SEQUENCE LISTING

<110> REGENERON PHARMACEUTICALS, INC.

<120> ANTI-VEGF PROTEIN COMPOSITIONS AND METHODS FOR PRODUCING THE SAME

<130> 070816-02433

<140> 17/492,440
<141> 2021-10-01

<150> 17/205,745
<151> 2021-03-18

<150> 11,180,540
<151> 2020-08-18

<150> 63/065,012
<151> 2020-08-13

<150> 62/944,635
<151> 2019-12-06

<160> 124

<170> PatentIn version 3.5

<210> 1
<211> 339
<212> PRT
<213> Artificial Sequence

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

<400> 1
Met Arg Lys Arg Cys Tyr Ser Thr Ser Ala Ala Val Leu Ala Ala Val
1   5   10   15

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

Ser Ala Asn Gln Glu Ile Arg Tyr Ser Glu Val Thr Pro Tyr His Val
        35   40   45

Thr Ser Val Trp Thr Lys Gly Val Thr Pro Pro Ala Asn Phe Thr Gln
50 55 60

Gly Glu Asp Val Phe His Ala Pro Tyr Val Ala Asn Gln Gly Trp Tyr
65 70 75 80

Asp Ile Thr Lys Thr Phe Asn Gly Lys Asp Asp Leu Leu Cys Gly Ala
85 90 95

Ala Thr Ala Gly Asn Met Leu His Trp Trp Phe Asp Gln Asn Lys Asp
100 105 110

Gln Ile Lys Arg Tyr Leu Glu Glu His Pro Glu Lys Gln Lys Ile Asn
115 120 125

Phe Asn Gly Glu Gln Met Phe Asp Val Lys Glu Ala Ile Asp Thr Lys
130 135 140

Asn His Gln Leu Asp Ser Lys Leu Phe Glu Tyr Phe Lys Glu Lys Ala
145 150 155 160

Phe Pro Tyr Leu Ser Thr Lys His Leu Gly Val Phe Pro Asp His Val
165 170 175

Ile Asp Met Phe Ile Asn Gly Tyr Arg Leu Ser Leu Thr Asn His Gly
180 185 190

Pro Thr Pro Val Lys Glu Gly Ser Lys Asp Pro Arg Gly Gly Ile Phe
195 200 205

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

His Asp Phe Lys Glu Lys Asn Leu Lys Glu Ile Ser Asp Leu Ile Lys
225 230 235 240

Lys Glu Leu Thr Glu Gly Lys Ala Leu Gly Leu Ser His Thr Tyr Ala

245 250 255

Asn Val Arg Ile Asn His Val Ile Asn Leu Trp Gly Ala Asp Phe Asp
260 265 270

Ser Asn Gly Asn Leu Lys Ala Ile Tyr Val Thr Asp Ser Asp Ser Asn
275 280 285

Ala Ser Ile Gly Met Lys Lys Tyr Phe Val Gly Val Asn Ser Ala Gly
290 295 300

Lys Val Ala Ile Ser Ala Lys Glu Ile Lys Glu Asp Asn Ile Gly Ala
305 310 315 320

Gln Val Leu Gly Leu Phe Thr Leu Ser Thr Gly Gln Asp Ser Trp Asn
325 330 335

Gln Thr Asn

<210> 2
<211> 339
<212> PRT
<213> Artificial Sequence

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

<400> 2
Met Arg Lys Arg Cys Tyr Ser Thr Ser Ala Ala Val Leu Ala Ala Val
1 5 10 15

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

Ser Ala Asn Gln Glu Ile Arg Tyr Ser Glu Val Thr Pro Tyr His Val
35 40 45

Thr Ser Val Trp Thr Lys Gly Val Thr Pro Pro Ala Asn Phe Thr Gln
50 55 60

Gly Glu Asp Val Phe His Ala Pro Tyr Val Ala Asn Gln Gly Trp Tyr
65 70 75 80

Asp Ile Thr Lys Thr Phe Asp Gly Lys Asp Asp Leu Leu Cys Gly Ala
85 90 95

Ala Thr Ala Gly Asn Met Leu His Trp Trp Phe Asp Gln Asn Lys Asp
100 105 110

Gln Ile Lys Arg Tyr Leu Glu Glu His Pro Glu Lys Gln Lys Ile Asn
115 120 125

Phe Asn Gly Glu Gln Met Phe Asp Val Lys Glu Ala Ile Asp Thr Lys
130 135 140

Asn His Gln Leu Asp Ser Lys Leu Phe Glu Tyr Phe Lys Glu Lys Ala
145 150 155 160

Phe Pro Tyr Leu Ser Thr Lys His Leu Gly Val Phe Pro Asp His Val
165 170 175

Ile Asp Met Phe Ile Asn Gly Tyr Arg Leu Ser Leu Thr Asn His Gly
180 185 190

Pro Thr Pro Val Lys Glu Gly Ser Lys Asp Pro Arg Gly Gly Ile Phe
195 200 205

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

His Asp Phe Lys Glu Lys Asn Leu Lys Glu Ile Ser Asp Leu Ile Lys
225 230 235 240

Lys Glu Leu Thr Glu Gly Lys Ala Leu Gly Leu Ser His Thr Tyr Ala

245 250 255

Asn Val Arg Ile Asn His Val Ile Asn Leu Trp Gly Ala Asp Phe Asp
260 265 270

Ser Asn Gly Asn Leu Lys Ala Ile Tyr Val Thr Asp Ser Asp Ser Asn
275 280 285

Ala Ser Ile Gly Met Lys Lys Tyr Phe Val Gly Val Asn Ser Ala Gly
290 295 300

Lys Val Ala Ile Ser Ala Lys Glu Ile Lys Glu Asp Asn Ile Gly Ala
305 310 315 320

Gln Val Leu Gly Leu Phe Thr Leu Ser Thr Gly Gln Asp Ser Trp Asn
325 330 335

Gln Thr Asn

<210> 3
<211> 339
<212> PRT
<213> Artificial Sequence

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

<400> 3
Met Arg Lys Arg Cys Tyr Ser Thr Ser Ala Ala Val Leu Ala Ala Val
1 5 10 15

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

Ser Ala Asn Gln Glu Ile Arg Tyr Ser Glu Val Thr Pro Tyr His Val
35 40 45

Thr Ser Val Trp Thr Lys Gly Val Thr Pro Pro Ala Asn Phe Thr Gln
50 55 60

Gly Glu Asp Val Phe His Ala Pro Tyr Val Ala Asn Gln Gly Trp Tyr
65 70 75 80

Asp Ile Thr Lys Thr Phe Asn Gly Lys Asp Asp Leu Leu Cys Gly Ala
85 90 95

Ala Thr Ala Gly Asn Met Leu His Trp Trp Phe Asp Gln Asn Lys Asp
100 105 110

Gln Ile Lys Arg Tyr Leu Glu Glu His Pro Glu Lys Gln Lys Ile Asn
115 120 125

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

Asn His Gln Leu Asp Ser Lys Leu Phe Glu Tyr Phe Lys Glu Lys Ala
145 150 155 160

Phe Pro Tyr Leu Ser Thr Lys His Leu Gly Val Phe Pro Asp His Val
165 170 175

Ile Asp Met Phe Ile Asn Gly Tyr Arg Leu Ser Leu Thr Asn His Gly
180 185 190

Pro Thr Pro Val Lys Glu Gly Ser Lys Asp Pro Arg Gly Gly Ile Phe
195 200 205

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

His Asp Phe Lys Glu Lys Asn Leu Lys Glu Ile Ser Asp Leu Ile Lys
225 230 235 240

Lys Glu Leu Thr Glu Gly Lys Ala Leu Gly Leu Ser His Thr Tyr Ala

245 250 255

Asn Val Arg Ile Asn His Val Ile Asn Leu Trp Gly Ala Asp Phe Asp
260 265 270

Ser Asn Gly Asn Leu Lys Ala Ile Tyr Val Thr Asp Ser Asp Ser Asn
275 280 285

Ala Ser Ile Gly Met Lys Lys Tyr Phe Val Gly Val Asn Ser Ala Gly
290 295 300

Lys Val Ala Ile Ser Ala Lys Glu Ile Lys Glu Asp Asn Ile Gly Ala
305 310 315 320

Gln Val Leu Gly Leu Phe Thr Leu Ser Thr Gly Gln Asp Ser Trp Asn
325 330 335

Gln Thr Asn

<210> 4
<211> 339
<212> PRT
<213> Artificial Sequence

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

<400> 4
Met Arg Lys Arg Cys Tyr Ser Thr Ser Ala Ala Val Leu Ala Ala Val
1 5 10 15

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

Ser Ala Asn Gln Glu Ile Arg Tyr Ser Glu Val Thr Pro Tyr His Val
35 40 45

Thr Ser Val Trp Thr Lys Gly Val Thr Pro Pro Ala Asn Phe Thr Gln
50 55 60

Gly Glu Asp Val Phe His Ala Pro Tyr Val Ala Asn Gln Gly Trp Tyr
65 70 75 80

Asp Ile Thr Lys Thr Phe Asn Gly Lys Asp Asp Leu Leu Cys Gly Ala
85 90 95

Ala Thr Ala Gly Asn Met Leu His Trp Trp Phe Asp Gln Asn Lys Asp
100 105 110

Gln Ile Lys Arg Tyr Leu Glu Glu His Pro Glu Lys Gln Lys Ile Asn
115 120 125

Phe Asn Gly Glu Gln Met Phe Asp Val Lys Glu Ala Ile Asp Thr Lys
130 135 140

Asn His Gln Leu Asp Ser Lys Leu Phe Glu Tyr Phe Lys Glu Lys Ala
145 150 155 160

Phe Pro Tyr Leu Ser Thr Lys His Leu Gly Val Phe Pro Asp His Val
165 170 175

Ile Asp Met Phe Ile Leu Gly Tyr Arg Leu Ser Leu Thr Asn His Gly
180 185 190

Pro Thr Pro Val Lys Glu Gly Ser Lys Asp Pro Arg Gly Gly Ile Phe
195 200 205

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

His Asp Phe Lys Glu Lys Asn Leu Lys Glu Ile Ser Asp Leu Ile Lys
225 230 235 240

Lys Glu Leu Thr Glu Gly Lys Ala Leu Gly Leu Ser His Thr Tyr Ala

245 250 255

Asn Val Arg Ile Asn His Val Ile Asn Leu Trp Gly Ala Asp Phe Asp
260 265 270

Ser Asn Gly Asn Leu Lys Ala Ile Tyr Val Thr Asp Ser Asp Ser Asn
275 280 285

Ala Ser Ile Gly Met Lys Lys Tyr Phe Val Gly Val Asn Ser Ala Gly
290 295 300

Lys Val Ala Ile Ser Ala Lys Glu Ile Lys Glu Asp Asn Ile Gly Ala
305 310 315 320

Gln Val Leu Gly Leu Phe Thr Leu Ser Thr Gly Gln Asp Ser Trp Asn
325 330 335

Gln Thr Asn

<210> 5
<211> 339
<212> PRT
<213> Artificial Sequence

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

<400> 5
Met Arg Lys Arg Cys Tyr Ser Thr Ser Ala Ala Val Leu Ala Ala Val
1 5 10 15

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

Ser Ala Asn Gln Glu Ile Arg Tyr Ser Glu Val Thr Pro Tyr His Val
35 40 45

Thr Ser Val Trp Thr Lys Gly Val Thr Pro Pro Ala Asn Phe Thr Gln
50 55 60

Gly Glu Asp Val Phe His Ala Pro Tyr Val Ala Asn Gln Gly Trp Tyr
65 70 75 80

Asp Ile Thr Lys Thr Phe Asn Gly Lys Asp Asp Leu Leu Cys Gly Ala
85 90 95

Ala Thr Ala Gly Asn Met Leu His Trp Trp Phe Asp Gln Asn Lys Asp
100 105 110

Gln Ile Lys Arg Tyr Leu Glu Glu His Pro Glu Lys Gln Lys Ile Asn
115 120 125

Phe Asn Gly Glu Gln Met Phe Asp Val Lys Glu Ala Ile Asp Thr Lys
130 135 140

Asn His Gln Leu Asp Ser Lys Leu Phe Glu Tyr Phe Lys Glu Lys Ala
145 150 155 160

Phe Pro Tyr Leu Ser Thr Lys His Leu Gly Val Phe Pro Asp His Val
165 170 175

Ile Asp Met Phe Ile Asn Gly Tyr Arg Leu Ser Leu Thr Asn His Gly
180 185 190

Pro Thr Pro Val Lys Glu Gly Ser Lys Asp Pro Arg Gly Gly Ile Phe
195 200 205

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

His Asp Phe Lys Glu Lys Asn Leu Lys Glu Ile Ser Asp Leu Ile Lys
225 230 235 240

Lys Glu Leu Thr Glu Gly Lys Ala Leu Gly Leu Ser His Thr Tyr Ala

245 250 255

Asn Val Arg Ile Asn His Val Ile Asn Leu Trp Gly Ala Asp Phe Asp
260 265 270

Ser Asp Gly Asn Leu Lys Ala Ile Tyr Val Thr Asp Ser Asp Ser Asn
275 280 285

Ala Ser Ile Gly Met Lys Lys Tyr Phe Val Gly Val Asn Ser Ala Gly
290 295 300

Lys Val Ala Ile Ser Ala Lys Glu Ile Lys Glu Asp Asn Ile Gly Ala
305 310 315 320

Gln Val Leu Gly Leu Phe Thr Leu Ser Thr Gly Gln Asp Ser Trp Asn
325 330 335

Gln Thr Asn

<210> 6
<211> 339
<212> PRT
<213> Artificial Sequence

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

<400> 6
Met Arg Lys Arg Cys Tyr Ser Thr Ser Ala Ala Val Leu Ala Ala Val
1 5 10 15

