu Glu Lys Phe Gln Gln Ala Ile Asp Ser Arg Glu Asp Pro Val Ser
65          70          75          80

Cys Ala Phe Val Val Leu Met Ala His Gly Arg Glu Gly Phe Leu Lys
85          90          95

Gly Glu Asp Gly Glu Met Val Lys Leu Glu Asn Leu Phe Glu Ala Leu
100         105         110

Asn Asn Lys Asn Cys Gln Ala Leu Arg Ala Lys Pro Lys Val Tyr Ile
115         120         125

Ile Gln Ala Cys Arg Gly Glu Gln Arg Asp Pro Gly Glu Thr Val Gly
130         135         140

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Gly Asp Glu Ile Val Met Val Ile Lys Asp Ser Pro Gln Thr Ile Pro
 145 150 155 160

Thr Tyr Thr Asp Ala Leu His Val Tyr Ser Thr Val Glu Gly Tyr Ile
 165 170 175

Ala Tyr Arg His Asp Gln Lys Gly Ser Cys Phe Ile Gln Thr Leu Val
 180 185 190

Asp Val Phe Thr Lys Arg Lys Gly His Ile Leu Glu Leu Leu Thr Glu
 195 200 205

Val Thr Arg Arg Met Ala Glu Ala Glu Leu Val Gln Glu Gly Lys Ala
 210 215 220

Arg Lys Thr Asn Pro Glu Ile Gln Ser Thr Leu Arg Lys Arg Leu Tyr
 225 230 235 240

Leu Gln

<210> 12250
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Leu	Met	Ala	Ala	Asp	Arg	Gly	Arg	Arg	Ile	Leu	Gly	Val	Cys	Gly	Met	
			20					25					30			
His	Pro	His	His	Gln	Glu	Thr	Leu	Lys	Lys	Asn	Arg	Val	Val	Leu	Ala	
		35					40					45				
Lys	Gln	Leu	Leu	Leu	Ser	Glu	Leu	Leu	Glu	His	Leu	Leu	Glu	Lys	Asp	
	50					55					60					
Ile	Ile	Thr	Leu	Glu	Met	Arg	Glu	Leu	Ile	Gln	Ala	Lys	Val	Gly	Ser	
65					70					75					80	
Phe	Ser	Gln	Asn	Val	Glu	Leu	Leu	Asn	Leu	Leu	Pro	Lys	Arg	Gly	Pro	
				85					90					95		
Gln	Ala	Phe	Asp	Ala	Phe	Cys	Glu	Ala	Leu	Arg	Glu	Thr	Lys	Gln	Gly	
			100					105					110			
His	Leu	Glu	Asp	Met	Leu	Leu	Thr	Thr	Leu	Ser	Gly	Leu	Gln	His	Val	
		115					120					125				
Leu	Pro	Pro	Leu	Ser	Cys	Asp	Tyr	Asp	Leu	Ser	Leu	Pro	Phe	Pro	Val	
	130					135					140					
Cys	Glu	Ser	Cys	Pro	Leu	Tyr	Lys	Lys	Leu	Arg	Leu	Ser	Thr	Asp	Thr	
145					150					155					160	
Val	Glu	His	Ser	Leu	Asp	Asn	Lys	Asp	Gly	Pro	Val	Cys	Leu	Gln	Val	
				165					170					175		
Lys	Pro	Cys	Thr	Pro	Glu	Phe	Tyr	Gln	Thr	His	Phe	Gln	Leu	Ala	Tyr	
			180					185					190			
Arg	Leu	Gln	Ser	Arg	Pro	Arg	Gly	Leu	Ala	Leu	Val	Leu	Ser	Asn	Val	
		195					200					205				
His	Phe	Thr	Gly	Glu	Lys	Glu	Leu	Glu	Phe	Arg	Ser	Gly	Gly	Asp	Val	
	210					215					220					
Asp	His	Ser	Thr	Leu	Val	Thr	Leu	Phe	Lys	Leu	Leu	Gly	Tyr	Asp	Val	
225					230					235					240	

His	Val	Leu	Cys	Asp	Gln	Thr	Ala	Gln	Glu	Met	Gln	Glu	Lys	Leu	Gln	
				245					250					255		
Asn	Phe	Ala	Gln	Leu	Pro	Ala	His	Arg	Val	Thr	Asp	Ser	Cys	Ile	Val	
			260					265					270			
Ala	Leu	Leu	Ser	His	Gly	Val	Glu	Gly	Ala	Ile	Tyr	Gly	Val	Asp	Gly	
		275					280					285				
Lys	Leu	Leu	Gln	Leu	Gln	Glu	Val	Phe	Gln	Leu	Phe	Asp	Asn	Ala	Asn	
	290					295					300					
Cys	Pro	Ser	Leu	Gln	Asn	Lys	Pro	Lys	Met	Phe	Phe	Ile	Gln	Ala	Cys	
305					310					315					320	
Arg	Gly	Asp	Glu	Thr	Asp	Arg	Gly	Val	Asp	Gln	Gln	Asp	Gly	Lys	Asn	
				325					330					335		
His	Ala	Gly	Ser	Pro	Gly	Cys	Glu	Glu	Ser	Asp	Ala	Gly	Lys	Glu	Lys	
			340					345					350			
Leu	Pro	Lys	Met	Arg	Leu	Pro	Thr	Arg	Ser	Asp	Met	Ile	Cys	Gly	Tyr	
		355					360					365				
Ala	Cys	Leu	Lys	Gly	Thr	Ala	Ala	Met	Arg	Asn	Thr	Lys	Arg	Gly	Ser	
	370					375					380					
Trp	Tyr	Ile	Glu	Ala	Leu	Ala	Gln	Val	Phe	Ser	Glu	Arg	Ala	Cys	Asp	
385					390					395					400	
Met	His	Val	Ala	Asp	Met	Leu	Val	Lys	Val	Asn	Ala	Leu	Ile	Lys	Asp	
				405					410					415		
Arg	Glu	Gly	Tyr	Ala	Pro	Gly	Thr	Glu	Phe	His	Arg	Cys	Lys	Glu	Met	
			420					425					430			
Ser	Glu	Tyr	Cys	Ser	Thr	Leu	Cys	Arg	His	Leu	Tyr	Leu	Phe	Pro	Gly	
		435					440					445				
His	Pro	Pro	Thr													
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<210> 12251
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<223> /note="Gene Name:
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<220>
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Met Ala Ala Pro Ser Ala Gly Ser Trp Ser Thr Phe Gln His Lys Glu
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Leu Met Ala Ala Asp Arg Gly Arg Arg Ile Leu Gly Val Cys Gly Met
              20              25              30

His Pro His His Gln Glu Thr Leu Lys Lys Asn Arg Val Val Leu Ala
              35              40              45

Lys Gln Leu Leu Leu Ser Glu Leu Leu Glu His Leu Leu Glu Lys Asp
              50              55              60

Ile Ile Thr Leu Glu Met Arg Glu Leu Ile Gln Ala Lys Val Gly Ser
65              70              75              80

Phe Ser Gln Asn Val Glu Leu Leu Asn Leu Leu Pro Lys Arg Gly Pro
              85              90              95

Gln Ala Phe Asp Ala Phe Cys Glu Ala Leu His Ser
              100              105

<210> 12252
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<220>
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Met Ala Ala Pro Ser Ala Gly Ser Trp Ser Thr Phe Gln His Lys Glu
1          5          10          15

Leu Met Ala Ala Asp Arg Gly Arg Arg Ile Leu Gly Val Cys Gly Met
          20          25          30

His Pro His His Gln Glu Thr Leu Lys Lys Asn Arg Val Val Leu Ala
          35          40          45

Lys Gln Leu Leu Leu Ser Glu Leu Leu Glu His Leu Leu Glu Lys Asp
          50          55          60

Ile Ile Thr Leu Glu Met Arg Glu Leu Ile Gln Ala Lys Val Gly Ser
65          70          75          80

Phe Ser Gln Asn Val Glu Leu Leu Asn Leu Leu Pro Lys Arg Gly Pro
          85          90          95

Gln Ala Phe Asp Ala Phe Cys Glu Ala Leu Arg Glu Thr Lys Gln Gly
          100          105          110

His Leu Glu Asp Met Leu Leu Thr Thr Leu Ser Gly Leu Gln His Val
          115          120          125

Leu Pro Pro Leu Ser Cys Asp Tyr Asp Leu Ser Leu Pro Phe Pro Val
          130          135          140

Cys Glu Ser Cys Pro Leu Tyr Lys Lys Leu Arg Leu Ser Thr Glu Ile
145          150          155          160

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Gly Ser Cys Ser Val Thr Gln Ala Gly Met Gln
165 170

<210> 12253
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<400> 12253
Met Ala Ala Pro Ser Ala Gly Ser Trp Ser Thr Phe Gln His Lys Glu
1 5 10 15

Leu Met Ala Ala Asp Arg Gly Arg Arg Ile Leu Gly Val Cys Gly Met
20 25 30

His Pro His His Gln Glu Thr Leu Lys Lys Asn Arg Val Val Leu Ala
35 40 45

Lys Gln Leu Leu Leu Ser Glu Leu Leu Glu His Leu Leu Glu Lys Asp
50 55 60

Ile Ile Thr Leu Glu Met Arg Glu Leu Ile Gln Ala Lys Val Gly Ser
65 70 75 80

Phe Ser Gln Asn Val Glu Leu Leu Asn Leu Leu Pro Lys Arg Gly Pro
85 90 95

Gln Ala Phe Asp Ala Phe Cys Glu Ala Leu His Ser
100 105

<210> 12254
<211> 277

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<212> PRT
<213> Homo sapiens

<220>
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<220>
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<223> /note="Gene Name:
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<220>
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<223> /note="Uniprot ID: P42574"

<220>
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<400> 12254
Met Glu Asn Thr Glu Asn Ser Val Asp Ser Lys Ser Ile Lys Asn Leu
1                               5                               10                               15

Glu Pro Lys Ile Ile His Gly Ser Glu Ser Met Asp Ser Gly Ile Ser
                20                               25                               30

Leu Asp Asn Ser Tyr Lys Met Asp Tyr Pro Glu Met Gly Leu Cys Ile
        35                               40                               45

Ile Ile Asn Asn Lys Asn Phe His Lys Ser Thr Gly Met Thr Ser Arg
        50                               55                               60

Ser Gly Thr Asp Val Asp Ala Ala Asn Leu Arg Glu Thr Phe Arg Asn
65                               70                               75                               80

Leu Lys Tyr Glu Val Arg Asn Lys Asn Asp Leu Thr Arg Glu Glu Ile
        85                               90                               95

Val Glu Leu Met Arg Asp Val Ser Lys Glu Asp His Ser Lys Arg Ser
        100                               105                               110

Ser Phe Val Cys Val Leu Leu Ser His Gly Glu Glu Gly Ile Ile Phe
        115                               120                               125

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Gly Thr Asn Gly Pro Val Asp Leu Lys Lys Ile Thr Asn Phe Phe Arg
130 135 140

Gly Asp Arg Cys Arg Ser Leu Thr Gly Lys Pro Lys Leu Phe Ile Ile
145 150 155 160

Gln Ala Cys Arg Gly Thr Glu Leu Asp Cys Gly Ile Glu Thr Asp Ser
165 170 175

Gly Val Asp Asp Asp Met Ala Cys His Lys Ile Pro Val Glu Ala Asp
180 185 190

Phe Leu Tyr Ala Tyr Ser Thr Ala Pro Gly Tyr Tyr Ser Trp Arg Asn
195 200 205

Ser Lys Asp Gly Ser Trp Phe Ile Gln Ser Leu Cys Ala Met Leu Lys
210 215 220

Gln Tyr Ala Asp Lys Leu Glu Phe Met His Ile Leu Thr Arg Val Asn
225 230 235 240

Arg Lys Val Ala Thr Glu Phe Glu Ser Phe Ser Phe Asp Ala Thr Phe
245 250 255

His Ala Lys Lys Gln Ile Pro Cys Ile Val Ser Met Leu Thr Lys Glu
260 265 270

Leu Tyr Phe Tyr His
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<210> 12255

<211> 182

<212> PRT

<213> Homo sapiens

<220>

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<223> /note="Payload ID: 2412"

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<223> /note="Gene Symbol: CASP3"

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<223> /note="Gene Name:
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<220>

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<223> /note="ENSP ID: ENSP00000377210"

<400> 12255

Met Glu Asn Thr Glu Asn Ser Val Asp Ser Lys Ser Ile Lys Asn Leu
1 5 10 15

Glu Pro Lys Ile Ile His Gly Ser Glu Ser Met Asp Ser Gly Ile Ser
20 25 30

Leu Asp Asn Ser Tyr Lys Met Asp Tyr Pro Glu Met Gly Leu Cys Ile
35 40 45

Ile Ile Asn Asn Lys Asn Phe His Lys Ser Thr Gly Met Thr Ser Arg
50 55 60

Ser Gly Thr Asp Val Asp Ala Ala Asn Leu Arg Glu Thr Phe Arg Asn
65 70 75 80

Leu Lys Tyr Glu Val Arg Asn Lys Asn Asp Leu Thr Arg Glu Glu Ile
85 90 95

Val Glu Leu Met Arg Asp Val Ser Lys Glu Asp His Ser Lys Arg Ser
100 105 110

Ser Phe Val Cys Val Leu Leu Ser His Gly Glu Glu Gly Ile Ile Phe
115 120 125

Gly Thr Asn Gly Pro Val Asp Leu Lys Lys Ile Thr Asn Phe Phe Arg
130 135 140

Gly Asp Arg Cys Arg Ser Leu Thr Gly Lys Pro Lys Leu Phe Ile Ile
145 150 155 160

Gln Val Ile Ile Leu Gly Glu Ile Gln Arg Met Ala Pro Gly Ser Ser
165 170 175

Ser Arg Phe Val Pro Cys
180

<210> 12256

<211> 182

<212> PRT

<213> Homo sapiens

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<223> /note="Gene Symbol: CASP3"

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<223> /note="Gene Name:
caspase 3, apoptosis-related cysteine peptidase"

<220>

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<223> /note="ENSP ID: ENSP00000377213"

<400> 12256

Met Glu Asn Thr Glu Asn Ser Val Asp Ser Lys Ser Ile Lys Asn Leu
1 5 10 15

Glu Pro Lys Ile Ile His Gly Ser Glu Ser Met Asp Ser Gly Ile Ser
20 25 30

Leu Asp Asn Ser Tyr Lys Met Asp Tyr Pro Glu Met Gly Leu Cys Ile
35 40 45

Ile Ile Asn Asn Lys Asn Phe His Lys Ser Thr Gly Met Thr Ser Arg
50 55 60

Ser Gly Thr Asp Val Asp Ala Ala Asn Leu Arg Glu Thr Phe Arg Asn
65 70 75 80

Leu Lys Tyr Glu Val Arg Asn Lys Asn Asp Leu Thr Arg Glu Glu Ile
85 90 95

Val Glu Leu Met Arg Asp Val Ser Lys Glu Asp His Ser Lys Arg Ser
100 105 110

Ser Phe Val Cys Val Leu Leu Ser His Gly Glu Glu Gly Ile Ile Phe
115 120 125

Gly Thr Asn Gly Pro Val Asp Leu Lys Lys Ile Thr Asn Phe Phe Arg
130 135 140

Gly Asp Arg Cys Arg Ser Leu Thr Gly Lys Pro Lys Leu Phe Ile Ile

27119

Val Glu Leu Met Arg Asp Val Ser Lys Glu Asp His Ser Lys Arg Ser
100 105 110

Ser Phe Val Cys Val
115

<210> 12258

<211> 182

<212> PRT

<213> Homo sapiens

<220>

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<223> /note="Gene Symbol: CASP3"

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<223> /note="Gene Name:
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<220>

<221> source

<223> /note="ENSP ID: ENSP00000428372"

<400> 12258

Met Glu Asn Thr Glu Asn Ser Val Asp Ser Lys Ser Ile Lys Asn Leu
1 5 10 15

Glu Pro Lys Ile Ile His Gly Ser Glu Ser Met Asp Ser Gly Ile Ser
20 25 30

Leu Asp Asn Ser Tyr Lys Met Asp Tyr Pro Glu Met Gly Leu Cys Ile
35 40 45

Ile Ile Asn Asn Lys Asn Phe His Lys Ser Thr Gly Met Thr Ser Arg
50 55 60

Ser Gly Thr Asp Val Asp Ala Ala Asn Leu Arg Glu Thr Phe Arg Asn
65 70 75 80

Leu Lys Tyr Glu Val Arg Asn Lys Asn Asp Leu Thr Arg Glu Glu Ile
85 90 95

Val Glu Leu Met Arg Asp Val Ser Lys Glu Asp His Ser Lys Arg Ser

27121

100 105 110
 Ser Phe Val Cys Val Leu Leu Ser His Gly Glu Glu Gly Ile Ile Phe
 115 120 125
 Gly Thr Asn Gly Pro Val Asp Leu Lys Lys Ile Thr Asn Phe Phe Arg
 130 135 140
 Gly Asp Arg Cys Arg Ser Leu Thr Gly Lys Pro Lys Leu Phe Ile Ile
 145 150 155 160
 Gln Val Ile Ile Leu Gly Glu Ile Gln Arg Met Ala Pro Gly Ser Ser
 165 170 175
 Ser Arg Phe Val Pro Cys
 180

<210> 12259
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 Met Glu Asn Thr Glu Asn Ser Val Asp Ser Lys Ser Ile Lys Asn Leu
 1 5 10 15

Glu Pro Lys Ile Ile His Gly Ser Glu Ser Met Asp Ser Gly Ile Ser
 20 25 30

Leu	Asp	Asn	Ser	Tyr	Lys	Met	Asp	Tyr	Pro	Glu	Met	Gly	Leu	Cys	Ile			
		35					40					45						
Ile	Ile	Asn	Asn	Lys	Asn	Phe	His	Lys	Ser	Thr	Gly	Met	Thr	Ser	Arg			
	50					55					60							
Ser	Gly	Thr	Asp	Val	Asp	Ala	Ala	Asn	Leu	Arg	Glu	Thr	Phe	Arg	Asn			
65					70					75					80			
Leu	Lys	Tyr	Glu	Val	Arg	Asn	Lys	Asn	Asp	Leu	Thr	Arg	Glu	Glu	Ile			
				85					90					95				
Val	Glu	Leu	Met	Arg	Asp	Val	Ser	Lys	Glu	Asp	His	Ser	Lys	Arg	Ser			
			100					105					110					
Ser	Phe	Val	Cys	Val	Leu	Leu	Ser	His	Gly	Glu	Glu	Gly	Ile	Ile	Phe			
		115					120					125						
Gly	Thr	Asn	Gly	Pro	Val	Asp	Leu	Lys	Lys	Ile	Thr	Asn	Phe	Phe	Arg			
	130					135					140							
Gly	Asp	Arg	Cys	Arg	Ser	Leu	Thr	Gly	Lys	Pro	Lys	Leu	Phe	Ile	Ile			
145					150					155					160			
Gln	Ala	Cys	Arg	Gly	Thr	Glu	Leu	Asp	Cys	Gly	Ile	Glu	Thr	Asp	Ser			
				165					170					175				
Gly	Val	Asp	Asp	Asp	Met	Ala	Cys	His	Lys	Ile	Pro	Val	Glu	Ala	Asp			
			180					185					190					
Phe	Leu	Tyr	Ala	Tyr	Ser	Thr	Ala	Pro	Gly	Tyr	Tyr	Ser	Trp	Arg	Asn			
		195					200					205						
Ser	Lys	Asp	Gly	Ser	Trp	Phe	Ile	Gln	Ser	Leu	Cys	Ala	Met	Leu	Lys			
	210					215					220							
Gln	Tyr	Ala	Asp	Lys	Leu	Glu	Phe	Met	His	Ile	Leu	Thr	Arg	Val	Asn			
225					230					235					240			
Arg	Lys	Val	Ala	Thr	Glu	Phe	Glu	Ser	Phe	Ser	Phe	Asp	Ala	Thr	Phe			
				245					250					255				

His Ala Lys Lys Gln Ile Pro Cys Ile Val Ser Met Leu Thr Lys Glu
260 265 270

Leu Tyr Phe Tyr His
275

<210> 12260

<211> 156

<212> PRT

<213> Homo sapiens

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<223> /note="Gene Name:
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<223> /note="ENSP ID: ENSP00000478339"

<400> 12260

Met Ser Asp Ala Leu Ile Lys Val Ser Met Glu Asn Thr Glu Asn Ser
1 5 10 15

Val Asp Ser Lys Ser Ile Lys Asn Leu Glu Pro Lys Ile Ile His Gly
20 25 30

Ser Glu Ser Met Asp Ser Gly Ile Ser Leu Asp Asn Ser Tyr Lys Met
35 40 45

Asp Tyr Pro Glu Met Gly Leu Cys Ile Ile Ile Asn Asn Lys Asn Phe
50 55 60

His Lys Ser Thr Gly Met Thr Ser Arg Ser Gly Thr Asp Val Asp Ala
65 70 75 80

Ala Asn Leu Arg Glu Thr Phe Arg Asn Leu Lys Tyr Glu Val Arg Asn
85 90 95

Lys Asn Asp Leu Thr Arg Glu Glu Ile Val Glu Leu Met Arg Asp Val
100 105 110

Ser Lys Glu Asp His Ser Lys Arg Ser Ser Phe Val Cys Val Leu Leu
115 120 125

Ser His Gly Glu Glu Gly Ile Ile Phe Gly Thr Asn Gly Pro Val Asp
130 135 140

Leu Lys Asn Asn Lys Leu Phe Gln Arg Gly Ser Leu
145 150 155

<210> 12261

<211> 321

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2413"

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<221> source

<223> /note="Gene Symbol: CASP4"

<220>

<221> source

<223> /note="Gene Name:
caspase 4, apoptosis-related cysteine peptidase"

<220>

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<223> /note="Uniprot ID: P49662"

<220>

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<223> /note="ENSP ID: ENSP00000376857"

<400> 12261

Met Ala Asp Ser Met Gln Glu Lys Gln Arg Met Ala Gly Gln Met Leu
1 5 10 15

Leu Gln Thr Phe Phe Asn Ile Asp Gln Ile Ser Pro Asn Lys Lys Ala
20 25 30

His Pro Asn Met Glu Ala Gly Pro Pro Glu Ser Gly Glu Ser Thr Asp
35 40 45

Ala Leu Lys Leu Cys Pro His Glu Glu Phe Leu Arg Leu Cys Lys Glu
50 55 60

Arg	Ala	Glu	Glu	Ile	Tyr	Pro	Ile	Lys	Glu	Arg	Asn	Asn	Arg	Thr	Arg	
65					70					75					80	
Leu	Ala	Leu	Ile	Ile	Cys	Asn	Thr	Glu	Phe	Asp	His	Leu	Pro	Pro	Arg	
				85					90					95		
Asn	Gly	Ala	Asp	Phe	Asp	Ile	Thr	Gly	Met	Lys	Glu	Leu	Leu	Glu	Gly	
			100					105					110			
Leu	Asp	Tyr	Ser	Val	Asp	Val	Glu	Glu	Asn	Leu	Thr	Ala	Arg	Asp	Met	
		115					120					125				
Glu	Ser	Ala	Leu	Arg	Ala	Phe	Ala	Thr	Arg	Pro	Glu	His	Lys	Ser	Ser	
	130					135					140					
Asp	Ser	Thr	Phe	Leu	Val	Leu	Met	Ser	His	Gly	Ile	Leu	Glu	Gly	Ile	
145					150					155					160	
Cys	Gly	Thr	Val	His	Asp	Glu	Lys	Lys	Pro	Asp	Val	Leu	Leu	Tyr	Asp	
				165					170					175		
Thr	Ile	Phe	Gln	Ile	Phe	Asn	Asn	Arg	Asn	Cys	Leu	Ser	Leu	Lys	Asp	
			180					185					190			
Lys	Pro	Lys	Val	Ile	Ile	Val	Gln	Ala	Cys	Arg	Gly	Ala	Asn	Arg	Gly	
		195					200					205				
Glu	Leu	Trp	Val	Arg	Asp	Ser	Pro	Ala	Ser	Leu	Glu	Val	Ala	Ser	Ser	
	210					215					220					
Gln	Ser	Ser	Glu	Asn	Leu	Glu	Glu	Asp	Ala	Val	Tyr	Lys	Thr	His	Val	
225					230					235					240	
Glu	Lys	Asp	Phe	Ile	Ala	Phe	Cys	Ser	Ser	Thr	Pro	His	Asn	Val	Ser	
				245					250					255		
Trp	Arg	Asp	Ser	Thr	Met	Gly	Ser	Ile	Phe	Ile	Thr	Gln	Leu	Ile	Thr	
			260					265					270			
Cys	Phe	Gln	Lys	Tyr	Ser	Trp	Cys	Cys	His	Leu	Glu	Glu	Val	Phe	Arg	
		275					280					285				
Lys	Val	Gln	Gln	Ser	Phe	Glu	Thr	Pro	Arg	Ala	Lys	Ala	Gln	Met	Pro	

290		295		300											
Thr	Ile	Glu	Arg	Leu	Ser	Met	Thr	Arg	Tyr	Phe	Tyr	Leu	Phe	Pro	Gly
305					310					315					320

Asn

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 <223> /note="Uniprot ID: P49662"

<220>
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<400> 12262
 Met Ala Glu Gly Asn His Arg Lys Lys Pro Leu Lys Val Leu Glu Ser
 1 5 10 15

Leu Gly Lys Asp Phe Leu Thr Gly Val Leu Asp Asn Leu Val Glu Gln
 20 25 30

Asn Val Leu Asn Trp Lys Glu Glu Glu Lys Lys Lys Tyr Tyr Asp Ala
 35 40 45

Lys Thr Glu Asp Lys Val Arg Val Met Ala Asp Ser Met Gln Glu Lys
 50 55 60

Gln Arg Met Ala Gly Gln Met Leu Leu Gln Thr Phe Phe Asn Ile Asp
 65 70 75 80

Gln	Ile	Ser	Pro	Asn	Lys	Lys	Ala	His	Pro	Asn	Met	Glu	Ala	Gly	Pro	
				85					90					95		
Pro	Glu	Ser	Gly	Glu	Ser	Thr	Asp	Ala	Leu	Lys	Leu	Cys	Pro	His	Glu	
			100					105					110			
Glu	Phe	Leu	Arg	Leu	Cys	Lys	Glu	Arg	Ala	Glu	Glu	Ile	Tyr	Pro	Ile	
		115					120					125				
Lys	Glu	Arg	Asn	Asn	Arg	Thr	Arg	Leu	Ala	Leu	Ile	Ile	Cys	Asn	Thr	
	130					135					140					
Glu	Phe	Asp	His	Leu	Pro	Pro	Arg	Asn	Gly	Ala	Asp	Phe	Asp	Ile	Thr	
145					150					155					160	
Gly	Met	Lys	Glu	Leu	Leu	Glu	Gly	Leu	Asp	Tyr	Ser	Val	Asp	Val	Glu	
				165					170					175		
Glu	Asn	Leu	Thr	Ala	Arg	Asp	Met	Glu	Ser	Ala	Leu	Arg	Ala	Phe	Ala	
			180					185					190			
Thr	Arg	Pro	Glu	His	Lys	Ser	Ser	Asp	Ser	Thr	Phe	Leu	Val	Leu	Met	
		195					200					205				
Ser	His	Gly	Ile	Leu	Glu	Gly	Ile	Cys	Gly	Thr	Val	His	Asp	Glu	Lys	
	210					215					220					
Lys	Pro	Asp	Val	Leu	Leu	Tyr	Asp	Thr	Ile	Phe	Gln	Ile	Phe	Asn	Asn	
225					230					235					240	
Arg	Asn	Cys	Leu	Ser	Leu	Lys	Asp	Lys	Pro	Lys	Val	Ile	Ile	Val	Gln	
				245					250					255		
Ala	Cys	Arg	Gly	Ala	Asn	Arg	Gly	Glu	Leu	Trp	Val	Arg	Asp	Ser	Pro	
			260					265					270			
Ala	Ser	Leu	Glu	Val	Ala	Ser	Ser	Gln	Ser	Ser	Glu	Asn	Leu	Glu	Glu	
		275					280					285				
Asp	Ala	Val	Tyr	Lys	Thr	His	Val	Glu	Lys	Asp	Phe	Ile	Ala	Phe	Cys	
	290					295					300					

Ser Ser Thr Pro His Asn Val Ser Trp Arg Asp Ser Thr Met Gly Ser
 305 310 315 320

Ile Phe Ile Thr Gln Leu Ile Thr Cys Phe Gln Lys Tyr Ser Trp Cys
 325 330 335

Cys His Leu Glu Glu Val Phe Arg Lys Val Gln Gln Ser Phe Glu Thr
 340 345 350

Pro Arg Ala Lys Ala Gln Met Pro Thr Ile Glu Arg Leu Ser Met Thr
 355 360 365

Arg Tyr Phe Tyr Leu Phe Pro Gly Asn
 370 375

<210> 12263
 <211> 147
 <212> PRT
 <213> Homo sapiens

<220>
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 <223> /note="Payload ID: 2413"

<220>
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 <223> /note="Gene Symbol: CASP4"

<220>
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 <223> /note="Gene Name:
 caspase 4, apoptosis-related cysteine peptidase"

<220>
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<400> 12263
 Met Ala Glu Gly Asn His Arg Lys Lys Pro Leu Lys Val Leu Glu Ser
 1 5 10 15

