SEQUENCE LISTING

<110> NGM Biopharmaceuticals, Inc.
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LUO, Jian

<120> Methods for Modulating Bile Acid Homeostasis and Treatment of Bile Acid Disorders and Diseases

<130> 13370-007-228

<140>
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<150> 61/746,499
<151> 2012-12-27

<150> 61/779,604
<151> 2013-03-13

<150> 61/887,129
<151> 2013-10-04

<160> 196

<170> PatentIn version 3.5

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<212> PRT
<213> Homo sapiens

<400> 1

Arg Pro Leu Ala Phe Ser Asp Ala Ser Pro His Val His Tyr Gly Trp
1 5 10 15

Gly Asp Pro Ile Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly
20 25 30

Leu Ser Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys
35 40 45

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

Leu Arg Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys
65 70 75 80

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

Asp Cys Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr
100 105 110

Arg Ser Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln
115 120 125

Arg Gln Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu
130 135 140

```
Pro Met Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His
145                 150                 155                 160

Leu Glu Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp
                165                 170                 175

Pro Phe Gly Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe
            180                 185                 190

Glu Lys
```

<210> 2
<211> 194
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<213> Homo sapiens

<400> 2

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Arg Pro Leu Ala Phe Ser Asp Ser Ser Pro Leu Val His Tyr Gly Trp
1               5                   10                  15

Gly Asp Pro Ile Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly
            20                  25                  30

Leu Ser Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys
        35                  40                  45

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

Leu Arg Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys
65                  70                  75                  80

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

Asp Cys Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr
            100                 105                 110

Arg Ser Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln
        115                 120                 125

Arg Gln Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu
    130                 135                 140

Pro Met Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His
145                 150                 155                 160

Leu Glu Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp
                165                 170                 175
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Pro Phe Gly Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe
180 185 190

Glu Lys

<210> 3
<211> 194
<212> PRT
<213> Homo sapiens

<400> 3

Arg Pro Leu Ala Phe Ser Asp Ala Gly Pro His Val His Tyr Gly Trp
1 5 10 15

Gly Asp Pro Ile Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly
20 25 30

Leu Ser Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys
35 40 45

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

Leu Arg Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys
65 70 75 80

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

Asp Cys Ala Phe Glu Glu Glu Ile Leu Glu Asp Gly Tyr Asn Val Tyr
100 105 110

Arg Ser Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln
115 120 125

Arg Gln Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu
130 135 140

Pro Met Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His
145 150 155 160

Leu Glu Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp
165 170 175

Pro Phe Gly Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe
180 185 190

Glu Lys

<210> 4
<211> 194
<212> PRT
<213> Homo sapiens

<400> 4

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Arg Pro Leu Ala Phe Ser Asp Ala Gly Pro His Val His Tyr Ala Trp
1               5                   10                  15

Gly Asp Pro Ile Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly
            20                  25                  30

Leu Ser Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys
        35                  40                  45

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

Leu Arg Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys
65                  70                  75                  80

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

Asp Cys Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr
            100                 105                 110

Arg Ser Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln
        115                 120                 125

Arg Gln Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu
    130                 135                 140

Pro Met Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His
145                 150                 155                 160

Leu Glu Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp
                165                 170                 175

Pro Phe Gly Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe
            180                 185                 190

Glu Lys
```

<210> 5
<211> 191
<212> PRT
<213> Homo sapiens

<400> 5

```
Arg His Pro Ile Pro Asp Ser Ser Pro Leu Leu Gln Phe Gly Gly Gln
1               5                   10                  15
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```
Val Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser Ser
            20                  25                  30

Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg Gly
        35                  40                  45

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

Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly Ala
65                  70                  75                  80

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

Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser Glu
            100                 105                 110

Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln Leu
        115                 120                 125

Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met Leu
    130                 135                 140

Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu Ser
145                 150                 155                 160

Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe Gly
                165                 170                 175

Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe Glu Lys
            180                 185                 190
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<210> 6
<211> 187
<212> PRT
<213> Homo sapiens

<400> 6

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Arg Asp Ser Ser Pro Leu Leu Gln Phe Gly Gly Gln Val Arg Leu Arg
1               5                   10                  15

His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser Ser Cys Phe Leu Arg
            20                  25                  30

Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg Gly Gln Ser Ala His
        35                  40                  45

Ser Leu Leu Glu Ile Lys Ala Val Ala Leu Arg Thr Val Ala Ile Lys
    50                  55                  60
```

Gly Val His Ser Val Arg Tyr Leu Cys Met Gly Ala Asp Gly Lys Met
65 70 75 80

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

Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser Glu Lys His Arg Leu
100 105 110

Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln Leu Tyr Lys Asn Arg
115 120 125

Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met Leu Pro Met Val Pro
130 135 140

Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu Ser Asp Met Phe Ser
145 150 155 160

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

Leu Glu Ala Val Arg Ser Pro Ser Phe Glu Lys
180 185

<210> 7
<211> 192
<212> PRT
<213> Homo sapiens

<400> 7

Arg Pro Leu Ala Phe Ser Asp Ser Ser Pro Leu Leu Gln Phe Gly Gly
1 5 10 15

Gln Val Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser
20 25 30

Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg
35 40 45

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

Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly
65 70 75 80

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

Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser
100 105 110

```
Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln
        115                 120                 125

Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met
    130                 135                 140

Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu
145                 150                 155                 160

Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe
                165                 170                 175

Gly Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe Glu Lys
            180                 185                 190
```

<210> 8
<211> 191
<212> PRT
<213> Homo sapiens

<400> 8

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Arg His Pro Ile Pro Asp Ser Ser Pro Leu Leu Gln Trp Gly Asp Pro
1               5                   10                  15

Ile Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser Ser
            20                  25                  30

Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg Gly
        35                  40                  45

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

Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly Ala
65                  70                  75                  80

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

Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser Glu
            100                 105                 110

Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln Leu
        115                 120                 125

Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met Leu
    130                 135                 140

Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu Ser
145                 150                 155                 160

Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe Gly
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165 170 175

Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe Glu Lys
180 185 190

<210> 9
<211> 193
<212> PRT
<213> Homo sapiens

<400> 9

Arg His Pro Ile Pro Asp Ser Ser Pro Leu Leu Gln Phe Gly Trp Gly
1 5 10 15

Asp Pro Ile Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu
20 25 30

Ser Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala
35 40 45

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

Arg Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met
65 70 75 80

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

Cys Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg
100 105 110

Ser Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg
115 120 125

Gln Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro
130 135 140

Met Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu
145 150 155 160

Glu Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro
165 170 175

Phe Gly Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe Glu
180 185 190

Lys

<210> 10
<211> 193

<212> PRT
<213> Homo sapiens

<400> 10

Arg His Pro Ile Pro Asp Ser Ser Pro His Val His Tyr Gly Trp Gly
1 5 10 15

Asp Pro Ile Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu
20 25 30

Ser Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala
35 40 45

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

Arg Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met
65 70 75 80

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

Cys Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg
100 105 110

Ser Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg
115 120 125

Gln Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro
130 135 140

Met Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu
145 150 155 160

Glu Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro
165 170 175

Phe Gly Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe Glu
180 185 190

Lys

<210> 11
<211> 192
<212> PRT
<213> Homo sapiens

<400> 11

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

Pro Ile Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser
20 25 30

Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg
35 40 45

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

Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly
65 70 75 80

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

Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser
100 105 110

Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln
115 120 125

Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met
130 135 140

Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu
145 150 155 160

Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe
165 170 175

Gly Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe Glu Lys
180 185 190

<210> 12
<211> 194
<212> PRT
<213> Homo sapiens

<400> 12

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

Gly Asp Pro Ile Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly
20 25 30

Leu Ser Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys
35 40 45

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

Leu Arg Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys

65 70 75 80

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

Asp Cys Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr
100 105 110

Arg Ser Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln
115 120 125

Arg Gln Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu
130 135 140

Pro Met Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His
145 150 155 160

Leu Glu Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp
165 170 175

Pro Phe Gly Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe
180 185 190

Glu Lys

<210> 13
<211> 192
<212> PRT
<213> Homo sapiens

<400> 13

Arg Pro Leu Ala Phe Ser Asp Ala Gly Pro Leu Leu Gln Phe Gly Gly
1 5 10 15

Gln Val Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser
20 25 30

Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg
35 40 45

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

Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly
65 70 75 80

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

Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser
100 105 110

```
Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln
        115                 120                 125

Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met
    130                 135                 140

Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu
145                 150                 155                 160

Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe
                165                 170                 175

Gly Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe Glu Lys
            180                 185                 190
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<210> 14
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<212> PRT
<213> Homo sapiens

<400> 14

```
Arg His Pro Ile Pro Asp Ser Ser Pro His Val His Tyr Gly Gly Gln
1               5                   10                  15

Val Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser Ser
            20                  25                  30

Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg Gly
        35                  40                  45

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

Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly Ala
65                  70                  75                  80

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

Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser Glu
            100                 105                 110

Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln Leu
        115                 120                 125

Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met Leu
    130                 135                 140

Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu Ser
145                 150                 155                 160
```

Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe Gly
165 170 175

Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe Glu Lys
180 185 190

<210> 15
<211> 192
<212> PRT
<213> Homo sapiens

<400> 15

Arg Pro Leu Ala Phe Ser Asp Ala Gly Pro His Val His Tyr Gly Gly
1 5 10 15

Gln Val Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser
20 25 30

Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg
35 40 45

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

Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly
65 70 75 80

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

Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser
100 105 110

Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln
115 120 125

Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met
130 135 140

Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu
145 150 155 160

Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe
165 170 175

Gly Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe Glu Lys
180 185 190

<210> 16
<211> 192
<212> PRT
<213> Homo sapiens

<400> 16

```
Arg Pro Leu Ala Phe Ser Asp Ala Gly Pro His Val His Trp Gly Asp
1               5                  10                  15

Pro Ile Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser
            20                  25                  30

Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg
        35                  40                  45

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

Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly
65                  70                  75                  80

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

Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser
            100                 105                 110

Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln
        115                 120                 125

Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met
    130                 135                 140

Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu
145                 150                 155                 160

Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe
                165                 170                 175

Gly Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe Glu Lys
            180                 185                 190
```

<210> 17
<211> 192
<212> PRT
<213> Homo sapiens

<400> 17

```
Arg Pro Leu Ala Phe Ser Asp Ala Gly Pro His Val Gly Trp Gly Asp
1               5                  10                  15

Pro Ile Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser
            20                  25                  30

Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg
        35                  40                  45
```

```
Gly Gln Ser Ala His Ser Leu Leu Glu Ile Lys Ala Val Ala Leu Arg
    50                  55                  60

Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly
65                  70                  75                  80

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

Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser
            100                 105                 110

Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln
        115                 120                 125

Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met
    130                 135                 140

Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu
145                 150                 155                 160

Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe
                165                 170                 175

Gly Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe Glu Lys
            180                 185                 190
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<210> 18
<211> 192
<212> PRT
<213> Homo sapiens

<400> 18

```
Arg Pro Leu Ala Phe Ser Asp Ala Gly Pro His Tyr Gly Trp Gly Asp
1               5                   10                  15

Pro Ile Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser
            20                  25                  30

Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg
        35                  40                  45

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

Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly
65                  70                  75                  80

Ala Asp Gly Lys Met Gln Gly Leu Leu Gln Tyr Ser Glu Glu Asp Cys
                85                  90                  95
```

Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser
100 105 110

Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln
115 120 125

Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met
130 135 140

Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu
145 150 155 160

Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe
165 170 175

Gly Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe Glu Lys
180 185 190

<210> 19
<211> 192
<212> PRT
<213> Homo sapiens

<400> 19

Arg Pro Leu Ala Phe Ser Asp Ala Gly Pro Val Tyr Gly Trp Gly Asp
1 5 10 15

Pro Ile Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser
20 25 30

Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg
35 40 45

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

Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly
65 70 75 80

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

Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser
100 105 110

Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln
115 120 125

Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met
130 135 140

Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu
145 150 155 160

Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe
165 170 175

Gly Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe Glu Lys
180 185 190

<210> 20
<211> 192
<212> PRT
<213> Homo sapiens

<400> 20

Arg Pro Leu Ala Phe Ser Asp Ala Gly Pro Val His Gly Trp Gly Asp
1 5 10 15

Pro Ile Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser
20 25 30

Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg
35 40 45

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

Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly
65 70 75 80

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

Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser
100 105 110

Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln
115 120 125

Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met
130 135 140

Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu
145 150 155 160

Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe
165 170 175

Gly Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe Glu Lys
180 185 190

<210> 21

<211> 192
<212> PRT
<213> Homo sapiens

<400> 21

Arg Pro Leu Ala Phe Ser Asp Ala Gly Pro Val His Tyr Trp Gly Asp
1 5 10 15

Pro Ile Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser
20 25 30

Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg
35 40 45

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

Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly
65 70 75 80

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

Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser
100 105 110

Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln
115 120 125

Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met
130 135 140

Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu
145 150 155 160

Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe
165 170 175

Gly Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe Glu Lys
180 185 190

<210> 22
<211> 193
<212> PRT
<213> Homo sapiens

<400> 22

Arg Pro Leu Ala Phe Ser Asp Ala Gly Pro His Val His Gly Trp Gly
1 5 10 15

Asp Pro Ile Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu
20 25 30

```
Ser Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala
        35                  40                  45

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

Arg Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met
65                  70                  75                  80

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

Cys Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg
            100                 105                 110

Ser Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg
        115                 120                 125

Gln Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro
    130                 135                 140

Met Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu
145                 150                 155                 160

Glu Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro
                165                 170                 175

