

SEQUENCE LISTING

<110> Eli Lilly and Company

<120> Relaxin-LA

<130> X22483

<160> 67

<170> PatentIn version 3.5

<210> 1

<211> 185

<212> PRT

<213> Homo sapiens

<400> 1

Met Pro Arg Leu Phe Leu Phe His Leu Leu Glu Phe Cys Leu Leu Leu
1 5 10 15

Asn Gln Phe Ser Arg Ala Val Ala Ala Lys Trp Lys Asp Asp Val Ile
20 25 30

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

Met Ser Thr Trp Ser Lys Arg Ser Leu Ser Gln Glu Asp Ala Pro Gln
50 55 60

Thr Pro Arg Pro Val Ala Glu Ile Val Pro Ser Phe Ile Asn Lys Asp
65 70 75 80

Thr Glu Thr Ile Ile Ile Met Leu Glu Phe Ile Ala Asn Leu Pro Pro
85 90 95

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

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

Phe Lys Lys Leu Ile Arg Asn Arg Gln Ser Glu Ala Ala Asp Ser Asn
130 135 140

Pro Ser Glu Leu Lys Tyr Leu Gly Leu Asp Thr His Ser Gln Lys Lys
145 150 155 160

Arg Arg Pro Tyr Val Ala Leu Phe Glu Lys Cys Cys Leu Ile Gly Cys
165 170 175

Thr Lys Arg Ser Leu Ala Lys Tyr Cys
180 185

<210> 2
<211> 23
<212> PRT
<213> Homo sapiens

<400> 2

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

Arg Ser Leu Ala Lys Tyr Cys
20

<210> 3
<211> 31
<212> PRT
<213> Homo sapiens

<400> 3

Val Ala Ala Lys Trp Lys Asp Asp Val Ile Lys Leu Cys Gly Arg Glu
1 5 10 15

Leu Val Arg Ala Gln Ile Ala Ile Cys Gly Met Ser Thr Trp Ser
20 25 30

<210> 4
<211> 185
<212> PRT
<213> Homo sapiens

<400> 4

Met Pro Arg Leu Phe Phe Phe His Leu Leu Gly Val Cys Leu Leu Leu
1 5 10 15

Asn Gln Phe Ser Arg Ala Val Ala Asp Ser Trp Met Glu Glu Val Ile
20 25 30

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

Met Ser Thr Trp Ser Lys Arg Ser Leu Ser Gln Glu Asp Ala Pro Gln
50 55 60

Thr Pro Arg Pro Val Ala Glu Ile Val Pro Ser Phe Ile Asn Lys Asp
65 70 75 80

Thr Glu Thr Ile Asn Met Met Ser Glu Phe Val Ala Asn Leu Pro Gln
85 90 95

Glu Leu Lys Leu Thr Leu Ser Glu Met Gln Pro Ala Leu Pro Gln Leu
100 105 110

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

Phe Lys Lys Leu Ile Arg Asn Arg Gln Ser Glu Ala Ala Asp Ser Ser
130 135 140

Pro Ser Glu Leu Lys Tyr Leu Gly Leu Asp Thr His Ser Arg Lys Lys
145 150 155 160

Arg Gln Leu Tyr Ser Ala Leu Ala Asn Lys Cys Cys His Val Gly Cys
165 170 175

Thr Lys Arg Ser Leu Ala Arg Phe Cys
180 185

<210> 5
<211> 24
<212> PRT
<213> Homo sapiens

<400> 5

Gln Leu Tyr Ser Ala Leu Ala Asn Lys Cys Cys His Val Gly Cys Thr
1 5 10 15

Lys Arg Ser Leu Ala Arg Phe Cys
20

<210> 6
<211> 29
<212> PRT
<213> Homo sapiens

<400> 6

Asp Ser Trp Met Glu Glu Val Ile Lys Leu Cys Gly Arg Glu Leu Val
1 5 10 15

Arg Ala Gln Ile Ala Ile Cys Gly Met Ser Thr Trp Ser
20 25

<210> 7
<211> 142
<212> PRT
<213> Homo sapiens

<400> 7

Met Ala Arg Tyr Met Leu Leu Leu Leu Leu Ala Val Trp Val Leu Thr
1 5 10 15

Gly Glu Leu Trp Pro Gly Ala Glu Ala Arg Ala Ala Pro Tyr Gly Val
20 25 30

Arg Leu Cys Gly Arg Glu Phe Ile Arg Ala Val Ile Phe Thr Cys Gly
35 40 45

Gly Ser Arg Trp Arg Arg Ser Asp Ile Leu Ala His Glu Ala Met Gly
50 55 60

Asp Thr Phe Pro Asp Ala Asp Ala Asp Glu Asp Ser Leu Ala Gly Glu
65 70 75 80

Leu Asp Glu Ala Met Gly Ser Ser Glu Trp Leu Ala Leu Thr Lys Ser
85 90 95

Pro Gln Ala Phe Tyr Arg Gly Arg Pro Ser Trp Gln Gly Thr Pro Gly
100 105 110

Val Leu Arg Gly Ser Arg Asp Val Leu Ala Gly Leu Ser Ser Ser Cys
115 120 125

Cys Lys Trp Gly Cys Ser Lys Ser Glu Ile Ser Ser Leu Cys
130 135 140

<210> 8
<211> 24
<212> PRT
<213> Homo sapiens

<400> 8

Asp Val Leu Ala Gly Leu Ser Ser Ser Cys Cys Lys Trp Gly Cys Ser
1 5 10 15

Lys Ser Glu Ile Ser Ser Leu Cys
20

<210> 9
<211> 27
<212> PRT
<213> Homo sapiens

<400> 9

Arg Ala Ala Pro Tyr Gly Val Arg Leu Cys Gly Arg Glu Phe Ile Arg
1 5 10 15

Ala Val Ile Phe Thr Cys Gly Gly Ser Arg Trp
20 25

<210> 10
<211> 126
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 10

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

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Arg Tyr Ile Asp Glu Thr

20

25

30

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

Ala Gly Ile Gly Gly Gly Val Asp Ile Thr Tyr Tyr Ala Asp 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 Pro Glu Asp Thr Ala Val Tyr Tyr Cys
 85 90 95