Leu Gly Lys Asp Phe Leu Thr Gly Val Leu Asp Asn Leu Val Glu Gln
 20 25 30

Asn Val Leu Asn Trp Lys Glu Glu Glu Lys Lys Lys Tyr Tyr Asp Ala
 35 40 45

Lys Thr Glu Asp Lys Val Arg Val Met Ala Asp Ser Met Gln Glu Lys
 50 55 60

Gln Arg Met Ala Gly Gln Met Leu Leu Gln Thr Phe Phe Asn Ile Asp
65 70 75 80

Gln Ile Ser Pro Asn Lys Lys Ala His Pro Asn Met Glu Ala Gly Pro
85 90 95

Pro Glu Ser Gly Glu Ser Thr Asp Ala Leu Lys Leu Cys Pro His Glu
100 105 110

Glu Phe Leu Arg Leu Cys Lys Glu Arg Ala Glu Glu Ile Tyr Pro Ile
115 120 125

Lys Glu Arg Asn Asn Arg Thr Arg Leu Ala Leu Ile Ile Cys Asn Thr
130 135 140

Glu Phe Asp
145

<210> 12264
<211> 72
<212> PRT
<213> Homo sapiens

<220>
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<220>
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<220>
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<223> /note="Gene Name:
caspase 4, apoptosis-related cysteine peptidase"

<220>
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<220>
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<222> (1)..(1)
<223> Any amino acid

<400> 12264
Xaa Asn Val Ser Trp Arg Asp Ser Thr Met Gly Ser Ile Phe Ile Thr
1 5 10 15

Gln Leu Ile Thr Cys Phe Gln Lys Tyr Ser Trp Cys Cys His Leu Glu
20 25 30

Glu Val Phe Arg Lys Glu Ala Thr Ser Ser Pro Ala Leu Leu Asn Gln
35 40 45

Leu Gln Gly Ala Pro Ser Leu Val Gln Leu Ala Tyr Leu Thr Phe Cys
50 55 60

Ile Ser Ile Lys Val Lys Thr Asn
65 70

<210> 12265
<211> 330
<212> PRT
<213> Homo sapiens

<220>
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<220>
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<220>
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<223> /note="Gene Name:
caspase 4, apoptosis-related cysteine peptidase"

<220>
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<223> /note="ENSP ID: ENSP00000482808"

<400> 12265
Met Leu Lys Leu Lys Thr Lys Phe Gly Ser Trp Gln Thr Leu Cys Lys
1 5 10 15

Arg Ser Asn Val Trp Gln Asp Lys Cys Phe Phe Lys Pro Phe Asn Ile
20 25 30

Asp Gln Ile Ser Pro Asn Lys Lys Ala His Pro Asn Met Glu Ala Gly
35 40 45

Pro Pro Glu Ser Gly Glu Ser Thr Asp Ala Leu Lys Leu Cys Pro His
50 55 60

Glu	Glu	Phe	Leu	Arg	Leu	Cys	Lys	Glu	Arg	Ala	Glu	Glu	Ile	Tyr	Pro	
65					70					75					80	
Ile	Lys	Glu	Arg	Asn	Asn	Arg	Thr	Arg	Leu	Ala	Leu	Ile	Ile	Cys	Asn	
				85					90					95		
Thr	Glu	Phe	Asp	His	Leu	Pro	Pro	Arg	Asn	Gly	Ala	Asp	Phe	Asp	Ile	
			100					105					110			
Thr	Gly	Met	Lys	Glu	Leu	Leu	Glu	Gly	Leu	Asp	Tyr	Ser	Val	Asp	Val	
		115					120					125				
Glu	Glu	Asn	Leu	Thr	Ala	Arg	Asp	Met	Glu	Ser	Ala	Leu	Arg	Ala	Phe	
	130					135					140					
Ala	Thr	Arg	Pro	Glu	His	Lys	Ser	Ser	Asp	Ser	Thr	Phe	Leu	Val	Leu	
145					150					155					160	
Met	Ser	His	Gly	Ile	Leu	Glu	Gly	Ile	Cys	Gly	Thr	Val	His	Asp	Glu	
				165					170					175		
Lys	Lys	Pro	Asp	Val	Leu	Leu	Tyr	Asp	Thr	Ile	Phe	Gln	Ile	Phe	Asn	
			180					185					190			
Asn	Arg	Asn	Cys	Leu	Ser	Leu	Lys	Asp	Lys	Pro	Lys	Val	Ile	Ile	Val	
		195					200					205				
Gln	Ala	Cys	Arg	Gly	Ala	Asn	Arg	Gly	Glu	Leu	Trp	Val	Arg	Asp	Ser	
	210					215					220					
Pro	Ala	Ser	Leu	Glu	Val	Ala	Ser	Ser	Gln	Ser	Ser	Glu	Asn	Leu	Glu	
225					230					235					240	
Glu	Asp	Ala	Val	Tyr	Lys	Thr	His	Val	Glu	Lys	Asp	Phe	Ile	Ala	Phe	
				245					250					255		
Cys	Ser	Ser	Thr	Pro	His	Asn	Val	Ser	Trp	Arg	Asp	Ser	Thr	Met	Gly	
			260					265					270			
Ser	Ile	Phe	Ile	Thr	Gln	Leu	Ile	Thr	Cys	Phe	Gln	Lys	Tyr	Ser	Trp	
	275						280					285				
Cys	Cys	His	Leu	Glu	Glu	Val	Phe	Arg	Lys	Val	Gln	Gln	Ser	Phe	Glu	

290 295 300
 Thr Pro Arg Ala Lys Ala Gln Met Pro Thr Ile Glu Arg Leu Ser Met
 305 310 315 320

 Thr Arg Tyr Phe Tyr Leu Phe Pro Gly Asn
 325 330

 <210> 12266
 <211> 434
 <212> PRT
 <213> Homo sapiens

 <220>
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 <223> /note="Payload ID: 2414"

 <220>
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 <223> /note="Gene Symbol: CASP5"

 <220>
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 <223> /note="Gene Name:
 caspase 5, apoptosis-related cysteine peptidase"

 <220>
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 <223> /note="Uniprot ID: P51878"

 <220>
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 <400> 12266
 Met Ala Glu Asp Ser Gly Lys Lys Lys Arg Arg Lys Asn Phe Glu Ala
 1 5 10 15

 Met Phe Lys Gly Ile Leu Gln Ser Gly Leu Asp Asn Phe Val Ile Asn
 20 25 30

 His Met Leu Lys Asn Asn Val Ala Gly Gln Thr Ser Ile Gln Thr Leu
 35 40 45

 Val Pro Asn Thr Asp Gln Lys Ser Thr Ser Val Lys Lys Asp Asn His
 50 55 60

 Lys Lys Lys Thr Val Lys Met Leu Glu Tyr Leu Gly Lys Asp Val Leu
 65 70 75 80

His	Gly	Val	Phe	Asn	Tyr	Leu	Ala	Lys	His	Asp	Val	Leu	Thr	Leu	Lys	85	90	95
Glu	Glu	Glu	Lys	Lys	Lys	Tyr	Tyr	Asp	Thr	Lys	Ile	Glu	Asp	Lys	Ala	100	105	110
Leu	Ile	Leu	Val	Asp	Ser	Leu	Arg	Lys	Asn	Arg	Val	Ala	His	Gln	Met	115	120	125
Phe	Thr	Gln	Thr	Leu	Leu	Asn	Met	Asp	Gln	Lys	Ile	Thr	Ser	Val	Lys	130	135	140
Pro	Leu	Leu	Gln	Ile	Glu	Ala	Gly	Pro	Pro	Glu	Ser	Ala	Glu	Ser	Thr	145	150	155
Asn	Ile	Leu	Lys	Leu	Cys	Pro	Arg	Glu	Glu	Phe	Leu	Arg	Leu	Cys	Lys	165	170	175
Lys	Asn	His	Asp	Glu	Ile	Tyr	Pro	Ile	Lys	Lys	Arg	Glu	Asp	Arg	Arg	180	185	190
Arg	Leu	Ala	Leu	Ile	Ile	Cys	Asn	Thr	Lys	Phe	Asp	His	Leu	Pro	Ala	195	200	205
Arg	Asn	Gly	Ala	His	Tyr	Asp	Ile	Val	Gly	Met	Lys	Arg	Leu	Leu	Gln	210	215	220
Gly	Leu	Gly	Tyr	Thr	Val	Val	Asp	Glu	Lys	Asn	Leu	Thr	Ala	Arg	Asp	225	230	235
Met	Glu	Ser	Val	Leu	Arg	Ala	Phe	Ala	Ala	Arg	Pro	Glu	His	Lys	Ser	245	250	255
Ser	Asp	Ser	Thr	Phe	Leu	Val	Leu	Met	Ser	His	Gly	Ile	Leu	Glu	Gly	260	265	270
Ile	Cys	Gly	Thr	Ala	His	Lys	Lys	Lys	Lys	Pro	Asp	Val	Leu	Leu	Tyr	275	280	285
Asp	Thr	Ile	Phe	Gln	Ile	Phe	Asn	Asn	Arg	Asn	Cys	Leu	Ser	Leu	Lys	290	295	300

Asp Lys Pro Lys Val Ile Ile Val Gln Ala Cys Arg Gly Glu Lys His
305 310 315 320

Gly Glu Leu Trp Val Arg Asp Ser Pro Ala Ser Leu Ala Leu Ile Ser
325 330 335

Ser Gln Ser Ser Glu Asn Leu Glu Ala Asp Ser Val Cys Lys Ile His
340 345 350

Glu Glu Lys Asp Phe Ile Ala Phe Cys Ser Ser Thr Pro His Asn Val
355 360 365

Ser Trp Arg Asp Arg Thr Arg Gly Ser Ile Phe Ile Thr Glu Leu Ile
370 375 380

Thr Cys Phe Gln Lys Tyr Ser Cys Cys Cys His Leu Met Glu Ile Phe
385 390 395 400

Arg Lys Val Gln Lys Ser Phe Glu Val Pro Gln Ala Lys Ala Gln Met
405 410 415

Pro Thr Ile Glu Arg Ala Thr Leu Thr Arg Asp Phe Tyr Leu Phe Pro
420 425 430

Gly Asn

<210> 12267
<211> 447
<212> PRT
<213> Homo sapiens

<220>
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<223> /note="Payload ID: 2414"

<220>
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<223> /note="Gene Symbol: CASP5"

<220>
<221> source
<223> /note="Gene Name:
caspase 5, apoptosis-related cysteine peptidase"

<220>
<221> source
<223> /note="Uniprot ID: P51878"

<223> /note="ENSP ID: ENSP00000376849"

Met Ala Ala Val Pro Arg Val Glu Gly Val Phe Ile Phe Leu Ile Glu
1 5 10 15

Asp Ser Gly Lys Lys Lys Arg Arg Lys Asn Phe Glu Ala Met Phe Lys
20 25 30

Gly Ile Leu Gln Ser Gly Leu Asp Asn Phe Val Ile Asn His Met Leu
35 40 45

Lys Asn Asn Val Ala Gly Gln Thr Ser Ile Gln Thr Leu Val Pro Asn
50 55 60

Thr Asp Gln Lys Ser Thr Ser Val Lys Lys Asp Asn His Lys Lys Lys
65 70 75 80

Thr Val Lys Met Leu Glu Tyr Leu Gly Lys Asp Val Leu His Gly Val
85 90 95

Phe Asn Tyr Leu Ala Lys His Asp Val Leu Thr Leu Lys Glu Glu Glu
100 105 110

Lys Lys Lys Tyr Tyr Asp Thr Lys Ile Glu Asp Lys Ala Leu Ile Leu
115 120 125

Val	Asp	Ser	Leu	Arg	Lys	Asn	Arg	Val	Ala	His	Gln	Met	Phe	Thr	Gln
130						135					140				

Thr Leu Leu Asn Met Asp Gln Lys Ile Thr Ser Val Lys Pro Leu Leu
145 150 155 160

Gln Ile Glu Ala Gly Pro Pro Glu Ser Ala Glu Ser Thr Asn Ile Leu
165 170 175

Lys Leu Cys Pro Arg Glu Glu Phe Leu Arg Leu Cys Lys Lys Asn His
180 185 190

Asp Glu Ile Tyr Pro Ile Lys Lys Arg Glu Asp Arg Arg Arg Leu Ala
195 200 205

Leu	Ile	Ile	Cys	Asn	Thr	Lys	Phe	Asp	His	Leu	Pro	Ala	Arg	Asn	Gly
210						215					220				
Ala	His	Tyr	Asp	Ile	Val	Gly	Met	Lys	Arg	Leu	Leu	Gln	Gly	Leu	Gly
225					230					235					240
Tyr	Thr	Val	Val	Asp	Glu	Lys	Asn	Leu	Thr	Ala	Arg	Asp	Met	Glu	Ser
				245					250					255	
Val	Leu	Arg	Ala	Phe	Ala	Ala	Arg	Pro	Glu	His	Lys	Ser	Ser	Asp	Ser
			260					265						270	
Thr	Phe	Leu	Val	Leu	Met	Ser	His	Gly	Ile	Leu	Glu	Gly	Ile	Cys	Gly
		275					280					285			
Thr	Ala	His	Lys	Lys	Lys	Lys	Pro	Asp	Val	Leu	Leu	Tyr	Asp	Thr	Ile
	290					295					300				
Phe	Gln	Ile	Phe	Asn	Asn	Arg	Asn	Cys	Leu	Ser	Leu	Lys	Asp	Lys	Pro
305					310					315					320
Lys	Val	Ile	Ile	Val	Gln	Ala	Cys	Arg	Gly	Glu	Lys	His	Gly	Glu	Leu
				325					330					335	
Trp	Val	Arg	Asp	Ser	Pro	Ala	Ser	Leu	Ala	Leu	Ile	Ser	Ser	Gln	Ser
			340					345						350	
Ser	Glu	Asn	Leu	Glu	Ala	Asp	Ser	Val	Cys	Lys	Ile	His	Glu	Glu	Lys
		355					360					365			
Asp	Phe	Ile	Ala	Phe	Cys	Ser	Ser	Thr	Pro	His	Asn	Val	Ser	Trp	Arg
	370					375					380				
Asp	Arg	Thr	Arg	Gly	Ser	Ile	Phe	Ile	Thr	Glu	Leu	Ile	Thr	Cys	Phe
385					390					395					400
Gln	Lys	Tyr	Ser	Cys	Cys	Cys	His	Leu	Met	Glu	Ile	Phe	Arg	Lys	Val
				405					410					415	
Gln	Lys	Ser	Phe	Glu	Val	Pro	Gln	Ala	Lys	Ala	Gln	Met	Pro	Thr	Ile
			420					425					430		

Glu Arg Ala Thr Leu Thr Arg Asp Phe Tyr Leu Phe Pro Gly Asn
435 440 445

<210> 12268

<211> 376

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2414"

<220>

<221> source

<223> /note="Gene Symbol: CASP5"

<220>

<221> source

<223> /note="Gene Name:
caspase 5, apoptosis-related cysteine peptidase"

<220>

<221> source

<223> /note="Uniprot ID: P51878"

<220>

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<223> /note="ENSP ID: ENSP00000388365"

<400> 12268

Met Ala Glu Asp Asn His Lys Lys Lys Thr Val Lys Met Leu Glu Tyr
1 5 10 15

Leu Gly Lys Asp Val Leu His Gly Val Phe Asn Tyr Leu Ala Lys His
20 25 30

Asp Val Leu Thr Leu Lys Glu Glu Glu Lys Lys Lys Tyr Tyr Asp Thr
35 40 45

Lys Ile Glu Asp Lys Ala Leu Ile Leu Val Asp Ser Leu Arg Lys Asn
50 55 60

Arg Val Ala His Gln Met Phe Thr Gln Thr Leu Leu Asn Met Asp Gln
65 70 75 80

Lys Ile Thr Ser Val Lys Pro Leu Leu Gln Ile Glu Ala Gly Pro Pro
85 90 95

Glu Ser Ala Glu Ser Thr Asn Ile Leu Lys Leu Cys Pro Arg Glu Glu
100 105 110

Phe	Leu	Arg	Leu	Cys	Lys	Lys	Asn	His	Asp	Glu	Ile	Tyr	Pro	Ile	Lys			
		115					120					125						
Lys	Arg	Glu	Asp	Arg	Arg	Arg	Leu	Ala	Leu	Ile	Ile	Cys	Asn	Thr	Lys			
	130					135					140							
Phe	Asp	His	Leu	Pro	Ala	Arg	Asn	Gly	Ala	His	Tyr	Asp	Ile	Val	Gly			
145					150					155					160			
Met	Lys	Arg	Leu	Leu	Gln	Gly	Leu	Gly	Tyr	Thr	Val	Val	Asp	Glu	Lys			
				165					170					175				
Asn	Leu	Thr	Ala	Arg	Asp	Met	Glu	Ser	Val	Leu	Arg	Ala	Phe	Ala	Ala			
			180					185					190					
Arg	Pro	Glu	His	Lys	Ser	Ser	Asp	Ser	Thr	Phe	Leu	Val	Leu	Met	Ser			
		195					200					205						
His	Gly	Ile	Leu	Glu	Gly	Ile	Cys	Gly	Thr	Ala	His	Lys	Lys	Lys	Lys			
	210					215					220							
Pro	Asp	Val	Leu	Leu	Tyr	Asp	Thr	Ile	Phe	Gln	Ile	Phe	Asn	Asn	Arg			
225					230					235					240			
Asn	Cys	Leu	Ser	Leu	Lys	Asp	Lys	Pro	Lys	Val	Ile	Ile	Val	Gln	Ala			
				245				250						255				
Cys	Arg	Gly	Glu	Lys	His	Gly	Glu	Leu	Trp	Val	Arg	Asp	Ser	Pro	Ala			
			260					265					270					
Ser	Leu	Ala	Leu	Ile	Ser	Ser	Gln	Ser	Ser	Glu	Asn	Leu	Glu	Ala	Asp			
		275					280					285						
Ser	Val	Cys	Lys	Ile	His	Glu	Glu	Lys	Asp	Phe	Ile	Ala	Phe	Cys	Ser			
	290					295					300							
Ser	Thr	Pro	His	Asn	Val	Ser	Trp	Arg	Asp	Arg	Thr	Arg	Gly	Ser	Ile			
305				310						315					320			
Phe	Ile	Thr	Glu	Leu	Ile	Thr	Cys	Phe	Gln	Lys	Tyr	Ser	Cys	Cys	Cys			
				325					330					335				

His Leu Met Glu Ile Phe Arg Lys Val Gln Lys Ser Phe Glu Val Pro
340 345 350

Gln Ala Lys Ala Gln Met Pro Thr Ile Glu Arg Ala Thr Leu Thr Arg
355 360 365

Asp Phe Tyr Leu Phe Pro Gly Asn
370 375

<210> 12269
<211> 117
<212> PRT
<213> Homo sapiens

<220>
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<223> /note="Payload ID: 2414"

<220>
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<223> /note="Gene Symbol: CASP5"

<220>
<221> source
<223> /note="Gene Name:
caspase 5, apoptosis-related cysteine peptidase"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000396053"

<220>
<221> MOD_RES
<222> (1)..(1)
<223> Any amino acid

<400> 12269
Xaa Lys His Gly Glu Leu Trp Val Arg Asp Ser Pro Ala Ser Leu Ala
1 5 10 15

Leu Ile Ser Ser Gln Ser Ser Glu Asn Leu Glu Ala Asp Ser Val Cys
20 25 30

Lys Ile His Glu Glu Lys Asp Phe Ile Ala Phe Cys Ser Ser Thr Pro
35 40 45

His Asn Val Ser Trp Arg Asp Arg Thr Arg Gly Ser Ile Phe Ile Thr
50 55 60

Glu Leu Ile Thr Cys Phe Gln Lys Tyr Ser Cys Cys Cys His Leu Met
65 70 75 80

Glu Ile Phe Arg Lys Val Gln Lys Ser Phe Glu Val Pro Gln Ala Lys
85 90 95

Ala Gln Met Pro Thr Ile Glu Arg Ala Thr Leu Thr Arg Asp Phe Tyr
100 105 110

Leu Phe Pro Gly Asn
115

<210> 12270
<211> 292
<212> PRT
<213> Homo sapiens

<220>
<221> source
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<220>
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<220>
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<223> /note="Gene Name:
caspase 5, apoptosis-related cysteine peptidase"

<220>
<221> source
<223> /note="Uniprot ID: P51878"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000398130"

<400> 12270
Met Ala Ala Leu Leu Gln Ile Glu Ala Gly Pro Pro Glu Ser Ala Glu
1 5 10 15

Ser Thr Asn Ile Leu Lys Leu Cys Pro Arg Glu Glu Phe Leu Arg Leu
20 25 30

Cys Lys Lys Asn His Asp Glu Ile Tyr Pro Ile Lys Lys Arg Glu Asp
35 40 45

Arg Arg Arg Leu Ala Leu Ile Ile Cys Asn Thr Lys Phe Asp His Leu

50					55					60					
Pro 65	Ala	Arg	Asn	Gly	Ala 70	His	Tyr	Asp	Ile	Val 75	Gly	Met	Lys	Arg	Leu 80
Leu	Gln	Gly	Leu	Gly 85	Tyr	Thr	Val	Val	Asp 90	Glu	Lys	Asn	Leu	Thr	Ala 95
Arg	Asp	Met	Glu 100	Ser	Val	Leu	Arg	Ala 105	Phe	Ala	Ala	Arg	Pro	Glu	His 110
Lys	Ser	Ser 115	Asp	Ser	Thr	Phe	Leu 120	Val	Leu	Met	Ser	His 125	Gly	Ile	Leu
Glu	Gly 130	Ile	Cys	Gly	Thr	Ala 135	His	Lys	Lys	Lys	Lys	Pro	Asp	Val	Leu 140
Leu 145	Tyr	Asp	Thr	Ile	Phe 150	Gln	Ile	Phe	Asn	Asn 155	Arg	Asn	Cys	Leu	Ser 160
Leu	Lys	Asp	Lys	Pro 165	Lys	Val	Ile	Ile	Val 170	Gln	Ala	Cys	Arg	Gly	Glu 175
Lys	His	Gly	Glu 180	Leu	Trp	Val	Arg	Asp 185	Ser	Pro	Ala	Ser	Leu	Ala	Leu 190
Ile	Ser	Ser 195	Gln	Ser	Ser	Glu	Asn 200	Leu	Glu	Ala	Asp	Ser 205	Val	Cys	Lys
Ile 210	His	Glu	Glu	Lys	Asp	Phe 215	Ile	Ala	Phe	Cys	Ser 220	Ser	Thr	Pro	His
Asn 225	Val	Ser	Trp	Arg	Asp 230	Arg	Thr	Arg	Gly	Ser 235	Ile	Phe	Ile	Thr	Glu 240
Leu	Ile	Thr	Cys	Phe 245	Gln	Lys	Tyr	Ser	Cys 250	Cys	Cys	His	Leu	Met	Glu 255
Ile	Phe	Arg	Lys 260	Val	Gln	Lys	Ser	Phe 265	Glu	Val	Pro	Gln	Ala 270	Lys	Ala
Gln	Met	Pro 275	Thr	Ile	Glu	Arg	Ala 280	Thr	Leu	Thr	Arg	Asp 285	Phe	Tyr	Leu

Phe Pro Gly Asn
290

<210> 12271
<211> 108
<212> PRT
<213> Homo sapiens

<220>
<221> source
<223> /note="Payload ID: 2414"

<220>
<221> source
<223> /note="Gene Symbol: CASP5"

<220>
<221> source
<223> /note="Gene Name:
caspase 5, apoptosis-related cysteine peptidase"

<220>
<221> source
<223> /note="Uniprot ID: P51878"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000408455"

<400> 12271
Met Ala Glu Asp Asn His Lys Lys Lys Thr Val Lys Met Leu Glu Tyr
1 5 10 15

Leu Gly Lys Asp Val Leu His Gly Val Phe Asn Tyr Leu Ala Lys His
20 25 30

Asp Val Leu Thr Leu Lys Glu Glu Glu Lys Lys Lys Tyr Tyr Asp Thr
35 40 45

Lys Ile Glu Asp Lys Ala Leu Ile Leu Val Asp Ser Leu Arg Lys Asn
50 55 60

Arg Val Ala His Gln Met Phe Thr Gln Thr Leu Leu Asn Met Asp Gln
65 70 75 80

Lys Ile Thr Ser Val Lys His Leu Ser Asn Lys Lys Glu Arg Gly Pro
85 90 95

Gln Thr Pro Gly Ser His His Met Gln Tyr Lys Val
100 105

<210> 12272

<211> 165

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2414"

<220>

<221> source

<223> /note="Gene Symbol: CASP5"

<220>

<221> source

<223> /note="Gene Name:
caspase 5, apoptosis-related cysteine peptidase"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000415241"

<400> 12272

Met Phe Lys Gly Ile Leu Gln Ser Gly Leu Asp Asn Phe Val Ile Asn
1 5 10 15

His Met Leu Lys Asn Asn Val Ala Gly Gln Thr Ser Ile Gln Thr Leu
20 25 30

Val Pro Asn Thr Asp Gln Lys Ser Thr Ser Val Lys Lys Asp Asn His
35 40 45

Lys Lys Lys Thr Val Lys Met Leu Glu Tyr Leu Gly Lys Asp Val Leu
50 55 60

His Gly Val Phe Asn Tyr Leu Ala Lys His Asp Val Leu Thr Leu Lys
65 70 75 80

Glu Glu Glu Lys Lys Lys Tyr Tyr Asp Thr Lys Ile Glu Asp Lys Ala
85 90 95

Leu Ile Leu Val Asp Ser Leu Arg Lys Asn Arg Val Ala His Gln Met
100 105 110

Phe Thr Gln Thr Leu Leu Asn Met Asp Gln Lys Ile Thr Ser Val Lys
115 120 125

Pro Leu Leu Gln Ile Glu Ala Gly Pro Pro Glu Ser Ala Glu Ser Thr
 130 135 140

Asn Ile Leu Lys Leu Cys Pro Arg Glu Glu Phe Leu Arg Leu Cys Lys
 145 150 155 160

Lys Asn His Asp Glu
 165

<210> 12273
 <211> 292
 <212> PRT
 <213> Homo sapiens

<220>
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 <223> /note="Payload ID: 2414"

<220>
 <221> source
 <223> /note="Gene Symbol: CASP5"

<220>
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 <223> /note="Gene Name:
 caspase 5, apoptosis-related cysteine peptidase"

<220>
 <221> source
 <223> /note="Uniprot ID: P51878"

<220>
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 <223> /note="ENSP ID: ENSP00000434471"

<400> 12273
 Met Ala Ala Leu Leu Gln Ile Glu Ala Gly Pro Pro Glu Ser Ala Glu
 1 5 10 15

Ser Thr Asn Ile Leu Lys Leu Cys Pro Arg Glu Glu Phe Leu Arg Leu
 20 25 30

Cys Lys Lys Asn His Asp Glu Ile Tyr Pro Ile Lys Lys Arg Glu Asp
 35 40 45

Arg Arg Arg Leu Ala Leu Ile Ile Cys Asn Thr Lys Phe Asp His Leu
 50 55 60

Pro	Ala	Arg	Asn	Gly	Ala	His	Tyr	Asp	Ile	Val	Gly	Met	Lys	Arg	Leu	65	70	75	80
Leu	Gln	Gly	Leu	Gly	Tyr	Thr	Val	Val	Asp	Glu	Lys	Asn	Leu	Thr	Ala	85	90	95	
Arg	Asp	Met	Glu	Ser	Val	Leu	Arg	Ala	Phe	Ala	Ala	Arg	Pro	Glu	His	100	105	110	
Lys	Ser	Ser	Asp	Ser	Thr	Phe	Leu	Val	Leu	Met	Ser	His	Gly	Ile	Leu	115	120	125	
Glu	Gly	Ile	Cys	Gly	Thr	Ala	His	Lys	Lys	Lys	Lys	Pro	Asp	Val	Leu	130	135	140	
Leu	Tyr	Asp	Thr	Ile	Phe	Gln	Ile	Phe	Asn	Asn	Arg	Asn	Cys	Leu	Ser	145	150	155	160
Leu	Lys	Asp	Lys	Pro	Lys	Val	Ile	Ile	Val	Gln	Ala	Cys	Arg	Gly	Glu	165	170	175	
Lys	His	Gly	Glu	Leu	Trp	Val	Arg	Asp	Ser	Pro	Ala	Ser	Leu	Ala	Leu	180	185	190	
Ile	Ser	Ser	Gln	Ser	Ser	Glu	Asn	Leu	Glu	Ala	Asp	Ser	Val	Cys	Lys	195	200	205	
Ile	His	Glu	Glu	Lys	Asp	Phe	Ile	Ala	Phe	Cys	Ser	Ser	Thr	Pro	His	210	215	220	
Asn	Val	Ser	Trp	Arg	Asp	Arg	Thr	Arg	Gly	Ser	Ile	Phe	Ile	Thr	Glu	225	230	235	240
Leu	Ile	Thr	Cys	Phe	Gln	Lys	Tyr	Ser	Cys	Cys	Cys	His	Leu	Met	Glu	245	250	255	
Ile	Phe	Arg	Lys	Val	Gln	Lys	Ser	Phe	Glu	Val	Pro	Gln	Ala	Lys	Ala	260	265	270	
Gln	Met	Pro	Thr	Ile	Glu	Arg	Ala	Thr	Leu	Thr	Arg	Asp	Phe	Tyr	Leu	275	280	285	
Phe	Pro	Gly	Asn																

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<210> 12274
<211> 447
<212> PRT
<213> Homo sapiens

<220>
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<223> /note="Payload ID: 2414"

<220>
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<223> /note="Gene Symbol: CASP5"

<220>
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<223> /note="Gene Name:
      caspase 5, apoptosis-related cysteine peptidase"

<220>
<221> source
<223> /note="Uniprot ID: P51878"

<220>
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<223> /note="ENSP ID: ENSP00000436877"

<400> 12274
Met Ala Ala Val Pro Arg Val Glu Gly Val Phe Ile Phe Leu Ile Glu
1              5              10              15

