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<150> PCT/CN2019/074577
<151> 2019-02-02

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<170> PatentIn version 3.5

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Glu Glu Phe Tyr Ser Gln Phe Tyr Asn Gln Arg Val Lys His Leu Cys
        35                  40                  45


Tyr Tyr His Arg Met Lys Pro Tyr Leu Cys Tyr Gln Leu Glu Gln Phe
    50                  55                  60


Asn Gly Gln Ala Pro Leu Lys Gly Cys Leu Leu Ser Glu Lys Gly Lys
65                  70                  75                  80


Gln His Ala Glu Ile Leu Phe Leu Asp Lys Ile Arg Ser Met Glu Leu
                85                  90                  95


Ser Gln Val Thr Ile Thr Cys Tyr Leu Thr Trp Ser Pro Cys Pro Asn
            100                 105                 110


Cys Ala Trp Gln Leu Ala Ala Phe Lys Arg Asp Arg Pro Asp Leu Ile
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        115                 120                 125

Leu His Ile Tyr Thr Ser Arg Leu Tyr Phe His Trp Lys Arg Pro Phe
    130                 135                 140

Gln Lys Gly Leu Cys Ser Leu Trp Gln Ser Gly Ile Leu Val Asp Val
145                 150                 155                 160

Met Asp Leu Pro Gln Phe Thr Asp Cys Trp Thr Asn Phe Val Asn Pro
                165                 170                 175

Lys Arg Pro Phe Trp Pro Trp Lys Gly Leu Glu Ile Ile Ser Arg Arg
            180                 185                 190

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

Leu Trp Asp Thr Gly Val Phe Arg Gly Gln Val Tyr Phe Lys Pro Gln
    50                  55                  60

Tyr His Ala Glu Met Cys Phe Leu Ser Trp Phe Cys Gly Asn Gln Leu
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65 70 75 80

Pro Ala Tyr Lys Cys Phe Gln Ile Thr Trp Phe Val Ser Trp Thr Pro
85 90 95

Cys Pro Asp Cys Val Ala Lys Leu Ala Glu Phe Leu Ser Glu His Pro
100 105 110

Asn Val Thr Leu Thr Ile Ser Ala Ala Arg Leu Tyr Tyr Tyr Trp Glu
115 120 125

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

Phe Arg Arg Asn Asn Gly Thr Leu Leu Val Gln Ser Leu His Gly Val
50 55 60

Phe Lys Val Lys Asn Thr Thr Thr Leu Gln Gln His Leu Ile Asp Gly

65 70 75 80

Arg Asp Met Ile Ile Ile Arg Met Pro Lys Asp Phe Pro Pro Phe Pro
85 90 95

Gln Lys Leu Lys Phe Arg Glu Pro Gln Arg Glu Glu Arg Ile Cys Leu
100 105 110

Val Thr Thr Asn Phe Gln Thr
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20 25 30

Gln Cys Gly Ser Pro Leu Val Ser Thr Arg Asp Gly Phe Ile Val Gly
35 40 45

Ile His Ser Ala Ser Asn Phe Thr Asn Thr Asn Asn Tyr Phe Thr Ser
50 55 60

Val Pro Lys Asn Phe Met Glu Leu Leu Thr Asn Gln Glu Ala Gln Gln
65 70 75 80

Trp Val Ser Gly Trp Arg Leu Asn Ala Asp Ser Val Leu Trp Gly Gly
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His Lys Val Phe Met Val Lys Pro Glu Glu Pro Phe Gln Pro Val Lys
100 105 110

Glu Ala Thr Gln

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35 40 45

His Leu Phe Glu Arg Asn Asn Gly Glu Leu Val Ile Lys Ser Arg His
50 55 60

Gly Glu Phe Val Ile Lys Asn Thr Thr Gln Leu His Leu Leu Pro Ile
65 70 75 80

Pro Asp Arg Asp Leu Leu Leu Ile Arg Leu Pro Lys Asp Val Pro Pro
85 90 95

Phe Pro Gln Lys Leu Gly Phe Arg Gln Pro Glu Lys Gly Glu Arg Ile
100 105 110

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Cys Met Val Gly Ser Asn Phe Gln Thr Lys Ser Ile Thr Ser Ile Val
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Ser Glu Thr Ser Thr Ile Met Pro Val Glu Asn Ser Gln Phe Trp Lys
    130                 135                 140


