

SEQUENCE LISTING

<110> SENTI BIOSCIENCES, INC.

<120> CHIMERIC RECEPTORS AND METHODS OF USE THEREOF

<130> STB-023W0

<140> PCT/US2021/060765

<141> 2021-11-24

<150> 63/231,626

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<160> 140

<170> PatentIn version 3.5

<210> 1

<211> 120

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 1

Gln	Val	Gln	Leu	Gln	Gln	Ser	Gly	Ala	Glu	Leu	Val	Arg	Pro	Gly	Thr
1				5					10					15	

Ser	Val	Lys	Val	Ser	Cys	Lys	Ala	Ser	Gly	Tyr	Ala	Phe	Thr	Asn	Asn
			20					25					30		

Leu	Ile	Glu	Trp	Val	Lys	Gln	Arg	Pro	Gly	Gln	Gly	Leu	Glu	Trp	Ile
		35					40					45			

Gly	Val	Ile	Asn	Pro	Gly	Ser	Gly	Asp	Thr	Asn	Tyr	Asn	Glu	Lys	Phe
	50					55					60				

Lys	Gly	Lys	Ala	Thr	Leu	Thr	Ala	Asp	Lys	Ser	Ser	Asn	Thr	Ala	Tyr
65					70					75					80

Met	Gln	Leu	Ser	Ser	Leu	Thr	Ser	Asp	Asp	Ser	Ala	Val	Tyr	Phe	Cys
				85					90					95	

Ala Arg Gly Asp Tyr Tyr Gly Gly Phe Ala Val Asp Tyr Trp Gly Gln
 100 105 110

Gly Thr Ser Val Thr Val Ser Ser
 115 120

<210> 2

<211> 106

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 polypeptide

<400> 2

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

Asp Arg Val Thr Ile Ser Cys Arg Thr Ser Gln Asp Ile Gly Asn Tyr
 20 25 30

Leu Asn Trp Tyr Gln Gln Lys Pro Asp Gly Thr Val Lys Leu Leu Ile
 35 40 45

Tyr Tyr Thr Ser Arg Leu His Ser Gly Val Pro Ser Arg Phe Ser Gly
 50 55 60

Ser Gly Ser Gly Thr Asp Tyr Ser Leu Thr Ile Ser Asn Leu Glu Gln
 65 70 75 80

Glu Asp Ile Ala Thr Tyr Phe Cys Gln Gln Gly Lys Ser Leu Pro Arg
 85 90 95

Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile
 100 105

<210> 3

<211> 119

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic

polypeptide

<400> 3

Glu Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Arg
 1 5 10 15

Ser Leu Arg Leu Ser Cys Ser Ala Ser Gly Phe Asp Phe Thr Thr Tyr
 20 25 30

Trp Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Ile
 35 40 45

Gly Glu Ile His Pro Asp Ser Ser Thr Ile Asn Tyr Ala Pro Ser Leu
 50 55 60

Lys Asp Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Thr Leu Phe
 65 70 75 80

Leu Gln Met Asp Ser Leu Arg Pro Glu Asp Thr Gly Val Tyr Phe Cys
 85 90 95

Ala Ser Leu Tyr Phe Gly Phe Pro Trp Phe Ala Tyr Trp Gly Gln Gly
 100 105 110

Thr Pro Val Thr Val Ser Ser
 115

<210> 4

<211> 106

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 polypeptide

<400> 4

Asp Ile Gln Leu Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
 1 5 10 15

Asp Arg Val Thr Ile Thr Cys Lys Ala Ser Gln Asp Val Gly Thr Ser
 20 25 30

Val Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile

35

40

45

Tyr Trp Thr Ser Thr Arg His Thr Gly Val Pro Ser Arg Phe Ser Gly
 50 55 60

Ser Gly Ser Gly Thr Asp Phe Thr Phe Thr Ile Ser Ser Leu Gln Pro
 65 70 75 80

Glu Asp Ile Ala Thr Tyr Tyr Cys Gln Gln Tyr Ser Leu Tyr Arg Ser
 85 90 95

Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
 100 105

<210> 5

<211> 448

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 polypeptide

<400> 5

Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Glu Phe
 20 25 30

Gly Met Asn Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
 35 40 45

Gly Trp Ile Asn Thr Lys Thr Gly Glu Ala Thr Tyr Val Glu Glu Phe
 50 55 60

Lys Gly Arg Val Thr Phe Thr Thr Asp Thr Ser Thr Ser Thr Ala Tyr
 65 70 75 80

Met Glu Leu Arg Ser Leu Arg Ser Asp Asp Thr Ala Val Tyr Tyr Cys
 85 90 95

Ala Arg Trp Asp Phe Ala Tyr Tyr Val Glu Ala Met Asp Tyr Trp Gly

100	105								110				
Thr	Val	Thr	Val	Ser 120	Ser	Ala	Ser	Thr	Lys 125	Gly	Pro	Ser	
Leu	Ala	Pro	Ser 135	Ser	Lys	Ser	Thr	Ser 140	Gly	Gly	Thr	Ala	
Cys	Leu	Val 150	Lys	Asp	Tyr	Phe	Pro 155	Glu	Pro	Val	Thr	Val 160	
Ser	Gly 165	Ala	Leu	Thr	Ser	Gly 170	Val	His	Thr	Phe	Pro 175	Ala	
Ser 180	Ser	Gly	Leu	Tyr	Ser 185	Leu	Ser	Ser	Val	Val 190	Thr	Val	
Ser	Leu	Gly	Thr	Gln 200	Thr	Tyr	Ile	Cys	Asn 205	Val	Asn	His	
Asn	Thr	Lys	Val 215	Asp	Lys	Lys	Val	Glu 220	Pro	Lys	Ser	Cys	
His	Thr	Cys 230	Pro	Pro	Cys	Pro	Ala 235	Pro	Glu	Ala	Ala	Gly 240	
Val	Phe 245	Leu	Phe	Pro	Pro	Lys 250	Pro	Lys	Asp	Thr	Leu 255	Met	
Thr 260	Pro	Glu	Val	Thr	Cys 265	Val	Val	Val	Asp	Val 270	Ser	His	
Glu	Val	Lys	Phe	Asn 280	Trp	Tyr	Val	Asp	Gly 285	Val	Glu	Val	
Lys	Thr	Lys	Pro 295	Arg	Glu	Glu	Gln	Tyr 300	Asn	Ser	Thr	Tyr	
Ser	Val	Leu 310	Thr	Val	Leu	His	Gln 315	Asp	Trp	Leu	Asn	Gly 320	

Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Gly Ala Pro Ile
325 330 335

Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val
340 345 350

Cys Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser
355 360 365

Leu Ser Cys Ala Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu
370 375 380

Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro
385 390 395 400

Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Val Ser Lys Leu Thr Val
405 410 415

Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met
420 425 430

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

$\langle 210 \rangle$ 6

<211> 214

<212> PRT

<213> Artificial Sequence

 $\langle 220 \rangle$

<223> Description of Artificial Sequence: Synthetic polypeptide

 $\langle 400 \rangle$ 6

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

Asp Arg Val Thr Ile Thr Cys Lys Ala Ser Ala Ala Val Gly Thr Tyr
20 25 30

Val Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
35 40 45

Tyr Ser Ala Ser Tyr Arg Lys Arg Gly Val Pro Ser Arg Phe Ser Gly
 50 55 60

Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
 65 70 75 80

Glu Asp Phe Ala Thr Tyr Tyr Cys His Gln Tyr Tyr Thr Tyr Pro Leu
 85 90 95

Phe Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys Arg Thr Val Ala
 100 105 110

Ala Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu Gln Leu Lys Ser
 115 120 125

Gly Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe Tyr Pro Arg Glu
 130 135 140

Ala Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln Ser Gly Asn Ser
 145 150 155 160

Gln Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr Tyr Ser Leu
 165 170 175

Ser Ser Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu Lys His Lys Val
 180 185 190

Tyr Ala Glu Val Thr His Gln Gly Leu Ser Ser Pro Val Thr Lys Ser
 195 200 205

Phe Asn Arg Gly Glu Cys
 210

<210> 7

<211> 448

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 polypeptide

<400> 7

Glu Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Gly Gly
 1 5 10 15

Ser Leu Ser Leu Ser Cys Ala Ala Ser Gly Phe Val Phe Ser Ser Tyr
 20 25 30

Asp Met Ser Trp Val Arg Gln Thr Pro Glu Arg Gly Leu Glu Trp Val
 35 40 45

Ala Tyr Ile Ser Ser Gly Gly Gly Ile Thr Tyr Ala Pro Ser Thr Val
 50 55 60

Lys Gly Arg Phe Thr Val Ser Arg Asp Asn Ala Lys Asn Thr Leu Tyr
 65 70 75 80

Leu Gln Met Asn Ser Leu Thr Ser Glu Asp Thr Ala Val Tyr Tyr Cys
 85 90 95

Ala Ala His Tyr Phe Gly Ser Ser Gly Pro Phe Ala Tyr Trp Gly Gln
 100 105 110

Gly Thr Leu Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val
 115 120 125

Phe Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala
 130 135 140

Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser
 145 150 155 160

Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val
 165 170 175

Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro
 180 185 190

Ser Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys
 195 200 205

Pro Ser Asn Thr Lys Val Asp Lys Lys Val Glu Pro Lys Ser Cys Asp

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

Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro
 435 440 445

<210> 8

<211> 214

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 polypeptide

<400> 8

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

Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Glu Asn Ile Phe Ser Tyr
 20 25 30

Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ser Pro Lys Leu Leu Val
 35 40 45

Tyr Asn Thr Arg Thr Leu Ala Glu Gly Val Pro Ser Arg Phe Ser Gly
 50 55 60

Ser Gly Ser Gly Thr Asp Phe Ser Leu Thr Ile Ser Ser Leu Gln Pro
 65 70 75 80

Glu Asp Phe Ala Thr Tyr Tyr Cys Gln His His Tyr Gly Thr Pro Phe
 85 90 95

Thr Phe Gly Ser Gly Thr Lys Leu Glu Ile Lys Arg Thr Val Ala Ala
 100 105 110

Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu Gln Leu Lys Ser Gly
 115 120 125

Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe Tyr Pro Arg Glu Ala
 130 135 140

Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln Ser Gly Asn Ser Gln
 145 150 155 160

Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr Tyr Ser Leu Ser
 165 170 175

Ser Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu Lys His Lys Val Tyr
 180 185 190

Ala Cys Glu Val Thr His Gln Gly Leu Ser Ser Pro Val Thr Lys Ser
 195 200 205

Phe Asn Arg Gly Glu Cys
 210

<210> 9

<211> 118

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 polypeptide

<400> 9

Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Arg Pro Ser Gln Thr Leu
 1 5 10 15

Ser Leu Thr Cys Thr Val Ser Gly Phe Thr Ile Ser Ser Gly Tyr Ser
 20 25 30

Trp His Trp Val Arg Gln Pro Pro Gly Arg Gly Leu Glu Trp Ile Gly
 35 40 45

Tyr Ile Gln Tyr Ser Gly Ile Thr Asn Tyr Asn Pro Ser Leu Lys Ser
 50 55 60

Arg Val Thr Met Leu Val Asp Thr Ser Lys Asn Gln Phe Ser Leu Arg
 65 70 75 80

Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr Cys Ala Arg
 85 90 95

Glu Asp Tyr Asp Tyr His Trp Tyr Phe Asp Val Trp Gly Gln Gly Ser
 100 105 110

Leu Val Thr Val Ser Ser
115

<210> 10
<211> 110
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
polypeptide

<400> 10
Gly Val His Ser Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser
1 5 10 15

Ala Ser Val Gly Asp Arg Val Thr Ile Thr Cys Ser Thr Ser Ser Ser
20 25 30

Val Ser Tyr Met His Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys
35 40 45

Leu Leu Ile Tyr Ser Thr Ser Asn Leu Ala Ser Gly Val Pro Ser Arg
50 55 60

Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Phe Thr Ile Ser Ser
65 70 75 80

Leu Gln Pro Glu Asp Ile Ala Thr Tyr Tyr Cys His Gln Trp Ser Ser
85 90 95

Tyr Pro Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys Arg
100 105 110

<210> 11
<211> 129
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
polypeptide

<400> 11
Met Asp Phe Gln Val Gln Ile Phe Ser Phe Leu Leu Ile Ser Ala Ser

1	5	10	15
Val Ile Met Ser Arg Gly Gln Thr Val Leu Ser Gln Ser Pro Ala Ile	20	25	30
Leu Ser Ala Ser Pro Gly Glu Lys Val Thr Met Thr Cys Arg Ala Ser	35	40	45
Ser Ser Val Thr Tyr Ile His Trp Tyr Gln Gln Lys Pro Gly Ser Ser	50	55	60
Pro Lys Ser Trp Ile Tyr Ala Thr Ser Asn Leu Ala Ser Gly Val Pro	65	70	75
Ala Arg Phe Ser Gly Ser Gly Ser Gly Thr Ser Tyr Ser Leu Thr Ile	85	90	95
Ser Arg Val Glu Ala Glu Asp Ala Ala Thr Tyr Tyr Cys Gln His Trp	100	105	110
Ser Ser Lys Pro Pro Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys	115	120	125

Arg

<210> 12

<211> 112

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 12

Met Asp Phe Gln Val Gln Ile Phe Ser Phe Leu Leu Ile Ser Ala Ser	1	5	10	15
---	---	---	----	----

Val Ile Met Ser Arg Gly Gln Thr Val Leu Ser Gln Ser Pro Ala Ile	20	25	30
---	----	----	----

Leu Ser Ala Ser Pro Gly Glu Lys Val Thr Met Thr Cys Arg Ala Ser

35

40

45

Ser Ser Val Thr Tyr Ile His Trp Tyr Gln Gln Lys Pro Gly Ser Ser
 50 55 60

Pro Ala Arg Phe Ser Gly Ser Gly Thr Ser Tyr Ser Leu Thr Ile Ser
 65 70 75 80

Arg Val Glu Ala Glu Asp Ala Ala Thr Tyr Tyr Cys Gln His Trp Ser
 85 90 95

Ser Lys Pro Pro Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys Arg
 100 105 110

<210> 13

<211> 145

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 polypeptide

<400> 13

Glu Thr Val Ile Lys Tyr Leu Leu Pro Thr Ala Ala Ala Gly Leu Leu
 1 5 10 15

Leu Leu Ala Ala Gln Pro Ala Met Ala Gln Val Lys Leu Gln Gln Ser
 20 25 30

Gly Ala Glu Leu Val Arg Ser Gly Thr Ser Val Lys Leu Ser Cys Thr
 35 40 45

Ala Ser Gly Phe Asn Ile Lys Asp Ser Tyr Met His Trp Leu Arg Gln
 50 55 60

Gly Pro Glu Gln Gly Leu Glu Trp Ile Gly Trp Ile Asp Pro Glu Asn
 65 70 75 80

Gly Asp Thr Glu Tyr Ala Pro Lys Phe Gln Gly Lys Ala Thr Phe Thr
 85 90 95

Thr Asp Thr Ser Ser Asn Thr Ala Tyr Leu Gln Leu Ser Ser Leu Thr

100

105

110

Ser Glu Asp Thr Ala Val Tyr Tyr Cys Asn Glu Gly Thr Pro Thr Gly
 115 120 125

Pro Tyr Tyr Phe Asp Tyr Trp Gly Gln Gly Thr Thr Val Thr Val Ser
 130 135 140

Ser
 145

<210> 14

<211> 109

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 polypeptide

<400> 14

Glu Asn Val Leu Thr Gln Ser Pro Ala Ile Met Ser Ala Ser Pro Gly
 1 5 10 15

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

His Trp Phe Gln Gln Lys Pro Gly Thr Ser Pro Lys Leu Trp Ile Tyr
 35 40 45

Ser Thr Ser Asn Leu Ala Ser Gly Val Pro Ala Arg Phe Ser Gly Ser
 50 55 60

Gly Ser Gly Thr Ser Tyr Ser Leu Thr Ile Ser Arg Met Glu Ala Glu
 65 70 75 80

Asp Ala Ala Thr Tyr Tyr Cys Gln Gln Arg Ser Ser Tyr Pro Leu Thr
 85 90 95

Phe Gly Ala Gly Thr Lys Leu Glu Leu Lys Arg Ala Ala
 100 105

<210> 15

<211> 121
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 polypeptide

<400> 15
 Glu Val Lys Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
 1 5 10 15

Ser Leu Arg Leu Ser Cys Ser Ile Ser Gly Phe Thr Phe Thr Asp Tyr
 20 25 30

Tyr Met Asn Trp Val Arg Gln Ser Pro Gly Lys Ala Leu Glu Trp Leu
 35 40 45

Gly Phe Ile Arg Asn Lys Val Asn Gly Asp Thr Thr Glu Tyr Ser Ala
 50 55 60

Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Ile Ser Gln Ser Ile
 65 70 75 80

Leu Tyr Leu Gln Met Asn Thr Leu Arg Thr Glu Asp Ser Ala Thr Tyr
 85 90 95

Tyr Cys Ala Arg Asp Lys Gly Ile Ala Tyr Tyr Phe Asp Tyr Trp Gly
 100 105 110

Gln Gly Thr Thr Leu Thr Val Ser Ser
 115 120

<210> 16
 <211> 106
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 polypeptide

<400> 16
 Gln Ile Val Leu Ser Gln Ser Pro Ala Ile Leu Phe Ala Ser Pro Gly
 1 5 10 15

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

His Trp Tyr Gln Gln Lys Pro Gly Ser Ser Pro Lys Pro Trp Ile His
 35 40 45

Gly Thr Ser Asn Leu Ala Ser Gly Val Pro Ala Arg Phe Ser Gly Ser
 50 55 60

Gly Ser Gly Thr Ser Tyr Ser Leu Thr Ile Ser Arg Met Glu Ala Glu
 65 70 75 80

Asp Ala Ala Thr Tyr Tyr Cys Gln Gln Trp Ser Ser Asn Leu Ser Thr
 85 90 95

Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys
 100 105

<210> 17

<211> 443

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 polypeptide

<400> 17

Gln Val Thr Leu Arg Glu Ser Gly Pro Ala Leu Val Lys Pro Thr Gln
 1 5 10 15

Thr Leu Thr Leu Thr Cys Thr Phe Ser Gly Phe Ser Leu Ser Thr Tyr
 20 25 30

Gly Ile Gly Val Gly Trp Ile Arg Gln Pro Pro Gly Lys Ala Leu Glu
 35 40 45

Trp Leu Ala His Ile Trp Trp Asn Asp Asn Lys Tyr Tyr Ser Thr Ser
 50 55 60

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

Val Leu Thr Met Thr Asn Met Asp Pro Val Asp Thr Ala Thr Tyr Tyr
85 90 95

Cys Ala Arg Ile Ser Leu Pro Tyr Phe Asp Tyr Trp Gly Gln Gly Thr
100 105 110

Thr Leu Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe Pro
115 120 125

Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser Thr Ala Ala Leu Gly
130 135 140

Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn
145 150 155 160

Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu Gln
165 170 175

Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser
180 185 190

Asn Phe Gly Thr Gln Thr Tyr Thr Cys Asn Val Asp His Lys Pro Ser
195 200 205

Asn Thr Lys Val Asp Lys Thr Val Glu Arg Lys Cys Cys Val Glu Cys
210 215 220

Pro Pro Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe
225 230 235 240

Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val
245 250 255

Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Gln Phe
260 265 270

Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro
275 280 285

Arg Glu Glu Gln Phe Asn Ser Thr Phe Arg Val Val Ser Val Leu Thr

290

295

300

Val Val His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val
 305 310 315 320

Ser Asn Lys Gly Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Thr
 325 330 335

Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg
 340 345 350

Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly
 355 360 365

Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro
 370 375 380

Glu Asn Asn Tyr Lys Thr Thr Pro Pro Met Leu Asp Ser Asp Gly Ser
 385 390 395 400

Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln
 405 410 415

Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His
 420 425 430

Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly
 435 440

<210> 18

<211> 214

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 polypeptide

<400> 18

Asp Ile Gln Leu Thr Gln Ser Pro Ser Phe Leu Ser Ala Ser Val Gly
 1 5 10 15

Asp Arg Val Thr Ile Thr Cys Lys Ala Ser Gln Asn Val Gly Thr Ala

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

<210> 19
 <211> 240
 <212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 19

Asp Ile Gln Leu Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
1 5 10 15

Asp Arg Val Thr Ile Thr Cys Lys Ala Ser Gln Asp Val Gly Thr Ser
20 25 30

Val Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
35 40 45

Tyr Trp Thr Ser Thr Arg His Thr Gly Val Pro Ser Arg Phe Ser Gly
50 55 60

Ser Gly Ser Gly Thr Asp Phe Thr Phe Thr Ile Ser Ser Leu Gln Pro
65 70 75 80

Glu Asp Ile Ala Thr Tyr Tyr Cys Gln Gln Tyr Ser Leu Tyr Arg Ser
85 90 95

Phe Gly Gln Gly Thr Lys Val Glu Ile Lys Gly Gly Ser Gly Ser Gly
100 105 110

Gly Ser Gly Ser Gly Gly Ser Gly Ser Glu Val Gln Leu Val Glu Ser
115 120 125

Gly Gly Gly Val Val Gln Pro Gly Arg Ser Leu Arg Leu Ser Cys Ser
130 135 140

Ala Ser Gly Phe Asp Phe Thr Thr Tyr Trp Met Ser Trp Val Arg Gln
145 150 155 160

Ala Pro Gly Lys Gly Leu Glu Trp Ile Gly Glu Ile His Pro Asp Ser
165 170 175

Ser Thr Ile Asn Tyr Ala Pro Ser Leu Lys Asp Arg Phe Thr Ile Ser
180 185 190

Arg Asp Asn Ala Lys Asn Thr Leu Phe Leu Gln Met Asp Ser Leu Arg
 195 200 205

Pro Glu Asp Thr Gly Val Tyr Phe Cys Ala Ser Leu Tyr Phe Gly Phe
 210 215 220

Pro Trp Phe Ala Tyr Trp Gly Gln Gly Thr Pro Val Thr Val Ser Ser
 225 230 235 240

<210> 20

<211> 241

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 polypeptide

<400> 20

Gln Val Lys Leu Glu Gln Ser Gly Ala Glu Val Val Lys Pro Gly Ala
 1 5 10 15

Ser Val Lys Leu Ser Cys Lys Ala Ser Gly Phe Asn Ile Lys Asp Ser
 20 25 30

Tyr Met His Trp Leu Arg Gln Gly Pro Gly Gln Arg Leu Glu Trp Ile
 35 40 45

Gly Trp Ile Asp Pro Glu Asn Gly Asp Thr Glu Tyr Ala Pro Lys Phe
 50 55 60

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

Leu Gly Leu Ser Ser Leu Arg Pro Glu Asp Thr Ala Val Tyr Tyr Cys
 85 90 95

Asn Glu Gly Thr Pro Thr Gly Pro Tyr Tyr Phe Asp Tyr Trp Gly Gln
 100 105 110

Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly
 115 120 125

Gly Ser Gly Gly Gly Gly Ser Glu Asn Val Leu Thr Gln Ser Pro Ser
 130 135 140

Ser Met Ser Val Ser Val Gly Asp Arg Val Thr Ile Ala Cys Ser Ala
 145 150 155 160

Ser Ser Ser Val Pro Tyr Met His Trp Leu Gln Gln Lys Pro Gly Lys
 165 170 175

Ser Pro Lys Leu Leu Ile Tyr Leu Thr Ser Asn Leu Ala Ser Gly Val
 180 185 190

Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Tyr Ser Leu Thr
 195 200 205

Ile Ser Ser Val Gln Pro Glu Asp Ala Ala Thr Tyr Tyr Cys Gln Gln
 210 215 220

Arg Ser Ser Tyr Pro Leu Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile
 225 230 235 240

Lys

<210> 21

<211> 242

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 polypeptide

<400> 21

Glu Val Lys Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
 1 5 10 15

Ser Leu Arg Leu Ser Cys Ser Ile Ser Gly Phe Thr Phe Thr Asp Tyr
 20 25 30

Tyr Met Asn Trp Val Arg Gln Ser Pro Gly Lys Ala Leu Glu Trp Leu
 35 40 45

Gly Phe Ile Arg Asn Lys Val Asn Gly Asp Thr Thr Glu Tyr Ser Ala
 50 55 60

Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Ile Ser Gln Ser Ile
 65 70 75 80

Leu Tyr Leu Gln Met Asn Thr Leu Arg Thr Glu Asp Ser Ala Thr Tyr
 85 90 95

Tyr Cys Ala Arg Asp Lys Gly Ile Ala Tyr Tyr Phe Asp Tyr Trp Gly
 100 105 110

Gln Gly Thr Thr Leu Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly
 115 120 125

Gly Gly Ser Gly Gly Gly Gly Ser Gln Ile Val Leu Ser Gln Ser Pro
 130 135 140

Ala Ile Leu Phe Ala Ser Pro Gly Glu Lys Val Thr Met Thr Cys Arg
 145 150 155 160

Ala Ser Ser Ser Val Ser Tyr Ile His Trp Tyr Gln Gln Lys Pro Gly
 165 170 175

Ser Ser Pro Lys Pro Trp Ile His Gly Thr Ser Asn Leu Ala Ser Gly
 180 185 190

Val Pro Ala Arg Phe Ser Gly Ser Gly Ser Gly Thr Ser Tyr Ser Leu
 195 200 205

Thr Ile Ser Arg Met Glu Ala Glu Asp Ala Ala Thr Tyr Tyr Cys Gln
 210 215 220

Gln Trp Ser Ser Asn Leu Ser Thr Phe Gly Gly Gly Thr Lys Leu Glu
 225 230 235 240

Ile Lys

<210> 22

<211> 241
 <212> PRT
 <213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 22

Gln Val Gln Leu Gln Gln Ser Gly Ala Glu Leu Val Arg Pro Gly Thr
 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Ala Phe Thr Asn Asn
 20 25 30

