

SEQUENCE LISTING

<110> THE BOARD OF TRUSTEES OF THE LELAND STANFORD JUNIOR
UNIVERSITY

<120> COMBINATION OF INTEGRIN-TARGETING KNOTTIN-FC FUSION AND ANTI-CD47
ANTIBODY FOR THE TREATMENT OF CANCER

<130> STDU2-37922.601

<150> US 62/875,337

<151> 2019-07-17

<160> 143

<170> PatentIn version 3.5

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<213> Artificial

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

Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Gln Thr
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Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn Thr Lys Val Asp Lys
85 90 95

Lys Val Glu Pro Lys Ser Cys Asp Lys Thr His Thr Cys Pro Pro Cys
100 105 110

Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro
115 120 125

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
130 135 140

Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp
145 150 155 160

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
165 170 175

Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
180 185 190

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
195 200 205

Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
210 215 220

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

Leu Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
245 250 255

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
260 265 270

Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
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Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn
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Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
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Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val
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Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln
 65 70 75 80

Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln
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Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala
 100 105 110

Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro
 115 120 125

Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr
 130 135 140

Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser
 145 150 155 160

Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr

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Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr
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Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe
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Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys
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Ser Leu Ser Leu Ser Pro Gly Lys
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Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val
 50 55 60

His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr
 65 70 75 80

Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly
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Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile

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Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val
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Tyr Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser
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Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu
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Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro
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Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val
 180 185 190

Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met
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His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser
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Pro Leu Lys Glu Cys Pro Pro Cys Ala Ala Pro Asp Leu Leu Gly Gly
35 40 45

Pro Ser Val Phe Ile Phe Pro Pro Lys Ile Lys Asp Val Leu Met Ile
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Ser Leu Ser Pro Met Val Thr Cys Val Val Val Ala Val Ser Glu Asp
65 70 75 80

Asp Pro Asp Val Gln Ile Ser Trp Phe Val Asn Asn Val Glu Val His
85 90 95

Thr Ala Gln Thr Gln Thr His Arg Glu Asp Tyr Asn Ser Thr Leu Arg
100 105 110

Val Val Ser Ala Leu Pro Ile Gln His Gln Asp Trp Met Ser Gly Lys
115 120 125

Glu Phe Lys Cys Lys Val Asn Asn Arg Ala Leu Pro Ser Pro Ile Glu
130 135 140

Lys Thr Ile Ser Lys Pro Arg Gly Pro Val Arg Ala Pro Gln Val Tyr
145 150 155 160

Val Leu Pro Pro Pro Ala Glu Glu Met Thr Lys Lys Glu Phe Ser Leu
165 170 175

Thr Cys Met Ile Thr Gly Phe Leu Pro Ala Glu Ile Ala Val Asp Trp
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Thr Ser Asn Gly Arg Thr Glu Gln Asn Tyr Lys Asn Thr Ala Thr Val
195 200 205

Leu Asp Ser Asp Gly Ser Tyr Phe Met Tyr Ser Lys Leu Arg Val Gln
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Lys Ser Thr Trp Glu Arg Gly Ser Leu Phe Ala Cys Ser Val Val His
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Glu Gly Leu His Asn His Leu Thr Thr Lys Thr Ile Ser Arg Ser Leu
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Gly Lys Gly Gly Gly Ser Asp Tyr Lys Asp Asp Asp Asp Lys
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Arg Phe Lys Asp Leu Gly Glu Glu Asn Phe Lys Ala Leu Val Leu Ile
35 40 45

Ala Phe Ala Gln Tyr Leu Gln Gln Cys Pro Phe Glu Asp His Val Lys
50 55 60

Leu Val Asn Glu Val Thr Glu Phe Ala Lys Thr Cys Val Ala Asp Glu
65 70 75 80

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

Leu Cys Thr Val Ala Thr Leu Arg Glu Thr Tyr Gly Glu Met Ala Asp
100 105 110

Cys Cys Ala Lys Gln Glu Pro Glu Arg Asn Glu Cys Phe Leu Gln His
115 120 125

Lys Asp Asp Asn Pro Asn Leu Pro Arg Leu Val Arg Pro Glu Val Asp
130 135 140

Val Met Cys Thr Ala Phe His Asp Asn Glu Glu Thr Phe Leu Lys Lys
145 150 155 160

Tyr Leu Tyr Glu Ile Ala Arg Arg His Pro Tyr Phe Tyr Ala Pro Glu
165 170 175

Leu Leu Phe Phe Ala Lys Arg Tyr Lys Ala Ala Phe Thr Glu Cys Cys
180 185 190

Gln Ala Ala Asp Lys Ala Ala Cys Leu Leu Pro Lys Leu Asp Glu Leu
195 200 205

Arg Asp Glu Gly Lys Ala Ser Ser Ala Lys Gln Arg Leu Lys Cys Ala
210 215 220

Ser Leu Gln Lys Phe Gly Glu Arg Ala Phe Lys Ala Trp Ala Val Ala
225 230 235 240

Arg Leu Ser Gln Arg Phe Pro Lys Ala Glu Phe Ala Glu Val Ser Lys
245 250 255

Leu Val Thr Asp Leu Thr Lys Val His Thr Glu Cys Cys His Gly Asp
260 265 270

Leu Leu Glu Cys Ala Asp Asp Arg Ala Asp Leu Ala Lys Tyr Ile Cys
275 280 285

Glu Asn Gln Asp Ser Ile Ser Ser Lys Leu Lys Glu Cys Cys Glu Lys
290 295 300

Pro Leu Leu Glu Lys Ser His Cys Ile Ala Glu Val Glu Asn Asp Glu
305 310 315 320

Met Pro Ala Asp Leu Pro Ser Leu Ala Ala Asp Phe Val Glu Ser Lys
325 330 335

Asp Val Cys Lys Asn Tyr Ala Glu Ala Lys Asp Val Phe Leu Gly Met
340 345 350

Phe Leu Tyr Glu Tyr Ala Arg Arg His Pro Asp Tyr Ser Val Val Leu
355 360 365

Leu Leu Arg Leu Ala Lys Thr Tyr Glu Thr Thr Leu Glu Lys Cys Cys
370 375 380

Ala Ala Ala Asp Pro His Glu Cys Tyr Ala Lys Val Phe Asp Glu Phe
385 390 395 400

Lys Pro Leu Val Glu Glu Pro Gln Asn Leu Ile Lys Gln Asn Cys Glu
405 410 415

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

Arg Tyr Thr Lys Lys Val Pro Gln Val Ser Thr Pro Thr Leu Val Glu
435 440 445

Val Ser Arg Asn Leu Gly Lys Val Gly Ser Lys Cys Cys Lys His Pro
450 455 460

Glu Ala Lys Arg Met Pro Cys Ala Glu Asp Tyr Leu Ser Val Val Leu
465 470 475 480

Asn Gln Leu Cys Val Leu His Glu Lys Thr Pro Val Ser Asp Arg Val
485 490 495

Thr Lys Cys Cys Thr Glu Ser Leu Val Asn Arg Arg Pro Cys Phe Ser
500 505 510

Ala Leu Glu Val Asp Glu Thr Tyr Val Pro Lys Glu Phe Asn Ala Glu
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Thr Phe Thr Phe His Ala Asp Ile Cys Thr Leu Ser Glu Lys Glu Arg
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Gln Ile Lys Lys Gln Thr Ala Leu Val Glu Leu Val Lys His Lys Pro
545 550 555 560

