

SEQUENCE LISTING

<110> REGENERON PHARMACEUTICALS, INC.

<120> NOVEL IL2 AGONISTS AND METHODS OF USE THEREOF

<130> RGN-006C-WO

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<150> 62/951,831

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<160> 124

<170> PatentIn version 3.5

<210> 1

<211> 5

<212> PRT

<213> Unknown

<220>

<221> source

<223> /note="Description of Unknown:
Type I cytokine receptor motif sequence"

<220>

<221> MOD_RES

<222> (3)..(3)

<223> Any amino acid

<400> 1

Trp Ser Xaa Trp Ser

1 5

<210> 2

<211> 133

<212> PRT

<213> Homo sapiens

<400> 2

Ala Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His

1 5 10 15

Leu Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys

20

25

30

Asn Pro Lys Leu Thr Arg Met Leu Thr Phe Lys Phe Tyr Met Pro Lys
 35 40 45

Lys Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys
 50 55 60

Pro Leu Glu Glu Val Leu Asn Leu Ala Gln Ser Lys Asn Phe His Leu
 65 70 75 80

Arg Pro Arg Asp Leu Ile Ser Asn Ile Asn Val Ile Val Leu Glu Leu
 85 90 95

Lys Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala
 100 105 110

Thr Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Cys Gln Ser Ile
 115 120 125

Ile Ser Thr Leu Thr
 130

<210> 3

<211> 251

<212> PRT

<213> Homo sapiens

<400> 3

Glu Leu Cys Asp Asp Asp Pro Pro Glu Ile Pro His Ala Thr Phe Lys
 1 5 10 15

Ala Met Ala Tyr Lys Glu Gly Thr Met Leu Asn Cys Glu Cys Lys Arg
 20 25 30

Gly Phe Arg Arg Ile Lys Ser Gly Ser Leu Tyr Met Leu Cys Thr Gly
 35 40 45

Asn Ser Ser His Ser Ser Trp Asp Asn Gln Cys Gln Cys Thr Ser Ser

50

55

60

Ala Thr Arg Asn Thr Thr Lys Gln Val Thr Pro Gln Pro Glu Glu Gln
65 70 75 80

Lys Glu Arg Lys Thr Thr Glu Met Gln Ser Pro Met Gln Pro Val Asp
85 90 95

Gln Ala Ser Leu Pro Gly His Cys Arg Glu Pro Pro Pro Trp Glu Asn
100 105 110

Glu Ala Thr Glu Arg Ile Tyr His Phe Val Val Gly Gln Met Val Tyr
115 120 125

Tyr Gln Cys Val Gln Gly Tyr Arg Ala Leu His Arg Gly Pro Ala Glu
130 135 140

Ser Val Cys Lys Met Thr His Gly Lys Thr Arg Trp Thr Gln Pro Gln
145 150 155 160

Leu Ile Cys Thr Gly Glu Met Glu Thr Ser Gln Phe Pro Gly Glu Glu
165 170 175

Lys Pro Gln Ala Ser Pro Glu Gly Arg Pro Glu Ser Glu Thr Ser Cys
180 185 190

Leu Val Thr Thr Thr Asp Phe Gln Ile Gln Thr Glu Met Ala Ala Thr
195 200 205

Met Glu Thr Ser Ile Phe Thr Thr Glu Tyr Gln Val Ala Val Ala Gly
210 215 220

Cys Val Phe Leu Leu Ile Ser Val Leu Leu Leu Ser Gly Leu Thr Trp
225 230 235 240

Gln Arg Arg Gln Arg Lys Ser Arg Arg Thr Ile
245 250

<210> 4

<211> 165

<212> PRT

<213> Homo sapiens

<400> 4

Glu Leu Cys Asp Asp Asp Pro Pro Glu Ile Pro His Ala Thr Phe Lys
1 5 10 15

Ala Met Ala Tyr Lys Glu Gly Thr Met Leu Asn Cys Glu Cys Lys Arg
20 25 30

Gly Phe Arg Arg Ile Lys Ser Gly Ser Leu Tyr Met Leu Cys Thr Gly
35 40 45

Asn Ser Ser His Ser Ser Trp Asp Asn Gln Cys Gln Cys Thr Ser Ser
50 55 60

Ala Thr Arg Asn Thr Thr Lys Gln Val Thr Pro Gln Pro Glu Glu Gln
65 70 75 80

Lys Glu Arg Lys Thr Thr Glu Met Gln Ser Pro Met Gln Pro Val Asp
85 90 95

Gln Ala Ser Leu Pro Gly His Cys Arg Glu Pro Pro Pro Trp Glu Asn
100 105 110

Glu Ala Thr Glu Arg Ile Tyr His Phe Val Val Gly Gln Met Val Tyr
115 120 125

Tyr Gln Cys Val Gln Gly Tyr Arg Ala Leu His Arg Gly Pro Ala Glu
130 135 140

Ser Val Cys Lys Met Thr His Gly Lys Thr Arg Trp Thr Gln Pro Gln
145 150 155 160

Leu Ile Cys Thr Gly
165

<210> 5

<211> 219

<212> PRT

<213> Homo sapiens

<400> 5

Glu Leu Cys Asp Asp Asp Pro Pro Glu Ile Pro His Ala Thr Phe Lys
1 5 10 15

Ala Met Ala Tyr Lys Glu Gly Thr Met Leu Asn Cys Glu Cys Lys Arg
20 25 30

Gly Phe Arg Arg Ile Lys Ser Gly Ser Leu Tyr Met Leu Cys Thr Gly
35 40 45

Asn Ser Ser His Ser Ser Trp Asp Asn Gln Cys Gln Cys Thr Ser Ser
50 55 60

Ala Thr Arg Asn Thr Thr Lys Gln Val Thr Pro Gln Pro Glu Glu Gln
65 70 75 80

Lys Glu Arg Lys Thr Thr Glu Met Gln Ser Pro Met Gln Pro Val Asp
85 90 95

Gln Ala Ser Leu Pro Gly His Cys Arg Glu Pro Pro Pro Trp Glu Asn
100 105 110

Glu Ala Thr Glu Arg Ile Tyr His Phe Val Val Gly Gln Met Val Tyr
115 120 125

Tyr Gln Cys Val Gln Gly Tyr Arg Ala Leu His Arg Gly Pro Ala Glu
130 135 140

Ser Val Cys Lys Met Thr His Gly Lys Thr Arg Trp Thr Gln Pro Gln
145 150 155 160

Leu Ile Cys Thr Gly Glu Met Glu Thr Ser Gln Phe Pro Gly Glu Glu
165 170 175

Lys Pro Gln Ala Ser Pro Glu Gly Arg Pro Glu Ser Glu Thr Ser Cys
180 185 190

Leu Val Thr Thr Thr Asp Phe Gln Ile Gln Thr Glu Met Ala Ala Thr
195 200 205

Met Glu Thr Ser Ile Phe Thr Thr Glu Tyr Gln
210 215

<210> 6

<211> 15

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 6

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

<210> 7

<211> 9

<212> PRT

<213> Human papillomavirus

<400> 7

Tyr Met Leu Asp Leu Gln Pro Glu Thr
1 5

<210> 8

<211> 9

<212> PRT

<213> Human papillomavirus

<400> 8

Leu Leu Met Gly Thr Leu Gly Ile Val
1 5

<210> 9

<211> 11

<212> PRT
<213> Artificial Sequence

<220>
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<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 9
Arg Pro His Ala Ile Arg Arg Pro Leu Ala Leu
1 5 10

<210> 10
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 10
Phe Leu Asp Glu Phe Met Glu Gly Val
1 5

<210> 11
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 11
Leu Thr Asp Asp Arg Leu Phe Thr Cys Tyr
1 5 10

<210> 12
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
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<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 12

Val Val Met Ser Trp Ala Pro Pro Val
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<210> 13

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 13

Leu Leu Leu Asp Asp Leu Leu Val Ser Ile
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<210> 14

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 14

Lys Thr Leu Thr Ser Val Phe Gln Lys
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<210> 15

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 15

Glu Ala Phe Ile Gln Pro Ile Thr Arg

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<210> 16

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 16

Arg Pro His Val Pro Glu Ser Ala Phe

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<210> 17

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 17

Ser Leu Ala Asp Glu Ala Glu Val Tyr Leu

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<210> 18

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 18

Lys Leu Tyr Glu Glu Pro Leu Leu Lys

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<210> 19

<211> 9

<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 19
Lys Ile Phe Ser Glu Val Thr Leu Lys
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<210> 20
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 20
Glu Thr Val Ser Glu Gln Ser Asn Val
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<210> 21
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
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<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 21
Val Leu His Asp Asp Leu Leu Glu Ala
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<210> 22
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
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<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 22

Gly Ile Val Glu Gly Leu Ile Thr Thr Val
1 5 10

<210> 23

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 23

Asp Tyr Leu Gln Tyr Val Leu Gln Ile
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<210> 24

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 24

Ser Leu Phe Glu Gly Ile Asp Ile Tyr Thr
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<210> 25

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 25

Phe Ile Ala Ser Asn Gly Val Lys Leu Val

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<210> 26

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 26

Cys Ile Leu Gly Lys Leu Phe Thr Lys

1

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<210> 27

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 27

Gln Thr Ala Cys Glu Val Leu Asp Tyr

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<210> 28

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 28

Ile Leu Asn Ala Met Ile Ala Lys Ile

1

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<210> 29

<211> 10

<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 29
Lys Glu Phe Glu Asp Asp Ile Ile Asn Trp
1 5 10

<210> 30
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 30
Tyr Thr Asp Phe His Cys Gln Tyr Val
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<210> 31
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 31
Glu Glu Lys Arg Gly Ser Leu His Val Trp
1 5 10

<210> 32
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<221> source

<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 32

Ser Glu Leu Phe Arg Ser Gly Leu Asp Ser Tyr
1 5 10

<210> 33

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 33

Ala Glu Pro Ile Asp Ile Gln Thr Trp
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<210> 34

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

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<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 34

Thr Leu Asp Trp Leu Leu Gln Thr Pro Lys
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<210> 35

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

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<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 35

Gly Leu Phe Gly Asp Ile Tyr Leu Ala Ile

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<210> 36

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 36

Ile Leu Asp Lys Val Leu Val His Leu

1

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<210> 37

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 37

Ser Tyr Leu Asp Ser Gly Ile His Phe

1

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<210> 38

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 38

Lys Ile Leu Asp Ala Val Val Ala Gln Lys

1

5

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<210> 39

<211> 9

<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 39
Lys Glu Leu Glu Gly Ile Leu Leu Leu
1 5