Leu Ile Glu Trp Val Lys Gln Arg Pro Gly Gln Gly Leu Glu Trp Ile
 35 40 45

Gly Val Ile Asn Pro Gly Ser Gly Asp Thr Asn Tyr Asn Glu Lys Phe
 50 55 60

Lys Gly Lys Ala Thr Leu Thr Ala Asp Lys Ser Ser Asn Thr Ala Tyr
 65 70 75 80

Met Gln Leu Ser Ser Leu Thr Ser Asp Asp Ser Ala Val Tyr Phe Cys
 85 90 95

Ala Arg Gly Asp Tyr Tyr Gly Gly Phe Ala Val Asp Tyr Trp Gly Gln
 100 105 110

Gly Thr Ser Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly
 115 120 125

Gly Ser Gly Gly Gly Gly Ser Asp Ile Gln Met Thr Gln Thr Thr Ser
 130 135 140

Ser Leu Ser Ala Ser Leu Gly Asp Arg Val Thr Ile Ser Cys Arg Thr
 145 150 155 160

Ser Gln Asp Ile Gly Asn Tyr Leu Asn Trp Tyr Gln Gln Lys Pro Asp
 165 170 175

Gly Thr Val Lys Leu Leu Ile Tyr Tyr Thr Ser Arg Leu His Ser Gly

180

185

190

Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Tyr Ser Leu
 195 200 205

Thr Ile Ser Asn Leu Glu Gln Glu Asp Ile Ala Thr Tyr Phe Cys Gln
 210 215 220

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

Ile

<210> 23

<211> 244

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 polypeptide

<400> 23

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

Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Glu Asn Ile Phe Ser Tyr
 20 25 30

Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ser Pro Lys Leu Leu Val
 35 40 45

Tyr Asn Thr Arg Thr Leu Ala Glu Gly Val Pro Ser Arg Phe Ser Gly
 50 55 60

Ser Gly Ser Gly Thr Asp Phe Ser Leu Thr Ile Ser Ser Leu Gln Pro
 65 70 75 80

Glu Asp Phe Ala Thr Tyr Tyr Cys Gln His His Tyr Gly Thr Pro Phe
 85 90 95

Thr Phe Gly Ser Gly Thr Lys Leu Glu Ile Lys Arg Gly Gly Gly Gly

100

105

110

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Val Gln Leu Gln
 115 120 125

Glu Ser Gly Pro Gly Leu Val Lys Pro Gly Gly Ser Leu Ser Leu Ser
 130 135 140

Cys Ala Ala Ser Gly Phe Val Phe Ser Ser Tyr Asp Met Ser Trp Val
 145 150 155 160

Arg Gln Thr Pro Glu Arg Gly Leu Glu Trp Val Ala Tyr Ile Ser Ser
 165 170 175

Gly Gly Gly Ile Thr Tyr Ala Pro Ser Thr Val Lys Gly Arg Phe Thr
 180 185 190

Val Ser Arg Asp Asn Ala Lys Asn Thr Leu Tyr Leu Gln Met Asn Ser
 195 200 205

Leu Thr Ser Glu Asp Thr Ala Val Tyr Tyr Cys Ala Ala His Tyr Phe
 210 215 220

Gly Ser Ser Gly Pro Phe Ala Tyr Trp Gly Gln Gly Thr Leu Val Thr
 225 230 235 240

Val Ser Ser Ala

<210> 24

<211> 244

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 polypeptide

<400> 24

Glu Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Gly Gly
 1 5 10 15

Ser Leu Ser Leu Ser Cys Ala Ala Ser Gly Phe Val Phe Ser Ser Tyr

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

Glu Ile Lys Arg

<210> 25

<211> 325

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 25

Glu Val Gln Leu Leu Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Thr Ser Gly Phe Thr Phe Thr Asp Tyr
20 25 30

Tyr Met Asn Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Leu
35 40 45

Gly Phe Ile Gly Asn Lys Ala Asn Gly Tyr Thr Thr Glu Tyr Ser Ala
50 55 60

Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Lys Ser Lys Ser Thr
65 70 75 80

Leu Tyr Leu Gln Met Asn Thr Leu Gln Ala Glu Asp Ser Ala Ile Tyr
85 90 95

Tyr Cys Thr Arg Asp Arg Gly Leu Arg Phe Tyr Phe Asp Tyr Trp Gly
100 105 110

Gln Gly Thr Leu Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser
115 120 125

Val Phe Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser Thr Ala
130 135 140

Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val
145 150 155 160

Leu Tyr Leu Gln Met Asn Thr Leu Gln Ala Glu Asp Ser Ala Ile Tyr
 165 170 175

Tyr Cys Thr Arg Asp Arg Gly Leu Arg Phe Tyr Phe Asp Tyr Trp Gly
 180 185 190

Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly
 195 200 205

Gly Gly Ser Gly Gly Gly Gly Ser Gln Thr Val Leu Thr Gln Ser Pro
 210 215 220

Ser Ser Leu Ser Val Ser Val Gly Asp Arg Val Thr Ile Thr Cys Arg
 225 230 235 240

Ala Ser Ser Ser Val Thr Tyr Ile His Trp Tyr Gln Gln Lys Pro Gly
 245 250 255

Leu Ala Pro Lys Ser Leu Ile Tyr Ala Thr Ser Asn Leu Ala Ser Gly
 260 265 270

Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Tyr Thr Phe
 275 280 285

Thr Ile Ser Ser Leu Gln Pro Glu Asp Ile Ala Thr Tyr Tyr Cys Gln
 290 295 300

His Trp Ser Ser Lys Pro Pro Thr Phe Gly Gln Gly Thr Lys Val Glu
 305 310 315 320

Val Lys Arg Thr Val
 325

<210> 26

<211> 325

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 polypeptide

<400> 26

Gln Thr Val Leu Thr Gln Ser Pro Ser Ser Leu Ser Val Ser Val Gly
 1 5 10 15

Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Ser Ser Val Thr Tyr Ile
 20 25 30

His Trp Tyr Gln Gln Lys Pro Gly Leu Ala Pro Lys Ser Leu Ile Tyr
 35 40 45

Ala Thr Ser Asn Leu Ala Ser Gly Val Pro Ser Arg Phe Ser Gly Ser
 50 55 60

Gly Ser Gly Thr Asp Tyr Thr Phe Thr Ile Ser Ser Leu Gln Pro Glu
 65 70 75 80

Asp Ile Ala Thr Tyr Tyr Cys Gln His Trp Ser Ser Lys Pro Pro Thr
 85 90 95

Phe Gly Gln Gly Thr Lys Val Glu Val Lys Arg Thr Val Gly Gly Gly
 100 105 110

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Val Gln Leu
 115 120 125

Leu Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly Ser Leu Arg Leu
 130 135 140

Ser Cys Ala Thr Ser Gly Phe Thr Phe Thr Asp Tyr Tyr Met Asn Trp
 145 150 155 160

Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Leu Gly Phe Ile Gly
 165 170 175

Asn Lys Ala Asn Gly Tyr Thr Thr Glu Tyr Ser Ala Ser Val Lys Gly
 180 185 190

Arg Phe Thr Ile Ser Arg Asp Lys Ser Lys Ser Thr Leu Tyr Leu Gln
 195 200 205

Met Asn Thr Leu Gln Ala Glu Asp Ser Ala Ile Tyr Tyr Cys Thr Arg

210

215

220

Asp Arg Gly Leu Arg Phe Tyr Phe Asp Tyr Trp Gly Gln Gly Thr Leu
 225 230 235 240

Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu
 245 250 255

Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser Thr Ala Ala Leu Gly Cys
 260 265 270

Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Leu Tyr Leu Gln
 275 280 285

Met Asn Thr Leu Gln Ala Glu Asp Ser Ala Ile Tyr Tyr Cys Thr Arg
 290 295 300

Asp Arg Gly Leu Arg Phe Tyr Phe Asp Tyr Trp Gly Gln Gly Thr Leu
 305 310 315 320

Val Thr Val Ser Ser
 325

<210> 27

<211> 3

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 peptide

<400> 27

Gly Gly Ser

1

<210> 28

<211> 6

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 peptide

<400> 28

Gly Gly Ser Gly Gly Ser
1 5

<210> 29

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
peptide

<400> 29

Gly Gly Ser Gly Gly Ser Gly Gly Ser
1 5

<210> 30

<211> 12

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
peptide

<400> 30

Gly Gly Ser Gly Gly Ser Gly Gly Ser Gly Gly Ser
1 5 10

<210> 31

<211> 15

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
peptide

<400> 31

Gly Gly Ser Gly Gly Ser Gly Gly Ser Gly Gly Ser Gly Gly Ser
1 5 10 15

<210> 32

<211> 4

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic

peptide

<400> 32

Gly Gly Gly Ser

1

<210> 33

<211> 8

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
peptide

<400> 33

Gly Gly Gly Ser Gly Gly Gly Ser

1

5

<210> 34

<211> 12

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
peptide

<400> 34

Gly Gly Gly Ser Gly Gly Gly Ser Gly Gly Gly Ser

1

5

10

<210> 35

<211> 16

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
peptide

<400> 35

Gly Gly Gly Ser Gly Gly Gly Ser Gly Gly Gly Ser Gly Gly Gly Ser

1

5

10

15

<210> 36

<211> 20

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 36

Gly Gly Gly Ser Gly Gly Gly Ser Gly Gly Gly Ser Gly Gly Gly Ser
1 5 10 15

Gly Gly Gly Ser
20

<210> 37

<211> 5

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 37

Gly Gly Gly Gly Ser
1 5

<210> 38

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 38

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
1 5 10

<210> 39

<211> 15

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 39

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
1 5 10 15

<210> 40
 <211> 20
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic peptide

<400> 40
 Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly
 1 5 10 15

Gly Gly Gly Ser
 20

<210> 41
 <211> 25
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic peptide

<400> 41
 Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly
 1 5 10 15

Gly Gly Gly Ser Gly Gly Gly Gly Ser
 20 25

<210> 42
 <211> 18
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic peptide

<400> 42
 Gly Ser Thr Ser Gly Ser Gly Lys Pro Gly Ser Gly Glu Gly Ser Thr
 1 5 10 15

Lys Gly

<210> 43
 <211> 20
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic peptide

<400> 43
 Glu Ala Ala Ala Lys Glu Ala Ala Ala Lys Glu Ala Ala Ala Lys Glu
 1 5 10 15

Ala Ala Ala Lys
 20

<210> 44
 <211> 45
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 44
 ggcggaggcg gatcaggtgg cggaggaagt ggcggcggag gatct 45

<210> 45
 <211> 21
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic peptide

<400> 45
 Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly Val Leu Leu Leu
 1 5 10 15

Ser Leu Val Ile Thr
 20

<210> 46
 <211> 27
 <212> PRT
 <213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 46

Phe Trp Val Leu Val Val Val Gly Gly Val Leu Ala Cys Tyr Ser Leu
1 5 10 15

Leu Val Thr Val Ala Phe Ile Ile Phe Trp Val
20 25

<210> 47

<211> 21

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 47

Val Ala Ala Ile Leu Gly Leu Gly Leu Val Leu Gly Leu Leu Gly Pro
1 5 10 15

Leu Ala Ile Leu Leu
20

<210> 48

<211> 21

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 48

Phe Leu Val Ile Ile Val Ile Leu Ser Ala Leu Phe Leu Gly Thr Leu
1 5 10 15

Ala Cys Phe Cys Val
20

<210> 49

<211> 42

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 49

Ala Ala Ala Ile Glu Val Met Tyr Pro Pro Pro Tyr Leu Asp Asn Glu
1 5 10 15

Lys Ser Asn Gly Thr Ile Ile His Val Lys Gly Lys His Leu Cys Pro
20 25 30

Ser Pro Leu Phe Pro Gly Pro Ser Lys Pro
35 40

<210> 50

<211> 45

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 50

Thr Thr Thr Pro Ala Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala
1 5 10 15

Leu Gln Pro Leu Ser Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly
20 25 30

Gly Ala Val His Thr Arg Gly Leu Asp Phe Ala Cys Asp
35 40 45

<210> 51

<211> 12

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 51

Glu Ser Lys Tyr Gly Pro Pro Cys Pro Ser Cys Pro
1 5 10

<210> 52
 <211> 12
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic peptide

<400> 52
 Glu Ser Lys Tyr Gly Pro Pro Ala Pro Ser Ala Pro
 1 5 10

<210> 53
 <211> 12
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic peptide

<400> 53
 Glu Ser Lys Tyr Gly Pro Pro Cys Pro Pro Cys Pro
 1 5 10

<210> 54
 <211> 12
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic peptide

<400> 54
 Glu Pro Lys Ser Cys Asp Lys Thr His Thr Cys Pro
 1 5 10

<210> 55
 <211> 86
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic polypeptide

<400> 55
 Ala Ala Ala Phe Val Pro Val Phe Leu Pro Ala Lys Pro Thr Thr Thr
 1 5 10 15

Pro Ala Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro
 20 25 30

Leu Ser Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala Val
 35 40 45

His Thr Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro
 50 55 60

Leu Ala Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr Leu
 65 70 75 80

Tyr Cys Asn His Arg Asn
 85

<210> 56

<211> 132

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 polypeptide

<400> 56

Ala Cys Pro Thr Gly Leu Tyr Thr His Ser Gly Glu Cys Cys Lys Ala
 1 5 10 15

Cys Asn Leu Gly Glu Gly Val Ala Gln Pro Cys Gly Ala Asn Gln Thr
 20 25 30

Val Cys Glu Pro Cys Leu Asp Ser Val Thr Phe Ser Asp Val Val Ser
 35 40 45

Ala Thr Glu Pro Cys Lys Pro Cys Thr Glu Cys Val Gly Leu Gln Ser
 50 55 60

Met Ser Ala Pro Cys Val Glu Ala Asp Asp Ala Val Cys Arg Cys Ala
 65 70 75 80

Tyr Gly Tyr Tyr Gln Asp Glu Thr Thr Gly Arg Cys Glu Ala Cys Arg
 85 90 95

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

Asn Thr Val Cys Glu Glu Cys Pro Asp Gly Thr Tyr Ser Asp Glu Ala
 115 120 125

Asp Ala Glu Cys
 130

<210> 57

<211> 34

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 polypeptide

<400> 57

Ala Cys Pro Thr Gly Leu Tyr Thr His Ser Gly Glu Cys Cys Lys Ala
 1 5 10 15

Cys Asn Leu Gly Glu Gly Val Ala Gln Pro Cys Gly Ala Asn Gln Thr
 20 25 30

Val Cys

<210> 58

<211> 20

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 peptide

<400> 58

Ala Val Gly Gln Asp Thr Gln Glu Val Ile Val Val Pro His Ser Leu
 1 5 10 15

Pro Phe Lys Val
 20

<210> 59
 <211> 126
 <212> DNA
 <213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 59
 gcagcagcta tcgaggtgat gtatcctccg ccctacctgg ataatgaaaa gagtaatggg 60
 actatcattc atgtaaaagg gaagcatctt tgccttctc cccttttccc cggtcctctt 120
 aaacct 126

<210> 60
 <211> 135
 <212> DNA
 <213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 60
 accacaacac cagctcctag acctccaact cctgctccta caatcgccct gcagccactg 60
 tctctgaggc ctgaagcttg tagacctgct gctggcggag ccgtgcatac cagaggactg 120
 gatttcgcct gcgac 135

<210> 61
 <211> 36
 <212> DNA
 <213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 61
 gaaagcaagt acggtccacc ttgccctagc tgtccg 36

<210> 62
 <211> 36
 <212> DNA
 <213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic

oligonucleotide

<400> 62
gaatccaagt acggccccc agcgcctagt gcccca 36

<210> 63
<211> 36
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 63
gaatctaaat atggcccgcc atgcccgcct tgccca 36

<210> 64
<211> 36
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 64
gaaccgaagt cttgtgataa aactcatagc tgcccc 36

<210> 65
<211> 258
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
polynucleotide

<400> 65
gctgtgctt tcgtaccgt gttcctcct gctaagccta cgactacccc cgcaccgaga 60
ccaccacgc cagcaccac gattgctagc cagcccctta gtttgcgacc agaagcttgt 120
cggcctgctg ctggtggcgc ggtacatacc cgcggccttg attttgcttg cgatatatat 180
atctgggcgc ctctggccgg aacatgcggg gtcctcctcc tttctctggt tattactctc 240
tactgtaatc acaggaat 258

<210> 66

<211> 396
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 polynucleotide

<400> 66
 gcctgcccga ccgggctcta cactcatagc ggggaatgtt gtaaggcatg taacttgggt 60
 gagggcgctcg cacagccctg cggagctaac caaacagtgt gcgaaccctg cctcgatagt 120
 gtgacgttct ctgatgttgt atcagctaca gagccttgca aaccatgtac tgagtgcgtt 180
 ggacttcagt caatgagcgc tccatgtgtg gaggcagatg atgcggtctg tcgatgtgct 240
 tacggatact accaagacga gacaacaggg cgggtgcgagg cctgtagagt ttgtgaggcg 300
 ggctccgggc tgggtgttttc atgtcaagac aagcaaaata cggctctgtga agagtgcctt 360
 gatggcacct actcagacga agcagatgca gaatgc 396

<210> 67
 <211> 102
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 polynucleotide

<400> 67
 gcctgcccga caggactcta cacgcatagc ggtgagtgtt gtaaagcatg caacctcggg 60
 gaaggtagtag cccagccatg cggggctaac caaacgttt gc 102

<210> 68
 <211> 60
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 oligonucleotide

<400> 68
 gctgtgggcc aggacacgca ggaggtcatc gtggtgccac actccttgcc ctttaagggtg 60

<210> 69
 <211> 12

<212> PRT
 <213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<220>

<221> MOD_RES

<222> (5)..(5)

<223> Any amino acid

<220>

<221> MOD_RES

<222> (11)..(11)

<223> Any amino acid

<400> 69

Gly	Gly	Cys	Lys	Xaa	Ser	Gly	Gly	Cys	Lys	Xaa	Ser
1				5					10		

<210> 70

<211> 42

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 70

Lys	Arg	Gly	Arg	Lys	Lys	Leu	Leu	Tyr	Ile	Phe	Lys	Gln	Pro	Phe	Met
1				5					10					15	

Arg	Pro	Val	Gln	Thr	Thr	Gln	Glu	Glu	Asp	Gly	Cys	Ser	Cys	Arg	Phe
			20					25					30		

Pro	Glu	Glu	Glu	Glu	Gly	Gly	Cys	Glu	Leu
			35				40		

<210> 71

<211> 41

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 71

Arg Ser Lys Arg Ser Arg Leu Leu His Ser Asp Tyr Met Asn Met Thr
1 5 10 15

Pro Arg Arg Pro Gly Pro Thr Arg Lys His Tyr Gln Pro Tyr Ala Pro
20 25 30

Pro Arg Asp Phe Ala Ala Tyr Arg Ser
35 40

<210> 72

<211> 42

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
polypeptide

<400> 72

Ala Leu Tyr Leu Leu Arg Arg Asp Gln Arg Leu Pro Pro Asp Ala His
1 5 10 15

Lys Pro Pro Gly Gly Gly Ser Phe Arg Thr Pro Ile Gln Glu Glu Gln
20 25 30

Ala Asp Ala His Ser Thr Leu Ala Lys Ile
35 40

<210> 73

<211> 120

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
polypeptide

<400> 73

Trp Arg Arg Lys Arg Lys Glu Lys Gln Ser Glu Thr Ser Pro Lys Glu
1 5 10 15

Phe Leu Thr Ile Tyr Glu Asp Val Lys Asp Leu Lys Thr Arg Arg Asn
20 25 30

His Glu Gln Glu Gln Thr Phe Pro Gly Gly Gly Ser Thr Ile Tyr Ser

35

40

45

Met Ile Gln Ser Gln Ser Ser Ala Pro Thr Ser Gln Glu Pro Ala Tyr
 50 55 60

Thr Leu Tyr Ser Leu Ile Gln Pro Ser Arg Lys Ser Gly Ser Arg Lys
 65 70 75 80

Arg Asn His Ser Pro Ser Phe Asn Ser Thr Ile Tyr Glu Val Ile Gly
 85 90 95

Lys Ser Gln Pro Lys Ala Gln Asn Pro Ala Arg Leu Ser Arg Lys Glu
 100 105 110

Leu Glu Asn Phe Asp Val Tyr Ser
 115 120

<210> 74

<211> 112

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 polypeptide

<400> 74

Arg Val Lys Phe Ser Arg Ser Ala Asp Ala Pro Ala Tyr Lys Gln Gly
 1 5 10 15

Gln Asn Gln Leu Tyr Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr
 20 25 30

Asp Val Leu Asp Lys Arg Arg Gly Arg Asp Pro Glu Met Gly Gly Lys
 35 40 45

Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys
 50 55 60

Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg
 65 70 75 80

Arg Arg Gly Lys Gly His Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala

85

90

95

Thr Lys Asp Thr Tyr Asp Ala Leu His Met Gln Ala Leu Pro Pro Arg
 100 105 110

<210> 75

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 peptide

<400> 75

Glu Gln Lys Leu Ile Ser Glu Glu Asp Leu
 1 5 10

<210> 76

<211> 21

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 peptide

<400> 76

Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
 1 5 10 15

His Ala Ala Arg Pro
 20

<210> 77

<211> 15

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 peptide

<400> 77

Gly Gly Ser Gly Ser Gly Gly Ser Gly Ser Gly Gly Ser Gly Ser
 1 5 10 15

<210> 78

<211> 120
 <212> PRT
 <213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 78

Gln Val Lys Leu Glu Gln Ser Gly Ala Glu Val Val Lys Pro Gly Ala
 1 5 10 15

Ser Val Lys Leu Ser Cys Lys Ala Ser Gly Phe Asn Ile Lys Asp Ser
 20 25 30

Tyr Met His Trp Leu Arg Gln Gly Pro Gly Gln Arg Leu Glu Trp Ile
 35 40 45

Gly Trp Ile Asp Pro Glu Asn Gly Asp Thr Glu Tyr Ala Pro Lys Phe
 50 55 60

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

Leu Gly Leu Ser Ser Leu Arg Pro Glu Asp Thr Ala Val Tyr Tyr Cys
 85 90 95

Asn Glu Gly Thr Pro Thr Gly Pro Tyr Tyr Phe Asp Tyr Trp Gly Gln
 100 105 110

Gly Thr Leu Val Thr Val Ser Ser
 115 120

<210> 79

<211> 106

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 79

Glu Asn Val Leu Thr Gln Ser Pro Ser Ser Met Ser Val Ser Val Gly
 1 5 10 15

Asp Arg Val Thr Ile Ala Cys Ser Ala Ser Ser Ser Val Pro Tyr Met
 20 25 30

His Trp Leu Gln Gln Lys Pro Gly Lys Ser Pro Lys Leu Leu Ile Tyr
 35 40 45

Leu Thr Ser Asn Leu Ala Ser Gly Val Pro Ser Arg Phe Ser Gly Ser
 50 55 60

Gly Ser Gly Thr Asp Tyr Ser Leu Thr Ile Ser Ser Val Gln Pro Glu
 65 70 75 80

Asp Ala Ala Thr Tyr Tyr Cys Gln Gln Arg Ser Ser Tyr Pro Leu Thr
 85 90 95

Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys
 100 105

<210> 80

<211> 1488

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 polynucleotide

<400> 80

atggctctgc ctgtgacagc tctgctgctg cctctggctc tgcttctgca tgccgccaga	60
cctgacatcc agctgacaca gagccctagc agcctgtctg cctctgtggg cgacagagtg	120
accatcacat gcaaggcctc tcaggacgtg ggcacaagcg tggcatggta tcagcagaag	180
cctggcaagg cccctaagct gctgatctac tggaccagca ccagacacac aggcgtgccc	240
agcagatttt ctggcagcgg ctctggcacc gacttcacct tcaccataag cagcctgcag	300
cctgaggata tcgccaccta ctactgccag cagtacagcc tgtacagaag cttcggccag	360
ggcaccaagg tggaaatcaa aggcggatct ggaagcggcg gttctggatc tggtggaagc	420
ggatctgagg tgcagctggt ggaatctggt ggcggagttg tgcagcctgg cagatctctg	480
agactgagct gtagcgccag cggcttcgat ttcaccacct actggatgag ctgggtccga	540
cagggcccctg gcaaaggact ggaatggatc ggcgagattc accccgacag cagcaccatc	600

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aattacgccc ctagcctgaa ggaccggttc accatctcca gagacaacgc caagaatacc      660
ctgttcctgc agatggacag cctccggcct gaagataccg gcgtgtactt ttgcgccagc      720
ctgtatttcg gcttccttg gtttgcctac tggggccagg gaacacctgt gaccgttagc      780
tctgagcaga agctgatctc cgaagaggac ctgaccacaa caccagctcc tagaccacct      840
acaccagcac ctacaatcgc cctgcagcca ctgtctctga ggccagaggc ttgtagacct      900
gctgctggcg gagccgtgca tacaagagga ctggatttcg cctgcgactt ctgggtgctc      960
gtggttggtg gaggcgtgct ggccctgttac tctctgctgg tcaccgtggc cttcatcatc     1020
ttttgggtcc gaagcaagcg gagccggctg ctgcacagcg actacatgaa catgaccctc     1080
agacggcccc gacctaccag aaagcactac cagccttacg ctctcctag agacttcgcc     1140
gcctaccggt ccagagtga gttctccaga tctgccgacg ctccgccta taagcagggc     1200
cagaaccagc tgtacaacga gctgaacctg gggagaagag aagagtacga cgtgctggac     1260
aagcggagag gcagagatcc tgagatgggc ggcaagccca gacggaagaa tcctcaagag     1320
ggcctgtata atgagctgca gaaagacaag atggccgagg cctacagcga gatcggaatg     1380
aagggcgagc gcagaagagg caagggacac gatggactgt accagggcct gagcaccgcc     1440
accaaggata cctatgatgc cctgcacatg caggccctgc ctccaaga     1488

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<210> 81

<211> 375

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
polypeptide

<400> 81

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Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1           5           10          15

```

```

His Ala Ala Arg Pro Glu Val Gln Leu Val Glu Ser Gly Gly Gly Val
          20          25          30

```