Phe Gly Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe Glu
            180                 185                 190

Lys
```

<210> 23
<211> 192
<212> PRT
<213> Homo sapiens

<400> 23

```
Arg Pro Leu Ala Phe Ser Asp Ala Gly Pro His His Gly Trp Gly Asp
1               5                   10                  15

Pro Ile Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser
            20                  25                  30

Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg
        35                  40                  45

Gly Gln Ser Ala His Ser Leu Leu Glu Ile Lys Ala Val Ala Leu Arg
    50                  55                  60
```

Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly
65 70 75 80

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

Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser
100 105 110

Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln
115 120 125

Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met
130 135 140

Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu
145 150 155 160

Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe
165 170 175

Gly Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe Glu Lys
180 185 190

<210> 24
<211> 192
<212> PRT
<213> Homo sapiens

<400> 24

Arg Pro Leu Ala Phe Ser Asp Ala Gly Pro His His Tyr Trp Gly Asp
1 5 10 15

Pro Ile Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser
20 25 30

Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg
35 40 45

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

Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly
65 70 75 80

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

Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser
100 105 110

Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln

115 120 125

Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met
130 135 140

Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu
145 150 155 160

Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe
165 170 175

Gly Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe Glu Lys
180 185 190

<210> 25
<211> 192
<212> PRT
<213> Homo sapiens

<400> 25

Arg Pro Leu Ala Phe Ser Asp Ala Gly Pro His Val Tyr Trp Gly Asp
1 5 10 15

Pro Ile Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser
20 25 30

Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg
35 40 45

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

Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly
65 70 75 80

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

Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser
100 105 110

Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln
115 120 125

Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met
130 135 140

Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu
145 150 155 160

Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe
165 170 175

```
Gly Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe Glu Lys
            180                 185                 190


<210>  26
<211>  192
<212>  PRT
<213>  Homo sapiens

<400>  26

Arg Pro Leu Ala Phe Ser Asp Ser Ser Pro Leu Val His Trp Gly Asp
1               5                   10                  15


Pro Ile Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser
            20                  25                  30


Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg
        35                  40                  45


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


Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly
65                  70                  75                  80


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


Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser
            100                 105                 110


Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln
        115                 120                 125


Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met
    130                 135                 140


Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu
145                 150                 155                 160


Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe
                165                 170                 175


Gly Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe Glu Lys
            180                 185                 190


<210>  27
<211>  192
<212>  PRT
<213>  Homo sapiens

<400>  27
```

Arg Pro Leu Ala Phe Ser Asp Ser Ser Pro His Val His Trp Gly Asp
1 5 10 15

Pro Ile Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser
20 25 30

Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg
35 40 45

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

Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly
65 70 75 80

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

Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser
100 105 110

Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln
115 120 125

Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met
130 135 140

Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu
145 150 155 160

Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe
165 170 175

Gly Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe Glu Lys
180 185 190

<210> 28
<211> 191
<212> PRT
<213> Homo sapiens

<400> 28

Arg Pro Leu Ala Phe Ser Asp Ala Gly Pro His Val Trp Gly Asp Pro
1 5 10 15

Ile Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser Ser
20 25 30

Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg Gly
35 40 45

Gln Ser Ala His Ser Leu Leu Glu Ile Lys Ala Val Ala Leu Arg Thr

50 55 60

Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly Ala
65 70 75 80

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

Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser Glu
100 105 110

Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln Leu
115 120 125

Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met Leu
130 135 140

Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu Ser
145 150 155 160

Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe Gly
165 170 175

Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe Glu Lys
180 185 190

<210> 29
<211> 193
<212> PRT
<213> Homo sapiens

<400> 29

Arg Pro Leu Ala Phe Ser Asp Ala Gly Pro His Val His Tyr Trp Gly
1 5 10 15

Asp Pro Ile Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu
20 25 30

Ser Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala
35 40 45

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

Arg Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met
65 70 75 80

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

Cys Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg
100 105 110

Ser Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg
115 120 125

Gln Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro
130 135 140

Met Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu
145 150 155 160

Glu Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro
165 170 175

Phe Gly Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe Glu
180 185 190

Lys

<210> 30
<211> 194
<212> PRT
<213> Homo sapiens

<400> 30

Arg Pro Leu Ala Phe Ser Asp Ala Gly Pro His Val His Tyr Ala Trp
1 5 10 15

Gly Asp Pro Ile Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly
20 25 30

Leu Ser Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys
35 40 45

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

Leu Arg Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys
65 70 75 80

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

Asp Cys Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr
100 105 110

Arg Ser Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln
115 120 125

Arg Gln Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu
130 135 140

```
Pro Met Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His
145                 150                 155                 160

Leu Glu Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp
                165                 170                 175

Pro Phe Gly Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe
            180                 185                 190

Glu Lys
```

<210> 31
<211> 191
<212> PRT
<213> Homo sapiens

<400> 31

```
Arg His Pro Ile Pro Asp Ser Ser Pro Leu Leu Gln Phe Gly Ala Gln
1               5                   10                  15

Val Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser Ser
            20                  25                  30

Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg Gly
        35                  40                  45

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

Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly Ala
65                  70                  75                  80

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

Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser Glu
            100                 105                 110

Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln Leu
        115                 120                 125

Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met Leu
    130                 135                 140

Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu Ser
145                 150                 155                 160

Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe Gly
                165                 170                 175
```

Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe Glu Lys
180 185 190

<210> 32
<211> 191
<212> PRT
<213> Homo sapiens

<400> 32

Arg His Pro Ile Pro Asp Ser Ser Pro Leu Leu Gln Phe Gly Asp Gln
1 5 10 15

Val Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser Ser
20 25 30

Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg Gly
35 40 45

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

Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly Ala
65 70 75 80

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

Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser Glu
100 105 110

Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln Leu
115 120 125

Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met Leu
130 135 140

Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu Ser
145 150 155 160

Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe Gly
165 170 175

Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe Glu Lys
180 185 190

<210> 33
<211> 191
<212> PRT
<213> Homo sapiens

<400> 33

Arg His Pro Ile Pro Asp Ser Ser Pro Leu Leu Gln Phe Gly Pro Gln
1 5 10 15

Val Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser Ser
20 25 30

Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg Gly
35 40 45

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

Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly Ala
65 70 75 80

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

Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser Glu
100 105 110

Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln Leu
115 120 125

Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met Leu
130 135 140

Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu Ser
145 150 155 160

Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe Gly
165 170 175

Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe Glu Lys
180 185 190

<210> 34
<211> 191
<212> PRT
<213> Homo sapiens

<400> 34

Arg His Pro Ile Pro Asp Ser Ser Pro Leu Leu Gln Phe Gly Gly Ala
1 5 10 15

Val Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser Ser
20 25 30

Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg Gly
35 40 45

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

Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly Ala
65 70 75 80

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

Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser Glu
100 105 110

Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln Leu
115 120 125

Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met Leu
130 135 140

Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu Ser
145 150 155 160

Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe Gly
165 170 175

Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe Glu Lys
180 185 190

<210> 35
<211> 191
<212> PRT
<213> Homo sapiens

<400> 35

Arg His Pro Ile Pro Asp Ser Ser Pro Leu Leu Gln Phe Gly Gly Glu
1 5 10 15

Val Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser Ser
20 25 30

Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg Gly
35 40 45

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

Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly Ala
65 70 75 80

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

Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser Glu
100 105 110

Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln Leu
115 120 125

Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met Leu
130 135 140

Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu Ser
145 150 155 160

Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe Gly
165 170 175

Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe Glu Lys
180 185 190

<210> 36
<211> 191
<212> PRT
<213> Homo sapiens

<400> 36

Arg His Pro Ile Pro Asp Ser Ser Pro Leu Leu Gln Phe Gly Gly Asn
1 5 10 15

Val Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser Ser
20 25 30

Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg Gly
35 40 45

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

Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly Ala
65 70 75 80

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

Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser Glu
100 105 110

Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln Leu
115 120 125

Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met Leu
130 135 140

Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu Ser
145 150 155 160

Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe Gly

165 170 175

Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe Glu Lys
180 185 190

<210> 37
<211> 191
<212> PRT
<213> Homo sapiens

<400> 37

Arg His Pro Ile Pro Asp Ser Ser Pro Leu Leu Gln Phe Gly Gly Gln
1 5 10 15

Ala Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser Ser
20 25 30

Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg Gly
35 40 45

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

Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly Ala
65 70 75 80

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

Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser Glu
100 105 110

Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln Leu
115 120 125

Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met Leu
130 135 140

Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu Ser
145 150 155 160

Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe Gly
165 170 175

Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe Glu Lys
180 185 190

<210> 38
<211> 191
<212> PRT
<213> Homo sapiens

<400> 38

```
Arg His Pro Ile Pro Asp Ser Ser Pro Leu Leu Gln Phe Gly Gly Gln
1               5                   10                  15

Ile Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser Ser
            20                  25                  30

Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg Gly
        35                  40                  45

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

Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly Ala
65                  70                  75                  80

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

Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser Glu
            100                 105                 110

Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln Leu
        115                 120                 125

Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met Leu
    130                 135                 140

Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu Ser
145                 150                 155                 160

Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe Gly
                165                 170                 175

Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe Glu Lys
            180                 185                 190


<210>  39
<211>  191
<212>  PRT
<213>  Homo sapiens

<400>  39

Arg His Pro Ile Pro Asp Ser Ser Pro Leu Leu Gln Phe Gly Gly Gln
1               5                   10                  15

Thr Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser Ser
            20                  25                  30

Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg Gly
        35                  40                  45
```

```
Gln Ser Ala His Ser Leu Leu Glu Ile Lys Ala Val Ala Leu Arg Thr
    50                  55                  60

Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly Ala
65                  70                  75                  80

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

Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser Glu
            100                 105                 110

Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln Leu
        115                 120                 125

Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met Leu
    130                 135                 140

Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu Ser
145                 150                 155                 160

Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe Gly
                165                 170                 175

Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe Glu Lys
            180                 185                 190
```

<210> 40
<211> 193
<212> PRT
<213> Homo sapiens

<400> 40

```
Arg His Pro Ile Pro Asp Ser Ser Pro Leu Leu Gln Phe Gly Trp Gly
1               5                   10                  15

Gln Pro Val Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu
            20                  25                  30

Ser Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala
        35                  40                  45

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

Arg Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met
65                  70                  75                  80

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

Cys Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg
```

100 105 110

Ser Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg
115 120 125

Gln Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro
130 135 140

Met Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu
145 150 155 160

Glu Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro
165 170 175

Phe Gly Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe Glu
180 185 190

Lys

<210> 41
<211> 182
<212> PRT
<213> Homo sapiens

<400> 41

Arg Pro Leu Ala Phe Ser Asp Ala Gly Pro His Val His Tyr Gly Trp
1 5 10 15

Gly Asp Pro Ile Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly
20 25 30

Leu Ser Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys
35 40 45

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

Leu Arg Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys
65 70 75 80

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

Asp Cys Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr
100 105 110

Arg Ser Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln
115 120 125

Arg Gln Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu
130 135 140

```
Pro Met Leu Pro Glu Pro Pro Gly Ile Leu Ala Pro Gln Pro Pro Asp
145                 150                 155                 160

Val Gly Ser Ser Asp Pro Leu Ser Met Val Gly Pro Ser Gln Gly Arg
                165                 170                 175

Ser Pro Ser Tyr Ala Ser
            180
```

<210> 42
<211> 178
<212> PRT
<213> Homo sapiens

<400> 42

```
His Pro Ile Pro Asp Ser Ser Pro Leu Leu Gln Phe Gly Gly Gln Val
1               5                   10                  15

Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser Ser Cys
            20                  25                  30

Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg Gly Gln
        35                  40                  45

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

Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly Ala Asp
65                  70                  75                  80

Gly Lys Met Gln Gly Leu Leu Gln Tyr Ser Glu Glu Asp Cys Ala Phe
                85                  90                  95

Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser Glu Lys
            100                 105                 110

His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln Leu Tyr
        115                 120                 125

Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met Leu Pro
    130                 135                 140

Glu Pro Pro Gly Ile Leu Ala Pro Gln Pro Pro Asp Val Gly Ser Ser
145                 150                 155                 160

Asp Pro Leu Ser Met Val Gly Pro Ser Gln Gly Arg Ser Pro Ser Tyr
                165                 170                 175