<210> 40
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 40
Lys Ile Asn Lys Asn Pro Lys Tyr Lys
1 5

<210> 41
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 41
Phe Leu Glu Gly Asn Glu Val Gly Lys Thr Tyr
1 5 10

<210> 42
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<221> source

<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 42

Ala Gln Gln Ile Thr Lys Thr Glu Val
1 5

<210> 43

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 43

Ala Cys Asp Pro His Ser Gly His Phe Val
1 5 10

<210> 44

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 44

Ala Val Cys Pro Trp Thr Trp Leu Arg
1 5

<210> 45

<211> 11

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 45

Met Glu Ile Phe Ile Glu Val Phe Ser His Phe

1

5

10

<210> 46

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 46

Arg Val Trp Asp Leu Pro Gly Val Leu Lys

1

5

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<210> 47

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 47

Glu Glu Lys Leu Ile Val Val Leu Phe

1

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<210> 48

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 48

Thr Pro Asn Gln Arg Gln Asn Val Cys

1

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<210> 49

<211> 232

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 49

Asp Lys Arg Val Glu Ser Lys Tyr Gly Pro Pro Cys Pro Pro Cys Pro
1 5 10 15

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

Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val
35 40 45

Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val
50 55 60

Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln
65 70 75 80

Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln
85 90 95

Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly
100 105 110

Leu Pro Ser Ser 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 Gln Glu Glu Met 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

165

170

175

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

Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe
195 200 205

Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys
210 215 220

Ser Leu Ser Leu Ser Leu Gly Lys
225 230

<210> 50

<211> 235

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 50

Asp Lys Lys Val Glu Pro Lys Ser Cys Asp Lys Thr His Thr Cys Pro
1 5 10 15

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

Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr
35 40 45

Cys Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn
50 55 60

Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg
65 70 75 80

Glu Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val
85 90 95

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

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

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

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

Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu
165 170 175

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

Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly
195 200 205

Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr
210 215 220

Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys
225 230 235

<210> 51

<211> 329

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 51

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

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

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

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

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

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

195

200

205

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

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

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

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

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

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

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

Lys Ser Leu Ser Leu Ser Pro Gly Lys
 325

<210> 52

<211> 326

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic
 polypeptide"

<400> 52

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 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 Gln 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 Tyr Arg Val Val Ser Val Leu Thr Val Leu 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

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

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

Leu Thr Val Asp Lys Ser Arg Trp Gln Glu 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 Leu Gly Lys
325

<210> 53
<211> 329
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 53
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 Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro Lys
 115 120 125

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

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

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

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

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

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

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

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

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

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

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

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

Lys Ser Leu Ser Leu Ser Pro Gly Lys
325

<210> 54

<211> 326

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 54

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 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 Gln 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 Tyr Arg Val Val Ser Val Leu Thr Val Leu 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

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

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

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

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

Ser Leu Ser Leu Gly Lys
325

<210> 55
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<220>
<221> SITE
<222> (1)..(9)
<223> /note="Each of amino acids 1-9 can independently be
present or absent"

<400> 55
Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Ser
1 5 10

<210> 56
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic

peptide"

<220>

<221> SITE

<222> (2)..(10)

<223> /note="Each of amino acids 2-10 can independently be present or absent"

<400> 56

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

<210> 57

<211> 5

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 57

Gly Gly Gly Gly Ser
1 5

<210> 58

<211> 4

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 58

Gly Gly Gly Gly
1

<210> 59

<211> 5

<212> PRT

<213> Artificial Sequence

<220>

<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 59
Gly Gly Gly Gly Gly
1 5

<210> 60
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 60
Gly Gly Gly Gly Gly Gly
1 5

<210> 61
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 61
Gly Gly Gly Gly Gly Gly Gly
1 5

<210> 62
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 62

Gly Gly Gly Gly Gly Gly Gly Gly
1 5

<210> 63

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 63

Gly Gly Gly Gly Gly Gly Gly Gly Gly
1 5

<210> 64

<211> 5

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 64

Gly Ser Gly Gly Ser
1 5

<210> 65

<211> 4

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 65

Gly Gly Gly Ser
1

<210> 66

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

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 66
Gly Gly Ser Gly
1

<210> 67
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 67
Gly Gly Ser Gly Gly
1 5

<210> 68
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 68
Gly Ser Gly Ser Gly
1 5

<210> 69
<211> 5
<212> PRT
<213> Artificial Sequence

<220>

<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 69
Gly Ser Gly Gly Gly
1 5

<210> 70
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 70
Gly Gly Gly Ser Gly
1 5

<210> 71
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 71
Gly Ser Ser Ser Gly
1 5

<210> 72
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 72

Gly Cys Gly Ala Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
1 5 10 15

<210> 73

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 73

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

<210> 74

<211> 15

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 74

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

<210> 75

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 75

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

<210> 76

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

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 76
Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly
1 5 10 15

Gly Gly Gly Ser
20

<210> 77
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 77
Gly Cys Gly Gly Ser
1 5

<210> 78
<211> 4
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 78
Cys Pro Pro Cys
1

<210> 79
<211> 4

<212> PRT
<213> Homo sapiens

<400> 79
Cys Pro Ser Cys
1

<210> 80
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 80
Glu Pro Lys Ser Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala
1 5 10 15

Pro Pro Val Ala
20

<210> 81
<211> 17
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 81
Glu Ser Lys Tyr Gly Pro Pro Cys Pro Pro Cys Pro Ala Pro Pro Val
1 5 10 15

Ala

<210> 82
<211> 15
<212> PRT
<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 82

Cys Pro Pro Cys Pro Ala Pro Gly Gly Gly Gly Pro Ser Val Phe
1 5 10 15

<210> 83

<211> 14

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 83

Cys Pro Pro Cys Pro Ala Pro Gly Gly Gly Pro Ser Val Phe
1 5 10

<210> 84

<211> 13

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 84

Cys Pro Pro Cys Pro Ala Pro Gly Gly Pro Ser Val Phe
1 5 10

<210> 85

<211> 12

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 85

Cys Pro Pro Cys Pro Ala Pro Gly Pro Ser Val Phe
1 5 10

<210> 86

<211> 21

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 86

Leu Cys Tyr Leu Leu Asp Gly Ile Leu Phe Ile Tyr Gly Val Ile Leu
1 5 10 15

Thr Ala Leu Phe Leu
20

<210> 87

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 87

Leu Asp Pro Lys Leu Cys Tyr Leu Leu Asp Gly Ile Leu Phe Ile Tyr
1 5 10 15

Gly Val Ile Leu Thr Ala Leu Phe Leu Arg Val Lys
20 25

<210> 88

<211> 27

<212> PRT

<213> Artificial Sequence

<220>

<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 88
Phe Trp Val Leu Val Val Val Gly Gly Val Leu Ala Cys Tyr Ser Leu
1 5 10 15

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

<210> 89
<211> 45
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 89
Lys Pro Thr Thr Thr Pro Ala Pro Arg Pro Pro Thr Pro Ala Pro Thr
1 5 10 15

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

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

<210> 90
<211> 137
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 90
Leu Asp Pro Lys Leu Cys Tyr Leu Leu Asp Gly Ile Leu Phe Ile Tyr
1 5 10 15

Gly Val Ile Leu Thr Ala Leu Phe Leu Arg Val Lys Phe Ser Arg Ser
20 25 30

Ala Asp Ala Pro Ala Tyr Gln Gln Gly Gln Asn Gln Leu Tyr Asn Glu
35 40 45

Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg
50 55 60

Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln
65 70 75 80

Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr
85 90 95

Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His Asp
100 105 110

Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala
115 120 125

Leu His Met Gln Ala Leu Pro Pro Arg
130 135

<210> 91

<211> 112

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 91

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

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

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

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

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

Arg Arg Gly Lys Gly His Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala
85 90 95

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

<210> 92

<211> 108

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 92

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

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

Leu Phe Pro Gly Pro Ser Lys Pro Phe Trp Val Leu Val Val Val Gly
35 40 45

Gly Val Leu Ala Cys Tyr Ser Leu Leu Val Thr Val Ala Phe Ile Ile
50 55 60

Phe Trp Val Arg Ser Lys Arg Ser Arg Leu Leu His Ser Asp Tyr Met

65		70		75		80
Asn Met Thr Pro Arg Arg Pro Gly Pro Thr Arg Lys His Tyr Gln Pro						
	85		90		95	

Tyr Ala Pro Pro Arg Asp Phe Ala Ala Tyr Arg Ser
100 105

<210> 93
 <211> 41
 <212> PRT
 <213> Artificial Sequence

<220>
 <221> source
 <223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 93
Arg Ser Lys Arg Ser Arg Leu Leu His Ser Asp Tyr Met Asn Met Thr
1 5 10 15

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

Pro Arg Asp Phe Ala Ala Tyr Arg Ser
35 40

<210> 94
 <211> 40
 <212> PRT
 <213> Artificial Sequence

<220>
 <221> source
 <223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 94
Lys Ile Glu Val Met Tyr Pro Pro Pro Tyr Leu Asp Asn Glu Lys Ser
1 5 10 15

Asn Gly Thr Ile Ile His Val Lys Gly Lys His Leu Cys Pro Ser Pro

20

25

30

Leu Phe Pro Gly Pro Ser Lys Pro
35 40

<210> 95

<211> 42

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 95

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

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

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

<210> 96

<211> 14

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 96

Gly Lys Pro Ile Pro Asn Pro Leu Leu Gly Leu Asp Ser Thr
1 5 10

<210> 97

<211> 9

<212> PRT

<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 97
Ile Pro Asn Pro Leu Leu Gly Leu Asp
1 5

<210> 98
<211> 366
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 98
Ala Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His
1 5 10 15

Leu Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys
20 25 30

Asn Pro Lys Leu Thr Arg Met Leu Thr Ala Lys Phe Ala Met Pro Lys
35 40 45

Lys Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys
50 55 60

Pro Leu Glu Glu Val Leu Asn Gly Ala Gln Ser Lys Asn Phe His Leu
65 70 75 80

Arg Pro Arg Asp Leu Ile Ser Asn Ile Asn Val Ile Val Leu Glu Leu
85 90 95

Lys Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala
100 105 110

Thr Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Cys Gln Ser Ile

115

120

125

Ile Ser Thr Leu Thr Gly Gly Gly Gly Ser Glu Ser Lys Tyr Gly Pro
 130 135 140

Pro Cys Pro Pro Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe
 145 150 155 160

Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro
 165 170 175

Glu Val Thr Cys Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val
 180 185 190

Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr
 195 200 205

Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val
 210 215 220

Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys
 225 230 235 240

Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser
 245 250 255

Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro
 260 265 270

Ser Gln Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val
 275 280 285

Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly
 290 295 300

Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp
 305 310 315 320

Gly Ser Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp
325 330 335

Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His
340 345 350

Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys
355 360 365

<210> 99

<211> 366

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 99

Ala Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His
1 5 10 15

Leu Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys
20 25 30

Asn Pro Lys Leu Thr Arg Met Leu Thr Phe Lys Phe Tyr Met Pro Lys
35 40 45

Lys Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys
50 55 60

Pro Leu Glu Glu Val Leu Asn Leu Ala Gln Ser Lys Asn Phe His Leu
65 70 75 80

Arg Pro Arg Asp Leu Ile Ser Asn Ile Asn Val Ile Val Leu Glu Leu
85 90 95

Lys Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala
100 105 110

Thr Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Cys Gln Ser Ile
115 120 125

Ile Ser Thr Leu Thr Gly Gly Gly Gly Ser Glu Ser Lys Tyr Gly Pro
130 135 140

Pro Cys Pro Pro Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe
145 150 155 160

Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro
165 170 175

Glu Val Thr Cys Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val
180 185 190

Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr
195 200 205

Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val
210 215 220

Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys
225 230 235 240

Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser
245 250 255

Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro
260 265 270

Ser Gln Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val
275 280 285

Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly
290 295 300

Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp
305 310 315 320

Gly Ser Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp
325 330 335

Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His
340 345 350

Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys
355 360 365

<210> 100

<211> 550

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 100

Ala Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His
1 5 10 15

Leu Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys
20 25 30

Asn Pro Lys Leu Thr Arg Met Leu Thr Phe Lys Phe Tyr Met Pro Lys
35 40 45

Lys Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys
50 55 60

Pro Leu Glu Glu Val Leu Asn Leu Ala Gln Ser Lys Asn Phe His Leu
65 70 75 80

Arg Pro Arg Asp Leu Ile Ser Asn Ile Asn Val Ile Val Leu Glu Leu
85 90 95

Lys Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala
100 105 110

Thr Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Cys Gln Ser Ile
115 120 125

Ile Ser Thr Leu Thr Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly
130 135 140

Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Leu Cys Asp Asp Asp Pro
145 150 155 160

Pro Glu Ile Pro His Ala Thr Phe Lys Ala Met Ala Tyr Lys Glu Gly
165 170 175

Thr Met Leu Asn Cys Glu Cys Lys Arg Gly Phe Arg Arg Ile Lys Ser
180 185 190

Gly Ser Leu Tyr Met Leu Cys Thr Gly Asn Ser Ser His Ser Ser Trp
195 200 205

Asp Asn Gln Cys Gln Cys Thr Ser Ser Ala Thr Arg Asn Thr Thr Lys
210 215 220

Gln Val Thr Pro Gln Pro Glu Glu Gln Lys Glu Arg Lys Thr Thr Glu
225 230 235 240

Met Gln Ser Pro Met Gln Pro Val Asp Gln Ala Ser Leu Pro Gly His
245 250 255

Cys Arg Glu Pro Pro Pro Trp Glu Asn Glu Ala Thr Glu Arg Ile Tyr
260 265 270

His Phe Val Val Gly Gln Met Val Tyr Tyr Gln Cys Val Gln Gly Tyr
275 280 285

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

290

295

300

Gly Lys Thr Arg Trp Thr Gln Pro Gln Leu Ile Cys Thr Gly Gly Gly
 305 310 315 320

Gly Ser Glu Ser Lys Tyr Gly Pro Pro Cys Pro Pro Cys Pro Ala Pro
 325 330 335

Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp
 340 345 350

Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp
 355 360 365

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

Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn
 385 390 395 400

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

Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro
 420 425 430

Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu
 435 440 445

Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn
 450 455 460

Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile
 465 470 475 480

Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr
 485 490 495

Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg
500 505 510

Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys
515 520 525

Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu
530 535 540

Ser Leu Ser Leu Gly Lys
545 550

<210> 101

<211> 566

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 101

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

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

Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser
35 40 45

Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val Glu
50 55 60

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

Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn
85 90 95

Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser Ser
100 105 110

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

Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln Val
130 135 140

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

Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro
165 170 175

Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu Thr
180 185 190

Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser Val
195 200 205

Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu
210 215 220

Ser Leu Gly Lys Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly
225 230 235 240

Gly Gly Ser Glu Leu Cys Asp Asp Asp Pro Pro Glu Ile Pro His Ala
245 250 255

Thr Phe Lys Ala Met Ala Tyr Lys Glu Gly Thr Met Leu Asn Cys Glu
260 265 270

Cys Lys Arg Gly Phe Arg Arg Ile Lys Ser Gly Ser Leu Tyr Met Leu
275 280 285

Cys Thr Gly Asn Ser Ser His Ser Ser Trp Asp Asn Gln Cys Gln Cys
290 295 300

Thr Ser Ser Ala Thr Arg Asn Thr Thr Lys Gln Val Thr Pro Gln Pro
305 310 315 320

Glu Glu Gln Lys Glu Arg Lys Thr Thr Glu Met Gln Ser Pro Met Gln
325 330 335

Pro Val Asp Gln Ala Ser Leu Pro Gly His Cys Arg Glu Pro Pro Pro
340 345 350

Trp Glu Asn Glu Ala Thr Glu Arg Ile Tyr His Phe Val Val Gly Gln
355 360 365

Met Val Tyr Tyr Gln Cys Val Gln Gly Tyr Arg Ala Leu His Arg Gly
370 375 380

Pro Ala Glu Ser Val Cys Lys Met Thr His Gly Lys Thr Arg Trp Thr
385 390 395 400

Gln Pro Gln Leu Ile Cys Thr Gly Gly Gly Gly Gly Ser Gly Gly Gly
405 410 415

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly
420 425 430

Ser Ala Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu
435 440 445

His Leu Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr
450 455 460

Lys Asn Pro Lys Leu Thr Arg Met Leu Thr Phe Lys Phe Tyr Met Pro
465 470 475 480

Lys Lys Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu
485 490 495

Lys Pro Leu Glu Glu Val Leu Asn Leu Ala Gln Ser Lys Asn Phe His
500 505 510

Leu Arg Pro Arg Asp Leu Ile Ser Asn Ile Asn Val Ile Val Leu Glu
515 520 525

Leu Lys Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr
530 535 540

Ala Thr Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Cys Gln Ser
545 550 555 560

Ile Ile Ser Thr Leu Thr
565

<210> 102

<211> 364

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 102

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

Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met
20 25 30

Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His
35 40 45

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 Gly Ser Thr Tyr

80

95

110

125

140

160

175

190

205

220

240

255

270

Phe Lys Phe Tyr Met Pro Lys Lys Ala Thr Glu Leu Lys His Leu Gln
275 280 285

Cys Leu Glu Glu Glu Leu Lys Pro Leu Glu Glu Val Leu Asn Leu Ala
290 295 300

Gln Ser Lys Asn Phe His Leu Arg Pro Arg Asp Leu Ile Ser Asn Ile
305 310 315 320

Asn Val Ile Val Leu Glu Leu Lys Gly Ser Glu Thr Thr Phe Met Cys
325 330 335

Glu Tyr Ala Asp Glu Thr Ala Thr Ile Val Glu Phe Leu Asn Arg Trp
340 345 350

Ile Thr Phe Ala Gln Ser Ile Ile Ser Thr Leu Thr
355 360

<210> 103

<211> 364

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 103

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

Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met
20 25 30

Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His
35 40 45

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 Gly Ser Thr Tyr
65 70 75 80

Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly
85 90 95

Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile
100 105 110

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

Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser
130 135 140

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

Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro
165 170 175

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
195 200 205

His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser
210 215 220

Pro Gly Gly Gly Gly Gly Ser Ala Pro Thr Ser Ser Ser Thr Lys Lys
225 230 235 240

Thr Gln Leu Gln Leu Glu His Leu Leu Leu Asp Leu Gln Met Ile Leu
245 250 255

Asn Gly Ile Asn Asn Tyr Lys Asn Pro Lys Leu Thr Arg Met Leu Thr
260 265 270

Phe Lys Phe Tyr Met Pro Lys Lys Ala Thr Glu Leu Lys His Leu Gln
275 280 285

Cys Leu Glu Glu Glu Leu Lys Pro Leu Glu Glu Val Leu Asn Leu Ala
290 295 300

Gln Ser Lys Asn Phe His Leu Arg Pro Arg Asp Leu Ile Ser Asp Ile
305 310 315 320

Asn Val Ile Val Leu Glu Leu Lys Gly Ser Glu Thr Thr Phe Met Cys
325 330 335

Glu Tyr Ala Asp Glu Thr Ala Thr Ile Val Glu Phe Leu Asn Arg Trp
340 345 350

Ile Thr Phe Ala Gln Ser Ile Ile Ser Thr Leu Thr
355 360

<210> 104

<211> 376

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 104

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

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

Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser
35 40 45

Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val Glu
50 55 60

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

Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn
85 90 95

Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser Ser
100 105 110

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

Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln Val
130 135 140

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

Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro
165 170 175

Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu Thr
180 185 190

Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser Val
195 200 205

Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu
210 215 220

Ser Leu Gly Lys Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly
225 230 235 240

Gly Gly Ser Ala Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln

245

250

255

Leu Glu Ala Leu Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn
 260 265 270

Asn Tyr Lys Asn Pro Lys Leu Thr Arg Met Leu Thr Ala Lys Phe Tyr
 275 280 285

Met Pro Lys Lys Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu
 290 295 300

Glu Leu Lys Pro Leu Glu Glu Val Leu Asn Leu Ala Gln Ser Lys Asn
 305 310 315 320

Phe His Leu Arg Pro Arg Asp Leu Ile Ser Asn Ile Asn Val Ile Val
 325 330 335

Leu Glu Leu Lys Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp
 340 345 350

Glu Thr Ala Thr Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Cys
 355 360 365

Gln Ser Ile Ile Ser Thr Leu Thr
 370 375

<210> 105

<211> 366

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic
 polypeptide"

<400> 105

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

Leu Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys
20 25 30

Asn Pro Lys Leu Thr Arg Met Leu Thr Ala Lys Phe Tyr Met Pro Lys
35 40 45

Lys Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys
50 55 60

Pro Leu Glu Glu Val Leu Asn Leu Ala Gln Ser Lys Asn Phe His Leu
65 70 75 80

Arg Pro Arg Asp Leu Ile Ser Asn Ile Asn Val Ile Val Leu Glu Leu
85 90 95

Lys Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala
100 105 110

Thr Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Cys Gln Ser Ile
115 120 125