Ala Ala Arg Pro Gly Arg Pro Leu Ile Thr Ser Lys Val Ala Asp Leu
 100 105 110

Tyr Pro Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
 115 120 125

<210> 11

<211> 128

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic Construct

<400> 11

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

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

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

Ala Gly Ile Gly Gly Gly Val Asp Ile Thr Tyr Tyr Ala Asp 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	Pro	Glu	Asp	Thr	Ala	Val	Tyr	Tyr	Cys
			85					90					95		
Ala	Ala	Arg	Pro	Gly	Arg	Pro	Leu	Ile	Thr	Ser	Lys	Val	Ala	Asp	Leu
			100				105						110		
Tyr	Pro	Tyr	Trp	Gly	Gln	Gly	Thr	Leu	Val	Thr	Val	Ser	Ser	Pro	Pro
		115					120					125			
<210> 12															
<211> 126															
<212> PRT															
<213> Artificial Sequence															
<220>															
<223> Synthetic Construct															
<400> 12															
Glu	Val	Gln	Leu	Leu	Glu	Ser	Gly	Gly	Gly	Leu	Val	Gln	Pro	Gly	Gly
1			5					10					15		
Ser	Leu	Arg	Leu	Ser	Cys	Ala	Ala	Ser	Gly	Arg	Tyr	Ile	Asp	Glu	Thr
			20					25					30		
Ala	Val	Ala	Trp	Phe	Arg	Gln	Ala	Pro	Gly	Lys	Gly	Arg	Glu	Phe	Val
		35					40					45			
Ala	Gly	Ile	Gly	Gly	Gly	Val	Asp	Ile	Thr	Tyr	Tyr	Ala	Asp	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	Pro	Glu	Asp	Thr	Ala	Val	Tyr	Tyr	Cys
			85					90					95		
Ala	Ala	Arg	Pro	Gly	Arg	Pro	Leu	Ile	Thr	Ser	Lys	Val	Ala	Asp	Leu
			100				105						110		
Tyr	Pro	Tyr	Trp	Gly	Gln	Gly	Thr	Leu	Val	Thr	Val	Ser	Ser		

115

120

125

<210> 13
 <211> 128
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Construct

<400> 13

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

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

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

Ala Gly Ile Gly Gly Gly Val Asp Ile Thr Tyr Tyr Ala Asp 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 Pro Glu Asp Thr Ala Val Tyr Tyr Cys
 85 90 95

Ala Ala Arg Pro Gly Arg Pro Leu Ile Thr Ser Lys Val Ala Asp Leu
 100 105 110

Tyr Pro Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Pro Pro
 115 120 125

<210> 14
 <211> 5
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Construct

<400> 14

Gly Gly Gly Gly Gln
1 5

<210> 15
<211> 4
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 15

Gly Gly Gly Gln
1

<210> 16
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 16

Gly Gly Gly Gly Ser
1 5

<210> 17
<211> 4
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 17

Pro Gly Pro Gln
1

<210> 18
<211> 4
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 18

Pro Gly Pro Ala
1

<210> 19

<211> 25

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic Construct

<400> 19

Gly Gly Gly Gly Gln Gly Gly Gly Gly Gln Gly Gly Gly Gly Gln Gly
1 5 10 15

Gly Gly Gly Gln Gly Gly Gly Gly Gln
20 25

<210> 20

<211> 32

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic Construct

<400> 20

Pro Gly Pro Gln Pro Gly Pro Gln Pro Gly Pro Gln Pro Gly Pro Gln
1 5 10 15

Pro Gly Pro Gln Pro Gly Pro Gln Pro Gly Pro Gln Pro Gly Pro Gln
20 25 30

<210> 21

<211> 32

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic Construct

<400> 21

Pro Gly Pro Ala Pro Gly Pro Ala Pro Gly Pro Ala Pro Gly Pro Ala

1	5	10	15
Pro Gly	Pro Ala	Pro Gly	Pro Ala
	20	25	30

<210> 22
 <211> 10
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Construct

<400> 22

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

<210> 23
 <211> 13
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Construct

<400> 23

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

<210> 24
 <211> 213
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Construct

<400> 24

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

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

Ala Val Ala Trp Phe Arg Gln Ala Pro Gly Lys Glu Arg Glu Phe Val

35

40

45

Ala Gly Ile Gly Gly Gly Val Asp Ile Thr Tyr Tyr Ala Asp 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 Pro Glu Asp Thr Ala Val Tyr Tyr Cys
 85 90 95

Ala Ala Arg Pro Gly Arg Pro Leu Ile Thr Ser Lys Val Ala Asp Leu
 100 105 110

Tyr Pro Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly
 115 120 125

Gly Gly Gln Gly Gly Gly Gly Gln Gly Gly Gly Gly Gln Gly Gly Gly
 130 135 140

Gly Gln Gly Gly Gly Gly Gln Gln Leu Tyr Ser Ala Leu Ala Asn Lys
 145 150 155 160

Cys Cys His Val Gly Cys Thr Lys Arg Ser Leu Ala Arg Phe Cys Gly
 165 170 175

Gly Gly Ser Gly Gly Ser Gly Gly Gly Ser Trp Met Glu Glu Val Ile
 180 185 190

Lys Leu Cys Gly Arg Glu Leu Val Arg Ala Gln Ile Ala Ile Cys Gly
 195 200 205

Met Ser Thr Trp Ser
 210

<210> 25

<211> 220

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic Construct

<400> 25

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

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

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

Ala Gly Ile Gly Gly Gly Val Asp Ile Thr Tyr Tyr Ala Asp 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 Pro Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Ala Arg Pro Gly Arg Pro Leu Ile Thr Ser Lys Val Ala Asp Leu
100 105 110

Tyr Pro Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Pro Gly
115 120 125

Pro Ala Pro Gly Pro Ala Pro Gly Pro Ala Pro Gly Pro Ala Pro Gly
130 135 140

Pro Ala Pro Gly Pro Ala Pro Gly Pro Ala Pro Gly Pro Ala Gln Leu
145 150 155 160

Tyr Ser Ala Leu Ala Asn Lys Cys Cys His Val Gly Cys Thr Lys Arg
165 170 175

Ser Leu Ala Arg Phe Cys Gly Gly Gly Ser Gly Gly Ser Gly Gly Gly
180 185 190

Ser Trp Met Glu Glu Val Ile Lys Leu Cys Gly Arg Glu Leu Val Arg
195 200 205

Ala Gln Ile Ala Ile Cys Gly Met Ser Thr Trp Ser
210 215 220

<210> 26
<211> 213
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 26

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

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

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

Ala Gly Ile Gly Gly Gly Val Asp Ile Thr Tyr Tyr Ala Asp 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 Pro Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Ala Arg Pro Gly Arg Pro Leu Ile Thr Ser Lys Val Ala Asp Leu
100 105 110

Tyr Pro Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly
115 120 125

Gly Gly Gln Gly Gly Gly Gly Gln Gly Gly Gly Gly Gln Gly Gly Gly
130 135 140

Gly Gln Gly Gly Gly Gly Gln Ser Trp Met Glu Glu Val Ile Lys Leu
145 150 155 160

Cys Gly Arg Glu Leu Val Arg Ala Gln Ile Ala Ile Cys Gly Met Ser
165 170 175

Thr Trp Ser Gly Gly Gly Ser Gly Gly Ser Gly Gly Gly Gln Leu Tyr
180 185 190

Ser Ala Leu Ala Asn Lys Cys Cys His Val Gly Cys Thr Lys Arg Ser
195 200 205

Leu Ala Arg Phe Cys
210

<210> 27

<211> 220

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic Construct

<400> 27

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

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

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

Ala Gly Ile Gly Gly Gly Val Asp Ile Thr Tyr Tyr Ala Asp 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 Pro Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Ala Arg Pro Gly Arg Pro Leu Ile Thr Ser Lys Val Ala Asp Leu
100 105 110