Ala Ser
```

<210> 43
<211> 192
<212> PRT
<213> Homo sapiens

<400> 43

Arg Pro Leu Ala Phe Ser Asp Ala Gly Pro His Val His Tyr Gly Gly
1 5 10 15

Asp Ile Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser
20 25 30

Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg
35 40 45

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

Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly
65 70 75 80

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

Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser
100 105 110

Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln
115 120 125

Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met
130 135 140

Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu
145 150 155 160

Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe
165 170 175

Gly Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe Glu Lys
180 185 190

<210> 44
<211> 185
<212> PRT
<213> Homo sapiens

<400> 44

Arg Pro Leu Ala Phe Ser Asp Ala Gly Pro His Val His Tyr Gly Trp
1 5 10 15

Gly Asp Pro Ile Arg Gln Arg Tyr Leu Tyr Thr Asp Asp Ala Gln Gln

20 25 30

Thr Glu Ala His Leu Glu Ile Arg Glu Asp Gly Thr Val Gly Gly Ala
35 40 45

Ala Asp Gln Ser Pro Glu Ser Leu Leu Gln Leu Lys Ala Leu Lys Pro
50 55 60

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

Arg Pro Asp Gly Ala Leu Tyr Gly Ser Leu His Phe Asp Pro Glu Ala
85 90 95

Cys Ser Phe Arg Glu Leu Leu Leu Glu Asp Gly Tyr Asn Val Tyr Gln
100 105 110

Ser Glu Ala His Gly Leu Pro Leu His Leu Pro Gly Asn Lys Ser Pro
115 120 125

His Arg Asp Pro Ala Pro Arg Gly Pro Ala Arg Phe Leu Pro Leu Pro
130 135 140

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

Pro Pro Asp Val Gly Ser Ser Asp Pro Leu Ser Met Val Gly Pro Ser
165 170 175

Gln Gly Arg Ser Pro Ser Tyr Ala Ser
180 185

<210> 45
<211> 193
<212> PRT
<213> Homo sapiens

<400> 45

His Pro Ile Pro Asp Ser Ser Pro Leu Leu Gln Phe Gly Gly Gln Val
1 5 10 15

Arg Gln Arg Tyr Leu Tyr Thr Asp Asp Ala Gln Gln Thr Glu Ala His
20 25 30

Leu Glu Ile Arg Glu Asp Gly Thr Val Gly Gly Ala Ala Asp Gln Ser
35 40 45

Pro Glu Ser Leu Leu Gln Leu Lys Ala Leu Lys Pro Gly Val Ile Gln
50 55 60

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

Ala Leu Tyr Gly Ser Leu His Phe Asp Pro Glu Ala Cys Ser Phe Arg
85 90 95

Glu Leu Leu Leu Glu Asp Gly Tyr Asn Val Tyr Gln Ser Glu Ala His
100 105 110

Gly Leu Pro Leu His Leu Pro Gly Asn Lys Ser Pro His Arg Asp Pro
115 120 125

Ala Pro Arg Gly Pro Ala Arg Phe Leu Pro Leu Pro Gly Leu Pro Pro
130 135 140

Ala Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu
145 150 155 160

Glu Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro
165 170 175

Phe Gly Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe Glu
180 185 190

Lys

<210> 46
<211> 232
<212> PRT
<213> Homo sapiens

<400> 46

Arg Pro Leu Ala Phe Ser Asp Ala Gly Pro His Val His Tyr Gly Trp
1 5 10 15

Gly Asp Pro Ile Arg Gln Arg Tyr Leu Tyr Thr Asp Asp Ala Gln Gln
20 25 30

Thr Glu Ala His Leu Glu Ile Arg Glu Asp Gly Thr Val Gly Gly Ala
35 40 45

Ala Asp Gln Ser Pro Glu Ser Leu Leu Gln Leu Lys Ala Leu Lys Pro
50 55 60

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

Arg Pro Asp Gly Ala Leu Tyr Gly Ser Leu His Phe Asp Pro Glu Ala
85 90 95

Cys Ser Phe Arg Glu Leu Leu Leu Glu Asp Gly Tyr Asn Val Tyr Gln
100 105 110

Ser Glu Ala His Gly Leu Pro Leu His Leu Pro Gly Asn Lys Ser Pro
115 120 125

His Arg Asp Pro Ala Pro Arg Gly Pro Ala Arg Phe Leu Pro Leu Pro
130 135 140

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

Pro Pro Asp Val Gly Ser Ser Asp Pro Leu Ser Met Val Gly Pro Ser
165 170 175

Gln Gly Arg Ser Pro Ser Tyr Ala Ser Pro Met Val Pro Glu Glu Pro
180 185 190

Glu Asp Leu Arg Gly His Leu Glu Ser Asp Met Phe Ser Ser Pro Leu
195 200 205

Glu Thr Asp Ser Met Asp Pro Phe Gly Leu Val Thr Gly Leu Glu Ala
210 215 220

Val Arg Ser Pro Ser Phe Glu Lys
225 230

<210> 47
<211> 190
<212> PRT
<213> Homo sapiens

<400> 47

His Pro Ile Pro Asp Ser Ser Pro Leu Leu Gln Trp Gly Asp Pro Ile
1 5 10 15

Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser Ser Cys
20 25 30

Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg Gly Gln
35 40 45

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

Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly Ala Asp
65 70 75 80

Gly Lys Met Gln Gly Leu Leu Gln Tyr Ser Glu Glu Asp Cys Ala Phe
85 90 95

Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser Glu Lys
100 105 110

```
His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln Leu Tyr
        115                 120                 125

Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met Leu Pro
    130                 135                 140

Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu Ser Asp
145                 150                 155                 160

Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe Gly Leu
                165                 170                 175

Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe Glu Lys
            180                 185                 190
```

<210> 48
<211> 187
<212> PRT
<213> Homo sapiens

<400> 48

```
Arg Asp Ser Ser Pro Leu Leu Gln Phe Gly Gly Gln Val Arg Leu Arg
1               5                   10                  15

His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser Ser Cys Phe Leu Arg
            20                  25                  30

Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg Gly Gln Ser Ala His
        35                  40                  45

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

Gly Val His Ser Val Arg Tyr Leu Cys Met Gly Ala Asp Gly Lys Met
65                  70                  75                  80

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

Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser Glu Lys His Arg Leu
            100                 105                 110

Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln Leu Tyr Lys Asn Arg
        115                 120                 125

Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met Leu Pro Met Val Pro
    130                 135                 140

Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu Ser Asp Met Phe Ser
145                 150                 155                 160

Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe Gly Leu Val Thr Gly
```

165 170 175

Leu Glu Ala Val Arg Ser Pro Ser Phe Glu Lys
180 185

<210> 49
<211> 192
<212> PRT
<213> Homo sapiens

<400> 49

Arg Pro Leu Ala Phe Ser Asp Ser Ser Pro Leu Leu Gln Phe Gly Gly
1 5 10 15

Gln Val Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser
20 25 30

Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg
35 40 45

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

Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly
65 70 75 80

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

Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser
100 105 110

Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln
115 120 125

Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met
130 135 140

Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu
145 150 155 160

Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe
165 170 175

Gly Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe Glu Lys
180 185 190

<210> 50
<211> 191
<212> PRT
<213> Homo sapiens

<400> 50

```
Arg His Pro Ile Pro Asp Ser Ser Pro Leu Leu Gln Phe Gly Asp Gln
1               5                   10                  15

Val Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser Ser
            20                  25                  30

Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg Gly
        35                  40                  45

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

Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly Ala
65                  70                  75                  80

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

Phe Glu Glu Glu Ile Leu Glu Asp Gly Tyr Asn Val Tyr Arg Ser Glu
            100                 105                 110

Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln Leu
        115                 120                 125

Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met Leu
    130                 135                 140

Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu Ser
145                 150                 155                 160

Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe Gly
                165                 170                 175

Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe Glu Lys
            180                 185                 190


<210>  51
<211>  191
<212>  PRT
<213>  Homo sapiens

<400>  51

Arg His Pro Ile Pro Asp Ser Ser Pro Leu Leu Gln Phe Gly Gly Asn
1               5                   10                  15

Val Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser Ser
            20                  25                  30

Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg Gly
        35                  40                  45
```

```
Gln Ser Ala His Ser Leu Leu Glu Ile Lys Ala Val Ala Leu Arg Thr
    50                  55                  60

Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly Ala
65                  70                  75                  80

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

Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser Glu
            100                 105                 110

Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln Leu
        115                 120                 125

Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met Leu
    130                 135                 140

Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu Ser
145                 150                 155                 160

Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe Gly
                165                 170                 175

Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe Glu Lys
            180                 185                 190
```

<210> 52
<211> 187
<212> PRT
<213> Homo sapiens

<400> 52

```
Arg Asp Ser Ser Pro Leu Leu Gln Trp Gly Asp Pro Ile Arg Leu Arg
1               5                   10                  15

His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser Ser Cys Phe Leu Arg
            20                  25                  30

Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg Gly Gln Ser Ala His
        35                  40                  45

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

Gly Val His Ser Val Arg Tyr Leu Cys Met Gly Ala Asp Gly Lys Met
65                  70                  75                  80

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

Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser Glu Lys His Arg Leu
```

100 105 110

Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln Leu Tyr Lys Asn Arg
115 120 125

Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met Leu Pro Met Val Pro
130 135 140

Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu Ser Asp Met Phe Ser
145 150 155 160

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

Leu Glu Ala Val Arg Ser Pro Ser Phe Glu Lys
180 185

<210> 53
<211> 189
<212> PRT
<213> Homo sapiens

<400> 53

Met Asp Ser Ser Pro Leu Val His Tyr Gly Trp Gly Asp Pro Ile Arg
1 5 10 15

Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser Ser Cys Phe
20 25 30

Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg Gly Gln Ser
35 40 45

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

Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly Ala Asp Gly
65 70 75 80

Lys Met Gln Gly Leu Leu Gln Tyr Ser Glu Glu Asp Cys Ala Phe Glu
85 90 95

Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser Glu Lys His
100 105 110

Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln Leu Tyr Lys
115 120 125

Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met Leu Pro Met
130 135 140

Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu Ser Asp Met
145 150 155 160

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

Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe Glu Lys
180 185

<210> 54
<211> 192
<212> PRT
<213> Homo sapiens

<400> 54

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

Pro Ile Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser
20 25 30

Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg
35 40 45

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

Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly
65 70 75 80

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

Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser
100 105 110

Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln
115 120 125

Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met
130 135 140

Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu
145 150 155 160

Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe
165 170 175

Gly Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe Glu Lys
180 185 190

<210> 55
<211> 192
<212> PRT

<213> Homo sapiens

<400> 55

```
Arg Pro Leu Ala Phe Ser Asp Ala Gly Pro His Tyr Gly Trp Gly Asp
1               5                  10                  15

Pro Ile Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser
            20                  25                  30

Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg
        35                  40                  45

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

Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly
65                  70                  75                  80

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

Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser
            100                 105                 110

Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln
        115                 120                 125

Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met
    130                 135                 140

Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu
145                 150                 155                 160

Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe
                165                 170                 175

Gly Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe Glu Lys
            180                 185                 190
```

<210> 56
<211> 192
<212> PRT
<213> Homo sapiens

<400> 56

```
Arg Pro Leu Ala Phe Ser Asp Ala Gly Pro Val Tyr Gly Trp Gly Asp
1               5                  10                  15

Pro Ile Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser
            20                  25                  30

Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg
```

35 40 45

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

Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly
65 70 75 80

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

Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser
100 105 110

Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln
115 120 125

Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met
130 135 140

Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu
145 150 155 160

Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe
165 170 175

Gly Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe Glu Lys
180 185 190

<210> 57
<211> 192
<212> PRT
<213> Homo sapiens

<400> 57

Arg Pro Leu Ala Phe Ser Asp Ala Gly Pro Val His Gly Trp Gly Asp
1 5 10 15

Pro Ile Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser
20 25 30

Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg
35 40 45

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

Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly
65 70 75 80

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

```
Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser
            100                 105                 110

Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln
        115                 120                 125

Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met
    130                 135                 140

Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu
145                 150                 155                 160

Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe
                165                 170                 175

Gly Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe Glu Lys
            180                 185                 190
```

<210> 58
<211> 192
<212> PRT
<213> Homo sapiens

<400> 58

```
Arg Pro Leu Ala Phe Ser Asp Ala Gly Pro Val His Tyr Trp Gly Asp
1               5                   10                  15

Pro Ile Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser
            20                  25                  30

Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg
        35                  40                  45

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

Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly
65                  70                  75                  80

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

Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser
            100                 105                 110

Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln
        115                 120                 125

Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met
    130                 135                 140
```

Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu
145 150 155 160

Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe
165 170 175

Gly Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe Glu Lys
180 185 190

<210> 59
<211> 192
<212> PRT
<213> Homo sapiens

<400> 59

Arg Pro Leu Ala Phe Ser Asp Ala Gly Pro His His Gly Trp Gly Asp
1 5 10 15

Pro Ile Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser
20 25 30

Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg
35 40 45

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

Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly
65 70 75 80

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

Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser
100 105 110

Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln
115 120 125

Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met
130 135 140

Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu
145 150 155 160

Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe
165 170 175

Gly Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe Glu Lys
180 185 190

<210> 60
<211> 192
<212> PRT
<213> Homo sapiens

<400> 60

Arg Pro Leu Ala Phe Ser Asp Ala Gly Pro His His Tyr Trp Gly Asp
1 5 10 15

Pro Ile Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser
20 25 30

Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg
35 40 45

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

Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly
65 70 75 80

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

Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser
100 105 110

Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln
115 120 125

Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met
130 135 140

Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu
145 150 155 160

Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe
165 170 175

Gly Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe Glu Lys
180 185 190

<210> 61
<211> 192
<212> PRT
<213> Homo sapiens

<400> 61

Arg Pro Leu Ala Phe Ser Asp Ala Gly Pro His Val Gly Trp Gly Asp
1 5 10 15

Pro Ile Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser
20 25 30

```
Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg
        35                  40                  45

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

Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly
65                  70                  75                  80

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

Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser
            100                 105                 110

Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln
        115                 120                 125

Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met
    130                 135                 140

Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu
145                 150                 155                 160

Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe
                165                 170                 175

Gly Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe Glu Lys
            180                 185                 190
```

<210> 62
<211> 192
<212> PRT
<213> Homo sapiens

<400> 62

```
Arg Pro Leu Ala Phe Ser Asp Ala Gly Pro His Val Tyr Trp Gly Asp
1               5                   10                  15

Pro Ile Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser
            20                  25                  30

Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg
        35                  40                  45