```

Val Gln Pro Gly Arg Ser Leu Arg Leu Ser Cys Ser Ala Ser Gly Phe
          35          40          45

```

Asp Phe Thr Thr Tyr Trp Met Ser Trp Val Arg Gln Ala Pro Gly Lys
 50 55 60

Gly Leu Glu Trp Ile Gly Glu Ile His Pro Asp Ser Ser Thr Ile Asn
 65 70 75 80

Tyr Ala Pro Ser Leu Lys Asp Arg Phe Thr Ile Ser Arg Asp Asn Ala
 85 90 95

Lys Asn Thr Leu Phe Leu Gln Met Asp Ser Leu Arg Pro Glu Asp Thr
 100 105 110

Gly Val Tyr Phe Cys Ala Ser Leu Tyr Phe Gly Phe Pro Trp Phe Ala
 115 120 125

Tyr Trp Gly Gln Gly Thr Pro Val Thr Val Ser Ser Glu Gln Lys Leu
 130 135 140

Ile Ser Glu Glu Asp Leu Thr Thr Thr Pro Ala Pro Arg Pro Pro Thr
 145 150 155 160

Pro Ala Pro Thr Ile Ala Leu Gln Pro Leu Ser Leu Arg Pro Glu Ala
 165 170 175

Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr Arg Gly Leu Asp Phe
 180 185 190

Ala Cys Asp Phe Trp Val Leu Val Val Val Gly Gly Val Leu Ala Cys
 195 200 205

Tyr Ser Leu Leu Val Thr Val Ala Phe Ile Ile Phe Trp Val Arg Ser
 210 215 220

Lys Arg Ser Arg Leu Leu His Ser Asp Tyr Met Asn Met Thr Pro Arg
 225 230 235 240

Arg Pro Gly Pro Thr Arg Lys His Tyr Gln Pro Tyr Ala Pro Pro Arg
 245 250 255

Asp Phe Ala Ala Tyr Arg Ser Arg Val Lys Phe Ser Arg Ser Ala Asp
 260 265 270

Ala Pro Ala Tyr Lys Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn
 275 280 285

Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg
 290 295 300

Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly
 305 310 315 320

Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu
 325 330 335

Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His Asp Gly Leu
 340 345 350

Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu His
 355 360 365

Met Gln Ala Leu Pro Pro Arg
 370 375

<210> 82

<211> 1491

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 polynucleotide

<400> 82

atggctctgc ctgtgacagc tctgctgctg cctctggctc tgcttctgca tgccgctaga 60

ccccaagtga agctggaaca gtctggcgcc gaggttgtga aacctggcgc ctctgtgaag 120

ctgagctgta aagccagcgg cttcaacatc aaggacagct acatgcactg gctgcggcaa 180

ggccctggac agagactgga atggatcggc tggatcgacc ccgagaatgg cgatacagag 240

tacgccccta agttccaggg caaagccacc ttcaccaccg acacctctgc caacacagcc 300

tacctgggac tgtctagcct gaggcctgaa gataccgccg tgtactactg caacgagggc 360

acacctacag gcccctacta cttcgattat tggggccagg gcaccctggt caccgtttct 420

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agcggaggcg gaggatctgg tggcggagga agtggcggag gcggttctga aaatgtgctg      480
acacagagcc ccagcagcat gtccgtgtct gtgggcgaca gagtgacaat cgcctgtagc      540
gcctctagca gcgtgcccta tatgcattgg ctgcagcaga agcccggcaa gagccctaag      600
ctgctgatct acctgaccag caatctggcc agcggcgtgc caagcagatt ttctggaagc      660
ggcagcggca ccgactacag cctgacaatc agtagcgtgc agcctgagga tgccgccacc      720
tactactgtc agcagagaag cagctaccct ctgacctttg gaggcggcac caagctggaa      780
atcaaagagc agaagctgat ctccgaagag gacctgacca caacaccagc tcctagacca      840
cctacaccag cacctacaat cgccctgcag ccactgtctc tgaggccaga agctttaga      900
cctgctgctg gcggagccgt gcatacaaga ggactggatt tcgcctgcga cttctgggtg      960
ctcgtgggtg ttggcggagt gctggcctgt tactctctgc tggtcacagt ggccttcac      1020
atcttttggg tccgaagcaa gcggagccgg ctgctgcaca gcgactacat gaacatgacc      1080
cctagacggc ccggacctac cagaaagcac taccagcctt acgctcctcc tagagacttc      1140
gccgcctacc ggtccagagt gaagttcagc agatccgccg atgctccgc ctataagcag      1200
ggccagaacc agctgtacaa cgagctgaac ctggggagaa gagaagagta cgacgtgctg      1260
gacaagcgga gaggcagaga tcctgagatg ggcggaagc ccagacggaa gaatcctcaa      1320
gagggcctgt ataatgagct gcagaaagac aagatggccg aggcctacag cgagatcgga      1380
atgaagggcg agcgcagaag aggcaaggga cacgatggac tgtatcaggg cctgagcacc      1440
gccaccaagg atacctatga tgccctgcac atgcaggccc tgcctccaag a              1491

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<210> 83

<211> 362

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
polypeptide

<400> 83

```

Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1           5           10          15

```

```

His Ala Ala Arg Pro Glu Asn Val Leu Thr Gln Ser Pro Ser Ser Met
          20          25          30

```

Ser Val Ser Val Gly Asp Arg Val Thr Ile Ala Cys Ser Ala Ser Ser
 35 40 45

Ser Val Pro Tyr Met His Trp Leu Gln Gln Lys Pro Gly Lys Ser Pro
 50 55 60

Lys Leu Leu Ile Tyr Leu Thr Ser Asn Leu Ala Ser Gly Val Pro Ser
 65 70 75 80

Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Tyr Ser Leu Thr Ile Ser
 85 90 95

Ser Val Gln Pro Glu Asp Ala Ala Thr Tyr Tyr Cys Gln Gln Arg Ser
 100 105 110

Ser Tyr Pro Leu Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys Glu
 115 120 125

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

Pro Pro Thr Pro Ala Pro Thr Ile Ala Leu Gln Pro Leu Ser Leu Arg
 145 150 155 160

Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr Arg Gly
 165 170 175

Leu Asp Phe Ala Cys Asp Phe Trp Val Leu Val Val Val Gly Gly Val
 180 185 190

Leu Ala Cys Tyr Ser Leu Leu Val Thr Val Ala Phe Ile Ile Phe Trp
 195 200 205

Val Arg Ser Lys Arg Ser Arg Leu Leu His Ser Asp Tyr Met Asn Met
 210 215 220

Thr Pro Arg Arg Pro Gly Pro Thr Arg Lys His Tyr Gln Pro Tyr Ala
 225 230 235 240

Pro Pro Arg Asp Phe Ala Ala Tyr Arg Ser Arg Val Lys Phe Ser Arg

245	250	255
Ser Ala Asp Ala Pro Ala Tyr Lys Gln Gly Gln Asn Gln Leu Tyr Asn		
260	265	270
Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg		
275	280	285
Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro		
290	295	300
Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala		
305	310	315
Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His		
325	330	335
Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp		
340	345	350
Ala Leu His Met Gln Ala Leu Pro Pro Arg		
355	360	

<210> 84

<211> 1494

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 84

atggctctgc ctgtgacagc tctgctgctg cctctggctc tgcttctgca tgctgccaga	60
cctcagatcg tgctgtctca gtctcccgcc atcctgtttg ctagccctgg cgagaaagtg	120
accatgacct gtagagccag cagctccgtg tcctacatcc actggtatca gcagaagccc	180
ggcagcagcc ctaagccttg gatccacggc acaagcaatc tggccagcgg agtgcctgcc	240
agattttctg gaagcggcag cggcaccagc tacagcctga ccatctctag aatggaagcc	300
gaggacgccg ccacctacta ctgtcagcag tggtccagca acctgagcac ctttggcggc	360
ggaacaaagc tggaaatcaa aggcggcgga ggatctggcg gaggcggtag cggaggtggt	420

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ggatctgaag tgaagctggt ggaatcaggc ggaggcctgg ttcaacctgg cggatctctg      480
agactgagct gcagcatctc cggcttcacc ttcaccgact actacatgaa ctgggtccga      540
cagagccctg gcaaggctct ggaatggctg ggcttcatca gaaacaaagt gaacggcgac      600
accaccgagt acagcgcctc tgtgaagggc agattcacca tcagccggga catcagccag      660
agcatcctgt acctgcagat gaacaccctg cggaccgagg atagcgccac atattactgc      720
gccagagaca agggaatcgc ctactacttc gactactggg gccagggcac cacactgaca      780
gtgtctagcg agcagaagct gatctccgaa gaggacctga ccacaacacc agctcctaga      840
ccacctacac cagcacctac aatcgccctg cagccactgt ctctgaggcc agaagcttgt      900
agacctgctg ctggcggagc cgtgcataca agaggactgg atttcgcctg cgacttctgg      960
gtgctcgtgg ttgttggcgg agtgctggcc tgttactctc tgctggtcac cgtggccttc     1020
atcatctttt gggtcggaag caagcggagc cggctgctgc acagcgatta catgaacatg     1080
acccctcgga ggcccggacc taccagaaag cactaccagc cttacgctcc tcctagagac     1140
ttcgccgcct accggtccag agtgaagttc agcagatccg ctgatgcccc tgcctacaag     1200
cagggccaga accagctgta caacgagctg aacctgggga gaagagaaga gtacgacgtg     1260
ctggacaagc ggagaggcag agatcctgag atgggcggca agcccagacg gaagaatcct     1320
caagagggcc tgtataacga actgcagaaa gacaagatgg ccgaggccta cagcgagatc     1380
ggaatgaagg gcgagcgagc aagaggcaag ggacacgatg gactgtacca gggcctgagc     1440
acagccacca aggataccta tgacgccctg cacatgcagg ccctgcctcc aaga           1494

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<210> 85

<211> 377

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
polypeptide

<400> 85

```

Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1           5           10          15

```

```

His Ala Ala Arg Pro Glu Val Lys Leu Val Glu Ser Gly Gly Gly Leu
          20          25          30

```

Val Gln Pro Gly Gly Ser Leu Arg Leu Ser Cys Ser Ile Ser Gly Phe
 35 40 45

Thr Phe Thr Asp Tyr Tyr Met Asn Trp Val Arg Gln Ser Pro Gly Lys
 50 55 60

Ala Leu Glu Trp Leu Gly Phe Ile Arg Asn Lys Val Asn Gly Asp Thr
 65 70 75 80

Thr Glu Tyr Ser Ala Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp
 85 90 95

Ile Ser Gln Ser Ile Leu Tyr Leu Gln Met Asn Thr Leu Arg Thr Glu
 100 105 110

Asp Ser Ala Thr Tyr Tyr Cys Ala Arg Asp Lys Gly Ile Ala Tyr Tyr
 115 120 125

Phe Asp Tyr Trp Gly Gln Gly Thr Thr Leu Thr Val Ser Ser Glu Gln
 130 135 140

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

Pro Thr Pro Ala Pro Thr Ile Ala Leu Gln Pro Leu Ser Leu Arg Pro
 165 170 175

Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr Arg Gly Leu
 180 185 190

Asp Phe Ala Cys Asp Phe Trp Val Leu Val Val Val Gly Gly Val Leu
 195 200 205

Ala Cys Tyr Ser Leu Leu Val Thr Val Ala Phe Ile Ile Phe Trp Val
 210 215 220

Arg Ser Lys Arg Ser Arg Leu Leu His Ser Asp Tyr Met Asn Met Thr
 225 230 235 240

Pro Arg Arg Pro Gly Pro Thr Arg Lys His Tyr Gln Pro Tyr Ala Pro
 245 250 255

Pro Arg Asp Phe Ala Ala Tyr Arg Ser Arg Val Lys Phe Ser Arg Ser
 260 265 270

Ala Asp Ala Pro Ala Tyr Lys Gln Gly Gln Asn Gln Leu Tyr Asn Glu
 275 280 285

Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg
 290 295 300

Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln
 305 310 315 320

Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr
 325 330 335

Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His Asp
 340 345 350

Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala
 355 360 365

Leu His Met Gln Ala Leu Pro Pro Arg
 370 375

<210> 86

<211> 363

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 polypeptide

<400> 86

Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
 1 5 10 15

His Ala Ala Arg Pro Asp Ile Gln Met Thr Gln Thr Thr Ser Ser Leu
 20 25 30

Ser Ala Ser Leu Gly Asp Arg Val Thr Ile Ser Cys Arg Thr Ser Gln
 35 40 45

Asp Ile Gly Asn Tyr Leu Asn Trp Tyr Gln Gln Lys Pro Asp Gly Thr
 50 55 60

Val Lys Leu Leu Ile Tyr Tyr Thr Ser Arg Leu His Ser Gly Val Pro
 65 70 75 80

Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Tyr Ser Leu Thr Ile
 85 90 95

Ser Asn Leu Glu Gln Glu Asp Ile Ala Thr Tyr Phe Cys Gln Gln Gly
 100 105 110

Lys Ser Leu Pro Arg Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys
 115 120 125

Glu Gln Lys Leu Ile Ser Glu Glu Asp Leu Thr Thr Thr Pro Ala Pro
 130 135 140

Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Leu Gln Pro Leu Ser Leu
 145 150 155 160

Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr Arg
 165 170 175

Gly Leu Asp Phe Ala Cys Asp Phe Trp Val Leu Val Val Val Gly Gly
 180 185 190

Val Leu Ala Cys Tyr Ser Leu Leu Val Thr Val Ala Phe Ile Ile Phe
 195 200 205

Trp Val Arg Ser Lys Arg Ser Arg Leu Leu His Ser Asp Tyr Met Asn
 210 215 220

Met Thr Pro Arg Arg Pro Gly Pro Thr Arg Lys His Tyr Gln Pro Tyr
 225 230 235 240

Ala Pro Pro Arg Asp Phe Ala Ala Tyr Arg Ser Arg Val Lys Phe Ser
 245 250 255

Arg Ser Ala Asp Ala Pro Ala Tyr Lys Gln Gly Gln Asn Gln Leu Tyr
 260 265 270

Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys
 275 280 285

Arg Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn
 290 295 300

Pro Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu
 305 310 315 320

Ala Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly
 325 330 335

His Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr
 340 345 350

Asp Ala Leu His Met Gln Ala Leu Pro Pro Arg
 355 360

<210> 87

<211> 1395

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 polynucleotide

<400> 87

atggctctgc ctgtgacagc tctgctgctg cctctggctc tgcttctgca tgctgctaga 60

cctcaggtcc agctgcagca gtctggcgcc gaacttgcta gacctggcac cagcgtgaag 120

gtgtcctgta aagccagcgg ctacgccttc accaacaacc tgatcgagtg ggtcaagcag 180

aggcctggac agggactcga gtggatcggc gtgatcaatc ctggcagcgg cgacaccaac 240

tacaacgaga agttcaaggg caaagccaca ctgaccgccg acaagagcag caacacagcc 300

tacatgcagc tgagcagcct gacctccgat gacagcgccg tgtacttttg cgccagaggc 360

gattactacg gcggcttcgc cgtggattat tggggccagg gaacaagcgt gaccgtgtct 420

```

agcggaggcg gaggatctgg tggcggagga agtggcggag gcggttctga tatccagatg      480
acccagacca ccagcagcct gtctgcctct ctgggcgata gaggtagcat cagctgcaga      540
accagccagg acatcggcaa ctacctgaac tggatatcagc agaaacccga cggcacctg      600
aagctgctga tctactacac cagcagactg cacagcggcg tgcccagcag attttctgga      660
agcggcagcg gcaccgacta ctccctgaca atcagcaacc tggaacaaga ggatatcgct      720
acctacttct gccagcaagg caagagcctg cctagaacct ttggaggcgg caccaagctg      780
gaaatcaaag agcagaagct gatctccgaa gaggacctgg agtctaagta cggccctcct      840
tgtcctagct gccccttttg ggtgctctg gttgttggcg gaggctggc ctgttactct      900
ctgctgggtca ccgtggcctt catcatcttt tgggtccgaa gcaagcggag cggctgctg      960
cactccgact acatgaacat gaccctaga cggcccggac ctaccagaaa gcactaccag     1020
ccttacgctc ctctagaga cttcgccgcc taccggtcca gaggtaagtt cagcagatcc     1080
gccgatgctc ccgcctataa gcagggccag aatcagctgt acaacgagct gaacctgggg     1140
cgagagaaag agtacgacgt gctggacaag agaagaggca gggaccctga gatgggcggc     1200
aagcccagaa gaaagaacct tcaagagggc ctgtataacg aactgcagaa agacaagatg     1260
gccgaggcct acagcgagat cggaatgaag ggcgaacgca gaagaggaaa gggccacgac     1320
ggactgtatc agggcctgag cacagccacc aaggacacct atgatgccct gcacatgcag     1380
gccctgcctc caaga                                             1395

```

<210> 88

<211> 330

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
polypeptide

<400> 88

```

Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1           5           10          15

```

```

His Ala Ala Arg Pro Asp Ile Gln Met Thr Gln Thr Thr Ser Ser Leu
          20          25          30

```

```

Ser Ala Ser Leu Gly Asp Arg Val Thr Ile Ser Cys Arg Thr Ser Gln

```

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

Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro
 260 265 270

Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala
 275 280 285

Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His
 290 295 300

Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp
 305 310 315 320

Ala Leu His Met Gln Ala Leu Pro Pro Arg
 325 330

<210> 89

<211> 491

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 polypeptide

<400> 89

Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
 1 5 10 15

His Ala Ala Arg Pro Asp Ile Gln Leu Thr Gln Ser Pro Ser Ser Leu
 20 25 30

Ser Ala Ser Val Gly Asp Arg Val Thr Ile Thr Cys Lys Ala Ser Gln
 35 40 45

Asp Val Gly Thr Ser Val Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala
 50 55 60

Pro Lys Leu Leu Ile Tyr Trp Thr Ser Thr Arg His Thr Gly Val Pro
 65 70 75 80

Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Phe Thr Ile
 85 90 95

Ser Ser Leu Gln Pro Glu Asp Ile Ala Thr Tyr Tyr Cys Gln Gln Tyr
 100 105 110

Ser Leu Tyr Arg Ser Phe Gly Gln Gly Thr Lys Val Glu Ile Lys Gly
 115 120 125

Gly Ser Gly Ser Gly Gly Ser Gly Ser Gly Gly Ser Gly Ser Glu Val
 130 135 140

Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Arg Ser Leu
 145 150 155 160

Arg Leu Ser Cys Ser Ala Ser Gly Phe Asp Phe Thr Thr Tyr Trp Met
 165 170 175

Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Ile Gly Glu
 180 185 190

Ile His Pro Asp Ser Ser Thr Ile Asn Tyr Ala Pro Ser Leu Lys Asp
 195 200 205

Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Thr Leu Phe Leu Gln
 210 215 220

Met Asp Ser Leu Arg Pro Glu Asp Thr Gly Val Tyr Phe Cys Ala Ser
 225 230 235 240

Leu Tyr Phe Gly Phe Pro Trp Phe Ala Tyr Trp Gly Gln Gly Thr Pro
 245 250 255

Val Thr Val Ser Ser Glu Gln Lys Leu Ile Ser Glu Glu Asp Leu Thr
 260 265 270

Thr Thr Pro Ala Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Leu
 275 280 285

Gln Pro Leu Ser Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly
 290 295 300

Ala Val His Thr Arg Gly Leu Asp Phe Ala Cys Asp Val Ala Ala Ile

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

<210> 90

<211> 1476

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic

polynucleotide

<400> 90

atggctctgc ctgtgacagc tctgctgctg cctctggctc tgcttctgca tgccgctaga	60
ccccaagtga agctggaaca gtctggcgcc gaggttgtga aacctggcgc ctctgtgaag	120
ctgagctgta aagccagcgg cttcaacatc aaggacagct acatgcactg gctgcgga	180
ggccctggac agagactgga atggatcggc tggatcgacc ccgagaatgg cgatacagag	240
tacgccccta agttccaggg caaagccacc ttcaccaccg acacctctgc caacacagcc	300
tacctgggac tgtctagcct gaggcctgaa gataccgccg tgtactactg caacgagggc	360
acacctacag gcccctacta cttcgattat tggggccagg gcaccctggt caccgtttct	420
agcggaggcg gaggatctgg tggcggagga agtggcggag gcggttctga aaatgtgctg	480
acacagagcc ccagcagcat gtccgtgtct gtgggcgaca gagtgacaat cgcctgtagc	540
gcctctagca gcgtgcccta tatgcattgg ctgcagcaga agcccggcaa gagccctaag	600
ctgctgatct acctgaccag caatctggcc agcggcgtgc caagcagatt ttctggaagc	660
ggcagcggca ccgactacag cctgacaatc agtagcgtgc agcctgagga tgccgccacc	720
tactactgtc agcagagaag cagctaccct ctgaccttg gaggcggcac caagctggaa	780
atcaaagagc agaagctgat ctccgaagag gacctgacca caacaccagc tcctagacca	840
cctacaccag cacctacaat cgccctgcag ccactgtctc tgaggccaga agcttgtaga	900
cctgctgctg gcggagccgt gcatacaaga ggactggatt tcgcctgcga cgtggccgcc	960
attctcggac tgggacttgt tctgggactg ctgggacctc tggccattct gctggctctg	1020
tacctgtga gaagggacca gagactgcct cctgacgctc acaaacctcc aggcggaggc	1080
agcttcagaa cccctatcca agaggaacag gctgacgccc acagcaccct ggccaagatc	1140
agagtgaagt tcagcagatc cgccgacgct cccgcctata agcagggaca gaatcagctg	1200
tacaacgagc tgaacctggg gcgcagagaa gactacgacg tgctggacaa gagaagaggc	1260
agggatcctg aaatgggcgg caagcccaga cggaagaatc ctcaagaggg cctgtataat	1320
gagctgcaga aagacaagat ggccgaggcc tacagcgaga tcggaatgaa gggcgaacgc	1380
agaagaggaa agggccacga cggactgtat cagggcctga gcacagccac caaggacacc	1440
tatgatgccc tgcacatgca ggccctgcct ccaaga	1476

<210> 91
 <211> 492
 <212> PRT
 <213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 91

Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
 1 5 10 15

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

Val Lys Pro Gly Ala Ser Val Lys Leu Ser Cys Lys Ala Ser Gly Phe
 35 40 45

Asn Ile Lys Asp Ser Tyr Met His Trp Leu Arg Gln Gly Pro Gly Gln
 50 55 60

Arg Leu Glu Trp Ile Gly Trp Ile Asp Pro Glu Asn Gly Asp Thr Glu
 65 70 75 80

Tyr Ala Pro Lys Phe Gln Gly Lys Ala Thr Phe Thr Thr Asp Thr Ser
 85 90 95

Ala Asn Thr Ala Tyr Leu Gly Leu Ser Ser Leu Arg Pro Glu Asp Thr
 100 105 110

Ala Val Tyr Tyr Cys Asn Glu Gly Thr Pro Thr Gly Pro Tyr Tyr Phe
 115 120 125

Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly
 130 135 140

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Asn Val Leu
 145 150 155 160

Thr Gln Ser Pro Ser Ser Met Ser Val Ser Val Gly Asp Arg Val Thr
 165 170 175

Ile Ala Cys Ser Ala Ser Ser Ser Val Pro Tyr Met His Trp Leu Gln
 180 185 190

Gln Lys Pro Gly Lys Ser Pro Lys Leu Leu Ile Tyr Leu Thr Ser Asn
 195 200 205

Leu Ala Ser Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr
 210 215 220

Asp Tyr Ser Leu Thr Ile Ser Ser Val Gln Pro Glu Asp Ala Ala Thr
 225 230 235 240

Tyr Tyr Cys Gln Gln Arg Ser Ser Tyr Pro Leu Thr Phe Gly Gly Gly
 245 250 255

Thr Lys Leu Glu Ile Lys Glu Gln Lys Leu Ile Ser Glu Glu Asp Leu
 260 265 270

Thr Thr Thr Pro Ala Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala
 275 280 285

Leu Gln Pro Leu Ser Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly
 290 295 300

Gly Ala Val His Thr Arg Gly Leu Asp Phe Ala Cys Asp Val Ala Ala
 305 310 315 320

Ile Leu Gly Leu Gly Leu Val Leu Gly Leu Leu Gly Pro Leu Ala Ile
 325 330 335

Leu Leu Ala Leu Tyr Leu Leu Arg Arg Asp Gln Arg Leu Pro Pro Asp
 340 345 350

Ala His Lys Pro Pro Gly Gly Gly Ser Phe Arg Thr Pro Ile Gln Glu
 355 360 365

Glu Gln Ala Asp Ala His Ser Thr Leu Ala Lys Ile Arg Val Lys Phe
 370 375 380

Ser Arg Ser Ala Asp Ala Pro Ala Tyr Lys Gln Gly Gln Asn Gln Leu
 385 390 395 400

Tyr Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp
 405 410 415

Lys Arg Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys
 420 425 430

Asn Pro Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala
 435 440 445

Glu Ala Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys
 450 455 460

Gly His Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr
 465 470 475 480

Tyr Asp Ala Leu His Met Gln Ala Leu Pro Pro Arg
 485 490

<210> 92

<211> 1479

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 polynucleotide

<400> 92

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cctcagatcg tgctgtctca gtctcccgcc atcctgtttg ctagccctgg cgagaaagtg	120
accatgacct gtagagccag cagctccgtg tcctacatcc actggtatca gcagaagccc	180
ggcagcagcc ctaagccttg gatccacggc acaagcaatc tggccagcgg agtgcctgcc	240
agattttctg gaagcggcag cggcaccagc tacagcctga ccattcttag aatggaagcc	300
gaggacgccg ccacctacta ctgtcagcag tgggtccagca acctgagcac ctttggcggc	360
ggaacaaagc tggaaatcaa aggcggcgga ggatctggcg gaggcggtag cggagggtgt	420
ggatctgaag tgaagctggt ggaatcaggc ggaggcctgg ttcaacctgg cggatctctg	480
agactgagct gcagcatctc cggcttcacc ttcaccgact actacatgaa ctgggtccga	540

