

SEQUENCE LISTING

<110> Amgen Inc.
Walker, Kenneth William

<120> TRANSTHYRETIN IMMUNOGLOBULIN FUSIONS

<130> A-2196-WO-PCT

<150> 62/568,217

<151> 2017-10-04

<160> 47

<170> PatentIn version 3.5

<210> 1

<211> 127

<212> PRT

<213> Homo sapiens

<400> 1

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

Leu Asp Ala Val Arg Gly Ser Pro Ala Ile Asn Val Ala Val His Val
20 25 30

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

Thr Ser Glu Ser Gly Glu Leu His Gly Leu Thr Thr Glu Glu Glu Phe
50 55 60

Val Glu Gly Ile Tyr Lys Val Glu Ile Asp Thr Lys Ser Tyr Trp Lys
65 70 75 80

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

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

Pro Tyr Ser Tyr Ser Thr Thr Ala Val Val Thr Asn Pro Lys Glu
115 120 125

<210> 2

<211> 381

<212> DNA

<213> Homo sapiens

<400> 2

ggccctacgg gcaccggtga atccaaggct cctctgatgg tcgccgttct agatgctgtc 60

cgaggcagtc ctgccatcaa tgtggccgtg catgtgttca gaaaggctgc tgatgacacc 120

tgggagccat ttgcctctgg gaaaaccagt gagtctggag agctgcatgg gctcacaact	180
gaggaggaat ttgtagaagg gatatacaaa gtggaaatag acaccaaadc ttactggaag	240
gcacttggca tctccccatt ccatgagcat gcagaggtgg tattcacagc caacgactcc	300
ggcccccgcc gctacaccat tgccgccctg ctgagcccct actcctattc caccacggct	360
gtcgtcacca atcccaagga a	381

<210> 3
 <211> 127
 <212> PRT
 <213> Mus musculus

<400> 3

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

Leu	Asp	Ala	Val	Arg	Gly	Ser	Pro	Ala	Val	Asp	Val	Ala	Val	Lys	Val
			20					25						30	

Phe	Lys	Lys	Thr	Ser	Glu	Gly	Ser	Trp	Glu	Pro	Phe	Ala	Ser	Gly	Lys
		35					40					45			

Thr	Ala	Glu	Ser	Gly	Glu	Leu	His	Gly	Leu	Thr	Thr	Asp	Glu	Lys	Phe
	50					55					60				

Val	Glu	Gly	Val	Tyr	Arg	Val	Glu	Leu	Asp	Thr	Lys	Ser	Tyr	Trp	Lys
65					70					75					80

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

Ala	Asn	Asp	Ser	Gly	His	Arg	His	Tyr	Thr	Ile	Ala	Ala	Leu	Leu	Ser
			100					105						110	

Pro	Tyr	Ser	Tyr	Ser	Thr	Thr	Ala	Val	Val	Ser	Asn	Pro	Gln	Asn
		115					120					125		

<210> 4
 <211> 615
 <212> DNA
 <213> Mus musculus

<400> 4

acagaagtc actcattctt ggcaggatgg cttctcatcg tctgctcctc ctctgccttg	60
ctggactggt atttgtgtct gaggctggcc ctacgggcac cggtgaatcc aagtgtcctc	120
tgatggtcaa agttctagat gctgtccgag gcagtcctgc catcaatgtg gccgtgcatg	180
tgttcagaaa ggctgctgat gacacctggg agccatttgc ctctgggaaa accagtgagt	240

165

170

175

Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu
180 185 190

Ser Ser Val Val Thr Val Pro Ser Ser Asn Phe Gly Thr Gln Thr Tyr
195 200 205

Thr Cys Asn Val Asp His Lys Pro Ser Asn Thr Lys Val Asp Lys Thr
210 215 220

Val Glu Arg Lys Cys Cys Val Glu Cys Pro Pro Cys Pro Ala Pro Pro
225 230 235 240

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

Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val
260 265 270

Ser His Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val
275 280 285

Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser
290 295 300

Thr Phe Arg Val Val Ser Val Leu Thr Val Val His Gln Asp Trp Leu
305 310 315 320

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

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

Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln
355 360 365

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

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

Pro Pro Met Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu
405 410 415

Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser

420

425

430

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

Leu Ser Pro Gly
 450

<210> 6
 <211> 452
 <212> PRT
 <213> Homo sapiens

<400> 6

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

Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Gly Ser Ile Arg Arg Gly
 20 25 30

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

Trp Ile Gly Tyr Ile Tyr Tyr Ser Gly Ser Thr Asn Tyr Asn Pro Ser
 50 55 60

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

Ser Leu Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr
 85 90 95

Cys Ala Arg Asp Tyr Asp Ile Leu Thr Gly Tyr Ser Tyr Tyr Tyr Tyr
 100 105 110

Gly Met Asp Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser Ala
 115 120 125