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

Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly
65                  70                  75                  80
```

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

Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser
100 105 110

Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln
115 120 125

Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met
130 135 140

Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu
145 150 155 160

Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe
165 170 175

Gly Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe Glu Lys
180 185 190

<210> 63
<211> 192
<212> PRT
<213> Homo sapiens

<400> 63

Arg Pro Leu Ala Phe Ser Asp Ala Gly Pro His Val His Trp Gly Asp
1 5 10 15

Pro Ile Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser
20 25 30

Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg
35 40 45

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

Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly
65 70 75 80

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

Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser
100 105 110

Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln
115 120 125

Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met
130 135 140

Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu
145 150 155 160

Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe
165 170 175

Gly Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe Glu Lys
180 185 190

<210> 64
<211> 192
<212> PRT
<213> Homo sapiens

<400> 64

Arg Pro Leu Ala Phe Ser Asp Ser Ser Pro Leu Val His Trp Gly Asp
1 5 10 15

Pro Ile Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser
20 25 30

Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg
35 40 45

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

Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly
65 70 75 80

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

Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser
100 105 110

Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln
115 120 125

Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met
130 135 140

Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu
145 150 155 160

Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe
165 170 175

Gly Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe Glu Lys

180 185 190

<210> 65
<211> 192
<212> PRT
<213> Homo sapiens

<400> 65

Arg Pro Leu Ala Phe Ser Asp Ser Ser Pro His Val His Trp Gly Asp
1 5 10 15

Pro Ile Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser
20 25 30

Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg
35 40 45

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

Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly
65 70 75 80

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

Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser
100 105 110

Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln
115 120 125

Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met
130 135 140

Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu
145 150 155 160

Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe
165 170 175

Gly Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe Glu Lys
180 185 190

<210> 66
<211> 192
<212> PRT
<213> Homo sapiens

<400> 66

Arg Pro Leu Ala Phe Ser Asp Ala Gly Pro His Leu Gln Trp Gly Asp
1 5 10 15

```
Pro Ile Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser
            20                  25                  30

Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg
        35                  40                  45

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

Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly
65                  70                  75                  80

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

Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser
            100                 105                 110

Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln
        115                 120                 125

Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met
    130                 135                 140

Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu
145                 150                 155                 160

Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe
                165                 170                 175

Gly Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe Glu Lys
            180                 185                 190
```

<210> 67
<211> 191
<212> PRT
<213> Homo sapiens

<400> 67

```
Arg Pro Leu Ala Phe Ser Asp Ala Gly Pro His Val Trp Gly Asp Pro
1               5                   10                  15

Ile Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser Ser
            20                  25                  30

Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg Gly
        35                  40                  45

Gln Ser Ala His Ser Leu Leu Glu Ile Lys Ala Val Ala Leu Arg Thr
    50                  55                  60
```

Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly Ala
65 70 75 80

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

Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser Glu
100 105 110

Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln Leu
115 120 125

Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met Leu
130 135 140

Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu Ser
145 150 155 160

Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe Gly
165 170 175

Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe Glu Lys
180 185 190

<210> 68
<211> 193
<212> PRT
<213> Homo sapiens

<400> 68

Arg Pro Leu Ala Phe Ser Asp Ala Gly Pro His Val His Tyr Trp Gly
1 5 10 15

Asp Pro Ile Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu
20 25 30

Ser Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala
35 40 45

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

Arg Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met
65 70 75 80

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

Cys Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg
100 105 110

Ser Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg

115 120 125

Gln Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro
130 135 140

Met Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu
145 150 155 160

Glu Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro
165 170 175

Phe Gly Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe Glu
180 185 190

Lys

<210> 69
<211> 189
<212> PRT
<213> Homo sapiens

<400> 69

Arg Asp Ser Ser Pro Leu Val His Tyr Gly Trp Gly Asp Pro Ile Arg
1 5 10 15

Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser Ser Cys Phe
20 25 30

Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg Gly Gln Ser
35 40 45

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

Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly Ala Asp Gly
65 70 75 80

Lys Met Gln Gly Leu Leu Gln Tyr Ser Glu Glu Asp Cys Ala Phe Glu
85 90 95

Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser Glu Lys His
100 105 110

Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln Leu Tyr Lys
115 120 125

Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met Leu Pro Met
130 135 140

Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu Ser Asp Met
145 150 155 160

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

Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe Glu Lys
180 185

<210> 70
<211> 190
<212> PRT
<213> Homo sapiens

<400> 70

Met Arg Asp Ser Ser Pro Leu Val His Tyr Gly Trp Gly Asp Pro Ile
1 5 10 15

Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser Ser Cys
20 25 30

Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg Gly Gln
35 40 45

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

Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly Ala Asp
65 70 75 80

Gly Lys Met Gln Gly Leu Leu Gln Tyr Ser Glu Glu Asp Cys Ala Phe
85 90 95

Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser Glu Lys
100 105 110

His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln Leu Tyr
115 120 125

Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met Leu Pro
130 135 140

Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu Ser Asp
145 150 155 160

Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe Gly Leu
165 170 175

Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe Glu Lys
180 185 190

<210> 71
<211> 181
<212> PRT

<213> Homo sapiens

<400> 71

```
His Pro Ile Pro Asp Ser Ser Pro Leu Leu Gln Phe Gly Gly Gln Val
1               5                   10                  15

Arg Gln Arg Tyr Leu Tyr Thr Asp Asp Ala Gln Gln Thr Glu Ala His
            20                  25                  30

Leu Glu Ile Arg Glu Asp Gly Thr Val Gly Gly Ala Ala Asp Gln Ser
        35                  40                  45

Pro Glu Ser Leu Leu Gln Leu Lys Ala Leu Lys Pro Gly Val Ile Gln
    50                  55                  60

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

Ala Leu Tyr Gly Ser Leu His Phe Asp Pro Glu Ala Cys Ser Phe Arg
                85                  90                  95

Glu Leu Leu Leu Glu Asp Gly Tyr Asn Val Tyr Gln Ser Glu Ala His
            100                 105                 110

Ser Leu Pro Leu His Leu Pro Gly Asn Lys Ser Pro His Arg Asp Pro
        115                 120                 125

Ala Pro Arg Gly Pro Ala Arg Phe Leu Pro Leu Pro Gly Leu Pro Pro
    130                 135                 140

Ala Leu Pro Glu Pro Pro Gly Ile Leu Ala Pro Gln Pro Pro Asp Val
145                 150                 155                 160

Gly Ser Ser Asp Pro Leu Ser Met Val Gly Pro Ser Gln Gly Arg Ser
                165                 170                 175

Pro Ser Tyr Ala Ser
            180
```

<210> 72
<211> 181
<212> PRT
<213> Homo sapiens

<400> 72

```
His Pro Ile Pro Asp Ser Ser Pro Leu Leu Gln Phe Gly Gly Gln Val
1               5                   10                  15

Arg Gln Arg Tyr Leu Tyr Thr Asp Asp Ala Gln Gln Thr Glu Ala His
            20                  25                  30

Leu Glu Ile Arg Glu Asp Gly Thr Val Gly Gly Ala Ala Asp Gln Ser
```

35 40 45

Pro Glu Ser Leu Leu Gln Leu Lys Ala Leu Lys Pro Gly Val Ile Gln
50 55 60

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

Ala Leu Tyr Gly Ser Leu His Phe Asp Pro Glu Ala Cys Ser Phe Arg
85 90 95

Glu Leu Leu Leu Glu Asp Gly Tyr Asn Val Tyr Gln Ser Glu Ala His
100 105 110

Gly Leu Pro Leu His Leu Pro Gly Asn Lys Ser Pro His Arg Asp Pro
115 120 125

Ala Pro Arg Gly Pro Ala Arg Phe Leu Pro Leu Pro Gly Leu Pro Pro
130 135 140

Ala Pro Pro Glu Pro Pro Gly Ile Leu Ala Pro Gln Pro Pro Asp Val
145 150 155 160

Gly Ser Ser Asp Pro Leu Ser Met Val Gly Pro Ser Gln Gly Arg Ser
165 170 175

Pro Ser Tyr Ala Ser
180

<210> 73
<211> 212
<212> PRT
<213> Homo sapiens

<400> 73

His Pro Ile Pro Asp Ser Ser Pro Leu Leu Gln Phe Gly Gly Gln Val
1 5 10 15

Arg Gln Arg Tyr Leu Tyr Thr Asp Asp Ala Gln Gln Thr Glu Ala His
20 25 30

Leu Glu Ile Arg Glu Asp Gly Thr Val Gly Gly Ala Ala Asp Gln Ser
35 40 45

Pro Glu Ser Leu Leu Gln Leu Lys Ala Leu Lys Pro Gly Val Ile Gln
50 55 60

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

Ala Leu Tyr Gly Ser Leu His Phe Asp Pro Glu Ala Cys Ser Phe Arg
85 90 95

Glu Leu Leu Leu Glu Asp Gly Tyr Asn Val Tyr Gln Ser Glu Ala His
100 105 110

Gly Leu Pro Leu His Leu Pro Gly Asn Lys Ser Pro His Arg Asp Pro
115 120 125

Ala Pro Arg Gly Pro Ala Arg Phe Leu Pro Leu Pro Gly Leu Pro Pro
130 135 140

Ala Leu Pro Glu Pro Pro Gly Ile Leu Ala Pro Gln Pro Pro Asp Val
145 150 155 160

Gly Ser Ser Asp Pro Leu Ser Met Val Val Gln Asp Glu Leu Gln Gly
165 170 175

Val Gly Gly Glu Gly Cys His Met His Pro Glu Asn Cys Lys Thr Leu
180 185 190

Leu Thr Asp Ile Asp Arg Thr His Thr Glu Lys Pro Val Trp Asp Gly
195 200 205

Ile Thr Gly Glu
210

<210> 74
<211> 189
<212> PRT
<213> Homo sapiens

<400> 74

Arg Asp Ala Gly Pro His Val His Tyr Gly Trp Gly Asp Pro Ile Arg
1 5 10 15

Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser Ser Cys Phe
20 25 30

Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg Gly Gln Ser
35 40 45

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

Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly Ala Asp Gly
65 70 75 80

Lys Met Gln Gly Leu Leu Gln Tyr Ser Glu Glu Asp Cys Ala Phe Glu
85 90 95

Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser Glu Lys His
100 105 110

Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln Leu Tyr Lys
115 120 125

Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met Leu Pro Met
130 135 140

Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu Ser Asp Met
145 150 155 160

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

Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe Glu Lys
180 185

<210> 75
<211> 184
<212> PRT
<213> Homo sapiens

<400> 75

Arg Val His Tyr Gly Trp Gly Asp Pro Ile Arg Leu Arg His Leu Tyr
1 5 10 15

Thr Ser Gly Pro His Gly Leu Ser Ser Cys Phe Leu Arg Ile Arg Ala
20 25 30

Asp Gly Val Val Asp Cys Ala Arg Gly Gln Ser Ala His Ser Leu Leu
35 40 45

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

Ser Val Arg Tyr Leu Cys Met Gly Ala Asp Gly Lys Met Gln Gly Leu
65 70 75 80

Leu Gln Tyr Ser Glu Glu Asp Cys Ala Phe Glu Glu Glu Ile Arg Pro
85 90 95

Asp Gly Tyr Asn Val Tyr Arg Ser Glu Lys His Arg Leu Pro Val Ser
100 105 110

Leu Ser Ser Ala Lys Gln Arg Gln Leu Tyr Lys Asn Arg Gly Phe Leu
115 120 125

Pro Leu Ser His Phe Leu Pro Met Leu Pro Met Val Pro Glu Glu Pro
130 135 140

Glu Asp Leu Arg Gly His Leu Glu Ser Asp Met Phe Ser Ser Pro Leu
145 150 155 160

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

Val Arg Ser Pro Ser Phe Glu Lys
180

<210> 76
<211> 179
<212> PRT
<213> Homo sapiens

<400> 76

Arg Gly Asp Pro Ile Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His
1 5 10 15

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

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

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

Cys Met Gly Ala Asp Gly Lys Met Gln Gly Leu Leu Gln Tyr Ser Glu
65 70 75 80

Glu Asp Cys Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val
85 90 95

Tyr Arg Ser Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys
100 105 110

Gln Arg Gln Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe
115 120 125

Leu Pro Met Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly
130 135 140

His Leu Glu Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met
145 150 155 160

Asp Pro Phe Gly Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser
165 170 175

Phe Glu Lys

<210> 77
<211> 175
<212> PRT
<213> Homo sapiens

<400> 77

Arg Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser Ser
1 5 10 15

Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg Gly
20 25 30

Gln Ser Ala His Ser Leu Leu Glu Ile Lys Ala Val Ala Leu Arg Thr
35 40 45

Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly Ala
50 55 60

Asp Gly Lys Met Gln Gly Leu Leu Gln Tyr Ser Glu Glu Asp Cys Ala
65 70 75 80

Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser Glu
85 90 95

Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln Leu
100 105 110

Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met Leu
115 120 125

Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu Ser
130 135 140

Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe Gly
145 150 155 160

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

<210> 78
<211> 188
<212> PRT
<213> Homo sapiens

<400> 78

Arg Ala Gly Pro His Val His Tyr Gly Trp Gly Asp Pro Ile Arg Leu
1 5 10 15

Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser Ser Cys Phe Leu
20 25 30

Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg Gly Gln Ser Ala
35 40 45

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

Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly Ala Asp Gly Lys
65 70 75 80

Met Gln Gly Leu Leu Gln Tyr Ser Glu Glu Asp Cys Ala Phe Glu Glu
85 90 95

Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser Glu Lys His Arg
100 105 110

Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln Leu Tyr Lys Asn
115 120 125

Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met Leu Pro Met Val
130 135 140

Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu Ser Asp Met Phe
145 150 155 160

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

Gly Leu Glu Ala Val Arg Ser Pro Ser Phe Glu Lys
180 185

<210> 79
<211> 187
<212> PRT
<213> Homo sapiens

<400> 79

Arg Gly Pro His Val His Tyr Gly Trp Gly Asp Pro Ile Arg Leu Arg
1 5 10 15

His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser Ser Cys Phe Leu Arg
20 25 30

Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg Gly Gln Ser Ala His
35 40 45

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

Gly Val His Ser Val Arg Tyr Leu Cys Met Gly Ala Asp Gly Lys Met
65 70 75 80

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

Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser Glu Lys His Arg Leu
100 105 110

Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln Leu Tyr Lys Asn Arg
115 120 125

Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met Leu Pro Met Val Pro
130 135 140

Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu Ser Asp Met Phe Ser
145 150 155 160

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

Leu Glu Ala Val Arg Ser Pro Ser Phe Glu Lys
180 185

<210> 80
<211> 186
<212> PRT
<213> Homo sapiens

<400> 80

Arg Pro His Val His Tyr Gly Trp Gly Asp Pro Ile Arg Leu Arg His
1 5 10 15

Leu Tyr Thr Ser Gly Pro His Gly Leu Ser Ser Cys Phe Leu Arg Ile
20 25 30

Arg Ala Asp Gly Val Val Asp Cys Ala Arg Gly Gln Ser Ala His Ser
35 40 45

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

Val His Ser Val Arg Tyr Leu Cys Met Gly Ala Asp Gly Lys Met Gln
65 70 75 80

Gly Leu Leu Gln Tyr Ser Glu Glu Asp Cys Ala Phe Glu Glu Glu Ile
85 90 95

Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser Glu Lys His Arg Leu Pro
100 105 110

Val Ser Leu Ser Ser Ala Lys Gln Arg Gln Leu Tyr Lys Asn Arg Gly
115 120 125

Phe Leu Pro Leu Ser His Phe Leu Pro Met Leu Pro Met Val Pro Glu
130 135 140

Glu Pro Glu Asp Leu Arg Gly His Leu Glu Ser Asp Met Phe Ser Ser
145 150 155 160

Pro Leu Glu Thr Asp Ser Met Asp Pro Phe Gly Leu Val Thr Gly Leu

165 170 175

Glu Ala Val Arg Ser Pro Ser Phe Glu Lys
180 185

<210> 81
<211> 185
<212> PRT
<213> Homo sapiens

<400> 81

Arg His Val His Tyr Gly Trp Gly Asp Pro Ile Arg Leu Arg His Leu
1 5 10 15

Tyr Thr Ser Gly Pro His Gly Leu Ser Ser Cys Phe Leu Arg Ile Arg
20 25 30

Ala Asp Gly Val Val Asp Cys Ala Arg Gly Gln Ser Ala His Ser Leu
35 40 45

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

His Ser Val Arg Tyr Leu Cys Met Gly Ala Asp Gly Lys Met Gln Gly
65 70 75 80

Leu Leu Gln Tyr Ser Glu Glu Asp Cys Ala Phe Glu Glu Glu Ile Arg
85 90 95

Pro Asp Gly Tyr Asn Val Tyr Arg Ser Glu Lys His Arg Leu Pro Val
100 105 110

Ser Leu Ser Ser Ala Lys Gln Arg Gln Leu Tyr Lys Asn Arg Gly Phe
115 120 125

Leu Pro Leu Ser His Phe Leu Pro Met Leu Pro Met Val Pro Glu Glu
130 135 140

Pro Glu Asp Leu Arg Gly His Leu Glu Ser Asp Met Phe Ser Ser Pro
145 150 155 160

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

Ala Val Arg Ser Pro Ser Phe Glu Lys
180 185

<210> 82
<211> 194
<212> PRT
<213> Homo sapiens

<400> 82

Arg Pro Leu Ala Phe Ser Ala Ala Gly Pro His Val His Tyr Gly Trp
1 5 10 15

Gly Asp Pro Ile Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly
20 25 30

Leu Ser Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys
35 40 45

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

Leu Arg Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys
65 70 75 80

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

Asp Cys Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr
100 105 110

Arg Ser Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln
115 120 125

Arg Gln Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu
130 135 140

Pro Met Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His
145 150 155 160

Leu Glu Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp
165 170 175

Pro Phe Gly Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe
180 185 190

Glu Lys

<210> 83
<211> 194
<212> PRT
<213> Homo sapiens

<400> 83

Arg Pro Leu Ala Phe Ser Asp Ala Ala Pro His Val His Tyr Gly Trp
1 5 10 15

Gly Asp Pro Ile Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly
20 25 30