Lys Ala Thr Lys Glu Gln Leu Lys Ala Val Met Asp Asp Phe Ala Ala
565 570 575

Phe Val Glu Lys Cys Cys Lys Ala Asp Asp Lys Glu Thr Cys Phe Ala
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Glu Glu Gly Lys Lys Leu Val Ala Ala Ser Gln Ala Ala Leu Gly Leu
595 600 605

Gly Gly Gly Ser Ala Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu
610 615 620

Gln Leu Glu His Leu Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile
625 630 635 640

Asn Asn Tyr Lys Asn Pro Lys Leu Thr Arg Met Leu Thr Phe Lys Phe
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Tyr Met Pro Lys Lys Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu
660 665 670

Glu Glu Leu Lys Pro Leu Glu Glu Val Leu Asn Leu Ala Gln Ser Lys
675 680 685

Asn Phe His Leu Arg Pro Arg Asp Leu Ile Ser Asn Ile Asn Val Ile
690 695 700

Val Leu Glu Leu Lys Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala
705 710 715 720

Asp Glu Thr Ala Thr Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe
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Cys Gln Ser Ile Ile Ser Thr Leu Thr Gly Gly Gly Ser
740 745

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Gln Cys Pro Phe Glu Asp His Val Lys Leu Val Asn Glu Val Thr Glu
35 40 45

Phe Ala Lys Thr Cys Val Ala Asp Glu Ser Ala Glu Asn Cys Asp Lys
50 55 60

Ser Leu His Thr Leu Phe Gly Asp Lys Leu Cys Thr Val Ala Thr Leu
65 70 75 80

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

Glu Arg Asn Glu Cys Phe Leu Gln His Lys Asp Asp Asn Pro Asn Leu
100 105 110

Pro Arg Leu Val Arg Pro Glu Val Asp Val Met Cys Thr Ala Phe His
115 120 125

Asp Asn Glu Glu Thr Phe Leu Lys Lys Tyr Leu Tyr Glu Ile Ala Arg
130 135 140

Arg His Pro Tyr Phe Tyr Ala Pro Glu Leu Leu Phe Phe Ala Lys Arg
145 150 155 160

Tyr Lys Ala Ala Phe Thr Glu Cys Cys Gln Ala Ala Asp Lys Ala Ala
165 170 175

Cys Leu Leu Pro Lys Leu Asp Glu Leu Arg Asp Glu Gly Lys Ala Ser
180 185 190

Ser Ala Lys Gln Arg Leu Lys Cys Ala Ser Leu Gln Lys Phe Gly Glu
195 200 205

Arg Ala Phe Lys Ala Trp Ala Val Ala Arg Leu Ser Gln Arg Phe Pro
210 215 220

Lys Ala Glu Phe Ala Glu Val Ser Lys Leu Val Thr Asp Leu Thr Lys
225 230 235 240

Val His Thr Glu Cys Cys His Gly Asp Leu Leu Glu Cys Ala Asp Asp
245 250 255

Arg Ala Asp Leu Ala Lys Tyr Ile Cys Glu Asn Gln Asp Ser Ile Ser
260 265 270

Ser Lys Leu Lys Glu Cys Cys Glu Lys Pro Leu Leu Glu Lys Ser His
275 280 285

Cys Ile Ala Glu Val Glu Asn Asp Glu Met Pro Ala Asp Leu Pro Ser
290 295 300

Leu Ala Ala Asp Phe Val Glu Ser Lys Asp Val Cys Lys Asn Tyr Ala
305 310 315 320

Glu Ala Lys Asp Val Phe Leu Gly Met Phe Leu Tyr Glu Tyr Ala Arg
325 330 335

Arg His Pro Asp Tyr Ser Val Val Leu Leu Leu Arg Leu Ala Lys Thr
340 345 350

Tyr Glu Thr Thr Leu Glu Lys Cys Cys Ala Ala Ala Asp Pro His Glu
355 360 365

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

Gln Asn Leu Ile Lys Gln Asn Cys Glu Leu Phe Glu Gln Leu Gly Glu

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Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro Leu Glu
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Glu Val Leu Asn Leu Ala Gln Ser Lys Asn Phe His Leu Arg Pro Arg
660 665 670

Asp Leu Ile Ser Asn Ile Asn Val Ile Val Leu Glu Leu Lys Gly Ser
675 680 685

Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr Ile Val
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Leu Thr Gly Gly Gly Ser
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Cys Asp Pro Cys Ala Thr Cys Tyr Cys Arg Phe Phe Asn Ala Phe Cys
20 25 30

Tyr Cys Arg Lys Leu Gly Thr Ala Met Asn Pro Cys Ser Arg Thr
35 40 45

<210> 41
<211> 48
<212> PRT
<213> Homo sapiens

<400> 41

Glu Asp Asn Cys Ile Ala Glu Asp Tyr Gly Lys Cys Thr Trp Gly Gly
1 5 10 15

Thr Lys Cys Cys Arg Gly Arg Pro Cys Arg Cys Ser Met Ile Gly Thr

20

25

30

Asn Cys Glu Cys Thr Pro Arg Leu Ile Met Glu Gly Leu Ser Phe Ala
 35 40 45

<210> 42
 <211> 33
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 <213> Artificial

<220>
 <223> Synthetic

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 <222> (3)..(5)
 <223> Xaa can be any naturally occurring amino acid

<220>
 <221> misc_feature
 <222> (9)..(13)
 <223> Xaa can be any naturally occurring amino acid

<400> 42

Gly Cys Xaa Xaa Xaa Arg Gly Asp Xaa Xaa Xaa Xaa Xaa Cys Lys Gln
 1 5 10 15

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

Gly

<210> 43
 <211> 33
 <212> PRT
 <213> Artificial

<220>
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<220>
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 <223> Xaa can be any naturally occurring amino acid

<220>
 <221> misc_feature
 <222> (9)..(13)
 <223> Xaa can be any naturally occurring amino acid

<400> 43

Gly	Cys	Xaa	Xaa	Xaa	Arg	Gly	Asp	Xaa	Xaa	Xaa	Xaa	Xaa	Cys	Ser	Gln
1				5				10					15		

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

Gly

<210> 44
 <211> 822
 <212> DNA
 <213> Artificial

<220>
 <223> Synthetic

<400> 44

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cccataacac	agaacccctg	tcctccactc	aaagagtgtc	ccccatgcgc	agctccagac	180
ctcttggggtg	gaccatccgt	cttcatcttc	cctccaaaga	tcaaggatgt	actcatgatc	240
tccctgagcc	ccatggtcac	atgtgtgggtg	gtggatgtga	gcgaggatga	cccagacgtc	300
cagatcagct	ggttttgtgaa	caacgtggaa	gtacacacag	ctcagacaca	aacccataga	360
gaggattaca	acagtactct	ccgggtggtc	agtgccctcc	ccatccagca	ccaggactgg	420
atgagtggca	aggagttaa	atgcaaggtc	aacaacagag	ccctcccatc	ccccatcgag	480
aaaaccatct	caaaaccag	agggccagta	agagctccac	aggtatatgt	cttgccctcca	540
ccagcagaag	agatgactaa	gaaagagttc	agtctgacct	gcatgatcac	aggcttctta	600
cctgccgaaa	ttgctgtgga	ctggaccagc	aatgggctga	cagagcaaaa	ctacaagaac	660
accgcaacag	tcctggactc	tgatggttct	tacttcatgt	acagcaagct	cagagtacaa	720
aagagcactt	gggaaagagg	aagtcttttc	gcctgctcag	tggtccacga	gggtctgcac	780