Ile Ser Thr Leu Thr Gly Gly Gly Gly Ser Glu Ser Lys Tyr Gly Pro
130 135 140

Pro Cys Pro Pro Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe
145 150 155 160

Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro
165 170 175

Glu Val Thr Cys Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val
180 185 190

Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr
195 200 205

Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val
210 215 220

Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys
225 230 235 240

Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser
245 250 255

Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro
260 265 270

Ser Gln Glu Glu Met Thr Lys Asn Gln Val Ser Leu Ser Cys Ala Val
275 280 285

Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly
290 295 300

Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp
305 310 315 320

Gly Ser Phe Phe Leu Val Ser Arg Leu Thr Val Asp Lys Ser Arg Trp
325 330 335

Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His
340 345 350

Asn Arg Phe Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys
355 360 365

<210> 106

<211> 464

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 106

Asn Trp Val Asn Val Ile Ser Asp Leu Lys Lys Ile Glu Asp Leu Ile

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

Val His Gln Arg Pro Ala Pro Pro Gly Gly Gly Gly Ser Gly Gly Gly
210 215 220

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Ser Lys Tyr
225 230 235 240

Gly Pro Pro Cys Pro Pro Cys Pro Ala Pro Pro Val Ala Gly Pro Ser
245 250 255

Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg
260 265 270

Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser Gln Glu Asp Pro
275 280 285

Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala
290 295 300

Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Tyr Arg Val Val
305 310 315 320

Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr
325 330 335

Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr
340 345 350

Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu
355 360 365

Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys
370 375 380

Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser
385 390 395 400

Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp

405

410

415

Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser
 420 425 430

Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala
 435 440 445

Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys
 450 455 460

<210> 107

<211> 454

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic
 polypeptide"

<400> 107

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

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

Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser
 35 40 45

Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val Glu
 50 55 60

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

Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn
 85 90 95

Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser Ser
100 105 110

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

Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln Val
130 135 140

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

Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro
165 170 175

Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu Thr
180 185 190

Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser Val
195 200 205

Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu
210 215 220

Ser Leu Gly Lys Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly
225 230 235 240

Gly Gly Ser Ile Thr Cys Pro Pro Pro Met Ser Val Glu His Ala Asp
245 250 255

Ile Trp Val Lys Ser Tyr Ser Leu Tyr Ser Arg Glu Arg Tyr Ile Cys
260 265 270

Asn Ser Gly Phe Lys Arg Lys Ala Gly Thr Ser Ser Leu Thr Glu Cys
275 280 285

Val Leu Asn Lys Ala Thr Asn Val Ala His Trp Thr Thr Pro Ser Leu
290 295 300

Lys Cys Ile Arg Asp Pro Ala Leu Val His Gln Arg Pro Ala Pro Pro
305 310 315 320

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly
325 330 335

Gly Gly Gly Ser Asn Trp Val Asn Val Ile Ser Asp Leu Lys Lys Ile
340 345 350

Glu Asp Leu Ile Gln Ser Met His Ile Asp Ala Thr Leu Tyr Thr Glu
355 360 365

Ser Asp Val His Pro Ser Cys Lys Val Thr Ala Met Lys Cys Phe Leu
370 375 380

Leu Glu Leu Gln Val Ile Ser Leu Glu Ser Gly Asp Ala Ser Ile His
385 390 395 400

Asp Thr Val Glu Asn Leu Ile Ile Leu Ala Asn Asn Ser Leu Ser Ser
405 410 415

Asn Gly Asn Val Thr Glu Ser Gly Cys Lys Glu Cys Glu Glu Leu Glu
420 425 430

Glu Lys Asn Ile Lys Glu Phe Leu Gln Ser Phe Val His Ile Val Gln
435 440 445

Met Phe Ile Asn Thr Ser
450

<210> 108

<211> 419

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic

polypeptide"

<400> 108

Asn Leu Val Pro Met Val Ala Thr Val Gly Cys Gly Gly Ser Gly Gly
1 5 10 15

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

Val Tyr Ser Arg His Pro Ala Glu Asn Gly Lys Ser Asn Phe Leu Asn
35 40 45

Cys Tyr Val Ser Gly Phe His Pro Ser Asp Ile Glu Val Asp Leu Leu
50 55 60

Lys Asn Gly Glu Arg Ile Glu Lys Val Glu His Ser Asp Leu Ser Phe
65 70 75 80

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

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

Gln Pro Lys Ile Val Lys Trp Asp Arg Asp Met Gly Gly Gly Gly Ser
115 120 125

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

Ser His Ser Met Arg Tyr Phe Phe Thr Ser Val Ser Arg Pro Gly Arg
145 150 155 160

Gly Glu Pro Arg Phe Ile Ala Val Gly Tyr Val Asp Asp Thr Gln Phe
165 170 175

Val Arg Phe Asp Ser Asp Ala Ala Ser Gln Arg Met Glu Pro Arg Ala
180 185 190

Pro Trp Ile Glu Gln Glu Gly Pro Glu Tyr Trp Asp Gly Glu Thr Arg
195 200 205

Lys Val Lys Ala His Ser Gln Thr His Arg Val Asp Leu Gly Thr Leu
210 215 220

Arg Gly Cys Tyr Asn Gln Ser Glu Ala Gly Ser His Thr Val Gln Arg
225 230 235 240

Met Tyr Gly Cys Asp Val Gly Ser Asp Trp Arg Phe Leu Arg Gly Tyr
245 250 255

His Gln Tyr Ala Tyr Asp Gly Lys Asp Tyr Ile Ala Leu Lys Glu Asp
260 265 270

Leu Arg Ser Trp Thr Ala Ala Asp Met Ala Ala Gln Thr Thr Lys His
275 280 285

Lys Trp Glu Ala Ala His Val Ala Glu Gln Leu Arg Ala Tyr Leu Glu
290 295 300

Gly Thr Cys Val Glu Trp Leu Arg Arg Tyr Leu Glu Asn Gly Lys Glu
305 310 315 320

Thr Leu Gln Arg Thr Asp Ala Pro Lys Thr His Met Thr His His Ala
325 330 335

Val Ser Asp His Glu Ala Thr Leu Arg Cys Trp Ala Leu Ser Phe Tyr
340 345 350

Pro Ala Glu Ile Thr Leu Thr Trp Gln Arg Asp Gly Glu Asp Gln Thr
355 360 365

Gln Asp Thr Glu Leu Val Glu Thr Arg Pro Ala Gly Asp Gly Thr Phe
370 375 380

Gln Lys Trp Ala Ala Val Val Val Pro Ser Gly Gln Glu Gln Arg Tyr

385 390 395 400

Thr Cys His Val Gln His Glu Gly Leu Pro Lys Pro Leu Thr Leu Arg
405 410 415

Trp Glu Pro

<210> 109
<211> 419
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 109
Tyr Met Leu Asp Leu Gln Pro Glu Thr Gly Cys Gly Gly Ser Gly Gly
1 5 10 15