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

Ser Ala Asn Gln Glu Ile Arg Tyr Ser Glu Val Thr Pro Tyr His Val
35 40 45

Thr Ser Val Trp Thr Lys Gly Val Thr Pro Pro Ala Asn Phe Thr Gln
    50 55 60

Gly Glu Asp Val Phe His Ala Pro Tyr Val Ala Asn Gln Gly Trp Tyr
65 70 75 80

Asp Ile Thr Lys Thr Phe Asp Gly Lys Asp Asp Leu Leu Cys Gly Ala
                85 90 95

Ala Thr Ala Gly Asn Met Leu His Trp Trp Phe Asp Gln Asn Lys Asp
            100 105 110

Gln Ile Lys Arg Tyr Leu Glu Glu His Pro Glu Lys Gln Lys Ile Asn
        115 120 125

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

Asn His Gln Leu Asp Ser Lys Leu Phe Glu Tyr Phe Lys Glu Lys Ala
145 150 155 160

Phe Pro Tyr Leu Ser Thr Lys His Leu Gly Val Phe Pro Asp His Val
                165 170 175

Ile Asp Met Phe Ile Asn Gly Tyr Arg Leu Ser Leu Thr Asn His Gly
            180 185 190

Pro Thr Pro Val Lys Glu Gly Ser Lys Asp Pro Arg Gly Gly Ile Phe
        195 200 205

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

His Asp Phe Lys Glu Lys Asn Leu Lys Glu Ile Ser Asp Leu Ile Lys
225 230 235 240

Lys Glu Leu Thr Glu Gly Lys Ala Leu Gly Leu Ser His Thr Tyr Ala

245 250 255

Asn Val Arg Ile Asn His Val Ile Asn Leu Trp Gly Ala Asp Phe Asp
260 265 270

Ser Asn Gly Asn Leu Lys Ala Ile Tyr Val Thr Asp Ser Asp Ser Asn
275 280 285

Ala Ser Ile Gly Met Lys Lys Tyr Phe Val Gly Val Asn Ser Ala Gly
290 295 300

Lys Val Ala Ile Ser Ala Lys Glu Ile Lys Glu Asp Asn Ile Gly Ala
305 310 315 320

Gln Val Leu Gly Leu Phe Thr Leu Ser Thr Gly Gln Asp Ser Trp Asn
325 330 335

Gln Thr Asn

<210> 7
<211> 339
<212> PRT
<213> Artificial Sequence

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

<400> 7
Met Arg Lys Arg Cys Tyr Ser Thr Ser Ala Ala Val Leu Ala Ala Val
1 5 10 15

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

Ser Ala Asn Gln Glu Ile Arg Tyr Ser Glu Val Thr Pro Tyr His Val
35 40 45

Thr Ser Val Trp Thr Lys Gly Val Thr Pro Pro Ala Asn Phe Thr Gln
    50 55 60

Gly Glu Asp Val Phe His Ala Pro Tyr Val Ala Asn Gln Gly Trp Tyr
65 70 75 80

Asp Ile Thr Lys Thr Phe Asp Gly Lys Asp Asp Leu Leu Cys Gly Ala
                85 90 95

Ala Thr Ala Gly Asn Met Leu His Trp Trp Phe Asp Gln Asn Lys Asp
            100 105 110

Gln Ile Lys Arg Tyr Leu Glu Glu His Pro Glu Lys Gln Lys Ile Asn
        115 120 125

Phe Asn Gly Glu Gln Met Phe Asp Val Lys Glu Ala Ile Asp Thr Lys
    130 135 140

Asn His Gln Leu Asp Ser Lys Leu Phe Glu Tyr Phe Lys Glu Lys Ala
145 150 155 160

Phe Pro Tyr Leu Ser Thr Lys His Leu Gly Val Phe Pro Asp His Val
                165 170 175

Ile Asp Met Phe Ile Leu Gly Tyr Arg Leu Ser Leu Thr Asn His Gly
            180 185 190

Pro Thr Pro Val Lys Glu Gly Ser Lys Asp Pro Arg Gly Gly Ile Phe
        195 200 205

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

His Asp Phe Lys Glu Lys Asn Leu Lys Glu Ile Ser Asp Leu Ile Lys
225 230 235 240

Lys Glu Leu Thr Glu Gly Lys Ala Leu Gly Leu Ser His Thr Tyr Ala

245 250 255

Asn Val Arg Ile Asn His Val Ile Asn Leu Trp Gly Ala Asp Phe Asp
260 265 270

Ser Asn Gly Asn Leu Lys Ala Ile Tyr Val Thr Asp Ser Asp Ser Asn
275 280 285

Ala Ser Ile Gly Met Lys Lys Tyr Phe Val Gly Val Asn Ser Ala Gly
290 295 300

Lys Val Ala Ile Ser Ala Lys Glu Ile Lys Glu Asp Asn Ile Gly Ala
305 310 315 320

Gln Val Leu Gly Leu Phe Thr Leu Ser Thr Gly Gln Asp Ser Trp Asn
325 330 335

Gln Thr Asn

<210> 8
<211> 339
<212> PRT
<213> Artificial Sequence

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

<400> 8
Met Arg Lys Arg Cys Tyr Ser Thr Ser Ala Ala Val Leu Ala Ala Val
1 5 10 15

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

Ser Ala Asn Gln Glu Ile Arg Tyr Ser Glu Val Thr Pro Tyr His Val
35 40 45

Thr Ser Val Trp Thr Lys Gly Val Thr Pro Pro Ala Asn Phe Thr Gln
    50 55 60

Gly Glu Asp Val Phe His Ala Pro Tyr Val Ala Asn Gln Gly Trp Tyr
65 70 75 80

Asp Ile Thr Lys Thr Phe Asp Gly Lys Asp Asp Leu Leu Cys Gly Ala
                85 90 95

Ala Thr Ala Gly Asn Met Leu His Trp Trp Phe Asp Gln Asn Lys Asp
            100 105 110

Gln Ile Lys Arg Tyr Leu Glu Glu His Pro Glu Lys Gln Lys Ile Asn
        115 120 125

Phe Asn Gly Glu Gln Met Phe Asp Val Lys Glu Ala Ile Asp Thr Lys
    130 135 140

Asn His Gln Leu Asp Ser Lys Leu Phe Glu Tyr Phe Lys Glu Lys Ala
145 150 155 160

Phe Pro Tyr Leu Ser Thr Lys His Leu Gly Val Phe Pro Asp His Val
                165 170 175

Ile Asp Met Phe Ile Asn Gly Tyr Arg Leu Ser Leu Thr Asn His Gly
            180 185 190

Pro Thr Pro Val Lys Glu Gly Ser Lys Asp Pro Arg Gly Gly Ile Phe
        195 200 205

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

His Asp Phe Lys Glu Lys Asn Leu Lys Glu Ile Ser Asp Leu Ile Lys
225 230 235 240

Lys Glu Leu Thr Glu Gly Lys Ala Leu Gly Leu Ser His Thr Tyr Ala

245 250 255

Asn Val Arg Ile Asn His Val Ile Asn Leu Trp Gly Ala Asp Phe Asp
260 265 270

Ser Asp Gly Asn Leu Lys Ala Ile Tyr Val Thr Asp Ser Asp Ser Asn
275 280 285

Ala Ser Ile Gly Met Lys Lys Tyr Phe Val Gly Val Asn Ser Ala Gly
290 295 300

Lys Val Ala Ile Ser Ala Lys Glu Ile Lys Glu Asp Asn Ile Gly Ala
305 310 315 320

Gln Val Leu Gly Leu Phe Thr Leu Ser Thr Gly Gln Asp Ser Trp Asn
325 330 335

Gln Thr Asn

<210> 9
<211> 339
<212> PRT
<213> Artificial Sequence

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

<400> 9
Met Arg Lys Arg Cys Tyr Ser Thr Ser Ala Ala Val Leu Ala Ala Val
1 5 10 15

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

Ser Ala Asn Gln Glu Ile Arg Tyr Ser Glu Val Thr Pro Tyr His Val
35 40 45

Thr Ser Val Trp Thr Lys Gly Val Thr Pro Pro Ala Asn Phe Thr Gln
    50 55 60

Gly Glu Asp Val Phe His Ala Pro Tyr Val Ala Asn Gln Gly Trp Tyr
65 70 75 80

Asp Ile Thr Lys Thr Phe Asn Gly Lys Asp Asp Leu Leu Cys Gly Ala
                85 90 95

Ala Thr Ala Gly Asn Met Leu His Trp Trp Phe Asp Gln Asn Lys Asp
            100 105 110

Gln Ile Lys Arg Tyr Leu Glu Glu His Pro Glu Lys Gln Lys Ile Asn
        115 120 125

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

Asn His Gln Leu Asp Ser Lys Leu Phe Glu Tyr Phe Lys Glu Lys Ala
145 150 155 160

Phe Pro Tyr Leu Ser Thr Lys His Leu Gly Val Phe Pro Asp His Val
                165 170 175

Ile Asp Met Phe Ile Leu Gly Tyr Arg Leu Ser Leu Thr Asn His Gly
            180 185 190

Pro Thr Pro Val Lys Glu Gly Ser Lys Asp Pro Arg Gly Gly Ile Phe
        195 200 205

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

His Asp Phe Lys Glu Lys Asn Leu Lys Glu Ile Ser Asp Leu Ile Lys
225 230 235 240

Lys Glu Leu Thr Glu Gly Lys Ala Leu Gly Leu Ser His Thr Tyr Ala

245 250 255

Asn Val Arg Ile Asn His Val Ile Asn Leu Trp Gly Ala Asp Phe Asp
260 265 270

Ser Asn Gly Asn Leu Lys Ala Ile Tyr Val Thr Asp Ser Asp Ser Asn
275 280 285

Ala Ser Ile Gly Met Lys Lys Tyr Phe Val Gly Val Asn Ser Ala Gly
290 295 300

Lys Val Ala Ile Ser Ala Lys Glu Ile Lys Glu Asp Asn Ile Gly Ala
305 310 315 320

Gln Val Leu Gly Leu Phe Thr Leu Ser Thr Gly Gln Asp Ser Trp Asn
325 330 335

Gln Thr Asn

<210> 10
<211> 339
<212> PRT
<213> Artificial Sequence

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

<400> 10
Met Arg Lys Arg Cys Tyr Ser Thr Ser Ala Ala Val Leu Ala Ala Val
1 5 10 15

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

Ser Ala Asn Gln Glu Ile Arg Tyr Ser Glu Val Thr Pro Tyr His Val
35 40 45

Thr Ser Val Trp Thr Lys Gly Val Thr Pro Pro Ala Asn Phe Thr Gln
50 55 60

Gly Glu Asp Val Phe His Ala Pro Tyr Val Ala Asn Gln Gly Trp Tyr
65 70 75 80

Asp Ile Thr Lys Thr Phe Asn Gly Lys Asp Asp Leu Leu Cys Gly Ala
85 90 95

Ala Thr Ala Gly Asn Met Leu His Trp Trp Phe Asp Gln Asn Lys Asp
100 105 110

Gln Ile Lys Arg Tyr Leu Glu Glu His Pro Glu Lys Gln Lys Ile Asn
115 120 125

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

Asn His Gln Leu Asp Ser Lys Leu Phe Glu Tyr Phe Lys Glu Lys Ala
145 150 155 160

Phe Pro Tyr Leu Ser Thr Lys His Leu Gly Val Phe Pro Asp His Val
165 170 175

Ile Asp Met Phe Ile Asn Gly Tyr Arg Leu Ser Leu Thr Asn His Gly
180 185 190

Pro Thr Pro Val Lys Glu Gly Ser Lys Asp Pro Arg Gly Gly Ile Phe
195 200 205

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

His Asp Phe Lys Glu Lys Asn Leu Lys Glu Ile Ser Asp Leu Ile Lys
225 230 235 240

Lys Glu Leu Thr Glu Gly Lys Ala Leu Gly Leu Ser His Thr Tyr Ala

245 250 255

Asn Val Arg Ile Asn His Val Ile Asn Leu Trp Gly Ala Asp Phe Asp
260 265 270

Ser Asp Gly Asn Leu Lys Ala Ile Tyr Val Thr Asp Ser Asp Ser Asn
275 280 285

Ala Ser Ile Gly Met Lys Lys Tyr Phe Val Gly Val Asn Ser Ala Gly
290 295 300

Lys Val Ala Ile Ser Ala Lys Glu Ile Lys Glu Asp Asn Ile Gly Ala
305 310 315 320

Gln Val Leu Gly Leu Phe Thr Leu Ser Thr Gly Gln Asp Ser Trp Asn
325 330 335

Gln Thr Asn

<210> 11
<211> 339
<212> PRT
<213> Artificial Sequence

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

<400> 11
Met Arg Lys Arg Cys Tyr Ser Thr Ser Ala Ala Val Leu Ala Ala Val
1 5 10 15