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

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

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

Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu
 180 185 190

Ser	Ser	Val	Val	Thr	Val	Pro	Ser	Ser	Asn	Phe	Gly	Thr	Gln	Thr	Tyr
		195					200					205			
Thr	Cys	Asn	Val	Asp	His	Lys	Pro	Ser	Asn	Thr	Lys	Val	Asp	Lys	Thr
	210					215					220				
Val	Glu	Arg	Lys	Cys	Cys	Val	Glu	Cys	Pro	Pro	Cys	Pro	Ala	Pro	Pro
225					230					235					240
Val	Ala	Gly	Pro	Ser	Val	Phe	Leu	Phe	Pro	Pro	Lys	Pro	Lys	Asp	Thr
				245					250					255	
Leu	Met	Ile	Ser	Arg	Thr	Pro	Glu	Val	Thr	Cys	Val	Val	Val	Asp	Val
			260					265						270	
Ser	His	Glu	Asp	Pro	Glu	Val	Gln	Phe	Asn	Trp	Tyr	Val	Asp	Gly	Val
		275					280					285			
Glu	Val	His	Asn	Ala	Lys	Thr	Lys	Pro	Arg	Glu	Glu	Gln	Phe	Asn	Ser
	290					295					300				
Thr	Phe	Arg	Val	Val	Ser	Val	Leu	Thr	Val	Val	His	Gln	Asp	Trp	Leu
305					310					315					320
Asn	Gly	Lys	Glu	Tyr	Lys	Cys	Lys	Val	Ser	Asn	Lys	Gly	Leu	Pro	Ala
				325					330					335	
Pro	Ile	Glu	Lys	Thr	Ile	Ser	Lys	Thr	Lys	Gly	Gln	Pro	Arg	Glu	Pro
			340					345					350		
Gln	Val	Tyr	Thr	Leu	Pro	Pro	Ser	Arg	Lys	Glu	Met	Thr	Lys	Asn	Gln
		355					360					365			
Val	Ser	Leu	Thr	Cys	Leu	Val	Lys	Gly	Phe	Tyr	Pro	Ser	Asp	Ile	Ala
	370					375					380				
Val	Glu	Trp	Glu	Ser	Asn	Gly	Gln	Pro	Glu	Asn	Asn	Tyr	Lys	Thr	Thr
385					390					395					400
Pro	Pro	Met	Leu	Lys	Ser	Asp	Gly	Ser	Phe	Phe	Leu	Tyr	Ser	Lys	Leu
				405					410					415	
Thr	Val	Asp	Lys	Ser	Arg	Trp	Gln	Gln	Gly	Asn	Val	Phe	Ser	Cys	Ser
			420					425					430		
Val	Met	His	Glu	Ala	Leu	His	Asn	His	Tyr	Thr	Gln	Lys	Ser	Leu	Ser
		435					440					445			

Leu Ser Pro Gly
450

<210> 7
<211> 452
<212> PRT
<213> Homo sapiens

<400> 7

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

Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Gly Ser Ile Arg Arg Gly
20 25 30

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

Trp Ile Gly Tyr Ile Tyr Tyr Ser Gly Ser Thr Asn Tyr Asn Pro Ser
50 55 60

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

Ser Leu Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr
85 90 95

Cys Ala Arg Asp Tyr Asp Ile Leu Thr Gly Tyr Ser Tyr Tyr Tyr Tyr
100 105 110

Gly Met Asp Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser Ala
115 120 125

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

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

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

Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu
180 185 190

Ser Ser Val Val Thr Val Pro Ser Ser Asn Phe Gly Thr Gln Thr Tyr
195 200 205

[illegible]

<210> 8
<211> 7
<212> PRT
<213> Homo sapiens

<400> 8

Arg Gly Gly Asp Tyr Trp Ser
1 5

<210> 9
<211> 16
<212> PRT
<213> Homo sapiens

<400> 9

Tyr Ile Tyr Tyr Ser Gly Ser Thr Asn Tyr Asn Pro Ser Leu Lys Ser
1 5 10 15

<210> 10
<211> 17
<212> PRT
<213> Homo sapiens

<400> 10

Asp Tyr Asp Ile Leu Thr Gly Tyr Ser Tyr Tyr Tyr Tyr Gly Met Asp
1 5 10 15

Val

<210> 11
<211> 219
<212> PRT
<213> Homo sapiens

<400> 11

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

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

Asn Gly Tyr Asn Tyr Leu Asp Trp Tyr Leu Gln Lys Pro Gly Gln Ser
35 40 45

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

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

Arg Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln Ala
85 90 95

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

Arg Thr Val Ala Ala Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu
115 120 125

Gln Leu Lys Ser Gly Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe
130 135 140

Tyr Pro Arg Glu Ala Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln
145 150 155 160

Ser Gly Asn Ser Gln Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser
165 170 175