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

Val Tyr Ser Arg His Pro Ala Glu Asn Gly Lys Ser Asn Phe Leu Asn
35 40 45

Cys Tyr Val Ser Gly Phe His Pro Ser Asp Ile Glu Val Asp Leu Leu
50 55 60

Lys Asn Gly Glu Arg Ile Glu Lys Val Glu His Ser Asp Leu Ser Phe
65 70 75 80

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

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

Gln Pro Lys Ile Val Lys Trp Asp Arg Asp Met Gly Gly Gly Gly Ser
115 120 125

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

Ser His Ser Met Arg Tyr Phe Phe Thr Ser Val Ser Arg Pro Gly Arg
145 150 155 160

Gly Glu Pro Arg Phe Ile Ala Val Gly Tyr Val Asp Asp Thr Gln Phe
165 170 175

Val Arg Phe Asp Ser Asp Ala Ala Ser Gln Arg Met Glu Pro Arg Ala
180 185 190

Pro Trp Ile Glu Gln Glu Gly Pro Glu Tyr Trp Asp Gly Glu Thr Arg
195 200 205

Lys Val Lys Ala His Ser Gln Thr His Arg Val Asp Leu Gly Thr Leu
210 215 220

Arg Gly Cys Tyr Asn Gln Ser Glu Ala Gly Ser His Thr Val Gln Arg
225 230 235 240

Met Tyr Gly Cys Asp Val Gly Ser Asp Trp Arg Phe Leu Arg Gly Tyr
245 250 255

His Gln Tyr Ala Tyr Asp Gly Lys Asp Tyr Ile Ala Leu Lys Glu Asp
260 265 270

Leu Arg Ser Trp Thr Ala Ala Asp Met Ala Ala Gln Thr Thr Lys His
275 280 285

Lys Trp Glu Ala Ala His Val Ala Glu Gln Leu Arg Ala Tyr Leu Glu
290 295 300

Gly Thr Cys Val Glu Trp Leu Arg Arg Tyr Leu Glu Asn Gly Lys Glu
305 310 315 320

Thr Leu Gln Arg Thr Asp Ala Pro Lys Thr His Met Thr His His Ala
325 330 335

Val Ser Asp His Glu Ala Thr Leu Arg Cys Trp Ala Leu Ser Phe Tyr
340 345 350

Pro Ala Glu Ile Thr Leu Thr Trp Gln Arg Asp Gly Glu Asp Gln Thr
355 360 365

Gln Asp Thr Glu Leu Val Glu Thr Arg Pro Ala Gly Asp Gly Thr Phe
370 375 380

Gln Lys Trp Ala Ala Val Val Val Pro Ser Gly Gln Glu Gln Arg Tyr
385 390 395 400

Thr Cys His Val Gln His Glu Gly Leu Pro Lys Pro Leu Thr Leu Arg
405 410 415

Trp Glu Pro

<210> 110

<211> 427

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 110

Ser Ile Ile Asn Phe Glu Lys Leu Gly Cys Gly Gly Ser Gly Gly Gly
1 5 10 15

Gly Ser Gly Gly Gly Gly Ser Ile Gln Lys Thr Pro Gln Ile Gln Val
20 25 30

Tyr Ser Arg His Pro Pro Glu Asn Gly Lys Pro Asn Ile Leu Asn Cys

35

40

45

Tyr Val Thr Gln Phe His Pro Pro His Ile Glu Ile Gln Met Leu Lys
 50 55 60

Asn Gly Lys Lys Ile Pro Lys Val Glu Met Ser Asp Met Ser Phe Ser
 65 70 75 80

Lys Asp Trp Ser Phe Tyr Ile Leu Ala His Thr Glu Phe Thr Pro Thr
 85 90 95

Glu Thr Asp Thr Tyr Ala Cys Arg Val Lys His Ala Ser Met Ala Glu
 100 105 110

Pro Lys Thr Val Tyr Trp Asp Arg Asp Met Gly Gly Gly Gly Ser Gly
 115 120 125

Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Pro
 130 135 140

His Ser Leu Arg Tyr Phe Val Thr Ala Val Ser Arg Pro Gly Leu Gly
 145 150 155 160

Glu Pro Arg Tyr Met Glu Val Gly Tyr Val Asp Asp Thr Glu Phe Val
 165 170 175

Arg Phe Asp Ser Asp Ala Glu Asn Pro Arg Tyr Glu Pro Arg Ala Arg
 180 185 190

Trp Met Glu Gln Glu Gly Pro Glu Tyr Trp Glu Arg Glu Thr Gln Lys
 195 200 205

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

Gly Cys Tyr Asn Gln Ser Lys Gly Gly Ser His Thr Ile Gln Val Ile
 225 230 235 240

Ser Gly Cys Glu Val Gly Ser Asp Gly Arg Leu Leu Arg Gly Tyr Gln
245 250 255

Gln Tyr Ala Tyr Asp Gly Cys Asp Tyr Ile Ala Leu Asn Glu Asp Leu
260 265 270

Lys Thr Trp Thr Ala Ala Asp Met Ala Ala Leu Ile Thr Lys His Lys
275 280 285

Trp Glu Gln Ala Gly Glu Ala Glu Arg Leu Arg Ala Tyr Leu Glu Gly
290 295 300

Thr Cys Val Glu Trp Leu Arg Arg Tyr Leu Lys Asn Gly Asn Ala Thr
305 310 315 320

Leu Leu Arg Thr Asp Ser Pro Lys Ala His Val Thr His His Ser Arg
325 330 335

Pro Glu Asp Lys Val Thr Leu Arg Cys Trp Ala Leu Gly Phe Tyr Pro
340 345 350

Ala Asp Ile Thr Leu Thr Trp Gln Leu Asn Gly Glu Glu Leu Ile Gln
355 360 365

Asp Met Glu Leu Val Glu Thr Arg Pro Ala Gly Asp Gly Thr Phe Gln
370 375 380

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

Cys His Val Tyr His Gln Gly Leu Pro Glu Pro Leu Thr Leu Arg Trp
405 410 415

Glu Pro Pro Pro Ser Thr Val Ser Asn Met Ala
420 425

<210> 111

<211> 427
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 111
Lys Ser Pro Trp Phe Thr Thr Leu Gly Cys Gly Gly Ser Gly Gly Gly
1 5 10 15