Asp Ser Gly Lys Lys Lys Arg Arg Lys Asn Phe Glu Ala Met Phe Lys
              20              25              30

Gly Ile Leu Gln Ser Gly Leu Asp Asn Phe Val Ile Asn His Met Leu
              35              40              45

Lys Asn Asn Val Ala Gly Gln Thr Ser Ile Gln Thr Leu Val Pro Asn
50              55              60

Thr Asp Gln Lys Ser Thr Ser Val Lys Lys Asp Asn His Lys Lys Lys
65              70              75              80

Thr Val Lys Met Leu Glu Tyr Leu Gly Lys Asp Val Leu His Gly Val
              85              90              95

Phe Asn Tyr Leu Ala Lys His Asp Val Leu Thr Leu Lys Glu Glu Glu
              100              105              110

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Lys	Lys	Lys	Tyr	Tyr	Asp	Thr	Lys	Ile	Glu	Asp	Lys	Ala	Leu	Ile	Leu	
		115					120					125				
Val	Asp	Ser	Leu	Arg	Lys	Asn	Arg	Val	Ala	His	Gln	Met	Phe	Thr	Gln	
	130					135					140					
Thr	Leu	Leu	Asn	Met	Asp	Gln	Lys	Ile	Thr	Ser	Val	Lys	Pro	Leu	Leu	
145					150					155					160	
Gln	Ile	Glu	Ala	Gly	Pro	Pro	Glu	Ser	Ala	Glu	Ser	Thr	Asn	Ile	Leu	
				165					170					175		
Lys	Leu	Cys	Pro	Arg	Glu	Glu	Phe	Leu	Arg	Leu	Cys	Lys	Lys	Asn	His	
			180					185						190		
Asp	Glu	Ile	Tyr	Pro	Ile	Lys	Lys	Arg	Glu	Asp	Arg	Arg	Arg	Leu	Ala	
		195					200					205				
Leu	Ile	Ile	Cys	Asn	Thr	Lys	Phe	Asp	His	Leu	Pro	Ala	Arg	Asn	Gly	
	210					215					220					
Ala	His	Tyr	Asp	Ile	Val	Gly	Met	Lys	Arg	Leu	Leu	Gln	Gly	Leu	Gly	
225					230					235					240	
Tyr	Thr	Val	Val	Asp	Glu	Lys	Asn	Leu	Thr	Ala	Arg	Asp	Met	Glu	Ser	
				245					250					255		
Val	Leu	Arg	Ala	Phe	Ala	Ala	Arg	Pro	Glu	His	Lys	Ser	Ser	Asp	Ser	
			260					265					270			
Thr	Phe	Leu	Val	Leu	Met	Ser	His	Gly	Ile	Leu	Glu	Gly	Ile	Cys	Gly	
		275					280					285				
Thr	Ala	His	Lys	Lys	Lys	Lys	Pro	Asp	Val	Leu	Leu	Tyr	Asp	Thr	Ile	
	290					295					300					
Phe	Gln	Ile	Phe	Asn	Asn	Arg	Asn	Cys	Leu	Ser	Leu	Lys	Asp	Lys	Pro	
305					310					315					320	
Lys	Val	Ile	Ile	Val	Gln	Ala	Cys	Arg	Gly	Glu	Lys	His	Gly	Glu	Leu	
				325					330					335		

Trp Val Arg Asp Ser Pro Ala Ser Leu Ala Leu Ile Ser Ser Gln Ser
340 345 350

Ser Glu Asn Leu Glu Ala Asp Ser Val Cys Lys Ile His Glu Glu Lys
355 360 365

Asp Phe Ile Ala Phe Cys Ser Ser Thr Pro His Asn Val Ser Trp Arg
370 375 380

Asp Arg Thr Arg Gly Ser Ile Phe Ile Thr Glu Leu Ile Thr Cys Phe
385 390 395 400

Gln Lys Tyr Ser Cys Cys Cys His Leu Met Glu Ile Phe Arg Lys Val
405 410 415

Gln Lys Ser Phe Glu Val Pro Gln Ala Lys Ala Gln Met Pro Thr Ile
420 425 430

Glu Arg Ala Thr Leu Thr Arg Asp Phe Tyr Leu Phe Pro Gly Asn
435 440 445

<210> 12275

<211> 293

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2415"

<220>

<221> source

<223> /note="Gene Symbol: CASP6"

<220>

<221> source

<223> /note="Gene Name:
caspase 6, apoptosis-related cysteine peptidase"

<220>

<221> source

<223> /note="Uniprot ID: P55212"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000265164"

<400> 12275

Met Ser Ser Ala Ser Gly Leu Arg Arg Gly His Pro Ala Gly Gly Glu
1 5 10 15

Glu	Asn	Met	Thr	Glu	Thr	Asp	Ala	Phe	Tyr	Lys	Arg	Glu	Met	Phe	Asp		
			20					25					30				
Pro	Ala	Glu	Lys	Tyr	Lys	Met	Asp	His	Arg	Arg	Arg	Gly	Ile	Ala	Leu		
		35					40					45					
Ile	Phe	Asn	His	Glu	Arg	Phe	Phe	Trp	His	Leu	Thr	Leu	Pro	Glu	Arg		
	50					55					60						
Arg	Gly	Thr	Cys	Ala	Asp	Arg	Asp	Asn	Leu	Thr	Arg	Arg	Phe	Ser	Asp		
65					70					75					80		
Leu	Gly	Phe	Glu	Val	Lys	Cys	Phe	Asn	Asp	Leu	Lys	Ala	Glu	Glu	Leu		
				85					90					95			
Leu	Leu	Lys	Ile	His	Glu	Val	Ser	Thr	Val	Ser	His	Ala	Asp	Ala	Asp		
			100					105					110				
Cys	Phe	Val	Cys	Val	Phe	Leu	Ser	His	Gly	Glu	Gly	Asn	His	Ile	Tyr		
		115					120					125					
Ala	Tyr	Asp	Ala	Lys	Ile	Glu	Ile	Gln	Thr	Leu	Thr	Gly	Leu	Phe	Lys		
	130					135					140						
Gly	Asp	Lys	Cys	His	Ser	Leu	Val	Gly	Lys	Pro	Lys	Ile	Phe	Ile	Ile		
145					150					155					160		
Gln	Ala	Cys	Arg	Gly	Asn	Gln	His	Asp	Val	Pro	Val	Ile	Pro	Leu	Asp		
				165					170					175			
Val	Val	Asp	Asn	Gln	Thr	Glu	Lys	Leu	Asp	Thr	Asn	Ile	Thr	Glu	Val		
			180					185					190				
Asp	Ala	Ala	Ser	Val	Tyr	Thr	Leu	Pro	Ala	Gly	Ala	Asp	Phe	Leu	Met		
		195					200					205					
Cys	Tyr	Ser	Val	Ala	Glu	Gly	Tyr	Tyr	Ser	His	Arg	Glu	Thr	Val	Asn		
	210					215					220						
Gly	Ser	Trp	Tyr	Ile	Gln	Asp	Leu	Cys	Glu	Met	Leu	Gly	Lys	Tyr	Gly		
225					230					235					240		

Ser Ser Leu Glu Phe Thr Glu Leu Leu Thr Leu Val Asn Arg Lys Val
245 250 255

Ser Gln Arg Arg Val Asp Phe Cys Lys Asp Pro Ser Ala Ile Gly Lys
260 265 270

Lys Gln Val Pro Cys Phe Ala Ser Met Leu Thr Lys Lys Leu His Phe
275 280 285

Phe Pro Lys Ser Asn
290

<210> 12276

<211> 204

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2415"

<220>

<221> source

<223> /note="Gene Symbol: CASP6"

<220>

<221> source

<223> /note="Gene Name:
caspase 6, apoptosis-related cysteine peptidase"

<220>

<221> source

<223> /note="Uniprot ID: P55212"

<220>

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<223> /note="ENSP ID: ENSP00000285333"

<400> 12276

Met Ser Ser Ala Ser Gly Leu Arg Arg Gly His Pro Ala Val Ser Thr
1 5 10 15

Val Ser His Ala Asp Ala Asp Cys Phe Val Cys Val Phe Leu Ser His
20 25 30

Gly Glu Gly Asn His Ile Tyr Ala Tyr Asp Ala Lys Ile Glu Ile Gln
35 40 45

Thr Leu Thr Gly Leu Phe Lys Gly Asp Lys Cys His Ser Leu Val Gly
27151

50		55		60											
Lys	Pro	Lys	Ile	Phe	Ile	Ile	Gln	Ala	Cys	Arg	Gly	Asn	Gln	His	Asp
65					70					75					80
Val	Pro	Val	Ile	Pro	Leu	Asp	Val	Val	Asp	Asn	Gln	Thr	Glu	Lys	Leu
				85					90					95	
Asp	Thr	Asn	Ile	Thr	Glu	Val	Asp	Ala	Ala	Ser	Val	Tyr	Thr	Leu	Pro
			100					105					110		
Ala	Gly	Ala	Asp	Phe	Leu	Met	Cys	Tyr	Ser	Val	Ala	Glu	Gly	Tyr	Tyr
		115					120					125			
Ser	His	Arg	Glu	Thr	Val	Asn	Gly	Ser	Trp	Tyr	Ile	Gln	Asp	Leu	Cys
	130					135					140				
Glu	Met	Leu	Gly	Lys	Tyr	Gly	Ser	Ser	Leu	Glu	Phe	Thr	Glu	Leu	Leu
145					150					155					160
Thr	Leu	Val	Asn	Arg	Lys	Val	Ser	Gln	Arg	Arg	Val	Asp	Phe	Cys	Lys
				165					170					175	
Asp	Pro	Ser	Ala	Ile	Gly	Lys	Lys	Gln	Val	Pro	Cys	Phe	Ala	Ser	Met
			180					185					190		
Leu	Thr	Lys	Lys	Leu	His	Phe	Phe	Pro	Lys	Ser	Asn				
		195					200								

<210> 12277

<211> 80

<212> PRT

<213> Homo sapiens

<220>

<221> source

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<223> /note="Gene Symbol: CASP6"

<220>

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<223> /note="Gene Name:
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<220>
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 <223> /note="ENSP ID: ENSP00000424080"

 <400> 12277
 Met Ser Ser Ala Ser Gly Leu Arg Arg Gly His Pro Ala Gly Gly Glu
 1 5 10 15

 Glu Asn Met Thr Glu Thr Asp Ala Phe Tyr Lys Arg Glu Met Phe Asp
 20 25 30

 Pro Ala Glu Lys Tyr Lys Met Asp His Arg Arg Arg Gly Ile Ala Leu
 35 40 45

 Ile Phe Asn His Glu Arg Phe Phe Trp His Leu Thr Leu Pro Glu Arg
 50 55 60

 Arg Gly Thr Cys Ala Asp Arg Asp Asn Leu Thr Arg Ser Val Asn Cys
 65 70 75 80

<210> 12278
 <211> 143
 <212> PRT
 <213> Homo sapiens

<220>
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<220>
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<220>
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 <223> /note="Gene Name:
 caspase 6, apoptosis-related cysteine peptidase"

<220>
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 <223> /note="ENSP ID: ENSP00000427669"

<400> 12278
 Met Thr Glu Thr Asp Ala Phe Tyr Lys Arg Glu Met Phe Asp Pro Ala
 1 5 10 15

 Glu Lys Tyr Lys Met Asp His Arg Arg Arg Gly Ile Ala Leu Ile Phe
 20 25 30

 Asn His Glu Arg Phe Phe Trp His Leu Thr Leu Pro Glu Arg Arg Gly

35	40	45
Thr Cys Ala Asp Arg Asp Asn Leu Thr Arg Arg Phe Ser Asp Leu Gly		
50	55	60
Phe Glu Val Lys Cys Phe Asn Asp Leu Lys Ala Glu Glu Leu Leu Leu		
65	70	75
Lys Ile His Glu Val Ser Thr Val Ser His Ala Asp Ala Asp Cys Phe		
	85	90
Val Cys Val Phe Leu Ser His Gly Glu Gly Asn His Ile Tyr Ala Tyr		
	100	105
Asp Ala Lys Ile Glu Ile Gln Thr Leu Thr Gly Leu Phe Lys Gly Asp		
	115	120
Lys Cys His Ser Leu Val Gly Lys Pro Lys Ile Phe Ile Ile Gln		
	130	135
		140

<210> 12279
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 <212> PRT
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<220>
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<220>
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 <223> /note="Gene Symbol: CASP7"

<220>
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 <223> /note="Gene Name:
 caspase 7, apoptosis-related cysteine peptidase"

<220>
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 <223> /note="Uniprot ID: P55210"

<220>
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<400> 12279
Met Ala Asp Asp Gln Gly Cys Ile Glu Glu Gln Gly Val Glu Asp Ser
1 5 10 15

Ala	Asn	Glu	Asp	Ser	Val	Asp	Ala	Lys	Pro	Asp	Arg	Ser	Ser	Phe	Val		
			20					25					30				
Pro	Ser	Leu	Phe	Ser	Lys	Lys	Lys	Lys	Asn	Val	Thr	Met	Arg	Ser	Ile		
		35					40					45					
Lys	Thr	Thr	Arg	Asp	Arg	Val	Pro	Thr	Tyr	Gln	Tyr	Asn	Met	Asn	Phe		
	50					55					60						
Glu	Lys	Leu	Gly	Lys	Cys	Ile	Ile	Ile	Asn	Asn	Lys	Asn	Phe	Asp	Lys		
65					70				75						80		
Val	Thr	Gly	Met	Gly	Val	Arg	Asn	Gly	Thr	Asp	Lys	Asp	Ala	Glu	Ala		
				85					90					95			
Leu	Phe	Lys	Cys	Phe	Arg	Ser	Leu	Gly	Phe	Asp	Val	Ile	Val	Tyr	Asn		
			100					105					110				
Asp	Cys	Ser	Cys	Ala	Lys	Met	Gln	Asp	Leu	Leu	Lys	Lys	Ala	Ser	Glu		
		115					120					125					
Glu	Asp	His	Thr	Asn	Ala	Ala	Cys	Phe	Ala	Cys	Ile	Leu	Leu	Ser	His		
	130					135					140						
Gly	Glu	Glu	Asn	Val	Ile	Tyr	Gly	Lys	Asp	Gly	Val	Thr	Pro	Ile	Lys		
145					150					155					160		
Asp	Leu	Thr	Ala	His	Phe	Arg	Gly	Asp	Arg	Cys	Lys	Thr	Leu	Leu	Glu		
				165					170					175			
Lys	Pro	Lys	Leu	Phe	Phe	Ile	Gln	Ala	Cys	Arg	Gly	Thr	Glu	Leu	Asp		
			180					185					190				
Asp	Gly	Ile	Gln	Ala	Asp	Ser	Gly	Pro	Ile	Asn	Asp	Thr	Asp	Ala	Asn		
		195					200					205					
Pro	Arg	Tyr	Lys	Ile	Pro	Val	Glu	Ala	Asp	Phe	Leu	Phe	Ala	Tyr	Ser		
	210					215					220						
Thr	Val	Pro	Gly	Tyr	Tyr	Ser	Trp	Arg	Ser	Pro	Gly	Arg	Gly	Ser	Trp		
225					230					235					240		

Phe Val Gln Ala Leu Cys Ser Ile Leu Glu Glu His Gly Lys Asp Leu
245 250 255

Glu Ile Met Gln Ile Leu Thr Arg Val Asn Asp Arg Val Ala Arg His
260 265 270

Phe Glu Ser Gln Ser Asp Asp Pro His Phe His Glu Lys Lys Gln Ile
275 280 285

Pro Cys Val Val Ser Met Leu Thr Lys Glu Leu Tyr Phe Ser Gln
290 295 300

<210> 12280

<211> 303

<212> PRT

<213> Homo sapiens

<220>

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<223> /note="Payload ID: 2416"

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<223> /note="Gene Symbol: CASP7"

<220>

<221> source

<223> /note="Gene Name:
caspase 7, apoptosis-related cysteine peptidase"

<220>

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<223> /note="Uniprot ID: P55210"

<220>

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<223> /note="ENSP ID: ENSP00000358321"

<400> 12280

Met Ala Asp Asp Gln Gly Cys Ile Glu Glu Gln Gly Val Glu Asp Ser
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Ala Asn Glu Asp Ser Val Asp Ala Lys Pro Asp Arg Ser Ser Phe Val
20 25 30

Pro Ser Leu Phe Ser Lys Lys Lys Lys Asn Val Thr Met Arg Ser Ile
35 40 45

Lys Thr Thr Arg Asp Arg Val Pro Thr Tyr Gln Tyr Asn Met Asn Phe
50 55 60

Glu	Lys	Leu	Gly	Lys	Cys	Ile	Ile	Ile	Asn	Asn	Lys	Asn	Phe	Asp	Lys	
65					70				75						80	
Val	Thr	Gly	Met	Gly	Val	Arg	Asn	Gly	Thr	Asp	Lys	Asp	Ala	Glu	Ala	
				85					90					95		
Leu	Phe	Lys	Cys	Phe	Arg	Ser	Leu	Gly	Phe	Asp	Val	Ile	Val	Tyr	Asn	
			100					105					110			
Asp	Cys	Ser	Cys	Ala	Lys	Met	Gln	Asp	Leu	Leu	Lys	Lys	Ala	Ser	Glu	
		115					120					125				
Glu	Asp	His	Thr	Asn	Ala	Ala	Cys	Phe	Ala	Cys	Ile	Leu	Leu	Ser	His	
	130					135					140					
Gly	Glu	Glu	Asn	Val	Ile	Tyr	Gly	Lys	Asp	Gly	Val	Thr	Pro	Ile	Lys	
145					150					155					160	
Asp	Leu	Thr	Ala	His	Phe	Arg	Gly	Asp	Arg	Cys	Lys	Thr	Leu	Leu	Glu	
				165					170						175	
Lys	Pro	Lys	Leu	Phe	Phe	Ile	Gln	Ala	Cys	Arg	Gly	Thr	Glu	Leu	Asp	
			180					185					190			
Asp	Gly	Ile	Gln	Ala	Asp	Ser	Gly	Pro	Ile	Asn	Asp	Thr	Asp	Ala	Asn	
		195					200					205				
Pro	Arg	Tyr	Lys	Ile	Pro	Val	Glu	Ala	Asp	Phe	Leu	Phe	Ala	Tyr	Ser	
	210					215					220					
Thr	Val	Pro	Gly	Tyr	Tyr	Ser	Trp	Arg	Ser	Pro	Gly	Arg	Gly	Ser	Trp	
225					230					235					240	
Phe	Val	Gln	Ala	Leu	Cys	Ser	Ile	Leu	Glu	Glu	His	Gly	Lys	Asp	Leu	
				245					250					255		
Glu	Ile	Met	Gln	Ile	Leu	Thr	Arg	Val	Asn	Asp	Arg	Val	Ala	Arg	His	
			260					265					270			
Phe	Glu	Ser	Gln	Ser	Asp	Asp	Pro	His	Phe	His	Glu	Lys	Lys	Gln	Ile	
		275					280					285				

Pro Cys Val Val Ser Met Leu Thr Lys Glu Leu Tyr Phe Ser Gln
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<210> 12281

<211> 303

<212> PRT

<213> Homo sapiens

<220>

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<223> /note="Payload ID: 2416"

<220>

<221> source

<223> /note="Gene Symbol: CASP7"

<220>

<221> source

<223> /note="Gene Name:
caspase 7, apoptosis-related cysteine peptidase"

<220>

<221> source

<223> /note="Uniprot ID: P55210"

<220>

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<223> /note="ENSP ID: ENSP00000358324"

<400> 12281

Met Ala Asp Asp Gln Gly Cys Ile Glu Glu Gln Gly Val Glu Asp Ser
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Ala Asn Glu Asp Ser Val Asp Ala Lys Pro Asp Arg Ser Ser Phe Val
20 25 30

Pro Ser Leu Phe Ser Lys Lys Lys Lys Asn Val Thr Met Arg Ser Ile
35 40 45

Lys Thr Thr Arg Asp Arg Val Pro Thr Tyr Gln Tyr Asn Met Asn Phe
50 55 60

Glu Lys Leu Gly Lys Cys Ile Ile Ile Asn Asn Lys Asn Phe Asp Lys
65 70 75 80

Val Thr Gly Met Gly Val Arg Asn Gly Thr Asp Lys Asp Ala Glu Ala
85 90 95

Leu Phe Lys Cys Phe Arg Ser Leu Gly Phe Asp Val Ile Val Tyr Asn

	100		105		110												
Asp	Cys	Ser	Cys	Ala	Lys	Met	Gln	Asp	Leu	Leu	Lys	Lys	Ala	Ser	Glu		
	115						120					125					
Glu	Asp	His	Thr	Asn	Ala	Ala	Cys	Phe	Ala	Cys	Ile	Leu	Leu	Ser	His		
	130					135					140						
Gly	Glu	Glu	Asn	Val	Ile	Tyr	Gly	Lys	Asp	Gly	Val	Thr	Pro	Ile	Lys		
145					150					155					160		
Asp	Leu	Thr	Ala	His	Phe	Arg	Gly	Asp	Arg	Cys	Lys	Thr	Leu	Leu	Glu		
				165					170						175		
Lys	Pro	Lys	Leu	Phe	Phe	Ile	Gln	Ala	Cys	Arg	Gly	Thr	Glu	Leu	Asp		
			180					185					190				
Asp	Gly	Ile	Gln	Ala	Asp	Ser	Gly	Pro	Ile	Asn	Asp	Thr	Asp	Ala	Asn		
		195					200					205					
Pro	Arg	Tyr	Lys	Ile	Pro	Val	Glu	Ala	Asp	Phe	Leu	Phe	Ala	Tyr	Ser		
	210					215					220						
Thr	Val	Pro	Gly	Tyr	Tyr	Ser	Trp	Arg	Ser	Pro	Gly	Arg	Gly	Ser	Trp		
225					230					235					240		
Phe	Val	Gln	Ala	Leu	Cys	Ser	Ile	Leu	Glu	Glu	His	Gly	Lys	Asp	Leu		
				245					250					255			
Glu	Ile	Met	Gln	Ile	Leu	Thr	Arg	Val	Asn	Asp	Arg	Val	Ala	Arg	His		
			260					265					270				
Phe	Glu	Ser	Gln	Ser	Asp	Asp	Pro	His	Phe	His	Glu	Lys	Lys	Gln	Ile		
	275						280					285					
Pro	Cys	Val	Val	Ser	Met	Leu	Thr	Lys	Glu	Leu	Tyr	Phe	Ser	Gln			
	290					295					300						

<210> 12282

<211> 388

<212> PRT

<213> Homo sapiens

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<221> source
<223> /note="Payload ID: 2416"

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<223> /note="Gene Symbol: CASP7"

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<223> /note="Gene Name:
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<220>
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<400> 12282
Met Arg Ala Gly Thr Arg Val Ala Leu Gly Ser Ser Thr Pro Ala Glu
1          5          10          15

Arg Thr Thr Pro Ser Gln Gly Arg Cys Lys Pro Arg Pro Ala Leu Pro
          20          25          30

Arg Ala Ala Pro Pro Ser Ala Ala Pro Arg Leu Leu Val Ser Leu Ser
          35          40          45

Leu Lys Gly Pro Gln Thr Leu Ala Ala Glu Arg Arg Arg Glu Thr Val
50          55          60

Pro Val Pro Ala Ala Leu Pro Pro Trp Glu Arg Trp Gln Met Ile Arg
65          70          75          80

Ala Val Leu Lys Ser Arg Gly Leu Arg Ile Gln Gln Met Lys Ile Gln
          85          90          95

Trp Met Leu Ser Gln Thr Gly Pro Arg Leu Tyr Arg Pro Ser Ser Ala
          100          105          110

Pro Asp Ser Gly Thr Leu Tyr Phe Thr Ser Lys Lys Lys Lys Asn Val
          115          120          125

Thr Met Arg Ser Ile Lys Thr Thr Arg Asp Arg Val Pro Thr Tyr Gln
130          135          140

Tyr Asn Met Asn Phe Glu Lys Leu Gly Lys Cys Ile Ile Ile Asn Asn
145          150          155          160

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Lys	Asn	Phe	Asp	Lys	Val	Thr	Gly	Met	Gly	Val	Arg	Asn	Gly	Thr	Asp	165	170	175
Lys	Asp	Ala	Glu	Ala	Leu	Phe	Lys	Cys	Phe	Arg	Ser	Leu	Gly	Phe	Asp	180	185	190
Val	Ile	Val	Tyr	Asn	Asp	Cys	Ser	Cys	Ala	Lys	Met	Gln	Asp	Leu	Leu	195	200	205
Lys	Lys	Ala	Ser	Glu	Glu	Asp	His	Thr	Asn	Ala	Ala	Cys	Phe	Ala	Cys	210	215	220
Ile	Leu	Leu	Ser	His	Gly	Glu	Glu	Asn	Val	Ile	Tyr	Gly	Lys	Asp	Gly	225	230	235
Val	Thr	Pro	Ile	Lys	Asp	Leu	Thr	Ala	His	Phe	Arg	Gly	Asp	Arg	Cys	245	250	255
Lys	Thr	Leu	Leu	Glu	Lys	Pro	Lys	Leu	Phe	Phe	Ile	Gln	Ala	Cys	Arg	260	265	270
Gly	Thr	Glu	Leu	Asp	Asp	Gly	Ile	Gln	Ala	Asp	Ser	Gly	Pro	Ile	Asn	275	280	285
Asp	Thr	Asp	Ala	Asn	Pro	Arg	Tyr	Lys	Ile	Pro	Val	Glu	Ala	Asp	Phe	290	295	300
Leu	Phe	Ala	Tyr	Ser	Thr	Val	Pro	Gly	Tyr	Tyr	Ser	Trp	Arg	Ser	Pro	305	310	315
Gly	Arg	Gly	Ser	Trp	Phe	Val	Gln	Ala	Leu	Cys	Ser	Ile	Leu	Glu	Glu	325	330	335
His	Gly	Lys	Asp	Leu	Glu	Ile	Met	Gln	Ile	Leu	Thr	Arg	Val	Asn	Asp	340	345	350
Arg	Val	Ala	Arg	His	Phe	Glu	Ser	Gln	Ser	Asp	Asp	Pro	His	Phe	His	355	360	365
Glu	Lys	Lys	Gln	Ile	Pro	Cys	Val	Val	Ser	Met	Leu	Thr	Lys	Glu	Leu	370	375	380
Tyr	Phe	Ser	Gln															

385

<210> 12283

<211> 253

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2416"

<220>

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<223> /note="Gene Symbol: CASP7"

<220>

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<223> /note="Gene Name:
caspase 7, apoptosis-related cysteine peptidase"

<220>

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<223> /note="Uniprot ID: P55210"

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<223> /note="ENSP ID: ENSP00000358337"

<400> 12283

Met	Ala	Asp	Asp	Gln	Gly	Cys	Ile	Glu	Glu	Gln	Gly	Val	Glu	Asp	Ser
1				5				10					15		

Ala	Asn	Glu	Asp	Ser	Val	Asp	Ala	Lys	Pro	Asp	Arg	Ser	Ser	Phe	Val
		20						25					30		

Pro	Ser	Leu	Phe	Ser	Lys	Lys	Lys	Lys	Asn	Val	Thr	Met	Arg	Ser	Ile
		35				40						45			

Lys	Thr	Thr	Arg	Asp	Arg	Val	Pro	Thr	Tyr	Gln	Tyr	Asn	Met	Asn	Phe
	50					55					60				

Glu	Lys	Leu	Gly	Lys	Cys	Ile	Ile	Ile	Asn	Asn	Lys	Asn	Phe	Asp	Lys
65					70					75					80

Val	Thr	Gly	Met	Gly	Val	Arg	Asn	Gly	Thr	Asp	Lys	Asp	Ala	Glu	Ala
				85					90					95	

Leu	Phe	Lys	Cys	Phe	Arg	Ser	Leu	Gly	Phe	Asp	Val	Ile	Val	Tyr	Asn
			100					105						110	

27162

Asp Cys Ser Cys Ala Lys Met Gln Asp Leu Leu Lys Lys Ala Ser Glu
115 120 125

Glu Asp His Thr Asn Ala Ala Cys Phe Ala Cys Ile Leu Leu Ser His
130 135 140

Gly Glu Glu Asn Met Glu Ser Cys Ser Val Thr Gln Ala Gly Val Gln
145 150 155 160

Arg Arg Asp Leu Gly Arg Leu Gln Pro Pro Pro Pro Arg Leu Ala Glu
165 170 175

Gly Pro Ser Leu Met Met Ala Ser Arg Pro Thr Arg Gly Pro Ser Met
180 185 190

Thr Gln Met Leu Ile Leu Asp Thr Arg Ser Gln Trp Lys Leu Thr Ser
195 200 205

Ser Ser Pro Ile Pro Arg Phe Gln Ala Ile Thr Arg Gly Gly Ala Gln
210 215 220

Glu Glu Ala Pro Gly Leu Cys Lys Pro Ser Ala Pro Ser Trp Arg Ser
225 230 235 240

Thr Glu Lys Thr Trp Lys Ser Cys Arg Ser Ser Pro Gly
245 250

<210> 12284
<211> 278
<212> PRT
<213> Homo sapiens

<220>
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<223> /note="Payload ID: 2416"

<220>
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<223> /note="Gene Symbol: CASP7"

<220>
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<223> /note="Gene Name:
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<220>
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<223> /note="Uniprot ID: P55210"

<220>

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<223> /note="ENSP ID: ENSP00000398107"