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

Ser Ala Asn Gln Glu Ile Arg Tyr Ser Glu Val Thr Pro Tyr His Val
35 40 45

Thr Ser Val Trp Thr Lys Gly Val Thr Pro Pro Ala Asn Phe Thr Gln
50 55 60

Gly Glu Asp Val Phe His Ala Pro Tyr Val Ala Asn Gln Gly Trp Tyr
65 70 75 80

Asp Ile Thr Lys Thr Phe Asn Gly Lys Asp Asp Leu Leu Cys Gly Ala
85 90 95

Ala Thr Ala Gly Asn Met Leu His Trp Trp Phe Asp Gln Asn Lys Asp
100 105 110

Gln Ile Lys Arg Tyr Leu Glu Glu His Pro Glu Lys Gln Lys Ile Asn
115 120 125

Phe Asn Gly Glu Gln Met Phe Asp Val Lys Glu Ala Ile Asp Thr Lys
130 135 140

Asn His Gln Leu Asp Ser Lys Leu Phe Glu Tyr Phe Lys Glu Lys Ala
145 150 155 160

Phe Pro Tyr Leu Ser Thr Lys His Leu Gly Val Phe Pro Asp His Val
165 170 175

Ile Asp Met Phe Ile Leu Gly Tyr Arg Leu Ser Leu Thr Asn His Gly
180 185 190

Pro Thr Pro Val Lys Glu Gly Ser Lys Asp Pro Arg Gly Gly Ile Phe
195 200 205

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

His Asp Phe Lys Glu Lys Asn Leu Lys Glu Ile Ser Asp Leu Ile Lys
225 230 235 240

Lys Glu Leu Thr Glu Gly Lys Ala Leu Gly Leu Ser His Thr Tyr Ala

245 250 255

Asn Val Arg Ile Asn His Val Ile Asn Leu Trp Gly Ala Asp Phe Asp
260 265 270

Ser Asp Gly Asn Leu Lys Ala Ile Tyr Val Thr Asp Ser Asp Ser Asn
275 280 285

Ala Ser Ile Gly Met Lys Lys Tyr Phe Val Gly Val Asn Ser Ala Gly
290 295 300

Lys Val Ala Ile Ser Ala Lys Glu Ile Lys Glu Asp Asn Ile Gly Ala
305 310 315 320

Gln Val Leu Gly Leu Phe Thr Leu Ser Thr Gly Gln Asp Ser Trp Asn
325 330 335

Gln Thr Asn

<210> 12
<211> 339
<212> PRT
<213> Artificial Sequence

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

<400> 12
Met Arg Lys Arg Cys Tyr Ser Thr Ser Ala Ala Val Leu Ala Ala Val
1 5 10 15

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

Ser Ala Asn Gln Glu Ile Arg Tyr Ser Glu Val Thr Pro Tyr His Val
35 40 45

Thr Ser Val Trp Thr Lys Gly Val Thr Pro Pro Ala Asn Phe Thr Gln
    50 55 60

Gly Glu Asp Val Phe His Ala Pro Tyr Val Ala Asn Gln Gly Trp Tyr
65 70 75 80

Asp Ile Thr Lys Thr Phe Asp Gly Lys Asp Asp Leu Leu Cys Gly Ala
                85 90 95

Ala Thr Ala Gly Asn Met Leu His Trp Trp Phe Asp Gln Asn Lys Asp
            100 105 110

Gln Ile Lys Arg Tyr Leu Glu Glu His Pro Glu Lys Gln Lys Ile Asn
        115 120 125

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

Asn His Gln Leu Asp Ser Lys Leu Phe Glu Tyr Phe Lys Glu Lys Ala
145 150 155 160

Phe Pro Tyr Leu Ser Thr Lys His Leu Gly Val Phe Pro Asp His Val
                165 170 175

Ile Asp Met Phe Ile Leu Gly Tyr Arg Leu Ser Leu Thr Asn His Gly
            180 185 190

Pro Thr Pro Val Lys Glu Gly Ser Lys Asp Pro Arg Gly Gly Ile Phe
        195 200 205

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

His Asp Phe Lys Glu Lys Asn Leu Lys Glu Ile Ser Asp Leu Ile Lys
225 230 235 240

Lys Glu Leu Thr Glu Gly Lys Ala Leu Gly Leu Ser His Thr Tyr Ala

245 250 255

Asn Val Arg Ile Asn His Val Ile Asn Leu Trp Gly Ala Asp Phe Asp
260 265 270

Ser Asn Gly Asn Leu Lys Ala Ile Tyr Val Thr Asp Ser Asp Ser Asn
275 280 285

Ala Ser Ile Gly Met Lys Lys Tyr Phe Val Gly Val Asn Ser Ala Gly
290 295 300

Lys Val Ala Ile Ser Ala Lys Glu Ile Lys Glu Asp Asn Ile Gly Ala
305 310 315 320

Gln Val Leu Gly Leu Phe Thr Leu Ser Thr Gly Gln Asp Ser Trp Asn
325 330 335

Gln Thr Asn

<210> 13
<211> 339
<212> PRT
<213> Artificial Sequence

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

<400> 13
Met Arg Lys Arg Cys Tyr Ser Thr Ser Ala Ala Val Leu Ala Ala Val
1 5 10 15

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

Ser Ala Asn Gln Glu Ile Arg Tyr Ser Glu Val Thr Pro Tyr His Val
35 40 45

Thr Ser Val Trp Thr Lys Gly Val Thr Pro Pro Ala Asn Phe Thr Gln
    50 55 60

Gly Glu Asp Val Phe His Ala Pro Tyr Val Ala Asn Gln Gly Trp Tyr
65 70 75 80

Asp Ile Thr Lys Thr Phe Asp Gly Lys Asp Asp Leu Leu Cys Gly Ala
                85 90 95

Ala Thr Ala Gly Asn Met Leu His Trp Trp Phe Asp Gln Asn Lys Asp
            100 105 110

Gln Ile Lys Arg Tyr Leu Glu Glu His Pro Glu Lys Gln Lys Ile Asn
        115 120 125

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

Asn His Gln Leu Asp Ser Lys Leu Phe Glu Tyr Phe Lys Glu Lys Ala
145 150 155 160

Phe Pro Tyr Leu Ser Thr Lys His Leu Gly Val Phe Pro Asp His Val
                165 170 175

Ile Asp Met Phe Ile Asn Gly Tyr Arg Leu Ser Leu Thr Asn His Gly
            180 185 190

Pro Thr Pro Val Lys Glu Gly Ser Lys Asp Pro Arg Gly Gly Ile Phe
        195 200 205

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

His Asp Phe Lys Glu Lys Asn Leu Lys Glu Ile Ser Asp Leu Ile Lys
225 230 235 240

Lys Glu Leu Thr Glu Gly Lys Ala Leu Gly Leu Ser His Thr Tyr Ala

245 250 255

Asn Val Arg Ile Asn His Val Ile Asn Leu Trp Gly Ala Asp Phe Asp
260 265 270

Ser Asp Gly Asn Leu Lys Ala Ile Tyr Val Thr Asp Ser Asp Ser Asn
275 280 285

Ala Ser Ile Gly Met Lys Lys Tyr Phe Val Gly Val Asn Ser Ala Gly
290 295 300

Lys Val Ala Ile Ser Ala Lys Glu Ile Lys Glu Asp Asn Ile Gly Ala
305 310 315 320

Gln Val Leu Gly Leu Phe Thr Leu Ser Thr Gly Gln Asp Ser Trp Asn
325 330 335

Gln Thr Asn

<210> 14
<211> 339
<212> PRT
<213> Artificial Sequence

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

<400> 14
Met Arg Lys Arg Cys Tyr Ser Thr Ser Ala Ala Val Leu Ala Ala Val
1 5 10 15

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

Ser Ala Asn Gln Glu Ile Arg Tyr Ser Glu Val Thr Pro Tyr His Val
35 40 45

Thr Ser Val Trp Thr Lys Gly Val Thr Pro Pro Ala Asn Phe Thr Gln
50 55 60

Gly Glu Asp Val Phe His Ala Pro Tyr Val Ala Asn Gln Gly Trp Tyr
65 70 75 80

Asp Ile Thr Lys Thr Phe Asp Gly Lys Asp Asp Leu Leu Cys Gly Ala
85 90 95

Ala Thr Ala Gly Asn Met Leu His Trp Trp Phe Asp Gln Asn Lys Asp
100 105 110

Gln Ile Lys Arg Tyr Leu Glu Glu His Pro Glu Lys Gln Lys Ile Asn
115 120 125

Phe Asn Gly Glu Gln Met Phe Asp Val Lys Glu Ala Ile Asp Thr Lys
130 135 140

Asn His Gln Leu Asp Ser Lys Leu Phe Glu Tyr Phe Lys Glu Lys Ala
145 150 155 160

Phe Pro Tyr Leu Ser Thr Lys His Leu Gly Val Phe Pro Asp His Val
165 170 175

Ile Asp Met Phe Ile Leu Gly Tyr Arg Leu Ser Leu Thr Asn His Gly
180 185 190

Pro Thr Pro Val Lys Glu Gly Ser Lys Asp Pro Arg Gly Gly Ile Phe
195 200 205

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

His Asp Phe Lys Glu Lys Asn Leu Lys Glu Ile Ser Asp Leu Ile Lys
225 230 235 240

Lys Glu Leu Thr Glu Gly Lys Ala Leu Gly Leu Ser His Thr Tyr Ala

245 250 255

Asn Val Arg Ile Asn His Val Ile Asn Leu Trp Gly Ala Asp Phe Asp
260 265 270

Ser Asp Gly Asn Leu Lys Ala Ile Tyr Val Thr Asp Ser Asp Ser Asn
275 280 285

Ala Ser Ile Gly Met Lys Lys Tyr Phe Val Gly Val Asn Ser Ala Gly
290 295 300

Lys Val Ala Ile Ser Ala Lys Glu Ile Lys Glu Asp Asn Ile Gly Ala
305 310 315 320

Gln Val Leu Gly Leu Phe Thr Leu Ser Thr Gly Gln Asp Ser Trp Asn
325 330 335

Gln Thr Asn

<210> 15
<211> 339
<212> PRT
<213> Artificial Sequence

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

<400> 15
Met Arg Lys Arg Cys Tyr Ser Thr Ser Ala Ala Val Leu Ala Ala Val
1 5 10 15

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

Ser Ala Asn Gln Glu Ile Arg Tyr Ser Glu Val Thr Pro Tyr His Val
35 40 45

Thr Ser Val Trp Thr Lys Gly Val Thr Pro Pro Ala Asn Phe Thr Gln
50 55 60

Gly Glu Asp Val Phe His Ala Pro Tyr Val Ala Asn Gln Gly Trp Tyr
65 70 75 80

Asp Ile Thr Lys Thr Phe Asn Gly Lys Asp Asp Leu Leu Cys Gly Ala
85 90 95

Ala Thr Ala Gly Asn Met Leu His Trp Trp Phe Asp Gln Asn Lys Asp
100 105 110

Gln Ile Lys Arg Tyr Leu Glu Glu His Pro Glu Lys Gln Lys Ile Asn
115 120 125

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

Asn His Gln Leu Asp Ser Lys Leu Phe Glu Tyr Phe Lys Glu Lys Ala
145 150 155 160

Phe Pro Tyr Leu Ser Thr Lys His Leu Gly Val Phe Pro Asp His Val
165 170 175

Ile Asp Met Phe Ile Leu Gly Tyr Arg Leu Ser Leu Thr Asn His Gly
180 185 190

Pro Thr Pro Val Lys Glu Gly Ser Lys Asp Pro Arg Gly Gly Ile Phe
195 200 205

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

His Asp Phe Lys Glu Lys Asn Leu Lys Glu Ile Ser Asp Leu Ile Lys
225 230 235 240

Lys Glu Leu Thr Glu Gly Lys Ala Leu Gly Leu Ser His Thr Tyr Ala

245 250 255

Asn Val Arg Ile Asn His Val Ile Asn Leu Trp Gly Ala Asp Phe Asp
260 265 270

Ser Asp Gly Asn Leu Lys Ala Ile Tyr Val Thr Asp Ser Asp Ser Asn
275 280 285

Ala Ser Ile Gly Met Lys Lys Tyr Phe Val Gly Val Asn Ser Ala Gly
290 295 300

Lys Val Ala Ile Ser Ala Lys Glu Ile Lys Glu Asp Asn Ile Gly Ala
305 310 315 320

Gln Val Leu Gly Leu Phe Thr Leu Ser Thr Gly Gln Asp Ser Trp Asn
325 330 335

Gln Thr Asn

<210> 16
<211> 339
<212> PRT
<213> Artificial Sequence

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

<400> 16
Met Arg Lys Arg Cys Tyr Ser Thr Ser Ala Ala Val Leu Ala Ala Val
1 5 10 15

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

Ser Ala Asn Gln Glu Ile Arg Tyr Ser Glu Val Thr Pro Tyr His Val
35 40 45

Thr Ser Val Trp Thr Lys Gly Val Thr Pro Pro Ala Asn Phe Thr Gln
    50 55 60

Gly Glu Asp Val Phe His Ala Pro Tyr Val Ala Asn Gln Gly Trp Tyr
65 70 75 80

Asp Ile Thr Lys Thr Phe Asp Gly Lys Asp Asp Leu Leu Cys Gly Ala
                85 90 95

Ala Thr Ala Gly Asn Met Leu His Trp Trp Phe Asp Gln Asn Lys Asp
            100 105 110

Gln Ile Lys Arg Tyr Leu Glu Glu His Pro Glu Lys Gln Lys Ile Asn
        115 120 125

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

Asn His Gln Leu Asp Ser Lys Leu Phe Glu Tyr Phe Lys Glu Lys Ala
145 150 155 160

Phe Pro Tyr Leu Ser Thr Lys His Leu Gly Val Phe Pro Asp His Val
                165 170 175

Ile Asp Met Phe Ile Leu Gly Tyr Arg Leu Ser Leu Thr Asn His Gly
            180 185 190

Pro Thr Pro Val Lys Glu Gly Ser Lys Asp Pro Arg Gly Gly Ile Phe
        195 200 205