aatcacctta cgactaagac catctcccgg tctctgggta aa

822

<210> 45
<211> 271
<212> PRT
<213> Artificial

<220>
<223> Synthetic

<400> 45

Gly Cys Pro Arg Pro Arg Gly Asp Asn Pro Pro Leu Thr Cys Ser Gln
1 5 10 15

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

Gly Glu Pro Arg Val Pro Ile Thr Gln Asn Pro Cys Pro Pro Leu Lys
35 40 45

Glu Cys Pro Pro Cys Ala Ala Pro Asp Leu Leu Gly Gly Pro Ser Val
50 55 60

Phe Ile Phe Pro Pro Lys Ile Lys Asp Val Leu Met Ile Ser Leu Ser
65 70 75 80

Pro Met Val Thr Cys Val Val Val Asp Val Ser Glu Asp Asp Pro Asp
85 90 95

Val Gln Ile Ser Trp Phe Val Asn Asn Val Glu Val His Thr Ala Gln
100 105 110

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

Ala Leu Pro Ile Gln His Gln Asp Trp Met Ser Gly Lys Glu Phe Lys
130 135 140

Cys Lys Val Asn Asn Arg Ala Leu Pro Ser Pro Ile Glu Lys Thr Ile
145 150 155 160

Ser Lys Pro Arg Gly Pro Val Arg Ala Pro Gln Val Tyr Val Leu Pro

165

170

175

Pro Pro Ala Glu Glu Met Thr Lys Lys Glu Phe Ser Leu Thr Cys Met
180 185 190

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

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

Asp Gly Ser Tyr Phe Met Tyr Ser Lys Leu Arg Val Gln Lys Ser Thr
225 230 235 240

Trp Glu Arg Gly Ser Leu Phe Ala Cys Ser Val Val His Glu Gly Leu
245 250 255

His Asn His Leu Thr Thr Lys Thr Ile Ser Arg Ser Leu Gly Lys
260 265 270

<210> 46

<211> 822

<212> DNA

<213> Artificial

<220>

<223> Synthetic

<400> 46

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ttggctgggt gtgtttgtgg tccaaatggg ttttgtgggt gtcgactaga gccagagtg 120

cccataacac agaaccctg tcctccactc aaagagtgtc ccccatgctc agctccagac 180

ctcttgggtg gaccatccgt cttcatcttc ctcctcaaaga tcaaggatgt actcatgatc 240

tccctgagcc ccatgggtcac atgtgtgggt gtggatgtga gcgaggatga cccagacgtc 300

cagatcagct ggttttgtgaa caacgtggaa gtacacacag ctgagacaca aacccataga 360

gaggattaca acagtactct ccgggtgggt agtgccctcc ccatccagca ccaggactgg 420

atgagtggca aggagttcaa atgcaagggt aacaacagag ccctcccatc ccccatcgag 480

aaaaccatct caaaaccag agggccagta agagctccac aggtatatgt cttgcctcca 540

ccagcagaag agatgactaa gaaagagttc agtctgacct gcatgatcac aggcttctta 600
cctgccgaaa ttgctgtgga ctggaccagc aatgggcgta cagagcaaaa ctacaagaac 660
accgcaacag tcctggactc tgatggttct tacttcatgt acagcaagct cagagtacaa 720
aagagcactt gggaaagagg aagtcttttc gcctgctcag tgggtccacga gggctctgcac 780
aatcacctta cgactaagac catctcccgg tctctgggta aa 822

<210> 47
<211> 271
<212> PRT
<213> Artificial

<220>
<223> Synthetic

<400> 47

Gly Cys Pro Gln Gly Arg Gly Asp Trp Ala Pro Thr Ser Cys Ser Gln
1 5 10 15

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

Gly Glu Pro Arg Val Pro Ile Thr Gln Asn Pro Cys Pro Pro Leu Lys
35 40 45

Glu Cys Pro Pro Cys Ala Ala Pro Asp Leu Leu Gly Gly Pro Ser Val
50 55 60

Phe Ile Phe Pro Pro Lys Ile Lys Asp Val Leu Met Ile Ser Leu Ser
65 70 75 80

Pro Met Val Thr Cys Val Val Val Asp Val Ser Glu Asp Asp Pro Asp
85 90 95

Val Gln Ile Ser Trp Phe Val Asn Asn Val Glu Val His Thr Ala Gln
100 105 110

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

Ala Leu Pro Ile Gln His Gln Asp Trp Met Ser Gly Lys Glu Phe Lys

130

135

140

Cys Lys Val Asn Asn Arg Ala Leu Pro Ser Pro Ile Glu Lys Thr Ile
 145 150 155 160

Ser Lys Pro Arg Gly Pro Val Arg Ala Pro Gln Val Tyr Val Leu Pro
 165 170 175

Pro Pro Ala Glu Glu Met Thr Lys Lys Glu Phe Ser Leu Thr Cys Met
 180 185 190

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

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

Asp Gly Ser Tyr Phe Met Tyr Ser Lys Leu Arg Val Gln Lys Ser Thr
 225 230 235 240

Trp Glu Arg Gly Ser Leu Phe Ala Cys Ser Val Val His Glu Gly Leu
 245 250 255

His Asn His Leu Thr Thr Lys Thr Ile Ser Arg Ser Leu Gly Lys
 260 265 270

<210> 48
 <211> 265
 <212> PRT
 <213> Artificial

<220>
 <223> Synthetic

<400> 48

Gly Cys Pro Arg Pro Arg Gly Asp Asn Pro Pro Leu Thr Cys Ser Gln
 1 5 10 15

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

Gly Glu Pro Lys Ser Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro

35

40

45

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

Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val
 65 70 75 80

Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr
 85 90 95

Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu
 100 105 110

Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His
 115 120 125

Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys
 130 135 140

Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln
 145 150 155 160

Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met
 165 170 175

Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro
 180 185 190

Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn
 195 200 205

Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu
 210 215 220

Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val
 225 230 235 240

Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln
 245 250 255

Lys Ser Leu Ser Leu Ser Pro Gly Lys
260 265

<210> 49
<211> 260
<212> PRT
<213> Artificial

<220>
<223> Synthetic

<400> 49

Gly Cys Pro Arg Pro Arg Gly Asp Asn Pro Pro Leu Thr Cys Ser Gln
1 5 10 15

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

Gly Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu
35 40 45

Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu
50 55 60

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

His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu
85 90 95

Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr
100 105 110

Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn
115 120 125

Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro
130 135 140

Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln
145 150 155 160

Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val
165 170 175

Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val
180 185 190

Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro
195 200 205

Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr
210 215 220

Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val
225 230 235 240

Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu
245 250 255

Ser Pro Gly Lys
260

<210> 50
<211> 265
<212> PRT
<213> Artificial

<220>
<223> Synthetic

<400> 50

Gly Cys Pro Gln Gly Arg Gly Asp Trp Ala Pro Thr Ser Cys Ser Gln
1 5 10 15

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

Gly Glu Pro Lys Ser Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro
35 40 45

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

Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val
65 70 75 80

Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr
85 90 95

Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu
100 105 110

Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His
115 120 125

Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys
130 135 140

Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln
145 150 155 160

Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met
165 170 175

Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro
180 185 190

Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn
195 200 205

Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu
210 215 220

Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val
225 230 235 240

Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln
245 250 255

Lys Ser Leu Ser Leu Ser Pro Gly Lys
260 265

<211> 260
<212> PRT
<213> Artificial

<220>
<223> Synthetic

<400> 51

Gly Cys Pro Gln Gly Arg Gly Asp Trp Ala Pro Thr Ser Cys Ser Gln
1 5 10 15

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

Gly Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu
35 40 45

Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu
50 55 60

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

His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu
85 90 95

Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr
100 105 110

Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn
115 120 125

Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro
130 135 140

Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln
145 150 155 160

Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val
165 170 175

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

180

185

190

Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro
 195 200 205

Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr
 210 215 220

Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val
 225 230 235 240

Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu
 245 250 255

Ser Pro Gly Lys
 260

<210> 52
 <400> 52
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<210> 53
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<210> 56
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<210> 57
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<210> 58
 <400> 58
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<210> 59
 <211> 33
 <212> PRT