```
Leu Ser Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys
        35                  40                  45

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

Leu Arg Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys
65                  70                  75                  80

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

Asp Cys Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr
            100                 105                 110

Arg Ser Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln
        115                 120                 125

Arg Gln Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu
    130                 135                 140

Pro Met Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His
145                 150                 155                 160

Leu Glu Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp
                165                 170                 175

Pro Phe Gly Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe
            180                 185                 190

Glu Lys
```

<210> 84
<211> 194
<212> PRT
<213> Homo sapiens

<400> 84

```
Arg Pro Leu Ala Phe Ser Asp Ala Gly Ala His Val His Tyr Gly Trp
1               5                   10                  15

Gly Asp Pro Ile Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly
            20                  25                  30

Leu Ser Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys
        35                  40                  45

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

Leu Arg Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys
```

65 70 75 80

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

Asp Cys Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr
100 105 110

Arg Ser Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln
115 120 125

Arg Gln Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu
130 135 140

Pro Met Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His
145 150 155 160

Leu Glu Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp
165 170 175

Pro Phe Gly Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe
180 185 190

Glu Lys

<210> 85
<211> 194
<212> PRT
<213> Homo sapiens

<400> 85

Arg Pro Leu Ala Phe Ser Asp Ala Gly Pro His Val His Tyr Gly Ala
1 5 10 15

Gly Asp Pro Ile Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly
20 25 30

Leu Ser Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys
35 40 45

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

Leu Arg Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys
65 70 75 80

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

Asp Cys Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr
100 105 110

Arg Ser Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln
115 120 125

Arg Gln Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu
130 135 140

Pro Met Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His
145 150 155 160

Leu Glu Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp
165 170 175

Pro Phe Gly Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe
180 185 190

Glu Lys

<210> 86
<211> 194
<212> PRT
<213> Homo sapiens

<400> 86

Arg Pro Leu Ala Phe Ser Asp Ala Gly Pro His Val His Tyr Gly Trp
1 5 10 15

Gly Ala Pro Ile Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly
20 25 30

Leu Ser Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys
35 40 45

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

Leu Arg Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys
65 70 75 80

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

Asp Cys Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr
100 105 110

Arg Ser Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln
115 120 125

Arg Gln Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu
130 135 140

Pro Met Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His
145 150 155 160

Leu Glu Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp
165 170 175

Pro Phe Gly Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe
180 185 190

Glu Lys

<210> 87
<211> 167
<212> PRT
<213> Homo sapiens

<400> 87

Arg Pro Leu Ala Phe Ser Asp Ala Gly Pro His Val His Tyr Gly Trp
1 5 10 15

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

Ile Lys Ala Val Ala Leu Arg Thr Val Ala Ile Lys Gly Val His Ser
35 40 45

Val Arg Tyr Leu Cys Met Gly Ala Asp Gly Lys Met Gln Gly Leu Leu
50 55 60

Gln Tyr Ser Glu Glu Asp Cys Ala Phe Glu Glu Glu Ile Arg Pro Asp
65 70 75 80

Gly Tyr Asn Val Tyr Arg Ser Glu Lys His Arg Leu Pro Val Ser Leu
85 90 95

Ser Ser Ala Lys Gln Arg Gln Leu Tyr Lys Asn Arg Gly Phe Leu Pro
100 105 110

Leu Ser His Phe Leu Pro Met Leu Pro Met Val Pro Glu Glu Pro Glu
115 120 125

Asp Leu Arg Gly His Leu Glu Ser Asp Met Phe Ser Ser Pro Leu Glu
130 135 140

Thr Asp Ser Met Asp Pro Phe Gly Leu Val Thr Gly Leu Glu Ala Val
145 150 155 160

Arg Ser Pro Ser Phe Glu Lys
165

<210> 88
<211> 194
<212> PRT
<213> Homo sapiens

<400> 88

Arg Pro Leu Ala Phe Ser Asp Ala Gly Pro His Val His Tyr Gly Trp
1 5 10 15

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

Leu Ser Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys
35 40 45

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

Leu Arg Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys
65 70 75 80

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

Asp Cys Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr
100 105 110

Arg Ser Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln
115 120 125

Arg Gln Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ala His Phe Leu
130 135 140

Pro Met Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His
145 150 155 160

Leu Glu Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp
165 170 175

Pro Phe Gly Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe
180 185 190

Glu Lys

<210> 89
<211> 194
<212> PRT
<213> Homo sapiens

<400> 89

Arg Pro Leu Ala Phe Ser Asp Ala Gly Pro His Val His Tyr Gly Trp
1 5 10 15

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

Leu Ser Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys
35 40 45

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

Leu Arg Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys
65 70 75 80

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

Asp Cys Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr
100 105 110

Arg Ser Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln
115 120 125

Arg Gln Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser Ala Phe Leu
130 135 140

Pro Met Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His
145 150 155 160

Leu Glu Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp
165 170 175

Pro Phe Gly Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe
180 185 190

Glu Lys

<210> 90
<211> 194
<212> PRT
<213> Homo sapiens

<400> 90

Arg Pro Leu Ala Phe Ser Asp Ala Gly Pro His Val His Tyr Gly Trp
1 5 10 15

Gly Asp Pro Ile Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly
20 25 30

Leu Ser Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys
35 40 45

```
Ala Arg Gly Gln Ser Ala His Ser Leu Leu Glu Ile Lys Ala Val Ala
    50                  55                  60

Leu Arg Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys
65                  70                  75                  80

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

Asp Cys Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr
            100                 105                 110

Arg Ser Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Ala Gln
        115                 120                 125

Ala Gln Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu
    130                 135                 140

Pro Met Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His
145                 150                 155                 160

Leu Glu Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp
                165                 170                 175

Pro Phe Gly Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe
            180                 185                 190

Glu Lys
```

<210> 91
<211> 194
<212> PRT
<213> Homo sapiens

<400> 91

```
Arg Pro Leu Ala Phe Ser Asp Ala Gly Pro His Val His Tyr Gly Trp
1               5                   10                  15

Gly Asp Pro Ile Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly
            20                  25                  30

Leu Ser Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys
        35                  40                  45

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

Leu Arg Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys
65                  70                  75                  80
```

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

Asp Cys Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr
100 105 110

Arg Ser Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Ala Gln
115 120 125

Arg Gln Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ala His Phe Leu
130 135 140

Pro Met Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His
145 150 155 160

Leu Glu Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp
165 170 175

Pro Phe Gly Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe
180 185 190

Glu Lys

<210> 92
<211> 194
<212> PRT
<213> Homo sapiens

<400> 92

Arg Pro Leu Ala Phe Ser Asp Ala Gly Pro His Val His Tyr Gly Trp
1 5 10 15

Gly Asp Pro Ile Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly
20 25 30

Leu Ser Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys
35 40 45

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

Leu Arg Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys
65 70 75 80

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

Asp Cys Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr
100 105 110

Arg Ser Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Ala Gln

115 120 125

Arg Gln Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser Ala Phe Leu
130 135 140

Pro Met Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His
145 150 155 160

Leu Glu Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp
165 170 175

Pro Phe Gly Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe
180 185 190

Glu Lys

<210> 93
<211> 194
<212> PRT
<213> Homo sapiens

<400> 93

Arg Pro Leu Ala Phe Ser Asp Ala Gly Pro His Val His Tyr Gly Trp
1 5 10 15

Gly Asp Pro Ile Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly
20 25 30

Leu Ser Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys
35 40 45

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

Leu Arg Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys
65 70 75 80

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

Asp Cys Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr
100 105 110

Arg Ser Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln
115 120 125

Ala Gln Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ala His Phe Leu
130 135 140

Pro Met Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His
145 150 155 160

Leu Glu Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp
165 170 175

Pro Phe Gly Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe
180 185 190

Glu Lys

<210> 94
<211> 194
<212> PRT
<213> Homo sapiens

<400> 94

Arg Pro Leu Ala Phe Ser Asp Ala Gly Pro His Val His Tyr Gly Trp
1 5 10 15

Gly Asp Pro Ile Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly
20 25 30

Leu Ser Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys
35 40 45

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

Leu Arg Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys
65 70 75 80

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

Asp Cys Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr
100 105 110

Arg Ser Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln
115 120 125

Arg Gln Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ala Ala Phe Leu
130 135 140

Pro Met Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His
145 150 155 160

Leu Glu Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp
165 170 175

Pro Phe Gly Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe
180 185 190

Glu Lys

<210> 95
<211> 194
<212> PRT
<213> Homo sapiens

<400> 95

Arg Pro Leu Ala Phe Ser Asp Ala Gly Pro His Val His Tyr Gly Trp
1 5 10 15

Gly Asp Pro Ile Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly
20 25 30

Leu Ser Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys
35 40 45

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

Leu Arg Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys
65 70 75 80

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

Asp Cys Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr
100 105 110

Arg Ser Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Ala Gln
115 120 125

Arg Gln Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser Ala Phe Leu
130 135 140

Pro Met Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His
145 150 155 160

Leu Glu Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp
165 170 175

Pro Phe Gly Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe
180 185 190

Glu Lys

<210> 96
<211> 194
<212> PRT
<213> Homo sapiens

<400> 96