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

His Asp Phe Lys Glu Lys Asn Leu Lys Glu Ile Ser Asp Leu Ile Lys
225 230 235 240

Lys Glu Leu Thr Glu Gly Lys Ala Leu Gly Leu Ser His Thr Tyr Ala

245 250 255

Asn Val Arg Ile Asn His Val Ile Asn Leu Trp Gly Ala Asp Phe Asp
260 265 270

Ser Asp Gly Asn Leu Lys Ala Ile Tyr Val Thr Asp Ser Asp Ser Asn
275 280 285

Ala Ser Ile Gly Met Lys Lys Tyr Phe Val Gly Val Asn Ser Ala Gly
290 295 300

Lys Val Ala Ile Ser Ala Lys Glu Ile Lys Glu Asp Asn Ile Gly Ala
305 310 315 320

Gln Val Leu Gly Leu Phe Thr Leu Ser Thr Gly Gln Asp Ser Trp Asn
325 330 335

Gln Thr Asn

<210> 17
<211> 16
<212> PRT
<213> Artificial Sequence

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

<220>
<221> MISC_FEATURE
<222> (4)..(4)
<223> May be oxidized

<220>
<221> MISC_FEATURE
<222> (6)..(6)
<223> May be carboxymethylated

<220>
<221> MISC_FEATURE

<222> (9)..(9)
<223> May be carboxymethylated

<400> 17
Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly
1 5 10 15

<210> 18
<211> 17
<212> PRT
<213> Artificial Sequence

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

<220>
<221> MISC_FEATURE
<222> (7)..(7)
<223> May be carboxymethylated

<220>
<221> MISC_FEATURE
<222> (14)..(14)
<223> May be oxidized

<400> 18
Glu Ile Gly Leu Leu Thr Cys Glu Ala Thr Val Asn Gly His Leu Tyr
1 5 10 15

Lys

<210> 19
<211> 23
<212> PRT
<213> Artificial Sequence

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

<220>
<221> MISC_FEATURE

<222> (14)..(14)
<223> May be oxidized

<400> 19
Gln Thr Asn Thr Ile Ile Asp Val Val Leu Ser Pro Ser His Gly Ile
1 5 10 15

Glu Leu Ser Val Gly Glu Lys
20

<210> 20
<211> 21
<212> PRT
<213> Artificial Sequence

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

<220>
<221> MISC_FEATURE
<222> (18)..(18)
<223> May be oxidized

<400> 20
Thr Glu Leu Asn Val Gly Ile Asp Phe Asn Trp Glu Tyr Pro Ser Ser
1 5 10 15

Lys His Gln His Lys
20

<210> 21
<211> 7
<212> PRT
<213> Artificial Sequence

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

<220>
<221> MISC_FEATURE
<222> (6)..(6)

<223> May be oxidized

<400> 21
Thr Asn Tyr Leu Thr His Arg
1 5

<210> 22
<211> 24
<212> PRT
<213> Artificial Sequence

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

<220>
<221> MISC_FEATURE
<222> (19)..(19)
<223> May be oxidized

<400> 22
Ser Asp Thr Gly Arg Pro Phe Val Glu Met Tyr Ser Glu Ile Pro Glu
1 5 10 15

Ile Ile His Met Thr Glu Gly Arg
20

<210> 23
<211> 6
<212> PRT
<213> Artificial Sequence

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

<220>
<221> MISC_FEATURE
<222> (2)..(2)
<223> May be oxidized

<400> 23
Val His Glu Lys Asp Lys
1 5

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

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

<220>
<221> MISC_FEATURE
<222> (10)..(10)
<223> May be oxidized

<400> 24
Ser Asp Thr Gly Arg Pro Phe Val Glu Met Tyr Ser Glu Ile Pro Glu
1 5 10 15

Ile Ile His Met Thr Glu Gly Arg
20

<210> 25
<211> 24
<212> PRT
<213> Artificial Sequence

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

<220>
<221> MISC_FEATURE
<222> (20)..(20)
<223> May be oxidized

<400> 25
Ser Asp Thr Gly Arg Pro Phe Val Glu Met Tyr Ser Glu Ile Pro Glu
1 5 10 15

Ile Ile His Met Thr Glu Gly Arg
20

<210> 26
<211> 8
<212> PRT
<213> Artificial Sequence

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

<220>
<221> MISC_FEATURE
<222> (7)..(7)
<223> May be oxidized

<400> 26
Thr Gln Ser Gly Ser Glu Met Lys
1 5

<210> 27
<211> 17
<212> PRT
<213> Artificial Sequence

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

<220>
<221> MISC_FEATURE
<222> (8)..(8)
<223> May be carboxymethylated

<400> 27
Ser Asp Gln Gly Leu Tyr Thr Cys Ala Ala Ser Ser Gly Leu Met Thr
1 5 10 15

Lys

<210> 28
<211> 6
<212> PRT
<213> Artificial Sequence

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

<220>
<221> MISC_FEATURE
<222> (3)..(3)
<223> May be oxidized

<400> 28
Ile Ile Trp Asp Ser Arg
1 5

<210> 29
<211> 17
<212> PRT
<213> Artificial Sequence

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

<220>
<221> MISC_FEATURE
<222> (11)..(11)
<223> May be oxidized

<400> 29
Thr Glu Leu Asn Val Gly Ile Asp Phe Asn Trp Glu Tyr Pro Ser Ser
1 5 10 15

Lys

<210> 30
<211> 10
<212> PRT
<213> Artificial Sequence

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

<220>
<221> MISC_FEATURE
<222> (9)..(9)
<223> May be oxidized

<400> 30
Gly Phe Ile Ile Ser Asn Ala Thr Tyr Lys
1 5 10

<210> 31
<211> 12
<212> PRT
<213> Artificial Sequence

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

<220>
<221> MISC_FEATURE
<222> (2)..(2)
<223> May be oxidized

<400> 31
Lys Phe Pro Leu Asp Thr Leu Ile Pro Asp Gly Lys
1 5 10

<210> 32
<211> 12
<212> PRT
<213> Artificial Sequence

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

<220>
<221> MISC_FEATURE
<222> (1)..(1)
<223> May be oxidized

<400> 32
Phe Leu Ser Thr Leu Thr Ile Asp Gly Val Thr Arg
1 5 10

<210> 33
<211> 227
<212> PRT
<213> Artificial Sequence

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

<220>
<221> MOD_RES
<222> (8)..(8)
<223> Leu or Pro

<220>
<221> MOD_RES
<222> (173)..(173)
<223> Ala or Thr

<400> 33
Asp Lys Thr His Thr Cys Pro Xaa 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 Asn 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 Asp Glu Leu 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 Xaa 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 Lys
225

<210> 34
<211> 103
<212> PRT
<213> Artificial Sequence

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

<400> 34
Ser Asp Thr Gly Arg Pro Phe Val Glu Met Tyr Ser Glu Ile Pro Glu
1 5 10 15

Ile Ile His Met Thr Glu Gly Arg Glu Leu Val Ile Pro Cys Arg Val

20 25 30

Thr Ser Pro Asn Ile Thr Val Thr Leu Lys Lys Phe Pro Leu Asp Thr
35 40 45

Leu Ile Pro Asp Gly Lys Arg Ile Ile Trp Asp Ser Arg Lys Gly Phe
50 55 60

Ile Ile Ser Asn Ala Thr Tyr Lys Glu Ile Gly Leu Leu Thr Cys Glu
65 70 75 80

Ala Thr Val Asn Gly His Leu Tyr Lys Thr Asn Tyr Leu Thr His Arg
85 90 95

Gln Thr Asn Thr Ile Ile Asp
100

<210> 35
<211> 93
<212> PRT
<213> Artificial Sequence

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

<400> 35
Pro Phe Val Glu Met Tyr Ser Glu Ile Pro Glu Ile Ile His Met Thr
1 5 10 15

Glu Gly Arg Glu Leu Val Ile Pro Cys Arg Val Thr Ser Pro Asn Ile
20 25 30

Thr Val Thr Leu Lys Lys Phe Pro Leu Asp Thr Leu Ile Pro Asp Gly
35 40 45

Lys Arg Ile Ile Trp Asp Ser Arg Lys Gly Phe Ile Ile Ser Asn Ala
50 55 60

Thr Tyr Lys Glu Ile Gly Leu Leu Thr Cys Glu Ala Thr Val Asn Gly
65 70 75 80

His Leu Tyr Lys Thr Asn Tyr Leu Thr His Arg Gln Thr
85 90

<210> 36
<211> 102
<212> PRT
<213> Artificial Sequence

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

<400> 36
Val Val Leu Ser Pro Ser His Gly Ile Glu Leu Ser Val Gly Glu Lys
1 5 10 15

Leu Val Leu Asn Cys Thr Ala Arg Thr Glu Leu Asn Val Gly Ile Asp
20 25 30

Phe Asn Trp Glu Tyr Pro Ser Ser Lys His Gln His Lys Lys Leu Val
35 40 45

Asn Arg Asp Leu Lys Thr Gln Ser Gly Ser Glu Met Lys Lys Phe Leu
50 55 60

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

Thr Cys Ala Ala Ser Ser Gly Leu Met Thr Lys Lys Asn Ser Thr Phe
85 90 95

Val Arg Val His Glu Lys
100

<210> 37
<211> 97
<212> PRT

<213> Artificial Sequence

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

<400> 37
Pro Phe Val Ala Phe Gly Ser Gly Met Glu Ser Leu Val Glu Ala Thr
1 5 10 15

Val Gly Glu Arg Val Arg Ile Pro Ala Lys Tyr Leu Gly Tyr Pro Pro
20 25 30

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

Thr Ile Lys Ala Gly His Val Leu Thr Ile Met Glu Val Ser Glu Arg
50 55 60

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

Lys Gln Ser His Val Val Ser Leu Val Val Tyr Val Pro Pro Gly Pro
85 90 95

Gly

<210> 38
<211> 92
<212> PRT
<213> Artificial Sequence

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

<400> 38
Phe Val Ala Phe Gly Ser Gly Met Glu Ser Leu Val Glu Ala Thr Val
1 5 10 15

Gly Glu Arg Val Arg Ile Pro Ala Lys Tyr Leu Gly Tyr Pro Pro Pro
20 25 30

Glu Ile Lys Trp Tyr Lys Asn Gly Ile Pro Leu Glu Ser Asn His Thr
35 40 45

Ile Lys Ala Gly His Val Leu Thr Ile Met Glu Val Ser Glu Arg Asp
50 55 60

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

Gln Ser His Val Val Ser Leu Val Val Tyr Val Pro
85 90

<210> 39
<211> 9
<212> PRT
<213> Artificial Sequence

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

<400> 39
Asp Lys Thr His Thr Cys Pro Pro Cys
1 5

<210> 40
<211> 12
<212> PRT
<213> Artificial Sequence

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

<400> 40
Asp Lys Thr His Thr Cys Pro Pro Cys Pro Pro Cys
1 5 10

<210> 41

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

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

<400> 41
Asp Lys Thr His Thr Cys Pro Pro Cys Pro Pro Cys Pro Pro Cys
1 5 10 15

<210> 42
<211> 16
<212> PRT
<213> Artificial Sequence

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

<400> 42
Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly
1 5 10 15

<210> 43
<211> 16
<212> PRT
<213> Artificial Sequence

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

<400> 43
Asp Lys Thr His Thr Cys Pro Leu Cys Pro Ala Pro Glu Leu Leu Gly
1 5 10 15

<210> 44
<211> 6
<212> PRT
<213> Artificial Sequence

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

<400> 44
Asp Lys Thr His Thr Cys
1 5

<210> 45
<211> 12
<212> PRT
<213> Artificial Sequence

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

<400> 45
Asp Lys Thr His Thr Cys Pro Leu Cys Pro Ala Pro
1 5 10

<210> 46
<211> 221
<212> PRT
<213> Artificial Sequence

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

<400> 46
Ser Asp Thr Gly Arg Pro Phe Val Glu Met Tyr Ser Glu Ile Pro Glu
1 5 10 15

Ile Ile His Met Thr Glu Gly Arg Glu Leu Val Ile Pro Cys Arg Val
20 25 30

Thr Ser Pro Asn Ile Thr Val Thr Leu Lys Lys Phe Pro Leu Asp Thr
35 40 45

Leu Ile Pro Asp Gly Lys Arg Ile Ile Trp Asp Ser Arg Lys Gly Phe
50 55 60

Ile Ile Ser Asn Ala Thr Tyr Lys Glu Ile Gly Leu Leu Thr Cys Glu
65 70 75 80

Ala Thr Val Asn Gly His Leu Tyr Lys Thr Asn Tyr Leu Thr His Arg
85 90 95

Gln Thr Asn Thr Ile Ile Asp Val Val Leu Ser Pro Ser His Gly Ile
100 105 110

Glu Leu Ser Val Gly Glu Lys Leu Val Leu Asn Cys Thr Ala Arg Thr
115 120 125

Glu Leu Asn Val Gly Ile Asp Phe Asn Trp Glu Tyr Pro Ser Ser Lys
130 135 140

His Gln His Lys Lys Leu Val Asn Arg Asp Leu Lys Thr Gln Ser Gly
145 150 155 160

Ser Glu Met Lys Lys Phe Leu Ser Thr Leu Thr Ile Asp Gly Val Thr
165 170 175

Arg Ser Asp Gln Gly Leu Tyr Thr Cys Ala Ala Ser Ser Gly Leu Met
180 185 190

Thr Lys Lys Asn Ser Thr Phe Val Arg Val His Glu Lys Asp Lys Thr
195 200 205

His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly
210 215 220

<210> 47
<211> 315
<212> PRT
<213> Artificial Sequence

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

<400> 47
Gly Arg Pro Phe Val Glu Met Tyr Ser Glu Ile Pro Glu Ile Ile His
1 5 10 15