<213> Artificial

<220>

<223> Synthetic

<400> 59

Gly Cys Ala Glu Pro Arg Gly Asp Met Pro Trp Thr Trp Cys Lys Gln
1 5 10 15

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

Gly

<210> 60

<211> 33

<212> PRT

<213> Artificial

<220>

<223> Synthetic

<400> 60

Gly Cys Val Gly Gly Arg Gly Asp Trp Ser Pro Lys Trp Cys Lys Gln
1 5 10 15

Asp Ser Asp Cys Pro Ala Gly Cys Val Cys Gly Pro Asn Gly Phe Cys
20 25 30

Gly

<210> 61

<211> 33

<212> PRT

<213> Artificial

<220>

<223> Synthetic

<400> 61

Gly Cys Ala Glu Leu Arg Gly Asp Arg Ser Tyr Pro Glu Cys Lys Gln
1 5 10 15

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

Gly

<210> 62
<211> 33
<212> PRT
<213> Artificial

<220>
<223> Synthetic

<400> 62

Gly Cys Arg Leu Pro Arg Gly Asp Val Pro Arg Pro His Cys Lys Gln
1 5 10 15

Asp Ser Asp Cys Gln Ala Gly Cys Val Cys Gly Pro Asn Gly Phe Cys
20 25 30

Gly

<210> 63
<211> 33
<212> PRT
<213> Artificial

<220>
<223> Synthetic

<400> 63

Gly Cys Tyr Pro Leu Arg Gly Asp Asn Pro Tyr Ala Ala Cys Lys Gln
1 5 10 15

Asp Ser Asp Cys Arg Ala Gly Cys Val Cys Gly Pro Asn Gly Phe Cys
20 25 30

Gly

<210> 64

<211> 33
<212> PRT
<213> Artificial

<220>
<223> Synthetic

<400> 64

Gly Cys Thr Ile Gly Arg Gly Asp Trp Ala Pro Ser Glu Cys Lys Gln
1 5 10 15

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

Gly

<210> 65
<211> 33
<212> PRT
<213> Artificial

<220>
<223> Synthetic

<400> 65

Gly Cys His Pro Pro Arg Gly Asp Asn Pro Pro Val Thr Cys Lys Gln
1 5 10 15

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

Gly

<210> 66
<211> 33
<212> PRT
<213> Artificial

<220>
<223> Synthetic

<400> 66

Gly Cys Pro Glu Pro Arg Gly Asp Asn Pro Pro Pro Ser Cys Lys Gln

1	5	10	15
Asp Ser Asp Cys Arg Ala Gly Cys Val Cys Gly Pro Asn Gly Phe Cys	20	25	30

Gly

<210> 67
 <211> 33
 <212> PRT
 <213> Artificial

<220>
 <223> Synthetic

<400> 67

Gly Cys Leu Pro Pro Arg Gly Asp Asn Pro Pro Pro Ser Cys Lys Gln	5	10	15
1			

Asp Ser Asp Cys Gln Ala Gly Cys Val Cys Gly Pro Asn Gly Phe Cys	20	25	30
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Gly

<210> 68
 <211> 33
 <212> PRT
 <213> Artificial

<220>
 <223> Synthetic

<400> 68

Gly Cys His Leu Gly Arg Gly Asp Trp Ala Pro Val Gly Cys Lys Gln	5	10	15
1			

Asp Ser Asp Cys Pro Ala Gly Cys Val Cys Gly Pro Asn Gly Phe Cys	20	25	30
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Gly

<210> 69
<211> 33
<212> PRT
<213> Artificial

<220>
<223> Synthetic

<400> 69

Gly	Cys	Asn	Val	Gly	Arg	Gly	Asp	Trp	Ala	Pro	Ser	Glu	Cys	Lys	Gln
1				5					10					15	

Asp	Ser	Asp	Cys	Pro	Ala	Gly	Cys	Val	Cys	Gly	Pro	Asn	Gly	Phe	Cys
			20					25					30		

Gly

<210> 70
<211> 33
<212> PRT
<213> Artificial

<220>
<223> Synthetic

<400> 70

Gly	Cys	Phe	Pro	Gly	Arg	Gly	Asp	Trp	Ala	Pro	Ser	Ser	Cys	Lys	Gln
1				5					10					15	

Asp	Ser	Asp	Cys	Arg	Ala	Gly	Cys	Val	Cys	Gly	Pro	Asn	Gly	Phe	Cys
			20					25					30		