<400> 12284

Met Gln Arg Gly Leu Phe Ser Asp Gly Asp Thr Ser Lys Lys Lys Lys
1 5 10 15

Asn Val Thr Met Arg Ser Ile Lys Thr Thr Arg Asp Arg Val Pro Thr
20 25 30

Tyr Gln Tyr Asn Met Asn Phe Glu Lys Leu Gly Lys Cys Ile Ile Ile
35 40 45

Asn Asn Lys Asn Phe Asp Lys Val Thr Gly Met Gly Val Arg Asn Gly
50 55 60

Thr Asp Lys Asp Ala Glu Ala Leu Phe Lys Cys Phe Arg Ser Leu Gly
65 70 75 80

Phe Asp Val Ile Val Tyr Asn Asp Cys Ser Cys Ala Lys Met Gln Asp
85 90 95

Leu Leu Lys Lys Ala Ser Glu Glu Asp His Thr Asn Ala Ala Cys Phe
100 105 110

Ala Cys Ile Leu Leu Ser His Gly Glu Glu Asn Val Ile Tyr Gly Lys
115 120 125

Asp Gly Val Thr Pro Ile Lys Asp Leu Thr Ala His Phe Arg Gly Asp
130 135 140

Arg Cys Lys Thr Leu Leu Glu Lys Pro Lys Leu Phe Phe Ile Gln Ala
145 150 155 160

Cys Arg Gly Thr Glu Leu Asp Asp Gly Ile Gln Ala Asp Ser Gly Pro
165 170 175

Ile Asn Asp Thr Asp Ala Asn Pro Arg Tyr Lys Ile Pro Val Glu Ala
180 185 190

Asp Phe Leu Phe Ala Tyr Ser Thr Val Pro Gly Tyr Tyr Ser Trp Arg
195 200 205

27164

Ser Pro Gly Arg Gly Ser Trp Phe Val Gln Ala Leu Cys Ser Ile Leu
 210 215 220

Glu Glu His Gly Lys Asp Leu Glu Ile Met Gln Ile Leu Thr Arg Val
 225 230 235 240

Asn Asp Arg Val Ala Arg His Phe Glu Ser Gln Ser Asp Asp Pro His
 245 250 255

Phe His Glu Lys Lys Gln Ile Pro Cys Val Val Ser Met Leu Thr Lys
 260 265 270

Glu Leu Tyr Phe Ser Gln
 275

<210> 12285
 <211> 222
 <212> PRT
 <213> Homo sapiens

<220>
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<220>
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<220>
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<220>
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<400> 12285
 Met Ala Asp Asp Gln Gly Cys Ile Glu Glu Gln Gly Val Glu Asp Ser
 1 5 10 15

Ala Asn Glu Asp Ser Val Asp Ala Lys Pro Asp Arg Ser Ser Phe Val
 20 25 30

Pro Ser Leu Phe Ser Lys Lys Lys Lys Asn Val Thr Met Arg Ser Ile
 35 40 45

Lys Thr Thr Arg Asp Arg Val Pro Thr Tyr Gln Tyr Asn Met Asn Phe
 50 55 60
 Glu Lys Leu Gly Lys Cys Ile Ile Ile Asn Asn Lys Asn Phe Asp Lys
 65 70 75 80
 Val Thr Gly Met Gly Val Arg Asn Gly Thr Asp Lys Asp Ala Glu Ala
 85 90 95
 Leu Phe Lys Cys Phe Arg Ser Leu Gly Phe Asp Val Ile Val Tyr Asn
 100 105 110
 Asp Cys Ser Cys Ala Lys Met Gln Asp Leu Leu Lys Lys Ala Ser Glu
 115 120 125
 Glu Asp His Thr Asn Ala Ala Cys Phe Ala Cys Ile Leu Leu Ser His
 130 135 140
 Gly Glu Glu Asn Val Ile Tyr Gly Lys Asp Gly Val Thr Pro Ile Lys
 145 150 155 160
 Asp Leu Thr Ala His Phe Arg Gly Asp Arg Cys Lys Thr Leu Leu Glu
 165 170 175
 Lys Pro Lys Leu Phe Phe Ile Gln Ala Cys Arg Gly Thr Glu Leu Asp
 180 185 190
 Asp Gly Ile Gln Ala Asp Ser Gly Pro Ile Asn Asp Thr Asp Ala Asn
 195 200 205
 Pro Arg Tyr Lys Ile Pro Val Glu Ala Asp Phe Leu Phe Ala
 210 215 220

<210> 12286

<211> 253

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2416"

<220>

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<223> /note="Gene Symbol: CASP7"

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<220>
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<223> /note="Gene Name:
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<220>
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<223> /note="Uniprot ID: P55210"

<220>
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<400> 12286
Met Ala Asp Asp Gln Gly Cys Ile Glu Glu Gln Gly Val Glu Asp Ser
1          5          10          15

Ala Asn Glu Asp Ser Val Asp Ala Lys Pro Asp Arg Ser Ser Phe Val
          20          25          30

Pro Ser Leu Phe Ser Lys Lys Lys Lys Asn Val Thr Met Arg Ser Ile
          35          40          45

Lys Thr Thr Arg Asp Arg Val Pro Thr Tyr Gln Tyr Asn Met Asn Phe
50          55          60

Glu Lys Leu Gly Lys Cys Ile Ile Ile Asn Asn Lys Asn Phe Asp Lys
65          70          75          80

Val Thr Gly Met Gly Val Arg Asn Gly Thr Asp Lys Asp Ala Glu Ala
          85          90          95

Leu Phe Lys Cys Phe Arg Ser Leu Gly Phe Asp Val Ile Val Tyr Asn
          100          105          110

Asp Cys Ser Cys Ala Lys Met Gln Asp Leu Leu Lys Lys Ala Ser Glu
          115          120          125

Glu Asp His Thr Asn Ala Ala Cys Phe Ala Cys Ile Leu Leu Ser His
130          135          140

Gly Glu Glu Asn Met Glu Ser Cys Ser Val Thr Gln Ala Gly Val Gln
145          150          155          160

Arg Arg Asp Leu Gly Arg Leu Gln Pro Pro Pro Pro Arg Leu Ala Glu
          165          170          175

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Gly Pro Ser Leu Met Met Ala Ser Arg Pro Thr Arg Gly Pro Ser Met
180 185 190

Thr Gln Met Leu Ile Leu Asp Thr Arg Ser Gln Trp Lys Leu Thr Ser
195 200 205

Ser Ser Pro Ile Pro Arg Phe Gln Ala Ile Thr Arg Gly Gly Ala Gln
210 215 220

Glu Glu Ala Pro Gly Leu Cys Lys Pro Ser Ala Pro Ser Trp Arg Ser
225 230 235 240

Thr Glu Lys Thr Trp Lys Ser Cys Arg Ser Ser Pro Gly
245 250

<210> 12287
<211> 336
<212> PRT
<213> Homo sapiens

<220>
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<220>
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<220>
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<223> /note="Gene Name:
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<220>
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<223> /note="Uniprot ID: P55210"

<220>
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<223> /note="ENSP ID: ENSP00000478999"

<400> 12287
Met Asp Cys Val Gly Trp Pro Pro Gly Arg Lys Trp His Leu Glu Lys
1 5 10 15

Asn Thr Ser Cys Gly Gly Ser Ser Gly Ile Cys Ala Ser Tyr Val Thr
20 25 30

Gln Met Ala Asp Asp Gln Gly Cys Ile Glu Glu Gln Gly Val Glu Asp
27168

35					40					45					
Ser	Ala	Asn	Glu	Asp	Ser	Val	Asp	Ala	Lys	Pro	Asp	Arg	Ser	Ser	Phe
50					55					60					
Val	Pro	Ser	Leu	Phe	Ser	Lys	Lys	Lys	Lys	Asn	Val	Thr	Met	Arg	Ser
65					70					75					80
Ile	Lys	Thr	Thr	Arg	Asp	Arg	Val	Pro	Thr	Tyr	Gln	Tyr	Asn	Met	Asn
				85					90					95	
Phe	Glu	Lys	Leu	Gly	Lys	Cys	Ile	Ile	Ile	Asn	Asn	Lys	Asn	Phe	Asp
			100					105					110		
Lys	Val	Thr	Gly	Met	Gly	Val	Arg	Asn	Gly	Thr	Asp	Lys	Asp	Ala	Glu
		115					120					125			
Ala	Leu	Phe	Lys	Cys	Phe	Arg	Ser	Leu	Gly	Phe	Asp	Val	Ile	Val	Tyr
	130					135					140				
Asn	Asp	Cys	Ser	Cys	Ala	Lys	Met	Gln	Asp	Leu	Leu	Lys	Lys	Ala	Ser
145					150					155					160
Glu	Glu	Asp	His	Thr	Asn	Ala	Ala	Cys	Phe	Ala	Cys	Ile	Leu	Leu	Ser
				165					170					175	
His	Gly	Glu	Glu	Asn	Val	Ile	Tyr	Gly	Lys	Asp	Gly	Val	Thr	Pro	Ile
			180					185					190		
Lys	Asp	Leu	Thr	Ala	His	Phe	Arg	Gly	Asp	Arg	Cys	Lys	Thr	Leu	Leu
		195					200					205			
Glu	Lys	Pro	Lys	Leu	Phe	Phe	Ile	Gln	Ala	Cys	Arg	Gly	Thr	Glu	Leu
	210					215					220				
Asp	Asp	Gly	Ile	Gln	Ala	Asp	Ser	Gly	Pro	Ile	Asn	Asp	Thr	Asp	Ala
225					230					235					240
Asn	Pro	Arg	Tyr	Lys	Ile	Pro	Val	Glu	Ala	Asp	Phe	Leu	Phe	Ala	Tyr
				245					250					255	
Ser	Thr	Val	Pro	Gly	Tyr	Tyr	Ser	Trp	Arg	Ser	Pro	Gly	Arg	Gly	Ser
			260					265					270		

Trp Phe Val Gln Ala Leu Cys Ser Ile Leu Glu Glu His Gly Lys Asp
275 280 285

Leu Glu Ile Met Gln Ile Leu Thr Arg Val Asn Asp Arg Val Ala Arg
290 295 300

His Phe Glu Ser Gln Ser Asp Asp Pro His Phe His Glu Lys Lys Gln
305 310 315 320

Ile Pro Cys Val Val Ser Met Leu Thr Lys Glu Leu Tyr Phe Ser Gln
325 330 335

<210> 12288
<211> 303
<212> PRT
<213> Homo sapiens

<220>
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<223> /note="Payload ID: 2416"

<220>
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<223> /note="Gene Name:
caspase 7, apoptosis-related cysteine peptidase"

<220>
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<223> /note="Uniprot ID: P55210"

<220>
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<223> /note="ENSP ID: ENSP00000480584"

<400> 12288
Met Ala Asp Asp Gln Gly Cys Ile Glu Glu Gln Gly Val Glu Asp Ser
1 5 10 15

Ala Asn Glu Asp Ser Val Asp Ala Lys Pro Asp Arg Ser Ser Phe Val
20 25 30

Pro Ser Leu Phe Ser Lys Lys Lys Lys Asn Val Thr Met Arg Ser Ile
35 40 45

Lys 50	Thr	Thr	Arg	Asp	Arg	Val 55	Pro	Thr	Tyr	Gln	Tyr 60	Asn	Met	Asn	Phe
Glu 65	Lys	Leu	Gly	Lys	Cys 70	Ile	Ile	Ile	Asn	Asn 75	Lys	Asn	Phe	Asp	Lys 80
Val	Thr	Gly	Met	Gly 85	Val	Arg	Asn	Gly	Thr 90	Asp	Lys	Asp	Ala	Glu 95	Ala
Leu	Phe	Lys	Cys 100	Phe	Arg	Ser	Leu	Gly 105	Phe	Asp	Val	Ile	Val 110	Tyr	Asn
Asp	Cys	Ser 115	Cys	Ala	Lys	Met	Gln 120	Asp	Leu	Leu	Lys	Lys 125	Ala	Ser	Glu
Glu	Asp 130	His	Thr	Asn	Ala	Ala 135	Cys	Phe	Ala	Cys	Ile 140	Leu	Leu	Ser	His
Gly 145	Glu	Glu	Asn	Val	Ile 150	Tyr	Gly	Lys	Asp	Gly 155	Val	Thr	Pro	Ile	Lys 160
Asp	Leu	Thr	Ala	His 165	Phe	Arg	Gly	Asp	Arg 170	Cys	Lys	Thr	Leu	Leu 175	Glu
Lys	Pro	Lys	Leu 180	Phe	Phe	Ile	Gln	Ala 185	Cys	Arg	Gly	Thr	Glu 190	Leu	Asp
Asp	Gly	Ile 195	Gln	Ala	Asp	Ser	Gly 200	Pro	Ile	Asn	Asp	Thr 205	Asp	Ala	Asn
Pro	Arg 210	Tyr	Lys	Ile	Pro	Val 215	Glu	Ala	Asp	Phe	Leu 220	Phe	Ala	Tyr	Ser
Thr 225	Val	Pro	Gly	Tyr	Tyr 230	Ser	Trp	Arg	Ser	Pro 235	Gly	Arg	Gly	Ser	Trp 240
Phe	Val	Gln	Ala	Leu 245	Cys	Ser	Ile	Leu	Glu 250	Glu	His	Gly	Lys	Asp 255	Leu
Glu	Ile	Met	Gln 260	Ile	Leu	Thr	Arg	Val 265	Asn	Asp	Arg	Val	Ala 270	Arg	His
Phe	Glu	Ser	Gln	Ser	Asp	Asp	Pro	His	Phe	His	Glu	Lys	Lys	Gln	Ile

275

280

285

Pro Cys Val Val Ser Met Leu Thr Lys Glu Leu Tyr Phe Ser Gln
 290 295 300

<210> 12289

<211> 1972

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2417"

<220>

<221> source

<223> /note="Gene Symbol: CASP8AP2"

<220>

<221> source

<223> /note="Gene Name:
caspase 8 associated protein 2"

<220>

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<223> /note="ENSP ID: ENSP00000478179"

<400> 12289

Met Ala Ala Asp Asp Asp Asn Gly Asp Gly Thr Ser Leu Phe Asp Val
 1 5 10 15

Phe Ser Ala Ser Pro Leu Lys Asn Asn Asp Glu Gly Ser Leu Asp Ile
 20 25 30

Tyr Ala Gly Leu Asp Ser Ala Val Ser Asp Ser Ala Ser Lys Ser Cys
 35 40 45

Val Pro Ser Arg Asn Cys Leu Asp Leu Tyr Glu Glu Ile Leu Thr Glu
 50 55 60

Glu Gly Thr Ala Lys Glu Ala Thr Tyr Asn Asp Leu Gln Val Glu Tyr
 65 70 75 80

Gly Lys Cys Gln Leu Gln Met Lys Glu Leu Met Lys Lys Phe Lys Glu
 85 90 95

Ile Gln Thr Gln Asn Phe Ser Leu Ile Asn Glu Asn Gln Ser Leu Lys
 100 105 110

27172

Lys	Asn	Ile	Ser	Ala	Leu	Ile	Lys	Thr	Ala	Arg	Val	Glu	Ile	Asn	Arg	
		115					120					125				
Lys	Asp	Glu	Glu	Ile	Ser	Asn	Leu	His	Gln	Arg	Leu	Ser	Glu	Phe	Pro	
	130					135					140					
His	Phe	Arg	Asn	Asn	His	Lys	Thr	Ala	Arg	Thr	Phe	Asp	Thr	Val	Lys	
145					150					155					160	
Thr	Lys	Asp	Leu	Lys	Ser	Arg	Ser	Pro	His	Leu	Asp	Asp	Cys	Ser	Lys	
				165					170					175		
Thr	Asp	His	Arg	Ala	Lys	Ser	Asp	Val	Ser	Lys	Asp	Val	His	His	Ser	
			180					185					190			
Thr	Ser	Leu	Pro	Asn	Leu	Glu	Lys	Glu	Gly	Lys	Pro	His	Ser	Asp	Lys	
		195					200					205				
Arg	Ser	Thr	Ser	His	Leu	Pro	Thr	Ser	Val	Glu	Lys	His	Cys	Thr	Asn	
	210					215					220					
Gly	Val	Trp	Ser	Arg	Ser	His	Tyr	Gln	Val	Gly	Glu	Gly	Ser	Ser	Asn	
225					230					235					240	
Glu	Asp	Ser	Arg	Arg	Gly	Arg	Lys	Asp	Ile	Arg	His	Ser	Gln	Phe	Asn	
				245					250					255		
Arg	Gly	Thr	Glu	Arg	Val	Arg	Lys	Asp	Leu	Ser	Thr	Gly	Cys	Gly	Asp	
			260					265					270			
Gly	Glu	Pro	Arg	Ile	Leu	Glu	Ala	Ser	Gln	Arg	Leu	Gln	Gly	His	Pro	
		275					280					285				
Glu	Lys	Tyr	Gly	Lys	Gly	Glu	Pro	Lys	Thr	Glu	Ser	Lys	Ser	Ser	Lys	
	290					295					300					
Phe	Lys	Ser	Asn	Ser	Asp	Ser	Asp	Tyr	Lys	Gly	Glu	Arg	Ile	Asn	Ser	
305					310					315					320	
Ser	Trp	Glu	Lys	Glu	Thr	Pro	Gly	Glu	Arg	Ser	His	Ser	Arg	Val	Asp	
				325					330					335		

Ser Gln Ser Asp Lys Lys Leu Glu Arg Gln Ser Glu Arg Ser Gln Asn
 340 345 350
 Ile Asn Arg Lys Glu Val Lys Ser Gln Asp Lys Glu Glu Arg Lys Val
 355 360 365
 Asp Gln Lys Pro Lys Ser Val Val Lys Asp Gln Asp His Trp Arg Arg
 370 375 380
 Ser Glu Arg Ala Ser Leu Pro His Ser Lys Asn Glu Ile Thr Phe Ser
 385 390 395 400
 His Asn Ser Ser Lys Tyr His Leu Glu Glu Arg Arg Gly Trp Glu Asp
 405 410 415
 Cys Lys Arg Asp Lys Ser Val Asn Ser His Ser Phe Gln Asp Gly Arg
 420 425 430
 Cys Pro Ser Ser Leu Ser Asn Ser Arg Thr His Lys Asn Ile Asp Ser
 435 440 445
 Lys Glu Val Asp Ala Met His Gln Trp Glu Asn Thr Pro Leu Lys Ala
 450 455 460
 Glu Arg His Arg Thr Glu Asp Lys Arg Lys Arg Glu Gln Glu Ser Lys
 465 470 475 480
 Glu Glu Asn Arg His Ile Arg Asn Glu Lys Arg Val Pro Thr Glu His
 485 490 495
 Leu Gln Lys Thr Asn Lys Glu Thr Lys Lys Thr Thr Thr Asp Leu Lys
 500 505 510
 Lys Gln Asn Glu Pro Lys Thr Asp Lys Gly Glu Val Leu Asp Asn Gly
 515 520 525
 Val Ser Glu Gly Ala Asp Asn Lys Glu Leu Ala Met Lys Ala Glu Ser
 530 535 540
 Gly Pro Asn Glu Thr Lys Asn Lys Asp Leu Lys Leu Ser Phe Met Lys
 545 550 555 560
 Lys Leu Asn Leu Thr Leu Ser Pro Ala Lys Lys Gln Pro Val Ser Gln

565

570

575

Asp Asn Gln His Lys Ile Thr Asp Ile Pro Lys Ser Ser Gly Val Cys
580 585 590

Asp Ser Glu Ser Ser Met Gln Val Lys Thr Val Ala Tyr Val Pro Ser
595 600 605

Ile Ser Glu His Ile Leu Gly Glu Ala Ala Val Ser Glu His Thr Met
610 615 620

Gly Glu Thr Lys Ser Thr Leu Leu Glu Pro Lys Val Ala Leu Leu Ala
625 630 635 640

Val Thr Glu Pro Arg Ile Gly Ile Ser Glu Thr Asn Lys Glu Asp Glu
645 650 655

Asn Ser Leu Leu Val Arg Ser Val Asp Asn Thr Met His Cys Glu Glu
660 665 670

Pro Ile Cys Gly Thr Glu Thr Ser Phe Pro Ser Pro Met Glu Ile Gln
675 680 685

Gln Thr Glu Ser Leu Phe Pro Ser Thr Gly Met Lys Gln Thr Ile Asn
690 695 700

Asn Gly Arg Ala Ala Ala Pro Val Val Met Asp Val Leu Gln Thr Asp
705 710 715 720

Val Ser Gln Asn Phe Gly Leu Glu Leu Asp Thr Lys Arg Asn Asp Asn
725 730 735

Ser Asp Tyr Cys Gly Ile Ser Glu Gly Met Glu Met Lys Val Ala Leu
740 745 750

Ser Thr Thr Val Ser Glu Thr Thr Glu Ser Ile Leu Gln Pro Ser Ile
755 760 765

Glu Glu Ala Asp Ile Leu Pro Ile Met Leu Ser Glu Asp Asn Asn Pro
770 775 780

Lys Phe Glu Pro Ser Val Ile Val Thr Pro Leu Val Glu Ser Lys Ser
785 790 795 800

27175

Cys His Leu Glu Pro Cys Leu Pro Lys Glu Thr Leu Asp Ser Ser Leu
805 810 815

Gln Gln Thr Glu Leu Met Asp His Arg Met Ala Thr Gly Glu Thr Asn
820 825 830

Ser Val Tyr His Asp Asp Asp Asn Ser Val Leu Ser Ile Asp Leu Asn
835 840 845

His Leu Arg Pro Ile Pro Glu Ala Ile Ser Pro Leu Asn Ser Pro Val
850 855 860

Arg Pro Val Ala Lys Val Leu Arg Asn Glu Ser Pro Pro Gln Val Pro
865 870 875 880

Val Tyr Asn Asn Ser His Lys Asp Val Phe Leu Pro Asn Ser Ala His
885 890 895

Ser Thr Ser Lys Ser Gln Ser Asp Leu Asn Lys Glu Asn Gln Lys Pro
900 905 910

Ile Tyr Lys Ser Asp Lys Cys Thr Glu Ala Asp Thr Cys Lys Asn Ser
915 920 925

Pro Leu Asp Glu Leu Glu Glu Gly Glu Ile Arg Ser Asp Ser Glu Thr
930 935 940

Ser Lys Pro Gln Glu Ser Phe Glu Lys Asn Ser Lys Arg Arg Val Ser
945 950 955 960

Ala Asp Val Arg Lys Ser Lys Thr Ile Pro Arg Arg Gly Lys Ser Thr
965 970 975

Val Cys Leu Asp Lys Asp Ser Arg Lys Thr His Val Arg Ile His Gln
980 985 990

Thr Asn Asn Lys Trp Asn Lys Arg Pro Asp Lys Ser Ser Arg Ser
Ser
995 1000 1005

Lys Thr Glu Lys Lys Asp Lys Val Met Ser Thr Ser Ser Leu Glu
1010 1015 1020

Lys	Ile	Val	Pro	Ile	Ile	Ala	Val	Pro	Ser	Ser	Glu	Gln	Glu	Ile
1025						1030					1035			
Met	His	Met	Leu	Arg	Met	Ile	Arg	Lys	His	Val	Arg	Lys	Asn	Tyr
1040						1045					1050			
Met	Lys	Phe	Lys	Ala	Lys	Phe	Ser	Leu	Ile	Gln	Phe	His	Arg	Ile
1055						1060					1065			
Ile	Glu	Ser	Ala	Ile	Leu	Ser	Phe	Thr	Ser	Leu	Ile	Lys	His	Leu
1070						1075					1080			
Asn	Leu	His	Lys	Ile	Ser	Lys	Ser	Val	Thr	Thr	Leu	Gln	Lys	Asn
1085						1090					1095			
Leu	Cys	Asp	Ile	Ile	Glu	Ser	Lys	Leu	Lys	Gln	Val	Lys	Lys	Asn
1100						1105					1110			
Gly	Ile	Val	Asp	Arg	Leu	Phe	Glu	Gln	Gln	Leu	Pro	Asp	Met	Lys
1115						1120					1125			
Lys	Lys	Leu	Trp	Lys	Phe	Val	Asp	Asp	Gln	Leu	Asp	Tyr	Leu	Phe
1130						1135					1140			
Ala	Lys	Leu	Lys	Lys	Ile	Leu	Val	Cys	Asp	Ser	Lys	Ser	Phe	Gly
1145						1150					1155			
Arg	Asp	Ser	Asp	Glu	Gly	Lys	Leu	Glu	Lys	Thr	Ser	Lys	Gln	Asn
1160						1165					1170			
Ala	Gln	Tyr	Ser	Asn	Ser	Gln	Lys	Arg	Ser	Val	Asp	Asn	Ser	Asn
1175						1180					1185			
Arg	Glu	Leu	Leu	Lys	Glu	Lys	Leu	Ser	Lys	Ser	Glu	Asp	Pro	Val
1190						1195					1200			
His	Tyr	Lys	Ser	Leu	Val	Gly	Cys	Lys	Lys	Ser	Glu	Glu	Asn	Tyr
1205						1210					1215			
Gln	Asp	Gln	Asn	Asn	Ser	Ser	Ile	Asn	Thr	Val	Lys	His	Asp	Ile
1220						1225					1230			

Lys	Lys	Asn	Phe	Asn	Ile	Cys	Phe	Asp	Asn	Ile	Lys	Asn	Ser	Gln
1235						1240					1245			
Ser	Glu	Glu	Arg	Ser	Leu	Glu	Val	His	Cys	Pro	Ser	Thr	Pro	Lys
1250						1255					1260			
Ser	Glu	Lys	Asn	Glu	Gly	Ser	Ser	Ile	Glu	Asp	Ala	Gln	Thr	Ser
1265						1270					1275			
Gln	His	Ala	Thr	Leu	Lys	Pro	Glu	Arg	Ser	Phe	Glu	Ile	Leu	Thr
1280						1285					1290			
Glu	Gln	Gln	Ala	Ser	Ser	Leu	Thr	Phe	Asn	Leu	Val	Ser	Asp	Ala
1295						1300					1305			
Gln	Met	Gly	Glu	Ile	Phe	Lys	Ser	Leu	Leu	Gln	Gly	Ser	Asp	Leu
1310						1315					1320			
Leu	Asp	Ser	Ser	Val	Asn	Cys	Thr	Glu	Lys	Ser	Glu	Trp	Glu	Leu
1325						1330					1335			
Lys	Thr	Pro	Glu	Lys	Gln	Leu	Leu	Glu	Thr	Leu	Lys	Cys	Glu	Ser
1340						1345					1350			
Ile	Pro	Ala	Cys	Thr	Thr	Glu	Glu	Leu	Val	Ser	Gly	Val	Ala	Ser
1355						1360					1365			
Pro	Cys	Pro	Lys	Met	Ile	Ser	Asp	Asp	Asn	Trp	Ser	Leu	Leu	Ser
1370						1375					1380			
Ser	Glu	Lys	Gly	Pro	Ser	Leu	Ser	Ser	Gly	Leu	Ser	Leu	Pro	Val
1385						1390					1395			
His	Pro	Asp	Val	Leu	Asp	Glu	Ser	Cys	Met	Phe	Glu	Val	Ser	Thr
1400						1405					1410			
Asn	Leu	Pro	Leu	Ser	Lys	Asp	Asn	Val	Cys	Ser	Val	Glu	Lys	Ser
1415						1420					1425			
Lys	Pro	Cys	Val	Ser	Ser	Ile	Leu	Leu	Glu	Asp	Leu	Ala	Val	Ser
1430						1435					1440			

Leu	Thr	Val	Pro	Ser	Pro	Leu	Lys	Ser	Asp	Gly	His	Leu	Ser	Phe
1445						1450					1455			
Leu	Lys	Pro	Asp	Met	Ser	Ser	Ser	Ser	Thr	Pro	Glu	Glu	Val	Ile
1460						1465					1470			
Ser	Ala	His	Phe	Ser	Glu	Asp	Ala	Leu	Leu	Glu	Glu	Glu	Asp	Ala
1475						1480					1485			
Ser	Glu	Gln	Asp	Ile	His	Leu	Ala	Leu	Glu	Ser	Asp	Asn	Ser	Ser
1490						1495					1500			
Ser	Lys	Ser	Ser	Cys	Ser	Ser	Ser	Trp	Thr	Ser	Arg	Ser	Val	Ala
1505						1510					1515			
Pro	Gly	Phe	Gln	Tyr	His	Pro	Asn	Leu	Pro	Met	His	Ala	Val	Ile
1520						1525					1530			
Met	Glu	Lys	Ser	Asn	Asp	His	Phe	Ile	Val	Lys	Ile	Arg	Arg	Ala
1535						1540					1545			
Thr	Pro	Ser	Thr	Ser	Ser	Gly	Leu	Lys	Gln	Ser	Met	Met	Pro	Asp
1550						1555					1560			
Glu	Leu	Leu	Thr	Ser	Leu	Pro	Arg	His	Gly	Lys	Glu	Ala	Asp	Glu
1565						1570					1575			
Gly	Pro	Glu	Lys	Glu	Tyr	Ile	Ser	Cys	Gln	Asn	Thr	Val	Phe	Lys
1580						1585					1590			
Ser	Val	Glu	Glu	Leu	Glu	Asn	Ser	Asn	Lys	Asn	Val	Asp	Gly	Ser
1595						1600					1605			
Lys	Ser	Thr	His	Glu	Glu	Gln	Ser	Ser	Met	Ile	Gln	Thr	Gln	Val
1610						1615					1620			
Pro	Asp	Ile	Tyr	Glu	Phe	Leu	Lys	Asp	Ala	Ser	Asp	Lys	Met	Gly
1625						1630					1635			
His	Ser	Asp	Glu	Val	Ala	Asp	Glu	Cys	Phe	Lys	Leu	His	Gln	Val
1640						1645					1650			
Trp	Glu	Thr	Lys	Val	Pro	Glu	Ser	Ile	Glu	Glu	Leu	Pro	Ser	Met