```
Arg Pro Leu Ala Phe Ser Asp Ala Gly Pro His Val His Tyr Gly Trp
1               5                   10                  15

Gly Asp Pro Ile Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly
            20                  25                  30

Leu Ser Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys
        35                  40                  45

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

Leu Arg Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys
65                  70                  75                  80

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

Asp Cys Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr
            100                 105                 110

Arg Ser Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Ala Gln
        115                 120                 125

Ala Gln Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ala His Phe Leu
    130                 135                 140

Pro Met Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His
145                 150                 155                 160

Leu Glu Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp
                165                 170                 175

Pro Phe Gly Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe
            180                 185                 190

Glu Lys
```

<210> 97
<211> 194
<212> PRT
<213> Homo sapiens

<400> 97

```
Arg Pro Leu Ala Phe Ser Asp Ala Gly Pro His Val His Tyr Gly Trp
1               5                   10                  15

Gly Asp Pro Ile Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly
            20                  25                  30
```

```
Leu Ser Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys
        35                  40                  45

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

Leu Arg Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys
65                  70                  75                  80

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

Asp Cys Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr
            100                 105                 110

Arg Ser Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Ala Gln
        115                 120                 125

Ala Gln Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser Ala Phe Leu
    130                 135                 140

Pro Met Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His
145                 150                 155                 160

Leu Glu Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp
                165                 170                 175

Pro Phe Gly Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe
            180                 185                 190

Glu Lys
```

<210> 98
<211> 194
<212> PRT
<213> Homo sapiens

<400> 98

```
Arg Pro Leu Ala Phe Ser Asp Ala Gly Pro His Val His Tyr Gly Trp
1               5                   10                  15

Gly Asp Pro Ile Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly
            20                  25                  30

Leu Ser Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys
        35                  40                  45

Ala Arg Gly Gln Ser Ala His Ser Leu Leu Glu Ile Lys Ala Val Ala
    50                  55                  60
```

```
Leu Arg Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys
65                  70                  75                  80

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

Asp Cys Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr
            100                 105                 110

Arg Ser Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Ala Gln
        115                 120                 125

Ala Gln Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ala Ala Phe Leu
    130                 135                 140

Pro Met Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His
145                 150                 155                 160

Leu Glu Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp
                165                 170                 175

Pro Phe Gly Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe
            180                 185                 190

Glu Lys
```

<210> 99
<211> 194
<212> PRT
<213> Homo sapiens

<400> 99

```
Arg Pro Leu Ala Phe Ser Asp Ala Gly Pro His Val His Tyr Gly Trp
1               5                   10                  15

Gly Asp Pro Ile Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly
            20                  25                  30

Leu Ser Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys
        35                  40                  45

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

Leu Arg Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys
65                  70                  75                  80

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

Asp Cys Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr
100 105 110

Arg Ser Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln
115 120 125

Arg Gln Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu
130 135 140

Pro Met Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His
145 150 155 160

Leu Glu Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp
165 170 175

Pro Phe Gly Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe
180 185 190

Glu Lys

<210> 100
<211> 181
<212> PRT
<213> Homo sapiens

<400> 100

His Pro Ile Pro Asp Ser Ser Pro Leu Leu Gln Phe Gly Gly Gln Val
1 5 10 15

Arg Gln Arg Tyr Leu Tyr Thr Asp Asp Ala Gln Gln Thr Glu Ala His
20 25 30

Leu Glu Ile Arg Glu Asp Gly Thr Val Gly Gly Ala Ala Asp Gln Ser
35 40 45

Pro Glu Ser Leu Leu Gln Leu Lys Ala Leu Lys Pro Gly Val Ile Gln
50 55 60

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

Ala Leu Tyr Gly Ser Leu His Phe Asp Pro Glu Ala Cys Ser Phe Arg
85 90 95

Glu Leu Leu Leu Glu Asp Gly Tyr Asn Val Tyr Gln Ser Glu Ala His
100 105 110

Gly Leu Pro Leu His Leu Pro Gly Asn Lys Ser Pro His Arg Asp Pro
115 120 125

Ala Pro Arg Gly Pro Ala Arg Phe Leu Pro Leu Pro Gly Leu Pro Pro

130 135 140

Ala Leu Pro Glu Pro Pro Gly Ile Leu Ala Pro Gln Pro Pro Asp Val
145 150 155 160

Gly Ser Ser Asp Pro Leu Ser Met Val Gly Pro Ser Gln Gly Arg Ser
165 170 175

Pro Ser Tyr Ala Ser
180

<210> 101
<211> 4
<212> PRT
<213> Homo sapiens

<400> 101

Val His Tyr Gly
1

<210> 102
<211> 9
<212> PRT
<213> Homo sapiens

<400> 102

Asp Ala Ser Pro His Val His Tyr Gly
1 5

<210> 103
<211> 9
<212> PRT
<213> Homo sapiens

<400> 103

Asp Ser Ser Pro Leu Val His Tyr Gly
1 5

<210> 104
<211> 7
<212> PRT
<213> Homo sapiens

<400> 104

Asp Ser Ser Pro Leu Leu Gln
1 5

<210> 105
<211> 12
<212> PRT
<213> Homo sapiens

<400> 105

Asp Ser Ser Pro Leu Leu Gln Phe Gly Gly Gln Val
1 5 10

<210> 106
<211> 5
<212> PRT
<213> Homo sapiens

<400> 106

Arg His Pro Ile Pro
1 5

<210> 107
<211> 4
<212> PRT
<213> Homo sapiens

<400> 107

His Pro Ile Pro
1

<210> 108
<211> 5
<212> PRT
<213> Homo sapiens

<400> 108

Arg Pro Leu Ala Phe
1 5

<210> 109
<211> 4
<212> PRT
<213> Homo sapiens

<400> 109

Pro Leu Ala Phe
1

<210> 110
<211> 6
<212> PRT
<213> Homo sapiens

<400> 110

Met Asp Ser Ser Pro Leu
1 5

<210> 111
<211> 7
<212> PRT
<213> Homo sapiens

<400> 111

Met Ser Asp Ser Ser Pro Leu
1 5

<210> 112
<211> 6
<212> PRT
<213> Homo sapiens

<400> 112

Ser Asp Ser Ser Pro Leu
1 5

<210> 113
<211> 5
<212> PRT
<213> Homo sapiens

<400> 113

Met Ser Ser Pro Leu
1 5

<210> 114
<211> 4
<212> PRT
<213> Homo sapiens

<400> 114

Ser Ser Pro Leu
1

<210> 115
<211> 4
<212> PRT
<213> Homo sapiens

<400> 115

Arg Asp Ser Ser
1

<210> 116
<211> 4
<212> PRT
<213> Homo sapiens

<400> 116

Met Asp Ser Ser
1

<210> 117
<211> 5
<212> PRT
<213> Homo sapiens

<400> 117

Met Arg Asp Ser Ser
1 5

<210> 118
<211> 5

<212> PRT
<213> Homo sapiens

<400> 118

Met Ser Ser Pro Leu
1 5

<210> 119
<211> 6
<212> PRT
<213> Homo sapiens

<400> 119

Met Asp Ser Ser Pro Leu
1 5

<210> 120
<211> 7
<212> PRT
<213> Homo sapiens

<400> 120

Met Ser Asp Ser Ser Pro Leu
1 5

<210> 121
<211> 5
<212> PRT
<213> Homo sapiens

<400> 121

Asp Ser Ser Pro Leu
1 5

<210> 122
<211> 5
<212> PRT
<213> Homo sapiens

<400> 122

Asp Ala Ser Pro His
1 5

<210> 123
<211> 4
<212> PRT
<213> Homo sapiens

<400> 123

Arg Asp Ser Ser
1

<210> 124
<211> 4
<212> PRT
<213> Homo sapiens

<400> 124

Met Asp Ser Ser
1

<210> 125
<211> 5
<212> PRT
<213> Homo sapiens

<400> 125

Met Arg Asp Ser Ser
1 5

<210> 126
<211> 6
<212> PRT
<213> Homo sapiens

<400> 126

Met Asp Ser Ser Pro Leu
1 5

<210> 127
<211> 7
<212> PRT
<213> Homo sapiens

<400> 127

Met Ser Asp Ser Ser Pro Leu
1 5

<210> 128
<211> 5
<212> PRT
<213> Homo sapiens

<400> 128

Met Ser Ser Pro Leu
1 5

<210> 129
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Linker sequence

<400> 129

Gly Ser Gly Gly Ser
1 5

<210> 130
<211> 4
<212> PRT

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Linker sequence

<400> 130

Gly Gly Gly Ser
1

<210> 131
<211> 4
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Linker sequence

<400> 131

Gly Gly Ser Gly
1

<210> 132
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Linker sequence

<400> 132

Gly Gly Ser Gly Gly
1 5

<210> 133
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Linker sequence

<400> 133

Gly Ser Gly Ser Gly
1 5

<210> 134
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Linker sequence

<400> 134

Gly Ser Gly Gly Gly
1 5

<210> 135

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

<220>
<223> Description of Artificial Sequence: Linker sequence

<400> 135

Gly Ser Ser Ser Gly
1 5

<210> 136
<211> 32
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Forward primer

<400> 136
ccgactagtc accatgcgga gcgggtgtgt gg 32

<210> 137
<211> 41
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Reverse primer

<400> 137
ataagaatgc ggccgcttac ttctcaaagc tgggactcct c 41

<210> 138
<211> 186
<212> PRT
<213> Homo sapiens

<400> 138

Asp Ser Ser Pro Leu Leu Gln Phe Gly Gly Gln Val Arg Leu Arg His
1 5 10 15

Leu Tyr Thr Ser Gly Pro His Gly Leu Ser Ser Cys Phe Leu Arg Ile
20 25 30

Arg Ala Asp Gly Val Val Asp Cys Ala Arg Gly Gln Ser Ala His Ser
35 40 45

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

Val His Ser Val Arg Tyr Leu Cys Met Gly Ala Asp Gly Lys Met Gln
65 70 75 80

Gly Leu Leu Gln Tyr Ser Glu Glu Asp Cys Ala Phe Glu Glu Glu Ile
85 90 95

```
Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser Glu Lys His Arg Leu Pro
            100                 105                 110

Val Ser Leu Ser Ser Ala Lys Gln Arg Gln Leu Tyr Lys Asn Arg Gly
        115                 120                 125

Phe Leu Pro Leu Ser His Phe Leu Pro Met Leu Pro Met Val Pro Glu
    130                 135                 140

Glu Pro Glu Asp Leu Arg Gly His Leu Glu Ser Asp Met Phe Ser Ser
145                 150                 155                 160

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

Glu Ala Val Arg Ser Pro Ser Phe Glu Lys
            180                 185
```

<210> 139
<211> 194
<212> PRT
<213> Homo sapiens

<400> 139

```
Arg Pro Leu Ala Phe Ser Asp Ala Ser Pro His Val His Tyr Gly Trp
1               5                   10                  15

Gly Asp Pro Ile Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly
            20                  25                  30

Leu Ser Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys
        35                  40                  45

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

Leu Arg Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys
65                  70                  75                  80

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

Asp Cys Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr
            100                 105                 110

Arg Ser Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln
        115                 120                 125

Arg Gln Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu
    130                 135                 140

Pro Met Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His
```

145 150 155 160

Leu Glu Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp
165 170 175

Pro Phe Gly Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe
180 185 190

Glu Lys

<210> 140
<211> 194
<212> PRT
<213> Homo sapiens

<400> 140

Arg Pro Leu Ala Phe Ser Asp Ser Ser Pro Leu Val His Tyr Gly Trp
1 5 10 15

Gly Asp Pro Ile Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly
20 25 30

Leu Ser Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys
35 40 45

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

Leu Arg Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys
65 70 75 80

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

Asp Cys Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr
100 105 110

Arg Ser Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln
115 120 125

Arg Gln Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu
130 135 140

Pro Met Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His
145 150 155 160

Leu Glu Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp
165 170 175

Pro Phe Gly Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe
180 185 190

Glu Lys

<210> 141
<211> 188
<212> PRT
<213> Homo sapiens

<400> 141

Asp Ser Ser Pro Leu Val His Tyr Gly Trp Gly Asp Pro Ile Arg Leu
1 5 10 15

Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser Ser Cys Phe Leu
20 25 30

Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg Gly Gln Ser Ala
35 40 45

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

Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly Ala Asp Gly Lys
65 70 75 80

Met Gln Gly Leu Leu Gln Tyr Ser Glu Glu Asp Cys Ala Phe Glu Glu
85 90 95

Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser Glu Lys His Arg
100 105 110

Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln Leu Tyr Lys Asn
115 120 125

Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met Leu Pro Met Val
130 135 140

Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu Ser Asp Met Phe
145 150 155 160

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

Gly Leu Glu Ala Val Arg Ser Pro Ser Phe Glu Lys
180 185

<210> 142
<211> 193
<212> PRT
<213> Homo sapiens

<400> 142

```
Arg His Pro Ile Pro Asp Ser Ser Pro Leu Leu Gln Phe Gly Trp Gly
1               5                   10                  15

Asp Pro Ile Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu
            20                  25                  30

Ser Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala
        35                  40                  45

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

Arg Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met
65                  70                  75                  80

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

Cys Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg
            100                 105                 110

Ser Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg
        115                 120                 125

Gln Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro
    130                 135                 140

Met Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu
145                 150                 155                 160

Glu Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro
                165                 170                 175

Phe Gly Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe Glu
            180                 185                 190

Lys
```