Tyr Pro Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Pro Gly
115 120 125

Pro Gln Pro Gly Pro Gln Pro Gly Pro Gln Pro Gly Pro Gln Pro Gly
130 135 140

Pro Gln Pro Gly Pro Gln Pro Gly Pro Gln Pro Gly Pro Gln Ser Trp
145 150 155 160

Met Glu Glu Val Ile Lys Leu Cys Gly Arg Glu Leu Val Arg Ala Gln
165 170 175

Ile Ala Ile Cys Gly Met Ser Thr Trp Ser Gly Gly Gly Ser Gly Gly
180 185 190

Ser Gly Gly Gly Gln Leu Tyr Ser Ala Leu Ala Asn Lys Cys Cys His
195 200 205

Val Gly Cys Thr Lys Arg Ser Leu Ala Arg Phe Cys
210 215 220

<210> 28
<211> 215
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 28

Ser Trp Met Glu Glu Val Ile Lys Leu Cys Gly Arg Glu Leu Val Arg
1 5 10 15

Ala Gln Ile Ala Ile Cys Gly Met Ser Thr Trp Ser Gly Gly Gly Ser
20 25 30

Gly Gly Ser Gly Gly Gly Gln Leu Tyr Ser Ala Leu Ala Asn Lys Cys
35 40 45

Cys His Val Gly Cys Thr Lys Arg Ser Leu Ala Arg Phe Cys Gly Gly
50 55 60

Gly Gly Gln Gly Gly Gly Gly Gln Gly Gly Gly Gly Gln Gly Gly Gly
65 70 75 80

Gly Gln Gly Gly Gly Gly Gln Glu Val Gln Leu Leu Glu Ser Gly Gly
85 90 95

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

Gly Arg Tyr Ile Asp Glu Thr Ala Val Ala Trp Phe Arg Gln Ala Pro
115 120 125

Gly Lys Glu Arg Glu Phe Val Ala Gly Ile Gly Gly Gly Val Asp Ile
130 135 140

Thr Tyr Tyr Ala Asp Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp
145 150 155 160

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

Asp Thr Ala Val Tyr Tyr Cys Ala Ala Arg Pro Gly Arg Pro Leu Ile
180 185 190

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

Val Thr Val Ser Ser Pro Pro
210 215

<210> 29
<211> 222
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 29

Ser Trp Met Glu Glu Val Ile Lys Leu Cys Gly Arg Glu Leu Val Arg
1 5 10 15

Ala Gln Ile Ala Ile Cys Gly Met Ser Thr Trp Ser Gly Gly Gly Ser
20 25 30

Gly Gly Ser Gly Gly Gly Gln Leu Tyr Ser Ala Leu Ala Asn Lys Cys
35 40 45

Cys His Val Gly Cys Thr Lys Arg Ser Leu Ala Arg Phe Cys Pro Gly
50 55 60

Pro Gln Pro Gly Pro Gln Pro Gly Pro Gln Pro Gly Pro Gln Pro Gly
65 70 75 80

Pro Gln Pro Gly Pro Gln Pro Gly Pro Gln Pro Gly Pro Gln Glu Val
85 90 95

Gln Leu Leu Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly Ser Leu
100 105 110

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

Ala Trp Phe Arg Gln Ala Pro Gly Lys Glu Arg Glu Phe Val Ala Gly
130 135 140

Ile Gly Gly Gly Val Asp Ile Thr Tyr Tyr Ala Asp Ser Val Lys Gly
145 150 155 160

Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr Leu Gln
165 170 175

Met Asn Ser Leu Arg Pro Glu Asp Thr Ala Val Tyr Tyr Cys Ala Ala
180 185 190

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

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

<210> 30

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

<220>
<223> Synthetic Construct

<400> 30

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

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

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

Ala Gly Ile Gly Gly Gly Val Asp Ile Thr Tyr Tyr Ala Asp 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 Pro Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Ala Arg Pro Gly Arg Pro Leu Ile Thr Ser Lys Val Ala Asp Leu
100 105 110

Tyr Pro Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly
115 120 125

Gly Gly Gln Gly Gly Gly Gly Gln Gly Gly Gly Gly Gln Gly Gly Gly
130 135 140

Gly Gln Gly Gly Gly Gly Gln Ser Trp Met Glu Glu Val Ile Lys Leu
145 150 155 160

Cys Gly Arg Glu Leu Val Arg Ala Gln Ile Ala Ile Cys Gly Met Ser
165 170 175

Thr Trp Ser Gly Gly Gly Ser Gly Gly Ser Gly Gly Gly Gln Leu Tyr

180

185

190

Ser Ala Leu Ala Asn Lys Cys Cys His Val Gly Cys Thr Lys Arg Ser
 195 200 205

Leu Ala Arg Phe Cys
 210

<210> 31
 <211> 220
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Construct

<400> 31

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

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

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

Ala Gly Ile Gly Gly Gly Val Asp Ile Thr Tyr Tyr Ala Asp 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 Pro Glu Asp Thr Ala Val Tyr Tyr Cys
 85 90 95

Ala Ala Arg Pro Gly Arg Pro Leu Ile Thr Ser Lys Val Ala Asp Leu
 100 105 110

Tyr Pro Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Pro Gly
 115 120 125

Pro Gln Pro Gly Pro Gln Pro Gly Pro Gln Pro Gly Pro Gln Pro Gly

130

135

140

Pro Gln Pro Gly Pro Gln Pro Gly Pro Gln Pro Gly Pro Gln Ser Trp
 145 150 155 160

Met Glu Glu Val Ile Lys Leu Cys Gly Arg Glu Leu Val Arg Ala Gln
 165 170 175

Ile Ala Ile Cys Gly Met Ser Thr Trp Ser Gly Gly Gly Ser Gly Gly
 180 185 190

Ser Gly Gly Gly Gln Leu Tyr Ser Ala Leu Ala Asn Lys Cys Cys His
 195 200 205

Val Gly Cys Thr Lys Arg Ser Leu Ala Arg Phe Cys
 210 215 220

<210> 32

<211> 215

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic Construct

<400> 32

Ser Trp Met Glu Glu Val Ile Lys Leu Cys Gly Arg Glu Leu Val Arg
 1 5 10 15

Ala Gln Ile Ala Ile Cys Gly Met Ser Thr Trp Ser Gly Gly Gly Ser
 20 25 30

Gly Gly Ser Gly Gly Gly Gln Leu Tyr Ser Ala Leu Ala Asn Lys Cys
 35 40 45

Cys His Val Gly Cys Thr Lys Arg Ser Leu Ala Arg Phe Cys Gly Gly
 50 55 60

Gly Gly Gln Gly Gly Gly Gly Gln Gly Gly Gly Gly Gln Gly Gly Gly
 65 70 75 80

Gly Gln Gly Gly Gly Gly Gln Glu Val Gln Leu Leu Glu Ser Gly Gly

85

90

95

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

Gly Arg Tyr Ile Asp Glu Thr Ala Val Ala Trp Phe Arg Gln Ala Pro
 115 120 125

Gly Lys Gly Arg Glu Phe Val Ala Gly Ile Gly Gly Gly Val Asp Ile
 130 135 140

Thr Tyr Tyr Ala Asp Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp
 145 150 155 160