1655						1660						1665			
Glu	Glu	Ile	Ser	His	Ser	Val	Gly	Glu	His	Leu	Pro	Asn	Thr	Tyr	
1670						1675					1680				
Val	Asp	Leu	Thr	Lys	Asp	Pro	Val	Thr	Glu	Thr	Lys	Asn	Leu	Gly	
1685						1690					1695				
Glu	Phe	Ile	Glu	Val	Thr	Val	Leu	His	Ile	Asp	Gln	Leu	Gly	Cys	
1700						1705					1710				
Ser	Gly	Gly	Asn	Leu	Asn	Gln	Ser	Ala	Gln	Ile	Leu	Asp	Asn	Ser	
1715						1720					1725				
Leu	Gln	Ala	Asp	Thr	Val	Gly	Ala	Phe	Ile	Asp	Leu	Thr	Gln	Asp	
1730						1735					1740				
Ala	Ser	Ser	Glu	Ala	Lys	Ser	Glu	Gly	Asn	His	Pro	Ala	Leu	Ala	
1745						1750					1755				
Val	Glu	Asp	Leu	Gly	Cys	Gly	Val	Ile	Gln	Val	Asp	Glu	Asp	Asn	
1760						1765					1770				
Cys	Lys	Glu	Glu	Lys	Ala	Gln	Val	Ala	Asn	Arg	Pro	Leu	Lys	Cys	
1775						1780					1785				
Ile	Val	Glu	Glu	Thr	Tyr	Ile	Asp	Leu	Thr	Thr	Glu	Ser	Pro	Ser	
1790						1795					1800				
Ser	Cys	Glu	Val	Lys	Lys	Asp	Glu	Leu	Lys	Ser	Glu	Pro	Gly	Ser	
1805						1810					1815				
Asn	Cys	Asp	Asn	Ser	Glu	Leu	Pro	Gly	Thr	Leu	His	Asn	Ser	His	
1820						1825					1830				
Lys	Lys	Arg	Arg	Asn	Ile	Ser	Asp	Leu	Asn	His	Pro	His	Lys	Lys	
1835						1840					1845				
Gln	Arg	Lys	Glu	Thr	Asp	Leu	Thr	Asn	Lys	Glu	Lys	Thr	Lys	Lys	
1850						1855					1860				
Pro	Thr	Gln	Asp	Ser	Cys	Glu	Asn	Thr	Glu	Ala	His	Gln	Lys	Lys	
1865						1870					1875				

27180

Ala Ser Lys Lys Lys Ala Pro Pro Val Thr Lys Asp Pro Ser Ser
 1880 1885 1890

Leu Lys Ala Thr Pro Gly Ile Lys Asp Ser Ser Ala Ala Leu Ala
 1895 1900 1905

Thr Ser Thr Ser Leu Ser Ala Lys Asn Val Ile Lys Lys Lys Gly
 1910 1915 1920

Glu Ile Ile Ile Leu Trp Thr Arg Asn Asp Asp Arg Glu Ile Leu
 1925 1930 1935

Leu Glu Cys Gln Lys Arg Gly Pro Ser Phe Lys Thr Phe Ala Tyr
 1940 1945 1950

Leu Ala Ala Lys Leu Asp Lys Asn Pro Asn Gln Val Thr Thr Gln
 1955 1960 1965

Phe Leu His Leu
 1970

<210> 12290
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<220>
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<220>
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<220>
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			20					25					30			
Tyr	Ala	Gly	Leu	Asp	Ser	Ala	Val	Ser	Asp	Ser	Ala	Ser	Lys	Ser	Cys	
		35					40					45				
Val	Pro	Ser	Arg	Asn	Cys	Leu	Asp	Leu	Tyr	Glu	Glu	Ile	Leu	Thr	Glu	
	50					55					60					
Glu	Gly	Thr	Ala	Lys	Glu	Ala	Thr	Tyr	Asn	Asp	Leu	Gln	Val	Glu	Tyr	
65					70					75					80	
Gly	Lys	Cys	Gln	Leu	Gln	Met	Lys	Glu	Leu	Met	Lys	Lys	Phe	Lys	Glu	
			85						90					95		
Ile	Gln	Thr	Gln	Asn	Phe	Ser	Leu	Ile	Asn	Glu	Asn	Gln	Ser	Leu	Lys	
			100					105					110			
Lys	Asn	Ile	Ser	Ala	Leu	Ile	Lys	Thr	Ala	Arg	Val	Glu	Ile	Asn	Arg	
		115					120					125				
Lys	Asp	Glu	Glu	Ile	Ser	Asn	Leu	His	Gln	Arg	Leu	Ser	Glu	Phe	Pro	
	130					135					140					
His	Phe	Arg	Asn	Asn	His	Lys	Thr	Ala	Arg	Thr	Phe	Asp	Thr	Val	Lys	
145					150					155					160	
Thr	Lys	Asp	Leu	Lys	Ser	Arg	Ser	Pro	His	Leu	Asp	Asp	Cys	Ser	Lys	
				165					170					175		
Thr	Asp	His	Arg	Ala	Lys	Ser	Asp	Val	Ser	Lys	Asp	Val	His	His	Ser	
			180					185					190			
Thr	Ser	Leu	Pro	Asn	Leu	Glu	Lys	Glu	Gly	Lys	Pro	His	Ser	Asp	Lys	
		195					200					205				
Arg	Ser	Thr	Ser	His	Leu	Pro	Thr	Ser	Val	Glu	Lys	His	Cys	Thr	Asn	
	210					215					220					
Gly	Val	Trp	Ser	Arg	Ser	His	Tyr	Gln	Val	Gly	Glu	Gly	Ser	Ser	Asn	
225					230					235					240	
Glu	Asp	Ser	Arg	Arg	Gly	Arg	Lys	Asp	Ile	Arg	His	Ser	Gln	Phe	Asn	

Phe	Ser	Ala	Ser	Pro	Leu	Lys	Asn	Asn	Asp	Glu	Gly	Ser	Leu	Asp	Ile	
			20					25					30			
Tyr	Ala	Gly	Leu	Asp	Ser	Ala	Val	Ser	Asp	Ser	Ala	Ser	Lys	Ser	Cys	
		35					40					45				
Val	Pro	Ser	Arg	Asn	Cys	Leu	Asp	Leu	Tyr	Glu	Glu	Ile	Leu	Thr	Glu	
	50					55					60					
Glu	Gly	Thr	Ala	Lys	Glu	Ala	Thr	Tyr	Asn	Asp	Leu	Gln	Val	Glu	Tyr	
65					70					75					80	
Gly	Lys	Cys	Gln	Leu	Gln	Met	Lys	Glu	Leu	Met	Lys	Lys	Phe	Lys	Glu	
				85					90							
Ile	Gln	Thr	Gln	Asn	Phe	Ser	Leu	Ile	Asn	Glu	Asn	Gln	Ser	Leu	Lys	
			100					105					110			
Lys	Asn	Ile	Ser	Ala	Leu	Ile	Lys	Thr	Ala	Arg	Val	Glu	Ile	Asn	Arg	
		115					120					125				
Lys	Asp	Glu	Glu	Ile	Ser	Asn	Leu	His	Gln	Arg	Leu	Ser	Glu	Phe	Pro	
	130					135					140					
His	Phe	Arg	Asn	Asn	His	Lys	Thr	Ala	Arg	Thr	Phe	Asp	Thr	Val	Lys	
145					150					155					160	
Thr	Lys	Asp	Leu	Lys	Ser	Arg	Ser	Pro	His	Leu	Asp	Asp	Cys	Ser	Lys	
				165					170					175		
Thr	Asp	His	Arg	Ala	Lys	Ser	Asp	Val	Ser	Lys	Asp	Val	His	His	Ser	
			180					185					190			
Thr	Ser	Leu	Pro	Asn	Leu	Glu	Lys	Glu	Gly	Lys	Pro	His	Ser	Asp	Lys	
		195					200					205				
Arg	Ser	Thr	Ser	His	Leu	Pro	Thr	Ser	Val	Glu	Lys	His	Cys	Thr	Asn	
	210					215					220					
Gly	Val	Trp	Ser	Arg	Ser	His	Tyr	Gln	Val	Gly	Glu	Gly	Ser	Ser	Asn	
225					230					235					240	

Glu Asp Ser Arg Arg Gly Arg Lys Asp Ile Arg His Ser Gln Phe Asn
245 250 255

Arg Gly Thr Glu Arg Val Arg Lys Asp Leu Ser Thr Gly Cys Gly Asp
260 265 270

Gly Glu Pro Arg Ile Leu Glu Ala Ser Gln Arg Leu Gln Gly His Pro
275 280 285

Glu Lys Tyr Gly Lys Gly Glu Pro Lys Thr Glu Ser Lys Ser Ser Lys
290 295 300

Phe Lys Ser Asn Ser Asp Ser Asp Tyr Lys Gly Glu Arg Ile Asn Ser
305 310 315 320

Ser Trp Glu Lys Glu Thr Pro Gly Glu Arg Ser His Ser Arg Val Asp
325 330 335

Ser Gln Ser Asp Lys Lys Leu Glu Arg Gln Ser Glu Arg Ser Gln Asn
340 345 350

Ile Asn Arg Lys Glu Val Lys Ser Gln
355 360

<210> 12292
<211> 395
<212> PRT
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<220>
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<223> /note="Gene Name:
caspase 8, apoptosis-related cysteine peptidase"

<220>
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<223> /note="Uniprot ID: Q14790"

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<400> 12292

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Glu Asp Leu Ala Ser Leu Lys Phe Leu Ser Leu Asp Tyr Ile Pro Gln
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Arg Lys Gln Glu Pro Ile Lys Asp Ala Leu Met Leu Phe Gln Arg Leu
35 40 45

Gln Glu Lys Arg Met Leu Glu Glu Ser Asn Leu Ser Phe Leu Lys Glu
50 55 60

Leu Leu Phe Arg Ile Asn Arg Leu Asp Leu Leu Ile Thr Tyr Leu Asn
65 70 75 80

Thr Arg Lys Glu Glu Met Glu Arg Glu Leu Gln Thr Pro Gly Arg Ala
85 90 95

Gln Ile Ser Ala Tyr Arg Val Met Leu Tyr Gln Ile Ser Glu Glu Val
100 105 110

Ser Arg Ser Glu Leu Arg Ser Phe Lys Phe Leu Leu Gln Glu Glu Ile
115 120 125

Ser Lys Cys Lys Leu Asp Asp Asp Met Asn Leu Leu Asp Ile Phe Ile
130 135 140

Glu Met Glu Lys Arg Val Ile Leu Gly Glu Gly Lys Leu Asp Ile Leu
145 150 155 160

Lys Arg Val Cys Ala Gln Ile Asn Lys Ser Leu Leu Lys Ile Ile Asn
165 170 175

Asp Tyr Glu Glu Phe Ser Lys Gly Ala Leu Thr Thr Thr Phe Glu Glu
180 185 190

Leu His Phe Glu Ile Lys Pro His Asp Asp Cys Thr Val Glu Gln Ile
195 200 205

Tyr Glu Ile Leu Lys Ile Tyr Gln Leu Met Asp His Ser Asn Met Asp
210 215 220

Cys Phe Ile Cys Cys Ile Leu Ser His Gly Asp Lys Gly Ile Ile Tyr
225 230 235 240

Gly Thr Asp Gly Gln Glu Ala Pro Ile Tyr Glu Leu Thr Ser Gln Phe
245 250 255

Thr Gly Leu Lys Cys Pro Ser Leu Ala Gly Lys Pro Lys Val Phe Phe
260 265 270

Ile Gln Ala Cys Gln Gly Asp Asn Tyr Gln Lys Gly Ile Pro Val Glu
275 280 285

Thr Asp Ser Glu Glu Gln Pro Tyr Leu Glu Met Asp Leu Ser Ser Pro
290 295 300

Gln Thr Arg Tyr Ile Pro Asp Glu Ala Asp Phe Leu Leu Gly Met Ala
305 310 315 320

Thr Val Asn Asn Cys Val Ser Tyr Arg Asn Pro Ala Glu Gly Thr Trp
325 330 335

Tyr Ile Gln Ser Leu Cys Gln Ser Leu Arg Glu Arg Cys Pro Arg Gly
340 345 350

Asp Asp Ile Leu Thr Ile Leu Thr Glu Val Asn Tyr Glu Val Ser Asn
355 360 365

Lys Asp Asp Lys Lys Asn Met Gly Lys Gln Met Pro Gln Pro Thr Phe
370 375 380

Thr Leu Arg Lys Lys Leu Val Phe Pro Ser Asp
385 390 395

<210> 12293

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Met Asp Phe Ser Arg Asn Leu Tyr Asp Ile Gly Glu Gln Leu Asp Ser
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Glu Asp Leu Ala Ser Leu Lys Phe Leu Ser Leu Asp Tyr Ile Pro Gln
          20          25          30

Arg Lys Gln Glu Pro Ile Lys Asp Ala Leu Met Leu Phe Gln Arg Leu
          35          40          45

Gln Glu Lys Arg Met Leu Glu Glu Ser Asn Leu Ser Phe Leu Lys Glu
          50          55          60

Leu Leu Phe Arg Ile Asn Arg Leu Asp Leu Leu Ile Thr Tyr Leu Asn
65          70          75          80

Thr Arg Lys Glu Glu Met Glu Arg Glu Leu Gln Thr Pro Gly Arg Ala
          85          90          95

Gln Ile Ser Ala Tyr Arg Phe His Phe Cys Arg Met Ser Trp Ala Glu
          100          105          110

Ala Asn Ser Gln Cys Gln Thr Gln Ser Val Pro Phe Trp Arg Arg Val
          115          120          125

Asp His Leu Leu Ile Arg Val Met Leu Tyr Gln Ile Ser Glu Glu Val
          130          135          140

Ser Arg Ser Glu Leu Arg Ser Phe Lys Phe Leu Leu Gln Glu Glu Ile
145          150          155          160

Ser Lys Cys Lys Leu Asp Asp Asp Met Asn Leu Leu Asp Ile Phe Ile
          165          170          175

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Glu	Met	Glu	Lys	Arg	Val	Ile	Leu	Gly	Glu	Gly	Lys	Leu	Asp	Ile	Leu	
			180					185					190			
Lys	Arg	Val	Cys	Ala	Gln	Ile	Asn	Lys	Ser	Leu	Leu	Lys	Ile	Ile	Asn	
		195					200					205				
Asp	Tyr	Glu	Glu	Phe	Ser	Lys	Gly	Glu	Glu	Leu	Cys	Gly	Val	Met	Thr	
	210					215					220					
Ile	Ser	Asp	Ser	Pro	Arg	Glu	Gln	Asp	Ser	Glu	Ser	Gln	Thr	Leu	Asp	
225					230					235					240	
Lys	Val	Tyr	Gln	Met	Lys	Ser	Lys	Pro	Arg	Gly	Tyr	Cys	Leu	Ile	Ile	
				245					250					255		
Asn	Asn	His	Asn	Phe	Ala	Lys	Ala	Arg	Glu	Lys	Val	Pro	Lys	Leu	His	
			260					265					270			
Ser	Ile	Arg	Asp	Arg	Asn	Gly	Thr	His	Leu	Asp	Ala	Gly	Ala	Leu	Thr	
		275					280					285				
Thr	Thr	Phe	Glu	Glu	Leu	His	Phe	Glu	Ile	Lys	Pro	His	Asp	Asp	Cys	
	290					295					300					
Thr	Val	Glu	Gln	Ile	Tyr	Glu	Ile	Leu	Lys	Ile	Tyr	Gln	Leu	Met	Asp	
305					310					315					320	
His	Ser	Asn	Met	Asp	Cys	Phe	Ile	Cys	Cys	Ile	Leu	Ser	His	Gly	Asp	
				325					330					335		
Lys	Gly	Ile	Ile	Tyr	Gly	Thr	Asp	Gly	Gln	Glu	Ala	Pro	Ile	Tyr	Glu	
			340					345					350			
Leu	Thr	Ser	Gln	Phe	Thr	Gly	Leu	Lys	Cys	Pro	Ser	Leu	Ala	Gly	Lys	
		355					360					365				
Pro	Lys	Val	Phe	Phe	Ile	Gln	Ala	Cys	Gln	Gly	Asp	Asn	Tyr	Gln	Lys	
	370					375					380					
Gly	Ile	Pro	Val	Glu	Thr	Asp	Ser	Glu	Glu	Gln	Pro	Tyr	Leu	Glu	Met	
385					390					395					400	

Asp Leu Ser Ser Pro Gln Thr Arg Tyr Ile Pro Asp Glu Ala Asp Phe
405 410 415

Leu Leu Gly Met Ala Thr Val Asn Asn Cys Val Ser Tyr Arg Asn Pro
420 425 430

Ala Glu Gly Thr Trp Tyr Ile Gln Ser Leu Cys Gln Ser Leu Arg Glu
435 440 445

Arg Cys Pro Arg Gly Asp Asp Ile Leu Thr Ile Leu Thr Glu Val Asn
450 455 460

Tyr Glu Val Ser Asn Lys Asp Asp Lys Lys Asn Met Gly Lys Gln Met
465 470 475 480

Pro Gln Pro Thr Phe Thr Leu Arg Lys Lys Leu Val Phe Pro Ser Asp
485 490 495

<210> 12294
<211> 464
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<213> Homo sapiens

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Glu Asp Leu Ala Ser Leu Lys Phe Leu Ser Leu Asp Tyr Ile Pro Gln

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Arg	Lys	Gln	Glu	Pro	Ile	Lys	Asp	Ala	Leu	Met	Leu	Phe	Gln	Arg	Leu
		35					40					45			
Gln	Glu	Lys	Arg	Met	Leu	Glu	Glu	Ser	Asn	Leu	Ser	Phe	Leu	Lys	Glu
	50					55					60				
Leu	Leu	Phe	Arg	Ile	Asn	Arg	Leu	Asp	Leu	Leu	Ile	Thr	Tyr	Leu	Asn
65					70					75					80
Thr	Arg	Lys	Glu	Glu	Met	Glu	Arg	Glu	Leu	Gln	Thr	Pro	Gly	Arg	Ala
				85					90					95	
Gln	Ile	Ser	Ala	Tyr	Arg	Val	Met	Leu	Tyr	Gln	Ile	Ser	Glu	Glu	Val
			100					105					110		
Ser	Arg	Ser	Glu	Leu	Arg	Ser	Phe	Lys	Phe	Leu	Leu	Gln	Glu	Glu	Ile
		115					120					125			
Ser	Lys	Cys	Lys	Leu	Asp	Asp	Asp	Met	Asn	Leu	Leu	Asp	Ile	Phe	Ile
	130					135					140				
Glu	Met	Glu	Lys	Arg	Val	Ile	Leu	Gly	Glu	Gly	Lys	Leu	Asp	Ile	Leu
145					150					155					160
Lys	Arg	Val	Cys	Ala	Gln	Ile	Asn	Lys	Ser	Leu	Leu	Lys	Ile	Ile	Asn
				165					170					175	
Asp	Tyr	Glu	Glu	Phe	Ser	Lys	Gly	Glu	Glu	Leu	Cys	Gly	Val	Met	Thr
			180					185					190		
Ile	Ser	Asp	Ser	Pro	Arg	Glu	Gln	Asp	Ser	Glu	Ser	Gln	Thr	Leu	Asp
		195					200					205			
Lys	Val	Tyr	Gln	Met	Lys	Ser	Lys	Pro	Arg	Gly	Tyr	Cys	Leu	Ile	Ile
	210					215					220				
Asn	Asn	His	Asn	Phe	Ala	Lys	Ala	Arg	Glu	Lys	Val	Pro	Lys	Leu	His
225					230					235					240
Ser	Ile	Arg	Asp	Arg	Asn	Gly	Thr	His	Leu	Asp	Ala	Gly	Ala	Leu	Thr
				245					250					255	

Thr	Thr	Phe	Glu	Glu	Leu	His	Phe	Glu	Ile	Lys	Pro	His	Asp	Asp	Cys	
			260					265					270			
Thr	Val	Glu	Gln	Ile	Tyr	Glu	Ile	Leu	Lys	Ile	Tyr	Gln	Leu	Met	Asp	
		275					280					285				
His	Ser	Asn	Met	Asp	Cys	Phe	Ile	Cys	Cys	Ile	Leu	Ser	His	Gly	Asp	
	290					295					300					
Lys	Gly	Ile	Ile	Tyr	Gly	Thr	Asp	Gly	Gln	Glu	Ala	Pro	Ile	Tyr	Glu	
305					310					315					320	
Leu	Thr	Ser	Gln	Phe	Thr	Gly	Leu	Lys	Cys	Pro	Ser	Leu	Ala	Gly	Lys	
				325					330					335		
Pro	Lys	Val	Phe	Phe	Ile	Gln	Ala	Cys	Gln	Gly	Asp	Asn	Tyr	Gln	Lys	
			340					345					350			
Gly	Ile	Pro	Val	Glu	Thr	Asp	Ser	Glu	Glu	Gln	Pro	Tyr	Leu	Glu	Met	
		355					360					365				
Asp	Leu	Ser	Ser	Pro	Gln	Thr	Arg	Tyr	Ile	Pro	Asp	Glu	Ala	Asp	Phe	
	370					375					380					
Leu	Leu	Gly	Met	Ala	Thr	Val	Asn	Asn	Cys	Val	Ser	Tyr	Arg	Asn	Pro	
385					390					395					400	
Ala	Glu	Gly	Thr	Trp	Tyr	Ile	Gln	Ser	Leu	Cys	Gln	Ser	Leu	Arg	Glu	
				405					410					415		
Arg	Cys	Pro	Arg	Gly	Asp	Asp	Ile	Leu	Thr	Ile	Leu	Thr	Glu	Val	Asn	
			420					425					430			
Tyr	Glu	Val	Ser	Asn	Lys	Asp	Asp	Lys	Lys	Asn	Met	Gly	Lys	Gln	Met	
		435					440					445				
Pro	Gln	Pro	Thr	Phe	Thr	Leu	Arg	Lys	Lys	Leu	Val	Phe	Pro	Ser	Asp	
						455					460					

<210> 12295
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<213> Homo sapiens

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<223> /note="Payload ID: 2418"

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<223> /note="Gene Name:
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<223> /note="Uniprot ID: Q14790"

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<400> 12295

Met Glu Gly Gly Arg Arg Ala Arg Val Val Ile Glu Ser Lys Arg Asn
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Phe Phe Leu Gly Ala Phe Pro Thr Pro Phe Pro Ala Glu His Val Glu
20 25 30

Leu Gly Arg Leu Gly Asp Ser Glu Thr Ala Met Val Pro Gly Lys Gly
35 40 45

Gly Ala Asp Tyr Ile Leu Leu Pro Phe Lys Lys Met Asp Phe Ser Arg
50 55 60

Asn Leu Tyr Asp Ile Gly Glu Gln Leu Asp Ser Glu Asp Leu Ala Ser
65 70 75 80

Leu Lys Phe Leu Ser Leu Asp Tyr Ile Pro Gln Arg Lys Gln Glu Pro
85 90 95

Ile Lys Asp Ala Leu Met Leu Phe Gln Arg Leu Gln Glu Lys Arg Met
100 105 110

Leu Glu Glu Ser Asn Leu Ser Phe Leu Lys Glu Leu Leu Phe Arg Ile
115 120 125

Asn Arg Leu Asp Leu Leu Ile Thr Tyr Leu Asn Thr Arg Lys Glu Glu

130						135						140			
Met	Glu	Arg	Glu	Leu	Gln	Thr	Pro	Gly	Arg	Ala	Gln	Ile	Ser	Ala	Tyr
145					150					155					160
Arg	Val	Met	Leu	Tyr	Gln	Ile	Ser	Glu	Glu	Val	Ser	Arg	Ser	Glu	Leu
				165					170					175	
Arg	Ser	Phe	Lys	Phe	Leu	Leu	Gln	Glu	Glu	Ile	Ser	Lys	Cys	Lys	Leu
			180					185					190		
Asp	Asp	Asp	Met	Asn	Leu	Leu	Asp	Ile	Phe	Ile	Glu	Met	Glu	Lys	Arg
		195					200					205			
Val	Ile	Leu	Gly	Glu	Gly	Lys	Leu	Asp	Ile	Leu	Lys	Arg	Val	Cys	Ala
	210					215					220				
Gln	Ile	Asn	Lys	Ser	Leu	Leu	Lys	Ile	Ile	Asn	Asp	Tyr	Glu	Glu	Phe
225					230					235					240
Ser	Lys	Glu	Arg	Ser	Ser	Ser	Leu	Glu	Gly	Ser	Pro	Asp	Glu	Phe	Ser
				245					250					255	
Asn	Gly	Glu	Glu	Leu	Cys	Gly	Val	Met	Thr	Ile	Ser	Asp	Ser	Pro	Arg
			260					265					270		
Glu	Gln	Asp	Ser	Glu	Ser	Gln	Thr	Leu	Asp	Lys	Val	Tyr	Gln	Met	Lys
		275					280					285			
Ser	Lys	Pro	Arg	Gly	Tyr	Cys	Leu	Ile	Ile	Asn	Asn	His	Asn	Phe	Ala
	290					295					300				
Lys	Ala	Arg	Glu	Lys	Val	Pro	Lys	Leu	His	Ser	Ile	Arg	Asp	Arg	Asn
305					310					315					320
Gly	Thr	His	Leu	Asp	Ala	Gly	Ala	Leu	Thr	Thr	Thr	Phe	Glu	Glu	Leu
				325					330					335	
His	Phe	Glu	Ile	Lys	Pro	His	Asp	Asp	Cys	Thr	Val	Glu	Gln	Ile	Tyr
			340				345						350		
Glu	Ile	Leu	Lys	Ile	Tyr	Gln	Leu	Met	Asp	His	Ser	Asn	Met	Asp	Cys
		355					360					365			

Phe Ile Cys Cys Ile Leu Ser His Gly Asp Lys Gly Ile Ile Tyr Gly
370 375 380

Thr Asp Gly Gln Glu Ala Pro Ile Tyr Glu Leu Thr Ser Gln Phe Thr
385 390 395 400

Gly Leu Lys Cys Pro Ser Leu Ala Gly Lys Pro Lys Val Phe Phe Ile
405 410 415

Gln Ala Cys Gln Gly Asp Asn Tyr Gln Lys Gly Ile Pro Val Glu Thr
420 425 430

Asp Ser Glu Glu Gln Pro Tyr Leu Glu Met Asp Leu Ser Ser Pro Gln
435 440 445

Thr Arg Tyr Ile Pro Asp Glu Ala Asp Phe Leu Leu Gly Met Ala Thr
450 455 460

Val Asn Asn Cys Val Ser Tyr Arg Asn Pro Ala Glu Gly Thr Trp Tyr
465 470 475 480

Ile Gln Ser Leu Cys Gln Ser Leu Arg Glu Arg Cys Pro Arg Gly Asp
485 490 495

Asp Ile Leu Thr Ile Leu Thr Glu Val Asn Tyr Glu Val Ser Asn Lys
500 505 510

Asp Asp Lys Lys Asn Met Gly Lys Gln Met Pro Gln Pro Thr Phe Thr
515 520 525

Leu Arg Lys Lys Leu Val Phe Pro Ser Asp
530 535

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<211> 235

<212> PRT

<213> Homo sapiens

<220>

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<223> /note="Payload ID: 2418"

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<221> source

<223> /note="Gene Symbol: CASP8"

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<223> /note="Gene Name:
caspase 8, apoptosis-related cysteine peptidase"

<220>

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<223> /note="Uniprot ID: Q14790"

<220>

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<223> /note="ENSP ID: ENSP00000376087"

<400> 12296

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Glu Asp Leu Ala Ser Leu Lys Phe Leu Ser Leu Asp Tyr Ile Pro Gln
20 25 30

Arg Lys Gln Glu Pro Ile Lys Asp Ala Leu Met Leu Phe Gln Arg Leu
35 40 45

Gln Glu Lys Arg Met Leu Glu Glu Ser Asn Leu Ser Phe Leu Lys Glu
50 55 60

Leu Leu Phe Arg Ile Asn Arg Leu Asp Leu Leu Ile Thr Tyr Leu Asn
65 70 75 80

Thr Arg Lys Glu Glu Met Glu Arg Glu Leu Gln Thr Pro Gly Arg Ala
85 90 95

Gln Ile Ser Ala Tyr Arg Val Met Leu Tyr Gln Ile Ser Glu Glu Val
100 105 110

Ser Arg Ser Glu Leu Arg Ser Phe Lys Phe Leu Leu Gln Glu Glu Ile
115 120 125

Ser Lys Cys Lys Leu Asp Asp Asp Met Asn Leu Leu Asp Ile Phe Ile
130 135 140

Glu Met Glu Lys Arg Val Ile Leu Gly Glu Gly Lys Leu Asp Ile Leu
145 150 155 160

Lys Arg Val Cys Ala Gln Ile Asn Lys Ser Leu Leu Lys Ile Ile Asn

165

170

175

Asp Tyr Glu Glu Phe Ser Lys Glu Arg Ser Ser Ser Leu Glu Gly Ser
 180 185 190

Pro Asp Glu Phe Ser Asn Asp Phe Gly Gln Ser Leu Pro Asn Glu Lys
 195 200 205

Gln Thr Ser Gly Ile Leu Ser Asp His Gln Gln Ser Gln Phe Cys Lys
 210 215 220

Ser Thr Gly Glu Ser Ala Gln Thr Ser Gln His
 225 230 235

<210> 12297

<211> 464

<212> PRT

<213> Homo sapiens

<220>

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<223> /note="Uniprot ID: Q14790"

<220>

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<223> /note="ENSP ID: ENSP00000376091"