Gly Ser Gly Gly Gly Gly Ser Ile Gln Lys Thr Pro Gln Ile Gln Val
20 25 30

Tyr Ser Arg His Pro Pro Glu Asn Gly Lys Pro Asn Ile Leu Asn Cys
35 40 45

Tyr Val Thr Gln Phe His Pro Pro His Ile Glu Ile Gln Met Leu Lys
50 55 60

Asn Gly Lys Lys Ile Pro Lys Val Glu Met Ser Asp Met Ser Phe Ser
65 70 75 80

Lys Asp Trp Ser Phe Tyr Ile Leu Ala His Thr Glu Phe Thr Pro Thr
85 90 95

Glu Thr Asp Thr Tyr Ala Cys Arg Val Lys His Ala Ser Met Ala Glu
100 105 110

Pro Lys Thr Val Tyr Trp Asp Arg Asp Met Gly Gly Gly Gly Ser Gly
115 120 125

Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Pro
130 135 140

His Ser Leu Arg Tyr Phe Val Thr Ala Val Ser Arg Pro Gly Leu Gly
145 150 155 160

Glu Pro Arg Tyr Met Glu Val Gly Tyr Val Asp Asp Thr Glu Phe Val
165 170 175

Arg Phe Asp Ser Asp Ala Glu Asn Pro Arg Tyr Glu Pro Arg Ala Arg
180 185 190

Trp Met Glu Gln Glu Gly Pro Glu Tyr Trp Glu Arg Glu Thr Gln Lys
195 200 205

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

Gly Cys Tyr Asn Gln Ser Lys Gly Gly Ser His Thr Ile Gln Val Ile
225 230 235 240

Ser Gly Cys Glu Val Gly Ser Asp Gly Arg Leu Leu Arg Gly Tyr Gln
245 250 255

Gln Tyr Ala Tyr Asp Gly Cys Asp Tyr Ile Ala Leu Asn Glu Asp Leu
260 265 270

Lys Thr Trp Thr Ala Ala Asp Met Ala Ala Leu Ile Thr Lys His Lys
275 280 285

Trp Glu Gln Ala Gly Glu Ala Glu Arg Leu Arg Ala Tyr Leu Glu Gly
290 295 300

Thr Cys Val Glu Trp Leu Arg Arg Tyr Leu Lys Asn Gly Asn Ala Thr
305 310 315 320

Leu Leu Arg Thr Asp Ser Pro Lys Ala His Val Thr His His Ser Arg
325 330 335

Pro Glu Asp Lys Val Thr Leu Arg Cys Trp Ala Leu Gly Phe Tyr Pro
340 345 350

Ala Asp Ile Thr Leu Thr Trp Gln Leu Asn Gly Glu Glu Leu Ile Gln
355 360 365

Asp Met Glu Leu Val Glu Thr Arg Pro Ala Gly Asp Gly Thr Phe Gln
370 375 380

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

Cys His Val Tyr His Gln Gly Leu Pro Glu Pro Leu Thr Leu Arg Trp
405 410 415

Glu Pro Pro Pro Ser Thr Val Ser Asn Met Ala
420 425

<210> 112

<211> 667

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 112

Tyr Met Leu Asp Leu Gln Pro Glu Thr Gly Cys Gly Gly Ser Gly Gly
1 5 10 15

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

Val Tyr Ser Arg His Pro Ala Glu Asn Gly Lys Ser Asn Phe Leu Asn
35 40 45

Cys Tyr Val Ser Gly Phe His Pro Ser Asp Ile Glu Val Asp Leu Leu
50 55 60

Lys Asn Gly Glu Arg Ile Glu Lys Val Glu His Ser Asp Leu Ser Phe
65 70 75 80

Ser Lys Asp Trp Ser Phe Tyr Leu Leu Tyr Tyr Thr Glu Phe Thr Pro

85

90

95

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

Gln Pro Lys Ile Val Lys Trp Asp Arg Asp Met Gly Gly Gly Gly Ser
 115 120 125

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

Ser His Ser Met Arg Tyr Phe Phe Thr Ser Val Ser Arg Pro Gly Arg
 145 150 155 160

Gly Glu Pro Arg Phe Ile Ala Val Gly Tyr Val Asp Asp Thr Gln Phe
 165 170 175

Val Arg Phe Asp Ser Asp Ala Ala Ser Gln Arg Met Glu Pro Arg Ala
 180 185 190

Pro Trp Ile Glu Gln Glu Gly Pro Glu Tyr Trp Asp Gly Glu Thr Arg
 195 200 205

Lys Val Lys Ala His Ser Gln Thr His Arg Val Asp Leu Gly Thr Leu
 210 215 220

Arg Gly Cys Tyr Asn Gln Ser Glu Ala Gly Ser His Thr Val Gln Arg
 225 230 235 240

Met Tyr Gly Cys Asp Val Gly Ser Asp Trp Arg Phe Leu Arg Gly Tyr
 245 250 255

His Gln Tyr Ala Tyr Asp Gly Lys Asp Tyr Ile Ala Leu Lys Glu Asp
 260 265 270

Leu Arg Ser Trp Thr Ala Ala Asp Met Ala Ala Gln Thr Thr Lys His
 275 280 285

Lys Trp Glu Ala Ala His Val Ala Glu Gln Leu Arg Ala Tyr Leu Glu
290 295 300

Gly Thr Cys Val Glu Trp Leu Arg Arg Tyr Leu Glu Asn Gly Lys Glu
305 310 315 320

Thr Leu Gln Arg Thr Asp Ala Pro Lys Thr His Met Thr His His Ala
325 330 335

Val Ser Asp His Glu Ala Thr Leu Arg Cys Trp Ala Leu Ser Phe Tyr
340 345 350

Pro Ala Glu Ile Thr Leu Thr Trp Gln Arg Asp Gly Glu Asp Gln Thr
355 360 365

Gln Asp Thr Glu Leu Val Glu Thr Arg Pro Ala Gly Asp Gly Thr Phe
370 375 380

Gln Lys Trp Ala Ala Val Val Val Pro Ser Gly Gln Glu Gln Arg Tyr
385 390 395 400

Thr Cys His Val Gln His Glu Gly Leu Pro Lys Pro Leu Thr Leu Arg
405 410 415

Trp Glu Pro Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly
420 425 430

Gly Ser Gly Gly Gly Gly Ser Glu Ser Lys Tyr Gly Pro Pro Cys Pro
435 440 445

Pro Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro
450 455 460

Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr
465 470 475 480

Cys Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn

485

490

495

Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg
500 505 510

Glu Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val
515 520 525

Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser
530 535 540

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

Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu
565 570 575

Glu Met Thr Lys Asn Gln Val Ser Leu Trp Cys Leu Val Lys Gly Phe
580 585 590

Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu
595 600 605

Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe
610 615 620

Phe Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly
625 630 635 640

Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr
645 650 655

Thr Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys
660 665

<210> 113

<211> 667

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 113

Asn Leu Val Pro Met Val Ala Thr Val Gly Cys Gly Gly Ser Gly Gly
1 5 10 15

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

Val Tyr Ser Arg His Pro Ala Glu Asn Gly Lys Ser Asn Phe Leu Asn
35 40 45

Cys Tyr Val Ser Gly Phe His Pro Ser Asp Ile Glu Val Asp Leu Leu
50 55 60

Lys Asn Gly Glu Arg Ile Glu Lys Val Glu His Ser Asp Leu Ser Phe
65 70 75 80

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

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

Gln Pro Lys Ile Val Lys Trp Asp Arg Asp Met Gly Gly Gly Gly Ser
115 120 125

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

Ser His Ser Met Arg Tyr Phe Phe Thr Ser Val Ser Arg Pro Gly Arg
145 150 155 160

Gly Glu Pro Arg Phe Ile Ala Val Gly Tyr Val Asp Asp Thr Gln Phe
165 170 175

Val Arg Phe Asp Ser Asp Ala Ala Ser Gln Arg Met Glu Pro Arg Ala
180 185 190

Pro Trp Ile Glu Gln Glu Gly Pro Glu Tyr Trp Asp Gly Glu Thr Arg
195 200 205

Lys Val Lys Ala His Ser Gln Thr His Arg Val Asp Leu Gly Thr Leu
210 215 220

Arg Gly Cys Tyr Asn Gln Ser Glu Ala Gly Ser His Thr Val Gln Arg
225 230 235 240

Met Tyr Gly Cys Asp Val Gly Ser Asp Trp Arg Phe Leu Arg Gly Tyr
245 250 255

His Gln Tyr Ala Tyr Asp Gly Lys Asp Tyr Ile Ala Leu Lys Glu Asp
260 265 270

Leu Arg Ser Trp Thr Ala Ala Asp Met Ala Ala Gln Thr Thr Lys His
275 280 285

Lys Trp Glu Ala Ala His Val Ala Glu Gln Leu Arg Ala Tyr Leu Glu
290 295 300

Gly Thr Cys Val Glu Trp Leu Arg Arg Tyr Leu Glu Asn Gly Lys Glu
305 310 315 320

Thr Leu Gln Arg Thr Asp Ala Pro Lys Thr His Met Thr His His Ala
325 330 335

Val Ser Asp His Glu Ala Thr Leu Arg Cys Trp Ala Leu Ser Phe Tyr
340 345 350

Pro Ala Glu Ile Thr Leu Thr Trp Gln Arg Asp Gly Glu Asp Gln Thr
355 360 365

Gln Asp Thr Glu Leu Val Glu Thr Arg Pro Ala Gly Asp Gly Thr Phe
370 375 380

Gln Lys Trp Ala Ala Val Val Val Pro Ser Gly Gln Glu Gln Arg Tyr
385 390 395 400

Thr Cys His Val Gln His Glu Gly Leu Pro Lys Pro Leu Thr Leu Arg
405 410 415

Trp Glu Pro Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly
420 425 430

Gly Ser Gly Gly Gly Gly Ser Glu Ser Lys Tyr Gly Pro Pro Cys Pro
435 440 445

Pro Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro
450 455 460

Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr
465 470 475 480

Cys Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn
485 490 495

Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg
500 505 510

Glu Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val
515 520 525

Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser
530 535 540

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

Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu
565 570 575

Glu Met Thr Lys Asn Gln Val Ser Leu Trp Cys Leu Val Lys Gly Phe
580 585 590

Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu
595 600 605

Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe
610 615 620

Phe Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly
625 630 635 640

Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr
645 650 655

Thr Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys
660 665

<210> 114

<211> 123

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 114

Asn Leu Val Pro Met Val Ala Thr Val Gly Cys Gly Gly Ser Gly Gly
1 5 10 15

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

Val Tyr Ser Arg His Pro Ala Glu Asn Gly Lys Ser Asn Phe Leu Asn
35 40 45

Cys Tyr Val Ser Gly Phe His Pro Ser Asp Ile Glu Val Asp Leu Leu

50

55

60

Lys Asn Gly Glu Arg Ile Glu Lys Val Glu His Ser Asp Leu Ser Phe
65 70 75 80

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

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

Gln Pro Lys Ile Val Lys Trp Asp Arg Asp Met
115 120

<210> 115

<211> 123

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 115

Tyr Met Leu Asp Leu Gln Pro Glu Thr Gly Cys Gly Gly Ser Gly Gly
1 5 10 15

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

Val Tyr Ser Arg His Pro Ala Glu Asn Gly Lys Ser Asn Phe Leu Asn
35 40 45

Cys Tyr Val Ser Gly Phe His Pro Ser Asp Ile Glu Val Asp Leu Leu
50 55 60

Lys Asn Gly Glu Arg Ile Glu Lys Val Glu His Ser Asp Leu Ser Phe
65 70 75 80

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

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

Gln Pro Lys Ile Val Lys Trp Asp Arg Asp Met
115 120

<210> 116

<211> 667

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 116

Asn Leu Val Pro Met Val Ala Thr Val Gly Cys Gly Gly Ser Gly Gly
1 5 10 15

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

Val Tyr Ser Arg His Pro Ala Glu Asn Gly Lys Ser Asn Phe Leu Asn
35 40 45

Cys Tyr Val Ser Gly Phe His Pro Ser Asp Ile Glu Val Asp Leu Leu
50 55 60

Lys Asn Gly Glu Arg Ile Glu Lys Val Glu His Ser Asp Leu Ser Phe
65 70 75 80

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

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

Gln Pro Lys Ile Val Lys Trp Asp Arg Asp Met Gly Gly Gly Gly Ser
115 120 125

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

Ser His Ser Met Arg Tyr Phe Phe Thr Ser Val Ser Arg Pro Gly Arg
145 150 155 160

Gly Glu Pro Arg Phe Ile Ala Val Gly Tyr Val Asp Asp Thr Gln Phe
165 170 175

Val Arg Phe Asp Ser Asp Ala Ala Ser Gln Arg Met Glu Pro Arg Ala
180 185 190

Pro Trp Ile Glu Gln Glu Gly Pro Glu Tyr Trp Asp Gly Glu Thr Arg
195 200 205

Lys Val Lys Ala His Ser Gln Thr His Arg Val Asp Leu Gly Thr Leu
210 215 220

Arg Gly Cys Tyr Asn Gln Ser Glu Ala Gly Ser His Thr Val Gln Arg
225 230 235 240

Met Tyr Gly Cys Asp Val Gly Ser Asp Trp Arg Phe Leu Arg Gly Tyr
245 250 255

His Gln Tyr Ala Tyr Asp Gly Lys Asp Tyr Ile Ala Leu Lys Glu Asp
260 265 270

Leu Arg Ser Trp Thr Ala Ala Asp Met Ala Ala Gln Thr Thr Lys His
275 280 285

Lys Trp Glu Ala Ala His Val Ala Glu Gln Leu Arg Ala Tyr Leu Glu
290 295 300

Gly Thr Cys Val Glu Trp Leu Arg Arg Tyr Leu Glu Asn Gly Lys Glu

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

Glu Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val
515 520 525

Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser
530 535 540

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

Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu
565 570 575

Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe
580 585 590

Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu
595 600 605

Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe
610 615 620

Phe Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly
625 630 635 640

Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr
645 650 655

Thr Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys
660 665

<210> 117

<211> 815

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 117

Asn Leu Val Pro Met Val Ala Thr Val Gly Cys Gly Gly Ser Gly Gly
1 5 10 15

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

Val Tyr Ser Arg His Pro Ala Glu Asn Gly Lys Ser Asn Phe Leu Asn
35 40 45

Cys Tyr Val Ser Gly Phe His Pro Ser Asp Ile Glu Val Asp Leu Leu
50 55 60

Lys Asn Gly Glu Arg Ile Glu Lys Val Glu His Ser Asp Leu Ser Phe
65 70 75 80

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

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

Gln Pro Lys Ile Val Lys Trp Asp Arg Asp Met Gly Gly Gly Gly Ser
115 120 125

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

Ser His Ser Met Arg Tyr Phe Phe Thr Ser Val Ser Arg Pro Gly Arg
145 150 155 160

Gly Glu Pro Arg Phe Ile Ala Val Gly Tyr Val Asp Asp Thr Gln Phe
165 170 175

Val Arg Phe Asp Ser Asp Ala Ala Ser Gln Arg Met Glu Pro Arg Ala
180 185 190

Pro Trp Ile Glu Gln Glu Gly Pro Glu Tyr Trp Asp Gly Glu Thr Arg
195 200 205

Lys Val Lys Ala His Ser Gln Thr His Arg Val Asp Leu Gly Thr Leu
210 215 220

Arg Gly Cys Tyr Asn Gln Ser Glu Ala Gly Ser His Thr Val Gln Arg
225 230 235 240

Met Tyr Gly Cys Asp Val Gly Ser Asp Trp Arg Phe Leu Arg Gly Tyr
245 250 255

His Gln Tyr Ala Tyr Asp Gly Lys Asp Tyr Ile Ala Leu Lys Glu Asp
260 265 270

Leu Arg Ser Trp Thr Ala Ala Asp Met Ala Ala Gln Thr Thr Lys His
275 280 285

Lys Trp Glu Ala Ala His Val Ala Glu Gln Leu Arg Ala Tyr Leu Glu
290 295 300

Gly Thr Cys Val Glu Trp Leu Arg Arg Tyr Leu Glu Asn Gly Lys Glu
305 310 315 320

Thr Leu Gln Arg Thr Asp Ala Pro Lys Thr His Met Thr His His Ala
325 330 335

Val Ser Asp His Glu Ala Thr Leu Arg Cys Trp Ala Leu Ser Phe Tyr
340 345 350

Pro Ala Glu Ile Thr Leu Thr Trp Gln Arg Asp Gly Glu Asp Gln Thr
355 360 365

Gln Asp Thr Glu Leu Val Glu Thr Arg Pro Ala Gly Asp Gly Thr Phe
370 375 380

Gln Lys Trp Ala Ala Val Val Val Pro Ser Gly Gln Glu Gln Arg Tyr
385 390 395 400

Thr Cys His Val Gln His Glu Gly Leu Pro Lys Pro Leu Thr Leu Arg
405 410 415

Trp Glu Pro Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly
420 425 430

Gly Ser Gly Gly Gly Gly Ser Glu Ser Lys Tyr Gly Pro Pro Cys Pro
435 440 445

Pro Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro
450 455 460

Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr
465 470 475 480

Cys Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn
485 490 495

Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg
500 505 510

Glu Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val
515 520 525

Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser
530 535 540

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

Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu
565 570 575

Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe
580 585 590

Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu
595 600 605

Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe
610 615 620

Phe Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly
625 630 635 640

Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr
645 650 655

Thr Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys Gly Gly Gly Gly Ser
660 665 670

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Pro Thr Ser Ser Ser
675 680 685

Thr Lys Lys Thr Gln Leu Gln Leu Glu Ala Leu Leu Leu Asp Leu Gln
690 695 700

Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn Pro Lys Leu Thr Arg
705 710 715 720

Met Leu Thr Ala Lys Phe Tyr Met Pro Lys Lys Ala Thr Glu Leu Lys
725 730 735

His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro Leu Glu Glu Val Leu
740 745 750

Asn Leu Ala Gln Ser Lys Asn Phe His Leu Arg Pro Arg Asp Leu Ile
755 760 765

Ser Asn Ile Asn Val Ile Val Leu Glu Leu Lys Gly Ser Glu Thr Thr
770 775 780

Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr Ile Val Glu Phe Leu
785 790 795 800