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

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

Pro Val Thr Lys Ser Phe Asn Arg Gly Glu Cys
210 215

<210> 12
<211> 16
<212> PRT
<213> Homo sapiens

<400> 12

Arg Ser Ser Gln Ser Leu Leu His Ser Asn Gly Tyr Asn Tyr Leu Asp
1 5 10 15

<210> 13
<211> 7
<212> PRT
<213> Homo sapiens

<400> 13

Leu Gly Ser Asn Arg Ala Ser
1 5

<210> 14
<211> 9
<212> PRT
<213> Homo sapiens

<400> 14

Met Gln Ala Leu Gln Thr Pro Arg Thr

1 5

<210> 15

<211> 1956

<212> DNA

<213> Homo sapiens

<400> 15

caggtgcagc	tgcaggagtc	gggcccagga	ctggtgaagc	cttcacagac	cctgtccctc	60
acctgcactg	tctctggtgg	ctccatcaga	agaggtggtg	actattggag	ctggattcgc	120
cagcaccacg	ggaagggcct	ggagtggatt	gggtacatct	attacagtgg	gagtactaac	180
tacaaccctg	ccctcaagag	tcgagctacc	atatcagtag	acacgtctaa	gaaccagttc	240
tccctgaagc	tgagctctgt	gactgccgcg	gacacggccg	tctattactg	tgcgagagat	300
tacgatattt	tgactggtta	ttcctactac	tactacggta	tggacgtctg	gggccaaggg	360
accacggtca	ccgtctctag	tgccctccacc	aaggggcccat	cggctcttccc	cctggcgccc	420
tgctccagga	gcacctccga	gagcacagcg	gccctgggct	gcctggtcaa	ggactacttc	480
cccgaaccgg	tgacgggtgtc	gtggaactca	ggcgctctga	ccagcggcgt	gcacaccttc	540
ccagctgtcc	tacagtcctc	aggactctac	tccctcagca	gcgtggtgac	cgtgccctcc	600
agcaacttcg	gcaccagac	ctacacctgc	aacgtagatc	acaagcccag	caacaccaag	660
acctgcactg	tctctggtgg	ctccatcaga	agaggtggtg	actattggag	ctggattcgc	720
cagcaccacg	ggaagggcct	ggagtggatt	gggtacatct	attacagtgg	gagtactaac	780
tacaaccctg	ccctcaagag	tcgagctacc	atatcagtag	acacgtctaa	gaaccagttc	840
tccctgaagc	tgagctctgt	gactgccgcg	gacacggccg	tctattactg	tgcgagagat	900
tacgatattt	tgactggtta	ttcctactac	tactacggta	tggacgtctg	gggccaaggg	960
accacggtca	ccgtctctag	tgccctccacc	aaggggcccat	cggctcttccc	cctggcgccc	1020
tgctccagga	gcacctccga	gagcacagcg	gccctgggct	gcctggtcaa	ggactacttc	1080
cccgaaccgg	tgacgggtgtc	gtggaactca	ggcgctctga	ccagcggcgt	gcacaccttc	1140
ccagctgtcc	tacagtcctc	aggactctac	tccctcagca	gcgtggtgac	cgtgccctcc	1200
agcaacttcg	gcaccagac	ctacacctgc	aacgtagatc	acaagcccag	caacaccaag	1260
gtggacaaga	cagttgagcg	caaagtgtgt	gtcgagtgcc	caccgtgccc	agcaccacct	1320
gtggcaggac	cgtcagtctt	cctcttcccc	ccaaaaccca	aggacaccct	catgatctcc	1380
cggacccctg	aggtcacgtg	cgtggtggtg	gacgtgagcc	acgaagacc	cgaggtccag	1440
ttcaactggg	acgtggacgg	cgtggaggtg	cataatgcca	agacaaagcc	acgggaggag	1500
cagttcaaca	gcacgttccg	tgtggtcagc	gtcctcaccg	ttgtgcacca	ggactggctg	1560

aacggcaagg agtacaagtg caaggtctcc aacaaaggcc tcccagcccc catcgagaaa	1620
accatctcca aaaccaaagg gcagccccga gaaccacagg tgtacaccct gccccatcc	1680
cgggaggaga tgaccaagaa ccaggtcagc ctgacctgcc tggtaaagg cttctacccc	1740
agcgacatcg ccgtggagtg ggagagcaat gggcagccgg agaacaacta caagaccaca	1800
cctcccatgc tggactccga cggctccttc ttcctctaca gcaagctcac cgtggacaag	1860
agcaggtggc agcaggggaa cgtcttctca tgctccgtga tgcattgaggc tctgcacaac	1920
cactacacgc agaagagcct ctccctgtct ccgggt	1956