```

cagagccctg gcaaggctct ggaatggctg ggcttcatca gaaacaaagt gaacggcgac      600
accaccgagt acagcgcctc tgtgaagggc agattcacca tcagccggga catcagccag      660
agcatcctgt acctgcagat gaacaccctg cggaccgagg atagcgccac atattactgc      720
gccagagaca agggaatcgc ctactacttc gactactggg gccagggcac cacactgaca      780
gtgtctagcg agcagaagct gatctccgaa gaggacctga ccacaacacc agctcctaga      840
ccacctacac cagcacctac aatcgccctg cagccactgt ctctgaggcc agaagcttgt      900
agacctgctg ctggcgggagc cgtgcataca agaggactgg atttcgcctg cgacgtggcc      960
gccattctcg gactgggact tgttctggga ctgctgggac ctctggccat tctgctggct     1020
ctgtacctgc tgagaaggga ccagagactg cctcctgacg ctcaaaaacc tccaggcgga     1080
ggcagcttca gaaccctat ccaagaggaa caggctgacg cccacagcac cctggccaag     1140
atcagagtga agttcagcag atccgccgac gctccgcctt ataagcaggg acagaatcag     1200
ctgtacaacg agctgaacct ggggcgcaga gaagagtacg acgtgctgga caagagaaga     1260
ggcagggatc ctgaaatggg cggcaagccc agacggaaga atcctcaaga gggcctgtat     1320
aatgagctgc agaaagacaa gatggccgag gcctacagcg agatcggaat gaagggcgaa     1380
cgcagaagag gaaagggcca cgacggactg tatcagggcc tgagcacagc caccaaggac     1440
acctatgatg ccctgcacat gcaggccctg cctccaaga                                1479

```

<210> 93

<211> 493

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
polypeptide

<400> 93

```

Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1           5           10          15

```

```

His Ala Ala Arg Pro Gln Ile Val Leu Ser Gln Ser Pro Ala Ile Leu
          20          25          30

```

```

Phe Ala Ser Pro Gly Glu Lys Val Thr Met Thr Cys Arg Ala Ser Ser
          35          40          45

```

Ser Val Ser Tyr Ile His Trp Tyr Gln Gln Lys Pro Gly Ser Ser Pro
 50 55 60

Lys Pro Trp Ile His Gly Thr Ser Asn Leu Ala Ser Gly Val Pro Ala
 65 70 75 80

Arg Phe Ser Gly Ser Gly Ser Gly Thr Ser Tyr Ser Leu Thr Ile Ser
 85 90 95

Arg Met Glu Ala Glu Asp Ala Ala Thr Tyr Tyr Cys Gln Gln Trp Ser
 100 105 110

Ser Asn Leu Ser Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys Gly
 115 120 125

Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Val
 130 135 140

Lys Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly Ser Leu
 145 150 155 160

Arg Leu Ser Cys Ser Ile Ser Gly Phe Thr Phe Thr Asp Tyr Tyr Met
 165 170 175

Asn Trp Val Arg Gln Ser Pro Gly Lys Ala Leu Glu Trp Leu Gly Phe
 180 185 190

Ile Arg Asn Lys Val Asn Gly Asp Thr Thr Glu Tyr Ser Ala Ser Val
 195 200 205

Lys Gly Arg Phe Thr Ile Ser Arg Asp Ile Ser Gln Ser Ile Leu Tyr
 210 215 220

Leu Gln Met Asn Thr Leu Arg Thr Glu Asp Ser Ala Thr Tyr Tyr Cys
 225 230 235 240

Ala Arg Asp Lys Gly Ile Ala Tyr Tyr Phe Asp Tyr Trp Gly Gln Gly
 245 250 255

Thr Thr Leu Thr Val Ser Ser Glu Gln Lys Leu Ile Ser Glu Glu Asp

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

Thr Tyr Asp Ala Leu His Met Gln Ala Leu Pro Pro Arg
 485 490

<210> 94

<211> 1479

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 polynucleotide

<400> 94

atggctctgc ctgtgacagc tctgctgctg cctctggctc tgcttctgca tgctgctaga	60
cctcaggtcc agctgcagca gtctggcgcc gaacttgta gacctggcac cagcgtgaag	120
gtgtcctgta aagccagcgg ctacgccttc accaacaacc tgatcgagtg ggtcaagcag	180
aggcctggac agggactcga gtggatcggc gtgatcaatc ctggcagcgg cgacaccaac	240
tacaacgaga agttcaaggg caaagccaca ctgaccgccg acaagagcag caacacagcc	300
tacatgcagc tgagcagcct gacctccgat gacagcgccg tgtacttttg cgccagaggc	360
gattactacg gcggcttcgc cgtggattat tggggccagg gaacaagcgt gaccgtgtct	420
agcggaggcg gaggatctgg tggcggagga agtggcggag gcggttctga tatccagatg	480
accagacca ccagcagcct gtctgcctct ctgggcgata gagtgaccat cagctgcaga	540
accagccagg acatcggcaa ctacctgaac tggtatcagc agaaacccga cggcaccgtg	600
aagctgctga tctactacac cagcagactg cacagcggcg tgcccagcag attttctgga	660
agcggcagcg gcaccgacta ctccctgaca atcagcaacc tggaacaaga ggatatcgct	720
acctacttct gccagcaagg caagagcctg cctagaacct ttggaggcgg caccaagctg	780
gaaatcaaag agcagaagct gatctccgaa gaggacctga ccacaacacc agctcctaga	840
cctccaactc ctgtccttac aatcgccctg cagccactgt ctctgaggcc tgaagcttgt	900
agacctgctg ctggcggagc cgtgcatacc agaggactgg atttcgcctg cgacgtggcc	960
gccatttctg gactgggact tgttctggga ctgctgggac ctctggccat tctgctggct	1020
ctgtacctgc tgagaaggga ccagagactg cctcctgacg ctcaaaacc tccaggcgga	1080
ggcagcttca gaaccctat ccaagaggaa caggctgacg cccacagcac cctggccaag	1140
atcagagtga agttcagcag atccgccgac gctccgcct ataagcaggg acagaatcag	1200

ctgtacaacg agctgaacct ggggcgcaga gaagagtacg acgtgctgga caagagaaga 1260
 ggcaggggatc ctgaaatggg cggcaagccc agacggaaga atcctcaaga gggcctgtat 1320
 aatgagctgc agaaagacaa gatggccgag gcctacagcg agatcggaat gaagggcgaa 1380
 cgcagaagag gaaagggcca cgacggactg tatcagggcc tgagcacagc caccaaggac 1440
 acctatgatg ccctgcacat gcaggccctg cctccaaga 1479

<210> 95

<211> 493

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 polypeptide

<400> 95

Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
 1 5 10 15

His Ala Ala Arg Pro Gln Val Gln Leu Gln Gln Ser Gly Ala Glu Leu
 20 25 30

Val Arg Pro Gly Thr Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr
 35 40 45

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

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

Tyr Asn Glu Lys Phe Lys Gly Lys Ala Thr Leu Thr Ala Asp Lys Ser
 85 90 95

Ser Asn Thr Ala Tyr Met Gln Leu Ser Ser Leu Thr Ser Asp Asp Ser
 100 105 110

Ala Val Tyr Phe Cys Ala Arg Gly Asp Tyr Tyr Gly Gly Phe Ala Val
 115 120 125

Asp Tyr Trp Gly Gln Gly Thr Ser Val Thr Val Ser Ser Gly Gly Gly
 130 135 140

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Gln Met
 145 150 155 160

Thr Gln Thr Thr Ser Ser Leu Ser Ala Ser Leu Gly Asp Arg Val Thr
 165 170 175

Ile Ser Cys Arg Thr Ser Gln Asp Ile Gly Asn Tyr Leu Asn Trp Tyr
 180 185 190

Gln Gln Lys Pro Asp Gly Thr Val Lys Leu Leu Ile Tyr Tyr Thr Ser
 195 200 205

Arg Leu His Ser Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly
 210 215 220

Thr Asp Tyr Ser Leu Thr Ile Ser Asn Leu Glu Gln Glu Asp Ile Ala
 225 230 235 240

Thr Tyr Phe Cys Gln Gln Gly Lys Ser Leu Pro Arg Thr Phe Gly Gly
 245 250 255

Gly Thr Lys Leu Glu Ile Lys Glu Gln Lys Leu Ile Ser Glu Glu Asp
 260 265 270

Leu Thr Thr Thr Pro Ala Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile
 275 280 285

Ala Leu Gln Pro Leu Ser Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala
 290 295 300

Gly Gly Ala Val His Thr Arg Gly Leu Asp Phe Ala Cys Asp Val Ala
 305 310 315 320

Ala Ile Leu Gly Leu Gly Leu Val Leu Gly Leu Leu Gly Pro Leu Ala
 325 330 335

Ile Leu Leu Ala Leu Tyr Leu Leu Arg Arg Asp Gln Arg Leu Pro Pro
 340 345 350

Asp Ala His Lys Pro Pro Gly Gly Gly Ser Phe Arg Thr Pro Ile Gln
 355 360 365

Glu Glu Gln Ala Asp Ala His Ser Thr Leu Ala Lys Ile Arg Val Lys
 370 375 380

Phe Ser Arg Ser Ala Asp Ala Pro Ala Tyr Lys Gln Gly Gln Asn Gln
 385 390 395 400

Leu Tyr Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu
 405 410 415

Asp Lys Arg Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg
 420 425 430

Lys Asn Pro Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met
 435 440 445

Ala Glu Ala Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly
 450 455 460

Lys Gly His Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp
 465 470 475 480

Thr Tyr Asp Ala Leu His Met Gln Ala Leu Pro Pro Arg
 485 490

<210> 96

<211> 1473

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 polynucleotide

<400> 96

atggctctgc ctgtgacagc tctgctgctg cctctggctc tgcttctgca tgccgccaga 60

cctgacatcc agctgacaca gagccctagc agcctgtctg cctctgtggg cgacagagtg 120

accatcacat gcaaggcctc tcaggacgtg ggcacaagcg tggcatggta tcagcagaag 180

cctggcaagg cccctaagct gctgatctac tggaccagca ccagacacac aggcgtgccc	240
agcagatttt ctggcagcgg ctctggcacc gacttcacct tcaccataag cagcctgcag	300
cctgaggata tcgccaccta ctactgccag cagtacagcc tgtacagaag cttcggccag	360
ggcaccaagg tggaaatcaa aggcggatct ggaagcggcg gttctggatc tgggtggaagc	420
ggatctgagg tgcagctggg ggaatctggg ggcggagttg tgcagcctgg cagatctctg	480
agactgagct gtagcgccag cggcttcgat ttcaccacct actggatgag ctgggtccga	540
caggccccctg gcaaaggact ggaatggatc ggcgagattc accccgacag cagcaccatc	600
aattacgccc ctagcctgaa ggaccggttc accatctcca gagacaacgc caagaatacc	660
ctgttcctgc agatggacag cctccggcct gaagataccg gcgtgtactt ttgcgccagc	720
ctgtatttcg gcttcccttg gtttgcctac tggggccagg gaacacctgt gaccgttagc	780
tctgagcaga agctgatctc cgaagaggac ctgaccacaa caccagctcc tagaccacct	840
acaccagcac ctacaatcgc cctgcagcca ctgtctctga ggccagaggc ttgtagacct	900
gctgctggcg gagccgtgca tacaagagga ctggatttcg cctgcgacgt ggccgccatt	960
ctcggactgg gacttgttct gggactgctg ggacctctgg ccattctgct ggctctgtac	1020
ctgctgagaa gggaccagag actgcctcct gacgctcaca aacctccagg cggaggcagc	1080
ttcagaaccc ctatccaaga ggaacaggct gacgcccaca gcacctggc caagatcaga	1140
gtgaagttca gcagatccgc cgacgctccc gcctataagc agggacagaa tcagctgtac	1200
aacgagctga acctggggcg cagagaagag tacgacgtgc tggacaagag aagaggcagg	1260
gacacctgaaa tgggcggcaa gccagacgg aagaatcctc aagagggcct gtataatgag	1320
ctgcagaaaag acaagatggc cgaggcctac agcgagatcg gaatgaaggc cgaacgcaga	1380
agaggaaagg gccacgacgg actgtatcag ggcctgagca cagccaccaa ggacacctat	1440
gatgccctgc acatgcaggc cctgcctcca aga	1473

<210> 97

<211> 491

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 97

Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
 1 5 10 15

His Ala Ala Arg Pro Asp Ile Gln Leu Thr Gln Ser Pro Ser Ser Leu
 20 25 30

Ser Ala Ser Val Gly Asp Arg Val Thr Ile Thr Cys Lys Ala Ser Gln
 35 40 45

Asp Val Gly Thr Ser Val Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala
 50 55 60

Pro Lys Leu Leu Ile Tyr Trp Thr Ser Thr Arg His Thr Gly Val Pro
 65 70 75 80

Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Phe Thr Ile
 85 90 95

Ser Ser Leu Gln Pro Glu Asp Ile Ala Thr Tyr Tyr Cys Gln Gln Tyr
 100 105 110

Ser Leu Tyr Arg Ser Phe Gly Gln Gly Thr Lys Val Glu Ile Lys Gly
 115 120 125

Gly Ser Gly Ser Gly Gly Ser Gly Ser Gly Gly Ser Gly Ser Glu Val
 130 135 140

Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Arg Ser Leu
 145 150 155 160

Arg Leu Ser Cys Ser Ala Ser Gly Phe Asp Phe Thr Thr Tyr Trp Met
 165 170 175

Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Ile Gly Glu
 180 185 190

Ile His Pro Asp Ser Ser Thr Ile Asn Tyr Ala Pro Ser Leu Lys Asp
 195 200 205

Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Thr Leu Phe Leu Gln

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

Pro Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu
 435 440 445

Ala Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly
 450 455 460

His Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr
 465 470 475 480

Asp Ala Leu His Met Gln Ala Leu Pro Pro Arg
 485 490

<210> 98

<211> 1746

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 polynucleotide

<400> 98

atggctctgc ctgtgacagc tctgctgctg cctctggctc tgcttctgca tgctgccaga	60
cctcagaccg tgctgacaca gagcccaagc agcctgtctg tgtccgtggg cgacagagtg	120
accatcacct gtagagccag cagctccgtg acctacatcc actggtatca gcagaagccc	180
ggactggccc ctaagagcct gatctacgcc acaagcaatc tggccagcgg cgtgccaagc	240
agattttctg gaagcggcag cggcaccgac tacaccttca ccatatctag cctgcagcct	300
gaggatatcg ccacctacta ctgccagcac tgggtccagca agcctccaac atttggccag	360
ggcaccaagg tggaagtga gagaacagtt ggcgccggag gatctggcgg aggcggtagc	420
ggagggtggtg gatctgaagt tcagctgctg gaatcaggcg gcggactggt tcaacctggc	480
ggatctctga gactgagctg tgccaccagc ggcttcacct ttaccgacta ctacatgaac	540
tgggtccgac agggccctgg caaaggactg gaatggctgg gcttcatcgg caacaaggcc	600
aacggctaca ccaccgagta cagcgcctct gtgaagggca gattcaccat cagccgggac	660
aagagcaaga gcaccctgta cctgcagatg aacaccctgc aggccgagga ctccgccatc	720
tactattgca ccagagacag aggcctgcgg ttctacttcg actattgggg ccagggaacc	780
ctggtcacag tgtctagcgc ctctacaaag ggccccagcg ttttcccact ggctccctgt	840

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agcagaagca ccagcgaatc tacagccgct ctgggctgcc tgggtcaagga ctactttcct      900
gagccagtga cagtgtctga tctccagatg aatactctcc aagctgagga cagcgccatc      960
tattactgta cgcgcgatcg gggcctgaga ttctactttg attactgggg acaaggcacc     1020
ctcgtgaccg tgtcctctga gcagaagctg atctccgaag aggacctgaa tggcgccgct     1080
gccgctgcta tcgaagtgat gtaccctcct ctttacctgg acaacgagaa gtccaacggc     1140
accatcatcc acgtgaaggg caagcacctg tgtccttctc cactgttccc cggacctagc     1200
aagcctttct gggtgctcgt tgttggtggc ggcgtgctgg cctgttattc cctgctggtt     1260
accgtggcct tcatcatctt ttgggtccga agcaagcgga gcagactgct gcactccgac     1320
tacatgaaca tgaccctag acggcccga ccaaccagaa agcactacca gccttacgct     1380
cctcctagag acttcgccgc ctaccggtcc agagtgaagt tctccagatc cgccgatgct     1440
cccgctata agcagggaca gaaccagctg tacaacgagc tgaacctggg gagaagagaa     1500
gagtacgacg tgctggacaa gcggagaggc agagatcctg agatgggcgg caagcccaga     1560
cggaagaatc ctcaagaggg cctgtataat gagctgcaaa aggacaagat ggccgaggcc     1620
tacagcgaga tcggaatgaa gggcgagcgc agaagaggca agggacacga tggactgtac     1680
cagggcctga gcaccgccac caaggatacc tatgatgccc tgcacatgca ggccctgcct     1740
ccaaga                                             1746

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<210> 99

<211> 582

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
polypeptide

<400> 99

```

Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1           5           10          15

```

```

His Ala Ala Arg Pro Gln Thr Val Leu Thr Gln Ser Pro Ser Ser Leu
          20          25          30

```

```

Ser Val Ser Val Gly Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Ser
          35          40          45

```

Ser Val Thr Tyr Ile His Trp Tyr Gln Gln Lys Pro Gly Leu Ala Pro
50 55 60

Lys Ser Leu Ile Tyr Ala Thr Ser Asn Leu Ala Ser Gly Val Pro Ser
65 70 75 80

Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Tyr Thr Phe Thr Ile Ser
85 90 95

Ser Leu Gln Pro Glu Asp Ile Ala Thr Tyr Tyr Cys Gln His Trp Ser
100 105 110

Ser Lys Pro Pro Thr Phe Gly Gln Gly Thr Lys Val Glu Val Lys Arg
115 120 125

Thr Val Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly
130 135 140

Ser Glu Val Gln Leu Leu Glu Ser Gly Gly Gly Leu Val Gln Pro Gly
145 150 155 160

Gly Ser Leu Arg Leu Ser Cys Ala Thr Ser Gly Phe Thr Phe Thr Asp
165 170 175

Tyr Tyr Met Asn Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp
180 185 190

Leu Gly Phe Ile Gly Asn Lys Ala Asn Gly Tyr Thr Thr Glu Tyr Ser
195 200 205

Ala Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Lys Ser Lys Ser
210 215 220

Thr Leu Tyr Leu Gln Met Asn Thr Leu Gln Ala Glu Asp Ser Ala Ile
225 230 235 240

Tyr Tyr Cys Thr Arg Asp Arg Gly Leu Arg Phe Tyr Phe Asp Tyr Trp
245 250 255

Gly Gln Gly Thr Leu Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro
 260 265 270

Ser Val Phe Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser Thr
 275 280 285

Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr
 290 295 300

Val Leu Tyr Leu Gln Met Asn Thr Leu Gln Ala Glu Asp Ser Ala Ile
 305 310 315 320

Tyr Tyr Cys Thr Arg Asp Arg Gly Leu Arg Phe Tyr Phe Asp Tyr Trp
 325 330 335

Gly Gln Gly Thr Leu Val Thr Val Ser Ser Glu Gln Lys Leu Ile Ser
 340 345 350

Glu Glu Asp Leu Asn Gly Ala Ala Ala Ala Ala Ile Glu Val Met Tyr
 355 360 365

Pro Pro Pro Tyr Leu Asp Asn Glu Lys Ser Asn Gly Thr Ile Ile His
 370 375 380

Val Lys Gly Lys His Leu Cys Pro Ser Pro Leu Phe Pro Gly Pro Ser
 385 390 395 400

Lys Pro Phe Trp Val Leu Val Val Val Gly Gly Val Leu Ala Cys Tyr
 405 410 415

Ser Leu Leu Val Thr Val Ala Phe Ile Ile Phe Trp Val Arg Ser Lys
 420 425 430

Arg Ser Arg Leu Leu His Ser Asp Tyr Met Asn Met Thr Pro Arg Arg
 435 440 445

Pro Gly Pro Thr Arg Lys His Tyr Gln Pro Tyr Ala Pro Pro Arg Asp
 450 455 460

Phe Ala Ala Tyr Arg Ser Arg Val Lys Phe Ser Arg Ser Ala Asp Ala
 465 470 475 480

Pro Ala Tyr Lys Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn Leu
 485 490 495

Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg Asp
 500 505 510

Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu
 515 520 525

Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile
 530 535 540

Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His Asp Gly Leu Tyr
 545 550 555 560

Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu His Met
 565 570 575

Gln Ala Leu Pro Pro Arg
 580

<210> 100

<211> 1497

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 polynucleotide

<400> 100

atggctctgc ctgtgacagc tctgctgctg cctctggctc tgcttctgca tgctgccaga 60

cctgaggtcc agctgcaaga gtctggccct ggacttgtga agcctggcgg aagcctgtct 120

ctgtcttgct ccgccagcgg cttcgtgttc agcagctacg atatgagctg ggtccgacag 180

acccctgagc gaggacttga gtgggtcgcc tacatctctt ctggcggcgg aatcacatac 240

gcccctagca cagtgaaggg cagattcacc gtgtccagag acaacgcaa gaacaccctg 300

tacctgcaga tgaacagcct gaccagcgag gacaccgccg tgtactattg tgccgctcac 360

tactttggca gcagcggccc ttttgcctat tggggccagg gaacactcgt gaccgtttct 420

```

agtgctggcg gaggcggatc aggtggcgga ggaagtggcg gcggaggatc tgatatccag      480
atgacacaga gccccgccag cctgtctgcc tctgtgggag atagagtgac catcacctgt      540
cgggccagcg agaacatctt cagctacctg gcctgggtatc agcagaagcc cggcaagtct      600
cctaagctgc tgggtgtacaa caccgggaca ctggctgaag gcgtgcccag cagattttct      660
ggcagcggct ctggcaccga cttcagcctg acaatcagca gcctgcagcc tgaggacttc      720
gccacctact actgccagca ccactacggc acccctttca cctttggaag cggcaccaag      780
ctggaaatca agagagagca gaagctgata tccgaagagg acctgaatgg cgccgctacc      840
acaacaccag ctctagacc tccaactcct gtcctacaa tcgccctgca gccactgtct      900
ctgaggcctg aagctttagt acctgctgct ggcggagccg tgcataccag aggactggat      960
ttcgctgctg acatctacat ctggggcccct ctggctggaa catgcggagt gttgctgctg     1020
agcctggta tcaccaagcg gggcagaaag aagctgctgt acatcttcaa gcagcccttc     1080
atgcggcccc tgcagaccac acaagaggaa gatggctgct cctgcagatt ccccgaggaa     1140
gaagaaggcg gctgagctg gagagtgaag ttcagcagat cgcgcgacgc tcctgcctat     1200
cagcaggggc agaaccagct gtacaacgag ctgaacctgg ggagaagaga agagtacgac     1260
gtgctggaca agcggagagg cagagatcct gaaatgggag gcaagcccag acggaagaat     1320
cctcaagagg gcctgtataa tgagctgcag aaagacaaga tggccgaggc ctacagcgag     1380
atcggaatga agggcgagcg cagaagaggc aaggacacg atggactgta ccagggcctg     1440
agcaccgcca ccaaggatac ctatgatgcc ctgcacatgc aggcctgcc tccaaga      1497

```

<210> 101

<211> 499

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
polypeptide

<400> 101

```

Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1           5           10          15

```

```

His Ala Ala Arg Pro Glu Val Gln Leu Gln Glu Ser Gly Pro Gly Leu
          20          25          30

```

Val Lys Pro Gly Gly Ser Leu Ser Leu Ser Cys Ala Ala Ser Gly Phe
 35 40 45

Val Phe Ser Ser Tyr Asp Met Ser Trp Val Arg Gln Thr Pro Glu Arg
 50 55 60

Gly Leu Glu Trp Val Ala Tyr Ile Ser Ser Gly Gly Gly Ile Thr Tyr
 65 70 75 80

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

Lys Asn Thr Leu Tyr Leu Gln Met Asn Ser Leu Thr Ser Glu Asp Thr
 100 105 110

Ala Val Tyr Tyr Cys Ala Ala His Tyr Phe Gly Ser Ser Gly Pro Phe
 115 120 125

Ala Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Ala Gly Gly
 130 135 140

Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Gln
 145 150 155 160

Met Thr Gln Ser Pro Ala Ser Leu Ser Ala Ser Val Gly Asp Arg Val
 165 170 175

Thr Ile Thr Cys Arg Ala Ser Glu Asn Ile Phe Ser Tyr Leu Ala Trp
 180 185 190

Tyr Gln Gln Lys Pro Gly Lys Ser Pro Lys Leu Leu Val Tyr Asn Thr
 195 200 205

Arg Thr Leu Ala Glu Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser
 210 215 220

Gly Thr Asp Phe Ser Leu Thr Ile Ser Ser Leu Gln Pro Glu Asp Phe
 225 230 235 240

Ala Thr Tyr Tyr Cys Gln His His Tyr Gly Thr Pro Phe Thr Phe Gly

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

Gly Glu Arg Arg Arg Gly Lys Gly His Asp Gly Leu Tyr Gln Gly Leu
 465 470 475 480

Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu His Met Gln Ala Leu
 485 490 495

Pro Pro Arg

<210> 102

<211> 1497

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 polynucleotide

<400> 102

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cctgacatcc agatgacaca gagccctgcc agcctgtctg cctctgtggg agacagagtg	120
accatcacct gtcgggccag cgagaacatc ttcagctacc tggcctggta tcagcagaag	180
cccggcaagt ctcctaagct gctggtgtac aacacccgga cactggctga aggcgtgccc	240
agcagatttt ctggcagcgg cagcgggaacc gacttcagcc tgacaatcag cagcctgcag	300
cctgaggact tcgccaccta ctactgccag caccactacg gcaccccttt cacctttggc	360
tctggcacca agctggaaat caagagaggc ggcggaggat ctggcggagg tggaagtggc	420
ggaggcggat ctgaagttca gctgcaagag tctggccctg gcctcgtgaa acctggcggga	480
tctctgtctc tgagctgtgc cgccagcggc ttcgtgttca gcagctacga tatgagctgg	540
gtccgacaga cccctgagcg aggacttgag tgggtcgcct acatctcttc tggcggcggga	600
atcacatacg cccctagcac agtgaagggc agattcaccg tgtccagaga caacgccaaag	660
aacaccctgt acctgcagat gaacagcctg accagcgagg acaccgccgt gtactattgt	720
gccgctcact actttggcag cagcggccct ttgcctatt ggggccaggg aacactcgtg	780
accgtgtcta gcgccgagca gaagctgata tccgaagagg acctgaatgg cgccgctacc	840
acaacaccag ctcttagacc tccaactcct gtcctacaa tcgccctgca gccactgtct	900
ctgaggcctg aagctttag acctgctgct ggcggagccg tgcataccag aggactggat	960

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ttcgctgcg acatctacat ctgggccct ctggctggaa catgcggagt gttgctgctg      1020
agcctgggtca tcaccaagcg gggcagaaag aagctgctgt acatcttcaa gcagcccttc      1080
atgcggcccg tgcagaccac acaagaggaa gatggctgct cctgcagatt ccccgaggaa      1140
gaagaaggcg gctgcgagct gagagtgaag ttcagcagat ccgccgacgc tcctgcctat      1200
cagcagggac agaaccagct gtacaacgag ctgaacctgg ggagaagaga agagtacgac      1260
gtgctggaca agcggagagg cagagatcct gaaatgggcg gcaagcccag acggaagaat      1320
cctcaagagg gcctgtataa tgagctgcag aaagacaaga tggccgaggc ctacagcgag      1380
atcggaatga agggcgagcg cagaagaggc aaggacacg atggactgta ccagggcctg      1440
agcaccgcca ccaaggatac ctatgatgcc ctgcacatgc aggcctgcc tccaaga      1497