<400> 12297

Met Asp Phe Ser Arg Asn Leu Tyr Asp Ile Gly Glu Gln Leu Asp Ser
 1 5 10 15

Glu Asp Leu Ala Ser Leu Lys Phe Leu Ser Leu Asp Tyr Ile Pro Gln
 20 25 30

Arg Lys Gln Glu Pro Ile Lys Asp Ala Leu Met Leu Phe Gln Arg Leu
 35 40 45

27197

Gln	Glu	Lys	Arg	Met	Leu	Glu	Glu	Ser	Asn	Leu	Ser	Phe	Leu	Lys	Glu	
	50					55					60					
Leu	Leu	Phe	Arg	Ile	Asn	Arg	Leu	Asp	Leu	Leu	Ile	Thr	Tyr	Leu	Asn	
65					70					75					80	
Thr	Arg	Lys	Glu	Glu	Met	Glu	Arg	Glu	Leu	Gln	Thr	Pro	Gly	Arg	Ala	
				85					90					95		
Gln	Ile	Ser	Ala	Tyr	Arg	Val	Met	Leu	Tyr	Gln	Ile	Ser	Glu	Glu	Val	
			100					105					110			
Ser	Arg	Ser	Glu	Leu	Arg	Ser	Phe	Lys	Phe	Leu	Leu	Gln	Glu	Glu	Ile	
		115					120					125				
Ser	Lys	Cys	Lys	Leu	Asp	Asp	Asp	Met	Asn	Leu	Leu	Asp	Ile	Phe	Ile	
	130					135					140					
Glu	Met	Glu	Lys	Arg	Val	Ile	Leu	Gly	Glu	Gly	Lys	Leu	Asp	Ile	Leu	
145					150					155					160	
Lys	Arg	Val	Cys	Ala	Gln	Ile	Asn	Lys	Ser	Leu	Leu	Lys	Ile	Ile	Asn	
				165					170					175		
Asp	Tyr	Glu	Glu	Phe	Ser	Lys	Gly	Glu	Glu	Leu	Cys	Gly	Val	Met	Thr	
			180					185					190			
Ile	Ser	Asp	Ser	Pro	Arg	Glu	Gln	Asp	Ser	Glu	Ser	Gln	Thr	Leu	Asp	
		195					200					205				
Lys	Val	Tyr	Gln	Met	Lys	Ser	Lys	Pro	Arg	Gly	Tyr	Cys	Leu	Ile	Ile	
	210					215					220					
Asn	Asn	His	Asn	Phe	Ala	Lys	Ala	Arg	Glu	Lys	Val	Pro	Lys	Leu	His	
225					230					235					240	
Ser	Ile	Arg	Asp	Arg	Asn	Gly	Thr	His	Leu	Asp	Ala	Gly	Ala	Leu	Thr	
				245					250					255		
Thr	Thr	Phe	Glu	Glu	Leu	His	Phe	Glu	Ile	Lys	Pro	His	Asp	Asp	Cys	
			260					265					270			

Thr Val Glu Gln Ile Tyr Glu Ile Leu Lys Ile Tyr Gln Leu Met Asp
 275 280 285
 His Ser Asn Met Asp Cys Phe Ile Cys Cys Ile Leu Ser His Gly Asp
 290 295 300
 Lys Gly Ile Ile Tyr Gly Thr Asp Gly Gln Glu Ala Pro Ile Tyr Glu
 305 310 315 320
 Leu Thr Ser Gln Phe Thr Gly Leu Lys Cys Pro Ser Leu Ala Gly Lys
 325 330 335
 Pro Lys Val Phe Phe Ile Gln Ala Cys Gln Gly Asp Asn Tyr Gln Lys
 340 345 350
 Gly Ile Pro Val Glu Thr Asp Ser Glu Glu Gln Pro Tyr Leu Glu Met
 355 360 365
 Asp Leu Ser Ser Pro Gln Thr Arg Tyr Ile Pro Asp Glu Ala Asp Phe
 370 375 380
 Leu Leu Gly Met Ala Thr Val Asn Asn Cys Val Ser Tyr Arg Asn Pro
 385 390 395 400
 Ala Glu Gly Thr Trp Tyr Ile Gln Ser Leu Cys Gln Ser Leu Arg Glu
 405 410 415
 Arg Cys Pro Arg Gly Asp Asp Ile Leu Thr Ile Leu Thr Glu Val Asn
 420 425 430
 Tyr Glu Val Ser Asn Lys Asp Asp Lys Lys Asn Met Gly Lys Gln Met
 435 440 445
 Pro Gln Pro Thr Phe Thr Leu Arg Lys Lys Leu Val Phe Pro Ser Asp
 450 455 460

<210> 12298

<211> 278

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2418"

<220>
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<223> /note="Gene Symbol: CASP8"

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<223> /note="Gene Name:
caspase 8, apoptosis-related cysteine peptidase"

<220>
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<400> 12298

Met Asp Phe Ser Arg Asn Leu Tyr Asp Ile Gly Glu Gln Leu Asp Ser
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Glu Asp Leu Ala Ser Leu Lys Phe Leu Ser Leu Asp Tyr Ile Pro Gln
20 25 30

Arg Lys Gln Glu Pro Ile Lys Asp Ala Leu Met Leu Phe Gln Arg Leu
35 40 45

Gln Glu Lys Arg Met Leu Glu Glu Ser Asn Leu Ser Phe Leu Lys Glu
50 55 60

Leu Leu Phe Arg Ile Asn Arg Leu Asp Leu Leu Ile Thr Tyr Leu Asn
65 70 75 80

Thr Arg Lys Glu Glu Met Glu Arg Glu Leu Gln Thr Pro Gly Arg Ala
85 90 95

Gln Ile Ser Ala Tyr Arg Val Met Leu Tyr Gln Ile Ser Glu Glu Val
100 105 110

Ser Arg Ser Glu Leu Arg Ser Phe Lys Phe Leu Leu Gln Glu Glu Ile
115 120 125

Ser Lys Cys Lys Leu Asp Asp Asp Met Asn Leu Leu Asp Ile Phe Ile
130 135 140

Glu Met Glu Lys Arg Val Ile Leu Gly Glu Gly Lys Leu Asp Ile Leu
145 150 155 160

Lys Arg Val Cys Ala Gln Ile Asn Lys Ser Leu Leu Lys Ile Ile Asn
165 170 175

Asp Tyr Glu Glu Phe Ser Lys Gly Glu Glu Leu Cys Gly Val Met Thr
180 185 190

Ile Ser Asp Ser Pro Arg Glu Gln Asp Ser Glu Ser Gln Thr Leu Asp
195 200 205

Lys Val Tyr Gln Met Lys Ser Lys Pro Arg Gly Tyr Cys Leu Ile Ile
210 215 220

Asn Asn His Asn Phe Ala Lys Ala Arg Glu Lys Val Pro Lys Leu His
225 230 235 240

Ser Ile Arg Asp Arg Asn Gly Thr His Leu Asp Ala Gly Ser His Ser
245 250 255

Val Ala Gln Ala Gly Val Gln Trp Cys Asp Leu Ser Ser Leu Gln Pro
260 265 270

Pro Pro Pro Trp Phe Lys
275

<210> 12299
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<213> Homo sapiens

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<220>
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caspase 8, apoptosis-related cysteine peptidase"

<220>
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<400> 12299
Met Asp Phe Ser Arg Asn Leu Tyr Asp Ile Gly Glu Gln Leu Asp Ser
1 5 10 15

Glu Asp Leu Ala Ser Leu Lys Phe Leu Ser Leu Asp Tyr Ile Pro Gln

20					25					30					
Arg	Lys	Gln	Glu	Pro	Ile	Lys	Asp	Ala	Leu	Met	Leu	Phe	Gln	Arg	Leu
		35					40					45			
Gln	Glu	Lys	Arg	Met	Leu	Glu	Glu	Ser	Asn	Leu	Ser	Phe	Leu	Lys	Glu
	50					55					60				
Leu	Leu	Phe	Arg	Ile	Asn	Arg	Leu	Asp	Leu	Leu	Ile	Thr	Tyr	Leu	Asn
65					70					75					80
Thr	Arg	Lys	Glu	Glu	Met	Glu	Arg	Glu	Leu	Gln	Thr	Pro	Gly	Arg	Ala
				85					90					95	
Gln	Ile	Ser	Ala	Tyr	Arg	Val	Met	Leu	Tyr	Gln	Ile	Ser	Glu	Glu	Val
			100					105					110		
Ser	Arg	Ser	Glu	Leu	Arg	Ser	Phe	Lys	Phe	Leu	Leu	Gln	Glu	Glu	Ile
		115					120					125			
Ser	Lys	Cys	Lys	Leu	Asp	Asp	Asp	Met	Asn	Leu	Leu	Asp	Ile	Phe	Ile
	130					135					140				
Glu	Met	Glu	Lys	Arg	Val	Ile	Leu	Gly	Glu	Gly	Lys	Leu	Asp	Ile	Leu
145					150					155					160
Lys	Arg	Val	Cys	Ala	Gln	Ile	Asn	Lys	Ser	Leu	Leu	Lys	Ile	Ile	Asn
				165					170					175	
Asp	Tyr	Glu	Glu	Phe	Ser	Lys	Asp	Phe	Gly	Gln	Ser	Leu	Pro	Asn	Glu
			180					185					190		
Lys	Gln	Thr	Ser	Gly	Ile	Leu	Ser	Asp	His	Gln	Gln	Ser	Gln	Phe	Cys
		195					200					205			

Lys

<210> 12300

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<212> PRT

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<220>
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<400> 12300
Asn Leu Leu Asp Ile Phe Ile Glu Met Glu Lys Arg Val Ile Leu Gly
1          5          10          15

Glu Gly Lys Leu Asp Ile Leu Lys Arg Val Cys Ala Gln Ile Asn Lys
20          25          30

Ser Leu Leu Lys Ile Ile Asn Asp Tyr Glu Glu Phe Ser Lys Asp Phe
35          40          45

Gly Gln Ser Leu Pro Asn Glu Lys Gln Thr Ser Gly Ile Leu Ser Asp
50          55          60

His Gln Gln Ser Gln Phe Cys Lys Ser Thr Gly Glu Ser Ala Gln Thr
65          70          75          80

Ser Gln His

<210> 12301
<211> 116
<212> PRT
<213> Homo sapiens

<220>
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<220>
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caspase 8, apoptosis-related cysteine peptidase"

<220>

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<223> /note="ENSP ID: ENSP00000390641"

<400> 12301

Met Asp Phe Ser Arg Asn Leu Tyr Asp Ile Gly Glu Gln Leu Asp Ser
1 5 10 15

Glu Asp Leu Ala Ser Leu Lys Phe Leu Ser Leu Asp Tyr Ile Pro Gln
20 25 30

Arg Lys Gln Glu Pro Ile Lys Asp Ala Leu Met Leu Phe Gln Arg Leu
35 40 45

Gln Glu Lys Arg Met Leu Glu Glu Ser Asn Leu Ser Phe Leu Lys Glu
50 55 60

Leu Leu Phe Arg Ile Asn Arg Leu Asp Leu Leu Ile Thr Tyr Leu Asn
65 70 75 80

Thr Arg Lys Glu Glu Met Glu Arg Glu Leu Gln Thr Pro Gly Arg Ala
85 90 95

Gln Ile Ser Ala Tyr Arg Val Met Leu Tyr Gln Ile Ser Glu Glu Val
100 105 110

Ser Arg Ser Glu
115

<210> 12302

<211> 149

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2418"

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<223> /note="Gene Name:
caspase 8, apoptosis-related cysteine peptidase"

<220>
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<400> 12302

Met Leu Tyr Gln Ile Ser Glu Glu Val Ser Arg Ser Glu Leu Arg Ser
1 5 10 15

Phe Lys Phe Leu Leu Gln Glu Glu Ile Ser Lys Cys Lys Leu Asp Asp
20 25 30

Asp Met Asn Leu Leu Asp Ile Phe Ile Glu Met Glu Lys Arg Val Ile
35 40 45

Leu Gly Glu Gly Lys Leu Asp Ile Leu Lys Arg Val Cys Ala Gln Ile
50 55 60

Asn Lys Ser Leu Leu Lys Ile Ile Asn Asp Tyr Glu Glu Phe Ser Lys
65 70 75 80

Gly Glu Glu Leu Cys Gly Val Met Thr Ile Ser Asp Ser Pro Arg Glu
85 90 95

Gln Asp Ser Glu Ser Gln Thr Leu Asp Lys Val Tyr Gln Met Lys Ser
100 105 110

Lys Pro Arg Gly Tyr Cys Leu Ile Ile Asn Asn His Asn Phe Ala Lys
115 120 125

Ala Arg Glu Lys Val Pro Lys Leu His Ser Ile Arg Asp Arg Asn Gly
130 135 140

Thr His Leu Asp Ala
145

<210> 12303

<211> 258

<212> PRT

<213> Homo sapiens

<220>

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<223> /note="Gene Symbol: CASP8"

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<223> /note="Gene Name:
caspase 8, apoptosis-related cysteine peptidase"

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<223> /note="ENSP ID: ENSP00000394434"

<400> 12303

Asn Leu Leu Asp Ile Phe Ile Glu Met Glu Lys Arg Val Ile Leu Gly
1 5 10 15

Glu Gly Lys Leu Asp Ile Leu Lys Arg Val Cys Ala Gln Ile Asn Lys
20 25 30

Ser Leu Leu Lys Ile Ile Asn Asp Tyr Glu Glu Phe Ser Lys Gly Ala
35 40 45

Leu Thr Thr Thr Phe Glu Glu Leu His Phe Glu Ile Lys Pro His Asp
50 55 60

Asp Cys Thr Val Glu Gln Ile Tyr Glu Ile Leu Lys Ile Tyr Gln Leu
65 70 75 80

Met Asp His Ser Asn Met Asp Cys Phe Ile Cys Cys Ile Leu Ser His
85 90 95

Gly Asp Lys Gly Ile Ile Tyr Gly Thr Asp Gly Gln Glu Ala Pro Ile
100 105 110

Tyr Glu Leu Thr Ser Gln Phe Thr Gly Leu Lys Cys Pro Ser Leu Ala
115 120 125

Gly Lys Pro Lys Val Phe Phe Ile Gln Ala Cys Gln Gly Asp Asn Tyr
130 135 140

Gln Lys Gly Ile Pro Val Glu Thr Asp Ser Glu Glu Gln Pro Tyr Leu
145 150 155 160

Glu Met Asp Leu Ser Ser Pro Gln Thr Arg Tyr Ile Pro Asp Glu Ala
165 170 175

Asp Phe Leu Leu Gly Met Ala Thr Val Asn Asn Cys Val Ser Tyr Arg
180 185 190

Asn Pro Ala Glu Gly Thr Trp Tyr Ile Gln Ser Leu Cys Gln Ser Leu
195 200 205

Arg Glu Arg Cys Pro Arg Gly Asp Asp Ile Leu Thr Ile Leu Thr Glu
210 215 220

Val Asn Tyr Glu Val Ser Asn Lys Asp Asp Lys Lys Asn Met Gly Lys
225 230 235 240

Gln Met Pro Gln Pro Thr Phe Thr Leu Arg Lys Lys Leu Val Phe Pro
245 250 255

Ser Asp

<210> 12304
<211> 124
<212> PRT
<213> Homo sapiens

<220>
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<223> /note="Gene Name:
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<220>
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Met Asp Phe Ser Arg Asn Leu Tyr Asp Ile Gly Glu Gln Leu Asp Ser
1 5 10 15

Glu Asp Leu Ala Ser Leu Lys Phe Leu Ser Leu Asp Tyr Ile Pro Gln
20 25 30

Arg Lys Gln Glu Pro Ile Lys Asp Ala Leu Met Leu Phe Gln Arg Leu
35 40 45

Gln Glu Lys Arg Met Leu Glu Glu Ser Asn Leu Ser Phe Leu Lys Glu
50 55 60

Leu Leu Phe Arg Ile Asn Arg Leu Asp Leu Leu Ile Thr Tyr Leu Asn
65 70 75 80

Thr Arg Lys Glu Glu Met Glu Arg Glu Leu Gln Thr Pro Gly Arg Ala
85 90 95

Gln Ile Ser Ala Tyr Arg Val Met Leu Tyr Gln Ile Ser Glu Glu Val
100 105 110

Ser Arg Ser Glu Leu Arg Ser Phe Lys Phe Leu Leu
115 120

<210> 12305
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1 5 10 15

Glu Asp Leu Ala Ser Leu Lys Phe Leu Ser Leu Asp Tyr Ile Pro Gln
20 25 30

Arg Lys Gln Glu Pro Ile Lys Asp Ala Leu Met Leu Phe Gln Arg Leu
35 40 45

Gln Glu Lys Arg Met Leu Glu Glu Ser Asn Leu Ser Phe Leu Lys Glu
50 55 60

Leu Leu Phe Arg Ile Asn Arg Leu Asp Leu Leu Ile Thr Tyr Leu Asn
65 70 75 80

Thr Arg Lys Glu Glu Met Glu Arg Glu Leu Gln Thr Pro Gly Arg Ala
85 90 95

Gln Ile Ser Ala Tyr Arg Val Met Leu Tyr Gln Ile Ser Glu Glu Val
100 105 110

Ser Arg Ser Glu Leu Arg Ser Phe Lys Phe Leu Leu Gln Glu Glu Ile
115 120 125

Ser Lys Cys Lys Leu Asp Asp Asp Met Asn Leu Leu Asp Ile Phe Ile
130 135 140

Glu Met Glu Lys Arg Val Ile Leu Gly Glu Gly Lys Leu Asp Ile Leu
145 150 155 160

Lys Arg Val Cys Ala Gln Ile Asn Lys Ser Leu Leu Lys Ile Ile Asn
165 170 175

Asp Tyr Glu Glu Phe Ser Lys Glu Arg Ser Ser Ser Leu Glu Gly Ser
180 185 190

Pro Asp Glu Phe Ser Asn
195

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Met Glu Gly Gly Arg Arg Ala Arg Val Val Ile Glu Ser Lys Arg Asn
1 5 10 15

Phe Phe Leu Gly Ala Phe Pro Thr Pro Phe Pro Ala Glu His Val Glu
20 25 30

Leu Gly Arg Leu Gly Asp Ser Glu Thr Ala Met Val Pro Gly Lys Gly
35 40 45

Gly Ala Asp Gly Leu Gln Gln Lys Ser Leu
50 55

<210> 12307
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Met Asp Phe Ser Arg Asn Leu Tyr Asp Ile Gly Glu Gln Leu Asp Ser
1 5 10 15

Glu Asp Leu Ala Ser Leu Lys Phe Leu Ser Leu Asp Tyr Ile Pro Gln
20 25 30

Arg Lys Gln Glu Pro Ile Lys Asp Ala Leu Met Leu Phe Gln Arg Leu
35 40 45

Gln	Glu	Lys	Arg	Met	Leu	Glu	Glu	Ser	Asn	Leu	Ser	Phe	Leu	Lys	Glu	
	50					55					60					
Leu	Leu	Phe	Arg	Ile	Asn	Arg	Leu	Asp	Leu	Leu	Ile	Thr	Tyr	Leu	Asn	
65					70					75					80	
Thr	Arg	Lys	Glu	Glu	Met	Glu	Arg	Glu	Leu	Gln	Thr	Pro	Gly	Arg	Ala	
				85					90					95		
Gln	Ile	Ser	Ala	Tyr	Arg	Val	Met	Leu	Tyr	Gln	Ile	Ser	Glu	Glu	Val	
			100					105					110			
Ser	Arg	Ser	Glu	Leu	Arg	Ser	Phe	Lys	Phe	Leu	Leu	Gln	Glu	Glu	Ile	
		115					120					125				
Ser	Lys	Cys	Lys	Leu	Asp	Asp	Asp	Met	Asn	Leu	Leu	Asp	Ile	Phe	Ile	
	130					135					140					
Glu	Met	Glu	Lys	Arg	Val	Ile	Leu	Gly	Glu	Gly	Lys	Leu	Asp	Ile	Leu	
145					150					155					160	
Lys	Arg	Val	Cys	Ala	Gln	Ile	Asn	Lys	Ser	Leu	Leu	Lys	Ile	Ile	Asn	
				165					170					175		
Asp	Tyr	Glu	Glu	Phe	Ser	Lys	Glu	Arg	Ser	Ser	Ser	Leu	Glu	Gly	Ser	
			180					185					190			
Pro	Asp	Glu	Phe	Ser	Asn	Gly	Glu	Glu	Leu	Cys	Gly	Val	Met	Thr	Ile	
		195					200					205				
Ser	Asp	Ser	Pro	Arg	Glu	Gln	Asp	Ser	Glu	Ser	Gln	Thr	Leu	Asp	Lys	
	210					215					220					
Val	Tyr	Gln	Met	Lys	Ser	Lys	Pro	Arg	Gly	Tyr	Cys	Leu	Ile	Ile	Asn	
225					230					235					240	
Asn	His	Asn	Phe	Ala	Lys	Ala	Arg	Glu	Lys	Val	Pro	Lys	Leu	His	Ser	
				245					250					255		
Ile	Arg	Asp	Arg	Asn	Gly	Thr	His	Leu	Asp	Ala	Gly	Ala	Leu	Thr	Thr	
			260					265					270			

Thr	Phe	Glu	Glu	Leu	His	Phe	Glu	Ile	Lys	Pro	His	Asp	Asp	Cys	Thr
		275					280					285			
Val	Glu	Gln	Ile	Tyr	Glu	Ile	Leu	Lys	Ile	Tyr	Gln	Leu	Met	Asp	His
	290					295					300				
Ser	Asn	Met	Asp	Cys	Phe	Ile	Cys	Cys	Ile	Leu	Ser	His	Gly	Asp	Lys
305					310					315					320
Gly	Ile	Ile	Tyr	Gly	Thr	Asp	Gly	Gln	Glu	Ala	Pro	Ile	Tyr	Glu	Leu
				325					330					335	
Thr	Ser	Gln	Phe	Thr	Gly	Leu	Lys	Cys	Pro	Ser	Leu	Ala	Gly	Lys	Pro
			340					345					350		
Lys	Val	Phe	Phe	Ile	Gln	Ala	Cys	Gln	Gly	Asp	Asn	Tyr	Gln	Lys	Gly
		355					360					365			
Ile	Pro	Val	Glu	Thr	Asp	Ser	Glu	Glu	Gln	Pro	Tyr	Leu	Glu	Met	Asp
	370					375					380				
Leu	Ser	Ser	Pro	Gln	Thr	Arg	Tyr	Ile	Pro	Asp	Glu	Ala	Asp	Phe	Leu
385					390					395					400
Leu	Gly	Met	Ala	Thr	Val	Asn	Asn	Cys	Val	Ser	Tyr	Arg	Asn	Pro	Ala
				405					410					415	
Glu	Gly	Thr	Trp	Tyr	Ile	Gln	Ser	Leu	Cys	Gln	Ser	Leu	Arg	Glu	Arg
			420					425					430		
Cys	Pro	Arg	Gly	Asp	Asp	Ile	Leu	Thr	Ile	Leu	Thr	Glu	Val	Asn	Tyr
		435					440					445			
Glu	Val	Ser	Asn	Lys	Asp	Asp	Lys	Lys	Asn	Met	Gly	Lys	Gln	Met	Pro
	450					455					460				
Gln	Pro	Thr	Phe	Thr	Leu	Arg	Lys	Lys	Leu	Val	Phe	Pro	Ser	Asp	
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<210> 12308
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<220>
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<220>
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<220>
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<223> /note="Gene Name:
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<220>
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<220>
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<223> /note="ENSP ID: ENSP00000255256"

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Met Asp Glu Ala Asp Arg Arg Leu Leu Arg Arg Cys Arg Leu Arg Leu
1          5          10          15

Val Glu Glu Leu Gln Val Asp Gln Leu Trp Asp Ala Leu Leu Ser Arg
20          25          30

Glu Leu Phe Arg Pro His Met Ile Glu Asp Ile Gln Arg Ala Gly Ser
35          40          45

Gly Ser Arg Arg Asp Gln Ala Arg Gln Leu Ile Ile Asp Leu Glu Thr
50          55          60

Arg Gly Ser Gln Ala Leu Pro Leu Phe Ile Ser Cys Leu Glu Asp Thr
65          70          75          80

Gly Gln Asp Met Leu Ala Ser Phe Leu Arg Thr Asn Arg Gln Ala Ala
85          90          95

Lys Leu Ser Lys Pro Thr Leu Glu Asn Leu Thr Pro Val Val Leu Arg
100         105         110

Pro Glu Ile Arg Lys Pro Glu Val Leu Arg Pro Glu Thr Pro Arg Pro
115         120         125

Val Asp Ile Gly Ser Gly Gly Phe Gly Asp Val Glu Gln Lys Asp His
130         135         140

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Gly Phe Glu Val Ala Ser Thr Ser Pro Glu Asp Glu Ser Pro Gly Ser
 145 150 155 160

Asn Pro Glu Pro Asp Ala Thr Pro Phe Gln Glu Gly Leu Arg Thr Phe
 165 170 175

Asp Gln Leu Asp Ala Ile Ser Ser Leu Pro Thr Pro Ser Asp Ile Phe
 180 185 190

Val Ser Tyr Ser Thr Phe Pro Gly Phe Val Ser Trp Arg Asp Pro Lys
 195 200 205

Ser Gly Ser Trp Tyr Val Glu Thr Leu Asp Asp Ile Phe Glu Gln Trp
 210 215 220

Ala His Ser Glu Asp Leu Gln Ser Leu Leu Leu Arg Val Ala Asn Ala
 225 230 235 240

Val Ser Val Lys Gly Ile Tyr Lys Gln Met Pro Gly Cys Phe Asn Phe
 245 250 255

Leu Arg Lys Lys Leu Phe Phe Lys Thr Ser
 260 265

<210> 12309
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<220>
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<220>
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<220>
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<400> 12309

Met Asp Glu Ala Asp Arg Arg Leu Leu Arg Arg Cys Arg Leu Arg Leu
1 5 10 15

Val Glu Glu Leu Gln Val Asp Gln Leu Trp Asp Ala Leu Leu Ser Arg
20 25 30

Glu Leu Phe Arg Pro His Met Ile Glu Asp Ile Gln Arg Ala Gly Ser
35 40 45

Gly Ser Arg Arg Asp Gln Ala Arg Gln Leu Ile Ile Asp Leu Glu Thr
50 55 60

Arg Gly Ser Gln Ala Leu Pro Leu Phe Ile Ser Cys Leu Glu Asp Thr
65 70 75 80

Gly Gln Asp Met Leu Ala Ser Phe Leu Arg Thr Asn Arg Gln Ala Ala
85 90 95

Lys Leu Ser Lys Pro Thr Leu Glu Asn Leu Thr Pro Val Val Leu Arg
100 105 110

Pro Glu Ile Arg Lys Pro Glu Val Leu Arg Pro Glu Thr Pro Arg Pro
115 120 125

Val Asp Ile Gly Ser Gly Gly Phe Gly Asp Val Gly Ala Leu Glu Ser
130 135 140

Leu Arg Gly Asn Ala Asp Leu Ala Tyr Ile Leu Ser Met Glu Pro Cys
145 150 155 160

Gly His Cys Leu Ile Ile Asn Asn Val Asn Phe Cys Arg Glu Ser Gly
165 170 175

Leu Arg Thr Arg Thr Gly Ser Asn Ile Asp Cys Glu Lys Leu Arg Arg
180 185 190

Arg Phe Ser Ser Leu His Phe Met Val Glu Val Lys Gly Asp Leu Thr
195 200 205

Ala Lys Lys Met Val Leu Ala Leu Leu Glu Leu Ala Gln Gln Asp His

27215

210																	
Gly	Ala	Leu	Asp	Cys	Cys	Val	Val	Val	Ile	Leu	Ser	His	Gly	Cys	Gln		
225					230					235					240		
Ala	Ser	His	Leu	Gln	Phe	Pro	Gly	Ala	Val	Tyr	Gly	Thr	Asp	Gly	Cys		
				245					250					255			
Pro	Val	Ser	Val	Glu	Lys	Ile	Val	Asn	Ile	Phe	Asn	Gly	Thr	Ser	Cys		
			260					265					270				
Pro	Ser	Leu	Gly	Gly	Lys	Pro	Lys	Leu	Phe	Phe	Ile	Gln	Ala	Cys	Gly		
		275					280					285					
Gly	Glu	Gln	Lys	Asp	His	Gly	Phe	Glu	Val	Ala	Ser	Thr	Ser	Pro	Glu		
	290					295					300						
Asp	Glu	Ser	Pro	Gly	Ser	Asn	Pro	Glu	Pro	Asp	Ala	Thr	Pro	Phe	Gln		
305					310					315					320		
Glu	Gly	Leu	Arg	Thr	Phe	Asp	Gln	Leu	Asp	Ala	Ile	Ser	Ser	Leu	Pro		
				325					330					335			
Thr	Pro	Ser	Asp	Ile	Phe	Val	Ser	Tyr	Ser	Thr	Phe	Pro	Gly	Phe	Val		
			340					345					350				
Ser	Trp	Arg	Asp	Pro	Lys	Ser	Gly	Ser	Trp	Tyr	Val	Glu	Thr	Leu	Asp		
		355					360					365					
Asp	Ile	Phe	Glu	Gln	Trp	Ala	His	Ser	Glu	Asp	Leu	Gln	Ser	Leu	Leu		
	370					375					380						
Leu	Arg	Val	Ala	Asn	Ala	Val	Ser	Val	Lys	Gly	Ile	Tyr	Lys	Gln	Met		
385					390					395					400		
Pro	Gly	Cys	Phe	Asn	Phe	Leu	Arg	Lys	Lys	Leu	Phe	Phe	Lys	Thr	Ser		
				405					410					415			

<210> 12310

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<212> PRT

<213> Homo sapiens

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<220>
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<220>
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<223> /note="Uniprot ID: P55211"

<220>
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Met Leu Ala Ser Phe Leu Arg Thr Asn Arg Gln Ala Ala Lys Leu Ser
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Lys Pro Thr Leu Glu Asn Leu Thr Pro Val Val Leu Arg Pro Glu Ile
          20          25          30