<210> 16
 <211> 1356
 <212> DNA
 <213> Homo sapiens

<400> 16	
caggtgcagc tgcaggagtc gggcccagga ctggtgaagc cttcacagac cctgtccctc	60
acctgcactg tctctgggtg ctccatcaga agaggtggtg actattggag ctggattcgc	120
cagcaccagc ggaagggcct ggagtggatt gggtagatct attacagtgg gaggactaac	180
tacaaccctg ccctcaagag tcgagctacc atatcagtag acacgtctaa gaaccagttc	240
tccttgaagc tgagctctgt gactgccgcg gacacggccg tctattactg tgcgagagat	300
tacgatattt tgactggtta ttcctactac tactacggta tggacgtctg gggccaaggg	360
accacgttca ccgtctctag tgccctccacc aaggggccat cgtcttccc cctggcgccc	420
tgctccagga gcacctccga gagcacagcg gccctgggct gcctggtcaa ggactacttc	480
cccgaaccgg tgacgggtgc gtggaactca ggcgctctga ccagcggcgt gcacaccttc	540
ccagctgtcc tacagtcctc aggactctac tccctcagca gcgtggtgac cgtgccctcc	600
agcaacttcg gcaccagac ctacacctgc aacgtagatc acaagcccag caacaccaag	660
gtggacaaga cagttgagcg caaatgttgt gtcgagtgcc caccgtgcc agcaccacct	720
gtggcaggac cgtcagtcct cctcttcccc ccaaaacca aggacaccct catgatctcc	780
cggacccctg aggtcacgtg cgtgggtggtg gacgtgagcc acgaagacct cgaggtccag	840
ttcaactggt acgtggacgg cgtggagggt cataatgcca agacaaagcc acgggaggag	900
cagttcaaca gcacgttccg tgtggtcagc gtcctcaccg ttgtgcacca ggactggctg	960
aacggcaagg agtacaagtg caaggtctcc aacaaaggcc tcccagcccc catcgagaaa	1020
accatctcca aaaccaaagg gcagccccga gaaccacagg tgtacaccct gccccatcc	1080
cgggaaggaga tgaccaagaa ccaggtcagc ctgacctgcc tggtaaagg cttctacccc	1140
agcgacatcg ccgtggagtg ggagagcaat gggcagccgg agaacaacta caagaccaca	1200
cctcccatgc tgaagtccga cggctccttc ttcctctaca gcaagctcac cgtggacaag	1260
agcaggtggc agcaggggaa cgtcttctca tgctccgtga tgcattgaggc tctgcacaac	1320

cactacacgc agaagagcct ctccctgtct ccgggt

1356

<210> 17

<211> 1356

<212> DNA

<213> Homo sapiens

<400> 17

caggtgcagc tgcaggagtc gggcccagga ctggtgaagc cttcacagac cctgtccctc	60
acctgcactg tctctggtgg ctccatcaga agagggtggtg actattggag ctggattcgc	120
cagcaccacag ggaagggcct ggagtggtatt gggtagatct attacagtgg gagtactaac	180
tacaacccgt ccctcaagag tcgagctacc atatcagtag acacgtctaa gaaccagttc	240
tcctgaagc tgagctctgt gactgccgcg gacacggccg tctattactg tgcgagagat	300
tacgatattt tgactggtta ttcctactac tactacggta tggacgtctg gggccaaggg	360
accacggtca ccgtctctag tgcctccacc aagggcccat cggctctccc cctggcgccc	420
tgctccagga gcacctccga gagcacagcg gccctgggct gcctggtcaa ggactacttc	480
cccgaaccgg tgacggtgtc gtggaactca ggcgctctga ccagcggcgt gcacaccttc	540
ccagctgtcc tacagtcctc aggactctac tccctcagca gcgtggtgac cgtgccctcc	600
agcaacttcg gcaccagac ctacacctgc aacgtagatc acaagcccag caacaccaag	660
gtggacaaga cagttgagcg caaatgttgt gtcgagtgcc caccgtgccc agcaccacct	720
gtggcaggac cgtcagtctt cctcttcccc ccaaaacca aggacaccct catgatctcc	780
cggacccctg aggtcacgtg cgtggtggtg gacgtgagcc acgaagacc cagaggtccag	840
ttcaactggt acgtggacgg cgtggagggt cataatgcca agacaaagcc acgggaggag	900
cagttcaaca gcacgttccg tgtggtcagc gtcctcaccg ttgtgcacca ggactggctg	960
aacggcaagg agtacaagtg caaggtctcc aacaaaggcc tcccagcccc catcgagaaa	1020
accatctcca aaaccaaagg gcagccccga gaaccacagg tgtacaccct gccccatcc	1080
cgggaggaga tgaccaagaa ccaggtcagc ctgacctgcc tggtaaagg cttctacccc	1140
agcgacatcg ccgtggagtg ggagagcaat gggcagccgg agaacaacta cgataccaca	1200
cctcccatgc tggactccga cggctccttc ttcctctaca gcgatctcac cgtggacaag	1260
agcaggtggc agcaggggaa cgtcttctca tgctccgtga tgcattgaggc tctgcacaac	1320
cactacacgc agaagagcct ctccctgtct ccgggt	1356

<210> 18

<211> 452

<212> PRT

<213> Homo sapiens

<400> 18

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

Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val
260 265 270

Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val
275 280 285

Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Gly Ser
290 295 300

Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu
305 310 315 320

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

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

Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln
355 360 365

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

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

Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu
405 410 415

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

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

Leu Ser Pro Gly
450

<210> 19
<211> 452
<212> PRT
<213> Homo sapiens

<400> 19

Gln 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 Val Ala Ser Gly Phe Thr Phe Ser Ser Tyr