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


Thr Lys Asp Gly Lys Ile Leu Gly Leu His Ser Leu Ala Asn Phe Gln
                165                 170                 175


Asn Ser Ile Asn Tyr Phe Ala Ala Phe Pro Asp Asp Phe Ala Glu Lys
            180                 185                 190


Tyr Leu His Thr Ile Glu Ala His Glu Trp Val Lys His Trp Lys Tyr
        195                 200                 205


Asn Thr Ser Ala Ile Ser Trp Gly Ser Leu Asn Ile Gln Ala Ser Gln
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Pro Ser Gly Leu Phe Lys Val Ser Lys Leu Ile Ser Asp Leu Asp Ser
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Thr Ala Val Tyr Ala Gln
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            20                  25                  30


Ser Glu Met Phe Gly Leu Gly Phe Gly Gly Leu Ile Val Thr Asn Gln
        35                  40                  45


His Leu Phe Lys Arg Asn Asp Gly Glu Leu Thr Ile Arg Ser His His
    50                  55                  60


Gly Glu Phe Val Val Lys Asp Thr Lys Thr Leu Lys Leu Leu Pro Cys
65                  70                  75                  80


Lys Gly Arg Asp Ile Val Ile Ile Arg Leu Pro Lys Asp Phe Pro Pro
                85                  90                  95


Phe Pro Arg Arg Leu Gln Phe Arg Thr Pro Thr Thr Glu Asp Arg Val
            100                 105                 110


Cys Leu Ile Gly Ser Asn Phe Gln Thr Lys Ser Ile Ser Ser Thr Met
        115                 120                 125


Ser Glu Thr Ser Ala Thr Tyr Pro Val Asp Asn Ser His Phe Trp Lys
    130                 135                 140


His Trp Ile Ser Thr Lys Asp Gly His Cys Gly Leu Pro Ile Val Ser
145                 150                 155                 160


Thr Arg Asp Gly Ser Ile Leu Gly Leu His Ser Leu Ala Asn Ser Thr
                165                 170                 175


Asn Thr Gln Asn Phe Tyr Ala Ala Phe Pro Asp Asn Phe Glu Thr Thr
            180                 185                 190
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Tyr Leu Ser Asn Gln Asp Asn Asp Asn Trp Ile Lys Gln Trp Arg Tyr
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Asn Pro Asp Glu Val Cys Trp Gly Ser Leu Gln Leu Lys Arg Asp Ile
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Pro Gln Ser Pro Phe Thr Ile Cys Lys Leu Leu Thr Asp Leu Asp Gly
225                 230                 235                 240


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


His Leu Phe Arg Ser Tyr Asn Gly Ser Met Glu Val Gln Ser Met His
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    50                  55                  60

Gly Thr Phe Arg Val Lys Asn Leu His Ser Leu Ser Val Leu Pro Ile
65                  70                  75                  80

Lys Gly Arg Asp Ile Ile Leu Ile Lys Met Pro Lys Asp Phe Pro Val
                85                  90                  95

Phe Pro Gln Lys Leu His Phe Arg Ala Pro Thr Gln Asn Glu Arg Ile
            100                 105                 110

Cys Leu Val Gly Thr Asn Phe Gln Glu Lys Tyr Ala Ser Ser Ile Ile
        115                 120                 125

Thr Glu Thr Ser Thr Thr Tyr Asn Ile Pro Gly Ser Thr Phe Trp Lys
    130                 135                 140

His Trp Ile Glu Thr Asp Asn Gly His Cys Gly Leu Pro Val Val Ser
145                 150                 155                 160

Thr Ala Asp Gly Cys Ile Val Gly Ile His Ser Leu Ala Asn Asn Ala
                165                 170                 175