Arg Lys Pro Glu Val Leu Arg Pro Glu Thr Pro Arg Pro Val Asp Ile
          35          40          45

Gly Ser Gly Gly Phe Gly Asp Val Gly Ala Leu Glu Ser Leu Arg Gly
          50          55          60

Asn Ala Asp Leu Ala Tyr Ile Leu Ser Met Glu Pro Cys Gly His Cys
65          70          75          80

Leu Ile Ile Asn Asn Val Asn Phe Cys Arg Glu Ser Gly Leu Arg Thr
          85          90          95

Arg Thr Gly Ser Asn Ile Asp Cys Glu Lys Leu Arg Arg Arg Phe Ser
          100          105          110

Ser Leu His Phe Met Val Glu Val Lys Gly Asp Leu Thr Ala Lys Lys
          115          120          125

Met Val Leu Ala Leu Leu Glu Leu Ala Gln Gln Asp His Gly Ala Leu
130          135          140

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Asp	Cys	Cys	Val	Val	Val	Ile	Leu	Ser	His	Gly	Cys	Gln	Ala	Ser	His
145					150					155					160
Leu	Gln	Phe	Pro	Gly	Ala	Val	Tyr	Gly	Thr	Asp	Gly	Cys	Pro	Val	Ser
				165					170					175	
Val	Glu	Lys	Ile	Val	Asn	Ile	Phe	Asn	Gly	Thr	Ser	Cys	Pro	Ser	Leu
			180					185					190		
Gly	Gly	Lys	Pro	Lys	Leu	Phe	Phe	Ile	Gln	Ala	Cys	Gly	Gly	Glu	Gln
		195					200					205			
Lys	Asp	His	Gly	Phe	Glu	Val	Ala	Ser	Thr	Ser	Pro	Glu	Asp	Glu	Ser
	210					215					220				
Pro	Gly	Ser	Asn	Pro	Glu	Pro	Asp	Ala	Thr	Pro	Phe	Gln	Glu	Gly	Leu
225					230					235					240
Arg	Thr	Phe	Asp	Gln	Leu	Asp	Ala	Ile	Ser	Ser	Leu	Pro	Thr	Pro	Ser
				245					250					255	
Asp	Ile	Phe	Val	Ser	Tyr	Ser	Thr	Phe	Pro	Gly	Phe	Val	Ser	Trp	Arg
			260					265					270		
Asp	Pro	Lys	Ser	Gly	Ser	Trp	Tyr	Val	Glu	Thr	Leu	Asp	Asp	Ile	Phe
		275					280					285			
Glu	Gln	Trp	Ala	His	Ser	Glu	Asp	Leu	Gln	Ser	Leu	Leu	Leu	Arg	Val
	290					295					300				
Ala	Asn	Ala	Val	Ser	Val	Lys	Gly	Ile	Tyr	Lys	Gln	Met	Pro	Gly	Cys
305					310					315					320
Phe	Asn	Phe	Leu	Arg	Lys	Lys	Leu	Phe	Phe	Lys	Thr	Ser			
				325					330						

<210> 12311

<211> 152

<212> PRT

<213> Homo sapiens

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<220>
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<220>
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<222> (1)..(1)
<223> Any amino acid

<400> 12311
Xaa Ala Asp Arg Arg Leu Leu Arg Arg Cys Arg Leu Arg Leu Val Glu
1 5 10 15

Glu Leu Gln Val Asp Gln Leu Trp Asp Ala Leu Leu Ser Arg Glu Leu
20 25 30

Phe Arg Pro His Met Ile Glu Asp Ile Gln Arg Ala Gly Ser Gly Ser
35 40 45

Arg Arg Asp Gln Ala Arg Gln Leu Ile Ile Asp Leu Glu Thr Arg Gly
50 55 60

Ser Gln Ala Leu Pro Leu Phe Ile Ser Cys Leu Glu Asp Thr Gly Gln
65 70 75 80

Asp Met Leu Ala Ser Phe Leu Arg Thr Asn Arg Gln Ala Ala Lys Leu
85 90 95

Ser Lys Pro Thr Leu Glu Asn Leu Thr Pro Val Val Leu Arg Pro Glu
100 105 110

Ile Arg Lys Pro Glu Val Leu Arg Pro Glu Thr Pro Arg Pro Val Asp
115 120 125

Ile Gly Ser Gly Gly Phe Gly Asp Val Gly Ala Leu Glu Ser Leu Arg
130 135 140

Gly Asn Ala Asp Leu Thr Val Leu

145

150

<210> 12312

<211> 266

<212> PRT

<213> Homo sapiens

<220>

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<220>

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<223> /note="Gene Symbol: CASP9"

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<223> /note="Gene Name:
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<223> /note="ENSP ID: ENSP00000396540"

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Met	Leu	Ala	Ser	Phe	Leu	Arg	Thr	Asn	Arg	Gln	Ala	Ala	Lys	Leu	Ser
1				5					10					15	

Lys	Pro	Thr	Leu	Glu	Asn	Leu	Thr	Pro	Val	Val	Leu	Arg	Pro	Glu	Ile
			20					25					30		

Arg	Lys	Pro	Glu	Val	Leu	Arg	Pro	Glu	Thr	Pro	Arg	Pro	Val	Asp	Ile
		35					40					45			

Gly	Ser	Gly	Gly	Phe	Gly	Asp	Val	Gly	Ala	Leu	Glu	Ser	Leu	Arg	Gly
	50					55					60				

Asn	Ala	Asp	Leu	Ala	Tyr	Ile	Leu	Ser	Met	Glu	Pro	Cys	Gly	His	Cys
65					70					75					80

Leu	Ile	Ile	Asn	Asn	Val	Asn	Phe	Cys	Arg	Glu	Ser	Gly	Leu	Arg	Thr
			85						90					95	

Arg	Thr	Gly	Ser	Asn	Ile	Asp	Cys	Glu	Lys	Leu	Arg	Arg	Arg	Phe	Ser
			100					105					110		

Ser	Leu	His	Phe	Met	Val	Glu	Val	Lys	Gly	Asp	Leu	Thr	Ala	Lys	Lys
		115					120					125			

27220

Met Val Leu Ala Leu Leu Glu Leu Ala Gln Gln Asp His Gly Ala Leu
130 135 140

Asp Cys Cys Val Val Val Ile Leu Ser His Gly Cys Gln Ala Ser His
145 150 155 160

Leu Gln Phe Pro Gly Ala Val Tyr Gly Thr Asp Gly Cys Pro Val Ser
165 170 175

Val Glu Lys Ile Val Asn Ile Phe Asn Gly Thr Ser Cys Pro Ser Leu
180 185 190

Gly Gly Lys Pro Lys Leu Phe Phe Ile Gln Ala Cys Gly Gly Glu Gln
195 200 205

Lys Asp His Gly Phe Glu Val Ala Ser Thr Ser Pro Glu Asp Glu Ser
210 215 220

Pro Gly Ser Asn Pro Glu Pro Asp Ala Thr Pro Phe Gln Glu Gly Leu
225 230 235 240

Arg Thr Phe Asp Gln Leu Asp Ala Ile Ser Ser Leu Pro Thr Pro Ser
245 250 255

Asp Ile Phe Val Ser Tyr Ser Thr Phe Pro
260 265

<210> 12313
<211> 198
<212> PRT
<213> Homo sapiens

<220>
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<222> (1)..(1)

<223> Any amino acid

<400> 12313

Xaa	Cys	Gly	His	Cys	Leu	Ile	Ile	Asn	Asn	Val	Asn	Phe	Cys	Arg	Glu
1				5					10					15	

Ser	Gly	Leu	Arg	Thr	Arg	Thr	Gly	Ser	Asn	Ile	Asp	Cys	Glu	Lys	Leu
			20					25					30		

Arg	Arg	Arg	Phe	Ser	Ser	Leu	His	Phe	Met	Val	Glu	Val	Lys	Gly	Asp
		35					40					45			

Leu	Thr	Ala	Lys	Lys	Met	Val	Leu	Ala	Leu	Leu	Glu	Leu	Ala	Gln	Gln
	50					55					60				

Asp	His	Gly	Ala	Leu	Asp	Cys	Cys	Val	Val	Val	Ile	Leu	Ser	His	Gly
65					70					75					80

Cys	Gln	Ala	Ser	His	Leu	Gln	Phe	Pro	Gly	Ala	Val	Tyr	Gly	Thr	Asp
				85					90					95	

Gly	Cys	Pro	Val	Ser	Val	Glu	Lys	Ile	Val	Asn	Ile	Phe	Asn	Gly	Thr
			100					105					110		

Ser	Cys	Pro	Ser	Leu	Gly	Gly	Lys	Pro	Lys	Leu	Phe	Phe	Ile	Gln	Ala
		115					120					125			

Cys	Gly	Gly	Gly	Phe	Val	Ser	Trp	Arg	Asp	Pro	Lys	Ser	Gly	Ser	Trp
	130						135				140				

Tyr	Val	Glu	Thr	Leu	Asp	Asp	Ile	Phe	Glu	Gln	Trp	Ala	His	Ser	Glu
145					150					155					160

Asp	Leu	Gln	Ser	Leu	Leu	Leu	Arg	Val	Ala	Asn	Ala	Val	Ser	Val	Lys
				165					170					175	

Gly	Ile	Tyr	Lys	Gln	Met	Pro	Gly	Cys	Phe	Asn	Phe	Leu	Arg	Lys	Lys
			180					185					190		

Leu Phe Phe Lys Thr Ser
195

<210> 12314

<211> 254

<212> PRT

<213> Homo sapiens

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<223> /note="Gene Name:
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<223> /note="ENSP ID: ENSP00000411304"

<400> 12314

Met Asp Glu Ala Asp Arg Arg Leu Leu Arg Arg Cys Arg Leu Arg Leu
1 5 10 15

Val Glu Glu Leu Gln Val Asp Gln Leu Trp Asp Ala Leu Leu Ser Arg
20 25 30

Glu Leu Phe Arg Pro His Met Ile Glu Asp Ile Gln Arg Ala Gly Ser
35 40 45

Gly Ser Arg Arg Asp Gln Ala Arg Gln Leu Ile Ile Asp Leu Glu Thr
50 55 60

Arg Gly Ser Gln Ala Leu Pro Leu Phe Ile Ser Cys Leu Glu Asp Thr
65 70 75 80

Gly Gln Asp Met Leu Ala Ser Phe Leu Arg Thr Asn Arg Gln Ala Ala
85 90 95

Lys Leu Ser Lys Pro Thr Leu Glu Asn Leu Thr Pro Val Val Leu Arg
100 105 110

Pro Glu Ile Arg Lys Pro Glu Val Leu Arg Pro Glu Thr Pro Arg Pro
115 120 125

27223

Val Asp Ile Gly Ser Gly Gly Phe Gly Asp Val Gly Ala Leu Glu Ser
130 135 140

Leu Arg Gly Asn Ala Asp Leu Ala Tyr Ile Leu Ser Met Glu Pro Cys
145 150 155 160

Gly His Cys Leu Ile Ile Asn Asn Val Asn Phe Cys Arg Glu Ser Gly
165 170 175

Leu Arg Thr Arg Thr Gly Ser Asn Ile Asp Cys Glu Lys Leu Arg Arg
180 185 190

Arg Phe Ser Ser Leu His Phe Met Val Glu Val Lys Gly Asp Leu Thr
195 200 205

Ala Lys Ala Ser His Leu Gln Phe Pro Gly Ala Val Tyr Gly Thr Asp
210 215 220

Gly Cys Pro Val Ser Val Glu Lys Ile Val Asn Ile Phe Asn Gly Thr
225 230 235 240

Ser Cys Pro Ser Leu Gly Gly Lys Pro Lys Leu Phe Phe Ile
245 250

<210> 12315
<211> 95
<212> PRT
<213> Homo sapiens

<220>
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<223> /note="Payload ID: 2419"

<220>
<221> source
<223> /note="Gene Symbol: CASP9"

<220>
<221> source
<223> /note="Gene Name:
caspase 9, apoptosis-related cysteine peptidase"

<220>
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<223> /note="ENSP ID: ENSP00000449216"

<400> 12315

Met Asp Glu Ala Asp Arg Arg Leu Leu Arg Arg Cys Arg Leu Arg Leu
1 5 10 15

Val Glu Glu Leu Gln Val Asp Gln Leu Trp Asp Ala Leu Leu Ser Arg
20 25 30

Glu Leu Phe Arg Pro His Met Ile Glu Asp Ile Gln Arg Ala Gly Ser
35 40 45

Gly Ser Arg Arg Asp Gln Ala Arg Gln Leu Ile Ile Asp Leu Glu Thr
50 55 60

Arg Gly Ser Gln Ala Leu Pro Leu Phe Ile Ser Cys Leu Glu Asp Thr
65 70 75 80

Gly Gln Asp Met Leu Ala Ser Phe Leu Arg Thr Asn Arg Cys Ser
85 90 95

<210> 12316

<211> 421

<212> PRT

<213> Homo sapiens

<220>

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<223> /note="Payload ID: 2419"

<220>

<221> source

<223> /note="Gene Symbol: CASP9"

<220>

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<223> /note="Gene Name:
caspase 9, apoptosis-related cysteine peptidase"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000449584"

<400> 12316

Met Asp Glu Ala Asp Arg Arg Leu Leu Arg Arg Cys Arg Leu Arg Leu
1 5 10 15

Val Glu Glu Leu Gln Val Asp Gln Leu Trp Asp Ala Leu Leu Ser Arg
20 25 30

Glu Leu Phe Arg Pro His Met Ile Glu Asp Ile Gln Arg Ala Gly Ser
35 40 45

27225

Gly	Ser	Arg	Arg	Asp	Gln	Ala	Arg	Gln	Leu	Ile	Ile	Asp	Leu	Glu	Thr	
50						55					60					
Arg	Gly	Ser	Gln	Ala	Leu	Pro	Leu	Phe	Ile	Ser	Cys	Leu	Glu	Asp	Thr	
65					70					75					80	
Gly	Gln	Asp	Met	Leu	Ala	Ser	Phe	Leu	Arg	Thr	Asn	Arg	Gln	Ala	Ala	
				85					90					95		
Lys	Leu	Ser	Lys	Pro	Thr	Leu	Glu	Asn	Leu	Thr	Pro	Val	Val	Leu	Arg	
			100					105					110			
Pro	Glu	Ile	Arg	Lys	Pro	Glu	Val	Leu	Arg	Pro	Glu	Thr	Pro	Arg	Pro	
		115					120					125				
Val	Asp	Ile	Gly	Ser	Gly	Gly	Phe	Gly	Asp	Val	Gly	Ala	Leu	Glu	Ser	
	130					135					140					
Leu	Arg	Gly	Asn	Ala	Asp	Leu	Ala	Tyr	Ile	Leu	Ser	Met	Glu	Pro	Cys	
145					150					155					160	
Gly	His	Cys	Leu	Ile	Ile	Asn	Asn	Val	Asn	Phe	Cys	Arg	Glu	Ser	Gly	
				165					170					175		
Leu	Arg	Thr	Arg	Thr	Gly	Ser	Asn	Ile	Asp	Cys	Glu	Lys	Leu	Arg	Arg	
			180					185					190			
Arg	Phe	Ser	Ser	Leu	His	Phe	Met	Val	Glu	Val	Lys	Gly	Asp	Leu	Thr	
		195					200					205				
Ala	Lys	Lys	Met	Val	Leu	Ala	Leu	Leu	Glu	Leu	Ala	Gln	Gln	Asp	His	
	210					215					220					
Gly	Ala	Leu	Asp	Cys	Cys	Val	Val	Val	Ile	Leu	Ser	His	Gly	Cys	Gln	
225					230					235					240	
Ala	Ser	His	Leu	Gln	Phe	Pro	Gly	Ala	Val	Tyr	Gly	Thr	Asp	Gly	Cys	
				245					250					255		
Pro	Val	Ser	Val	Glu	Lys	Ile	Val	Asn	Ile	Phe	Asn	Gly	Thr	Ser	Cys	
			260					265					270			

Pro Ser Leu Gly Gly Lys Pro Lys Leu Phe Phe Ile Gln Ala Cys Gly
275 280 285

Gly Glu Gln Lys Asp His Gly Phe Glu Val Ala Ser Thr Ser Pro Glu
290 295 300

Asp Glu Ser Pro Gly Ser Asn Pro Glu Pro Asp Ala Thr Pro Phe Gln
305 310 315 320

Glu Gly Leu Arg Thr Phe Asp Gln Leu Asp Ala Ile Ser Ser Leu Pro
325 330 335

Thr Pro Ser Asp Ile Phe Val Ser Tyr Ser Thr Phe Pro Gly Phe Val
340 345 350

Ser Trp Arg Asp Pro Lys Ser Gly Ser Trp Tyr Val Glu Thr Leu Asp
355 360 365

Asp Ile Phe Glu Gln Trp Ala His Ser Glu Asp Leu Gln Ser Leu Leu
370 375 380

Leu Arg Val Ser Ala Ala Phe Leu Cys Lys Gly Glu Gly Arg Leu Leu
385 390 395 400

Arg Gly Ser Val Ser Ser Trp Gly Trp Gly Phe Gly Val Ser Arg Ala
405 410 415

Gly Pro Asn Gln Gly
420

<210> 12317

<211> 47

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2419"

<220>

<221> source

<223> /note="Gene Symbol: CASP9"

<220>

<221> source

<223> /note="Gene Name:

caspase 9, apoptosis-related cysteine peptidase"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000480785"

<400> 12317

Met Leu Ala Ser Phe Leu Arg Thr Asn Arg Gln Ala Ala Lys Leu Ser
1 5 10 15

Lys Pro Thr Leu Glu Asn Leu Thr Pro Val Val Leu Arg Pro Glu Ile
20 25 30

Arg Lys Pro Glu Val Leu Arg Pro Glu Thr Pro Arg Pro Val Asp
35 40 45

<210> 12318

<211> 361

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2420"

<220>

<221> source

<223> /note="Gene Symbol: CAAP1"

<220>

<221> source

<223> /note="Gene Name:
caspase activity and apoptosis inhibitor 1"

<220>

<221> source

<223> /note="Uniprot ID: Q9H8G2"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000369431"

<400> 12318

Met Thr Gly Lys Lys Ser Ser Arg Glu Lys Arg Arg Lys Arg Ser Ser
1 5 10 15

Gln Glu Ala Ala Ala Ala Leu Ala Ala Pro Asp Ile Val Pro Ala Leu
20 25 30

Ala Ser Gly Ser Ser Gly Ser Thr Ser Gly Cys Gly Ser Ala Gly Gly
35 40 45

Cys	Gly	Ser	Val	Ser	Cys	Cys	Gly	Asn	Ala	Asn	Phe	Ser	Gly	Ser	Val	
50						55					60					
Thr	Gly	Gly	Gly	Ser	Gly	Gly	Ser	Cys	Trp	Gly	Gly	Ser	Ser	Val	Glu	
65					70					75					80	
Arg	Ser	Glu	Arg	Arg	Lys	Arg	Arg	Ser	Thr	Asp	Ser	Ser	Ser	Val	Ser	
				85					90					95		
Gly	Ser	Leu	Gln	Gln	Glu	Thr	Lys	Tyr	Ile	Leu	Pro	Thr	Leu	Glu	Lys	
			100					105					110			
Glu	Leu	Phe	Leu	Ala	Glu	His	Ser	Asp	Leu	Glu	Glu	Gly	Gly	Leu	Asp	
		115					120					125				
Leu	Thr	Val	Ser	Leu	Lys	Pro	Val	Ser	Phe	Tyr	Ile	Ser	Asp	Lys	Lys	
	130					135					140					
Glu	Met	Leu	Gln	Gln	Cys	Phe	Cys	Ile	Ile	Gly	Glu	Lys	Lys	Leu	Gln	
145					150					155					160	
Lys	Met	Leu	Pro	Asp	Val	Leu	Lys	Asn	Cys	Ser	Ile	Glu	Glu	Ile	Lys	
				165					170					175		
Lys	Leu	Cys	Gln	Glu	Gln	Leu	Glu	Leu	Leu	Ser	Glu	Lys	Lys	Ile	Leu	
			180					185						190		
Lys	Ile	Leu	Glu	Gly	Asp	Asn	Gly	Met	Asp	Ser	Asp	Met	Glu	Glu	Glu	
		195					200					205				
Ala	Asp	Asp	Gly	Ser	Lys	Met	Gly	Ser	Asp	Leu	Val	Ser	Gln	Gln	Asp	
	210					215					220					
Ile	Cys	Ile	Asp	Ser	Ala	Ser	Ser	Val	Arg	Glu	Asn	Lys	Gln	Pro	Glu	
225					230					235					240	
Gly	Leu	Glu	Leu	Lys	Gln	Gly	Lys	Gly	Glu	Asp	Ser	Asp	Val	Leu	Ser	
				245					250					255		
Ile	Asn	Ala	Asp	Ala	Tyr	Asp	Ser	Asp	Ile	Glu	Gly	Pro	Cys	Asn	Glu	
			260					265					270			

Glu Ala Ala Ala Pro Glu Ala Pro Glu Asn Thr Val Gln Ser Glu Ala
275 280 285

Gly Gln Ile Asp Asp Leu Glu Lys Asp Ile Glu Lys Ser Val Asn Glu
290 295 300

Ile Leu Gly Leu Ala Glu Ser Ser Pro Asn Glu Pro Lys Ala Ala Thr
305 310 315 320

Leu Ala Val Pro Pro Pro Glu Asp Val Gln Pro Ser Ala Gln Gln Leu
325 330 335

Glu Leu Leu Glu Leu Glu Met Arg Ala Arg Ala Ile Lys Ala Leu Met
340 345 350

Lys Ala Gly Asp Ile Lys Lys Pro Ala
355 360

<210> 12319
<211> 133
<212> PRT
<213> Homo sapiens

<220>
<221> source
<223> /note="Payload ID: 2420"

<220>
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<223> /note="Gene Symbol: CAAP1"

<220>
<221> source
<223> /note="Gene Name:
caspase activity and apoptosis inhibitor 1"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000427916"

<400> 12319
Met Thr Gly Lys Lys Ser Ser Arg Glu Lys Arg Arg Lys Arg Ser Ser
1 5 10 15

Gln Glu Ala Ala Ala Ala Leu Ala Ala Pro Asp Ile Val Pro Ala Leu
20 25 30

Ala Ser Gly Ser Ser Gly Ser Thr Ser Gly Cys Gly Ser Ala Gly Gly
35 40 45

Cys Gly Ser Val Ser Cys Cys Gly Asn Ala Asn Phe Ser Gly Ser Val
50 55 60

Thr Gly Gly Gly Ser Gly Gly Ser Cys Trp Gly Gly Ser Ser Val Glu
65 70 75 80

Arg Ser Glu Arg Arg Lys Arg Arg Ser Thr Asp Ser Ser Ser Val Ser
85 90 95

Gly Ser Leu Gln Gln Val Arg Ala Arg Pro Ser Gly Arg Phe Leu Glu
100 105 110

Leu Leu Leu Phe Arg Lys Lys Ser Gly Phe Gln Arg Asp Gly Ala Gln
115 120 125

Ala Gly Ala His Cys
130

<210> 12320
<211> 111
<212> PRT
<213> Homo sapiens

<220>
<221> source
<223> /note="Payload ID: 2420"

<220>
<221> source
<223> /note="Gene Symbol: CAAP1"

<220>
<221> source
<223> /note="Gene Name:
caspase activity and apoptosis inhibitor 1"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000427938"

<400> 12320
Met Thr Gly Lys Lys Ser Ser Arg Glu Lys Arg Arg Lys Arg Ser Ser
1 5 10 15

Gln Glu Ala Ala Ala Ala Leu Ala Ala Pro Asp Ile Val Pro Ala Leu
20 25 30

Ala Ser Gly Ser Ser Gly Ser Thr Ser Gly Cys Gly Ser Ala Gly Gly
35 40 45

Cys Gly Ser Val Ser Cys Cys Gly Asn Ala Asn Phe Ser Gly Ser Val
50 55 60

Thr Gly Gly Gly Ser Gly Gly Ser Cys Trp Gly Gly Ser Ser Val Glu
65 70 75 80

Arg Ser Glu Arg Arg Lys Arg Arg Ser Thr Asp Ser Ser Ser Val Ser
85 90 95

Gly Ser Leu Gln Gln Glu Lys Gly Lys Ile Val Met Tyr Ser Val
100 105 110

<210> 12321
<211> 216
<212> PRT
<213> Homo sapiens

<220>
<221> source
<223> /note="Payload ID: 2420"

<220>
<221> source
<223> /note="Gene Symbol: CAAP1"

<220>
<221> source
<223> /note="Gene Name:
caspase activity and apoptosis inhibitor 1"

<220>
<221> source
<223> /note="Uniprot ID: Q9H8G2"

<220>
<221> source
<223> /note="ENSP ID: ENSP00000487373"

<400> 12321
Met Leu Gln Gln Cys Phe Cys Ile Ile Gly Glu Lys Lys Leu Gln Lys
1 5 10 15

Met Leu Pro Asp Val Leu Lys Asn Cys Ser Ile Glu Glu Ile Lys Lys
20 25 30

Leu Cys Gln Glu Gln Leu Glu Leu Leu Ser Glu Lys Lys Ile Leu Lys
35 40 45

Ile Leu Glu Gly Asp Asn Gly Met Asp Ser Asp Met Glu Glu Glu Ala
 50 55 60
 Asp Asp Gly Ser Lys Met Gly Ser Asp Leu Val Ser Gln Gln Asp Ile
 65 70 75 80
 Cys Ile Asp Ser Ala Ser Ser Val Arg Glu Asn Lys Gln Pro Glu Gly
 85 90 95
 Leu Glu Leu Lys Gln Gly Lys Gly Glu Asp Ser Asp Val Leu Ser Ile
 100 105 110
 Asn Ala Asp Ala Tyr Asp Ser Asp Ile Glu Gly Pro Cys Asn Glu Glu
 115 120 125
 Ala Ala Ala Pro Glu Ala Pro Glu Asn Thr Val Gln Ser Glu Ala Gly
 130 135 140
 Gln Ile Asp Asp Leu Glu Lys Asp Ile Glu Lys Ser Val Asn Glu Ile
 145 150 155 160
 Leu Gly Leu Ala Glu Ser Ser Pro Asn Glu Pro Lys Ala Ala Thr Leu
 165 170 175
 Ala Val Pro Pro Pro Glu Asp Val Gln Pro Ser Ala Gln Gln Leu Glu
 180 185 190
 Leu Leu Glu Leu Glu Met Arg Ala Arg Ala Ile Lys Ala Leu Met Lys
 195 200 205
 Ala Gly Asp Ile Lys Lys Pro Ala
 210 215

<210> 12322

<211> 1032

<212> PRT

<213> Homo sapiens

<220>

<221> source

<223> /note="Payload ID: 2421"

<220>

<221> source

<223> /note="Gene Symbol: CARD10"

<220>

<221> source

<223> /note="Gene Name:
caspase recruitment domain family, member 10"

<220>

<221> source

<223> /note="Uniprot ID: Q9BWT7"

<220>

<221> source

<223> /note="ENSP ID: ENSP00000251973"

<400> 12322

Met Pro Gly Arg Ala Glu Ala Gly Glu Ala Glu Glu Glu Ala Gly Ala
1 5 10 15

Gly Ser Gly Ser Glu Ala Glu Glu Asp Ala Leu Trp Glu Arg Ile Glu
20 25 30

Gly Val Arg His Arg Leu Ala Arg Ala Leu Asn Pro Ala Lys Leu Thr
35 40 45

Pro Tyr Leu Arg Gln Cys Arg Val Ile Asp Glu Gln Asp Glu Glu Glu
50 55 60

Val Leu Ser Thr Tyr Arg Phe Pro Cys Arg Val Asn Arg Thr Gly Arg
65 70 75 80

Leu Met Asp Ile Leu Arg Cys Arg Gly Lys Arg Gly Tyr Glu Ala Phe
85 90 95

Leu Glu Ala Leu Glu Phe Tyr Tyr Pro Glu His Phe Thr Leu Leu Thr
100 105 110

Gly Gln Glu Pro Ala Gln Arg Cys Ser Met Ile Leu Asp Glu Glu Gly
115 120 125

Pro Glu Gly Leu Thr Gln Phe Leu Met Thr Glu Val Arg Arg Leu Arg
130 135 140

Glu Ala Arg Lys Ser Gln Leu Gln Arg Glu Gln Gln Leu Gln Ala Arg
145 150 155 160

Gly Arg Val Leu Glu Glu Glu Arg Ala Gly Leu Glu Gln Arg Leu Arg

165								170				175			
Asp	Gln	Gln	Gln	Ala	Gln	Glu	Arg	Cys	Gln	Arg	Leu	Arg	Glu	Asp	Trp
			180					185					190		
Glu	Ala	Gly	Ser	Leu	Glu	Leu	Leu	Arg	Leu	Lys	Asp	Glu	Asn	Tyr	Met
		195					200					205			
Ile	Ala	Met	Arg	Leu	Ala	Gln	Leu	Ser	Glu	Glu	Lys	Asn	Ser	Ala	Val
	210					215					220				
Leu	Arg	Ser	Arg	Asp	Leu	Gln	Leu	Ala	Val	Asp	Gln	Leu	Lys	Leu	Lys
225					230					235					240
Val	Ser	Arg	Leu	Glu	Glu	Glu	Cys	Ala	Leu	Leu	Arg	Arg	Ala	Arg	Gly
				245					250					255	
Pro	Pro	Pro	Gly	Ala	Glu	Glu	Lys	Glu	Lys	Glu	Lys	Glu	Lys	Glu	Lys
			260					265					270		
Glu	Pro	Asp	Asn	Val	Asp	Leu	Val	Ser	Glu	Leu	Arg	Ala	Glu	Asn	Gln
		275					280					285			
Arg	Leu	Thr	Ala	Ser	Leu	Arg	Glu	Leu	Gln	Glu	Gly	Leu	Gln	Gln	Glu
	290					295					300				
Ala	Ser	Arg	Pro	Gly	Ala	Pro	Gly	Ser	Glu	Arg	Ile	Leu	Leu	Asp	Ile
305					310					315					320
Leu	Glu	His	Asp	Trp	Arg	Glu	Ala	Gln	Asp	Ser	Arg	Gln	Glu	Leu	Cys
				325					330					335	
Gln	Lys	Leu	His	Ala	Val	Gln	Gly	Glu	Leu	Gln	Trp	Ala	Glu	Glu	Leu
			340					345					350		
Arg	Asp	Gln	Tyr	Leu	Gln	Glu	Met	Glu	Asp	Leu	Arg	Leu	Lys	His	Arg
		355					360					365			
Thr	Leu	Gln	Lys	Asp	Cys	Asp	Leu	Tyr	Lys	His	Arg	Met	Ala	Thr	Val
	370					375					380				
Leu	Ala	Gln	Leu	Glu	Glu	Ile	Glu	Lys	Glu	Arg	Asp	Gln	Ala	Ile	Gln
385					390					395					400