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

Asp Thr Ala Val Tyr Tyr Cys Ala Ala Arg Pro Gly Arg Pro Leu Ile
 180 185 190

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

Val Thr Val Ser Ser Pro Pro
 210 215

<210> 33
 <211> 222
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 <213> Artificial Sequence

<220>
 <223> Synthetic Construct

<400> 33

Ser Trp Met Glu Glu Val Ile Lys Leu Cys Gly Arg Glu Leu Val Arg
 1 5 10 15

Ala Gln Ile Ala Ile Cys Gly Met Ser Thr Trp Ser Gly Gly Gly Ser
 20 25 30

Gly Gly Ser Gly Gly Gly Gln Leu Tyr Ser Ala Leu Ala Asn Lys Cys

35

40

45

Cys His Val Gly Cys Thr Lys Arg Ser Leu Ala Arg Phe Cys Pro Gly
 50 55 60

Pro Gln Pro Gly Pro Gln Pro Gly Pro Gln Pro Gly Pro Gln Pro Gly
 65 70 75 80

Pro Gln Pro Gly Pro Gln Pro Gly Pro Gln Pro Gly Pro Gln Glu Val
 85 90 95

Gln Leu Leu Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly Ser Leu
 100 105 110

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

Ala Trp Phe Arg Gln Ala Pro Gly Lys Gly Arg Glu Phe Val Ala Gly
 130 135 140

Ile Gly Gly Gly Val Asp Ile Thr Tyr Tyr Ala Asp Ser Val Lys Gly
 145 150 155 160

Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr Leu Gln
 165 170 175

Met Asn Ser Leu Arg Pro Glu Asp Thr Ala Val Tyr Tyr Cys Ala Ala
 180 185 190

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

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

<210> 34

<211> 212

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic Construct

<400> 34

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

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

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

Ala Gly Ile Gly Gly Gly Val Asp Ile Thr Tyr Tyr Ala Asp 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 Pro Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Ala Arg Pro Gly Arg Pro Leu Ile Thr Ser Lys Val Ala Asp Leu
100 105 110

Tyr Pro Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly
115 120 125

Gly Gly Gln Gly Gly Gly Gly Gln Gly Gly Gly Gly Gln Gly Gly Gly
130 135 140

Gly Gln Gly Gly Gly Gly Gln Ser Trp Met Glu Glu Val Ile Lys Leu
145 150 155 160

Cys Gly Arg Glu Leu Val Arg Ala Gln Ile Ala Ile Cys Gly Met Ser
165 170 175

Thr Trp Ser Gly Gly Gly Ser Gly Gly Ser Gly Gly Ser Gly Gly Gly
180 185 190

Ala Leu Ala Asn Lys Cys Cys His Val Gly Cys Thr Lys Arg Ser Leu
195 200 205

Ala Arg Phe Cys
210

<210> 35
<211> 212
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 35

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

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

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

Ala Gly Ile Gly Gly Gly Val Asp Ile Thr Tyr Tyr Ala Asp 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 Pro Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Ala Arg Pro Gly Arg Pro Leu Ile Thr Ser Lys Val Ala Asp Leu
100 105 110

Tyr Pro Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly
115 120 125

Gly Gly Gln Gly Gly Gly Gly Gln Gly Gly Gly Gly Gln Gly Gly Gly
130 135 140

Gly Gln Gly Gly Gly Gly Gln Ser Trp Met Glu Glu Val Ile Lys Leu
145 150 155 160

Cys Gly Arg Glu Leu Val Arg Ala Gln Ile Ala Ile Cys Gly Met Ser
165 170 175

Thr Trp Ser Gly Gly Gly Ser Gly Gly Ser Gly Gly Ser Gly Gly Gly
180 185 190

Ala Leu Ala Asn Lys Cys Cys His Val Gly Cys Thr Lys Arg Ser Leu
195 200 205

Ala Arg Phe Cys
210

<210> 36
<211> 209
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 36

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

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

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

Ala Gly Ile Gly Gly Gly Val Asp Ile Thr Tyr Tyr Ala Asp 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 Pro Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Ala Arg Pro Gly Arg Pro Leu Ile Thr Ser Lys Val Ala Asp Leu
100 105 110

Tyr Pro Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly
115 120 125

Gly Gly Gln Gly Gly Gly Gly Gln Gly Gly Gly Gly Gln Gly Gly Gly
130 135 140

Gly Gln Gly Gly Gly Gly Gln Ala Leu Ala Asn Lys Cys Cys His Val
145 150 155 160

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

Gly Ser Gly Gly Gly Ser Trp Met Glu Glu Val Ile Lys Leu Cys Gly
180 185 190

Arg Glu Leu Val Arg Ala Gln Ile Ala Ile Cys Gly Met Ser Thr Trp
195 200 205

Ser

<210> 37
<211> 216
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 37

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

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

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

Ala Gly Ile Gly Gly Gly Val Asp Ile Thr Tyr Tyr Ala Asp 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 Pro Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Ala Arg Pro Gly Arg Pro Leu Ile Thr Ser Lys Val Ala Asp Leu
100 105 110

Tyr Pro Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Pro Gly
115 120 125

Pro Gln Pro Gly Pro Gln Pro Gly Pro Gln Pro Gly Pro Gln Pro Gly
130 135 140

Pro Gln Pro Gly Pro Gln Pro Gly Pro Gln Pro Gly Pro Gln Ala Leu
145 150 155 160

Ala Asn Lys Cys Cys His Val Gly Cys Thr Lys Arg Ser Leu Ala Arg
165 170 175

Phe Cys Gly Gly Gly Ser Gly Gly Ser Gly Gly Gly Ser Trp Met Glu
180 185 190

Glu Val Ile Lys Leu Cys Gly Arg Glu Leu Val Arg Ala Gln Ile Ala
195 200 205

Ile Cys Gly Met Ser Thr Trp Ser
210 215

<210> 38
<211> 214
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 38

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

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

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

Ala Gly Ile Gly Gly Gly Val Asp Ile Thr Tyr Tyr Ala Asp 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 Pro Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Ala Arg Pro Gly Arg Pro Leu Ile Thr Ser Lys Val Ala Asp Leu
100 105 110

Tyr Pro Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly
115 120 125

Gly Gly Gln Gly Gly Gly Gly Gln Gly Gly Gly Gly Gln Gly Gly Gly
130 135 140

Gly Gln Gly Gly Gly Gly Gln Asp Ser Trp Met Glu Glu Val Ile Lys
145 150 155 160

Leu Cys Gly Arg Glu Leu Val Arg Ala Gln Ile Ala Ile Cys Gly Met
165 170 175

Ser Thr Trp Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Gln Leu
180 185 190

Tyr Ser Ala Leu Ala Asn Lys Cys Cys His Val Gly Cys Thr Lys Arg
195 200 205

Ser Leu Ala Arg Phe Cys
210

<210> 39

<211> 221
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 39

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

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

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

Ala Gly Ile Gly Gly Gly Val Asp Ile Thr Tyr Tyr Ala Asp 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 Pro Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Ala Arg Pro Gly Arg Pro Leu Ile Thr Ser Lys Val Ala Asp Leu
100 105 110