His Thr Thr Asn Tyr Tyr Ser Ala Phe Asp Glu Asp Phe Glu Ser Lys
            180                 185                 190

Tyr Leu Arg Thr Asn Glu His Asn Glu Trp Val Lys Ser Trp Val Tyr
        195                 200                 205

Asn Pro Asp Thr Val Leu Trp Gly Pro Leu Lys Leu Lys Asp Ser Thr
    210                 215                 220

Pro Lys Gly Leu Phe Lys Thr Thr Lys Leu Val Gln Asp Leu Ile Asp
225                 230                 235                 240

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

Arg Glu Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Ala Leu Trp
50 55 60

Asp Val Pro Ala Pro Lys Glu Val Lys Lys Gly Glu Thr Thr Asp Gly
65 70 75 80

Val Tyr Arg Val Met Thr Arg Arg Leu Leu Gly Ser Thr Gln Val Gly
85 90 95

Val Gly Val Met Gln Glu Gly Val Phe His Thr Met Trp His Val Thr
100 105 110

Lys Gly Ala Ala Leu Arg Ser Gly Glu Gly Arg Leu Asp Pro Tyr Trp
115 120 125

Gly Asp Val Lys Gln Asp Leu Val Ser Tyr Cys Gly Pro Trp Lys Leu

130 135 140

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

Pro Gly Glu Arg Ala Arg Asn Ile Gln Thr Leu Pro Gly Ile Phe Lys
165 170 175

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

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

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

Pro Trp Lys Gly Gly Gly Gly Ser Gly Gly Gly Gly Gly Val Leu Trp
    50                  55                  60

Asp Thr Pro Ser Pro Lys Glu Tyr Lys Lys Gly Asp Thr Thr Thr Gly
65                  70                  75                  80

Val Tyr Arg Ile Met Thr Arg Gly Leu Leu Gly Ser Tyr Gln Ala Gly
                85                  90                  95

Ala Gly Val Met Val Glu Gly Val Phe His Thr Leu Trp His Thr Thr
            100                 105                 110

Lys Gly Ala Ala Leu Met Ser Gly Glu Gly Arg Leu Asp Pro Tyr Trp
        115                 120                 125

Gly Ser Val Lys Glu Asp Arg Leu Cys Tyr Gly Gly Pro Trp Lys Leu
    130                 135                 140

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

Pro Gly Lys Asn Val Lys Asn Val Gln Thr Lys Pro Gly Val Phe Lys
                165                 170                 175

Thr Pro Glu Gly Glu Ile Gly Ala Val Thr Leu Asp Phe Pro Thr Gly
            180                 185                 190

Thr Ser Gly Ser Pro Ile Val Asp Lys Asn Gly Asp Val Ile Gly Leu
        195                 200                 205

Tyr Gly Asn Gly Val Ile Met Pro Asn Gly Ser Tyr Ile Ser Ala Ile
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Val Gln Gly Glu Arg Met Asp Glu Pro Ile Pro Ala Gly Phe Glu Pro
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Glu Met Leu

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Gly Asp Val Thr Val Ala Pro Ser Asn Phe Ala Asn Gly Ile Ala Glu
            20   25   30

Trp Ile Ser Ser Asn Ser Arg Ser Gln Ala Tyr Lys Val Thr Cys Ser
        35   40   45

Val Arg Gln Ser Ser Ala Gln Asn Arg Lys Tyr Thr Ile Lys Val Glu
    50   55   60

Val Pro Lys Gly Ala Trp Arg Ser Tyr Leu Asn Met Glu Leu Thr Ile
65   70   75   80

Pro Ile Phe Ala Thr Asn Ser Asp Cys Glu Leu Ile Val Lys Ala Met
                85   90   95

Gln Gly Leu Leu Lys Asp Gly Asn Pro Ile Pro Ser Ala Ile Ala Ala
            100   105   110