```

<210> 103

<211> 499

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
polypeptide

<400> 103

```

Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1           5           10          15

```

```

His Ala Ala Arg Pro Asp Ile Gln Met Thr Gln Ser Pro Ala Ser Leu
          20          25          30

```

```

Ser Ala Ser Val Gly Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Glu
          35          40          45

```

```

Asn Ile Phe Ser Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ser
50          55          60

```

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Pro Lys Leu Leu Val Tyr Asn Thr Arg Thr Leu Ala Glu Gly Val Pro
65          70          75          80

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Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Ser Leu Thr Ile
          85          90          95

```

Ser Ser Leu Gln Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Gln His His
 100 105 110

Tyr Gly Thr Pro Phe Thr Phe Gly Ser Gly Thr Lys Leu Glu Ile Lys
 115 120 125

Arg Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
 130 135 140

Glu Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Gly Gly
 145 150 155 160

Ser Leu Ser Leu Ser Cys Ala Ala Ser Gly Phe Val Phe Ser Ser Tyr
 165 170 175

Asp Met Ser Trp Val Arg Gln Thr Pro Glu Arg Gly Leu Glu Trp Val
 180 185 190

Ala Tyr Ile Ser Ser Gly Gly Gly Ile Thr Tyr Ala Pro Ser Thr Val
 195 200 205

Lys Gly Arg Phe Thr Val Ser Arg Asp Asn Ala Lys Asn Thr Leu Tyr
 210 215 220

Leu Gln Met Asn Ser Leu Thr Ser Glu Asp Thr Ala Val Tyr Tyr Cys
 225 230 235 240

Ala Ala His Tyr Phe Gly Ser Ser Gly Pro Phe Ala Tyr Trp Gly Gln
 245 250 255

Gly Thr Leu Val Thr Val Ser Ser Ala Glu Gln Lys Leu Ile Ser Glu
 260 265 270

Glu Asp Leu Asn Gly Ala Ala Thr Thr Thr Pro Ala Pro Arg Pro Pro
 275 280 285

Thr Pro Ala Pro Thr Ile Ala Leu Gln Pro Leu Ser Leu Arg Pro Glu
 290 295 300

Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr Arg Gly Leu Asp
 305 310 315 320

Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly
 325 330 335

Val Leu Leu Leu Ser Leu Val Ile Thr Lys Arg Gly Arg Lys Lys Leu
 340 345 350

Leu Tyr Ile Phe Lys Gln Pro Phe Met Arg Pro Val Gln Thr Thr Gln
 355 360 365

Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu Glu Glu Glu Gly Gly
 370 375 380

Cys Glu Leu Arg Val Lys Phe Ser Arg Ser Ala Asp Ala Pro Ala Tyr
 385 390 395 400

Gln Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn Leu Gly Arg Arg
 405 410 415

Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg Asp Pro Glu Met
 420 425 430

Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu Tyr Asn Glu
 435 440 445

Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile Gly Met Lys
 450 455 460

Gly Glu Arg Arg Arg Gly Lys Gly His Asp Gly Leu Tyr Gln Gly Leu
 465 470 475 480

Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu His Met Gln Ala Leu
 485 490 495

Pro Pro Arg

<210> 104

<211> 1740

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 104

atggctctgc ctgtgacagc tctgctgctg cctctggctc tgcttctgca tgctgccaga	60
cctgaagtgc agctgctgga atctggcgga ggactggttc aacctggcgg ctctctgaga	120
ctgagctgtg ccacaagcgg cttcaccttc accgactact acatgaactg ggtccgacag	180
gcccctggca aaggactgga atggctgggc ttcacgga acaaggccaa cggctacacc	240
accgagtaca gcgcctctgt gaagggcaga ttcacatca gccgggacaa gagcaagagc	300
accctgtacc tgcagatgaa caccctgcag gccgaggact ccgccatcta ctactgcacc	360
agagacagag gcctgcggtt ctacttcgac tattggggcc agggcacctt ggtcacagt	420
tctagcgcct ctacaaaggg cccagcggtt ttcccactgg ctccctgtag cagaagcacc	480
agcgaatcta cagccgctct gggctgcctg gtcaaggact actttcctga gcctgtgacc	540
gtgctgtatc tccagatgaa tactctccag gctgaagata gcgccatata ttactgtacg	600
cgcgaccggg gcctgagatt ctactttgat tactggggac aagggaccct cgtgaccgtt	660
tcttctggcg gcggaggaag cggaggcgga ggatccggtg gtggtggatc tcagacagt	720
ctgacacaga gccctagcag cctgtctgtg tccgtgggag acagagtgc catcacctgt	780
agagccagca gctccgtgac ctacatccac tggatatcagc agaagcccgg actggcccct	840
aagagcctga tctacgccac aagcaatctg gccagcggcg tgccaagcag attttctgga	900
agcggcagcg gcaccgacta tacctttaca atcagcagcc tgcagcctga ggatatcgcc	960
acctactatt gccagcactg gtccagcaag cctccaacct ttggacaggg caccaaggtg	1020
gaagtgaagc ggaccgtgga gcagaagctg atctccgaag aggacctgaa tggcgccgct	1080
accacaacac cagctcctag acctccaact cctgctccta caatcgccct gcagccactg	1140
tctctgaggc ctgaagcttg tagacctgct gctggcgag ccgtgcatac cagaggactg	1200
gatttcgcct gcgacatcta catctgggac cctctggctg gaacatgcgg agtggtgctg	1260
ctgagcctgg tcatcaccaa gcggggcaga aagaagctgc tgtacatctt caagcagccc	1320
ttcatgcggc ccgtgcagac cacacaagag gaagatggct gctcctgcag attccccgag	1380
gaagaagaag gcggctgcga gctgagagtg aagttcagca gatccgccga cgctcctgcc	1440

tatcagcagg gacagaacca gctgtacaac gagctgaacc tggggagaag agaagagtac 1500
gacgtgctgg acaagcggag aggcagagat cctgaaatgg gcggcaagcc cagacggaag 1560
aatcctcaag agggcctgta taatgagctg cagaaagaca agatggccga ggcctacagc 1620
gagatcggaa tgaagggcga gcgcagaaga ggcaaggac acgatggact gtaccagggc 1680
ctgagcaccg ccaccaagga tacctatgat gccctgcaca tgcaggccct gcctccaaga 1740

<210> 105

<211> 580

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
polypeptide

<400> 105

Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Glu Val Gln Leu Leu Glu Ser Gly Gly Gly Leu
20 25 30

Val Gln Pro Gly Gly Ser Leu Arg Leu Ser Cys Ala Thr Ser Gly Phe
35 40 45

Thr Phe Thr Asp Tyr Tyr Met Asn Trp Val Arg Gln Ala Pro Gly Lys
50 55 60

Gly Leu Glu Trp Leu Gly Phe Ile Gly Asn Lys Ala Asn Gly Tyr Thr
65 70 75 80

Thr Glu Tyr Ser Ala Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp
85 90 95

Lys Ser Lys Ser Thr Leu Tyr Leu Gln Met Asn Thr Leu Gln Ala Glu
100 105 110

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

Phe Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Ala Ser

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

Glu Glu Asp Leu Asn Gly Ala Ala Thr Thr Thr Pro Ala Pro Arg Pro
 355 360 365

Pro Thr Pro Ala Pro Thr Ile Ala Leu Gln Pro Leu Ser Leu Arg Pro
 370 375 380

Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr Arg Gly Leu
 385 390 395 400

Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys
 405 410 415

Gly Val Leu Leu Leu Ser Leu Val Ile Thr Lys Arg Gly Arg Lys Lys
 420 425 430

Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met Arg Pro Val Gln Thr Thr
 435 440 445

Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu Glu Glu Glu Gly
 450 455 460

Gly Cys Glu Leu Arg Val Lys Phe Ser Arg Ser Ala Asp Ala Pro Ala
 465 470 475 480

Tyr Gln Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn Leu Gly Arg
 485 490 495

Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg Asp Pro Glu
 500 505 510

Met Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu Tyr Asn
 515 520 525

Glu Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile Gly Met
 530 535 540

Lys Gly Glu Arg Arg Arg Gly Lys Gly His Asp Gly Leu Tyr Gln Gly
 545 550 555 560

Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu His Met Gln Ala

565

570

575

Leu Pro Pro Arg
580

<210> 106

<211> 1740

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
polynucleotide

<400> 106

atggctctgc ctgtgacagc tctgctgctg cctctggctc tgcttctgca tgctgccaga	60
cctcagaccg tgctgacaca gagcccaagc agcctgtctg tgtccgtggg cgacagagtg	120
accatcacct gtagagccag cagctccgtg acctacatcc actggtatca gcagaagccc	180
ggactggccc ctaagagcct gatctacgcc acaagcaatc tggccagcgg cgtgccaaagc	240
agattttctg gaagcggcag cggcaccgac tacaccttca ccatatctag cctgcagcct	300
gaggatatcg ccacctacta ctgccagcac tgggtccagca agcctccaac atttggccag	360
ggcaccaagg tggaagtga gagaacagtt ggcggcggag gatctggcgg aggcggtagc	420
ggagggtggtg gatctgaagt tcagctgctg gaatcaggcg gcggactggt tcaacctggc	480
ggatctctga gactgagctg tgccaccagc ggcttcacct ttaccgacta ctacatgaac	540
tgggtccgac aggcccctgg caaaggactg gaatggctgg gcttcatcgg caacaaggcc	600
aacggctaca ccaccgagta cagcgcctct gtgaagggca gattcaccat cagccgggac	660
aagagcaaga gcaccctgta cctgcagatg aacaccctgc aggccgagga ctccgccatc	720
tactattgca ccagagacag aggcctgcgg ttctacttcg actattgggg ccagggaacc	780
ctggtcacag tgtctagcgc ctctacaaag ggccccagcg ttttcccact ggctccctgt	840
agcagaagca ccagcgaatc tacagccgct ctgggctgcc tgggtcaagga ctactttcct	900
gagccagtga cagtgtgta tctccagatg aatactctcc aagctgagga cagcgccatc	960
tattactgta cgcgcgatcg gggcctgaga ttctactttg attactgggg acaaggcacc	1020
ctcgtgaccg tgtcctctga gcagaagctg atctccgaag aggacctgaa tggcgccgct	1080
accacaacac cagctcctag acctccaact cctgctccta caatcgccct gcagccactg	1140

tctctgaggc ctgaagcttg tagacctgct gctggcggag ccgtgcatac cagaggactg 1200
 gatttcgcct gcgacatcta catctgggcc cctctggctg gaacatgcgg agtgttgctg 1260
 ctgagcctgg tcatcaccaa gcggggcaga aagaagctgc tgtacatctt caagcagccc 1320
 ttcatgcggc ccgtgcagac cacacaagag gaagatggct gctcctgcag attccccgag 1380
 gaagaagaag gcggctgcga gctgagagtg aagttcagca gatccgccga cgctcctgcc 1440
 tatcagcagg gacagaacca gctgtacaac gagctgaacc tggggagaag agaagagtac 1500
 gacgtgctgg acaagcggag aggcagagat cctgaaatgg gcggcaagcc cagacggaag 1560
 aatcctcaag agggcctgta taatgagctg cagaaagaca agatggccga ggcctacagc 1620
 gagatcggaa tgaagggcga gcgcagaaga ggcaaggagc acgatggact gtaccagggc 1680
 ctgagcaccg ccaccaagga tacctatgat gccctgcaca tgcaggccct gcctccaaga 1740

<210> 107

<211> 580

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 107

Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
 1 5 10 15

His Ala Ala Arg Pro Gln Thr Val Leu Thr Gln Ser Pro Ser Ser Leu
 20 25 30

Ser Val Ser Val Gly Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Ser
 35 40 45

Ser Val Thr Tyr Ile His Trp Tyr Gln Gln Lys Pro Gly Leu Ala Pro
 50 55 60

Lys Ser Leu Ile Tyr Ala Thr Ser Asn Leu Ala Ser Gly Val Pro Ser
 65 70 75 80

Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Tyr Thr Phe Thr Ile Ser
 85 90 95

Ser Leu Gln Pro Glu Asp Ile Ala Thr Tyr Tyr Cys Gln His Trp Ser
 100 105 110

Ser Lys Pro Pro Thr Phe Gly Gln Gly Thr Lys Val Glu Val Lys Arg
 115 120 125

Thr Val Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly
 130 135 140

Ser Glu Val Gln Leu Leu Glu Ser Gly Gly Gly Leu Val Gln Pro Gly
 145 150 155 160

Gly Ser Leu Arg Leu Ser Cys Ala Thr Ser Gly Phe Thr Phe Thr Asp
 165 170 175

Tyr Tyr Met Asn Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp
 180 185 190

Leu Gly Phe Ile Gly Asn Lys Ala Asn Gly Tyr Thr Thr Glu Tyr Ser
 195 200 205

Ala Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Lys Ser Lys Ser
 210 215 220

Thr Leu Tyr Leu Gln Met Asn Thr Leu Gln Ala Glu Asp Ser Ala Ile
 225 230 235 240

Tyr Tyr Cys Thr Arg Asp Arg Gly Leu Arg Phe Tyr Phe Asp Tyr Trp
 245 250 255

Gly Gln Gly Thr Leu Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro
 260 265 270

Ser Val Phe Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser Thr
 275 280 285

Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr
 290 295 300

Val Leu Tyr Leu Gln Met Asn Thr Leu Gln Ala Glu Asp Ser Ala Ile
305 310 315 320

Tyr Tyr Cys Thr Arg Asp Arg Gly Leu Arg Phe Tyr Phe Asp Tyr Trp
325 330 335

Gly Gln Gly Thr Leu Val Thr Val Ser Ser Glu Gln Lys Leu Ile Ser
340 345 350

Glu Glu Asp Leu Asn Gly Ala Ala Thr Thr Thr Pro Ala Pro Arg Pro
355 360 365

Pro Thr Pro Ala Pro Thr Ile Ala Leu Gln Pro Leu Ser Leu Arg Pro
370 375 380

Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr Arg Gly Leu
385 390 395 400

Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys
405 410 415

Gly Val Leu Leu Leu Ser Leu Val Ile Thr Lys Arg Gly Arg Lys Lys
420 425 430

Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met Arg Pro Val Gln Thr Thr
435 440 445

Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu Glu Glu Glu Gly
450 455 460

Gly Cys Glu Leu Arg Val Lys Phe Ser Arg Ser Ala Asp Ala Pro Ala
465 470 475 480

Tyr Gln Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn Leu Gly Arg
485 490 495

Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg Asp Pro Glu
500 505 510

Met Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu Tyr Asn
515 520 525

Glu Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile Gly Met
 530 535 540

Lys Gly Glu Arg Arg Arg Gly Lys Gly His Asp Gly Leu Tyr Gln Gly
 545 550 555 560

Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu His Met Gln Ala
 565 570 575

Leu Pro Pro Arg
 580

<210> 108

<211> 500

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 polypeptide

<400> 108

Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
 1 5 10 15

His Ala Ala Arg Pro Asp Ile Gln Leu Thr Gln Ser Pro Ser Ser Leu
 20 25 30

Ser Ala Ser Val Gly Asp Arg Val Thr Ile Thr Cys Lys Ala Ser Gln
 35 40 45

Asp Val Gly Thr Ser Val Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala
 50 55 60

Pro Lys Leu Leu Ile Tyr Trp Thr Ser Thr Arg His Thr Gly Val Pro
 65 70 75 80

Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Phe Thr Ile
 85 90 95

Ser Ser Leu Gln Pro Glu Asp Ile Ala Thr Tyr Tyr Cys Gln Gln Tyr
 100 105 110

Ser Leu Tyr Arg Ser Phe Gly Gln Gly Thr Lys Val Glu Ile Lys Gly
 115 120 125

Gly Ser Gly Ser Gly Gly Ser Gly Ser Gly Gly Ser Gly Ser Glu Val
 130 135 140

Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Arg Ser Leu
 145 150 155 160

Arg Leu Ser Cys Ser Ala Ser Gly Phe Asp Phe Thr Thr Tyr Trp Met
 165 170 175

Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Ile Gly Glu
 180 185 190

Ile His Pro Asp Ser Ser Thr Ile Asn Tyr Ala Pro Ser Leu Lys Asp
 195 200 205

Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Thr Leu Phe Leu Gln
 210 215 220

Met Asp Ser Leu Arg Pro Glu Asp Thr Gly Val Tyr Phe Cys Ala Ser
 225 230 235 240

Leu Tyr Phe Gly Phe Pro Trp Phe Ala Tyr Trp Gly Gln Gly Thr Pro
 245 250 255

Val Thr Val Ser Ser Glu Gln Lys Leu Ile Ser Glu Glu Asp Leu Asn
 260 265 270

Gly Ala Ala Thr Thr Thr Pro Ala Pro Arg Pro Pro Thr Pro Ala Pro
 275 280 285

Thr Ile Ala Leu Gln Pro Leu Ser Leu Arg Pro Glu Ala Cys Arg Pro
 290 295 300

Ala Ala Gly Gly Ala Val His Thr Arg Gly Leu Asp Phe Ala Cys Asp
 305 310 315 320

Phe Trp Val Leu Val Val Val Gly Gly Val Leu Ala Cys Tyr Ser Leu
 325 330 335

Leu Val Thr Val Ala Phe Ile Ile Phe Trp Val Arg Ser Lys Arg Ser
 340 345 350

Arg Leu Leu His Ser Asp Tyr Met Asn Met Thr Pro Arg Arg Pro Gly
 355 360 365

Pro Thr Arg Lys His Tyr Gln Pro Tyr Ala Pro Pro Arg Asp Phe Ala
 370 375 380

Ala Tyr Arg Ser Arg Val Lys Phe Ser Arg Ser Ala Asp Ala Pro Ala
 385 390 395 400

Tyr Lys Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn Leu Gly Arg
 405 410 415

Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg Asp Pro Glu
 420 425 430

Met Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu Tyr Asn
 435 440 445

Glu Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile Gly Met
 450 455 460

Lys Gly Glu Arg Arg Arg Gly Lys Gly His Asp Gly Leu Tyr Gln Gly
 465 470 475 480

Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu His Met Gln Ala
 485 490 495

Leu Pro Pro Arg
 500

<210> 109

<211> 1473

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 109

atggctctgc ctgtgacagc tctgctgctg cctctggctc tgcttctgca tgccgccaga	60
cctgacatcc agctgacaca gagccctagc agcctgtctg cctctgtggg cgacagagtg	120
accatcacat gcaaggcctc tcaggacgtg ggcacaagcg tggcatggta tcagcagaag	180
cctggcaagg cccctaagct gctgatctac tggaccagca ccagacacac aggcgtgccc	240
agcagatfff ctggcagcgg ctctggcacc gacttcacct tcaccataag cagcctgcag	300
cctgaggata tcgccaccta ctactgccag cagtacagcc tgtacagaag cttcggccag	360
ggcaccaagg tggaaatcaa aggcggatct ggaagcggcg gttctggatc tgggtggaagc	420
ggatctgagg tgcagctggg ggaatctggg ggcggagttg tgcagcctgg cagatctctg	480
agactgagct gtagcgccag cggcttcgat ttcaccacct actggatgag ctgggtccga	540
caggcccctg gcaaaggact ggaatggatc ggcgagattc accccgacag cagcaccatc	600
aattacgccc ctagcctgaa ggaccggttc accatctcca gagacaacgc caagaatacc	660
ctgttcctgc agatggacag cctccggcct gaagataccg gcgtgtactt ttgcgccagc	720
ctgtatttcg gcttcccttg gtttgcctac tggggccagg gaacacctgt gaccgttagc	780
tctgagcaga agctgatctc cgaagaggac ctgaccacaa caccagctcc tagacctcca	840
actcctgctc ctacaatcgc cctgcagcca ctgtctctga ggcctgaagc ttgtagacct	900
gctgctggcg gagccgtgca taccagagga ctggatttcg cctgcgacat ctacatctgg	960
gcccctctgg ctggaacatg cggagtgttg ctgctgagcc tggatcatcac caagcggggc	1020
agaaagaagc tgctgtacat cttcaagcag cccttcatgc ggcccgtgca gaccacacaa	1080
gaggaagatg gctgctcctg cagattcccc gaggaagaag aaggcggctg cgagctgaga	1140
gtgaagttca gcagatccgc cgacgctcct gcctatcagc agggacagaa ccagctgtac	1200
aacgagctga acctggggag aagagaagag tacgacgtgc tggacaagcg gagaggcaga	1260
gatcctgaaa tgggaggcaa gccagacgg aagaatcctc aagagggcct gtataatgag	1320
ctgcagaaaag acaagatggc cgaggcctac agcgagatcg gaatgaaggg cgagcgcaga	1380
agaggcaagg gacacgatgg actgtaccag ggcctgagca ccgccaccaa ggatacctat	1440
gatgccctgc acatgcaggc cctgcctcca aga	1473

<210> 110

<211> 495

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 110

Met	Ala	Leu	Pro	Val	Thr	Ala	Leu	Leu	Leu	Pro	Leu	Ala	Leu	Leu	Leu
1				5				10					15		

His	Ala	Ala	Arg	Pro	Asp	Ile	Gln	Leu	Thr	Gln	Ser	Pro	Ser	Ser	Leu
			20					25					30		

Ser	Ala	Ser	Val	Gly	Asp	Arg	Val	Thr	Ile	Thr	Cys	Lys	Ala	Ser	Gln
		35					40					45			

Asp	Val	Gly	Thr	Ser	Val	Ala	Trp	Tyr	Gln	Gln	Lys	Pro	Gly	Lys	Ala
	50					55					60				

Pro	Lys	Leu	Leu	Ile	Tyr	Trp	Thr	Ser	Thr	Arg	His	Thr	Gly	Val	Pro
65					70					75					80

Ser	Arg	Phe	Ser	Gly	Ser	Gly	Ser	Gly	Thr	Asp	Phe	Thr	Phe	Thr	Ile
				85					90						95

Ser	Ser	Leu	Gln	Pro	Glu	Asp	Ile	Ala	Thr	Tyr	Tyr	Cys	Gln	Gln	Tyr
			100					105					110		

Ser	Leu	Tyr	Arg	Ser	Phe	Gly	Gln	Gly	Thr	Lys	Val	Glu	Ile	Lys	Gly
		115					120					125			

Gly	Ser	Gly	Ser	Gly	Gly	Ser	Gly	Ser	Gly	Gly	Ser	Gly	Ser	Glu	Val
	130					135					140				

Gln	Leu	Val	Glu	Ser	Gly	Gly	Gly	Val	Val	Gln	Pro	Gly	Arg	Ser	Leu
145					150					155					160

Arg	Leu	Ser	Cys	Ser	Ala	Ser	Gly	Phe	Asp	Phe	Thr	Thr	Tyr	Trp	Met
				165					170					175	

Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Ile Gly Glu
 180 185 190

Ile His Pro Asp Ser Ser Thr Ile Asn Tyr Ala Pro Ser Leu Lys Asp
 195 200 205

Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Thr Leu Phe Leu Gln
 210 215 220

Met Asp Ser Leu Arg Pro Glu Asp Thr Gly Val Tyr Phe Cys Ala Ser
 225 230 235 240

Leu Tyr Phe Gly Phe Pro Trp Phe Ala Tyr Trp Gly Gln Gly Thr Pro
 245 250 255

Val Thr Val Ser Ser Glu Gln Lys Leu Ile Ser Glu Glu Asp Leu Asn
 260 265 270

Gly Ala Ala Thr Thr Thr Pro Ala Pro Arg Pro Pro Thr Pro Ala Pro
 275 280 285

Thr Ile Ala Leu Gln Pro Leu Ser Leu Arg Pro Glu Ala Cys Arg Pro
 290 295 300

Ala Ala Gly Gly Ala Val His Thr Arg Gly Leu Asp Phe Ala Cys Asp
 305 310 315 320

Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly Val Leu Leu Leu
 325 330 335

Ser Leu Val Ile Thr Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe
 340 345 350

Lys Gln Pro Phe Met Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly
 355 360 365

Cys Ser Cys Arg Phe Pro Glu Glu Glu Gly Gly Cys Glu Leu Arg
 370 375 380

Val Lys Phe Ser Arg Ser Ala Asp Ala Pro Ala Tyr Gln Gln Gly Gln

385		390		395		400									
Asn	Gln	Leu	Tyr	Asn	Glu	Leu	Asn	Leu	Gly	Arg	Arg	Glu	Glu	Tyr	Asp
				405					410					415	
Val	Leu	Asp	Lys	Arg	Arg	Gly	Arg	Asp	Pro	Glu	Met	Gly	Gly	Lys	Pro
			420					425					430		
Arg	Arg	Lys	Asn	Pro	Gln	Glu	Gly	Leu	Tyr	Asn	Glu	Leu	Gln	Lys	Asp
		435					440					445			
Lys	Met	Ala	Glu	Ala	Tyr	Ser	Glu	Ile	Gly	Met	Lys	Gly	Glu	Arg	Arg
	450					455					460				
Arg	Gly	Lys	Gly	His	Asp	Gly	Leu	Tyr	Gln	Gly	Leu	Ser	Thr	Ala	Thr
465					470					475					480
Lys	Asp	Thr	Tyr	Asp	Ala	Leu	His	Met	Gln	Ala	Leu	Pro	Pro	Arg	
				485					490					495	

<210> 111

<211> 1500

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 111

atggctctgc ctgtgacagc tctgctgctg cctctggctc tgcttctgca tgccgctaga	60
cctgaggtcc agctgcaaga gtctggccct ggacttgtga agcctggcgg aagcctgtct	120
ctgtcttgtg ccgccagcgg cttcgtgttc agcagctacg atatgagctg ggtccgacag	180
acctctgagc gaggacttga gtgggtcgcc tacatctctt ctggcggcgg aatcacatac	240
gcccctagca cagtgaaggg cagattcacc gtgtccagag acaacgcaa gaacaccctg	300
tacctgcaga tgaacagcct gaccagcgag gacaccgccg tgtactattg tgccgctcac	360
tactttggca gcagcggccc ttttgcctat tggggccagg gaacactcgt gaccgtttct	420
agtgtggcg gaggcgatc aggtggcgga ggaagtggcg gcggaggatc tgatatccag	480
atgacacaga gccccgccag cctgtctgcc tctgtgggag atagagtgc catcacctgt	540