20

25

30

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

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

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

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

Ala Arg Gly Gly Arg Leu Gly Lys Asp Tyr Tyr Ser Gly Met Asp Val
 100 105 110

Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser Ala Ser Thr Lys Gly
 115 120 125

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

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

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

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

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

Asn His Lys Pro Ser Asn Thr Lys Val Asp Lys Lys Val Glu Pro Lys
 210 215 220

Ser Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu
 225 230 235 240

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

Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val
 260 265 270

Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val

275

280

285

Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Gly Ser
 290 295 300

Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu
 305 310 315 320

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

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

Gln Val Tyr Thr Leu Pro Pro Ser Arg Lys Glu Met Thr Lys Asn Gln
 355 360 365

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

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

Pro Pro Val Leu Lys Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu
 405 410 415

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

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

Leu Ser Pro Gly
 450

<210> 20
 <211> 452
 <212> PRT
 <213> Homo sapiens

<400> 20

Gln 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 Val Ala Ser Gly Phe Thr Phe Ser Ser Tyr
 20 25 30

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

Ala	Val	Ile	Trp	Tyr	Glu	Gly	Ser	Asn	Lys	Tyr	Tyr	Ala	Glu	Ser	Val	50	55	60
Lys	Gly	Arg	Phe	Thr	Ile	Ser	Arg	Asp	Asn	Ser	Lys	Asn	Thr	Leu	Tyr	65	70	75
Leu	Gln	Met	Asn	Ser	Leu	Arg	Ala	Glu	Asp	Thr	Ala	Val	Tyr	Tyr	Cys	85	90	95
Ala	Arg	Gly	Gly	Arg	Leu	Gly	Lys	Asp	Tyr	Tyr	Ser	Gly	Met	Asp	Val	100	105	110
Trp	Gly	Gln	Gly	Thr	Thr	Val	Thr	Val	Ser	Ser	Ala	Ser	Thr	Lys	Gly	115	120	125
Pro	Ser	Val	Phe	Pro	Leu	Ala	Pro	Ser	Ser	Lys	Ser	Thr	Ser	Gly	Gly	130	135	140
Thr	Ala	Ala	Leu	Gly	Cys	Leu	Val	Lys	Asp	Tyr	Phe	Pro	Glu	Pro	Val	145	150	155
Thr	Val	Ser	Trp	Asn	Ser	Gly	Ala	Leu	Thr	Ser	Gly	Val	His	Thr	Phe	165	170	175
Pro	Ala	Val	Leu	Gln	Ser	Ser	Gly	Leu	Tyr	Ser	Leu	Ser	Ser	Val	Val	180	185	190
Thr	Val	Pro	Ser	Ser	Ser	Leu	Gly	Thr	Gln	Thr	Tyr	Ile	Cys	Asn	Val	195	200	205
Asn	His	Lys	Pro	Ser	Asn	Thr	Lys	Val	Asp	Lys	Lys	Val	Glu	Pro	Lys	210	215	220
Ser	Cys	Asp	Lys	Thr	His	Thr	Cys	Pro	Pro	Cys	Pro	Ala	Pro	Glu	Leu	225	230	235
Leu	Gly	Gly	Pro	Ser	Val	Phe	Leu	Phe	Pro	Pro	Lys	Pro	Lys	Asp	Thr	245	250	255
Leu	Met	Ile	Ser	Arg	Thr	Pro	Glu	Val	Thr	Cys	Val	Val	Val	Asp	Val	260	265	270
Ser	His	Glu	Asp	Pro	Glu	Val	Lys	Phe	Asn	Trp	Tyr	Val	Asp	Gly	Val	275	280	285
Glu	Val	His	Asn	Ala	Lys	Thr	Lys	Pro	Arg	Glu	Glu	Gln	Tyr	Gly	Ser	290	295	300

Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu
305 310 315 320

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

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

Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln
355 360 365

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

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

Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Asp Leu
405 410 415

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

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

Leu Ser Pro Gly
450

<210> 21
<211> 228
<212> PRT
<213> Homo sapiens

<400> 21

Gln 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 Val Ala Ser Gly Phe Thr Phe Ser Ser Tyr
20 25 30

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

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

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

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

Ala Arg Gly Gly Arg Leu Gly Lys Asp Tyr Tyr Ser Gly Met Asp Val
100 105 110

Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser Ala Ser Thr Lys Gly
115 120 125

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

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

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

Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Glu Ser Val Val
180 185 190

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

Asn His Lys Pro Ser Asn Thr Lys Val Asp Lys Lys Val Glu Pro Lys
210 215 220

Ser Cys Gly Gly
225

<210> 22
<211> 5
<212> PRT
<213> Homo sapiens

<400> 22

Ser Tyr Gly Met His
1 5

<210> 23
<211> 17
<212> PRT
<213> Homo sapiens

<400> 23

Val Ile Trp Tyr Glu Gly Ser Asn Lys Tyr Tyr Ala Glu Ser Val Lys

1 5 10 15

Gly

<210> 24
<211> 14
<212> PRT
<213> Homo sapiens

<400> 24

Gly Gly Arg Leu Gly Lys Asp Tyr Tyr Ser Gly Met Asp Val
1 5 10

<210> 25
<211> 214
<212> PRT
<213> Homo sapiens

<400> 25

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 Arg Ala Ser Gln Gly Ile Arg Asn Asp
20 25 30