Tyr Pro Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Pro Gly
115 120 125

Pro Ala Pro Gly Pro Ala Pro Gly Pro Ala Pro Gly Pro Ala Pro Gly
130 135 140

Pro Ala Pro Gly Pro Ala Pro Gly Pro Ala Pro Gly Pro Ala Asp Ser
145 150 155 160

Trp Met Glu Glu Val Ile Lys Leu Cys Gly Arg Glu Leu Val Arg Ala
165 170 175

Gln Ile Ala Ile Cys Gly Met Ser Thr Trp Ser Ser Gly Gly Gly Gly

180

185

190

Ser Gly Gly Gly Gly Gln Leu Tyr Ser Ala Leu Ala Asn Lys Cys Cys
 195 200 205

His Val Gly Cys Thr Lys Arg Ser Leu Ala Arg Phe Cys
 210 215 220

<210> 40

<211> 757

<212> PRT

<213> Homo sapiens

<400> 40

Met Thr Ser Gly Ser Val Phe Phe Tyr Ile Leu Ile Phe Gly Lys Tyr
 1 5 10 15

Phe Ser His Gly Gly Gly Gln Asp Val Lys Cys Ser Leu Gly Tyr Phe
 20 25 30

Pro Cys Gly Asn Ile Thr Lys Cys Leu Pro Gln Leu Leu His Cys Asn
 35 40 45

Gly Val Asp Asp Cys Gly Asn Gln Ala Asp Glu Asp Asn Cys Gly Asp
 50 55 60

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

Lys Met Thr Ser Gln Tyr Pro Phe Glu Ala Glu Thr Pro Glu Cys Leu
 85 90 95

Val Gly Ser Val Pro Val Gln Cys Leu Cys Gln Gly Leu Glu Leu Asp
 100 105 110

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

Thr Ala Met Ser Leu Gln Trp Asn Leu Ile Arg Lys Leu Pro Pro Asp
 130 135 140

Cys Phe Lys Asn Tyr His Asp Leu Gln Lys Leu Tyr Leu Gln Asn Asn
145 150 155 160

Lys Ile Thr Ser Ile Ser Ile Tyr Ala Phe Arg Gly Leu Asn Ser Leu
165 170 175

Thr Lys Leu Tyr Leu Ser His Asn Arg Ile Thr Phe Leu Lys Pro Gly
180 185 190

Val Phe Glu Asp Leu His Arg Leu Glu Trp Leu Ile Ile Glu Asp Asn
195 200 205

His Leu Ser Arg Ile Ser Pro Pro Thr Phe Tyr Gly Leu Asn Ser Leu
210 215 220

Ile Leu Leu Val Leu Met Asn Asn Val Leu Thr Arg Leu Pro Asp Lys
225 230 235 240

Pro Leu Cys Gln His Met Pro Arg Leu His Trp Leu Asp Leu Glu Gly
245 250 255

Asn His Ile His Asn Leu Arg Asn Leu Thr Phe Ile Ser Cys Ser Asn
260 265 270

Leu Thr Val Leu Val Met Arg Lys Asn Lys Ile Asn His Leu Asn Glu
275 280 285

Asn Thr Phe Ala Pro Leu Gln Lys Leu Asp Glu Leu Asp Leu Gly Ser
290 295 300

Asn Lys Ile Glu Asn Leu Pro Pro Leu Ile Phe Lys Asp Leu Lys Glu
305 310 315 320

Leu Ser Gln Leu Asn Leu Ser Tyr Asn Pro Ile Gln Lys Ile Gln Ala
325 330 335

Asn Gln Phe Asp Tyr Leu Val Lys Leu Lys Ser Leu Ser Leu Glu Gly
340 345 350

Ile Glu Ile Ser Asn Ile Gln Gln Arg Met Phe Arg Pro Leu Met Asn
355 360 365

Leu Ser His Ile Tyr Phe Lys Lys Phe Gln Tyr Cys Gly Tyr Ala Pro
370 375 380

His Val Arg Ser Cys Lys Pro Asn Thr Asp Gly Ile Ser Ser Leu Glu
385 390 395 400

Asn Leu Leu Ala Ser Ile Ile Gln Arg Val Phe Val Trp Val Val Ser
405 410 415

Ala Val Thr Cys Phe Gly Asn Ile Phe Val Ile Cys Met Arg Pro Tyr
420 425 430

Ile Arg Ser Glu Asn Lys Leu Tyr Ala Met Ser Ile Ile Ser Leu Cys
435 440 445

Cys Ala Asp Cys Leu Met Gly Ile Tyr Leu Phe Val Ile Gly Gly Phe
450 455 460

Asp Leu Lys Phe Arg Gly Glu Tyr Asn Lys His Ala Gln Leu Trp Met
465 470 475 480

Glu Ser Thr His Cys Gln Leu Val Gly Ser Leu Ala Ile Leu Ser Thr
485 490 495

Glu Val Ser Val Leu Leu Leu Thr Phe Leu Thr Leu Glu Lys Tyr Ile
500 505 510

Cys Ile Val Tyr Pro Phe Arg Cys Val Arg Pro Gly Lys Cys Arg Thr
515 520 525

Ile Thr Val Leu Ile Leu Ile Trp Ile Thr Gly Phe Ile Val Ala Phe
530 535 540

Ile Pro Leu Ser Asn Lys Glu Phe Phe Lys Asn Tyr Tyr Gly Thr Asn
545 550 555 560

Gly Val Cys Phe Pro Leu His Ser Glu Asp Thr Glu Ser Ile Gly Ala
565 570 575

Gln Ile Tyr Ser Val Ala Ile Phe Leu Gly Ile Asn Leu Ala Ala Phe
580 585 590

Ile Ile Ile Val Phe Ser Tyr Gly Ser Met Phe Tyr Ser Val His Gln
595 600 605

Ser Ala Ile Thr Ala Thr Glu Ile Arg Asn Gln Val Lys Lys Glu Met
610 615 620

Ile Leu Ala Lys Arg Phe Phe Phe Ile Val Phe Thr Asp Ala Leu Cys
625 630 635 640

Trp Ile Pro Ile Phe Val Val Lys Phe Leu Ser Leu Leu Gln Val Glu
645 650 655

Ile Pro Gly Thr Ile Thr Ser Trp Val Val Ile Phe Ile Leu Pro Ile
660 665 670

Asn Ser Ala Leu Asn Pro Ile Leu Tyr Thr Leu Thr Thr Arg Pro Phe
675 680 685

Lys Glu Met Ile His Arg Phe Trp Tyr Asn Tyr Arg Gln Arg Lys Ser
690 695 700

Met Asp Ser Lys Gly Gln Lys Thr Tyr Ala Pro Ser Phe Ile Trp Val
705 710 715 720

Glu Met Trp Pro Leu Gln Glu Met Pro Pro Glu Leu Met Lys Pro Asp
725 730 735

Leu Phe Thr Tyr Pro Cys Glu Met Ser Leu Ile Ser Gln Ser Thr Arg
740 745 750

Leu Asn Ser Tyr Ser
755

<210> 41

<211> 754

<212> PRT

<213> Homo sapiens

<400> 41

Met Ile Val Phe Leu Val Phe Lys His Leu Phe Ser Leu Arg Leu Ile
1 5 10 15