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

Val Gly Pro Leu Val Gly Arg Leu Arg Leu Thr Ala Ser Leu Arg Gln
35 40 45

Asn Gly Ala Lys Thr Ala Tyr Arg Val Asn Leu Lys Leu Asp Gln Ala
50 55 60

Asp Val Val Asp Ser Gly Leu Pro Lys Val Arg Tyr Thr Gln Val Trp
65 70 75 80

Ser His Asp Val Thr Ile Val Ala Asn Ser Thr Glu Ala Ser Arg Lys
85 90 95

Ser Leu Tyr Asp Leu Thr Lys Ser Leu Val Ala Thr Ser Gln Val Glu
100 105 110

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

Ser Thr Asp Glu Asn Val Met Leu Leu Thr Ser Asp Ala Pro Glu Tyr
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Lys Pro Trp Ala Leu Val Ile Gln Asp Ser Asn Gly Glu Asn Lys Ile
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Lys Met Leu

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ganucggugc 70

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cgcaccgauu cggugc 76

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ggcaccgauu cggugc 76

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agcaccgauu cggugc 76

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<213> Artificial Sequence

<220>
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cgcaccgagu cggugc 76

<210> 41
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<213> Artificial Sequence

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<223> Synthetic

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guuuuagagc uagaaauagc aaguuaaaau aaggcuaguc cguuauccac uugaaaaagu 60

ggcaccgagu cggugc 76

<210> 42
<211> 76
<212> RNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 42
guuuuagagc uagaaauagc aaguuaaaau aaggcuaguc cguuaucaac uugaaaaagu 60

ugcaccgagu cggugc 76

<210> 43
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<212> RNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 43
guuuuagagc uagaaauagc aaguuaaaau aaggcuaguc cguuaucuac uugaaaaagu 60

agcaccgagu cggugc 76

<210> 44
<211> 2080
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 44

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

Gly Trp Ala Val Ile Thr Asp Glu Tyr Lys Val Pro Ser Lys Lys Phe
            20 25 30

Lys Val Leu Gly Asn Thr Asp Arg His Ser Ile Lys Lys Asn Leu Ile
        35 40 45

Gly Ala Leu Leu Phe Asp Ser Gly Glu Thr Ala Glu Ala Thr Arg Leu
    50 55 60

Lys Arg Thr Ala Arg Arg Arg Tyr Thr Arg Arg Lys Asn Arg Ile Cys
65 70 75 80

Tyr Leu Gln Glu Ile Phe Ser Asn Glu Met Ala Lys Val Asp Asp Ser
                85 90 95

Phe Phe His Arg Leu Glu Glu Ser Phe Leu Val Glu Glu Asp Lys Lys
            100 105 110

His Glu Arg His Pro Ile Phe Gly Asn Ile Val Asp Glu Val Ala Tyr
        115 120 125