```

cgggccagcg agaacatctt cagctacctg gcctggtatc agcagaagcc cggcaagtct      600
cctaagctgc tgggtgtacaa caccggaaca ctggctgaag gcgtgcccag cagattttct      660
ggcagcggct ctggcaccga cttcagcctg acaatcagca gcctgcagcc tgaggacttc      720
gccacctact actgccagca ccactacggc acccctttca cctttggaag cggcaccaag      780
ctggaaatca agagagagca gaagctgatc tccgaagagg acctgaccac aactcctgct      840
cctagacctc ctacaccagc tcctacaatc gccctgcagc cactgtctct gaggccagaa      900
gcttgtagac ctgctgcagg cggagccgtg catacaagag gactggattt cgcctgcgac      960
ttctgggtgc tcgtggttgt tggcggagtg ctggcctgtt actctctgct ggtcaccgtg     1020
gccttcatca tcttttgggt ccgaagcaag cggagccggc tgctgcacag cgactacatg     1080
aacatgaccc ctagacggcc cggacctacc agaaagcact accagcctta cgctcctcct     1140
agagatttcg cgcctaccg gtccagagtg aagttcagca gatccgccga tgctcccgcc     1200
tataagcagg gacagaacca gctgtacaac gagctgaacc tggggagaag agaagagtac     1260
gacgtgctgg acaagcggag aggcagagat cctgagatgg gcggcaagcc cagacggaag     1320
aatcctcaag agggcctgta taatgagctg cagaaagaca agatggccga ggcctacagc     1380
gagatcgga tgaagggcga gcgcagaaga ggcaaggac acgatggact gtaccagggc     1440
ctgagcaccg ccaccaagga tacctatgat gccctgcaca tgcaggccct gcctccaaga     1500

```

<210> 112

<211> 504

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
polypeptide

<400> 112

```

Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1           5           10          15

```

```

His Ala Ala Arg Pro Glu Val Gln Leu Gln Glu Ser Gly Pro Gly Leu
          20          25          30

```

```

Val Lys Pro Gly Gly Ser Leu Ser Leu Ser Cys Ala Ala Ser Gly Phe
          35          40          45

```

Val Phe Ser Ser Tyr Asp Met Ser Trp Val Arg Gln Thr Pro Glu Arg
50 55 60

Gly Leu Glu Trp Val Ala Tyr Ile Ser Ser Gly Gly Gly Ile Thr Tyr
65 70 75 80

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

Lys Asn Thr Leu Tyr Leu Gln Met Asn Ser Leu Thr Ser Glu Asp Thr
100 105 110

Ala Val Tyr Tyr Cys Ala Ala His Tyr Phe Gly Ser Ser Gly Pro Phe
115 120 125

Ala Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Ala Gly Gly
130 135 140

Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Gln
145 150 155 160

Met Thr Gln Ser Pro Ala Ser Leu Ser Ala Ser Val Gly Asp Arg Val
165 170 175

Thr Ile Thr Cys Arg Ala Ser Glu Asn Ile Phe Ser Tyr Leu Ala Trp
180 185 190

Tyr Gln Gln Lys Pro Gly Lys Ser Pro Lys Leu Leu Val Tyr Asn Thr
195 200 205

Arg Thr Leu Ala Glu Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser
210 215 220

Gly Thr Asp Phe Ser Leu Thr Ile Ser Ser Leu Gln Pro Glu Asp Phe
225 230 235 240

Ala Thr Tyr Tyr Cys Gln His His Tyr Gly Thr Pro Phe Thr Phe Gly
245 250 255

Ser Gly Thr Lys Leu Glu Ile Lys Arg Glu Gln Lys Leu Ile Ser Glu
 260 265 270

Glu Asp Leu Asn Gly Ala Ala Thr Thr Thr Pro Ala Pro Arg Pro Pro
 275 280 285

Thr Pro Ala Pro Thr Ile Ala Leu Gln Pro Leu Ser Leu Arg Pro Glu
 290 295 300

Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr Arg Gly Leu Asp
 305 310 315 320

Phe Ala Cys Asp Phe Trp Val Leu Val Val Val Gly Gly Val Leu Ala
 325 330 335

Cys Tyr Ser Leu Leu Val Thr Val Ala Phe Ile Ile Phe Trp Val Arg
 340 345 350

Ser Lys Arg Ser Arg Leu Leu His Ser Asp Tyr Met Asn Met Thr Pro
 355 360 365

Arg Arg Pro Gly Pro Thr Arg Lys His Tyr Gln Pro Tyr Ala Pro Pro
 370 375 380

Arg Asp Phe Ala Ala Tyr Arg Ser Arg Val Lys Phe Ser Arg Ser Ala
 385 390 395 400

Asp Ala Pro Ala Tyr Lys Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu
 405 410 415

Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly
 420 425 430

Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu
 435 440 445

Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser
 450 455 460

Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His Asp Gly
 465 470 475 480

Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu
 485 490 495

His Met Gln Ala Leu Pro Pro Arg
 500

<210> 113
 <211> 1485
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 polynucleotide

<400> 113
 atggctctgc ctgtgacagc tctgctgctg cctctggctc tgcttctgca tgccgctaga 60
 cctgaggtcc agctgcaaga gtctggccct ggacttgtga agcctggcgg aagcctgtct 120
 ctgtcttgtg ccgccagcgg cttcgtgttc agcagctacg atatgagctg ggtccgacag 180
 acccctgagc gaggacttga gtgggtcgcc tacatctctt ctggcggcgg aatcacatac 240
 gcccctagca cagtgaaggg cagattcacc gtgtccagag acaacgcaa gaacaccctg 300
 tacctgcaga tgaacagcct gaccagcgag gacaccgccg tgtactattg tgccgctcac 360
 tactttggca gcagcggccc ttttgcctat tggggccagg gaacactcgt gaccgtttct 420
 agtgctggcg gaggcggatc aggtggcgga ggaagtggcg gcggaggatc tgatatccag 480
 atgacacaga gccccgccag cctgtctgcc tctgtgggag atagagtga catcacctgt 540
 cgggccagcg agaacatctt cagctacctg gcctggtatc agcagaagcc cggcaagtct 600
 cctaagctgc tgggtgtacaa caccggaca ctggctgaag gcgtgcccag cagattttct 660
 ggcagcggct ctggcaccga cttcagcctg acaatcagca gcctgcagcc tgaggacttc 720
 gccacctact actgccagca ccactacggc acccctttca cctttggaag cggcaccaag 780
 ctggaaatca agagagagca gaagctgatc tccgaagagg acctgaccac aacaccagct 840
 cctagaccac ctacaccagc acctacaatc gccctgcagc cactgtctct gaggccagag 900
 gctttagtagac ctgctgctgg cggagccgtg catacaagag gactggattt cgcctgcgac 960
 gtggccgcca ttctcggact gggacttggt ctgggactgc tgggacctct ggccattctg 1020

```

ctggctctgt acctgctgag aagggaccag agactgcctc ctgacgtca caaacctcca      1080
ggcggaggca gcttcagaac ccctatcaa gaggaacagg ctgacgcca cagcacctg      1140
gccaagatca gagtgaagtt cagcagatcc gccgacgctc ccgcctataa gcagggacag      1200
aatcagctgt acaacgagct gaacctgggg cgagagaaag agtacgacgt gctggacaag      1260
agaagaggca gggatcctga aatgggcggc aagcccagac ggaagaatcc tcaagagggc      1320
ctgtataatg agctgcagaa agacaagatg gccgaggcct acagcgagat cggaatgaag      1380
ggcgaacgca gaagaggaaa gggccacgac ggactgtatc agggcctgag cacagccacc      1440
aaggacacct atgatgccct gcacatgcag gccctgcctc caaga                      1485

```

<210> 114

<211> 499

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
polypeptide

<400> 114

```

Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1           5           10          15

```

```

His Ala Ala Arg Pro Glu Val Gln Leu Gln Glu Ser Gly Pro Gly Leu
      20           25           30

```

```

Val Lys Pro Gly Gly Ser Leu Ser Leu Ser Cys Ala Ala Ser Gly Phe
      35           40           45

```

```

Val Phe Ser Ser Tyr Asp Met Ser Trp Val Arg Gln Thr Pro Glu Arg
      50           55           60

```

```

Gly Leu Glu Trp Val Ala Tyr Ile Ser Ser Gly Gly Gly Ile Thr Tyr
      65           70           75           80

```

```

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

```

```

Lys Asn Thr Leu Tyr Leu Gln Met Asn Ser Leu Thr Ser Glu Asp Thr
      100          105          110

```

Ala Val Tyr Tyr Cys Ala Ala His Tyr Phe Gly Ser Ser Gly Pro Phe
 115 120 125

Ala Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Ala Gly Gly
 130 135 140

Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Gln
 145 150 155 160

Met Thr Gln Ser Pro Ala Ser Leu Ser Ala Ser Val Gly Asp Arg Val
 165 170 175

Thr Ile Thr Cys Arg Ala Ser Glu Asn Ile Phe Ser Tyr Leu Ala Trp
 180 185 190

Tyr Gln Gln Lys Pro Gly Lys Ser Pro Lys Leu Leu Val Tyr Asn Thr
 195 200 205

Arg Thr Leu Ala Glu Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser
 210 215 220

Gly Thr Asp Phe Ser Leu Thr Ile Ser Ser Leu Gln Pro Glu Asp Phe
 225 230 235 240

Ala Thr Tyr Tyr Cys Gln His His Tyr Gly Thr Pro Phe Thr Phe Gly
 245 250 255

Ser Gly Thr Lys Leu Glu Ile Lys Arg Glu Gln Lys Leu Ile Ser Glu
 260 265 270

Glu Asp Leu Asn Gly Ala Ala Thr Thr Thr Pro Ala Pro Arg Pro Pro
 275 280 285

Thr Pro Ala Pro Thr Ile Ala Leu Gln Pro Leu Ser Leu Arg Pro Glu
 290 295 300

Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr Arg Gly Leu Asp
 305 310 315 320

Phe Ala Cys Asp Val Ala Ala Ile Leu Gly Leu Gly Leu Val Leu Gly

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

<210> 115

<211> 1707

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic

polynucleotide

<400> 115

atggctctgc ctgtgacagc tctgctgctg cctctggctc tgcttctgca tgccgccaga	60
cctgacatcc agctgacaca gagccctagc agcctgtctg cctctgtggg cgacagagtg	120
accatcacat gcaaggcctc tcaggacgtg ggcacaagcg tggcatggta tcagcagaag	180
cctggcaagg cccctaagct gctgatctac tggaccagca ccagacacac aggcgtgccc	240
agcagatttt ctggcagcgg ctctggcacc gacttcacct tcaccataag cagcctgcag	300
cctgaggata tcgccaccta ctactgccag cagtacagcc tgtacagaag cttcggccag	360
ggcaccaagg tggaaatcaa aggcggatct ggaagcggcg gttctggatc tgggtggaagc	420
ggatctgagg tgcagctggg ggaatctggg ggcggagttg tgcagcctgg cagatctctg	480
agactgagct gtagcgccag cggcttcgat ttcaccacct actggatgag ctgggtccga	540
caggcccctg gcaaaggact ggaatggatc ggcgagattc accccgacag cagcaccatc	600
aattacgccc ctagcctgaa ggaccggttc accatctcca gagacaacgc caagaatacc	660
ctgttcctgc agatggacag cctccggcct gaagataccg gcgtgtactt ttgcgccagc	720
ctgtatttcg gcttccttg gtttgcctac tggggccagg gaacacctgt gaccgttagc	780
tctgagcaga agctgatctc cgaagaggac ctgaccacaa caccagctcc tagacctcca	840
actcctgctc ctacaatcgc cctgcagcca ctgtctctga ggcctgaagc ttgtagacct	900
gctgctggcg gagccgtgca taccagagga ctggatttcg cctgcgactt cctggtcatc	960
atcgtgatcc tgagcgccct gttcctgggc aactggcct gtttctgcgt gtggcgcaga	1020
aagcgaaaag agaagcagag cgagacaagc cccaaagagt tcctgaccat ctacgaggac	1080
gtgaaggacc tgaaaacccg gcggaaccac gagcaagagc agacctttcc tggcggcgga	1140
tccaccatct acagcatgat ccagagccag agcagcgccc ctacaagcca agagcctgcc	1200
tacacactgt acagcctgat tcagcccagc agaaagagcg gctcccggaa gagaaatcac	1260
agccccagct tcaacagcac gatctacgaa gtgatcggca agagccagcc aaaggctcag	1320
aaccctgcca gactgagcag aaaagagctg gaaaacttcg acgtgtacag ccgctgaag	1380
ttcagcagat ccgccgatgc tcctgcctat cagcagggcc agaaccagct gtacaacgag	1440
ctgaacctgg ggagaagaga agagtacgac gtgctggaca agcggagagg cagagatcct	1500
gaaatgggcg gcaagcccag acggaagaat cctcaagagg gcctgtataa tgagctgcag	1560

aaagacaaga tggccgaggc ctacagcgag atcggaatga agggcgagcg cagaagaggc 1620
aagggacacg atggactgta ccagggcctg agcaccgccca ccaaggatac ctatgatgcc 1680
ctgcacatgc aggccctgcc tccaaga 1707

<210> 116
<211> 573
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
polypeptide

<400> 116
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Asp Ile Gln Leu Thr Gln Ser Pro Ser Ser Leu
20 25 30

Ser Ala Ser Val Gly Asp Arg Val Thr Ile Thr Cys Lys Ala Ser Gln
35 40 45

Asp Val Gly Thr Ser Val Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala
50 55 60

Pro Lys Leu Leu Ile Tyr Trp Thr Ser Thr Arg His Thr Gly Val Pro
65 70 75 80

Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Phe Thr Ile
85 90 95

Ser Ser Leu Gln Pro Glu Asp Ile Ala Thr Tyr Tyr Cys Gln Gln Tyr
100 105 110

Ser Leu Tyr Arg Ser Phe Gly Gln Gly Thr Lys Val Glu Ile Lys Gly
115 120 125

Gly Ser Gly Ser Gly Gly Ser Gly Ser Gly Gly Ser Gly Ser Glu Val
130 135 140

Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Arg Ser Leu
145 150 155 160

Arg Leu Ser Cys Ser Ala Ser Gly Phe Asp Phe Thr Thr Tyr Trp Met
165 170 175

Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Ile Gly Glu
180 185 190

Ile His Pro Asp Ser Ser Thr Ile Asn Tyr Ala Pro Ser Leu Lys Asp
195 200 205

Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Thr Leu Phe Leu Gln
210 215 220

Met Asp Ser Leu Arg Pro Glu Asp Thr Gly Val Tyr Phe Cys Ala Ser
225 230 235 240

Leu Tyr Phe Gly Phe Pro Trp Phe Ala Tyr Trp Gly Gln Gly Thr Pro
245 250 255

Val Thr Val Ser Ser Glu Gln Lys Leu Ile Ser Glu Glu Asp Leu Asn
260 265 270

Gly Ala Ala Thr Thr Thr Pro Ala Pro Arg Pro Pro Thr Pro Ala Pro
275 280 285

Thr Ile Ala Leu Gln Pro Leu Ser Leu Arg Pro Glu Ala Cys Arg Pro
290 295 300

Ala Ala Gly Gly Ala Val His Thr Arg Gly Leu Asp Phe Ala Cys Asp
305 310 315 320

Phe Leu Val Ile Ile Val Ile Leu Ser Ala Leu Phe Leu Gly Thr Leu
325 330 335

Ala Cys Phe Cys Val Trp Arg Arg Lys Arg Lys Glu Lys Gln Ser Glu
340 345 350

Thr Ser Pro Lys Glu Phe Leu Thr Ile Tyr Glu Asp Val Lys Asp Leu
355 360 365

Lys Thr Arg Arg Asn His Glu Gln Glu Gln Thr Phe Pro Gly Gly Gly
 370 375 380

Ser Thr Ile Tyr Ser Met Ile Gln Ser Gln Ser Ser Ala Pro Thr Ser
 385 390 395 400

Gln Glu Pro Ala Tyr Thr Leu Tyr Ser Leu Ile Gln Pro Ser Arg Lys
 405 410 415

Ser Gly Ser Arg Lys Arg Asn His Ser Pro Ser Phe Asn Ser Thr Ile
 420 425 430

Tyr Glu Val Ile Gly Lys Ser Gln Pro Lys Ala Gln Asn Pro Ala Arg
 435 440 445

Leu Ser Arg Lys Glu Leu Glu Asn Phe Asp Val Tyr Ser Arg Val Lys
 450 455 460

Phe Ser Arg Ser Ala Asp Ala Pro Ala Tyr Gln Gln Gly Gln Asn Gln
 465 470 475 480

Leu Tyr Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu
 485 490 495

Asp Lys Arg Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg
 500 505 510

Lys Asn Pro Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met
 515 520 525

Ala Glu Ala Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly
 530 535 540

Lys Gly His Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp
 545 550 555 560

Thr Tyr Asp Ala Leu His Met Gln Ala Leu Pro Pro Arg
 565 570

<210> 117
 <211> 1710
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 117
 atggctctgc ctgtgacagc tctgctgctg cctctggctc tgcttctgca tgccgctaga 60
 cccaagtga agctggaaca gtctggcgcc gaggttgtga aacctggcgc ctctgtgaag 120
 ctgagctgta aagccagcgg cttcaacatc aaggacagct acatgcactg gctgcggcaa 180
 ggccctggac agagactgga atggatcggc tggatcgacc ccgagaatgg cgatacagag 240
 tacgccccta agttccaggg caaagccacc ttcaccaccg acacctctgc caacacagcc 300
 tacctgggac tgtctagcct gaggcctgaa gataccgccg tgtactactg caacgagggc 360
 acacctacag gcccctacta cttcgattat tggggccagg gcaccctggt caccgtttct 420
 agcggaggcg gaggatctgg tggcggagga agtggcggag gcggttctga aaatgtgctg 480
 acacagagcc ccagcagcat gtccgtgtct gtggcgaca gagtgacaat cgcctgtagc 540
 gcctctagca gcgtgcccta tatgcattgg ctgcagcaga agcccggcaa gagccctaag 600
 ctgctgatct acctgaccag caatctggcc agcggcgtgc caagcagatt ttctggaagc 660
 ggagcggca ccgactacag cctgacaatc agtagcgtgc agcctgagga tgccgccacc 720
 tactactgtc agcagagaag cagctaccct ctgaccttg gaggcggcac caagctggaa 780
 atcaaagagc agaagctgat ctccgaagag gacctgacca caacaccagc tcctagacct 840
 ccaactcctg ctctacaat cgccctgcag cactgtctc tgaggcctga agcttgtaga 900
 cctgctgctg gcggagccgt gcataccaga ggactggatt tcgcctgcga cttcctggtc 960
 atcatcgtga tcctgagcgc cctgttcctg ggcacactgg cctgtttctg cgtgtggcgc 1020
 agaaagcgca aagagaagca gagcgagaca agcccaaag agttcctgac catctacgag 1080
 gacgtgaagg acctgaaaac ccggcggaac cacgagcaag agcagacctt tcctggcggc 1140
 ggatccacca tctacagcat gatccagagc cagagcagcg cccctacaag ccaagagcct 1200
 gcctacacac tgtacagcct gattcagccc agcagaaaaga gcggctcccga gaagagaaat 1260
 cacagcccca gttcaacag cacgatctac gaagtgatcg gcaagagcca gccaaaggct 1320

cagaaccctg ccagactgag cagaaaagag ctggaaaact tcgacgtgta cagccgcgtg 1380
 aagttcagca gatccgccga tgctcctgcc tatcagcagg gccagaacca gctgtacaac 1440
 gagctgaacc tggggagaag agaagagtac gacgtgctgg acaagcggag aggcagagat 1500
 cctgaaatgg gcggcaagcc cagacggaag aatcctcaag agggcctgta taatgagctg 1560
 cagaaagaca agatggccga ggcctacagc gagatcggaa tgaagggcga gcgcagaaga 1620
 ggcaagggac acgatggact gtaccagggc ctgagcaccg ccaccaagga tacctatgat 1680
 gccctgcaca tgcaggccct gcctccaaga 1710

<210> 118

<211> 598

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 118

Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
 1 5 10 15

His Ala Ala Arg Pro Glu Thr Val Ile Lys Tyr Leu Leu Pro Thr Ala
 20 25 30

Ala Ala Gly Leu Leu Leu Leu Ala Ala Gln Pro Ala Met Ala Gln Val
 35 40 45

Lys Leu Gln Gln Ser Gly Ala Glu Leu Val Arg Ser Gly Thr Ser Val
 50 55 60

Lys Leu Ser Cys Thr Ala Ser Gly Phe Asn Ile Lys Asp Ser Tyr Met
 65 70 75 80

His Trp Leu Arg Gln Gly Pro Glu Gln Gly Leu Glu Trp Ile Gly Trp
 85 90 95

Ile Asp Pro Glu Asn Gly Asp Thr Glu Tyr Ala Pro Lys Phe Gln Gly
 100 105 110

Lys Ala Thr Phe Thr Thr Asp Thr Ser Ser Asn Thr Ala Tyr Leu Gln

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

Thr Arg Gly Leu Asp Phe Ala Cys Asp Phe Leu Val Ile Ile Val Ile
 340 345 350

Leu Ser Ala Leu Phe Leu Gly Thr Leu Ala Cys Phe Cys Val Trp Arg
 355 360 365

Arg Lys Arg Lys Glu Lys Gln Ser Glu Thr Ser Pro Lys Glu Phe Leu
 370 375 380

Thr Ile Tyr Glu Asp Val Lys Asp Leu Lys Thr Arg Arg Asn His Glu
 385 390 395 400

Gln Glu Gln Thr Phe Pro Gly Gly Gly Ser Thr Ile Tyr Ser Met Ile
 405 410 415

Gln Ser Gln Ser Ser Ala Pro Thr Ser Gln Glu Pro Ala Tyr Thr Leu
 420 425 430

Tyr Ser Leu Ile Gln Pro Ser Arg Lys Ser Gly Ser Arg Lys Arg Asn
 435 440 445

His Ser Pro Ser Phe Asn Ser Thr Ile Tyr Glu Val Ile Gly Lys Ser
 450 455 460

Gln Pro Lys Ala Gln Asn Pro Ala Arg Leu Ser Arg Lys Glu Leu Glu
 465 470 475 480

Asn Phe Asp Val Tyr Ser Arg Val Lys Phe Ser Arg Ser Ala Asp Ala
 485 490 495

Pro Ala Tyr Gln Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn Leu
 500 505 510

Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg Asp
 515 520 525

Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu
 530 535 540

Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile

545		550		555		560
Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His Asp Gly Leu Tyr						
		565		570		575
Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu His Met						
		580		585		590
Gln Ala Leu Pro Pro Arg						
		595				

<210> 119

<211> 1476

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 119

atggctctgc ctgtgacagc tctgctgctg cctctggctc tgcttctgca tgccgctaga	60
ccccaagtga agctggaaca gtctggcgcc gaggttgtga aacctggcgc ctctgtgaag	120
ctgagctgta aagccagcgg cttcaacatc aaggacagct acatgcactg gctgcggcaa	180
ggccctggac agagactgga atggatcggc tggatcgacc ccgagaatgg cgatacagag	240
tacgccccta agttccaggg caaagccacc ttcaccaccg acacctctgc caacacagcc	300
tacctgggac tgtctagcct gaggcctgaa gataccgccg tgtactactg caacgagggc	360
acacctacag gcccctacta cttcgattat tggggccagg gcaccctggt caccgtttct	420
agcggaggcg gaggatctgg tggcggagga agtggcggag gcggttctga aaatgtgctg	480
acacagagcc ccagcagcat gtccgtgtct gtgggcgaca gagtgacaat cgcctgtagc	540
gcctctagca gcgtgcccta tatgcattgg ctgcagcaga agcccggcaa gagccctaag	600
ctgctgatct acctgaccag caatctggcc agcggcgtgc caagcagatt ttctggaagc	660
ggcagcggca ccgactacag cctgacaatc agtagcgtgc agcctgagga tgccgccacc	720
tactactgtc agcagagaag cagctaccct ctgacctttg gaggcggcac caagctggaa	780
atcaaagagc agaagctgat ctccgaagag gacctgacca caacaccagc tcctagacct	840
ccaactcctg ctcttacaat cgccctgcag ccaactgtctc tgaggcctga agctttaga	900