Gly

<210> 71
<211> 33
<212> PRT
<213> Artificial

<220>
<223> Synthetic

<400> 71

Gly Cys Pro Leu Pro Arg Gly Asp Asn Pro Pro Thr Glu Cys Lys Gln
1 5 10 15

Asp Ser Asp Cys Gln Ala Gly Cys Val Cys Gly Pro Asn Gly Phe Cys
20 25 30

Gly

<210> 72
<211> 33
<212> PRT
<213> Artificial

<220>
<223> Synthetic

<400> 72

Gly Cys Ser Glu Ala Arg Gly Asp Asn Pro Arg Leu Ser Cys Lys Gln
1 5 10 15

Asp Ser Asp Cys Arg Ala Gly Cys Val Cys Gly Pro Asn Gly Phe Cys
20 25 30

Gly

<210> 73
<211> 32
<212> PRT
<213> Artificial

<220>
<223> Synthetic

<400> 73

Gly Cys Leu Leu Gly Arg Gly Asp Trp Ala Pro Glu Ala Cys Lys Gln
1 5 10 15

Asp Ser Asp Cys Arg Ala Gly Cys Val Cys Pro Asn Gly Phe Cys Gly
20 25 30

<210> 74

<211> 33
<212> PRT
<213> Artificial

<220>
<223> Synthetic

<400> 74

Gly Cys His Val Gly Arg Gly Asp Trp Ala Pro Leu Lys Cys Lys Gln
1 5 10 15

Asp Ser Asp Cys Gln Ala Gly Cys Val Cys Gly Pro Asn Gly Phe Cys
20 25 30

Gly

<210> 75
<211> 33
<212> PRT
<213> Artificial

<220>
<223> Synthetic

<400> 75

Gly Cys Val Arg Gly Arg Gly Asp Trp Ala Pro Pro Ser Cys Lys Gln
1 5 10 15

Asp Ser Asp Cys Pro Ala Gly Cys Val Cys Gly Pro Asn Gly Phe Cys
20 25 30

Gly

<210> 76
<211> 33
<212> PRT
<213> Artificial

<220>
<223> Synthetic

<400> 76

Gly Cys Leu Gly Gly Arg Gly Asp Trp Ala Pro Pro Ala Cys Lys Gln

1 5 10 15

Asp Ser Asp Cys Arg Ala Gly Cys Val Cys Gly Pro Asn Gly Phe Cys
20 25 30

Gly

<210> 77
<211> 33
<212> PRT
<213> Artificial

<220>
<223> Synthetic

<400> 77

Gly Cys Phe Val Gly Arg Gly Asp Trp Ala Pro Leu Thr Cys Lys Gln
1 5 10 15

Asp Ser Asp Cys Gln Ala Gly Cys Val Cys Gly Pro Asn Gly Phe Cys
20 25 30

Gly

<210> 78
<211> 33
<212> PRT
<213> Artificial

<220>
<223> Synthetic

<400> 78

Gly Cys Pro Val Gly Arg Gly Asp Trp Ser Pro Ala Ser Cys Lys Gln
1 5 10 15

Asp Ser Asp Cys Arg Ala Gly Cys Val Cys Gly Pro Asn Gly Phe Cys
20 25 30

Gly

<210> 79
<211> 33
<212> PRT
<213> Artificial

<220>
<223> Synthetic

<400> 79

Gly Cys Pro Arg Pro Arg Gly Asp Asn Pro Pro Leu Thr Cys Lys Gln
1 5 10 15

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

Gly

<210> 80
<211> 33
<212> PRT
<213> Artificial

<220>
<223> Synthetic

<400> 80

Gly Cys Tyr Gln Gly Arg Gly Asp Trp Ser Pro Ser Ser Cys Lys Gln
1 5 10 15

Asp Ser Asp Cys Pro Ala Gly Cys Val Cys Gly Pro Asn Gly Phe Cys
20 25 30

Gly

<210> 81
<211> 33
<212> PRT
<213> Artificial

<220>
<223> Synthetic

<400> 81

Gly Cys Ala Pro Gly Arg Gly Asp Trp Ala Pro Ser Glu Cys Lys Gln
1 5 10 15

Asp Ser Asp Cys Gln Ala Gly Cys Val Cys Gly Pro Asn Gly Phe Cys
20 25 30

Gly

<210> 82
<211> 33
<212> PRT
<213> Artificial

<220>
<223> Synthetic

<400> 82

Gly Cys Val Gln Gly Arg Gly Asp Trp Ser Pro Pro Ser Cys Lys Gln
1 5 10 15

Asp Ser Asp Cys Pro Ala Gly Cys Val Cys Gly Pro Asn Gly Phe Cys
20 25 30

Gly

<210> 83
<211> 33
<212> PRT
<213> Artificial

<220>
<223> Synthetic

<400> 83

Gly Cys His Val Gly Arg Gly Asp Trp Ala Pro Glu Glu Cys Lys Gln
1 5 10 15

Asp Ser Asp Cys Gln Ala Gly Cys Val Cys Gly Pro Asn Gly Phe Cys
20 25 30

Gly

<210> 84
<211> 33
<212> PRT
<213> Artificial

<220>
<223> Synthetic

<400> 84

Gly Cys Asp Gly Gly Arg Gly Asp Trp Ala Pro Pro Ala Cys Lys Gln
1 5 10 15

Asp Ser Asp Cys Arg Ala Gly Cys Val Cys Gly Pro Asn Gly Phe Cys
20 25 30

Gly

<210> 85
<211> 33
<212> PRT
<213> Artificial

<220>
<223> Synthetic

<400> 85

Gly Cys Pro Gln Gly Arg Gly Asp Trp Ala Pro Thr Ser Cys Lys Gln
1 5 10 15

Asp Ser Asp Cys Arg Ala Gly Cys Val Cys Gly Pro Asn Gly Phe Cys
20 25 30

Gly

<210> 86
<211> 33
<212> PRT
<213> Artificial

<220>
<223> Synthetic

<400> 86

Gly Cys Pro Arg Pro Arg Gly Asp Asn Pro Pro Leu Thr Cys Lys Gln
1 5 10 15

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

Gly

<210> 87

<211> 33

<212> PRT

<213> Artificial

<220>

<223> Synthetic

<400> 87

Gly Cys Pro Gln Gly Arg Gly Asp Trp Ala Pro Thr Ser Cys Ser Gln
1 5 10 15

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

Gly

<210> 88

<211> 33

<212> PRT

<213> Artificial

<220>

<223> Synthetic

<400> 88

Gly Cys Pro Arg Pro Arg Gly Asp Asn Pro Pro Leu Thr Cys Ser Gln
1 5 10 15

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

Gly

<210> 89
<211> 33
<212> PRT
<213> Artificial

<220>
<223> Synthetic

<400> 89

Gly	Cys	Pro	Gln	Gly	Arg	Gly	Asp	Trp	Ala	Pro	Glu	Trp	Cys	Lys	Gln
1			5					10					15		

Asp	Ser	Asp	Cys	Pro	Ala	Gly	Cys	Val	Cys	Gly	Pro	Asn	Gly	Phe	Cys
			20					25					30		

Gly

<210> 90
<211> 33
<212> PRT
<213> Artificial

<220>
<223> Synthetic

<400> 90

Gly	Cys	Pro	Arg	Gly	Arg	Gly	Asp	Trp	Ser	Pro	Pro	Ala	Cys	Lys	Gln
1			5					10					15		

Asp	Ser	Asp	Cys	Gln	Ala	Gly	Cys	Val	Cys	Gly	Pro	Asn	Gly	Phe	Cys
			20					25					30		