Met Thr Glu Gly Arg Glu Leu Val Ile Pro Cys Arg Val Thr Ser Pro
20 25 30

Asn Ile Thr Val Thr Leu Lys Lys Phe Pro Leu Asp Thr Leu Ile Pro
35 40 45

Asp Gly Lys Arg Ile Ile Trp Asp Ser Arg Lys Gly Phe Ile Ile Ser
50 55 60

Asn Ala Thr Tyr Lys Glu Ile Gly Leu Leu Thr Cys Glu Ala Thr Val
65 70 75 80

Asn Gly His Leu Tyr Lys Thr Asn Tyr Leu Thr His Arg Gln Thr Asn
85 90 95

Thr Ile Ile Asp Val Val Leu Ser Pro Ser His Gly Ile Glu Leu Ser
100 105 110

Val Gly Glu Lys Leu Val Leu Asn Cys Thr Ala Arg Thr Glu Leu Asn
115 120 125

Val Gly Ile Asp Phe Asn Trp Glu Tyr Pro Ser Ser Lys His Gln His
130 135 140

Lys Lys Leu Val Asn Arg Asp Leu Lys Thr Gln Ser Gly Ser Glu Met
145 150 155 160

Lys Lys Phe Leu Ser Thr Leu Thr Ile Asp Gly Val Thr Arg Ser Asp
165 170 175

Gln Gly Leu Tyr Thr Cys Ala Ala Ser Ser Gly Leu Met Thr Lys Lys
180 185 190

Asn Ser Thr Phe Val Arg Val His Glu Asn Leu Ser Val Ala Phe Gly
195 200 205

Ser Gly Met Glu Ser Leu Val Glu Ala Thr Val Gly Glu Arg Val Arg
210 215 220

Ile Pro Ala Lys Tyr Leu Gly Tyr Pro Pro Pro Glu Ile Lys Trp Tyr
225 230 235 240

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

Val Leu Thr Ile Met Glu Val Ser Glu Arg Asp Thr Gly Asn Tyr Thr
260 265 270

Val Ile Leu Thr Asn Pro Ile Ser Lys Glu Lys Gln Ser His Val Val
275 280 285

Ser Leu Val Val Tyr Val Pro Pro Gly Pro Gly Asp Lys Thr His Thr
290 295 300

Cys Pro Leu Cys Pro Ala Pro Glu Leu Leu Gly
305 310 315

<210> 48
<211> 214
<212> PRT
<213> Artificial Sequence

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

<400> 48
Ser Asp Thr Gly Arg Pro Phe Val Glu Met Tyr Ser Glu Ile Pro Glu
1 5 10 15

Ile Ile His Met Thr Glu Gly Arg Glu Leu Val Ile Pro Cys Arg Val
20 25 30

Thr Ser Pro Asn Ile Thr Val Thr Leu Lys Lys Phe Pro Leu Asp Thr
35 40 45

Leu Ile Pro Asp Gly Lys Arg Ile Ile Trp Asp Ser Arg Lys Gly Phe
    50 55 60

Ile Ile Ser Asn Ala Thr Tyr Lys Glu Ile Gly Leu Leu Thr Cys Glu
65 70 75 80

Ala Thr Val Asn Gly His Leu Tyr Lys Thr Asn Tyr Leu Thr His Arg
                85 90 95

Gln Thr Asn Thr Ile Ile Asp Val Val Leu Ser Pro Ser His Gly Ile
            100 105 110

Glu Leu Ser Val Gly Glu Lys Leu Val Leu Asn Cys Thr Ala Arg Thr
        115 120 125

Glu Leu Asn Val Gly Ile Asp Phe Asn Trp Glu Tyr Pro Ser Ser Lys
    130 135 140

His Gln His Lys Lys Leu Val Asn Arg Asp Leu Lys Thr Gln Ser Gly
145 150 155 160

Ser Glu Met Lys Lys Phe Leu Ser Thr Leu Thr Ile Asp Gly Val Thr
                165 170 175

Arg Ser Asp Gln Gly Leu Tyr Thr Cys Ala Ala Ser Ser Gly Leu Met
            180 185 190

Thr Lys Lys Asn Ser Thr Phe Val Arg Val His Glu Lys Asp Lys Thr
        195 200 205

His Thr Cys Pro Pro Cys
    210

<210> 49
<211> 217
<212> PRT

<213> Artificial Sequence

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

<400> 49
Ser Asp Thr Gly Arg Pro Phe Val Glu Met Tyr Ser Glu Ile Pro Glu
1 5 10 15

Ile Ile His Met Thr Glu Gly Arg Glu Leu Val Ile Pro Cys Arg Val
20 25 30

Thr Ser Pro Asn Ile Thr Val Thr Leu Lys Lys Phe Pro Leu Asp Thr
35 40 45

Leu Ile Pro Asp Gly Lys Arg Ile Ile Trp Asp Ser Arg Lys Gly Phe
50 55 60

Ile Ile Ser Asn Ala Thr Tyr Lys Glu Ile Gly Leu Leu Thr Cys Glu
65 70 75 80

Ala Thr Val Asn Gly His Leu Tyr Lys Thr Asn Tyr Leu Thr His Arg
85 90 95

Gln Thr Asn Thr Ile Ile Asp Val Val Leu Ser Pro Ser His Gly Ile
100 105 110

Glu Leu Ser Val Gly Glu Lys Leu Val Leu Asn Cys Thr Ala Arg Thr
115 120 125

Glu Leu Asn Val Gly Ile Asp Phe Asn Trp Glu Tyr Pro Ser Ser Lys
130 135 140

His Gln His Lys Lys Leu Val Asn Arg Asp Leu Lys Thr Gln Ser Gly
145 150 155 160

Ser Glu Met Lys Lys Phe Leu Ser Thr Leu Thr Ile Asp Gly Val Thr
165 170 175

Arg Ser Asp Gln Gly Leu Tyr Thr Cys Ala Ala Ser Ser Gly Leu Met
180 185 190

Thr Lys Lys Asn Ser Thr Phe Val Arg Val His Glu Lys Asp Lys Thr
195 200 205

His Thr Cys Pro Pro Cys Pro Pro Cys
210 215

<210> 50
<211> 220
<212> PRT
<213> Artificial Sequence

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

<400> 50
Ser Asp Thr Gly Arg Pro Phe Val Glu Met Tyr Ser Glu Ile Pro Glu
1 5 10 15

Ile Ile His Met Thr Glu Gly Arg Glu Leu Val Ile Pro Cys Arg Val
20 25 30

Thr Ser Pro Asn Ile Thr Val Thr Leu Lys Lys Phe Pro Leu Asp Thr
35 40 45

Leu Ile Pro Asp Gly Lys Arg Ile Ile Trp Asp Ser Arg Lys Gly Phe
50 55 60

Ile Ile Ser Asn Ala Thr Tyr Lys Glu Ile Gly Leu Leu Thr Cys Glu
65 70 75 80

Ala Thr Val Asn Gly His Leu Tyr Lys Thr Asn Tyr Leu Thr His Arg
85 90 95

Gln Thr Asn Thr Ile Ile Asp Val Val Leu Ser Pro Ser His Gly Ile

100 105 110

Glu Leu Ser Val Gly Glu Lys Leu Val Leu Asn Cys Thr Ala Arg Thr
115 120 125

Glu Leu Asn Val Gly Ile Asp Phe Asn Trp Glu Tyr Pro Ser Ser Lys
130 135 140

His Gln His Lys Lys Leu Val Asn Arg Asp Leu Lys Thr Gln Ser Gly
145 150 155 160

Ser Glu Met Lys Lys Phe Leu Ser Thr Leu Thr Ile Asp Gly Val Thr
165 170 175

Arg Ser Asp Gln Gly Leu Tyr Thr Cys Ala Ala Ser Ser Gly Leu Met
180 185 190

Thr Lys Lys Asn Ser Thr Phe Val Arg Val His Glu Lys Asp Lys Thr
195 200 205

His Thr Cys Pro Pro Cys Pro Pro Cys Pro Pro Cys
210 215 220

<210> 51
<211> 440
<212> PRT
<213> Artificial Sequence

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

<400> 51
Ser Asp Thr Gly Arg Pro Phe Val Glu Met Tyr Ser Glu Ile Pro Glu
1 5 10 15

Ile Ile His Met Thr Glu Gly Arg Glu Leu Val Ile Pro Cys Arg Val
20 25 30

Thr Ser Pro Asn Ile Thr Val Thr Leu Lys Lys Phe Pro Leu Asp Thr
35 40 45

Leu Ile Pro Asp Gly Lys Arg Ile Ile Trp Asp Ser Arg Lys Gly Phe
50 55 60

Ile Ile Ser Asn Ala Thr Tyr Lys Glu Ile Gly Leu Leu Thr Cys Glu
65 70 75 80

Ala Thr Val Asn Gly His Leu Tyr Lys Thr Asn Tyr Leu Thr His Arg
85 90 95

Gln Thr Asn Thr Ile Ile Asp Val Val Leu Ser Pro Ser His Gly Ile
100 105 110

Glu Leu Ser Val Gly Glu Lys Leu Val Leu Asn Cys Thr Ala Arg Thr
115 120 125

Glu Leu Asn Val Gly Ile Asp Phe Asn Trp Glu Tyr Pro Ser Ser Lys
130 135 140

His Gln His Lys Lys Leu Val Asn Arg Asp Leu Lys Thr Gln Ser Gly
145 150 155 160

Ser Glu Met Lys Lys Phe Leu Ser Thr Leu Thr Ile Asp Gly Val Thr
165 170 175

Arg Ser Asp Gln Gly Leu Tyr Thr Cys Ala Ala Ser Ser Gly Leu Met
180 185 190

Thr Lys Lys Asn Ser Thr Phe Val Arg Val His Glu Lys Gly Gly Gly
195 200 205

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly
210 215 220

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ser Asp Thr Gly Arg

225 230 235 240

Pro Phe Val Glu Met Tyr Ser Glu Ile Pro Glu Ile Ile His Met Thr
245 250 255

Glu Gly Arg Glu Leu Val Ile Pro Cys Arg Val Thr Ser Pro Asn Ile
260 265 270

Thr Val Thr Leu Lys Lys Phe Pro Leu Asp Thr Leu Ile Pro Asp Gly
275 280 285

Lys Arg Ile Ile Trp Asp Ser Arg Lys Gly Phe Ile Ile Ser Asn Ala
290 295 300

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

His Leu Tyr Lys Thr Asn Tyr Leu Thr His Arg Gln Thr Asn Thr Ile
325 330 335

Ile Asp Val Val Leu Ser Pro Ser His Gly Ile Glu Leu Ser Val Gly
340 345 350

Glu Lys Leu Val Leu Asn Cys Thr Ala Arg Thr Glu Leu Asn Val Gly
355 360 365

Ile Asp Phe Asn Trp Glu Tyr Pro Ser Ser Lys His Gln His Lys Lys
370 375 380

Leu Val Asn Arg Asp Leu Lys Thr Gln Ser Gly Ser Glu Met Lys Lys
385 390 395 400

Phe Leu Ser Thr Leu Thr Ile Asp Gly Val Thr Arg Ser Asp Gln Gly
405 410 415

Leu Tyr Thr Cys Ala Ala Ser Ser Gly Leu Met Thr Lys Lys Asn Ser
420 425 430

Thr Phe Val Arg Val His Glu Lys
435 440

<210> 52
<211> 425
<212> PRT
<213> Artificial Sequence

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

<400> 52
Ser Asp Thr Gly Arg Pro Phe Val Glu Met Tyr Ser Glu Ile Pro Glu
1 5 10 15

Ile Ile His Met Thr Glu Gly Arg Glu Leu Val Ile Pro Cys Arg Val
20 25 30

Thr Ser Pro Asn Ile Thr Val Thr Leu Lys Lys Phe Pro Leu Asp Thr
35 40 45

Leu Ile Pro Asp Gly Lys Arg Ile Ile Trp Asp Ser Arg Lys Gly Phe
50 55 60

Ile Ile Ser Asn Ala Thr Tyr Lys Glu Ile Gly Leu Leu Thr Cys Glu
65 70 75 80

Ala Thr Val Asn Gly His Leu Tyr Lys Thr Asn Tyr Leu Thr His Arg
85 90 95

Gln Thr Asn Thr Ile Ile Asp Val Val Leu Ser Pro Ser His Gly Ile
100 105 110

Glu Leu Ser Val Gly Glu Lys Leu Val Leu Asn Cys Thr Ala Arg Thr
115 120 125

Glu Leu Asn Val Gly Ile Asp Phe Asn Trp Glu Tyr Pro Ser Ser Lys

130 135 140

His Gln His Lys Lys Leu Val Asn Arg Asp Leu Lys Thr Gln Ser Gly
145 150 155 160

Ser Glu Met Lys Lys Phe Leu Ser Thr Leu Thr Ile Asp Gly Val Thr
165 170 175

Arg Ser Asp Gln Gly Leu Tyr Thr Cys Ala Ala Ser Ser Gly Leu Met
180 185 190

Thr Lys Lys Asn Ser Thr Phe Val Arg Val His Glu Lys Gly Gly Gly
195 200 205

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ser Asp Thr Gly
210 215 220

Arg Pro Phe Val Glu Met Tyr Ser Glu Ile Pro Glu Ile Ile His Met
225 230 235 240

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

Ile Thr Val Thr Leu Lys Lys Phe Pro Leu Asp Thr Leu Ile Pro Asp
260 265 270

Gly Lys Arg Ile Ile Trp Asp Ser Arg Lys Gly Phe Ile Ile Ser Asn
275 280 285

Ala Thr Tyr Lys Glu Ile Gly Leu Leu Thr Cys Glu Ala Thr Val Asn
290 295 300

Gly His Leu Tyr Lys Thr Asn Tyr Leu Thr His Arg Gln Thr Asn Thr
305 310 315 320

Ile Ile Asp Val Val Leu Ser Pro Ser His Gly Ile Glu Leu Ser Val
325 330 335

Gly Glu Lys Leu Val Leu Asn Cys Thr Ala Arg Thr Glu Leu Asn Val
340 345 350

Gly Ile Asp Phe Asn Trp Glu Tyr Pro Ser Ser Lys His Gln His Lys
355 360 365

Lys Leu Val Asn Arg Asp Leu Lys Thr Gln Ser Gly Ser Glu Met Lys
370 375 380

Lys Phe Leu Ser Thr Leu Thr Ile Asp Gly Val Thr Arg Ser Asp Gln
385 390 395 400

Gly Leu Tyr Thr Cys Ala Ala Ser Ser Gly Leu Met Thr Lys Lys Asn
405 410 415

Ser Thr Phe Val Arg Val His Glu Lys
420 425

<210> 53
<211> 455
<212> PRT
<213> Artificial Sequence

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

<400> 53
Ser Asp Thr Gly Arg Pro Phe Val Glu Met Tyr Ser Glu Ile Pro Glu
1 5 10 15