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

Tyr Ala Thr Ser Ser Leu Gln Ser 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 Leu Gln His Asn Thr Tyr Pro Trp
85 90 95

Thr Phe Gly Gln 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> 26
<211> 214
<212> PRT
<213> Homo sapiens

<400> 26

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 Arg Ala Ser Gln Gly Ile Arg Asn Asp
20 25 30

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

Tyr Ala Thr Ser Ser Leu Gln Ser 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 Leu Gln His Asn Thr Tyr Pro Trp
85 90 95

Thr Phe Gly Gln 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 Lys
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> 27
<211> 11
<212> PRT
<213> Homo sapiens

<400> 27

Arg Ala Ser Gln Gly Ile Arg Asn Asp Leu Gly
1 5 10

<210> 28
<211> 7
<212> PRT
<213> Homo sapiens

<400> 28

Ala Thr Ser Ser Leu Gln Ser
1 5

<210> 29
<211> 9
<212> PRT
<213> Homo sapiens

<400> 29

Leu Gln His Asn Thr Tyr Pro Trp Thr
1 5

<210> 30
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic polypeptide

<400> 30

Gly Gly His His His His His
1 5

<210> 31

<211> 451
 <212> PRT
 <213> Homo sapiens
 <400> 31

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

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

Asp Tyr Phe Trp Ser Trp Ile Arg Gln Leu Pro Gly Lys Gly Leu Glu
 35 40 45

Trp Ile Gly His Ile His Asn Ser Gly Thr Thr Tyr Tyr Asn Pro Ser
 50 55 60

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

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

Cys Ala Arg Asp Arg Gly Gly Asp Tyr Tyr Tyr Gly Met Asp Val Trp
 100 105 110

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

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

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

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

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

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

His Lys Pro Ser Asn Thr Lys Val Asp Lys Lys Val Glu Pro Lys Ser
 210 215 220

Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu
 225 230 235 240

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

<210> 32
 <211> 451
 <212> PRT
 <213> Homo sapiens

 <400> 32

Gln	Val	Gln	Leu	Gln	Glu	Ser	Gly	Pro	Gly	Leu	Val	Lys	Pro	Ser	Gln	1	5	10	15
Thr	Leu	Ser	Leu	Thr	Cys	Thr	Val	Ser	Gly	Gly	Ser	Ile	Ser	Ser	Gly	20	25	30	
Asp	Tyr	Phe	Trp	Ser	Trp	Ile	Arg	Gln	Leu	Pro	Gly	Lys	Gly	Leu	Glu	35	40	45	
Trp	Ile	Gly	His	Ile	His	Asn	Ser	Gly	Thr	Thr	Tyr	Tyr	Asn	Pro	Ser	50	55	60	
Leu	Lys	Ser	Arg	Val	Thr	Ile	Ser	Val	Asp	Thr	Ser	Lys	Lys	Gln	Phe	65	70	75	80
Ser	Leu	Arg	Leu	Ser	Ser	Val	Thr	Ala	Ala	Asp	Thr	Ala	Val	Tyr	Tyr	85	90	95	
Cys	Ala	Arg	Asp	Arg	Gly	Gly	Asp	Tyr	Tyr	Tyr	Gly	Met	Asp	Val	Trp	100	105	110	
Gly	Gln	Gly	Thr	Thr	Val	Thr	Val	Ser	Ser	Ala	Ser	Thr	Lys	Gly	Pro	115	120	125	
Ser	Val	Phe	Pro	Leu	Ala	Pro	Ser	Ser	Lys	Ser	Thr	Ser	Gly	Gly	Thr	130	135	140	
Ala	Ala	Leu	Gly	Cys	Leu	Val	Lys	Asp	Tyr	Phe	Pro	Glu	Pro	Val	Thr	145	150	155	160
Val	Ser	Trp	Asn	Ser	Gly	Ala	Leu	Thr	Ser	Gly	Val	His	Thr	Phe	Pro	165	170	175	
Ala	Val	Leu	Gln	Ser	Ser	Gly	Leu	Tyr	Ser	Leu	Ser	Ser	Val	Val	Thr	180	185	190	
Val	Pro	Ser	Ser	Ser	Leu	Gly	Thr	Gln	Thr	Tyr	Ile	Cys	Asn	Val	Asn	195	200	205	
His	Lys	Pro	Ser	Asn	Thr	Lys	Val	Asp	Lys	Lys	Val	Glu	Pro	Lys	Ser	210	215	220	
Cys	Asp	Lys	Thr	His	Thr	Cys	Pro	Pro	Cys	Pro	Ala	Pro	Glu	Leu	Leu	225	230	235	240
Gly	Gly	Pro	Ser	Val	Phe	Leu	Phe	Pro	Pro	Lys	Pro	Lys	Asp	Thr	Leu	245	250	255	

Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser
260 265 270

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

Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Gly Ser Thr
290 295 300

Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn
305 310 315 320

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

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

Val Tyr Thr Leu Pro Pro Ser Arg Lys Glu Met Thr Lys Asn Gln Val
355 360 365

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

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

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

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

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

Ser Pro Gly
450

<210> 33
<211> 451
<212> PRT
<213> Homo sapiens

<400> 33

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

Thr	Leu	Ser	Leu	Thr	Cys	Thr	Val	Ser	Gly	Gly	Ser	Ile	Ser	Ser	Gly	20	25	30
Asp	Tyr	Phe	Trp	Ser	Trp	Ile	Arg	Gln	Leu	Pro	Gly	Lys	Gly	Leu	Glu	35	40	45
Trp	Ile	Gly	His	Ile	His	Asn	Ser	Gly	Thr	Thr	Tyr	Tyr	Asn	Pro	Ser	50	55	60
Leu	Lys	Ser	Arg	Val	Thr	Ile	Ser	Val	Asp	Thr	Ser	Lys	Lys	Gln	Phe	65	70	75
Ser	Leu	Arg	Leu	Ser	Ser	Val	Thr	Ala	Ala	Asp	Thr	Ala	Val	Tyr	Tyr	85	90	95
Cys	Ala	Arg	Asp	Arg	Gly	Gly	Asp	Tyr	Tyr	Tyr	Gly	Met	Asp	Val	Trp	100	105	110
Gly	Gln	Gly	Thr	Thr	Val	Thr	Val	Ser	Ser	Ala	Ser	Thr	Lys	Gly	Pro	115	120	125
Ser	Val	Phe	Pro	Leu	Ala	Pro	Ser	Ser	Lys	Ser	Thr	Ser	Gly	Gly	Thr	130	135	140
Ala	Ala	Leu	Gly	Cys	Leu	Val	Lys	Asp	Tyr	Phe	Pro	Glu	Pro	Val	Thr	145	150	155
Val	Ser	Trp	Asn	Ser	Gly	Ala	Leu	Thr	Ser	Gly	Val	His	Thr	Phe	Pro	165	170	175
Ala	Val	Leu	Gln	Ser	Ser	Gly	Leu	Tyr	Ser	Leu	Ser	Ser	Val	Val	Thr	180	185	190
Val	Pro	Ser	Ser	Ser	Leu	Gly	Thr	Gln	Thr	Tyr	Ile	Cys	Asn	Val	Asn	195	200	205
His	Lys	Pro	Ser	Asn	Thr	Lys	Val	Asp	Lys	Lys	Val	Glu	Pro	Lys	Ser	210	215	220
Cys	Asp	Lys	Thr	His	Thr	Cys	Pro	Pro	Cys	Pro	Ala	Pro	Glu	Leu	Leu	225	230	235
Gly	Gly	Pro	Ser	Val	Phe	Leu	Phe	Pro	Pro	Lys	Pro	Lys	Asp	Thr	Leu	245	250	255
Met	Ile	Ser	Arg	Thr	Pro	Glu	Val	Thr	Cys	Val	Val	Val	Asp	Val	Ser	260	265	270

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

Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Gly Ser Thr
290 295 300

Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn
305 310 315 320

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

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

Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val
355 360 365

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

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

Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Asp Leu Thr
405 410 415

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

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

Ser Pro Gly
450

<210> 34
<211> 227
<212> PRT
<213> Homo sapiens

<400> 34

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

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

Asp Tyr Phe Trp Ser Trp Ile Arg Gln Leu Pro Gly Lys Gly Leu Glu

35

40

45

Trp Ile Gly His Ile His Asn Ser Gly Thr Thr Tyr Tyr Asn Pro Ser
 50 55 60

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

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

Cys Ala Arg Asp Arg Gly Gly Asp Tyr Tyr Tyr Gly Met Asp Val Trp
 100 105 110

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

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

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

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

Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Glu Ser Val Val Thr
 180 185 190

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

His Lys Pro Ser Asn Thr Lys Val Asp Lys Lys Val Glu Pro Lys Ser
 210 215 220

Cys Gly Gly
 225

<210> 35
 <211> 7
 <212> PRT
 <213> Homo sapiens

<400> 35

Ser Gly Asp Tyr Phe Trp Ser
 1 5

<210> 36
 <211> 16

<212> PRT
<213> Homo sapiens

<400> 36

His Ile His Asn Ser Gly Thr Thr Tyr Tyr Asn Pro Ser Leu Lys Ser
1 5 10 15

<210> 37
<211> 12
<212> PRT
<213> Homo sapiens

<400> 37

Asp Arg Gly Gly Asp Tyr Tyr Tyr Gly Met Asp Val
1 5 10

<210> 38
<211> 215
<212> PRT
<213> Homo sapiens

<400> 38

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

Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Gly Ile Ser Arg Ser
20 25 30

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

Ile Tyr Gly Ala Ser Ser Arg Ala Thr Gly Ile Pro Asp Arg Phe Ser
50 55 60

Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu
65 70 75 80

Pro Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Phe Gly Ser Ser Pro
85 90 95