Gly

<210> 91
<211> 38
<212> PRT
<213> Artificial

<220>

<223> Synthetic

<400> 91

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

Cys Asp Pro Ala Ala Thr Cys Tyr Cys Val Val Arg Gly Asp Trp Arg
20 25 30

Lys Arg Cys Tyr Cys Arg
35

<210> 92

<211> 38

<212> PRT

<213> Artificial

<220>

<223> Synthetic

<400> 92

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

Cys Asp Pro Ala Ala Thr Cys Tyr Cys Glu Glu Arg Gly Asp Met Leu
20 25 30

Glu Lys Cys Tyr Cys Arg
35

<210> 93

<211> 38

<212> PRT

<213> Artificial

<220>

<223> Synthetic

<400> 93

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

Cys Asp Pro Ala Ala Thr Cys Tyr Cys Glu Thr Arg Gly Asp Gly Lys

20

25

30

Glu Lys Cys Tyr Cys Arg
35

<210> 94
<211> 38
<212> PRT
<213> Artificial

<220>
<223> Synthetic

<400> 94

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

Cys Asp Pro Ala Ala Thr Cys Tyr Cys Gln Trp Arg Gly Asp Gly Asp
20 25 30

Val Lys Cys Tyr Cys Arg
35

<210> 95
<211> 38
<212> PRT
<213> Artificial

<220>
<223> Synthetic

<400> 95

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

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

Glu Arg Cys Tyr Cys Arg
35

<210> 96
<211> 38
<212> PRT

<213> Artificial

<220>

<223> Synthetic

<400> 96

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

Cys Asp Pro Ala Ala Thr Cys Tyr Cys Gln Tyr Arg Gly Asp Gly Met
20 25 30

Lys His Cys Tyr Cys Arg
35

<210> 97

<211> 38

<212> PRT

<213> Artificial

<220>

<223> Synthetic

<400> 97

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

Cys Asp Pro Ala Ala Thr Cys Tyr Cys Thr Gly Arg Gly Asp Thr Lys
20 25 30

Val Leu Cys Tyr Cys Arg
35

<210> 98

<211> 38

<212> PRT

<213> Artificial

<220>

<223> Synthetic

<400> 98

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

Cys Asp Pro Ala Ala Thr Cys Tyr Cys Val Glu Arg Gly Asp Met Lys
20 25 30

Arg Arg Cys Tyr Cys Arg
35

<210> 99
<211> 38
<212> PRT
<213> Artificial

<220>
<223> Synthetic

<400> 99

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

Cys Asp Pro Ala Ala Thr Cys Tyr Cys Thr Gly Arg Gly Asp Val Arg
20 25 30

Met Asn Cys Tyr Cys Arg
35

<210> 100
<211> 38
<212> PRT
<213> Artificial

<220>
<223> Synthetic

<400> 100

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

Cys Asp Pro Ala Ala Thr Cys Tyr Cys Val Glu Arg Gly Asp Gly Met
20 25 30

Ser Lys Cys Tyr Cys Arg
35

<210> 101

<211> 38
<212> PRT
<213> Artificial

<220>
<223> Synthetic

<400> 101

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

Cys Asp Pro Ala Ala Thr Cys Tyr Cys Arg Gly Arg Gly Asp Met Arg
20 25 30

Arg Glu Cys Tyr Cys Arg
35

<210> 102
<211> 38
<212> PRT
<213> Artificial

<220>
<223> Synthetic

<400> 102

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

Cys Asp Pro Ala Ala Thr Cys Tyr Cys Glu Gly Arg Gly Asp Val Lys
20 25 30

Val Asn Cys Tyr Cys Arg
35

<210> 103
<211> 38
<212> PRT
<213> Artificial

<220>
<223> Synthetic

<400> 103

Gly Cys Val Arg Leu His Glu Ser Cys Leu Gly Gln Gln Val Pro Cys

1 5 10 15

Cys Asp Pro Ala Ala Thr Cys Tyr Cys Val Gly Arg Gly Asp Glu Lys
 20 25 30

Met Ser Cys Tyr Cys Arg
 35

<210> 104
<211> 38
<212> PRT
<213> Artificial

<220>
<223> Synthetic

<400> 104

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

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

Lys Arg Cys Tyr Cys Arg
 35

<210> 105
<211> 38
<212> PRT
<213> Artificial

<220>
<223> Synthetic

<400> 105

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

Cys Asp Pro Ala Ala Thr Cys Tyr Cys Glu Arg Arg Gly Asp Ser Val
 20 25 30

Lys Lys Cys Tyr Cys Arg
 35

<210> 106
<211> 38
<212> PRT
<213> Artificial

<220>
<223> Synthetic

<400> 106

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

Cys	Asp	Pro	Ala	Ala	Thr	Cys	Tyr	Cys	Glu	Gly	Arg	Gly	Asp	Thr	Arg
			20					25					30		

Arg	Arg	Cys	Tyr	Cys	Arg
		35			

<210> 107
<211> 38
<212> PRT
<213> Artificial

<220>
<223> Synthetic

<400> 107

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

Cys	Asp	Pro	Ala	Ala	Thr	Cys	Tyr	Cys	Glu	Gly	Arg	Gly	Asp	Val	Val
			20					25					30		

Arg	Arg	Cys	Tyr	Cys	Arg
		35			

<210> 108
<211> 38
<212> PRT
<213> Artificial

<220>
<223> Synthetic

<400> 108

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

Cys Asp Pro Ala Ala Thr Cys Tyr Cys Lys Gly Arg Gly Asp Asn Lys
20 25 30

Arg Lys Cys Tyr Cys Arg
35

<210> 109
<211> 38
<212> PRT
<213> Artificial

<220>
<223> Synthetic

<220>
<221> misc_feature
<222> (21)..(21)
<223> Xaa can be any naturally occurring amino acid

<400> 109

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

Cys Asp Pro Ala Xaa Thr Cys Tyr Cys Lys Gly Arg Gly Asp Val Arg
20 25 30

Arg Val Cys Tyr Cys Arg
35

<210> 110
<211> 38
<212> PRT
<213> Artificial

<220>
<223> Synthetic

<400> 110

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

Cys Asp Pro Ala Ala Thr Cys Tyr Cys Val Gly Arg Gly Asp Asn Lys
20 25 30

Val Lys Cys Tyr Cys Arg
35

<210> 111
<211> 38
<212> PRT
<213> Artificial

<220>
<223> Synthetic

<400> 111

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

Cys Asp Pro Ala Ala Thr Cys Tyr Cys Val Gly Arg Gly Asp Asn Arg
20 25 30

Leu Lys Cys Tyr Cys Arg
35

<210> 112
<211> 38
<212> PRT
<213> Artificial

<220>
<223> Synthetic

<400> 112

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

Cys Asp Pro Ala Ala Thr Cys Tyr Cys Val Glu Arg Gly Asp Gly Met
20 25 30

Lys Lys Cys Tyr Cys Arg
35

<210> 113

<211> 38
<212> PRT
<213> Artificial

<220>
<223> Synthetic

<400> 113

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

Cys Asp Pro Ala Ala Thr Cys Tyr Cys Glu Gly Arg Gly Asp Met Arg
20 25 30

Arg Arg Cys Tyr Cys Arg
35

<210> 114
<211> 38
<212> PRT
<213> Artificial

<220>
<223> Synthetic

<400> 114

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

Cys Asp Pro Ala Ala Thr Cys Tyr Cys Gln Gly Arg Gly Asp Gly Asp
20 25 30

Val Lys Cys Tyr Cys Arg
35

<210> 115
<211> 38
<212> PRT
<213> Artificial

<220>
<223> Synthetic

<400> 115

Gly Cys Val Arg Leu His Glu Ser Cys Leu Gly Gln Gln Val Pro Cys

1 5 10 15

Cys Asp Pro Ala Ala Thr Cys Tyr Cys Ser Gly Arg Gly Asp Asn Asp
 20 25 30

Leu Val Cys Tyr Cys Arg
 35

<210> 116
<211> 38
<212> PRT
<213> Artificial

<220>
<223> Synthetic

<400> 116

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

Cys Asp Pro Ala Ala Thr Cys Tyr Cys Val Glu Arg Gly Asp Gly Met
 20 25 30

Ile Arg Cys Tyr Cys Arg
 35

<210> 117
<211> 38
<212> PRT
<213> Artificial

<220>
<223> Synthetic

<400> 117

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

Cys Asp Pro Ala Ala Thr Cys Tyr Cys Ser Gly Arg Gly Asp Asn Asp
 20 25 30

Leu Val Cys Tyr Cys Arg
 35

<210> 118
<211> 38
<212> PRT
<213> Artificial

<220>
<223> Synthetic

<400> 118

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

Cys Asp Pro Ala Ala Thr Cys Tyr Cys Glu Gly Arg Gly Asp Met Lys
20 25 30

Met Lys Cys Tyr Cys Arg
35

<210> 119
<211> 38
<212> PRT
<213> Artificial

<220>
<223> Synthetic

<400> 119

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

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

Arg Arg Cys Tyr Cys Arg
35

<210> 120
<211> 38
<212> PRT
<213> Artificial

<220>
<223> Synthetic

<400> 120

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

Cys Asp Pro Ala Ala Thr Cys Tyr Cys Glu Glu Arg Gly Asp Gly Arg
20 25 30

Lys Lys Cys Tyr Cys Arg
35

<210> 121
<211> 38
<212> PRT
<213> Artificial

<220>
<223> Synthetic

<400> 121

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

Cys Asp Pro Ala Ala Thr Cys Tyr Cys Glu Gly Arg Gly Asp Arg Asp
20 25 30

Met Lys Cys Tyr Cys Arg
35

<210> 122
<211> 38
<212> PRT
<213> Artificial

<220>
<223> Synthetic

<400> 122

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

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

Leu Arg Cys Tyr Cys Arg

35

<210> 123
<211> 38
<212> PRT
<213> Artificial

<220>
<223> Synthetic

<400> 123

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

Cys	Asp	Pro	Ala	Ala	Thr	Cys	Tyr	Cys	Val	Glu	Arg	Gly	Asp	Gly	Asn
			20					25					30		