His Glu Lys Tyr Pro Thr Ile Tyr His Leu Arg Lys Lys Leu Val Asp
    130 135 140

```
Ser Thr Asp Lys Ala Asp Leu Arg Leu Ile Tyr Leu Ala Leu Ala His
145                 150                 155                 160

Met Ile Lys Phe Arg Gly His Phe Leu Ile Glu Gly Asp Leu Asn Pro
                165                 170                 175

Asp Asn Ser Asp Val Asp Lys Leu Phe Ile Gln Leu Val Gln Thr Tyr
            180                 185                 190

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

Lys Ala Ile Leu Ser Ala Arg Leu Ser Lys Ser Arg Arg Leu Glu Asn
    210                 215                 220

Leu Ile Ala Gln Leu Pro Gly Glu Lys Lys Asn Gly Leu Phe Gly Asn
225                 230                 235                 240

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

Asp Leu Ala Glu Asp Ala Lys Leu Gln Leu Ser Lys Asp Thr Tyr Asp
            260                 265                 270

Asp Asp Leu Asp Asn Leu Leu Ala Gln Ile Gly Asp Gln Tyr Ala Asp
        275                 280                 285

Leu Phe Leu Ala Ala Lys Asn Leu Ser Asp Ala Ile Leu Leu Ser Asp
    290                 295                 300

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

Met Ile Lys Arg Tyr Asp Glu His His Gln Asp Leu Thr Leu Leu Lys
                325                 330                 335

Ala Leu Val Arg Gln Gln Leu Pro Glu Lys Tyr Lys Glu Ile Phe Phe
            340                 345                 350
```

```
Asp Gln Ser Lys Asn Gly Tyr Ala Gly Tyr Ile Asp Gly Gly Ala Ser
        355                 360                 365

Gln Glu Glu Phe Tyr Lys Phe Ile Lys Pro Ile Leu Glu Lys Met Asp
    370                 375                 380

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

Lys Gln Arg Thr Phe Asp Asn Gly Ser Ile Pro His Gln Ile His Leu
                405                 410                 415

Gly Glu Leu His Ala Ile Leu Arg Arg Gln Glu Asp Phe Tyr Pro Phe
            420                 425                 430

Leu Lys Asp Asn Arg Glu Lys Ile Glu Lys Ile Leu Thr Phe Arg Ile
        435                 440                 445

Pro Tyr Tyr Val Gly Pro Leu Ala Arg Gly Asn Ser Arg Phe Ala Trp
    450                 455                 460

Met Thr Arg Lys Ser Glu Glu Thr Ile Thr Pro Trp Asn Phe Glu Glu
465                 470                 475                 480

Val Val Asp Lys Gly Ala Ser Ala Gln Ser Phe Ile Glu Arg Met Thr
                485                 490                 495

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

Leu Leu Tyr Glu Tyr Phe Thr Val Tyr Asn Glu Leu Thr Lys Val Lys
        515                 520                 525

Tyr Val Thr Glu Gly Met Arg Lys Pro Ala Phe Leu Ser Gly Glu Gln
    530                 535                 540

Lys Lys Ala Ile Val Asp Leu Leu Phe Lys Thr Asn Arg Lys Val Thr
545                 550                 555                 560

Val Lys Gln Leu Lys Glu Asp Tyr Phe Lys Lys Ile Glu Cys Phe Asp
                565                 570                 575
```

```
Ser Val Glu Ile Ser Gly Val Glu Asp Arg Phe Asn Ala Ser Leu Gly
            580                 585                 590

Thr Tyr His Asp Leu Leu Lys Ile Ile Lys Asp Lys Asp Phe Leu Asp
        595                 600                 605

Asn Glu Glu Asn Glu Asp Ile Leu Glu Asp Ile Val Leu Thr Leu Thr
    610                 615                 620

Leu Phe Glu Asp Arg Glu Met Ile Glu Glu Arg Leu Lys Thr Tyr Ala
625                 630                 635                 640

His Leu Phe Asp Asp Lys Val Met Lys Gln Leu Lys Arg Arg Arg Tyr
                645                 650                 655

Thr Gly Trp Gly Arg Leu Ser Arg Lys Leu Ile Asn Gly Ile Arg Asp
            660                 665                 670

Lys Gln Ser Gly Lys Thr Ile Leu Asp Phe Leu Lys Ser Asp Gly Phe
        675                 680                 685

Ala Asn Arg Asn Phe Met Gln Leu Ile His Asp Asp Ser Leu Thr Phe
    690                 695                 700

Lys Glu Asp Ile Gln Lys Ala Gln Val Ser Gly Gln Gly Asp Ser Leu
705                 710                 715                 720