Thr Met Phe Phe Leu Leu His Phe Ile Val Leu Ile Asn Val Lys Asp
20 25 30

Phe Ala Leu Thr Gln Gly Ser Met Ile Thr Pro Ser Cys Gln Lys Gly
35 40 45

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

Cys Asp Gly Lys Asp Asp Cys Gly Asn Gly Ala Asp Glu Glu Asn Cys
65 70 75 80

Gly Asp Thr Ser Gly Trp Ala Thr Ile Phe Gly Thr Val His Gly Asn
85 90 95

Ala Asn Ser Val Ala Leu Thr Gln Glu Cys Phe Leu Lys Gln Tyr Pro
100 105 110

Gln Cys Cys Asp Cys Lys Glu Thr Glu Leu Glu Cys Val Asn Gly Asp
115 120 125

Leu Lys Ser Val Pro Met Ile Ser Asn Asn Val Thr Leu Leu Ser Leu
130 135 140

Lys Lys Asn Lys Ile His Ser Leu Pro Asp Lys Val Phe Ile Lys Tyr
145 150 155 160

Thr Lys Leu Lys Lys Ile Phe Leu Gln His Asn Cys Ile Arg His Ile
165 170 175

Ser Arg Lys Ala Phe Phe Gly Leu Cys Asn Leu Gln Ile Leu Tyr Leu
180 185 190

Asn His Asn Cys Ile Thr Thr Leu Arg Pro Gly Ile Phe Lys Asp Leu
195 200 205

His Gln Leu Thr Trp Leu Ile Leu Asp Asp Asn Pro Ile Thr Arg Ile

210

215

220

Ser Gln Arg Leu Phe Thr Gly Leu Asn Ser Leu Phe Phe Leu Ser Met
 225 230 235 240

Val Asn Asn Tyr Leu Glu Ala Leu Pro Lys Gln Met Cys Ala Gln Met
 245 250 255

Pro Gln Leu Asn Trp Val Asp Leu Glu Gly Asn Arg Ile Lys Tyr Leu
 260 265 270

Thr Asn Ser Thr Phe Leu Ser Cys Asp Ser Leu Thr Val Leu Phe Leu
 275 280 285

Pro Arg Asn Gln Ile Gly Phe Val Pro Glu Lys Thr Phe Ser Ser Leu
 290 295 300

Lys Asn Leu Gly Glu Leu Asp Leu Ser Ser Asn Thr Ile Thr Glu Leu
 305 310 315 320

Ser Pro His Leu Phe Lys Asp Leu Lys Leu Leu Gln Lys Leu Asn Leu
 325 330 335

Ser Ser Asn Pro Leu Met Tyr Leu His Lys Asn Gln Phe Glu Ser Leu
 340 345 350

Lys Gln Leu Gln Ser Leu Asp Leu Glu Arg Ile Glu Ile Pro Asn Ile
 355 360 365

Asn Thr Arg Met Phe Gln Pro Met Lys Asn Leu Ser His Ile Tyr Phe
 370 375 380

Lys Asn Phe Arg Tyr Cys Ser Tyr Ala Pro His Val Arg Ile Cys Met
 385 390 395 400

Pro Leu Thr Asp Gly Ile Ser Ser Phe Glu Asp Leu Leu Ala Asn Asn
 405 410 415

Ile Leu Arg Ile Phe Val Trp Val Ile Ala Phe Ile Thr Cys Phe Gly
 420 425 430

Asn Leu Phe Val Ile Gly Met Arg Ser Phe Ile Lys Ala Glu Asn Thr
435 440 445

Thr His Ala Met Ser Ile Lys Ile Leu Cys Cys Ala Asp Cys Leu Met
450 455 460

Gly Val Tyr Leu Phe Phe Val Gly Ile Phe Asp Ile Lys Tyr Arg Gly
465 470 475 480

Gln Tyr Gln Lys Tyr Ala Leu Leu Trp Met Glu Ser Val Gln Cys Arg
485 490 495

Leu Met Gly Phe Leu Ala Met Leu Ser Thr Glu Val Ser Val Leu Leu
500 505 510

Leu Thr Tyr Leu Thr Leu Glu Lys Phe Leu Val Ile Val Phe Pro Phe
515 520 525

Ser Asn Ile Arg Pro Gly Lys Arg Gln Thr Ser Val Ile Leu Ile Cys
530 535 540

Ile Trp Met Ala Gly Phe Leu Ile Ala Val Ile Pro Phe Trp Asn Lys
545 550 555 560

Asp Tyr Phe Gly Asn Phe Tyr Gly Lys Asn Gly Val Cys Phe Pro Leu
565 570 575

Tyr Tyr Asp Gln Thr Glu Asp Ile Gly Ser Lys Gly Tyr Ser Leu Gly
580 585 590

Ile Phe Leu Gly Val Asn Leu Leu Ala Phe Leu Ile Ile Val Phe Ser
595 600 605

Tyr Ile Thr Met Phe Cys Ser Ile Gln Lys Thr Ala Leu Gln Thr Thr
610 615 620

Glu Val Arg Asn Cys Phe Gly Arg Glu Val Ala Val Ala Asn Arg Phe
625 630 635 640

Phe Phe Ile Val Phe Ser Asp Ala Ile Cys Trp Ile Pro Val Phe Val

645

650

655

Val Lys Ile Leu Ser Leu Phe Arg Val Glu Ile Pro Asp Thr Met Thr
 660 665 670

Ser Trp Ile Val Ile Phe Phe Leu Pro Val Asn Ser Ala Leu Asn Pro
 675 680 685

Ile Leu Tyr Thr Leu Thr Thr Asn Phe Phe Lys Asp Lys Leu Lys Gln
 690 695 700

Leu Leu His Lys His Gln Arg Lys Ser Ile Phe Lys Ile Lys Lys Lys
 705 710 715 720

Ser Leu Ser Thr Ser Ile Val Trp Ile Glu Asp Ser Ser Ser Leu Lys
 725 730 735

Leu Gly Val Leu Asn Lys Ile Thr Leu Gly Asp Ser Ile Met Lys Pro
 740 745 750

Val Ser

<210> 42

<211> 469

<212> PRT

<213> Homo sapiens

<400> 42

Met Gln Met Ala Asp Ala Ala Thr Ile Ala Thr Met Asn Lys Ala Ala
 1 5 10 15

Gly Gly Asp Lys Leu Ala Glu Leu Phe Ser Leu Val Pro Asp Leu Leu
 20 25 30

Glu Ala Ala Asn Thr Ser Gly Asn Ala Ser Leu Gln Leu Pro Asp Leu
 35 40 45

Trp Trp Glu Leu Gly Leu Glu Leu Pro Asp Gly Ala Pro Pro Gly His
 50 55 60

Pro Pro Gly Ser Gly Gly Ala Glu Ser Ala Asp Thr Glu Ala Arg Val
65 70 75 80

Arg Ile Leu Ile Ser Val Val Tyr Trp Val Val Cys Ala Leu Gly Leu
85 90 95

Ala Gly Asn Leu Leu Val Leu Tyr Leu Met Lys Ser Met Gln Gly Trp
100 105 110

Arg Lys Ser Ser Ile Asn Leu Phe Val Thr Asn Leu Ala Leu Thr Asp
115 120 125

Phe Gln Phe Val Leu Thr Leu Pro Phe Trp Ala Val Glu Asn Ala Leu
130 135 140

Asp Phe Lys Trp Pro Phe Gly Lys Ala Met Cys Lys Ile Val Ser Met