<210> 143
<211> 191
<212> PRT
<213> Homo sapiens

<400> 143

```
Arg His Pro Ile Pro Asp Ser Ser Pro Leu Leu Gln Trp Gly Asp Pro
1               5                   10                  15

Ile Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser Ser
            20                  25                  30

Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg Gly
```

35 40 45

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

Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly Ala
65 70 75 80

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

Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser Glu
100 105 110

Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln Leu
115 120 125

Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met Leu
130 135 140

Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu Ser
145 150 155 160

Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe Gly
165 170 175

Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe Glu Lys
180 185 190

<210> 144
<211> 194
<212> PRT
<213> Homo sapiens

<400> 144

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

Gly Asp Pro Ile Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly
20 25 30

Leu Ser Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys
35 40 45

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

Leu Arg Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys
65 70 75 80

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

```
Asp Cys Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr
            100                 105                 110

Arg Ser Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln
        115                 120                 125

Arg Gln Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu
    130                 135                 140

Pro Met Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His
145                 150                 155                 160

Leu Glu Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp
                165                 170                 175

Pro Phe Gly Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe
            180                 185                 190

Glu Lys
```

<210> 145
<211> 193
<212> PRT
<213> Homo sapiens

<400> 145

```
Arg His Pro Ile Pro Asp Ser Ser Pro His Val His Tyr Gly Trp Gly
1               5                   10                  15

Asp Pro Ile Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu
            20                  25                  30

Ser Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala
        35                  40                  45

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

Arg Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met
65                  70                  75                  80

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

Cys Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg
            100                 105                 110

Ser Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg
        115                 120                 125
```

```
Gln Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro
    130                 135                 140

Met Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu
145                 150                 155                 160

Glu Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro
                165                 170                 175

Phe Gly Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe Glu
            180                 185                 190

Lys
```

<210> 146
<211> 192
<212> PRT
<213> Homo sapiens

<400> 146

```
Arg Pro Leu Ala Phe Ser Asp Ala Gly Pro Leu Leu Gln Phe Gly Gly
1               5                   10                  15

Gln Val Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser
            20                  25                  30

Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg
        35                  40                  45

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

Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly
65                  70                  75                  80

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

Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser
            100                 105                 110

Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln
        115                 120                 125

Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met
    130                 135                 140

Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu
145                 150                 155                 160
```

Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe
165 170 175

Gly Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe Glu Lys
180 185 190

<210> 147
<211> 191
<212> PRT
<213> Homo sapiens

<400> 147

Arg His Pro Ile Pro Asp Ser Ser Pro His Val His Tyr Gly Gly Gln
1 5 10 15

Val Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser Ser
20 25 30

Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg Gly
35 40 45

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

Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly Ala
65 70 75 80

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

Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser Glu
100 105 110

Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln Leu
115 120 125

Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met Leu
130 135 140

Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu Ser
145 150 155 160

Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe Gly
165 170 175

Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe Glu Lys
180 185 190

<210> 148
<211> 187
<212> PRT
<213> Homo sapiens

<400> 148

Arg Asp Ser Ser Pro Leu Leu Gln Phe Gly Gly Gln Val Arg Leu Arg
1 5 10 15

His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser Ser Cys Phe Leu Arg
20 25 30

Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg Gly Gln Ser Ala His
35 40 45

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

Gly Val His Ser Val Arg Tyr Leu Cys Met Gly Ala Asp Gly Lys Met
65 70 75 80

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

Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser Glu Lys His Arg Leu
100 105 110

Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln Leu Tyr Lys Asn Arg
115 120 125

Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met Leu Pro Met Val Pro
130 135 140

Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu Ser Asp Met Phe Ser
145 150 155 160

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

Leu Glu Ala Val Arg Ser Pro Ser Phe Glu Lys
180 185

<210> 149
<211> 192
<212> PRT
<213> Homo sapiens

<400> 149

Arg Pro Leu Ala Phe Ser Asp Ser Ser Pro Leu Leu Gln Phe Gly Gly
1 5 10 15

Gln Val Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser
20 25 30

Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg
35 40 45

```
Gly Gln Ser Ala His Ser Leu Leu Glu Ile Lys Ala Val Ala Leu Arg
    50                  55                  60

Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly
65                  70                  75                  80

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

Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser
            100                 105                 110

Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln
        115                 120                 125

Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met
    130                 135                 140

Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu
145                 150                 155                 160

Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe
                165                 170                 175

Gly Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe Glu Lys
            180                 185                 190
```

<210> 150
<211> 191
<212> PRT
<213> Homo sapiens

<400> 150

```
Arg His Pro Ile Pro Asp Ser Ser Pro Leu Leu Gln Phe Gly Ala Gln
1               5                   10                  15

Val Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser Ser
            20                  25                  30

Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg Gly
        35                  40                  45

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

Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly Ala
65                  70                  75                  80

Asp Gly Lys Met Gln Gly Leu Leu Gln Tyr Ser Glu Glu Asp Cys Ala
                85                  90                  95
```

```
Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser Glu
            100                 105                 110

Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln Leu
        115                 120                 125

Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met Leu
    130                 135                 140

Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu Ser
145                 150                 155                 160

Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe Gly
                165                 170                 175

Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe Glu Lys
            180                 185                 190
```

<210> 151
<211> 191
<212> PRT
<213> Homo sapiens

<400> 151

```
Arg His Pro Ile Pro Asp Ser Ser Pro Leu Leu Gln Phe Gly Asp Gln
1               5                   10                  15

Val Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser Ser
            20                  25                  30

Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg Gly
        35                  40                  45

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

Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly Ala
65                  70                  75                  80

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

Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser Glu
            100                 105                 110

Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln Leu
        115                 120                 125

Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met Leu
    130                 135                 140

Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu Ser
```

145 150 155 160

Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe Gly
165 170 175

Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe Glu Lys
180 185 190

<210> 152
<211> 191
<212> PRT
<213> Homo sapiens

<400> 152

Arg His Pro Ile Pro Asp Ser Ser Pro Leu Leu Gln Phe Gly Pro Gln
1 5 10 15

Val Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser Ser
20 25 30

Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg Gly
35 40 45

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

Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly Ala
65 70 75 80

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

Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser Glu
100 105 110

Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln Leu
115 120 125

Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met Leu
130 135 140

Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu Ser
145 150 155 160

Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe Gly
165 170 175

Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe Glu Lys
180 185 190

<210> 153
<211> 191

<212> PRT
<213> Homo sapiens

<400> 153

Arg His Pro Ile Pro Asp Ser Ser Pro Leu Leu Gln Phe Gly Gly Ala
1 5 10 15

Val Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser Ser
20 25 30

Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg Gly
35 40 45

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

Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly Ala
65 70 75 80

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

Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser Glu
100 105 110

Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln Leu
115 120 125

Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met Leu
130 135 140

Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu Ser
145 150 155 160

Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe Gly
165 170 175

Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe Glu Lys
180 185 190

<210> 154
<211> 191
<212> PRT
<213> Homo sapiens

<400> 154

Arg His Pro Ile Pro Asp Ser Ser Pro Leu Leu Gln Phe Gly Gly Glu
1 5 10 15

Val Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser Ser
20 25 30

Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg Gly
35 40 45

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

Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly Ala
65 70 75 80

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

Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser Glu
100 105 110

Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln Leu
115 120 125

Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met Leu
130 135 140

Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu Ser
145 150 155 160

Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe Gly
165 170 175

Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe Glu Lys
180 185 190

<210> 155
<211> 191
<212> PRT
<213> Homo sapiens

<400> 155

Arg His Pro Ile Pro Asp Ser Ser Pro Leu Leu Gln Phe Gly Gly Asn
1 5 10 15

Val Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser Ser
20 25 30

Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg Gly
35 40 45

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

Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly Ala
65 70 75 80

Asp Gly Lys Met Gln Gly Leu Leu Gln Tyr Ser Glu Glu Asp Cys Ala

85 90 95

Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser Glu
100 105 110

Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln Leu
115 120 125

Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met Leu
130 135 140

Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu Ser
145 150 155 160

Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe Gly
165 170 175

Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe Glu Lys
180 185 190

<210> 156
<211> 191
<212> PRT
<213> Homo sapiens

<400> 156

Arg His Pro Ile Pro Asp Ser Ser Pro Leu Leu Gln Phe Gly Gly Gln
1 5 10 15

Ala Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser Ser
20 25 30

Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg Gly
35 40 45

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

Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly Ala
65 70 75 80

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

Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser Glu
100 105 110

Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln Leu
115 120 125

Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met Leu
130 135 140

Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu Ser
145 150 155 160

Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe Gly
165 170 175

Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe Glu Lys
180 185 190

<210> 157
<211> 191
<212> PRT
<213> Homo sapiens

<400> 157

Arg His Pro Ile Pro Asp Ser Ser Pro Leu Leu Gln Phe Gly Gly Gln
1 5 10 15

Ile Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser Ser
20 25 30

Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg Gly
35 40 45

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

Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly Ala
65 70 75 80

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

Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser Glu
100 105 110

Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln Leu
115 120 125

Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met Leu
130 135 140

Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu Ser
145 150 155 160

Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe Gly
165 170 175

Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe Glu Lys
180 185 190

<210> 158
<211> 191
<212> PRT
<213> Homo sapiens

<400> 158

Arg His Pro Ile Pro Asp Ser Ser Pro Leu Leu Gln Phe Gly Gly Gln
1 5 10 15

Thr Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser Ser
20 25 30

Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg Gly
35 40 45

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

Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly Ala
65 70 75 80

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

Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser Glu
100 105 110

Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln Leu
115 120 125

Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met Leu
130 135 140

Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu Ser
145 150 155 160

Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe Gly
165 170 175

Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe Glu Lys
180 185 190

<210> 159
<211> 193
<212> PRT
<213> Homo sapiens

<400> 159

Arg His Pro Ile Pro Asp Ser Ser Pro Leu Leu Gln Phe Gly Trp Gly
1 5 10 15

Gln Pro Val Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu

20 25 30

Ser Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala
35 40 45

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

Arg Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met
65 70 75 80

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

Cys Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg
100 105 110

Ser Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg
115 120 125

Gln Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro
130 135 140

Met Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu
145 150 155 160

Glu Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro
165 170 175

Phe Gly Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe Glu
180 185 190

Lys

<210> 160
<211> 190
<212> PRT
<213> Homo sapiens

<400> 160

His Pro Ile Pro Asp Ser Ser Pro Leu Leu Gln Phe Gly Gly Gln Val
1 5 10 15

Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser Ser Cys
20 25 30

Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg Gly Gln
35 40 45

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

Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly Ala Asp
65 70 75 80

Gly Lys Met Gln Gly Leu Leu Gln Tyr Ser Glu Glu Asp Cys Ala Phe
85 90 95

Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser Glu Lys
100 105 110

His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln Leu Tyr
115 120 125

Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met Leu Pro
130 135 140

Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu Ser Asp
145 150 155 160

Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe Gly Leu
165 170 175

Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe Glu Lys
180 185 190

<210> 161
<211> 186
<212> PRT
<213> Homo sapiens

<400> 161

Asp Ser Ser Pro Leu Leu Gln Phe Gly Gly Gln Val Arg Leu Arg His
1 5 10 15

Leu Tyr Thr Ser Gly Pro His Gly Leu Ser Ser Cys Phe Leu Arg Ile
20 25 30

Arg Ala Asp Gly Val Val Asp Cys Ala Arg Gly Gln Ser Ala His Ser
35 40 45

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

Val His Ser Val Arg Tyr Leu Cys Met Gly Ala Asp Gly Lys Met Gln
65 70 75 80

Gly Leu Leu Gln Tyr Ser Glu Glu Asp Cys Ala Phe Glu Glu Glu Ile
85 90 95

Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser Glu Lys His Arg Leu Pro
100 105 110

```
Val Ser Leu Ser Ser Ala Lys Gln Arg Gln Leu Tyr Lys Asn Arg Gly
        115                 120                 125


Phe Leu Pro Leu Ser His Phe Leu Pro Met Leu Pro Met Val Pro Glu
    130                 135                 140


Glu Pro Glu Asp Leu Arg Gly His Leu Glu Ser Asp Met Phe Ser Ser
145                 150                 155                 160


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


Glu Ala Val Arg Ser Pro Ser Phe Glu Lys
            180                 185


<210>  162
<211>  190
<212>  PRT
<213>  Homo sapiens

<400>  162

His Pro Ile Pro Asp Ser Ser Pro Leu Leu Gln Trp Gly Asp Pro Ile
1               5                   10                  15


Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser Ser Cys
            20                  25                  30


Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg Gly Gln
        35                  40                  45


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


Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly Ala Asp
65                  70                  75                  80


Gly Lys Met Gln Gly Leu Leu Gln Tyr Ser Glu Glu Asp Cys Ala Phe
                85                  90                  95


Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser Glu Lys
            100                 105                 110


His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln Leu Tyr
        115                 120                 125


Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met Leu Pro
    130                 135                 140


Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu Ser Asp
145                 150                 155                 160
```

Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe Gly Leu
165 170 175

Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe Glu Lys
180 185 190

<210> 163
<211> 192
<212> PRT
<213> Homo sapiens

<400> 163

His Pro Ile Pro Asp Ser Ser Pro Leu Leu Gln Phe Gly Trp Gly Asp
1 5 10 15

Pro Ile Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser
20 25 30

Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg
35 40 45

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

Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly
65 70 75 80

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

Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser
100 105 110

Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln
115 120 125

Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met
130 135 140

Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu
145 150 155 160

Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe
165 170 175

Gly Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe Glu Lys
180 185 190

<210> 164
<211> 192
<212> PRT
<213> Homo sapiens

<400> 164

His Pro Ile Pro Asp Ser Ser Pro His Val His Tyr Gly Trp Gly Asp
1 5 10 15

Pro Ile Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser
20 25 30

Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg
35 40 45

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

Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly
65 70 75 80

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

Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser
100 105 110

Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln
115 120 125

Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met
130 135 140

Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu
145 150 155 160

Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe
165 170 175

Gly Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe Glu Lys
180 185 190

<210> 165
<211> 190
<212> PRT
<213> Homo sapiens

<400> 165

His Pro Ile Pro Asp Ser Ser Pro His Val His Tyr Gly Gly Gln Val
1 5 10 15

Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser Ser Cys
20 25 30

Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg Gly Gln
35 40 45

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

Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly Ala Asp
65                  70                  75                  80

Gly Lys Met Gln Gly Leu Leu Gln Tyr Ser Glu Glu Asp Cys Ala Phe
                85                  90                  95

Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser Glu Lys
            100                 105                 110

His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln Leu Tyr
        115                 120                 125

Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met Leu Pro
    130                 135                 140

Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu Ser Asp
145                 150                 155                 160

Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe Gly Leu
                165                 170                 175

Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe Glu Lys
            180                 185                 190
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<210> 166
<211> 188
<212> PRT
<213> Homo sapiens

<400> 166

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Asp Ala Gly Pro His Val His Tyr Gly Trp Gly Asp Pro Ile Arg Leu
1               5                   10                  15

Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser Ser Cys Phe Leu
            20                  25                  30

Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg Gly Gln Ser Ala
        35                  40                  45

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

Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly Ala Asp Gly Lys
65                  70                  75                  80

Met Gln Gly Leu Leu Gln Tyr Ser Glu Glu Asp Cys Ala Phe Glu Glu
                85                  90                  95
```

Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser Glu Lys His Arg
100 105 110

Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln Leu Tyr Lys Asn
115 120 125

Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met Leu Pro Met Val
130 135 140

Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu Ser Asp Met Phe
145 150 155 160

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

Gly Leu Glu Ala Val Arg Ser Pro Ser Phe Glu Lys
180 185

<210> 167
<211> 183
<212> PRT
<213> Homo sapiens

<400> 167

Val His Tyr Gly Trp Gly Asp Pro Ile Arg Leu Arg His Leu Tyr Thr
1 5 10 15

Ser Gly Pro His Gly Leu Ser Ser Cys Phe Leu Arg Ile Arg Ala Asp
20 25 30

Gly Val Val Asp Cys Ala Arg Gly Gln Ser Ala His Ser Leu Leu Glu
35 40 45

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

Val Arg Tyr Leu Cys Met Gly Ala Asp Gly Lys Met Gln Gly Leu Leu
65 70 75 80

Gln Tyr Ser Glu Glu Asp Cys Ala Phe Glu Glu Glu Ile Arg Pro Asp
85 90 95

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

Ser Ser Ala Lys Gln Arg Gln Leu Tyr Lys Asn Arg Gly Phe Leu Pro
115 120 125

Leu Ser His Phe Leu Pro Met Leu Pro Met Val Pro Glu Glu Pro Glu
130 135 140

Asp Leu Arg Gly His Leu Glu Ser Asp Met Phe Ser Ser Pro Leu Glu

145 150 155 160

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

Arg Ser Pro Ser Phe Glu Lys
180

<210> 168
<211> 174
<212> PRT
<213> Homo sapiens

<400> 168

Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser Ser Cys
1 5 10 15

Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg Gly Gln
20 25 30

Ser Ala His Ser Leu Leu Glu Ile Lys Ala Val Ala Leu Arg Thr Val
35 40 45

Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly Ala Asp
50 55 60

Gly Lys Met Gln Gly Leu Leu Gln Tyr Ser Glu Glu Asp Cys Ala Phe
65 70 75 80

Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser Glu Lys
85 90 95

His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln Leu Tyr
100 105 110

Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met Leu Pro
115 120 125

Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu Ser Asp
130 135 140

Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe Gly Leu
145 150 155 160

Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe Glu Lys
165 170

<210> 169
<211> 14
<212> PRT
<213> Artificial Sequence

<220>

<223> Synthetic peptide

<400> 169
Trp Gly Asp Pro Ile Arg Leu Arg His Leu Tyr Thr Ser Gly
 1   5   10

<210> 170
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<400> 170
Trp Gly Asp Pro Ile
 1   5

<210> 171
<211> 4
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<400> 171
Trp Gly Pro Ile
 1

<210> 172
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<400> 172
Trp Gly Asp Pro Val
 1   5

<210> 173
<211> 4
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<400> 173
Trp Gly Asp Ile
 1

<210> 174
<211> 4
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<400> 174

Gly Asp Pro Ile
 1

<210> 175
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<400> 175
Trp Gly Gln Pro Ile
 1   5

<210> 176
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<400> 176
Trp Gly Ala Pro Ile
 1   5

<210> 177
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<400> 177
Ala Gly Asp Pro Ile
 1   5

<210> 178
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<400> 178
Trp Ala Asp Pro Ile
 1   5

<210> 179
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<400> 179
Trp Gly Asp Ala Ile
 1   5

<210> 180
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<400> 180
Trp Gly Asp Pro Ala
 1   5

<210> 181
<211> 4
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<400> 181
Trp Asp Pro Ile
 1

<210> 182
<211> 4
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<400> 182
Trp Gly Asp Ile
 1

<210> 183
<211> 4
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<400> 183
Trp Gly Asp Pro
 1

<210> 184
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<400> 184
Phe Gly Asp Pro Ile
 1   5

<210> 185
<211> 9

<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<400> 185
Arg Leu Arg His Leu Tyr Thr Ser Gly
 1   5

<210> 186
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> core sequence

<400> 186
Arg Gln Arg Tyr Leu Tyr Thr Asp Asp
 1   5

<210> 187
<211> 13
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<400> 187
Ala Gly Pro His Val His Tyr Gly Trp Gly Asp Pro Ile
 1   5   10

<210> 188
<211> 165
<212> PRT
<213> Homo sapiens

<220>
<223> FGF19 C-terminal sequence

<400> 188
Pro His Gly Leu Ser Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val
 1   5   10   15
Val Asp Cys Ala Arg Gly Gln Ser Ala His Ser Leu Leu Glu Ile Lys
            20   25   30
Ala Val Ala Leu Arg Thr Val Ala Ile Lys Gly Val His Ser Val Arg
        35   40   45
Tyr Leu Cys Met Gly Ala Asp Gly Lys Met Gln Gly Leu Leu Gln Tyr
    50   55   60
Ser Glu Glu Asp Cys Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr
65   70   75   80
Asn Val Tyr Arg Ser Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser
                85   90   95
Ala Lys Gln Arg Gln Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser
            100   105   110
His Phe Leu Pro Met Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu
        115   120   125
Arg Gly His Leu Glu Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp
    130   135   140
Ser Met Asp Pro Phe Gly Leu Val Thr Gly Leu Glu Ala Val Arg Ser
145   150   155   160
Pro Ser Phe Glu Lys
                165

<210> 189
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<223> Linker sequence

<400> 189
Gly Gly Gly Ser Gly
 1   5

<210> 190
<211> 11
<212> PRT
<213> Homo sapiens

<220>
<223> Sheet-8/Loop-8/Sheet-9 region of FGF19

<400> 190
Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr
 1   5   10

<210> 191
<211> 11
<212> PRT
<213> Homo sapiens

<220>
<223> Sheet-8/Loop-8/Sheet-9 region of FGF21

<400> 191
Glu Leu Leu Leu Glu Asp Gly Tyr Asn Val Tyr
 1   5   10

<210> 192
<211> 187
<212> PRT
<213> Artificial Sequence

<220>
<223> M53 sequence

<400> 192
Met Asp Ser Ser Pro Leu Leu Gln Trp Gly Asp Pro Ile Arg Leu Arg
 1   5   10   15
His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser Ser Cys Phe Leu Arg
            20   25   30
Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg Gly Gln Ser Ala His
        35   40   45
Ser Leu Leu Glu Ile Lys Ala Val Ala Leu Arg Thr Val Ala Ile Lys
    50   55   60
Gly Val His Ser Val Arg Tyr Leu Cys Met Gly Ala Asp Gly Lys Met
65   70   75   80
Gln Gly Leu Leu Gln Tyr Ser Glu Glu Asp Cys Ala Phe Glu Glu Glu
                85   90   95
Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser Glu Lys His Arg Leu
            100   105   110
Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln Leu Tyr Lys Asn Arg
        115   120   125
Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met Leu Pro Met Val Pro
    130   135   140

Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu Ser Asp Met Phe Ser
145 150 155 160
Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe Gly Leu Val Thr Gly
165 170 175
Leu Glu Ala Val Arg Ser Pro Ser Phe Glu Lys
180 185

<210> 193
<211> 194
<212> PRT
<213> Artificial Sequence

<220>
<223> M139 sequence

<400> 193
Arg Pro Leu Ala Phe Ser Asp Ala Gly Pro His Val His Tyr Gly Trp
1 5 10 15
Gly Asp Pro Ile Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly
20 25 30
Leu Ser Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys
35 40 45
Ala Arg Gly Gln Ser Ala His Ser Leu Leu Glu Ile Lys Ala Val Ala
50 55 60
Leu Arg Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys
65 70 75 80
Met Gly Ala Asp Gly Lys Met Gln Gly Leu Leu Gln Tyr Ser Glu Glu
85 90 95
Asp Cys Ala Phe Glu Glu Glu Ile Leu Pro Asp Gly Tyr Asn Val Tyr
100 105 110
Arg Ser Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln
115 120 125
Arg Gln Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu
130 135 140
Pro Met Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His
145 150 155 160
Leu Glu Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp
165 170 175
Pro Phe Gly Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe
180 185 190
Glu Lys

<210> 194
<211> 194
<212> PRT
<213> Artificial Sequence

<220>
<223> M140 sequence

<400> 194
Arg Pro Leu Ala Phe Ser Asp Ala Gly Pro His Val His Tyr Gly Trp
1 5 10 15
Gly Asp Pro Ile Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly
20 25 30
Leu Ser Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys
35 40 45
Ala Arg Gly Gln Ser Ala His Ser Leu Leu Glu Ile Lys Ala Val Ala
50 55 60
Leu Arg Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys
65 70 75 80
Met Gly Ala Asp Gly Lys Met Gln Gly Leu Leu Gln Tyr Ser Glu Glu
85 90 95
Asp Cys Ala Phe Glu Glu Glu Ile Arg Glu Asp Gly Tyr Asn Val Tyr
100 105 110

Arg Ser Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln
        115   120   125
Arg Gln Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu
    130   135   140
Pro Met Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His
145   150   155   160
Leu Glu Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp
                165   170   175
Pro Phe Gly Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe
            180   185   190
Glu Lys

<210> 195
<211> 194
<212> PRT
<213> Artificial Sequence

<220>
<223> M141 sequence

<400> 195
Arg Pro Leu Ala Phe Ser Asp Ala Gly Pro His Val His Tyr Gly Trp
 1   5   10   15
Gly Asp Pro Ile Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly
            20   25   30
Leu Ser Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys
        35   40   45
Ala Arg Gly Gln Ser Ala His Ser Leu Leu Glu Ile Lys Ala Val Ala
    50   55   60
Leu Arg Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys
65   70   75   80
Met Gly Ala Asp Gly Lys Met Gln Gly Leu Leu Gln Tyr Ser Glu Glu
                85   90   95
Asp Cys Ala Phe Glu Glu Glu Ile Leu Cys Asp Gly Tyr Asn Val Tyr
            100   105   110
Arg Ser Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln
        115   120   125
Arg Gln Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu
    130   135   140
Pro Met Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His
145   150   155   160
Leu Glu Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp
                165   170   175
Pro Phe Gly Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe
            180   185   190
Glu Lys

<210> 196
<211> 194
<212> PRT
<213> Artificial Sequence

<220>
<223> M160 sequence

<400> 196
Arg Pro Leu Ala Phe Ser Asp Ala Gly Pro His Val His Tyr Gly Trp
 1   5   10   15
Gly Asp Pro Ile Arg Gln Arg His Leu Tyr Thr Ser Gly Pro His Gly
            20   25   30
Leu Ser Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys
        35   40   45
Ala Arg Gly Gln Ser Ala His Ser Leu Leu Glu Ile Lys Ala Val Ala
    50   55   60

```
Leu Arg Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys
65                  70                  75                  80
Met Gly Ala Asp Gly Lys Met Gln Gly Leu Leu Gln Tyr Ser Glu Glu
                85                  90                  95
Asp Cys Ala Phe Glu Glu Glu Ile Leu Glu Asp Gly Tyr Asn Val Tyr
            100                 105                 110
Arg Ser Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln
        115                 120                 125
Arg Gln Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu
    130                 135                 140
Pro Met Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His
145                 150                 155                 160
Leu Glu Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp
                165                 170                 175
Pro Phe Gly Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe
            180                 185                 190
Glu Lys
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