```

cctgctgctg gcggagccgt gcataccaga ggactggatt tcgcctgcga catctacatc      960
tgggcccctc tggctggaac atgcggagtg ttgctgctga gcctggtcac caccaagcgg      1020
ggcagaaaga agctgctgta catcttcaag cagcccttca tgcggcccgt gcagaccaca      1080
caagaggaag atggctgctc ctgcagattc cccgaggaag aagaaggcgg ctgcgagctg      1140
agagtgaagt tcagcagatc cgccgacgct cctgcctatc agcagggaca gaaccagctg      1200
tacaacgagc tgaacctggg gagaagagaa gactacgacg tgctggacaa gcggagaggc      1260
agagatcctg aaatgggcgg caagcccaga cggaagaatc ctcaagaggg cctgtataat      1320
gagctgcaga aagacaagat ggccgaggcc tacagcgaga tcggaatgaa gggcgagcgc      1380
agaagaggca agggacacga tggactgtac cagggcctga gcaccgccac caaggatacc      1440
tatgatgccc tgcacatgca ggccctgcct ccaaga                                1476

```

<210> 120

<211> 520

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
polypeptide

<400> 120

```

Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1           5           10          15

```

```

His Ala Ala Arg Pro Glu Thr Val Ile Lys Tyr Leu Leu Pro Thr Ala
          20          25          30

```

```

Ala Ala Gly Leu Leu Leu Leu Ala Ala Gln Pro Ala Met Ala Gln Val
          35          40          45

```

```

Lys Leu Gln Gln Ser Gly Ala Glu Leu Val Arg Ser Gly Thr Ser Val
          50          55          60

```

```

Lys Leu Ser Cys Thr Ala Ser Gly Phe Asn Ile Lys Asp Ser Tyr Met
          65          70          75          80

```

```

His Trp Leu Arg Gln Gly Pro Glu Gln Gly Leu Glu Trp Ile Gly Trp
          85          90          95

```

Ile Asp Pro Glu Asn Gly Asp Thr Glu Tyr Ala Pro Lys Phe Gln Gly
 100 105 110

Lys Ala Thr Phe Thr Thr Asp Thr Ser Ser Asn Thr Ala Tyr Leu Gln
 115 120 125

Leu Ser Ser Leu Thr Ser Glu Asp Thr Ala Val Tyr Tyr Cys Asn Glu
 130 135 140

Gly Thr Pro Thr Gly Pro Tyr Tyr Phe Asp Tyr Trp Gly Gln Gly Thr
 145 150 155 160

Thr Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Ser
 165 170 175

Gly Gly Gly Gly Ser Glu Asn Val Leu Thr Gln Ser Pro Ala Ile Met
 180 185 190

Ser Ala Ser Pro Gly Glu Lys Val Thr Ile Thr Cys Ser Ala Ser Ser
 195 200 205

Ser Val Ser Tyr Met His Trp Phe Gln Gln Lys Pro Gly Thr Ser Pro
 210 215 220

Lys Leu Trp Ile Tyr Ser Thr Ser Asn Leu Ala Ser Gly Val Pro Ala
 225 230 235 240

Arg Phe Ser Gly Ser Gly Ser Gly Thr Ser Tyr Ser Leu Thr Ile Ser
 245 250 255

Arg Met Glu Ala Glu Asp Ala Ala Thr Tyr Tyr Cys Gln Gln Arg Ser
 260 265 270

Ser Tyr Pro Leu Thr Phe Gly Ala Gly Thr Lys Leu Glu Leu Lys Arg
 275 280 285

Ala Ala Glu Gln Lys Leu Ile Ser Glu Glu Asp Leu Thr Thr Thr Pro
 290 295 300

Ala Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Leu Gln Pro Leu
305 310 315 320

Ser Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His
325 330 335

Thr Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu
340 345 350

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

Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met Arg Pro
370 375 380

Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu
385 390 395 400

Glu Glu Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg Ser Ala
405 410 415

Asp Ala Pro Ala Tyr Gln Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu
420 425 430

Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly
435 440 445

Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu
450 455 460

Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser
465 470 475 480

Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His Asp Gly
485 490 495

Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu
500 505 510

His Met Gln Ala Leu Pro Pro Arg
515 520

<210> 121
 <211> 1713
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 polynucleotide

<400> 121
 atggctctgc ctgtgacagc tctgctgctg cctctggctc tgcttctgca tgctgccaga 60
 cctcagatcg tgctgtctca gtctcccgcc atcctgtttg ctagccctgg cgagaaagtg 120
 accatgacct gtagagccag cagctccgtg tcctacatcc actggtatca gcagaagccc 180
 ggacgacgcc ctaagccttg gatccacggc acaagcaatc tggccagcgg agtgcctggc 240
 agattttctg gaagcggcag cggcaccagc tacagcctga ccatctctag aatggaagcc 300
 gaggacgccg ccacctacta ctgtcagcag tggctcagca acctgagcac ctttggcggc 360
 ggaacaaagc tggaaatcaa aggcggcgga ggatctggcg gaggcggtag cggaggtggt 420
 ggatctgaag tgaagctggt ggaatcaggc ggaggcctgg ttcaacctgg cggatctctg 480
 agactgagct gcagcatctc cggcttcacc ttcaccgact actacatgaa ctgggtccga 540
 cagagccctg gcaaggctct ggaatggctg ggcttcatca gaaacaaagt gaacggcgac 600
 accaccgagt acagcgcctc tgtgaagggc agattcacca tcagccggga catcagccag 660
 agcatcctgt acctgcagat gaacaccctg cggaccgagg atagcgccac atattactgc 720
 gccagagaca agggaatcgc ctactacttc gactactggg gccagggcac cacactgaca 780
 gtgtctagcg agcagaagct gatctccgaa gaggacctga ccacaacacc agctcctaga 840
 ccacctacac cagcacctac aatcgccctg cagccactgt ctctgaggcc agaagcttgt 900
 agacctgctg ctggcggagc cgtgcataca agaggactgg atttcgcctg cgacttcctg 960
 gtcacatcag tgatcctgag cgccctgttc ctgggcacac tggcctgttt ctgcgtgtgg 1020
 cgagaaaagc gcaaagagaa gcagagcgag acaagcccca aagagttcct gaccatctac 1080
 gaggacgtga aggacctgaa aaccggcgga aaccacgagc aagagcagac ctttcctggc 1140
 ggcggatcca ccatctacag catgatccag agccagagca gcgccctac aagccaagag 1200
 cctgcctaca cactgtacag cctgattcag cccagcagaa agagcggctc ccggaagaga 1260

```

aatcacagcc ccagcttcaa cagcacgatac tacgaagtga tcggcaagag ccagccaaag      1320
gctcagaacc ctgccagact gagcagaaaa gagctggaaa acttcgacgt gtacagccgc      1380
gtgaagttca gcagatccgc cgatgctcct gcctatcagc agggccagaa ccagctgtac      1440
aacgagctga acctggggag aagagaagag tacgacgtgc tggacaagcg gagaggcaga      1500
gacacctgaaa tgggcggcaa gcccagacgg aagaatcctc aagagggcct gtataatgag      1560
ctgcagaaaag acaagatggc cgaggcctac agcgagatcg gaatgaaggg cgagcgcaga      1620
agaggcaagg gacacgatgg actgtaccag ggcctgagca ccgccaccaa ggatacctat      1680
gatgccctgc acatgcaggc cctgcctcca aga                                  1713

```

<210> 122

<211> 571

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
polypeptide

<400> 122

```

Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1           5           10           15

```

```

His Ala Ala Arg Pro Gln Ile Val Leu Ser Gln Ser Pro Ala Ile Leu
          20           25           30

```

```

Phe Ala Ser Pro Gly Glu Lys Val Thr Met Thr Cys Arg Ala Ser Ser
          35           40           45

```

```

Ser Val Ser Tyr Ile His Trp Tyr Gln Gln Lys Pro Gly Ser Ser Pro
          50           55           60

```

```

Lys Pro Trp Ile His Gly Thr Ser Asn Leu Ala Ser Gly Val Pro Ala
65           70           75           80

```

```

Arg Phe Ser Gly Ser Gly Ser Gly Thr Ser Tyr Ser Leu Thr Ile Ser
          85           90           95

```

```

Arg Met Glu Ala Glu Asp Ala Ala Thr Tyr Tyr Cys Gln Gln Trp Ser
          100          105          110

```

Ser Asn Leu Ser Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys Gly
 115 120 125

Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Val
 130 135 140

Lys Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly Ser Leu
 145 150 155 160

Arg Leu Ser Cys Ser Ile Ser Gly Phe Thr Phe Thr Asp Tyr Tyr Met
 165 170 175

Asn Trp Val Arg Gln Ser Pro Gly Lys Ala Leu Glu Trp Leu Gly Phe
 180 185 190

Ile Arg Asn Lys Val Asn Gly Asp Thr Thr Glu Tyr Ser Ala Ser Val
 195 200 205

Lys Gly Arg Phe Thr Ile Ser Arg Asp Ile Ser Gln Ser Ile Leu Tyr
 210 215 220

Leu Gln Met Asn Thr Leu Arg Thr Glu Asp Ser Ala Thr Tyr Tyr Cys
 225 230 235 240

Ala Arg Asp Lys Gly Ile Ala Tyr Tyr Phe Asp Tyr Trp Gly Gln Gly
 245 250 255

Thr Thr Leu Thr Val Ser Ser Glu Gln Lys Leu Ile Ser Glu Glu Asp
 260 265 270

Leu Thr Thr Thr Pro Ala Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile
 275 280 285

Ala Leu Gln Pro Leu Ser Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala
 290 295 300

Gly Gly Ala Val His Thr Arg Gly Leu Asp Phe Ala Cys Asp Phe Leu
 305 310 315 320

Val Ile Ile Val Ile Leu Ser Ala Leu Phe Leu Gly Thr Leu Ala Cys

				325						330						335
Phe	Cys	Val	Trp	Arg	Arg	Lys	Arg	Lys	Glu	Lys	Gln	Ser	Glu	Thr	Ser	
			340					345					350			
Pro	Lys	Glu	Phe	Leu	Thr	Ile	Tyr	Glu	Asp	Val	Lys	Asp	Leu	Lys	Thr	
		355					360					365				
Arg	Arg	Asn	His	Glu	Gln	Glu	Gln	Thr	Phe	Pro	Gly	Gly	Gly	Ser	Thr	
		370				375					380					
Ile	Tyr	Ser	Met	Ile	Gln	Ser	Gln	Ser	Ser	Ala	Pro	Thr	Ser	Gln	Glu	
385					390					395					400	
Pro	Ala	Tyr	Thr	Leu	Tyr	Ser	Leu	Ile	Gln	Pro	Ser	Arg	Lys	Ser	Gly	
				405					410					415		
Ser	Arg	Lys	Arg	Asn	His	Ser	Pro	Ser	Phe	Asn	Ser	Thr	Ile	Tyr	Glu	
			420					425					430			
Val	Ile	Gly	Lys	Ser	Gln	Pro	Lys	Ala	Gln	Asn	Pro	Ala	Arg	Leu	Ser	
		435					440					445				
Arg	Lys	Glu	Leu	Glu	Asn	Phe	Asp	Val	Tyr	Ser	Arg	Val	Lys	Phe	Ser	
	450					455					460					
Arg	Ser	Ala	Asp	Ala	Pro	Ala	Tyr	Gln	Gln	Gly	Gln	Asn	Gln	Leu	Tyr	
465					470					475					480	
Asn	Glu	Leu	Asn	Leu	Gly	Arg	Arg	Glu	Glu	Tyr	Asp	Val	Leu	Asp	Lys	
			485					490					495			
Arg	Arg	Gly	Arg	Asp	Pro	Glu	Met	Gly	Gly	Lys	Pro	Arg	Arg	Lys	Asn	
			500					505					510			
Pro	Gln	Glu	Gly	Leu	Tyr	Asn	Glu	Leu	Gln	Lys	Asp	Lys	Met	Ala	Glu	
		515					520					525				
Ala	Tyr	Ser	Glu	Ile	Gly	Met	Lys	Gly	Glu	Arg	Arg	Arg	Gly	Lys	Gly	
	530					535					540					

His Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr
 545 550 555 560

Asp Ala Leu His Met Gln Ala Leu Pro Pro Arg
 565 570

<210> 123

<211> 1479

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 polynucleotide

<400> 123

atggctctgc ctgtgacagc tctgctgctg cctctggctc tgcttctgca tgctgccaga	60
cctcagatcg tgctgtctca gtctcccgcc atcctgtttg ctagccctgg cgagaaagtg	120
accatgacct gtagagccag cagctccgtg tcctacatcc actggtatca gcagaagccc	180
ggcagcagcc ctaagccttg gatccacggc acaagcaatc tggccagcgg agtgcctgcc	240
agattttctg gaagcggcag cggcaccagc tacagcctga ccatctctag aatggaagcc	300
gaggacgccg ccacctacta ctgtcagcag tgggtccagca acctgagcac ctttggcggc	360
ggaacaaagc tggaaatcaa aggcggcgga ggatctggcg gaggcggtag cggaggtggt	420
ggatctgaag tgaagctggt ggaatcaggc ggaggcctgg ttcaacctgg cggatctctg	480
agactgagct gcagcatctc cggcttcacc ttcaccgact actacatgaa ctgggtccga	540
cagagccctg gcaaggctct ggaatggctg ggcttcatca gaaacaaagt gaacggcgac	600
accaccgagt acagcgctc tgtgaagggc agattcacca tcagccggga catcagccag	660
agcatcctgt acctgcagat gaacaccctg cggaccgagg atagcgccac atattactgc	720
gccagagaca agggaatcgc ctactacttc gactactggg gccagggcac cacactgaca	780
gtgtctagcg agcagaagct gatctccgaa gaggacctga ccacaacacc agctcctaga	840
cctccaactc ctgctcctac aatcgccctg cagccactgt ctctgaggcc tgaagcttgt	900
agacctgctg ctggcggagc cgtgcatacc agaggactgg atttcgcctg cgacatctac	960
atctgggccc ctctggctgg aacatgcgga gtgttgctgc tgagcctggt catcaccaag	1020
cggggcagaa agaagctgct gtacatcttc aagcagccct tcatgcggcc cgtgcagacc	1080

```

acacaagagg aagatggctg ctctgcaga ttccccgagg aagaagaagg cggctgcgag      1140
ctgagagtga agttcagcag atccgccgac gtcctgcct atcagcaggg acagaaccag      1200
ctgtacaacg agctgaacct ggggagaaga gaagagtacg acgtgctgga caagcggaga      1260
ggcagagatc ctgaaatggg cggcaagccc agacggaaga atcctcaaga gggcctgtat      1320
aatgagctgc agaaagacaa gatggccgag gcctacagcg agatcggaat gaagggcgag      1380
cgcagaagag gcaagggaca cgatggactg taccagggcc tgagcaccgc caccaaggat      1440
acctatgatg ccctgcacat gcaggccctg cctccaaga                               1479

```

<210> 124

<211> 493

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
polypeptide

<400> 124

```

Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1           5           10          15

```

```

His Ala Ala Arg Pro Gln Ile Val Leu Ser Gln Ser Pro Ala Ile Leu
      20          25          30

```

```

Phe Ala Ser Pro Gly Glu Lys Val Thr Met Thr Cys Arg Ala Ser Ser
      35          40          45

```

```

Ser Val Ser Tyr Ile His Trp Tyr Gln Gln Lys Pro Gly Ser Ser Pro
      50          55          60

```

```

Lys Pro Trp Ile His Gly Thr Ser Asn Leu Ala Ser Gly Val Pro Ala
65          70          75          80

```

```

Arg Phe Ser Gly Ser Gly Ser Gly Thr Ser Tyr Ser Leu Thr Ile Ser
      85          90          95

```