Ile Ile His Met Thr Glu Gly Arg Glu Leu Val Ile Pro Cys Arg Val
20 25 30

Thr Ser Pro Asn Ile Thr Val Thr Leu Lys Lys Phe Pro Leu Asp Thr
35 40 45

Leu Ile Pro Asp Gly Lys Arg Ile Ile Trp Asp Ser Arg Lys Gly Phe

50 55 60

Ile Ile Ser Asn Ala Thr Tyr Lys Glu Ile Gly Leu Leu Thr Cys Glu
65 70 75 80

Ala Thr Val Asn Gly His Leu Tyr Lys Thr Asn Tyr Leu Thr His Arg
85 90 95

Gln Thr Asn Thr Ile Ile Asp Val Val Leu Ser Pro Ser His Gly Ile
100 105 110

Glu Leu Ser Val Gly Glu Lys Leu Val Leu Asn Cys Thr Ala Arg Thr
115 120 125

Glu Leu Asn Val Gly Ile Asp Phe Asn Trp Glu Tyr Pro Ser Ser Lys
130 135 140

His Gln His Lys Lys Leu Val Asn Arg Asp Leu Lys Thr Gln Ser Gly
145 150 155 160

Ser Glu Met Lys Lys Phe Leu Ser Thr Leu Thr Ile Asp Gly Val Thr
165 170 175

Arg Ser Asp Gln Gly Leu Tyr Thr Cys Ala Ala Ser Ser Gly Leu Met
180 185 190

Thr Lys Lys Asn Ser Thr Phe Val Arg Val His Glu Lys Gly Gly Gly
195 200 205

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly
210 215 220

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
225 230 235 240

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ser Asp Thr Gly Arg Pro
245 250 255

Phe Val Glu Met Tyr Ser Glu Ile Pro Glu Ile Ile His Met Thr Glu
260 265 270

Gly Arg Glu Leu Val Ile Pro Cys Arg Val Thr Ser Pro Asn Ile Thr
275 280 285

Val Thr Leu Lys Lys Phe Pro Leu Asp Thr Leu Ile Pro Asp Gly Lys
290 295 300

Arg Ile Ile Trp Asp Ser Arg Lys Gly Phe Ile Ile Ser Asn Ala Thr
305 310 315 320

Tyr Lys Glu Ile Gly Leu Leu Thr Cys Glu Ala Thr Val Asn Gly His
325 330 335

Leu Tyr Lys Thr Asn Tyr Leu Thr His Arg Gln Thr Asn Thr Ile Ile
340 345 350

Asp Val Val Leu Ser Pro Ser His Gly Ile Glu Leu Ser Val Gly Glu
355 360 365

Lys Leu Val Leu Asn Cys Thr Ala Arg Thr Glu Leu Asn Val Gly Ile
370 375 380

Asp Phe Asn Trp Glu Tyr Pro Ser Ser Lys His Gln His Lys Lys Leu
385 390 395 400

Val Asn Arg Asp Leu Lys Thr Gln Ser Gly Ser Glu Met Lys Lys Phe
405 410 415

Leu Ser Thr Leu Thr Ile Asp Gly Val Thr Arg Ser Asp Gln Gly Leu
420 425 430

Tyr Thr Cys Ala Ala Ser Ser Gly Leu Met Thr Lys Lys Asn Ser Thr
435 440 445

Phe Val Arg Val His Glu Lys
    450   455

<210> 54
<211> 470
<212> PRT
<213> Artificial Sequence

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

<400> 54
Ser Asp Thr Gly Arg Pro Phe Val Glu Met Tyr Ser Glu Ile Pro Glu
1   5   10   15

Ile Ile His Met Thr Glu Gly Arg Glu Leu Val Ile Pro Cys Arg Val
            20   25   30

Thr Ser Pro Asn Ile Thr Val Thr Leu Lys Lys Phe Pro Leu Asp Thr
        35   40   45

Leu Ile Pro Asp Gly Lys Arg Ile Ile Trp Asp Ser Arg Lys Gly Phe
    50   55   60

Ile Ile Ser Asn Ala Thr Tyr Lys Glu Ile Gly Leu Leu Thr Cys Glu
65   70   75   80

Ala Thr Val Asn Gly His Leu Tyr Lys Thr Asn Tyr Leu Thr His Arg
                85   90   95

Gln Thr Asn Thr Ile Ile Asp Val Val Leu Ser Pro Ser His Gly Ile
            100   105   110

Glu Leu Ser Val Gly Glu Lys Leu Val Leu Asn Cys Thr Ala Arg Thr
        115   120   125

Glu Leu Asn Val Gly Ile Asp Phe Asn Trp Glu Tyr Pro Ser Ser Lys
    130   135   140

His Gln His Lys Lys Leu Val Asn Arg Asp Leu Lys Thr Gln Ser Gly
145 150 155 160

Ser Glu Met Lys Lys Phe Leu Ser Thr Leu Thr Ile Asp Gly Val Thr
165 170 175

Arg Ser Asp Gln Gly Leu Tyr Thr Cys Ala Ala Ser Ser Gly Leu Met
180 185 190

Thr Lys Lys Asn Ser Thr Phe Val Arg Val His Glu Lys Gly Gly Gly
195 200 205

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly
210 215 220

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
225 230 235 240

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly
245 250 255

Gly Gly Gly Ser Gly Gly Gly Gly Ser Ser Asp Thr Gly Arg Pro Phe
260 265 270

Val Glu Met Tyr Ser Glu Ile Pro Glu Ile Ile His Met Thr Glu Gly
275 280 285

Arg Glu Leu Val Ile Pro Cys Arg Val Thr Ser Pro Asn Ile Thr Val
290 295 300

Thr Leu Lys Lys Phe Pro Leu Asp Thr Leu Ile Pro Asp Gly Lys Arg
305 310 315 320

Ile Ile Trp Asp Ser Arg Lys Gly Phe Ile Ile Ser Asn Ala Thr Tyr
325 330 335

Lys Glu Ile Gly Leu Leu Thr Cys Glu Ala Thr Val Asn Gly His Leu
340 345 350

Tyr Lys Thr Asn Tyr Leu Thr His Arg Gln Thr Asn Thr Ile Ile Asp
355 360 365

Val Val Leu Ser Pro Ser His Gly Ile Glu Leu Ser Val Gly Glu Lys
370 375 380

Leu Val Leu Asn Cys Thr Ala Arg Thr Glu Leu Asn Val Gly Ile Asp
385 390 395 400

Phe Asn Trp Glu Tyr Pro Ser Ser Lys His Gln His Lys Lys Leu Val
405 410 415

Asn Arg Asp Leu Lys Thr Gln Ser Gly Ser Glu Met Lys Lys Phe Leu
420 425 430

Ser Thr Leu Thr Ile Asp Gly Val Thr Arg Ser Asp Gln Gly Leu Tyr
435 440 445

Thr Cys Ala Ala Ser Ser Gly Leu Met Thr Lys Lys Asn Ser Thr Phe
450 455 460

Val Arg Val His Glu Lys
465 470

<210> 55
<211> 432
<212> PRT
<213> Artificial Sequence

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

<400> 55
Ser Asp Thr Gly Arg Pro Phe Val Glu Met Tyr Ser Glu Ile Pro Glu
1 5 10 15

Ile Ile His Met Thr Glu Gly Arg Glu Leu Val Ile Pro Cys Arg Val
20 25 30

Thr Ser Pro Asn Ile Thr Val Thr Leu Lys Lys Phe Pro Leu Asp Thr
35 40 45

Leu Ile Pro Asp Gly Lys Arg Ile Ile Trp Asp Ser Arg Lys Gly Phe
50 55 60

Ile Ile Ser Asn Ala Thr Tyr Lys Glu Ile Gly Leu Leu Thr Cys Glu
65 70 75 80

Ala Thr Val Asn Gly His Leu Tyr Lys Thr Asn Tyr Leu Thr His Arg
85 90 95

Gln Thr Asn Thr Ile Ile Asp Val Val Leu Ser Pro Ser His Gly Ile
100 105 110

Glu Leu Ser Val Gly Glu Lys Leu Val Leu Asn Cys Thr Ala Arg Thr
115 120 125

Glu Leu Asn Val Gly Ile Asp Phe Asn Trp Glu Tyr Pro Ser Ser Lys
130 135 140

His Gln His Lys Lys Leu Val Asn Arg Asp Leu Lys Thr Gln Ser Gly
145 150 155 160

Ser Glu Met Lys Lys Phe Leu Ser Thr Leu Thr Ile Asp Gly Val Thr
165 170 175

Arg Ser Asp Gln Gly Leu Tyr Thr Cys Ala Ala Ser Ser Gly Leu Met
180 185 190

Thr Lys Lys Asn Ser Thr Phe Val Arg Val His Glu Lys Asp Lys Thr
195 200 205

His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser
210 215 220

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

Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro
245 250 255

Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala
260 265 270

Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val
275 280 285

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

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

Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu
325 330 335

Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu Thr Cys
340 345 350

Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser
355 360 365

Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp
370 375 380

Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser
385 390 395 400

Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala
405 410 415

Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys
420 425 430

<210> 56
<211> 6
<212> PRT
<213> Artificial Sequence

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

<400> 56
Ile Ile Trp Asp Ser Arg
1 5

<210> 57
<211> 17
<212> PRT
<213> Artificial Sequence

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

<400> 57
Glu Ile Gly Leu Leu Thr Cys Glu Ala Thr Val Asn Gly His Leu Tyr
1 5 10 15

Lys

<210> 58
<211> 23
<212> PRT
<213> Artificial Sequence

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

<400> 58
Gln Thr Asn Thr Ile Ile Asp Val Val Leu Ser Pro Ser His Gly Ile
1 5 10 15

Glu Leu Ser Val Gly Glu Lys
20

<210> 59
<211> 21
<212> PRT
<213> Artificial Sequence

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

<400> 59
Thr Glu Leu Asn Val Gly Ile Asp Phe Asn Trp Glu Tyr Pro Ser Ser
1 5 10 15

Lys His Gln His Lys
20

<210> 60
<211> 16
<212> PRT
<213> Artificial Sequence

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

<400> 60
Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly
1 5 10 15

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

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

<400> 61
Thr Asn Tyr Leu Thr His Arg
1 5

<210> 62
<211> 17
<212> PRT
<213> Artificial Sequence

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

<220>
<221> MISC_FEATURE
<222> (7)..(7)
<223> May be carboxymethylated

<400> 62
Glu Ile Gly Leu Leu Thr Cys Glu Ala Thr Val Asn Gly His Leu Tyr
1 5 10 15

Lys

<210> 63
<211> 23
<212> PRT
<213> Artificial Sequence

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

<400> 63
Gln Thr Asn Thr Ile Ile Asp Val Val Leu Ser Pro Ser His Gly Ile
1 5 10 15

Glu Leu Ser Val Gly Glu Lys
20

<210> 64

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

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

<220>
<221> MISC_FEATURE
<222> (10)..(10)
<223> May be oxidized

<400> 64
Ser Asp Thr Gly Arg Pro Phe Val Glu Met Tyr Ser Glu Ile Pro Glu
1 5 10 15

Ile Ile His Met Thr Glu Gly Arg
20

<210> 65
<211> 24
<212> PRT
<213> Artificial Sequence

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

<220>
<221> MISC_FEATURE
<222> (20)..(20)
<223> May be oxidized

<400> 65
Ser Asp Thr Gly Arg Pro Phe Val Glu Met Tyr Ser Glu Ile Pro Glu
1 5 10 15

Ile Ile His Met Thr Glu Gly Arg
20

<210> 66
<211> 8

<212> PRT
<213> Artificial Sequence

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

<220>
<221> MISC_FEATURE
<222> (7)..(7)
<223> May be oxidized

<400> 66
Thr Gln Ser Gly Ser Glu Met Lys
1 5

<210> 67
<211> 17
<212> PRT
<213> Artificial Sequence

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

<220>
<221> MISC_FEATURE
<222> (8)..(8)
<223> May be carboxymethylated

<220>
<221> MISC_FEATURE
<222> (15)..(15)
<223> May be oxidized

<400> 67
Ser Asp Gln Gly Leu Tyr Thr Cys Ala Ala Ser Ser Gly Leu Met Thr
1 5 10 15