Trp Thr Phe Gly Gln Gly Thr Lys Val 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 Cys Glu Val Thr His Gln Gly Leu Ser Ser Pro Val Thr Lys						
	195		200		205	
Ser Phe Asn Arg Gly Glu Cys						
	210		215			
<210> 39						
<211> 215						
<212> PRT						
<213> Homo sapiens						
<400> 39						
Glu Ile Val Leu Thr Gln Ser Pro Gly Thr Leu Ser Leu Ser Pro Gly						
1		5		10		15
Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Gly Ile Ser Arg Ser						
	20		25			30
Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Ser Leu Leu						
	35		40		45	
Ile Tyr Gly Ala Ser Ser Arg Ala Thr Gly Ile Pro Asp Arg Phe Ser						
	50		55		60	
Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu						
65		70		75		80
Pro Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Phe Gly Ser Ser Pro						
	85		90			95
Trp Thr Phe Gly Gln Gly Thr Lys Val 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

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

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

Ser Phe Asn Arg Gly Glu Cys
210 215

<210> 40
<211> 12
<212> PRT
<213> Homo sapiens

<400> 40

Arg Ala Ser Gln Gly Ile Ser Arg Ser Tyr Leu Ala
1 5 10

<210> 41
<211> 7
<212> PRT
<213> Homo sapiens

<400> 41

Gly Ala Ser Ser Arg Ala Thr
1 5

<210> 42
<211> 9
<212> PRT
<213> Homo sapiens

<400> 42

Gln Gln Phe Gly Ser Ser Pro Trp Thr
1 5

<210> 43
<211> 127
<212> PRT
<213> Homo sapiens

<400> 43

Gly Pro Thr Gly Thr Gly Glu Ser Lys Cys Pro Leu Met Val Lys Val
1 5 10 15

Leu Asp Ala Val Arg Gly Ser Pro Ala Ile Asn Val Ala Val His Val
20 25 30

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

Thr Ser Glu Ser Gly Glu Leu His Gly Leu Thr Thr Glu Glu Glu Phe
50 55 60

Val Glu Gly Ile Tyr Lys Val Glu Ile Asp Thr Lys Ser Tyr Trp Lys
65 70 75 80

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

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

Pro Tyr Ser Tyr Ser Thr Thr Ala Val Val Thr Asn Pro Lys Glu
115 120 125

<210> 44
<211> 231
<212> PRT
<213> Homo sapiens

<400> 44

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

Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Gly Ser Ile Arg Arg Gly
20 25 30

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

Trp Ile Gly Tyr Ile Tyr Tyr Ser Gly Ser Thr Asn Tyr Asn Pro Ser
50 55 60

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

Ser Leu Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr
85 90 95

Cys Ala Arg Asp Tyr Asp Ile Leu Thr Gly Tyr Ser Tyr Tyr Tyr Tyr
100 105 110

Gly Met Asp Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser Ala
115 120 125

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

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

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

Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu
180 185 190

Ser Ser Val Val Thr Val Pro Ser Ser Asn Phe Gly Thr Gln Thr Tyr
195 200 205

Thr Cys Asn Val Asp His Lys Pro Ser Asn Thr Lys Val Asp Lys Thr
210 215 220

Val Glu Arg Lys Cys Gly Gly
225 230

<210> 45
<211> 231
<212> PRT
<213> Homo sapiens

<400> 45

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

Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Gly Ser Ile Arg Arg Gly
20 25 30

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

Trp Ile Gly Tyr Ile Tyr Tyr Ser Gly Ser Thr Asn Tyr Asn Pro Ser
50 55 60

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

Ser Leu Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr
85 90 95

Cys Ala Arg Asp Tyr Asp Ile Leu Thr Gly Tyr Ser Tyr Tyr Tyr Tyr
100 105 110

Gly Met Asp Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser Ala
115 120 125

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

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

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

Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu
180 185 190

Glu Ser Val Val Thr Val Pro Ser Ser Asn Phe Gly Thr Gln Thr Tyr
195 200 205

Thr Cys Asn Val Asp His Lys Pro Ser Asn Thr Lys Val Asp Lys Thr
210 215 220

Val Glu Arg Lys Cys Gly Gly
225 230

<210> 46
<211> 221
<212> PRT
<213> Homo sapiens

<400> 46

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

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

Asn Gly Tyr Asn Tyr Leu Asp Trp Tyr Leu Gln Lys Pro Gly Gln Ser
35 40 45

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

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

Arg Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln Ala
85 90 95

Leu Gln Thr Pro Arg Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys

100

105

110

Arg Thr Val Ala Ala Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu
 115 120 125

Gln Leu Lys Ser Gly Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe
 130 135 140

Tyr Pro Arg Glu Ala Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln
 145 150 155 160

Ser Gly Asn Ser Gln Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser
 165 170 175

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

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

Pro Val Thr Lys Ser Phe Asn Arg Gly Glu Cys Gly Gly
 210 215 220

<210> 47

<211> 5

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic polypeptide

<400> 47

Gly Gly Gly Gly Ser
 1 5