145 150 155 160

Val Thr Ser Met Asn Met Tyr Ala Ser Val Phe Phe Leu Thr Ala Met
165 170 175

Ser Val Thr Arg Tyr His Ser Val Ala Ser Ala Leu Lys Ser His Arg
180 185 190

Thr Arg Gly His Gly Arg Gly Asp Cys Cys Gly Arg Ser Leu Gly Asp
195 200 205

Ser Cys Cys Phe Ser Ala Lys Ala Leu Cys Val Trp Ile Trp Ala Leu
210 215 220

Ala Ala Leu Ala Ser Leu Pro Ser Ala Ile Phe Ser Thr Thr Val Lys
225 230 235 240

Val Met Gly Glu Glu Leu Cys Leu Val Arg Phe Pro Asp Lys Leu Leu
245 250 255

Gly Arg Asp Arg Gln Phe Trp Leu Gly Leu Tyr His Ser Gln Lys Val
260 265 270

Leu Leu Gly Phe Val Leu Pro Leu Gly Ile Ile Ile Leu Cys Tyr Leu
275 280 285

Leu Leu Val Arg Phe Ile Ala Asp Arg Arg Ala Ala Gly Thr Lys Gly
290 295 300

Gly Ala Ala Val Ala Gly Gly Arg Pro Thr Gly Ala Ser Ala Arg Arg
305 310 315 320

Leu Ser Lys Val Thr Lys Ser Val Thr Ile Val Val Leu Ser Phe Phe
325 330 335

Leu Cys Trp Leu Pro Asn Gln Ala Leu Thr Thr Trp Ser Ile Leu Ile
340 345 350

Lys Phe Asn Ala Val Pro Phe Ser Gln Glu Tyr Phe Leu Cys Gln Val
355 360 365

Tyr Ala Phe Pro Val Ser Val Cys Leu Ala His Ser Asn Ser Cys Leu
370 375 380

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

Lys Ser Leu Leu Trp Arg Ile Ala Ser Pro Ser Ile Thr Ser Met Arg
405 410 415

Pro Phe Thr Ala Thr Thr Lys Pro Glu His Glu Asp Gln Gly Leu Gln
420 425 430

Ala Pro Ala Pro Pro His Ala Ala Ala Glu Pro Asp Leu Leu Tyr Tyr
435 440 445

Pro Pro Gly Val Val Val Tyr Ser Gly Gly Arg Tyr Asp Leu Leu Pro
450 455 460

Ser Ser Ser Ala Tyr
465

<210> 43
<211> 374
<212> PRT
<213> Homo sapiens

<400> 43

Met Pro Thr Leu Asn Thr Ser Ala Ser Pro Pro Thr Phe Phe Trp Ala
1 5 10 15

Asn Ala Ser Gly Gly Ser Val Leu Ser Ala Asp Asp Ala Pro Met Pro
20 25 30

Val Lys Phe Leu Ala Leu Arg Leu Met Val Ala Leu Ala Tyr Gly Leu
35 40 45

Val Gly Ala Ile Gly Leu Leu Gly Asn Leu Ala Val Leu Trp Val Leu
50 55 60

Ser Asn Cys Ala Arg Arg Ala Pro Gly Pro Pro Ser Asp Thr Phe Val
65 70 75 80

Phe Asn Leu Ala Leu Ala Asp Leu Gly Leu Ala Leu Thr Leu Pro Phe
85 90 95

Trp Ala Ala Glu Ser Ala Leu Asp Phe His Trp Pro Phe Gly Gly Ala
100 105 110

Leu Cys Lys Met Val Leu Thr Ala Thr Val Leu Asn Val Tyr Ala Ser
115 120 125

Ile Phe Leu Ile Thr Ala Leu Ser Val Ala Arg Tyr Trp Val Val Ala
130 135 140

Met Ala Ala Gly Pro Gly Thr His Leu Ser Leu Phe Trp Ala Arg Ile
145 150 155 160

Ala Thr Leu Ala Val Trp Ala Ala Ala Ala Leu Val Thr Val Pro Thr
165 170 175

Ala Val Phe Gly Val Glu Gly Glu Val Cys Gly Val Arg Leu Cys Leu
180 185 190

Leu Arg Phe Pro Ser Arg Tyr Trp Leu Gly Ala Tyr Gln Leu Gln Arg
195 200 205

Val Val Leu Ala Phe Met Val Pro Leu Gly Val Ile Thr Thr Ser Tyr
210 215 220

Leu Leu Leu Leu Ala Phe Leu Gln Arg Arg Gln Arg Arg Arg Gln Asp
225 230 235 240

Ser Arg Val Val Ala Arg Ser Val Arg Ile Leu Val Ala Ser Phe Phe
245 250 255

Leu Cys Trp Phe Pro Asn His Val Val Thr Leu Trp Gly Val Leu Val
260 265 270

Lys Phe Asp Leu Val Pro Trp Asn Ser Thr Phe Tyr Thr Ile Gln Thr
275 280 285

Tyr Val Phe Pro Val Thr Thr Cys Leu Ala His Ser Asn Ser Cys Leu
290 295 300

Asn Pro Val Leu Tyr Cys Leu Leu Arg Arg Glu Pro Arg Gln Ala Leu
305 310 315 320

Ala Gly Thr Phe Arg Asp Leu Arg Leu Arg Leu Trp Pro Gln Gly Gly
325 330 335

Gly Trp Val Gln Gln Val Ala Leu Lys Gln Val Gly Arg Arg Trp Val
340 345 350

Ala Ser Asn Pro Arg Glu Ser Arg Pro Ser Thr Leu Leu Thr Asn Leu
355 360 365

Asp Arg Gly Thr Pro Gly
370

<210> 44
<211> 20
<212> PRT
<213> Mus musculus

<400> 44

Met Glu Thr Asp Thr Leu Leu Leu Trp Val Leu Leu Leu Trp Val Pro
1 5 10 15

Gly Ser Thr Gly
20

<210> 45
<211> 126
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 45

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

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

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

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

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

Tyr Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
115 120 125

<210> 46
<211> 126
<212> PRT
<213> Artificial Sequence

<220>

<223> Synthetic Construct

<400> 46

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

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

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

Ala Gly Ile Gly Gly Gly Val Asp Ile Thr Tyr Tyr Ala Asp 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 Pro Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