Lys

<210> 68
<211> 24

<212> PRT
<213> Artificial Sequence

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

<400> 68
Ser Asp Thr Gly Arg Pro Phe Val Glu Met Tyr Ser Glu Ile Pro Glu
1 5 10 15

Ile Ile His Met Thr Glu Gly Arg
20

<210> 69
<211> 10
<212> PRT
<213> Artificial Sequence

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

<220>
<221> MISC_FEATURE
<222> (9)..(9)
<223> May be oxidized

<400> 69
Gly Phe Ile Ile Ser Asn Ala Thr Tyr Lys
1 5 10

<210> 70
<211> 12
<212> PRT
<213> Artificial Sequence

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

<220>
<221> MISC_FEATURE
<222> (2)..(2)

<223> May be oxidized

<400> 70
Lys Phe Pro Leu Asp Thr Leu Ile Pro Asp Gly Lys
1 5 10

<210> 71
<211> 12
<212> PRT
<213> Artificial Sequence

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

<220>
<221> MISC_FEATURE
<222> (1)..(1)
<223> May be oxidized

<400> 71
Phe Leu Ser Thr Leu Thr Ile Asp Gly Val Thr Arg
1 5 10

<210> 72
<211> 165
<212> PRT
<213> Artificial Sequence

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

<400> 72
Ala Pro Met Ala Glu Gly Gly Gly Gln Asn His His Glu Val Val Lys
1 5 10 15

Phe Met Asp Val Tyr Gln Arg Ser Tyr Cys His Pro Ile Glu Thr Leu
20 25 30

Val Asp Ile Phe Gln Glu Tyr Pro Asp Glu Ile Glu Tyr Ile Phe Lys
35 40 45

75
Pro Ser Cys Val Pro Leu Met Arg Cys Gly Gly Cys Cys Asn Asp Glu
50 55 60

Gly Leu Glu Cys Val Pro Thr Glu Glu Ser Asn Ile Thr Met Gln Ile
65 70 75 80

Met Arg Ile Lys Pro His Gln Gly Gln His Ile Gly Glu Met Ser Phe
85 90 95

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

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

Val Gln Asp Pro Gln Thr Cys Lys Cys Ser Cys Lys Asn Thr Asp Ser
130 135 140

Arg Cys Lys Ala Arg Gln Leu Glu Leu Asn Glu Arg Thr Cys Arg Cys
145 150 155 160

Asp Lys Pro Arg Arg
165

<210> 73
<211> 451
<212> PRT
<213> Artificial Sequence

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

<400> 73
Glu Val Gln Leu Val Glu Ser Gly Gly Asp Leu Val Lys Pro Gly Gly
1 5 10 15

Ser Leu Lys Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Ser
20 25 30

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

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

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

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

Ala Arg Leu Gly Asn Tyr Gly Gly Tyr Tyr Ala Met Asp Tyr Trp Gly
100 105 110

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

420 425 430

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

Pro Gly Lys
450

<210> 74
<211> 213
<212> PRT
<213> Artificial Sequence

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

<400> 74
Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Leu Gly
1 5 10 15

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

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

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

Ser Gly Ser Gly Arg Asp Tyr Ser Phe Ser Ile Ser Asn Leu Glu Pro
65 70 75 80

Glu Asp Ile Ala Thr Tyr Phe Cys Leu Gln Tyr Asp Tyr Leu Trp Thr
85 90 95

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

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

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

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

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

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

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

Asn Arg Gly Glu Cys
210

<210> 75
<211> 451
<212> PRT
<213> Artificial Sequence

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

<400> 75
Glu Val Gln Leu Val Glu Ser Gly Gly Asp Leu Val Lys Pro Gly Gly
1 5 10 15

Ser Leu Lys Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Asp Ser
20 25 30

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

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

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

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

Ala Arg Leu Gly Asn Tyr Gly Gly Tyr Tyr Gly Met Asp Tyr Trp Gly
100 105 110

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser

435 440 445

Pro Gly Lys
450

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

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

<400> 76
Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Leu Gly
1 5 10 15

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

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

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

Ser Gly Ser Gly Arg Asp Tyr Ser Phe Ser Ile Ser Asn Leu Glu Pro
65 70 75 80

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

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

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

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

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

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

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

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

Asn Arg Gly Glu Cys
    210

<210> 77
<211> 445
<212> PRT
<213> Artificial Sequence

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

<400> 77
Glu Val Gln Leu Val Glu Ser Gly Gly Asp Leu Val Lys Pro Gly Gly
1 5 10 15

Ser Leu Lys Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Ser
            20 25 30

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

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

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

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

Ala Arg Leu Gly Asn Tyr Gly Gly Tyr Tyr Ala Met Asp Tyr Trp Gly
100 105 110

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

Val Tyr Pro Leu Ala Pro Gly Ser Ala Ala Gln Thr Asn Ser Met Val
130 135 140

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

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

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

Ser Ser Thr Trp Pro Ser Glu Thr Val Thr Cys Asn Val Ala His Pro
195 200 205

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

Cys Lys Pro Cys Ile Cys Thr Val Pro Glu Val Ser Ser Val Phe Ile
225 230 235 240

Phe Pro Pro Lys Pro Lys Asp Val Leu Thr Ile Thr Leu Thr Pro Lys
245 250 255

Val Thr Cys Val Val Val Asp Ile Ser Lys Asp Asp Pro Glu Val Gln
260 265 270

Phe Ser Trp Phe Val Asp Asp Val Glu Val His Thr Ala Gln Thr Gln
275 280 285

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

Pro Ile Met His Gln Asp Trp Leu Asn Gly Lys Glu Phe Lys Cys Arg
305 310 315 320

Val Asn Ser Ala Ala Phe Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys
325 330 335

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

Lys Glu Gln Met Ala Lys Asp Lys Val Ser Leu Thr Cys Met Ile Thr
355 360 365

Asp Phe Phe Pro Glu Asp Ile Thr Val Glu Trp Gln Trp Asn Gly Gln
370 375 380

Pro Ala Glu Asn Tyr Lys Asn Thr Gln Pro Ile Met Asp Thr Asp Gly
385 390 395 400

Ser Tyr Phe Val Tyr Ser Lys Leu Asn Val Gln Lys Ser Asn Trp Glu
405 410 415

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

His His Thr Glu Lys Ser Leu Ser His Ser Pro Gly Lys
435 440 445

<210> 78

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

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

<400> 78
Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Leu Gly
1 5 10 15

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

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

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

Ser Gly Ser Gly Arg Asp Tyr Ser Phe Ser Ile Ser Asn Leu Glu Pro
65 70 75 80

Glu Asp Ile Ala Thr Tyr Phe Cys Leu Gln Tyr Asp Tyr Leu Trp Thr
85 90 95

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

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

Ala Ser Val Val Cys Phe Leu Asn Asn Phe Tyr Pro Lys Asp Ile Asn
130 135 140

Val Lys Trp Lys Ile Asp Gly Ser Glu Arg Gln Asn Gly Val Leu Asn
145 150 155 160

Ser Trp Thr Asp Gln Asp Ser Lys Asp Ser Thr Tyr Ser Met Ser Ser
165 170 175

Thr Leu Thr Leu Thr Lys Asp Glu Tyr Glu Arg His Asn Ser Tyr Thr
180 185 190

Cys Glu Ala Thr His Lys Thr Ser Thr Ser Pro Ile Val Lys Ser Phe
195 200 205

Asn Arg Gly Glu Cys
210

<210> 79
<211> 445
<212> PRT
<213> Artificial Sequence

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

<400> 79
Glu Val Gln Leu Val Glu Ser Gly Gly Asp Leu Val Lys Pro Gly Gly
1 5 10 15

Ser Leu Lys Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Asp Ser
20 25 30

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

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

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

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

Ala Arg Leu Gly Asn Tyr Gly Gly Tyr Tyr Gly Met Asp Tyr Trp Gly
100 105 110

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

Val Tyr Pro Leu Ala Pro Gly Ser Ala Ala Gln Thr Asn Ser Met Val
130 135 140

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

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

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

Ser Ser Thr Trp Pro Ser Glu Thr Val Thr Cys Asn Val Ala His Pro
195 200 205

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

Cys Lys Pro Cys Ile Cys Thr Val Pro Glu Val Ser Ser Val Phe Ile
225 230 235 240

Phe Pro Pro Lys Pro Lys Asp Val Leu Thr Ile Thr Leu Thr Pro Lys
245 250 255

Val Thr Cys Val Val Val Asp Ile Ser Lys Asp Asp Pro Glu Val Gln
260 265 270

Phe Ser Trp Phe Val Asp Asp Val Glu Val His Thr Ala Gln Thr Gln
275 280 285

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

Pro Ile Met His Gln Asp Trp Leu Asn Gly Lys Glu Phe Lys Cys Arg
305 310 315 320

Val Asn Ser Ala Ala Phe Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys
325 330 335

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

Lys Glu Gln Met Ala Lys Asp Lys Val Ser Leu Thr Cys Met Ile Thr
355 360 365

Asp Phe Phe Pro Glu Asp Ile Thr Val Glu Trp Gln Trp Asn Gly Gln
370 375 380

Pro Ala Glu Asn Tyr Lys Asn Thr Gln Pro Ile Met Asp Thr Asp Gly
385 390 395 400

Ser Tyr Phe Val Tyr Ser Lys Leu Asn Val Gln Lys Ser Asn Trp Glu
405 410 415

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

His His Thr Glu Lys Ser Leu Ser His Ser Pro Gly Lys
435 440 445

<210> 80
<211> 200
<212> PRT
<213> Artificial Sequence

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

<400> 80

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

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

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

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

Ser Gly Ser Gly Arg Asp Tyr Ser Phe Ser Ile Ser Asn Leu Glu Pro
65 70 75 80

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

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

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

Ala Ser Val Val Cys Phe Leu Asn Asn Phe Tyr Pro Lys Asp Ile Asn
130 135 140

Val Lys Trp Lys Ile Asp Gly Ser Glu Arg Gln Asn Gly Val Leu Asn
145 150 155 160

Ser Trp Thr Asp Gln Asp Ser Lys Asp Ser Thr Tyr Ser Met Ser Ser
165 170 175

Thr Leu Thr Leu Thr Lys Asp Glu Tyr Glu Arg His Asn Ser Tyr Thr
180 185 190

Cys Glu Ala Thr His Lys Thr Ser
195 200

<210> 81
<211> 7
<212> PRT
<213> Artificial Sequence

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

<400> 81
Glu Leu Val Ile Pro Cys Arg
1 5

<210> 82
<211> 8
<212> PRT
<213> Artificial Sequence

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

<400> 82
Leu Val Leu Asn Cys Thr Ala Arg
1 5

<210> 83
<211> 14
<212> PRT
<213> Artificial Sequence

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

<220>
<221> MISC_FEATURE
<222> (2)..(2)
<223> May be oxidized

<400> 83
Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly

1 5 10

<210> 84
<211> 24
<212> PRT
<213> Artificial Sequence

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

<400> 84
Glu Leu Val Ile Pro Cys Arg Glu Ile Gly Leu Leu Thr Cys Glu Ala
1 5 10 15

Thr Val Asn Gly His Leu Tyr Lys
20

<210> 85
<211> 26
<212> PRT
<213> Artificial Sequence

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

<220>
<221> MISC_FEATURE
<222> (26)..(26)
<223> May or may not be present

<400> 85
Leu Val Leu Asn Cys Thr Ala Arg Ser Asp Gln Gly Leu Tyr Thr Cys
1 5 10 15

Ala Ala Ser Ser Gly Leu Met Thr Lys Lys
20 25

<210> 86
<211> 28
<212> PRT
<213> Artificial Sequence

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

<220>
<221> MISC_FEATURE
<222> (28)..(28)
<223> May or may not be present

<400> 86
Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Thr His
1 5 10 15

Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly
20 25

<210> 87
<211> 17
<212> PRT
<213> Artificial Sequence

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

<400> 87
Glu Ile Gly Leu Leu Thr Cys Glu Ala Thr Val Asn Gly His Leu Tyr
1 5 10 15

Lys

<210> 88
<211> 23
<212> PRT
<213> Artificial Sequence

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

<400> 88
Gln Thr Asn Thr Ile Ile Asp Val Val Leu Ser Pro Ser His Gly Ile

1 5 10 15

Glu Leu Ser Val Gly Glu Lys
20

<210> 89
<211> 24
<212> PRT
<213> Artificial Sequence

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

<220>
<221> MISC_FEATURE
<222> (10)..(10)
<223> May be oxidized

<400> 89
Ser Asp Thr Gly Arg Pro Phe Val Glu Met Tyr Ser Glu Ile Pro Glu
1 5 10 15

Ile Ile His Met Thr Glu Gly Arg
20

<210> 90
<211> 24
<212> PRT
<213> Artificial Sequence

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

<220>
<221> MISC_FEATURE
<222> (20)..(20)
<223> May be oxidized

<400> 90
Ser Asp Thr Gly Arg Pro Phe Val Glu Met Tyr Ser Glu Ile Pro Glu
1 5 10 15

Ile Ile His Met Thr Glu Gly Arg
            20

<210> 91
<211> 54
<212> PRT
<213> Artificial Sequence

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

<220>
<221> MISC_FEATURE
<222> (40)..(40)
<223> May be oxidized

<400> 91
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 Ser Asp
            20   25   30