Asn Arg Trp Ile Thr Phe Cys Gln Ser Ile Ile Ser Thr Leu Thr
805 810 815

<210> 118

<211> 1005

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 118

Tyr Met Leu Asp Leu Gln Pro Glu Thr Gly Cys Gly Gly Ser Gly Gly
1 5 10 15

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

Val Tyr Ser Arg His Pro Ala Glu Asn Gly Lys Ser Asn Phe Leu Asn
35 40 45

Cys Tyr Val Ser Gly Phe His Pro Ser Asp Ile Glu Val Asp Leu Leu
50 55 60

Lys Asn Gly Glu Arg Ile Glu Lys Val Glu His Ser Asp Leu Ser Phe
65 70 75 80

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

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

Gln Pro Lys Ile Val Lys Trp Asp Arg Asp Met Gly Gly Gly Gly Ser
115 120 125

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

130

135

140

Ser His Ser Met Arg Tyr Phe Phe Thr Ser Val Ser Arg Pro Gly Arg
 145 150 155 160

Gly Glu Pro Arg Phe Ile Ala Val Gly Tyr Val Asp Asp Thr Gln Phe
 165 170 175

Val Arg Phe Asp Ser Asp Ala Ala Ser Gln Arg Met Glu Pro Arg Ala
 180 185 190

Pro Trp Ile Glu Gln Glu Gly Pro Glu Tyr Trp Asp Gly Glu Thr Arg
 195 200 205

Lys Val Lys Ala His Ser Gln Thr His Arg Val Asp Leu Gly Thr Leu
 210 215 220

Arg Gly Cys Tyr Asn Gln Ser Glu Ala Gly Ser His Thr Val Gln Arg
 225 230 235 240

Met Tyr Gly Cys Asp Val Gly Ser Asp Trp Arg Phe Leu Arg Gly Tyr
 245 250 255

His Gln Tyr Ala Tyr Asp Gly Lys Asp Tyr Ile Ala Leu Lys Glu Asp
 260 265 270

Leu Arg Ser Trp Thr Ala Ala Asp Met Ala Ala Gln Thr Thr Lys His
 275 280 285

Lys Trp Glu Ala Ala His Val Ala Glu Gln Leu Arg Ala Tyr Leu Glu
 290 295 300

Gly Thr Cys Val Glu Trp Leu Arg Arg Tyr Leu Glu Asn Gly Lys Glu
 305 310 315 320

Thr Leu Gln Arg Thr Asp Ala Pro Lys Thr His Met Thr His His Ala
 325 330 335

Val Ser Asp His Glu Ala Thr Leu Arg Cys Trp Ala Leu Ser Phe Tyr
340 345 350

Pro Ala Glu Ile Thr Leu Thr Trp Gln Arg Asp Gly Glu Asp Gln Thr
355 360 365

Gln Asp Thr Glu Leu Val Glu Thr Arg Pro Ala Gly Asp Gly Thr Phe
370 375 380

Gln Lys Trp Ala Ala Val Val Val Pro Ser Gly Gln Glu Gln Arg Tyr
385 390 395 400

Thr Cys His Val Gln His Glu Gly Leu Pro Lys Pro Leu Thr Leu Arg
405 410 415

Trp Glu Pro Gly Gly Gly Gly Ser Gly Gly Gly Ser Gly Gly Gly
420 425 430

Gly Ser Gly Gly Gly Gly Ser Glu Ser Lys Tyr Gly Pro Pro Cys Pro
435 440 445

Pro Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro
450 455 460

Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr
465 470 475 480

Cys Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn
485 490 495

Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg
500 505 510

Glu Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val
515 520 525

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

530

535

540

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

Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu
 565 570 575

Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe
 580 585 590

Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu
 595 600 605

Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe
 610 615 620

Phe Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly
 625 630 635 640

Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr
 645 650 655

Thr Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys Gly Gly Gly Ser
 660 665 670

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Leu Cys Asp Asp Asp
 675 680 685

Pro Pro Glu Ile Pro His Ala Thr Phe Lys Ala Met Ala Tyr Lys Glu
 690 695 700

Gly Thr Met Leu Asn Cys Glu Cys Lys Arg Gly Phe Arg Arg Ile Lys
 705 710 715 720

Ser Gly Ser Leu Tyr Met Leu Cys Thr Gly Asn Ser Ser His Ser Ser
 725 730 735

Trp Asp Asn Gln Cys Gln Cys Thr Ser Ser Ala Thr Arg Asn Thr Thr
740 745 750

Lys Gln Val Thr Pro Gln Pro Glu Glu Gln Lys Glu Arg Lys Thr Thr
755 760 765

Glu Met Gln Ser Pro Met Gln Pro Val Asp Gln Ala Ser Leu Pro Gly
770 775 780

His Cys Arg Glu Pro Pro Pro Trp Glu Asn Glu Ala Thr Glu Arg Ile
785 790 795 800

Tyr His Phe Val Val Gly Gln Met Val Tyr Tyr Gln Cys Val Gln Gly
805 810 815

Tyr Arg Ala Leu His Arg Gly Pro Ala Glu Ser Val Cys Lys Met Thr
820 825 830

His Gly Lys Thr Arg Trp Thr Gln Pro Gln Leu Ile Cys Thr Gly Gly
835 840 845

Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly
850 855 860

Gly Gly Ser Gly Gly Gly Gly Ser Ala Pro Thr Ser Ser Ser Thr Lys
865 870 875 880

Lys Thr Gln Leu Gln Leu Glu His Leu Leu Asp Leu Gln Met Ile
885 890 895

Leu Asn Gly Ile Asn Asn Tyr Lys Asn Pro Lys Leu Thr Arg Met Leu
900 905 910

Thr Phe Lys Phe Tyr Met Pro Lys Lys Ala Thr Glu Leu Lys His Leu
915 920 925

Gln Cys Leu Glu Glu Glu Leu Lys Pro Leu Glu Glu Val Leu Asn Leu

930

935

940

Ala Gln Ser Lys Asn Phe His Leu Arg Pro Arg Asp Leu Ile Ser Asn
 945 950 955 960

Ile Asn Val Ile Val Leu Glu Leu Lys Gly Ser Glu Thr Thr Phe Met
 965 970 975

Cys Glu Tyr Ala Asp Glu Thr Ala Thr Ile Val Glu Phe Leu Asn Arg
 980 985 990

Trp Ile Thr Phe Cys Gln Ser Ile Ile Ser Thr Leu Thr
 995 1000 1005

<210> 119

<211> 815

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic
 polypeptide"

<400> 119

Tyr Met Leu Asp Leu Gln Pro Glu Thr Gly Cys Gly Gly Ser Gly Gly
 1 5 10 15

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

Val Tyr Ser Arg His Pro Ala Glu Asn Gly Lys Ser Asn Phe Leu Asn
 35 40 45

Cys Tyr Val Ser Gly Phe His Pro Ser Asp Ile Glu Val Asp Leu Leu
 50 55 60

Lys Asn Gly Glu Arg Ile Glu Lys Val Glu His Ser Asp Leu Ser Phe
 65 70 75 80

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

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

Gln Pro Lys Ile Val Lys Trp Asp Arg Asp Met Gly Gly Gly Gly Ser
115 120 125

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

Ser His Ser Met Arg Tyr Phe Phe Thr Ser Val Ser Arg Pro Gly Arg
145 150 155 160

Gly Glu Pro Arg Phe Ile Ala Val Gly Tyr Val Asp Asp Thr Gln Phe
165 170 175

Val Arg Phe Asp Ser Asp Ala Ala Ser Gln Arg Met Glu Pro Arg Ala
180 185 190

Pro Trp Ile Glu Gln Glu Gly Pro Glu Tyr Trp Asp Gly Glu Thr Arg
195 200 205

Lys Val Lys Ala His Ser Gln Thr His Arg Val Asp Leu Gly Thr Leu
210 215 220

Arg Gly Cys Tyr Asn Gln Ser Glu Ala Gly Ser His Thr Val Gln Arg
225 230 235 240

Met Tyr Gly Cys Asp Val Gly Ser Asp Trp Arg Phe Leu Arg Gly Tyr
245 250 255

His Gln Tyr Ala Tyr Asp Gly Lys Asp Tyr Ile Ala Leu Lys Glu Asp
260 265 270

Leu Arg Ser Trp Thr Ala Ala Asp Met Ala Ala Gln Thr Thr Lys His
275 280 285

Lys Trp Glu Ala Ala His Val Ala Glu Gln Leu Arg Ala Tyr Leu Glu
290 295 300

Gly Thr Cys Val Glu Trp Leu Arg Arg Tyr Leu Glu Asn Gly Lys Glu
305 310 315 320

Thr Leu Gln Arg Thr Asp Ala Pro Lys Thr His Met Thr His His Ala
325 330 335

Val Ser Asp His Glu Ala Thr Leu Arg Cys Trp Ala Leu Ser Phe Tyr
340 345 350

Pro Ala Glu Ile Thr Leu Thr Trp Gln Arg Asp Gly Glu Asp Gln Thr
355 360 365

Gln Asp Thr Glu Leu Val Glu Thr Arg Pro Ala Gly Asp Gly Thr Phe
370 375 380

Gln Lys Trp Ala Ala Val Val Val Pro Ser Gly Gln Glu Gln Arg Tyr
385 390 395 400

Thr Cys His Val Gln His Glu Gly Leu Pro Lys Pro Leu Thr Leu Arg
405 410 415

Trp Glu Pro Gly Gly Gly Gly Ser Gly Gly Gly Ser Gly Gly Gly
420 425 430

Gly Ser Gly Gly Gly Gly Ser Glu Ser Lys Tyr Gly Pro Pro Cys Pro
435 440 445

Pro Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro
450 455 460

Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr
465 470 475 480

Cys Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn
485 490 495

Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg
500 505 510

Glu Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val
515 520 525

Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser
530 535 540

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

Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu
565 570 575

Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe
580 585 590

Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu
595 600 605

Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe
610 615 620

Phe Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly
625 630 635 640

Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr
645 650 655

Thr Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys Gly Gly Gly Ser
660 665 670

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Pro Thr Ser Ser Ser
675 680 685

Thr Lys Lys Thr Gln Leu Gln Leu Glu Ala Leu Leu Leu Asp Leu Gln
690 695 700

Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn Pro Lys Leu Thr Arg
705 710 715 720

Met Leu Thr Ala Lys Phe Tyr Met Pro Lys Lys Ala Thr Glu Leu Lys
725 730 735

His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro Leu Glu Glu Val Leu
740 745 750

Asn Leu Ala Gln Ser Lys Asn Phe His Leu Arg Pro Arg Asp Leu Ile
755 760 765

Ser Asn Ile Asn Val Ile Val Leu Glu Leu Lys Gly Ser Glu Thr Thr
770 775 780

Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr Ile Val Glu Phe Leu
785 790 795 800