Arg	Arg	Cys	Tyr	Cys	Arg
					35

<210> 124
<211> 38
<212> PRT
<213> Artificial

<220>
<223> Synthetic

<400> 124

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

Cys	Asp	Pro	Ala	Ala	Thr	Cys	Tyr	Cys	Glu	Ser	Arg	Gly	Asp	Val	Val
			20					25					30		

Arg	Lys	Cys	Tyr	Cys	Arg
					35

<210> 125
<211> 38
<212> PRT
<213> Artificial

<220>
<223> Synthetic

<400> 125

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

Cys Asp Pro Ala Ala Thr Cys Tyr Cys Tyr Gly Arg Gly Asp Asn Asp
20 25 30

Leu Arg Cys Tyr Cys Arg
35

<210> 126

<211> 330

<212> PRT

<213> Artificial

<220>

<223> Synthetic

<400> 126

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

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

Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser
35 40 45

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

Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Gln Thr
65 70 75 80

Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn Thr Lys Val Asp Lys
85 90 95

Lys Val Glu Pro Lys Ser Cys Asp Lys Thr His Thr Cys Pro Pro Cys
100 105 110

Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro

115

120

125

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
 130 135 140

Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp
 145 150 155 160

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
 165 170 175

Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
 180 185 190

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
 195 200 205

Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
 210 215 220

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

Leu Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
 245 250 255

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
 260 265 270

Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
 275 280 285

Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn
 290 295 300

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
 305 310 315 320

Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys
 325 330

<210> 127
<211> 326
<212> PRT
<213> Artificial

<220>
<223> Synthetic

<400> 127

Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Cys Ser Arg
1 5 10 15

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

Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser
35 40 45

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

Leu Ser Ser Val Val Thr Val Pro Ser Ser Asn Phe Gly Thr Gln Thr
65 70 75 80

Tyr Thr Cys Asn Val Asp His Lys Pro Ser Asn Thr Lys Val Asp Lys
85 90 95

Thr Val Glu Arg Lys Cys Cys Val Glu Cys Pro Pro Cys Pro Ala Pro
100 105 110

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

Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp
130 135 140

Val Ser His Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly
145 150 155 160

Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn
165 170 175

Ser Thr Phe Arg Val Val Ser Val Leu Thr Val Val His Gln Asp Trp
180 185 190

Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro
195 200 205

Ala Pro Ile Glu Lys Thr Ile Ser Lys Thr Lys Gly Gln Pro Arg Glu
210 215 220

Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn
225 230 235 240

Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile
245 250 255

Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr
260 265 270

Thr Pro Pro Met Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys
275 280 285

Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys
290 295 300

Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu
305 310 315 320

Ser Leu Ser Pro Gly Lys
325

<210> 128
<211> 377
<212> PRT
<213> Artificial

<220>
<223> Synthetic

<400> 128

Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Cys Ser Arg
1 5 10 15

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

Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser
35 40 45

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

Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Gln Thr
65 70 75 80

Tyr Thr Cys Asn Val Asn His Lys Pro Ser Asn Thr Lys Val Asp Lys
85 90 95

Arg Val Glu Leu Lys Thr Pro Leu Gly Asp Thr Thr His Thr Cys Pro
100 105 110

Arg Cys Pro Glu Pro Lys Ser Cys Asp Thr Pro Pro Pro Cys Pro Arg
115 120 125

Cys Pro Glu Pro Lys Ser Cys Asp Thr Pro Pro Pro Cys Pro Arg Cys
130 135 140

Pro Glu Pro Lys Ser Cys Asp Thr Pro Pro Pro Cys Pro Arg Cys Pro
145 150 155 160

Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys
165 170 175

Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val
180 185 190

Val Val Asp Val Ser His Glu Asp Pro Glu Val Gln Phe Lys Trp Tyr
195 200 205

Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu
210 215 220

Gln Tyr Asn Ser Thr Phe Arg Val Val Ser Val Leu Thr Val Leu His

225		230		235		240									
Gln	Asp	Trp	Leu	Asn	Gly	Lys	Glu	Tyr	Lys	Cys	Lys	Val	Ser	Asn	Lys
			245						250					255	
Ala	Leu	Pro	Ala	Pro	Ile	Glu	Lys	Thr	Ile	Ser	Lys	Thr	Lys	Gly	Gln
			260					265					270		
Pro	Arg	Glu	Pro	Gln	Val	Tyr	Thr	Leu	Pro	Pro	Ser	Arg	Glu	Glu	Met
		275					280					285			
Thr	Lys	Asn	Gln	Val	Ser	Leu	Thr	Cys	Leu	Val	Lys	Gly	Phe	Tyr	Pro
	290					295					300				
Ser	Asp	Ile	Ala	Val	Glu	Trp	Glu	Ser	Ser	Gly	Gln	Pro	Glu	Asn	Asn
305					310					315					320
Tyr	Asn	Thr	Thr	Pro	Pro	Met	Leu	Asp	Ser	Asp	Gly	Ser	Phe	Phe	Leu
				325					330					335	
Tyr	Ser	Lys	Leu	Thr	Val	Asp	Lys	Ser	Arg	Trp	Gln	Gln	Gly	Asn	Ile
			340					345					350		
Phe	Ser	Cys	Ser	Val	Met	His	Glu	Ala	Leu	His	Asn	Arg	Phe	Thr	Gln
		355					360					365			
Lys	Ser	Leu	Ser	Leu	Ser	Pro	Gly	Lys							
	370					375									

<210> 129
 <211> 327
 <212> PRT
 <213> Artificial

<220>
 <223> Synthetic

<400> 129

Ala	Ser	Thr	Lys	Gly	Pro	Ser	Val	Phe	Pro	Leu	Ala	Pro	Cys	Ser	Arg
1				5					10					15	