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

Tyr Pro Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
115 120 125

<210> 47

<211> 126

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic Construct

<400> 47

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

Ser Leu Arg Leu Ser Cys Ala Ala Ser Tyr Arg Tyr Ile Asp Glu Thr
20 25 30

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

Ala Gly Ile Gly Gly Gly Val Asp Ile Thr Tyr Tyr Ala Asp 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 Pro Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Ala Arg Pro Gly Arg Pro Leu Ile Thr Ser Lys Val Ala Asp Leu
100 105 110

Tyr Pro Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
115 120 125

<210> 48
<211> 126
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 48

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

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

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

Ala Gly Ile Gly Gly Gly Val Asp Ile Thr Tyr Tyr Ala Asp 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 Pro Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Ala Arg Pro Gly Arg Pro Leu Ile Thr Ser Lys Val Ala Asp Leu
100 105 110

Tyr Pro Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
115 120 125

<210> 49

<211> 126

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic Construct

<400> 49

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

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

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

Ala Gly Ile Gly Gly Gly Val Asp Glu Thr Tyr Tyr Ala Asp 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 Pro Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Ala Arg Pro Gly Arg Pro Leu Ile Thr Ser Lys Val Ala Asp Leu
100 105 110

Tyr Pro Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
115 120 125

<210> 50
<211> 126
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 50

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

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

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

Ala Gly Ile Gly Gly Gly Val Asp Gln Thr Tyr Tyr Ala Asp 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 Pro Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Ala Arg Pro Gly Arg Pro Leu Ile Thr Ser Lys Val Ala Asp Leu
100 105 110

Tyr Pro Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
115 120 125

<210> 51
<211> 126
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 51

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

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

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

Ala Gly Ile Gly Gly Gly Val Asp Ile Thr Ala Tyr Ala Asp 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 Pro Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Ala Arg Pro Gly Arg Pro Leu Ile Thr Ser Lys Val Ala Asp Leu
100 105 110

Tyr Pro Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
115 120 125

<210> 52
<211> 126
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 52

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

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

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

Ala Gly Ile Gly Gly Gly Val Asp Ile Thr Glu Tyr Ala Asp 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 Pro Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Ala Arg Pro Gly Arg Pro Leu Ile Thr Ser Lys Val Ala Asp Leu
100 105 110

Tyr Pro Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
115 120 125

<210> 53
<211> 126
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 53

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

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

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

Ala Gly Ile Gly Gly Gly Val Asp Ile Thr Gln Tyr Ala Asp 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 Pro Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Ala Arg Pro Gly Arg Pro Leu Ile Thr Ser Lys Val Ala Asp Leu
100 105 110

Tyr Pro Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
115 120 125

<210> 54
<211> 126
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 54

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

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

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

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

Ala Ala Arg Pro Gly Arg Pro Leu Ile Thr Ser Lys Val Ala Asp Leu
100 105 110

Tyr Pro Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
115 120 125

<210> 55
<211> 126
<212> PRT
<213> Artificial Sequence

<220>

<223> Synthetic Construct

<400> 55

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

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

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

Ala Gly Ile Gly Gly Gly Val Asp Ile Thr Thr Tyr Ala Asp 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 Pro Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Ala Arg Pro Gly Arg Pro Leu Ile Thr Ser Lys Val Ala Asp Leu
100 105 110

Tyr Pro Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
115 120 125

<210> 56

<211> 126

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic Construct

<400> 56

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

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

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

Ala Gly Ile Gly Gly Gly Val Asp Ile Thr Tyr Tyr Ala Asp 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 Pro Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Ala Arg Pro Gly Lys Pro Leu Ile Thr Ser Lys Val Ala Asp Leu
100 105 110

Tyr Pro Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
115 120 125

<210> 57
<211> 126
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 57

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

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

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

Ala Gly Ile Gly Gly Gly Val Asp Ile Thr Tyr Tyr Ala Asp 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 Pro Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Ala Arg Pro Gly Gln Pro Leu Ile Thr Ser Lys Val Ala Asp Leu
100 105 110

Tyr Pro Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
115 120 125

<210> 58

<211> 126

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic Construct

<400> 58

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

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

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

Ala Gly Ile Gly Gly Gly Val Asp Ile Thr Tyr Tyr Ala Asp 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 Pro Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Ala Arg Pro Gly Ser Pro Leu Ile Thr Ser Lys Val Ala Asp Leu
100 105 110

Tyr Pro Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
115 120 125

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

<220>
<223> Synthetic Construct

<400> 59

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

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

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

Ala Gly Ile Gly Gly Gly Val Asp Ile Thr Tyr Tyr Ala Asp 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 Pro Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

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

Tyr Pro Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
115 120 125

<210> 60
<211> 126
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 60

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

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

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

Ala Gly Ile Gly Gly Gly Val Asp Ile Thr Tyr Tyr Ala Asp 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 Pro Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Ala Arg Pro Gly Arg Gln Leu Ile Thr Ser Lys Val Ala Asp Leu
100 105 110

Tyr Pro Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
115 120 125

<210> 61
<211> 126
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 61

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

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

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

Ala Gly Ile Gly Gly Gly Val Asp Ile Thr Tyr Tyr Ala Asp 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 Pro Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Ala Arg Pro Gly Arg Ser Leu Ile Thr Ser Lys Val Ala Asp Leu
100 105 110

Tyr Pro Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
115 120 125

<210> 62
<211> 126
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 62

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

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

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

Ala Gly Ile Gly Gly Gly Val Asp Ile Thr Tyr Tyr Ala Asp 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 Pro Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

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

Tyr Pro Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
115 120 125

<210> 63
<211> 126
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 63

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

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

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

Ala Gly Ile Gly Gly Gly Val Asp Ile Thr Tyr Tyr Ala Asp 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 Pro Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Ala Arg Pro Gly Arg Pro Gly Ile Thr Ser Lys Val Ala Asp Leu
100 105 110

Tyr Pro Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
115 120 125

<210> 64
<211> 126
<212> PRT
<213> Artificial Sequence

<220>

<223> Synthetic Construct

<400> 64

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

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

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

Ala Gly Ile Gly Gly Gly Val Asp Ile Thr Tyr Tyr Ala Asp 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 Pro Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Ala Arg Pro Gly Arg Pro Gln Ile Thr Ser Lys Val Ala Asp Leu
100 105 110

Tyr Pro Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
115 120 125

<210> 65

<211> 126

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic Construct

<400> 65

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

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

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

Ala Gly Ile Gly Gly Gly Val Asp Ile Thr Tyr Tyr Ala Asp 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 Pro Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Ala Arg Pro Gly Arg Pro Thr Ile Thr Ser Lys Val Ala Asp Leu
100 105 110

Tyr Pro Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
115 120 125

<210> 66
<211> 126
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 66

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

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

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

Ala Gly Ile Gly Gly Gly Val Asp Ile Thr Tyr Tyr Ala Asp 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 Pro Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Ala Arg Pro Gly Arg Pro Leu Ile Thr Glu Lys Val Ala Asp Leu
100 105 110

Tyr Pro Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
115 120 125

<210> 67

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic Construct

<400> 67

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