```

Arg Met Glu Ala Glu Asp Ala Ala Thr Tyr Tyr Cys Gln Gln Trp Ser
      100         105         110

```

Ser Asn Leu Ser Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys Gly
 115 120 125

Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Val
 130 135 140

Lys Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly Ser Leu
 145 150 155 160

Arg Leu Ser Cys Ser Ile Ser Gly Phe Thr Phe Thr Asp Tyr Tyr Met
 165 170 175

Asn Trp Val Arg Gln Ser Pro Gly Lys Ala Leu Glu Trp Leu Gly Phe
 180 185 190

Ile Arg Asn Lys Val Asn Gly Asp Thr Thr Glu Tyr Ser Ala Ser Val
 195 200 205

Lys Gly Arg Phe Thr Ile Ser Arg Asp Ile Ser Gln Ser Ile Leu Tyr
 210 215 220

Leu Gln Met Asn Thr Leu Arg Thr Glu Asp Ser Ala Thr Tyr Tyr Cys
 225 230 235 240

Ala Arg Asp Lys Gly Ile Ala Tyr Tyr Phe Asp Tyr Trp Gly Gln Gly
 245 250 255

Thr Thr Leu Thr Val Ser Ser Glu Gln Lys Leu Ile Ser Glu Glu Asp
 260 265 270

Leu Thr Thr Thr Pro Ala Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile
 275 280 285

Ala Leu Gln Pro Leu Ser Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala
 290 295 300

Gly Gly Ala Val His Thr Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr
 305 310 315 320

Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly Val Leu Leu Leu Ser Leu
 325 330 335

Val Ile Thr Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln
 340 345 350

Pro Phe Met Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser
 355 360 365

Cys Arg Phe Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg Val Lys
 370 375 380

Phe Ser Arg Ser Ala Asp Ala Pro Ala Tyr Gln Gln Gly Gln Asn Gln
 385 390 395 400

Leu Tyr Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu
 405 410 415

Asp Lys Arg Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg
 420 425 430

Lys Asn Pro Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met
 435 440 445

Ala Glu Ala Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly
 450 455 460

Lys Gly His Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp
 465 470 475 480

Thr Tyr Asp Ala Leu His Met Gln Ala Leu Pro Pro Arg
 485 490

<210> 125

<211> 1500

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 polynucleotide

<400> 125

atggccctgc ctgtgacagc tctgctgctg cctctggccc tgctgctgca tgctgctaga

60

cctgacatcc agctgacaca gagccctagc agcctgtctg cctctgtggg cgacagagtg	120
accatcacat gcaaggcctc tcaggacgtg ggcacaagcg tggcatggta tcagcagaag	180
cctggcaagg cccctaagct gctgatctac tggaccagca ccagacacac aggcggtgcc	240
agcagatfff ctggcagcgg ctctggcacc gacttcacct tcaccataag cagcctgcag	300
cctgaggata tcgccaccta ctactgccag cagtacagcc tgtacagaag cttcggccag	360
ggcaccaagg tggaaatcaa aggcggatct ggaagcggcg gttctggatc tgggtggaagc	420
ggatctgagg tgcagctggg ggaatctggg ggcggagtgt tgcagcctgg cagatctctg	480
agactgagct gtagcgccag cggcttcgat ttcaccacct actggatgag ctgggtccga	540
cagggccctg gcaaaggact ggaatggatc ggcgagattc accccgacag cagcaccatc	600
aattacgccc ctagcctgaa ggaccgggtc accatctcca gagacaacgc caagaatacc	660
ctgttcctgc agatggacag cctccggcct gaagataccg gcgtgtactt ttgcgccagc	720
ctgtatttcg gcttcccttg gtttgcctac tggggccagg gaacacctgt gaccgttagc	780
tctgaacaaa aactcatctc agaagaagat ctgaatgggg ccgcaaccac gacgccagcg	840
ccgcgaccac caacaccggc gcccaccatc gcgttgacgc ccctgtccct gcgccagag	900
gcgtgccggc cagcggcggg gggcgagtg cacacgaggg ggctggactt cgcctgtgat	960
ttttgggtgc tgggtgggtg tgggtggagtc ctggcttgct atagcttgct agtaacagtg	1020
gcctttatta ttttctgggt gaggagtaag aggagcaggc tcctgcacag tgactacatg	1080
aacatgactc cccgccgcc cggggccacc cgcaagcatt accagcccta tgccccacca	1140
cgcgacttcg cagcctatcg ctccagagtg aagttcagca ggagcgcaga cgccccgcg	1200
tacaagcagg gccagaacca gctctataac gagctcaatc taggacgaag agaggagtac	1260
gatgttttgg acaagagacg tggccgggac cctgagatgg ggggaaagcc gagaaggaag	1320
aaccctcagg aaggcctgta caatgaactg cagaaagata agatggcgga ggcctacagt	1380
gagattggga tgaaaggcga gcgccggagg ggcaaggggc acgatggcct ttaccagggt	1440
ctcagtacag ccaccaagga cacctacgac gcccttcaca tgcaggccct gccccctcgc	1500

<210> 126

<211> 500

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 126

Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
 1 5 10 15

His Ala Ala Arg Pro Asp Ile Gln Leu Thr Gln Ser Pro Ser Ser Leu
 20 25 30

Ser Ala Ser Val Gly Asp Arg Val Thr Ile Thr Cys Lys Ala Ser Gln
 35 40 45

Asp Val Gly Thr Ser Val Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala
 50 55 60

Pro Lys Leu Leu Ile Tyr Trp Thr Ser Thr Arg His Thr Gly Val Pro
 65 70 75 80

Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Phe Thr Ile
 85 90 95

Ser Ser Leu Gln Pro Glu Asp Ile Ala Thr Tyr Tyr Cys Gln Gln Tyr
 100 105 110

Ser Leu Tyr Arg Ser Phe Gly Gln Gly Thr Lys Val Glu Ile Lys Gly
 115 120 125

Gly Ser Gly Ser Gly Gly Ser Gly Ser Gly Gly Ser Gly Ser Glu Val
 130 135 140

Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Arg Ser Leu
 145 150 155 160

Arg Leu Ser Cys Ser Ala Ser Gly Phe Asp Phe Thr Thr Tyr Trp Met
 165 170 175

Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Ile Gly Glu
 180 185 190

Ile His Pro Asp Ser Ser Thr Ile Asn Tyr Ala Pro Ser Leu Lys Asp

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

Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg Asp Pro Glu
 420 425 430

Met Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu Tyr Asn
 435 440 445

Glu Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile Gly Met
 450 455 460

Lys Gly Glu Arg Arg Arg Gly Lys Gly His Asp Gly Leu Tyr Gln Gly
 465 470 475 480

Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu His Met Gln Ala
 485 490 495

Leu Pro Pro Arg
 500

<210> 127

<211> 1485

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 polynucleotide

<400> 127

atggccctgc ctgtgacagc tctgctgctg cctctggccc tgctgctgca tgctgctaga	60
cctgacatcc agctgacaca gagccctagc agcctgtctg cctctgtggg cgacagagtg	120
accatcacat gcaaggcctc tcaggacgtg ggcacaagcg tggcatggta tcagcagaag	180
cctggcaagg cccctaagct gctgatctac tggaccagca ccagacacac aggcgtgccc	240
agcagatttt ctggcagcgg ctctggcacc gacttcacct tcaccataag cagcctgcag	300
cctgaggata tcgccaccta ctactgccag cagtacagcc tgtacagaag cttcggccag	360
ggcaccaagg tggaaatcaa aggcggatct ggaagcggcg gttctggatc tggtggaagc	420
ggatctgagg tgcagctggt ggaatctggt ggcggagttg tgcagcctgg cagatctctg	480
agactgagct gtagcgccag cggcttcgat ttcaccacct actggatgag ctgggtccga	540
cagggcccctg gcaaaggact ggaatggatc ggcgagattc accccgacag cagcaccatc	600

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aattacgccc ctagcctgaa ggaccggttc accatctcca gagacaacgc caagaatacc      660
ctgttcctgc agatggacag cctccggcct gaagataccg gcgtgtactt ttgcgccagc      720
ctgtatttcg gcttcccttg gtttgcctac tggggccagg gaacacctgt gaccgttagc      780
tctgaacaaa aactcatctc agaagaagat ctgaatgggg ccgcaaccac gacgccagcg      840
ccgcgaccac caacaccggc gcccaccatc gcgttgcagc ccctgtccct gcgcccagag      900
gcgtgccggc cagcggcggg gggcgcagtg cacacgaggg ggctggactt cgcctgtgat      960
gtggccgcca ttcttggact gggacttggt ctgggactgc tgggacctct ggccattctg     1020
ctggctctgt acctgctgag aagggaccag agactgcctc ctgacgctca caaacctcca     1080
ggcggaggca gcttcagaac ccctatccaa gaggaacagg ctgacgcca cagcacctg      1140
gccaagatca gagtgaagtt cagcaggagc gcagacgccc ccgcgtacaa gcagggccag      1200
aaccagctct ataacgagct caatctagga cgaagagagg agtacgatgt tttggacaag      1260
agacgtggcc gggaccctga gatgggggga aagccgagaa ggaagaaccc tcaggaaggc      1320
ctgtacaatg aactgcagaa agataagatg gcggaggcct acagtgagat tgggatgaaa      1380
ggcgagcgcc ggagggggcaa ggggcacgat ggcctttacc agggctctcag tacagccacc      1440
aaggacacct acgacgccct tcacatgcag gccctgcccc ctcgc                       1485

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<210> 128

<211> 495

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
polypeptide

<400> 128

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Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1           5           10          15

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His Ala Ala Arg Pro Asp Ile Gln Leu Thr Gln Ser Pro Ser Ser Leu
          20          25          30

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Ser Ala Ser Val Gly Asp Arg Val Thr Ile Thr Cys Lys Ala Ser Gln
          35          40          45

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Asp Val Gly Thr Ser Val Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala
50 55 60

Pro Lys Leu Leu Ile Tyr Trp Thr Ser Thr Arg His Thr Gly Val Pro
65 70 75 80

Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Phe Thr Ile
85 90 95

Ser Ser Leu Gln Pro Glu Asp Ile Ala Thr Tyr Tyr Cys Gln Gln Tyr
100 105 110

Ser Leu Tyr Arg Ser Phe Gly Gln Gly Thr Lys Val Glu Ile Lys Gly
115 120 125

Gly Ser Gly Ser Gly Gly Ser Gly Ser Gly Gly Ser Gly Ser Glu Val
130 135 140

Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Arg Ser Leu
145 150 155 160

Arg Leu Ser Cys Ser Ala Ser Gly Phe Asp Phe Thr Thr Tyr Trp Met
165 170 175

Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Ile Gly Glu
180 185 190

Ile His Pro Asp Ser Ser Thr Ile Asn Tyr Ala Pro Ser Leu Lys Asp
195 200 205

Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Thr Leu Phe Leu Gln
210 215 220

Met Asp Ser Leu Arg Pro Glu Asp Thr Gly Val Tyr Phe Cys Ala Ser
225 230 235 240

Leu Tyr Phe Gly Phe Pro Trp Phe Ala Tyr Trp Gly Gln Gly Thr Pro
245 250 255

Val Thr Val Ser Ser Glu Gln Lys Leu Ile Ser Glu Glu Asp Leu Asn
260 265 270

Gly Ala Ala Thr Thr Thr Pro Ala Pro Arg Pro Pro Thr Pro Ala Pro
 275 280 285

Thr Ile Ala Leu Gln Pro Leu Ser Leu Arg Pro Glu Ala Cys Arg Pro
 290 295 300

Ala Ala Gly Gly Ala Val His Thr Arg Gly Leu Asp Phe Ala Cys Asp
 305 310 315 320

Val Ala Ala Ile Leu Gly Leu Gly Leu Val Leu Gly Leu Leu Gly Pro
 325 330 335

Leu Ala Ile Leu Leu Ala Leu Tyr Leu Leu Arg Arg Asp Gln Arg Leu
 340 345 350

Pro Pro Asp Ala His Lys Pro Pro Gly Gly Gly Ser Phe Arg Thr Pro
 355 360 365

Ile Gln Glu Glu Gln Ala Asp Ala His Ser Thr Leu Ala Lys Ile Arg
 370 375 380

Val Lys Phe Ser Arg Ser Ala Asp Ala Pro Ala Tyr Lys Gln Gly Gln
 385 390 395 400

Asn Gln Leu Tyr Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp
 405 410 415

Val Leu Asp Lys Arg Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro
 420 425 430

Arg Arg Lys Asn Pro Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp
 435 440 445

Lys Met Ala Glu Ala Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg
 450 455 460

Arg Gly Lys Gly His Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr
 465 470 475 480

Lys Asp Thr Tyr Asp Ala Leu His Met Gln Ala Leu Pro Pro Arg
 485 490 495

<210> 129
 <211> 1512
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 polynucleotide

<400> 129
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 cctgaggtcc agctgcaaga gtctggccct ggacttgtga agcctggcgg aagcctgtct 120
 ctgtcttgtg ccgccagcgg cttcgtgttc agcagctacg atatgagctg ggtccgacag 180
 acccctgagc gaggacttga gtgggtcgcc tacatctctt ctggcggcgg aatcacatac 240
 gcccttagca cagtgaaggg cagattcacc gtgtccagag acaacgcaa gaacaccctg 300
 tacctgcaga tgaacagcct gaccagcgag gacaccgccg tgtactattg tgccgctcac 360
 tactttggca gcagcggccc ttttgcctat tggggccagg gaacactcgt gaccgtttct 420
 agtgctggcg gaggcggatc aggtggcgga ggaagtggcg gcggaggatc tgatatccag 480
 atgacacaga gccccgccag cctgtctgcc tctgtgggag atagagtgac catcacctgt 540
 cgggccagcg agaacatctt cagctacctg gcctggatatc agcagaagcc cggcaagtct 600
 cctaagctgc tgggtgtaaa caccggaca ctggctgaag gcgtgcccag cagattttct 660
 ggtagcggct ctggcaccga cttcagcctg acaatcagca gcctgcagcc tgaggacttc 720
 gccacctact actgccagca ccactacggc acccctttca cctttggaag cggcaccaag 780
 ctggaaatca agagagaaca aaaactcatc tcagaagaag atctgaatgg ggccgcaacc 840
 acgacgccag cgccgcgacc accaacaccg gcgcccacca tcgcgttgca gccctgttcc 900
 ctgcgcccag aggcgtgccg gccagcggcg gggggcgagc tgcacacgag ggggctggac 960
 ttgcctgtg atttttgggt gctgggtggtg gttgggtggag tcctggcttg ctatagcttg 1020
 ctagtaacag tggcctttat tttttctgg gtgaggagta agaggagcag gctcctgcac 1080
 agtgactaca tgaacatgac tccccgccgc cccgggcca cccgcaagca ttaccagccc 1140
 tatgcccac cacgcgactt cgcagcctat cgctccagag tgaagttcag caggagcgca 1200

gacgcccccg cgtacaagca gggccagaac cagctctata acgagctcaa tctaggacga	1260
agagaggagt acgatgtttt ggacaagaga cgtggccggg accctgagat ggggggaaag	1320
ccgagaagga agaaccctca ggaaggcctg tacaatgaac tgcagaaaga taagatggcg	1380
gaggcctaca gtgagattgg gatgaaaggc gagcgccgga ggggcaaggg gcacgatggc	1440
ctttaccagg gtctcagtac agccaccaag gacacctacg acgcccttca catgcaggcc	1500
ctgccccctc gc	1512

<210> 130

<211> 1497

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 130

atggccctgc ctgtgacagc tctgctgctg cctctggccc tgctgctgca tgctgctaga	60
cctgaggtcc agctgcaaga gtctggccct ggacttgtga agcctggcgg aagcctgtct	120
ctgtcttgtg ccgccagcgg cttcgtgttc agcagctacg atatgagctg ggtccgacag	180
acccctgagc gaggacttga gtgggtcgcc tacatctctt ctggcggcgg aatcacatac	240
gcccctagca cagtgaaggg cagattcacc gtgtccagag acaacgcaa gaacaccctg	300
tacctgcaga tgaacagcct gaccagcgag gacaccgccg tgtactattg tgccgctcac	360
tactttggca gcagcggccc ttttgcctat tggggccagg gaacactcgt gaccgtttct	420
agtgctggcg gaggcggatc aggtggcgga ggaagtggcg gcggaggatc tgatatccag	480
atgacacaga gccccgccag cctgtctgcc tctgtgggag atagagtgac catcacctgt	540
cgggccagcg agaacatctt cagctacctg gcctgggtatc agcagaagcc cggcaagtct	600
cctaagctgc tgggtgtaca caccggaca ctggctgaag gcgtgcccag cagattttct	660
ggcagcggct ctggcaccga cttcagcctg acaatcagca gcctgcagcc tgaggacttc	720
gccacctact actgccagca ccactacggc acccctttca cctttggaag cggcaccaag	780
ctggaaatca agagagaaca aaaactcatc tcagaagaag atctgaatgg ggccgcaacc	840
acgacgccag cgccgcgacc accaacaccg gcgcccacca tcgcgttgca gccctgtcc	900
ctgcgcccag aggcgtgccg gccagcggcg gggggcgagc tgcacacgag ggggctggac	960

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ttcgctgtg atgtggccgc cattctcgga ctgggacttg ttctgggact gctgggacct 1020
ctggccattc tgctggctct gtacctgctg agaagggacc agagactgcc tcctgacgct 1080
caciaaacctc caggcggagg cagcttcaga acccctatcc aagaggaaca ggctgacgcc 1140
cacagcacc c tggccaagat cagagtgaag ttcagcagga gcgcagacgc ccccgctac 1200
aagcagggcc agaaccagct ctataacgag ctcaatctag gacgaagaga ggagtacgat 1260
gttttggaca agagacgtgg ccgggaccct gagatggggg gaaagccgag aaggaagaac 1320
cctcaggaag gcctgtacaa tgaactgcag aaagataaga tggcggaggc ctacagttag 1380
attgggatga aaggcgagcg ccggaggggc aaggggcacg atggccttta ccagggtctc 1440
agtacagcca ccaaggacac ctacgacgcc cttcacatgc aggcctgcc ccctcgc 1497

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<210> 131

<211> 1488

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 131

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atggctctgc ctgtgacagc tctgctgctg cctctggctc tgcttctgca tgccgccaga 60
cctgacatcc agctgacaca gagccctagc agcctgtctg cctctgtggg cgacagagtg 120
accatcacat gcaaggcctc tcaggacgtg ggcacaagcg tggcatggta tcagcagaag 180
cctggcaagg cccctaagct gctgatctac tggaccagca ccagacacac aggcgtgccc 240
agcagatttt ctggcagcgg ctctggcacc gacttcacct tcaccataag cagcctgcag 300
cctgaggata tcgccaccta ctactgccag cagtacagcc tgtacagaag cttcggccag 360
ggcaccaagg tggaaatcaa aggcggatct ggaagcggcg gttctggatc tggtggaagc 420
ggatctgagg tgacagctggt ggaatctggt ggcggagttg tgacgcctgg cagatctctg 480
agactgagct gtagcgccag cggcttcgat ttcaccacct actggatgag ctgggtccga 540
caggcccctg gcaaaggact ggaatggatc ggcgagattc accccgacag cagcaccatc 600
aattacgccc ctagcctgaa ggaccggttc accatctcca gagacaacgc caagaatacc 660
ctgttcctgc agatggacag cctccggcct gaagataccg gcgtgtactt ttgcgccagc 720

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ctgtatttcg gcttcccttg gtttgcctac tggggccagg gaacacctgt gaccgttagc	780
tctgagcaga agctgatctc cgaagaggac ctgaccacaa caccagctcc tagaccacct	840
acaccagcac ctacaatcgc cctgcagcca ctgtctctga ggcctgaagc ttgtagacct	900
gctgctggcg gagccgtgca tacaagagga ctggatttcg cctgcgactt ctgggtgctc	960
gttgttgttg gcggcgtgct ggcctgttat tccctgctgg ttaccgtggc cttcatcatc	1020
ttttgggtcc gaagcaagcg gagcagactg ctgcactccg actacatgaa catgaccctt	1080
agacggcccg gaccaaccag aaagcactac cagccttacg ctctcctag agacttcgcc	1140
gcctaccggc ccagagtga gttctccaga tccgccgatg ctcccgcta taagcaggga	1200
cagaaccagc tgtacaacga gctgaacctg gggagaagag aagagtacga cgtgctggac	1260
aagcggagag gcagagatcc tgagatgggc ggcaagccca gacggaagaa tcctcaagag	1320
ggcctgtata atgagctgca aaaggacaag atggccgagg cctacagcga gatcggaatg	1380
aagggcgagc gcagaagagg caaggacac gatggactgt accagggcct gagcaccgcc	1440
accaaggata cctatgatgc cctgcacatg caggccctgc ctccaaga	1488

<210> 132

<211> 1473

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 132

atggctctgc ctgtgacagc tctgctgctg cctctggctc tgcttctgca tgccgccaga	60
cctgacatcc agctgacaca gagccctagc agcctgtctg cctctgtggg cgacagagtg	120
accatcacat gcaaggcctc tcaggacgtg ggcacaagcg tggcatggta tcagcagaag	180
cctggcaagg cccctaagct gctgatctac tggaccagca ccagacacac aggcgtgccc	240
agcagatttt ctggcagcgg ctctggcacc gacttcacct tcaccataag cagcctgcag	300
cctgaggata tcgccaccta ctactgccag cagtacagcc tgtacagaag cttcggccag	360
ggcaccaagg tggaaatcaa aggcggatct ggaagcggcg gttctggatc tgggtggaagc	420
ggatctgagg tgcagctggg ggaatctggg ggcggagttg tgcagcctgg cagatctctg	480
agactgagct gtagcgccag cggcttcgat ttcaccacct actggatgag ctgggtccga	540

caggccccctg gcaaaggact ggaatggatc ggcgagattc accccgacag cagcaccatc	600
aattacgccc ctagcctgaa ggaccgggtc accatctcca gagacaacgc caagaatacc	660
ctgttcctgc agatggacag cctccggcct gaagataccg gcgtgtactt ttgcgccagc	720
ctgtatttcg gcttcccttg gtttgcctac tggggccagg gaacacctgt gaccgttagc	780
tctgagcaga agctgatctc cgaagaggac ctgaccacaa caccagctcc tagaccacct	840
acaccagcac ctacaatcgc cctgcagcca ctgtctctga ggccagaggc ttgtagacct	900
gctgctggcg gagccgtgca tacaagagga ctggatttcg cctgcgacgt ggccgccatt	960
ctcggactgg gacttgttct gggactgctg ggacctctgg ccattctgct ggctctgtac	1020
ctgctgagaa gggaccagag actgcctcct gacgctcaca aacctccagg cggaggcagc	1080
ttcagaaccc ctatccaaga ggaacaggct gacgccaca gcaccctggc caagatcaga	1140
gtgaagttca gcagatccgc cgacgctccc gcctataagc agggacagaa tcagctgtac	1200
aacgagctga acctggggcg cagagaagag tacgacgtgc tggacaagag aagaggcagg	1260
gacacctgaaa tgggcggcaa gccagacgg aagaatcctc aagagggcct gtataatgag	1320
ctgcagaaag acaagatggc cgaggcctac agcgagatcg gaatgaaggg cgaacgcaga	1380
agaggaaagg gccacgacgg actgtatcag ggcctgagca cagccaccaa ggacacctat	1440
gatgccctgc acatgcaggc cctgcctcca aga	1473

<210> 133

<211> 1500

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 133

atggctctgc ctgtgacagc tctgctgctg cctctggctc tgcttctgca tgccgctaga	60
cctgaggtcc agctgcaaga gtctggccct ggacttgtga agcctggcgg aagcctgtct	120
ctgtcttgtg ccgccagcgg cttcgtgttc agcagctacg atatgagctg ggtccgacag	180
accctgagc gaggacttga gtgggtcgcc tacatctctt ctggcggcgg aatcacatac	240
gccctagca cagtgaaggg cagattcacc gtgtccagag acaacgcaa gaacaccctg	300

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tacctgcaga tgaacagcct gaccagcgag gacaccgccg tgtactattg tgccgctcac      360
tactttggca gcagcggccc ttttgcctat tggggccagg gaacactcgt gaccgtttct      420
agtgcctggcg gaggcggatc aggtggcgga ggaagtggcg gcggaggatc tgatatccag      480
atgacacaga gccccgccag cctgtctgcc tctgtgggag atagagtgac catcacctgt      540
cgggccagcg agaacatctt cagctacctg gcctggatatc agcagaagcc cggcaagtct      600
cctaagctgc tgggtgtacaa caccgggaca ctggctgaag gcgtgcccag cagattttct      660
ggcagcggct ctggcaccga cttcagcctg acaatcagca gcctgcagcc tgaggacttc      720
gccacctact actgccagca ccactacggc acccctttca cctttggaag cggcaccaag      780
ctggaaatca agagagagca gaagctgac tccgaagagg acctgaccac aactcctgct      840
cctagacctc ctacaccagc tcctacaatc gccctgcagc cactgtctct gaggccagaa      900
gctttagtag ctgctgcagg cggagccgtg catacaagag gactggattt cgcctgcgac      960
ttctgggtgc tcgtggttgt tggcggagtg ctggcctgtt actctctgct ggtcacctg      1020
gccttcatca tcttttgggt ccgaagcaag cggagccggc tgctgcacag cgactacatg      1080
aacatgaccc ctagacggcc cggacctacc agaaagcact accagcctta cgctcctcct      1140
agagatttcg ccgcctaccg gtccagagtg aagttcagca gatccgccga tgctcccgcc      1200
tataagcagg gacagaacca gctgtacaac gagctgaacc tggggagaag agaagagtac      1260
gacgtgctgg acaagcggag aggcagagat cctgagatgg gcggcaagcc cagacggaag      1320
aatcctcaag agggcctgta taatgagctg cagaaagaca agatggccga ggcctacagc      1380
gagatcgga tgaagggcga gcgcagaaga ggcaaggac acgatggact gtaccagggc      1440
ctgagcaccg ccaccaagga tacctatgat gccctgcaca tgcaggccct gcctccaaga      1500

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<210> 134

<211> 1485

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
polynucleotide

<400> 134

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atggctctgc ctgtgacagc tctgctgctg cctctggctc tgcttctgca tgccgctaga      60
cctgaggtcc agctgcaaga gtctggccct ggacttgtga agcctggcgg aagcctgtct      120

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ctgtcttgtg ccgccagcgg cttcgtgttc agcagctacg atatgagctg ggtccgacag	180
acccctgagc gaggacttga gtgggtcgcc tacatctctt ctggcggcgg aatcacatac	240
gcccctagca cagtgaaggg cagattcacc gtgtccagag acaacgcaa gaacaccctg	300
tacctgcaga tgaacagcct gaccagcgag gacaccgccg tgtactattg tgccgctcac	360
tactttggca gcagcggccc ttttgcctat tggggccagg gaacactcgt gaccgtttct	420
agtgctggcg gaggcggatc aggtggcgga ggaagtggcg gcggaggatc tgatatccag	480
atgacacaga gccccgccag cctgtctgcc tctgtgggag atagagtgac catcacctgt	540
cgggccagcg agaacatctt cagctacctg gcctggatc agcagaagcc cggcaagtct	600
cctaagctgc tgggtgtaca caccggaca ctggctgaag gcgtgcccag cagattttct	660
ggcagcggct ctggcaccga cttcagcctg acaatcagca gcctgcagcc tgaggacttc	720
gccacctact actgccagca ccactacggc acccctttca cctttggaag cggcaccaag	780
ctggaaatca agagagagca gaagctgatc tccgaagagg acctgaccac aacaccagct	840
cctagaccac ctacaccagc acctacaatc gccctgcagc cactgtctct gaggccagag	900
gcttgtagac ctgctgctgg cggagccgtg catacaagag gactggattt cgcctgcgac	960
gtggccgcca ttctcggact gggacttggt ctgggactgc tgggacctct ggccattctg	1020
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ggcggaggca gcttcagaac ccctatccaa gaggaacagg ctgacgcca cagcaccctg	1140
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aatcagctgt acaacgagct gaacctgggg cgagagaag agtacgacgt gctggacaag	1260
agaagaggca gggatcctga aatgggcggc aagcccagac ggaagaatcc tcaagagggc	1320
ctgtataatg agctgcagaa agacaagatg gccgaggcct acagcgagat cggaatgaag	1380
ggcgaacgca gaagaggaaa gggccacgac ggactgtatc agggcctgag cacagccacc	1440
aaggacacct atgatgccct gcacatgcag gccctgcctc caaga	1485

<210> 135

<211> 243

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 135

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

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

Leu Ala Trp Tyr Gln Gln Lys Gln Gly Lys Ser Pro Gln Leu Leu Val
35 40 45

Phe Asn Ala Glu Thr Leu Pro Glu Gly Val Pro Ser Arg Phe Ser Gly
50 55 60

Thr Gly Ser Gly Thr His Phe Ser Leu Arg Ile Asn Ser Leu Gln Pro
65 70 75 80

Glu Asp Phe Gly Ser Tyr Tyr Cys Gln His His Tyr Val Ile Pro Trp
85 90 95

Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys Gly Ser Thr Ser Gly
100 105 110

Ser Gly Lys Pro Gly Ser Gly Glu Gly Ser Thr Lys Gly Glu Val Gln
115 120 125

Met Val Glu Ser Gly Gly Asp Leu Val Lys Pro Gly Gly Ser Leu Lys
130 135 140

Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Asn Ser Gly Met Ser
145 150 155 160

Trp Val Arg Gln Thr Pro Asp Lys Arg Leu Glu Trp Val Ala Ser Ile
165 170 175

Ser Asp Gly Gly Leu Tyr Thr His Tyr Pro Asp Ser Val Lys Gly Arg
180 185 190

Phe Thr Ile Ser Arg Asp Asn Gly Lys Ser Thr Leu Tyr Leu Gln Met
195 200 205

Ser Ser Leu Arg Ser Glu Asp Thr Ala Ile Tyr Tyr Cys Ala Arg Gln
 210 215 220

Gly Val Arg Pro Phe Phe Asp Tyr Trp Gly Gln Gly Thr Thr Leu Thr
 225 230 235 240

Val Ser Ser

<210> 136

<211> 1473

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 polynucleotide

<400> 136

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cctgacatcc agctgacaca gagccctagc agcctgtctg cctctgtggg cgacagagtg	120
accatcacat gcaaggcctc tcaggacgtg ggcacaagcg tggcatggta tcagcagaag	180
cctggcaagg cccctaagct gctgatctac tggaccagca ccagacacac aggcgtgccc	240
agcagatttt ctggcagcgg ctctggcacc gacttcacct tcaccataag cagcctgcag	300
cctgaggata tcgccaccta ctactgccag cagtacagcc tgtacagaag cttcggccag	360
ggcaccaagg tggaaatcaa aggcggatct ggaagcggcg gttctggatc tgggtggaagc	420
ggatctgagg tgcagctggg ggaatctggg ggcggagttg tgcagcctgg cagatctctg	480
agactgagct gtagcgccag cggcttcgat ttcaccacct actggatgag ctgggtccga	540
caggccccctg gcaaaggact ggaatggatc ggcgagattc accccgacag cagcaccatc	600
aattacgccc ctagcctgaa ggaccggttc accatctcca gagacaacgc caagaatacc	660
ctgttcctgc agatggacag cctccggcct gaagataccg gcgtgtactt ttgcgccagc	720
ctgtatttcg gcttccttg gtttgcctac tggggccagg gaacacctgt gaccgttagc	780
tctgagcaga agctgatctc cgaagaggac ctgaccacaa caccagctcc tagaccacct	840
acaccagcac ctacaatcgc cctgcagcca ctgtctctga ggccagaggc ttgtagacct	900

gctgctggcg gagccgtgca tacaagagga ctggatttcg cctgcgacgt ggccgccatt 960
 ctggaactgg gacttgttct gggactgctg ggacctctgg ccattctgct ggctctgtac 1020
 ctgctgagaa gggaccagag actgcctcct gacgctcaca aacctccagg cggaggcagc 1080
 ttcagaaccc ctatccaaga ggaacaggct gacgcccaca gcaccctggc caagatcaga 1140
 gtgaagttca gcagatccgc cgacgctccc gcctataagc agggacagaa tcagctgtac 1200
 aacgagctga acctggggcg cagagaagag tacgacgtgc tggacaagag aagaggcagg 1260
 gatcctgaaa tgggaggcaa gccagacgg aagaatcctc aagagggcct gtataatgag 1320
 ctgcagaaag acaagatggc cgaggcctac agcgagatcg gaatgaaggc cgaacgcaga 1380
 agaggaaagg gccacgacgg actgtatcag ggcctgagca cagccaccaa ggacacctat 1440
 gatgccctgc acatgcaggc cctgcctcca aga 1473

<210> 137

<211> 1488

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 137

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 cctgacatcc agctgacaca gagccctagc agcctgtctg cctctgtggg cgacagagtg 120
 accatcacat gcaaggcctc tcaggacgtg ggcacaagcg tggcatggta tcagcagaag 180
 cctggcaagg cccctaagct gctgatctac tggaccagca ccagacacac aggcgtgccc 240
 agcagatddd ctggcagcgg ctctggcacc gacttcacct tcaccataag cagcctgcag 300
 cctgaggata tcgccaccta ctactgccag cagtacagcc tgtacagaag cttcgccag 360
 ggcaccaagg tggaatcaa aggcggatct ggaagcggcg gttctggatc tgggtggaagc 420
 ggatctgagg tgcagctggg ggaatctggg ggcggagttg tgcagcctgg cagatctctg 480
 agactgagct gtagcgccag cggcttcgat ttcaccacct actggatgag ctgggtccga 540
 caggcccctg gcaaaggact ggaatggatc ggcgagattc accccgacag cagcaccatc 600
 aattacgccc ctagcctgaa ggaccggttc accatctcca gagacaacgc caagaatacc 660
 ctgttcctgc agatggacag cctccggcct gaagataccg gcgtgtactt ttgcgccagc 720

```

ctgtatttcg gcttcccttg gtttgcctac tggggccagg gaacacctgt gaccgttagc      780
tctgagcaga agctgatctc cgaagaggac ctgaccacaa caccagctcc tagaccacct      840
acaccagcac ctacaatcgc cctgcagcca ctgtctctga ggcctgaagc ttgtagacct      900
gctgctggcg gagccgtgca tacaagagga ctggatttcg cctgcgactt ctgggtgctc      960
gttgttgttg gcggcgtgct ggcctgttat tccctgctgg ttaccgtggc cttcatcatc     1020
ttttgggtcc gaagcaagcg gagcagactg ctgcactccg actacatgaa catgaccctt     1080
agacggccccg gaccaaccag aaagcactac cagccttacg ctcctcctag agacttcgcc     1140
gcctaccggg ccagagtga gttctccaga tccgccgatg ctcccgcta taagcaggga     1200
cagaaccagc tgtacaacga gctgaacctg gggagaagag aagagtacga cgtgctggac     1260
aagcggagag gcagagatcc tgagatgggc ggcaagccca gacggaagaa tcctcaagag     1320
ggcctgtata atgagctgca aaaggacaag atggccgagg cctacagcga gatcggaatg     1380
aagggcgagc gcagaagagg caaggacac gatggactgt accagggcct gagcaccgcc     1440
accaaggata cctatgatgc cctgcacatg caggccctgc ctccaaga     1488

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<210> 138

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<220>

<221> SITE

<222> (1)..(30)

<223> This sequence may encompass 1 to 6 "Gly Gly Gly Gly Ser" repeating units

<400> 138

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Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly
1           5           10          15

```

```

Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
      20           25           30

```

<210> 139

<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
peptide

<220>
<223> See specification as filed for detailed description of
substitutions and preferred embodiments

<400> 139
Gly Gly Gly Gly Ser
1 5

<210> 140
<211> 4
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
peptide

<220>
<223> See specification as filed for detailed description of
substitutions and preferred embodiments

<400> 140
Gly Gly Gly Ser
1