Ser Thr Ser Glu Ser Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr

20

25

30

Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser
 35 40 45

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

Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Lys Thr
 65 70 75 80

Tyr Thr Cys Asn Val Asp His Lys Pro Ser Asn Thr Lys Val Asp Lys
 85 90 95

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

Glu Phe Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys
 115 120 125

Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val
 130 135 140

Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp
 145 150 155 160

Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe
 165 170 175

Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp
 180 185 190

Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu
 195 200 205

Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg
 210 215 220

Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys
 225 230 235 240

Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp
245 250 255

Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys
260 265 270

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

Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser
290 295 300

Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser
305 310 315 320

Leu Ser Leu Ser Leu Gly Lys
325

<210> 130
<211> 33
<212> PRT
<213> Artificial

<220>
<223> Synthetic

<400> 130

Gly Cys Pro Arg Pro Arg Gly Asp Asn Pro Pro Leu Thr Cys Ser Gln
1 5 10 15

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

Gly

<210> 131
<211> 33
<212> PRT
<213> Artificial

<220>
<223> Synthetic

<400> 131

Gly Cys Pro Arg Pro Arg Gly Asp Asn Pro Pro Leu Thr Cys Lys Gln
1 5 10 15

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

Gly

<210> 132

<211> 38

<212> PRT

<213> Artificial

<220>

<223> Synthetic

<400> 132

Gly Cys Pro Arg Pro Arg Gly Asp Asn Pro Pro Leu Thr Cys Ser Gln
1 5 10 15

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

Gly Gly Gly Gly Gly Ser
35

<210> 133

<211> 38

<212> PRT

<213> Artificial

<220>

<223> Synthetic

<400> 133

Gly Cys Pro Arg Pro Arg Gly Asp Asn Pro Pro Leu Thr Cys Lys Gln
1 5 10 15

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

Gly Gly Gly Gly Gly Ser
35

<210> 134
<211> 48
<212> PRT
<213> Artificial

<220>
<223> Synthetic

<400> 134

Gly Cys Pro Arg Pro Arg Gly Asp Asn Pro Pro Leu Thr Cys Ser Gln
1 5 10 15

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

Gly Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
35 40 45

<210> 135
<211> 48
<212> PRT
<213> Artificial

<220>
<223> Synthetic

<400> 135

Gly Cys Pro Arg Pro Arg Gly Asp Asn Pro Pro Leu Thr Cys Lys Gln
1 5 10 15

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

Gly Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
35 40 45

<210> 136
<211> 5
<212> PRT
<213> Artificial

<220>

<223> Synthetic

<400> 136

Gly Gly Gly Gly Ser
1 5

<210> 137

<211> 15

<212> PRT

<213> Artificial

<220>

<223> Synthetic

<400> 137

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

<210> 138

<211> 18

<212> PRT

<213> Artificial

<220>

<223> Synthetic

<400> 138

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

Ser Arg

<210> 139

<211> 264

<212> PRT

<213> Artificial

<220>

<223> Synthetic

<400> 139

Gly Cys Pro Arg Pro Arg Gly Asp Asn Pro Pro Leu Thr Cys Ser Gln
1 5 10 15

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

Gly Glu Pro Lys Ser Ser Asp Lys Thr His Thr Cys Pro Pro Cys Pro
35 40 45

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

Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val
65 70 75 80

Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr
85 90 95

Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu
100 105 110

Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His
115 120 125

Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys
130 135 140

Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln
145 150 155 160

Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Asp Glu Leu
165 170 175

Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro
180 185 190

Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn
195 200 205

Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu
210 215 220

Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val

225					230					235					240	
Phe	Ser	Cys	Ser	Val	Met	His	Glu	Ala	Leu	His	Asn	His	Tyr	Thr	Gln	
				245					250					255		
Lys	Ser	Leu	Ser	Leu	Ser	Pro	Gly									
				260												
<210>	140															
<211>	264															
<212>	PRT															
<213>	Artificial															
<220>																
<223>	Synthetic															
<400>	140															
Gly	Cys	Val	Thr	Gly	Arg	Asp	Gly	Ser	Pro	Ala	Ser	Ser	Cys	Ser	Gln	
1				5					10					15		
Asp	Ser	Asp	Cys	Leu	Ala	Gly	Cys	Val	Cys	Gly	Pro	Asn	Gly	Phe	Cys	
			20					25					30			
Gly	Glu	Pro	Lys	Ser	Ser	Asp	Lys	Thr	His	Thr	Cys	Pro	Pro	Cys	Pro	
		35					40					45				
Ala	Pro	Glu	Leu	Leu	Gly	Gly	Pro	Ser	Val	Phe	Leu	Phe	Pro	Pro	Lys	
		50					55					60				
Pro	Lys	Asp	Thr	Leu	Met	Ile	Ser	Arg	Thr	Pro	Glu	Val	Thr	Cys	Val	
65					70					75					80	
Val	Val	Asp	Val	Ser	His	Glu	Asp	Pro	Glu	Val	Lys	Phe	Asn	Trp	Tyr	
				85					90					95		
Val	Asp	Gly	Val	Glu	Val	His	Asn	Ala	Lys	Thr	Lys	Pro	Arg	Glu	Glu	
			100					105					110			
Gln	Tyr	Asn	Ser	Thr	Tyr	Arg	Val	Val	Ser	Val	Leu	Thr	Val	Leu	His	
		115					120					125				
Gln	Asp	Trp	Leu	Asn	Gly	Lys	Glu	Tyr	Lys	Cys	Lys	Val	Ser	Asn	Lys	

130

135

140

Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln
 145 150 155 160

Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Asp Glu Leu
 165 170 175

Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro
 180 185 190

Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn
 195 200 205

Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu
 210 215 220

Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val
 225 230 235 240

Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln
 245 250 255

Lys Ser Leu Ser Leu Ser Pro Gly
 260

<210> 141
 <211> 270
 <212> PRT
 <213> Artificial

<220>
 <223> Synthetic

<400> 141

Gly Cys Pro Arg Pro Arg Gly Asp Asn Pro Pro Leu Thr Cys Ser Gln
 1 5 10 15

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

Gly Glu Pro Arg Val Pro Ile Thr Gln Asn Pro Cys Pro Pro Leu Lys

35

40

45

Glu Cys Pro Pro Cys Ala Ala Pro Asp Leu Leu Gly Gly Pro Ser Val
 50 55 60

Phe Ile Phe Pro Pro Lys Ile Lys Asp Val Leu Met Ile Ser Leu Ser
 65 70 75 80

Pro Met Val Thr Cys Val Val Val Asp Val Ser Glu Asp Asp Pro Asp
 85 90 95

Val Gln Ile Ser Trp Phe Val Asn Asn Val Glu Val His Thr Ala Gln
 100 105 110

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

Ala Leu Pro Ile Gln His Gln Asp Trp Met Ser Gly Lys Glu Phe Lys
 130 135 140

Cys Lys Val Asn Asn Arg Ala Leu Pro Ser Pro Ile Glu Lys Thr Ile
 145 150 155 160

Ser Lys Pro Arg Gly Pro Val Arg Ala Pro Gln Val Tyr Val Leu Pro
 165 170 175

Pro Pro Ala Glu Glu Met Thr Lys Lys Glu Phe Ser Leu Thr Cys Met
 180 185 190

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

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

Asp Gly Ser Tyr Phe Met Tyr Ser Lys Leu Arg Val Gln Lys Ser Thr
 225 230 235 240

Trp Glu Arg Gly Ser Leu Phe Ala Cys Ser Val Val His Glu Gly Leu
 245 250 255

His Asn His Leu Thr Thr Lys Thr Ile Ser Arg Ser Leu Gly
260 265 270

<210> 142
<211> 269
<212> PRT
<213> Artificial

<220>
<223> Synthetic

<400> 142

Gly Cys Pro Arg Pro Arg Gly Asp Asn Pro Pro Leu Thr Cys Ser Gln
1 5 10 15

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

Gly Gly Gly Gly Gly Ser Glu Pro Lys Ser Ser Asp Lys Thr His Thr
35 40 45

Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe
50 55 60

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

Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val
85 90 95

Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr
100 105 110

Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val
115 120 125

Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys
130 135 140

Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser
145 150 155 160

Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro
165 170 175

Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val
180 185 190

Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly
195 200 205

Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp
210 215 220

Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp
225 230 235 240

Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His
245 250 255

Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly
260 265

<210> 143
<211> 279
<212> PRT
<213> Artificial

<220>
<223> Synthetic

<400> 143

Gly Cys Pro Arg Pro Arg Gly Asp Asn Pro Pro Leu Thr Cys Ser Gln
1 5 10 15

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

Gly Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
35 40 45

Glu Pro Lys Ser Ser Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala
50 55 60

Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro
65 70 75 80

Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val
85 90 95

Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val
100 105 110

Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln
115 120 125

Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln
130 135 140

Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala
145 150 155 160

Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro
165 170 175

Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr
180 185 190

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

Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr
210 215 220

Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr
225 230 235 240

Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe
245 250 255

Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys
260 265 270

Ser Leu Ser Leu Ser Pro Gly