Asn Arg Trp Ile Thr Phe Cys Gln Ser Ile Ile Ser Thr Leu Thr
805 810 815

<210> 120

<211> 823

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 120

Ser Ile Ile Asn Phe Glu Lys Leu Gly Cys Gly Gly Ser Gly Gly Gly
1 5 10 15

Gly Ser Gly Gly Gly Gly Ser Ile Gln Lys Thr Pro Gln Ile Gln Val

20

25

30

Tyr Ser Arg His Pro Pro Glu Asn Gly Lys Pro Asn Ile Leu Asn Cys
 35 40 45

Tyr Val Thr Gln Phe His Pro Pro His Ile Glu Ile Gln Met Leu Lys
 50 55 60

Asn Gly Lys Lys Ile Pro Lys Val Glu Met Ser Asp Met Ser Phe Ser
 65 70 75 80

Lys Asp Trp Ser Phe Tyr Ile Leu Ala His Thr Glu Phe Thr Pro Thr
 85 90 95

Glu Thr Asp Thr Tyr Ala Cys Arg Val Lys His Ala Ser Met Ala Glu
 100 105 110

Pro Lys Thr Val Tyr Trp Asp Arg Asp Met Gly Gly Gly Gly Ser Gly
 115 120 125

Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Pro
 130 135 140

His Ser Leu Arg Tyr Phe Val Thr Ala Val Ser Arg Pro Gly Leu Gly
 145 150 155 160

Glu Pro Arg Tyr Met Glu Val Gly Tyr Val Asp Asp Thr Glu Phe Val
 165 170 175

Arg Phe Asp Ser Asp Ala Glu Asn Pro Arg Tyr Glu Pro Arg Ala Arg
 180 185 190

Trp Met Glu Gln Glu Gly Pro Glu Tyr Trp Glu Arg Glu Thr Gln Lys
 195 200 205

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

Gly Cys Tyr Asn Gln Ser Lys Gly Gly Ser His Thr Ile Gln Val Ile
225 230 235 240

Ser Gly Cys Glu Val Gly Ser Asp Gly Arg Leu Leu Arg Gly Tyr Gln
245 250 255

Gln Tyr Ala Tyr Asp Gly Cys Asp Tyr Ile Ala Leu Asn Glu Asp Leu
260 265 270

Lys Thr Trp Thr Ala Ala Asp Met Ala Ala Leu Ile Thr Lys His Lys
275 280 285

Trp Glu Gln Ala Gly Glu Ala Glu Arg Leu Arg Ala Tyr Leu Glu Gly
290 295 300

Thr Cys Val Glu Trp Leu Arg Arg Tyr Leu Lys Asn Gly Asn Ala Thr
305 310 315 320

Leu Leu Arg Thr Asp Ser Pro Lys Ala His Val Thr His His Ser Arg
325 330 335

Pro Glu Asp Lys Val Thr Leu Arg Cys Trp Ala Leu Gly Phe Tyr Pro
340 345 350

Ala Asp Ile Thr Leu Thr Trp Gln Leu Asn Gly Glu Glu Leu Ile Gln
355 360 365

Asp Met Glu Leu Val Glu Thr Arg Pro Ala Gly Asp Gly Thr Phe Gln
370 375 380

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

Cys His Val Tyr His Gln Gly Leu Pro Glu Pro Leu Thr Leu Arg Trp
405 410 415

Glu Pro Pro Pro Ser Thr Val Ser Asn Met Ala Gly Gly Gly Gly Ser

420

425

430

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu
 435 440 445

Ser Lys Tyr Gly Pro Pro Cys Pro Pro Cys Pro Ala Pro Pro Val Ala
 450 455 460

Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met
 465 470 475 480

Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser Gln
 485 490 495

Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val
 500 505 510

His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Tyr
 515 520 525

Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly
 530 535 540

Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile
 545 550 555 560

Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val
 565 570 575

Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln Val Ser
 580 585 590

Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu
 595 600 605

Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro
 610 615 620

Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu Thr Val
625 630 635 640

Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met
645 650 655

His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser
660 665 670

Leu Gly Lys Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly
675 680 685

Gly Ser Ala Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu
690 695 700

Glu Ala Leu Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn
705 710 715 720

Tyr Lys Asn Pro Lys Leu Thr Arg Met Leu Thr Ala Lys Phe Tyr Met
725 730 735

Pro Lys Lys Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu
740 745 750

Leu Lys Pro Leu Glu Glu Val Leu Asn Leu Ala Gln Ser Lys Asn Phe
755 760 765

His Leu Arg Pro Arg Asp Leu Ile Ser Asn Ile Asn Val Ile Val Leu
770 775 780

Glu Leu Lys Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu
785 790 795 800

Thr Ala Thr Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Cys Gln
805 810 815

Ser Ile Ile Ser Thr Leu Thr

<210> 121

<211> 823

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 121

Lys Ser Pro Trp Phe Thr Thr Leu Gly Cys Gly Gly Ser Gly Gly Gly
 1 5 10 15

Gly Ser Gly Gly Gly Gly Ser Ile Gln Lys Thr Pro Gln Ile Gln Val
 20 25 30

Tyr Ser Arg His Pro Pro Glu Asn Gly Lys Pro Asn Ile Leu Asn Cys
 35 40 45

Tyr Val Thr Gln Phe His Pro Pro His Ile Glu Ile Gln Met Leu Lys
 50 55 60

Asn Gly Lys Lys Ile Pro Lys Val Glu Met Ser Asp Met Ser Phe Ser
 65 70 75 80

Lys Asp Trp Ser Phe Tyr Ile Leu Ala His Thr Glu Phe Thr Pro Thr
 85 90 95

Glu Thr Asp Thr Tyr Ala Cys Arg Val Lys His Ala Ser Met Ala Glu
 100 105 110

Pro Lys Thr Val Tyr Trp Asp Arg Asp Met Gly Gly Gly Gly Ser Gly
 115 120 125

Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Pro
 130 135 140

His Ser Leu Arg Tyr Phe Val Thr Ala Val Ser Arg Pro Gly Leu Gly
145 150 155 160

Glu Pro Arg Tyr Met Glu Val Gly Tyr Val Asp Asp Thr Glu Phe Val
165 170 175

Arg Phe Asp Ser Asp Ala Glu Asn Pro Arg Tyr Glu Pro Arg Ala Arg
180 185 190

Trp Met Glu Gln Glu Gly Pro Glu Tyr Trp Glu Arg Glu Thr Gln Lys
195 200 205

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

Gly Cys Tyr Asn Gln Ser Lys Gly Gly Ser His Thr Ile Gln Val Ile
225 230 235 240

Ser Gly Cys Glu Val Gly Ser Asp Gly Arg Leu Leu Arg Gly Tyr Gln
245 250 255

Gln Tyr Ala Tyr Asp Gly Cys Asp Tyr Ile Ala Leu Asn Glu Asp Leu
260 265 270

Lys Thr Trp Thr Ala Ala Asp Met Ala Ala Leu Ile Thr Lys His Lys
275 280 285

Trp Glu Gln Ala Gly Glu Ala Glu Arg Leu Arg Ala Tyr Leu Glu Gly
290 295 300

Thr Cys Val Glu Trp Leu Arg Arg Tyr Leu Lys Asn Gly Asn Ala Thr
305 310 315 320

Leu Leu Arg Thr Asp Ser Pro Lys Ala His Val Thr His His Ser Arg
325 330 335

Pro Glu Asp Lys Val Thr Leu Arg Cys Trp Ala Leu Gly Phe Tyr Pro
340 345 350

Ala Asp Ile Thr Leu Thr Trp Gln Leu Asn Gly Glu Glu Leu Ile Gln
355 360 365

Asp Met Glu Leu Val Glu Thr Arg Pro Ala Gly Asp Gly Thr Phe Gln
370 375 380

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

Cys His Val Tyr His Gln Gly Leu Pro Glu Pro Leu Thr Leu Arg Trp
405 410 415

Glu Pro Pro Pro Ser Thr Val Ser Asn Met Ala Gly Gly Gly Gly Ser
420 425 430

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu
435 440 445

Ser Lys Tyr Gly Pro Pro Cys Pro Pro Cys Pro Ala Pro Pro Val Ala
450 455 460

Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met
465 470 475 480

Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser Gln
485 490 495

Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val
500 505 510

His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Tyr
515 520 525

Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly
530 535 540

Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile
545 550 555 560

Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val
565 570 575

Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln Val Ser
580 585 590

Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu
595 600 605

Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro
610 615 620

Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu Thr Val
625 630 635 640

Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met
645 650 655

His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser
660 665 670

Leu Gly Lys Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly
675 680 685

Gly Ser Ala Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu
690 695 700

Glu Ala Leu Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn
705 710 715 720

Tyr Lys Asn Pro Lys Leu Thr Arg Met Leu Thr Ala Lys Phe Tyr Met
725 730 735

Pro Lys Lys Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu
740 745 750

Leu Lys Pro Leu Glu Glu Val Leu Asn Leu Ala Gln Ser Lys Asn Phe
755 760 765

His Leu Arg Pro Arg Asp Leu Ile Ser Asn Ile Asn Val Ile Val Leu
770 775 780

Glu Leu Lys Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu
785 790 795 800

Thr Ala Thr Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Cys Gln
805 810 815

Ser Ile Ile Ser Thr Leu Thr
820

<210> 122
<211> 25
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<220>
<221> SITE
<222> (1)..(25)
<223> /note="This sequence can include 2-5 'Gly Gly Gly Gly Ser' repeating units"

<400> 122
Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly
1 5 10 15

Gly Gly Gly Ser Gly Gly Gly Gly Ser
20 25

<210> 123
<211> 30

<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<220>
<221> SITE
<222> (1)..(30)
<223> /note="This sequence can include 2-6 'Gly Gly Gly Gly Ser' repeating units"

<400> 123
Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly
1 5 10 15

Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
20 25 30

<210> 124
<211> 134
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 124
Ser Ala Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu
1 5 10 15

Ala Leu Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr
20 25 30

Lys Asn Pro Lys Leu Thr Arg Met Leu Thr Ala Lys Phe Tyr Met Pro
35 40 45

Lys Lys Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu
50 55 60

Lys Pro Leu Glu Glu Val Leu Asn Leu Ala Gln Ser Lys Asn Phe His
65 70 75 80

Leu Arg Pro Arg Asp Leu Ile Ser Asn Ile Asn Val Ile Val Leu Glu
85 90 95

Leu Lys Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr
100 105 110

Ala Thr Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Cys Gln Ser
115 120 125

Ile Ile Ser Thr Leu Thr
130