27235

Ser	Arg	Asp	Arg	Ile	Gln	Leu	Gln	Tyr	Ser	Gln	Ser	Leu	Ile	Glu	Lys	
				405					410					415		
Asp	Gln	Tyr	Arg	Lys	Gln	Val	Arg	Gly	Leu	Glu	Ala	Glu	Arg	Asp	Glu	
			420					425					430			
Leu	Leu	Thr	Thr	Leu	Thr	Ser	Leu	Glu	Gly	Thr	Lys	Ala	Leu	Leu	Glu	
		435					440					445				
Val	Gln	Leu	Gln	Arg	Ala	Gln	Gly	Gly	Thr	Cys	Leu	Lys	Ala	Cys	Ala	
	450					455					460					
Ser	Ser	His	Ser	Leu	Cys	Ser	Asn	Leu	Ser	Ser	Thr	Trp	Ser	Leu	Ser	
465					470					475					480	
Glu	Phe	Pro	Ser	Pro	Leu	Gly	Gly	Pro	Glu	Ala	Thr	Gly	Glu	Ala	Ala	
				485					490					495		
Val	Met	Gly	Gly	Pro	Glu	Pro	His	Asn	Ser	Glu	Glu	Ala	Thr	Asp	Ser	
			500					505					510			
Glu	Lys	Glu	Ile	Asn	Arg	Leu	Ser	Ile	Leu	Pro	Phe	Pro	Pro	Ser	Ala	
		515					520					525				
Gly	Ser	Ile	Leu	Arg	Arg	Gln	Arg	Glu	Glu	Asp	Pro	Ala	Pro	Pro	Lys	
	530					535					540					
Arg	Ser	Phe	Ser	Ser	Met	Ser	Asp	Ile	Thr	Gly	Ser	Val	Thr	Leu	Lys	
545					550					555					560	
Pro	Trp	Ser	Pro	Gly	Leu	Ser	Ser	Ser	Ser	Ser	Ser	Asp	Ser	Val	Trp	
				565					570					575		
Pro	Leu	Gly	Lys	Pro	Glu	Gly	Leu	Leu	Ala	Arg	Gly	Cys	Gly	Leu	Asp	
			580					585					590			
Phe	Leu	Asn	Arg	Ser	Leu	Ala	Ile	Arg	Val	Ser	Gly	Arg	Ser	Pro	Pro	
		595					600					605				
Gly	Gly	Pro	Glu	Pro	Gln	Asp	Lys	Gly	Pro	Asp	Gly	Leu	Ser	Phe	Tyr	
	610					615					620					

Gly 625	Asp	Arg	Trp	Ser	Gly 630	Ala	Val	Val	Arg	Arg 635	Val	Leu	Ser	Gly	Pro 640
Gly	Ser	Ala	Arg	Met 645	Glu	Pro	Arg	Glu	Gln 650	Arg	Val	Glu	Ala	Ala	Gly 655
Leu	Glu	Gly	Ala 660	Cys	Leu	Glu	Ala	Glu 665	Ala	Gln	Gln	Arg	Thr	Leu	Leu
Trp	Asn	Gln 675	Gly	Ser	Thr	Leu	Pro 680	Ser	Leu	Met	Asp	Ser 685	Lys	Ala	Cys
Gln 690	Ser	Phe	His	Glu	Ala	Leu 695	Glu	Ala	Trp	Ala	Lys 700	Gly	Pro	Gly	Ala
Glu 705	Pro	Phe	Tyr	Ile	Arg 710	Ala	Asn	Leu	Thr	Leu 715	Pro	Glu	Arg	Ala	Asp 720
Pro	His	Ala	Leu	Cys 725	Val	Lys	Ala	Gln	Glu 730	Ile	Leu	Arg	Leu	Val	Asp 735
Ser	Ala	Tyr	Lys 740	Arg	Arg	Gln	Glu	Trp 745	Phe	Cys	Thr	Arg	Val 750	Asp	Pro
Leu	Thr	Leu 755	Arg	Asp	Leu	Asp 760	Arg	Gly	Thr	Val	Pro	Asn 765	Tyr	Gln	Arg
Ala 770	Gln	Gln	Leu	Leu	Glu	Val 775	Gln	Glu	Lys	Cys	Leu 780	Pro	Ser	Ser	Arg
His 785	Arg	Gly	Pro	Arg	Ser 790	Asn	Leu	Lys	Lys	Arg 795	Ala	Leu	Asp	Gln	Leu 800
Arg	Leu	Val	Arg	Pro 805	Lys	Pro	Val	Gly	Ala 810	Pro	Ala	Gly	Asp	Ser 815	Pro
Asp	Gln	Leu 820	Leu	Leu	Glu	Pro	Cys 825	Ala	Glu	Pro	Glu	Arg	Ser 830	Leu	Arg
Pro	Tyr	Ser 835	Leu	Val	Arg	Pro	Leu 840	Leu	Val	Ser	Ala	Leu 845	Arg	Pro	Val

Val Leu Leu Pro Glu Cys Leu Ala Pro Arg Leu Ile Arg Asn Leu Leu
850 855 860

Asp Leu Pro Ser Ser Arg Leu Asp Phe Gln Val Cys Pro Ala Glu Ser
865 870 875 880

Leu Ser Gly Glu Glu Leu Cys Pro Ser Ser Ala Pro Gly Ala Pro Lys
885 890 895

Ala Gln Pro Ala Thr Pro Gly Leu Gly Ser Arg Ile Arg Ala Ile Gln
900 905 910

Glu Ser Val Gly Lys Lys His Cys Leu Leu Glu Leu Gly Ala Arg Gly
915 920 925

Val Arg Glu Leu Val Gln Asn Glu Ile Tyr Pro Ile Val Ile His Val
930 935 940

Glu Val Thr Glu Lys Asn Val Arg Glu Val Arg Gly Leu Leu Gly Arg
945 950 955 960

Pro Gly Trp Arg Asp Ser Glu Leu Leu Arg Gln Cys Arg Gly Ser Glu
965 970 975

Gln Val Leu Trp Gly Leu Pro Cys Ser Trp Val Gln Val Pro Ala His
980 985 990

Glu Trp Gly His Ala Glu Glu Leu Ala Lys Val Val Arg Gly Arg
Ile 995 1000 1005

Leu Gln Glu Gln Ala Arg Leu Val Trp Val Glu Cys Gly Ser Ser
1010 1015 1020

Arg Gly Cys Pro Ser Ser Ser Glu Ala
1025 1030

<210> 12323

<211> 1032

<212> PRT

<213> Homo sapiens

<220>

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<223> /note="Payload ID: 2421"

<220>
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 <223> /note="Gene Symbol: CARD10"

<220>
 <221> source
 <223> /note="Gene Name:
 caspase recruitment domain family, member 10"

<220>
 <221> source
 <223> /note="Uniprot ID: Q9BWT7"

<220>
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 <223> /note="ENSP ID: ENSP00000384570"

<400> 12323
 Met Pro Gly Arg Ala Glu Ala Gly Glu Ala Glu Glu Glu Ala Gly Ala
 1 5 10 15

Gly Ser Gly Ser Glu Ala Glu Glu Asp Ala Leu Trp Glu Arg Ile Glu
 20 25 30

Gly Val Arg His Arg Leu Ala Arg Ala Leu Asn Pro Ala Lys Leu Thr
 35 40 45

Pro Tyr Leu Arg Gln Cys Arg Val Ile Asp Glu Gln Asp Glu Glu Glu
 50 55 60

Val Leu Ser Thr Tyr Arg Phe Pro Cys Arg Val Asn Arg Thr Gly Arg
 65 70 75 80

Leu Met Asp Ile Leu Arg Cys Arg Gly Lys Arg Gly Tyr Glu Ala Phe
 85 90 95

Leu Glu Ala Leu Glu Phe Tyr Tyr Pro Glu His Phe Thr Leu Leu Thr
 100 105 110

Gly Gln Glu Pro Ala Gln Arg Cys Ser Met Ile Leu Asp Glu Glu Gly
 115 120 125

Pro Glu Gly Leu Thr Gln Phe Leu Met Thr Glu Val Arg Arg Leu Arg
 130 135 140

Glu Ala Arg Lys Ser Gln Leu Gln Arg Glu Gln Gln Leu Gln Ala Arg
 145 150 155 160

Gly	Arg	Val	Leu	Glu	Glu	Glu	Arg	Ala	Gly	Leu	Glu	Gln	Arg	Leu	Arg		
				165					170					175			
Asp	Gln	Gln	Gln	Ala	Gln	Glu	Arg	Cys	Gln	Arg	Leu	Arg	Glu	Asp	Trp		
			180					185					190				
Glu	Ala	Gly	Ser	Leu	Glu	Leu	Leu	Arg	Leu	Lys	Asp	Glu	Asn	Tyr	Met		
		195					200					205					
Ile	Ala	Met	Arg	Leu	Ala	Gln	Leu	Ser	Glu	Glu	Lys	Asn	Ser	Ala	Val		
	210					215					220						
Leu	Arg	Ser	Arg	Asp	Leu	Gln	Leu	Ala	Val	Asp	Gln	Leu	Lys	Leu	Lys		
225					230					235					240		
Val	Ser	Arg	Leu	Glu	Glu	Glu	Cys	Ala	Leu	Leu	Arg	Arg	Ala	Arg	Gly		
				245					250					255			
Pro	Pro	Pro	Gly	Ala	Glu	Glu	Lys	Glu	Lys	Glu	Lys	Glu	Lys	Glu	Lys		
			260					265					270				
Glu	Pro	Asp	Asn	Val	Asp	Leu	Val	Ser	Glu	Leu	Arg	Ala	Glu	Asn	Gln		
		275					280					285					
Arg	Leu	Thr	Ala	Ser	Leu	Arg	Glu	Leu	Gln	Glu	Gly	Leu	Gln	Gln	Glu		
	290					295					300						
Ala	Ser	Arg	Pro	Gly	Ala	Pro	Gly	Ser	Glu	Arg	Ile	Leu	Leu	Asp	Ile		
305					310					315					320		
Leu	Glu	His	Asp	Trp	Arg	Glu	Ala	Gln	Asp	Ser	Arg	Gln	Glu	Leu	Cys		
				325					330					335			
Gln	Lys	Leu	His	Ala	Val	Gln	Gly	Glu	Leu	Gln	Trp	Ala	Glu	Glu	Leu		
			340					345					350				
Arg	Asp	Gln	Tyr	Leu	Gln	Glu	Met	Glu	Asp	Leu	Arg	Leu	Lys	His	Arg		
		355					360					365					
Thr	Leu	Gln	Lys	Asp	Cys	Asp	Leu	Tyr	Lys	His	Arg	Met	Ala	Thr	Val		
	370					375					380						

Leu	Ala	Gln	Leu	Glu	Glu	Ile	Glu	Lys	Glu	Arg	Asp	Gln	Ala	Ile	Gln	
385					390					395					400	
Ser	Arg	Asp	Arg	Ile	Gln	Leu	Gln	Tyr	Ser	Gln	Ser	Leu	Ile	Glu	Lys	
				405					410					415		
Asp	Gln	Tyr	Arg	Lys	Gln	Val	Arg	Gly	Leu	Glu	Ala	Glu	Arg	Asp	Glu	
			420					425					430			
Leu	Leu	Thr	Thr	Leu	Thr	Ser	Leu	Glu	Gly	Thr	Lys	Ala	Leu	Leu	Glu	
		435					440					445				
Val	Gln	Leu	Gln	Arg	Ala	Gln	Gly	Gly	Thr	Cys	Leu	Lys	Ala	Cys	Ala	
	450					455					460					
Ser	Ser	His	Ser	Leu	Cys	Ser	Asn	Leu	Ser	Ser	Thr	Trp	Ser	Leu	Ser	
465					470					475					480	
Glu	Phe	Pro	Ser	Pro	Leu	Gly	Gly	Pro	Glu	Ala	Thr	Gly	Glu	Ala	Ala	
				485					490					495		
Val	Met	Gly	Gly	Pro	Glu	Pro	His	Asn	Ser	Glu	Glu	Ala	Thr	Asp	Ser	
			500					505					510			
Glu	Lys	Glu	Ile	Asn	Arg	Leu	Ser	Ile	Leu	Pro	Phe	Pro	Pro	Ser	Ala	
		515					520					525				
Gly	Ser	Ile	Leu	Arg	Arg	Gln	Arg	Glu	Glu	Asp	Pro	Ala	Pro	Pro	Lys	
	530					535					540					
Arg	Ser	Phe	Ser	Ser	Met	Ser	Asp	Ile	Thr	Gly	Ser	Val	Thr	Leu	Lys	
545					550					555					560	
Pro	Trp	Ser	Pro	Gly	Leu	Ser	Ser	Ser	Ser	Ser	Ser	Asp	Ser	Val	Trp	
				565					570					575		
Pro	Leu	Gly	Lys	Pro	Glu	Gly	Leu	Leu	Ala	Arg	Gly	Cys	Gly	Leu	Asp	
			580					585					590			
Phe	Leu	Asn	Arg	Ser	Leu	Ala	Ile	Arg	Val	Ser	Gly	Arg	Ser	Pro	Pro	
		595					600					605				

Gly	Gly	Pro	Glu	Pro	Gln	Asp	Lys	Gly	Pro	Asp	Gly	Leu	Ser	Phe	Tyr	
610						615					620					
Gly	Asp	Arg	Trp	Ser	Gly	Ala	Val	Val	Arg	Arg	Val	Leu	Ser	Gly	Pro	
625					630					635					640	
Gly	Ser	Ala	Arg	Met	Glu	Pro	Arg	Glu	Gln	Arg	Val	Glu	Ala	Ala	Gly	
				645					650					655		
Leu	Glu	Gly	Ala	Cys	Leu	Glu	Ala	Glu	Ala	Gln	Gln	Arg	Thr	Leu	Leu	
			660					665					670			
Trp	Asn	Gln	Gly	Ser	Thr	Leu	Pro	Ser	Leu	Met	Asp	Ser	Lys	Ala	Cys	
		675					680					685				
Gln	Ser	Phe	His	Glu	Ala	Leu	Glu	Ala	Trp	Ala	Lys	Gly	Pro	Gly	Ala	
	690					695					700					
Glu	Pro	Phe	Tyr	Ile	Arg	Ala	Asn	Leu	Thr	Leu	Pro	Glu	Arg	Ala	Asp	
705					710					715					720	
Pro	His	Ala	Leu	Cys	Val	Lys	Ala	Gln	Glu	Ile	Leu	Arg	Leu	Val	Asp	
				725					730					735		
Ser	Ala	Tyr	Lys	Arg	Arg	Gln	Glu	Trp	Phe	Cys	Thr	Arg	Val	Asp	Pro	
			740					745					750			
Leu	Thr	Leu	Arg	Asp	Leu	Asp	Arg	Gly	Thr	Val	Pro	Asn	Tyr	Gln	Arg	
		755					760					765				
Ala	Gln	Gln	Leu	Leu	Glu	Val	Gln	Glu	Lys	Cys	Leu	Pro	Ser	Ser	Arg	
	770					775					780					
His	Arg	Gly	Pro	Arg	Ser	Asn	Leu	Lys	Lys	Arg	Ala	Leu	Asp	Gln	Leu	
785					790					795					800	
Arg	Leu	Val	Arg	Pro	Lys	Pro	Val	Gly	Ala	Pro	Ala	Gly	Asp	Ser	Pro	
				805					810					815		
Asp	Gln	Leu	Leu	Leu	Glu	Pro	Cys	Ala	Glu	Pro	Glu	Arg	Ser	Leu	Arg	
		820						825					830			
Pro	Tyr	Ser	Leu	Val	Arg	Pro	Leu	Leu	Val	Ser	Ala	Leu	Arg	Pro	Val	

835		840		845											
Val	Leu	Leu	Pro	Glu	Cys	Leu	Ala	Pro	Arg	Leu	Ile	Arg	Asn	Leu	Leu
850						855					860				
Asp	Leu	Pro	Ser	Ser	Arg	Leu	Asp	Phe	Gln	Val	Cys	Pro	Ala	Glu	Ser
865					870					875					880
Leu	Ser	Gly	Glu	Glu	Leu	Cys	Pro	Ser	Ser	Ala	Pro	Gly	Ala	Pro	Lys
				885					890					895	
Ala	Gln	Pro	Ala	Thr	Pro	Gly	Leu	Gly	Ser	Arg	Ile	Arg	Ala	Ile	Gln
			900					905					910		
Glu	Ser	Val	Gly	Lys	Lys	His	Cys	Leu	Leu	Glu	Leu	Gly	Ala	Arg	Gly
		915					920					925			
Val	Arg	Glu	Leu	Val	Gln	Asn	Glu	Ile	Tyr	Pro	Ile	Val	Ile	His	Val
	930					935					940				
Glu	Val	Thr	Glu	Lys	Asn	Val	Arg	Glu	Val	Arg	Gly	Leu	Leu	Gly	Arg
945					950					955					960
Pro	Gly	Trp	Arg	Asp	Ser	Glu	Leu	Leu	Arg	Gln	Cys	Arg	Gly	Ser	Glu
				965					970					975	
Gln	Val	Leu	Trp	Gly	Leu	Pro	Cys	Ser	Trp	Val	Gln	Val	Pro	Ala	His
		980						985					990		
Glu	Trp	Gly	His	Ala	Glu	Glu	Leu	Ala	Lys	Val	Val	Arg	Gly	Arg	
Ile															
		995					1000					1005			
Leu	Gln	Glu	Gln	Ala	Arg	Leu	Val	Trp	Val	Glu	Cys	Gly	Ser	Ser	
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Arg	Gly	Cys	Pro	Ser	Ser	Ser	Glu	Ala							
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<220>
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Met Glu Ala Ser Arg Pro Gly Ala Pro Gly Ser Glu Arg Ile Leu Leu
          20          25          30

Asp Ile Leu Glu His Asp Trp Arg Glu Ala Gln Asp Ser Arg Gln Glu
          35          40          45

Leu Cys Gln Lys Leu His Ala Val Gln Gly Glu Leu Gln Trp Ala Glu
          50          55          60

Glu Leu Arg Asp Gln Tyr Leu Gln Glu Met Glu Asp Leu Arg Leu Lys
65          70          75          80

His Arg Thr Leu Gln Lys Asp Cys Asp Leu Tyr Lys His Arg Met Ala
          85          90          95

Thr Val Leu Ala Gln Leu Glu Glu Ile Glu Lys Glu Arg Asp Gln Ala
          100          105          110

Ile Gln Ser Arg Asp Arg Ile Gln Leu Gln Tyr Ser Gln Ser Leu Ile
          115          120          125

Glu Lys Asp Gln Tyr Arg Lys Gln Val Arg Gly Leu Glu Ala Glu Arg
          130          135          140

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Asp	Glu	Leu	Leu	Thr	Thr	Leu	Thr	Ser	Leu	Glu	Gly	Thr	Lys	Ala	Leu	145	150	155	160
Leu	Glu	Val	Gln	Leu	Gln	Arg	Ala	Gln	Gly	Gly	Thr	Cys	Leu	Lys	Ala	165	170	175	
Cys	Ala	Ser	Ser	His	Ser	Leu	Cys	Ser	Asn	Leu	Ser	Ser	Thr	Trp	Ser	180	185	190	
Leu	Ser	Glu	Phe	Pro	Ser	Pro	Leu	Gly	Gly	Pro	Glu	Ala	Thr	Gly	Glu	195	200	205	
Ala	Ala	Val	Met	Gly	Gly	Pro	Glu	Pro	His	Asn	Ser	Glu	Glu	Ala	Thr	210	215	220	
Asp	Ser	Glu	Lys	Glu	Ile	Asn	Arg	Leu	Ser	Ile	Leu	Pro	Phe	Pro	Pro	225	230	235	240
Ser	Ala	Gly	Ser	Ile	Leu	Arg	Arg	Gln	Arg	Glu	Glu	Asp	Pro	Ala	Pro	245	250	255	
Pro	Lys	Arg	Ser	Phe	Ser	Ser	Met	Ser	Asp	Ile	Thr	Gly	Ser	Val	Thr	260	265	270	
Leu	Lys	Pro	Trp	Ser	Pro	Gly	Leu	Ser	Ser	Ser	Ser	Ser	Ser	Asp	Ser	275	280	285	
Val	Trp	Pro	Leu	Gly	Lys	Pro	Glu	Gly	Leu	Leu	Ala	Arg	Gly	Cys	Gly	290	295	300	
Leu	Asp	Phe	Leu	Asn	Arg	Ser	Leu	Ala	Ile	Arg	Val	Ser	Gly	Arg	Ser	305	310	315	320
Pro	Pro	Gly	Gly	Pro	Glu	Pro	Gln	Asp	Lys	Gly	Pro	Asp	Gly	Leu	Ser	325	330	335	
Phe	Tyr	Gly	Asp	Arg	Trp	Ser	Gly	Ala	Val	Val	Arg	Arg	Val	Leu	Ser	340	345	350	
Gly	Pro	Gly	Ser	Ala	Arg	Met	Glu	Pro	Arg	Glu	Gln	Arg	Val	Glu	Ala	355	360	365	

Ala Gly Leu Glu Gly Ala Cys Leu Glu Ala Glu Ala Gln Gln Arg Thr
370 375 380

Leu Leu Trp Asn Gln Gly Ser Thr Leu Pro Ser Leu Met Asp Ser Lys
385 390 395 400

Ala Cys Gln Ser Phe His Glu Ala Leu Glu Ala Trp Ala Lys Gly Pro
405 410 415

Gly Ala Glu Pro Phe Tyr Ile Arg Ala Asn Leu Thr Leu Pro Glu Arg
420 425 430

Ala Asp Pro His Ala Leu Cys Val Lys Ala Gln Glu Ile Leu Arg Leu
435 440 445

Val Asp Ser Ala Tyr Lys Arg Arg Gln Glu Trp Phe Cys Thr Arg Val
450 455 460

Asp Pro Leu Thr Leu Arg Asp Leu Asp Arg Gly Thr Val Pro Asn Tyr
465 470 475 480

Gln Arg Ala Gln Gln Leu Leu Glu Val Gln Glu Lys Cys Leu Pro Ser
485 490 495

Ser Arg His Arg Gly Pro Arg Ser Asn Leu Lys Lys Arg Ala Leu Asp
500 505 510

Gln Leu Arg Leu Val Arg Pro Lys Pro Val Gly Ala Pro Ala Gly Asp
515 520 525

Ser Pro Asp Gln Leu Leu Leu Glu Pro Cys Ala Glu Pro Glu Arg Ser
530 535 540

Leu Arg Pro Tyr Ser Leu Val Arg Pro Leu Leu Val Ser Ala Leu Arg
545 550 555 560

Pro Val Val Leu Leu Pro Glu Cys Leu Ala Pro Arg Leu Ile Arg Asn
565 570 575

Leu Leu Asp Leu Pro Ser Ser Arg Leu Asp Phe Gln Val Cys Pro Ala
580 585 590

Glu Ser Leu Ser Gly Glu Glu Leu Cys Pro Ser Ser Ala Pro Gly Ala

595						600						605					
Pro	Lys	Ala	Gln	Pro	Ala	Thr	Pro	Gly	Leu	Gly	Ser	Arg	Ile	Arg	Ala		
	610					615					620						
Ile	Gln	Glu	Ser	Val	Gly	Lys	Lys	His	Cys	Leu	Leu	Glu	Leu	Gly	Ala		
625					630					635					640		
Arg	Gly	Val	Arg	Glu	Leu	Val	Gln	Asn	Glu	Ile	Tyr	Pro	Ile	Val	Ile		
				645					650					655			
His	Val	Glu	Val	Thr	Glu	Lys	Asn	Val	Arg	Glu	Val	Arg	Gly	Leu	Leu		
			660					665					670				
Gly	Arg	Pro	Gly	Trp	Arg	Asp	Ser	Glu	Leu	Leu	Arg	Gln	Cys	Arg	Gly		
		675					680					685					
Ser	Glu	Gln	Val	Leu	Trp	Gly	Leu	Pro	Cys	Ser	Trp	Val	Gln	Val	Pro		
	690					695					700						
Ala	His	Glu	Trp	Gly	His	Ala	Glu	Glu	Leu	Ala	Lys	Val	Val	Arg	Gly		
705					710					715					720		
Arg	Ile	Leu	Gln	Glu	Gln	Ala	Arg	Leu	Val	Trp	Val	Glu	Cys	Gly	Ser		
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Leu Ser Phe Ser Ser Met Ser Asp Ile Thr Gly Ser Val Thr Leu Lys
 20 25 30

Pro Trp Ser Pro Gly Leu Ser Ser Ser Ser Ser Asp Ser Val Trp
 35 40 45

Pro Leu Gly Lys Pro Glu Gly Leu Leu Ala Arg Gly Cys Gly Leu Asp
 50 55 60

Phe Leu Asn Arg Ser Leu Ala Ile Arg Val Ser Gly Arg Ser Pro Pro
 65 70 75 80

Gly Gly Pro Glu Pro Gln Asp Lys Gly Pro Asp Gly Leu Ser Phe Tyr
 85 90 95

Gly Asp Arg Trp Ser Gly Ala Val Val Arg Arg Val Leu Ser Gly Pro
 100 105 110

Gly Ser Ala Arg Met Glu Pro Arg Glu Gln Arg Val Glu Ala Ala Gly
 115 120 125

Leu Glu Gly Ala Cys Leu Glu Ala Glu Ala Gln Gln Arg Thr Leu Leu
 130 135 140

Trp Asn Gln Gly Ser Thr Leu Pro Ser Leu Met Asp Ser Lys Ala Cys
 145 150 155 160

Gln Ser Phe His Glu Ala Leu Glu Ala Trp Ala Lys Gly Pro Gly Ala
 165 170 175

Glu Pro Phe Tyr Ile Arg Ala Asn Leu Thr Leu Pro Glu Arg Ala Asp
 180 185 190

<210> 12326

<211> 480

<212> PRT

<213> Homo sapiens


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<400> 12326
Met Glu Asp Leu Arg Leu Lys His Arg Thr Leu Gln Lys Asp Cys Asp
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Leu Tyr Lys His Arg Met Ala Thr Val Leu Ala Gln Leu Glu Glu Ile
20          25          30

Glu Lys Glu Arg Asp Gln Ala Ile Gln Ser Arg Asp Arg Ile Gln Leu
35          40          45

Gln Tyr Ser Gln Ser Leu Ile Glu Lys Asp Gln Tyr Arg Lys Gln Val
50          55          60

Arg Gly Leu Glu Ala Glu Arg Asp Glu Leu Leu Thr Thr Leu Thr Ser
65          70          75          80

Leu Glu Gly Thr Lys Ala Leu Leu Glu Val Gln Leu Gln Arg Ala Gln
85          90          95

Gly Gly Thr Cys Leu Lys Ala Cys Ala Ser Ser His Ser Leu Cys Ser
100         105         110

Asn Leu Ser Ser Thr Trp Ser Leu Ser Glu Phe Pro Ser Pro Leu Gly
115         120         125

Gly Pro Glu Ala Thr Gly Glu Ala Ala Val Met Gly Gly Pro Glu Pro
130         135         140

His Asn Ser Glu Glu Ala Thr Asp Ser Glu Lys Glu Ile Asn Arg Leu
145         150         155         160

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Ser	Ile	Leu	Pro	Phe	Pro	Pro	Ser	Ala	Gly	Ser	Ile	Leu	Arg	Arg	Gln	
				165					170					175		
Arg	Glu	Glu	Asp	Pro	Ala	Pro	Pro	Lys	Arg	Ser	Phe	Ser	Ser	Met	Ser	
			180					185					190			
Asp	Ile	Thr	Gly	Ser	Val	Thr	Leu	Lys	Pro	Trp	Ser	Pro	Gly	Leu	Ser	
		195					200					205				
Ser	Ser	Ser	Ser	Ser	Asp	Ser	Val	Trp	Pro	Leu	Gly	Lys	Pro	Glu	Gly	
	210					215					220					
Leu	Leu	Ala	Arg	Gly	Cys	Gly	Leu	Asp	Phe	Leu	Asn	Arg	Ser	Leu	Ala	
225					230					235					240	
Ile	Arg	Val	Ser	Gly	Arg	Ser	Pro	Pro	Gly	Gly	Pro	Glu	Pro	Gln	Asp	
				245					250					255		
Lys	Gly	Pro	Asp	Gly	Leu	Ser	Phe	Tyr	Gly	Asp	Arg	Trp	Ser	Gly	Ala	
			260					265					270			
Val	Val	Arg	Arg	Val	Leu	Ser	Gly	Pro	Gly	Ser	Ala	Arg	Met	Glu	Pro	