Thr Gly Arg Pro Phe Val Glu Met Tyr Ser Glu Ile Pro Glu Ile Ile
        35   40   45

His Met Thr Glu Gly Arg
    50

<210> 92
<211> 54
<212> PRT
<213> Artificial Sequence

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

<220>

<221> MISC_FEATURE
<222> (50)..(50)
<223> May be oxidized

<400> 92
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 Ser Asp
20 25 30

Thr Gly Arg Pro Phe Val Glu Met Tyr Ser Glu Ile Pro Glu Ile Ile
35 40 45

His Met Thr Glu Gly Arg
50

<210> 93
<211> 8
<212> PRT
<213> Artificial Sequence

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

<220>
<221> MISC_FEATURE
<222> (7)..(7)
<223> May be oxidized

<400> 93
Thr Gln Ser Gly Ser Glu Met Lys
1 5

<210> 94
<211> 17
<212> PRT
<213> Artificial Sequence

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

<220>
<221> MISC_FEATURE
<222> (15)..(15)
<223> May be oxidized

<400> 94
Ser Asp Gln Gly Leu Tyr Thr Cys Ala Ala Ser Ser Gly Leu Met Thr
1 5 10 15

Lys

<210> 95
<211> 14
<212> PRT
<213> Artificial Sequence

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

<400> 95
Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly
1 5 10

<210> 96
<211> 23
<212> PRT
<213> Artificial Sequence

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

<400> 96
Gln Thr Asn Thr Ile Ile Asp Val Val Leu Ser Pro Ser His Gly Ile
1 5 10 15

Glu Leu Ser Val Gly Glu Lys
20

<210> 97

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

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

<220>
<223> See specification as filed for detailed description of
substitutions and preferred embodiments

<400> 97
Thr Asn Tyr Leu Thr His Arg
1 5

<210> 98
<211> 54
<212> PRT
<213> Artificial Sequence

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

<400> 98
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 Ser Asp
20 25 30

Thr Gly Arg Pro Phe Val Glu Met Tyr Ser Glu Ile Pro Glu Ile Ile
35 40 45

His Met Thr Glu Gly Arg
50

<210> 99
<211> 24
<212> PRT
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
peptide

<400> 99
Ser Asp Thr Gly Arg Pro Phe Val Glu Met Tyr Ser Glu Ile Pro Glu
1 5 10 15

Ile Ile His Met Thr Glu Gly Arg
20

<210> 100
<211> 12
<212> PRT
<213> Artificial Sequence

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

<220>
<221> MISC_FEATURE
<222> (1)..(1)
<223> May or may not be present

<400> 100
Arg Val Thr Ser Pro Asn Ile Thr Val Thr Leu Lys
1 5 10

<210> 101
<211> 11
<212> PRT
<213> Artificial Sequence

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

<220>
<221> MISC_FEATURE
<222> (1)..(1)
<223> May or may not be present

<400> 101
Lys Gly Phe Ile Ile Ser Asn Ala Thr Tyr Lys

100
1 5 10

<210> 102
<211> 9
<212> PRT
<213> Artificial Sequence

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

<220>
<221> MISC_FEATURE
<222> (1)..(1)
<223> May or may not be present

<400> 102
Lys Leu Val Leu Asn Cys Thr Ala Arg
1 5

<210> 103
<211> 7
<212> PRT
<213> Artificial Sequence

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

<220>
<221> MISC_FEATURE
<222> (1)..(1)
<223> May or may not be present

<400> 103
Lys Asn Ser Thr Phe Val Arg
1 5

<210> 104
<211> 60
<212> PRT
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
polypeptide

<220>
<221> MISC_FEATURE
<222> (1)..(60)
<223> This sequence may encompass 1-15 'Gly Gly Gly Ser'
repeating units

<400> 104
Gly Gly Gly Ser Gly Gly Gly Ser Gly Gly Gly Ser Gly Gly Gly Ser
1 5 10 15

Gly Gly Gly Ser Gly Gly Gly Ser Gly Gly Gly Ser Gly Gly Gly Ser
20 25 30

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

Gly Gly Gly Ser Gly Gly Gly Ser Gly Gly Gly Ser
50 55 60

<210> 105
<211> 21
<212> PRT
<213> Artificial Sequence

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

<220>
<221> MISC_FEATURE
<222> (7)..(21)
<223> This region may encompass 1-5 'Pro Pro Cys'
repeating units

<400> 105
Asp Lys Thr His Thr Cys Pro Pro Cys Pro Pro Cys Pro Pro Cys Pro
1 5 10 15

Pro Cys Pro Pro Cys

20

<210> 106
<211> 226
<212> PRT
<213> Artificial Sequence

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

<220>
<221> MISC_FEATURE
<222> (212)..(226)
<223> This region may encompass 1-5 'Pro Pro Cys'
repeating units

<400> 106
Ser Asp Thr Gly Arg Pro Phe Val Glu Met Tyr Ser Glu Ile Pro Glu
1 5 10 15

Ile Ile His Met Thr Glu Gly Arg Glu Leu Val Ile Pro Cys Arg Val
20 25 30

Thr Ser Pro Asn Ile Thr Val Thr Leu Lys Lys Phe Pro Leu Asp Thr
35 40 45

Leu Ile Pro Asp Gly Lys Arg Ile Ile Trp Asp Ser Arg Lys Gly Phe
50 55 60

Ile Ile Ser Asn Ala Thr Tyr Lys Glu Ile Gly Leu Leu Thr Cys Glu
65 70 75 80

Ala Thr Val Asn Gly His Leu Tyr Lys Thr Asn Tyr Leu Thr His Arg
85 90 95

Gln Thr Asn Thr Ile Ile Asp Val Val Leu Ser Pro Ser His Gly Ile
100 105 110

Glu Leu Ser Val Gly Glu Lys Leu Val Leu Asn Cys Thr Ala Arg Thr

115 120 125

Glu Leu Asn Val Gly Ile Asp Phe Asn Trp Glu Tyr Pro Ser Ser Lys
130 135 140

His Gln His Lys Lys Leu Val Asn Arg Asp Leu Lys Thr Gln Ser Gly
145 150 155 160

Ser Glu Met Lys Lys Phe Leu Ser Thr Leu Thr Ile Asp Gly Val Thr
165 170 175

Arg Ser Asp Gln Gly Leu Tyr Thr Cys Ala Ala Ser Ser Gly Leu Met
180 185 190

Thr Lys Lys Asn Ser Thr Phe Val Arg Val His Glu Lys Asp Lys Thr
195 200 205

His Thr Cys Pro Pro Cys Pro Pro Cys Pro Pro Cys Pro Pro Cys Pro
210 215 220

Pro Cys
225

<210> 107
<211> 15
<212> PRT
<213> Artificial Sequence

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

<400> 107
Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
1 5 10 15

<210> 108
<211> 30
<212> PRT
<213> Artificial Sequence

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

<400> 108
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> 109
<211> 45
<212> PRT
<213> Artificial Sequence

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

<400> 109
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 Gly Gly
20 25 30

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

<210> 110
<211> 60
<212> PRT
<213> Artificial Sequence

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

<400> 110
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 Gly Gly
20 25 30

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

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
50 55 60

<210> 111
<211> 5
<212> PRT
<213> Artificial Sequence

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

<400> 111
Gly Gly Gly Gly Ser
1 5

<210> 112
<211> 485
<212> PRT
<213> Artificial Sequence

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

<220>
<221> MISC_FEATURE
<222> (206)..(280)
<223> This region may encompass 1-15 'Gly Gly Gly Gly Ser'
repeating units

<400> 112
Ser Asp Thr Gly Arg Pro Phe Val Glu Met Tyr Ser Glu Ile Pro Glu
1 5 10 15

Ile Ile His Met Thr Glu Gly Arg Glu Leu Val Ile Pro Cys Arg Val

20 25 30

Thr Ser Pro Asn Ile Thr Val Thr Leu Lys Lys Phe Pro Leu Asp Thr
35 40 45

Leu Ile Pro Asp Gly Lys Arg Ile Ile Trp Asp Ser Arg Lys Gly Phe
50 55 60

Ile Ile Ser Asn Ala Thr Tyr Lys Glu Ile Gly Leu Leu Thr Cys Glu
65 70 75 80

Ala Thr Val Asn Gly His Leu Tyr Lys Thr Asn Tyr Leu Thr His Arg
85 90 95

Gln Thr Asn Thr Ile Ile Asp Val Val Leu Ser Pro Ser His Gly Ile
100 105 110

Glu Leu Ser Val Gly Glu Lys Leu Val Leu Asn Cys Thr Ala Arg Thr
115 120 125

Glu Leu Asn Val Gly Ile Asp Phe Asn Trp Glu Tyr Pro Ser Ser Lys
130 135 140

His Gln His Lys Lys Leu Val Asn Arg Asp Leu Lys Thr Gln Ser Gly
145 150 155 160

Ser Glu Met Lys Lys Phe Leu Ser Thr Leu Thr Ile Asp Gly Val Thr
165 170 175

Arg Ser Asp Gln Gly Leu Tyr Thr Cys Ala Ala Ser Ser Gly Leu Met
180 185 190

Thr Lys Lys Asn Ser Thr Phe Val Arg Val His Glu Lys Gly Gly Gly
195 200 205

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly
210 215 220

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
225 230 235 240

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly
245 250 255

Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly
260 265 270

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

Glu Met Tyr Ser Glu Ile Pro Glu Ile Ile His Met Thr Glu Gly Arg
290 295 300

Glu Leu Val Ile Pro Cys Arg Val Thr Ser Pro Asn Ile Thr Val Thr
305 310 315 320

Leu Lys Lys Phe Pro Leu Asp Thr Leu Ile Pro Asp Gly Lys Arg Ile
325 330 335

Ile Trp Asp Ser Arg Lys Gly Phe Ile Ile Ser Asn Ala Thr Tyr Lys
340 345 350

Glu Ile Gly Leu Leu Thr Cys Glu Ala Thr Val Asn Gly His Leu Tyr
355 360 365

Lys Thr Asn Tyr Leu Thr His Arg Gln Thr Asn Thr Ile Ile Asp Val
370 375 380

Val Leu Ser Pro Ser His Gly Ile Glu Leu Ser Val Gly Glu Lys Leu
385 390 395 400

Val Leu Asn Cys Thr Ala Arg Thr Glu Leu Asn Val Gly Ile Asp Phe
405 410 415

Asn Trp Glu Tyr Pro Ser Ser Lys His Gln His Lys Lys Leu Val Asn
420 425 430

Arg Asp Leu Lys Thr Gln Ser Gly Ser Glu Met Lys Lys Phe Leu Ser
435 440 445

Thr Leu Thr Ile Asp Gly Val Thr Arg Ser Asp Gln Gly Leu Tyr Thr
450 455 460

Cys Ala Ala Ser Ser Gly Leu Met Thr Lys Lys Asn Ser Thr Phe Val
465 470 475 480

Arg Val His Glu Lys
485

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

<220>
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polypeptide

<400> 113
Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met
1 5 10 15

Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His
20 25 30

Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val
35 40 45

His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr
50 55 60

Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly
65 70 75 80

Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile
85 90 95

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

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

Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu
130 135 140

Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro
145 150 155 160

Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val
165 170 175

Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met
180 185 190

His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser
195 200 205

Pro Gly Lys
210

<210> 114
<211> 7
<212> PRT
<213> Artificial Sequence

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

<220>

<221> MISC_FEATURE
<222> (3)..(3)
<223> May be oxidized

<400> 114
Ile Ile Trp Asp Ser Arg Lys
1 5

<210> 115
<211> 7
<212> PRT
<213> Artificial Sequence

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

<220>
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<223> May be oxidized

<400> 115
Arg Ile Ile Trp Asp Ser Arg
1 5

<210> 116
<211> 12
<212> PRT
<213> Artificial Sequence

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

<400> 116
Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys
1 5 10

<210> 117
<211> 16
<212> PRT
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
peptide

<220>
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<222> (9)..(9)
<223> May be oxidized

<400> 117
Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys
1 5 10 15

<210> 118
<211> 26
<212> PRT
<213> Artificial Sequence

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

<220>
<221> MISC_FEATURE
<222> (2)..(2)
<223> May be oxidized

<220>
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<222> (4)..(4)
<223> May be carboxymethylated

<220>
<221> MISC_FEATURE
<222> (7)..(7)
<223> May be carboxymethylated

<400> 118
Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro
1 5 10 15

Ser Val Phe Leu Phe Pro Pro Lys Pro Lys
20 25

<210> 119
<211> 16
<212> PRT
<213> Artificial Sequence

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

<220>
<221> MISC_FEATURE
<222> (9)..(9)
<223> May be oxidized

<400> 119
Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys
1 5 10 15

<210> 120
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<212> PRT
<213> Artificial Sequence

<220>
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<400> 120
Ser Asp Thr Gly Arg Pro Phe Val Glu Met
1 5 10

<210> 121
<211> 11
<212> PRT
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<220>
<223> Description of Artificial Sequence: Synthetic
peptide

<400> 121
Val Thr Ser Pro Asn Ile Thr Val Thr Leu Lys
1 5 10

<210> 122

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

<220>
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peptide

<400> 122
Asn Ser Thr Phe Val Arg
1 5

<210> 123
<211> 14
<212> PRT
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<220>
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peptide

<220>
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<400> 123
Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly
1 5 10

<210> 124
<211> 7
<212> PRT
<213> Artificial Sequence

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

<220>
<221> MISC_FEATURE
<222> (4)..(4)
<223> May be oxidized

<400> 124

Ile Ile Ile Trp Asp Ser Arg
1 5

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