His Glu His Ile Ala Asn Leu Ala Gly Ser Pro Ala Ile Lys Lys Gly
                725                 730                 735

Ile Leu Gln Thr Val Lys Val Val Asp Glu Leu Val Lys Val Met Gly
            740                 745                 750

Arg His Lys Pro Glu Asn Ile Val Ile Glu Met Ala Arg Glu Asn Gln
        755                 760                 765

Thr Thr Gln Lys Gly Gln Lys Asn Ser Arg Glu Arg Met Lys Arg Ile
    770                 775                 780
```

```
Glu Glu Gly Ile Lys Glu Leu Gly Ser Gln Ile Leu Lys Glu His Pro
785                 790                 795                 800


Val Glu Asn Thr Gln Leu Gln Asn Glu Lys Leu Tyr Leu Tyr Tyr Leu
                805                 810                 815


Gln Asn Gly Arg Asp Met Tyr Val Asp Gln Glu Leu Asp Ile Asn Arg
            820                 825                 830


Leu Ser Asp Tyr Asp Val Asp Ala Ile Val Pro Gln Ser Phe Leu Lys
        835                 840                 845


Asp Asp Ser Ile Asp Asn Lys Val Leu Thr Arg Ser Asp Lys Asn Arg
    850                 855                 860


Gly Lys Ser Asp Asn Val Pro Ser Glu Glu Val Val Lys Lys Met Lys
865                 870                 875                 880


Asn Tyr Trp Arg Gln Leu Leu Asn Ala Lys Leu Ile Thr Gln Arg Lys
                885                 890                 895


Phe Asp Asn Leu Thr Lys Ala Glu Arg Gly Gly Leu Ser Glu Leu Asp
            900                 905                 910


Lys Ala Gly Phe Ile Lys Arg Gln Leu Val Glu Thr Arg Gln Ile Thr
        915                 920                 925


Lys His Val Ala Gln Ile Leu Asp Ser Arg Met Asn Thr Lys Tyr Asp
    930                 935                 940


Glu Asn Asp Lys Leu Ile Arg Glu Val Lys Val Ile Thr Leu Lys Ser
945                 950                 955                 960


Lys Leu Val Ser Asp Phe Arg Lys Asp Phe Gln Phe Tyr Lys Val Arg
                965                 970                 975


Glu Ile Asn Asn Tyr His His Ala His Asp Ala Tyr Leu Asn Ala Val
            980                 985                 990


Val Gly Thr Ala Leu Ile Lys Lys  Tyr Pro Lys Leu Glu  Ser Glu Phe
        995                 1000                1005
```

```
Val Tyr  Gly Asp Tyr Lys Val  Tyr Asp Val Arg Lys  Met Ile Ala
    1010                1015                1020

Lys Ser  Glu Gln Glu Ile Gly  Lys Ala Thr Ala Lys  Tyr Phe Phe
    1025                1030                1035

Tyr Ser  Asn Ile Met Asn Phe  Phe Lys Thr Glu Ile  Thr Leu Ala
    1040                1045                1050

Asn Gly  Glu Ile Arg Lys Arg  Pro Leu Ile Glu Thr  Asn Gly Glu
    1055                1060                1065

Thr Gly  Glu Ile Val Trp Asp  Lys Gly Arg Asp Phe  Ala Thr Val
    1070                1075                1080

Arg Lys  Val Leu Ser Met Pro  Gln Val Asn Ile Val  Lys Lys Thr
    1085                1090                1095

Glu Val  Gln Thr Gly Gly Phe  Ser Lys Glu Ser Ile  Arg Pro Lys
    1100                1105                1110

Arg Asn  Ser Asp Lys Leu Ile  Ala Arg Lys Lys Asp  Trp Asp Pro
    1115                1120                1125

Lys Lys  Tyr Gly Gly Phe Val  Ser Pro Thr Val Ala  Tyr Ser Val
    1130                1135                1140

Leu Val  Val Ala Lys Val Glu  Lys Gly Lys Ser Lys  Lys Leu Lys
    1145                1150                1155

Ser Val  Lys Glu Leu Leu Gly  Ile Thr Ile Met Glu  Arg Ser Ser
    1160                1165                1170

Phe Glu  Lys Asn Pro Ile Asp  Phe Leu Glu Ala Lys  Gly Tyr Lys
    1175                1180                1185

Glu Val  Lys Lys Asp Leu Ile  Ile Lys Leu Pro Lys  Tyr Ser Leu
    1190                1195                1200
```

```
Phe Glu  Leu Glu Asn Gly Arg  Lys Arg Met Leu Ala  Ser Ala Arg
    1205                 1210                 1215

Phe Leu  Gln Lys Gly Asn Glu  Leu Ala Leu Pro Ser  Lys Tyr Val
    1220                 1225                 1230

Asn Phe  Leu Tyr Leu Ala Ser  His Tyr Glu Lys Leu  Lys Gly Ser
    1235                 1240                 1245

Pro Glu  Asp Asn Glu Gln Lys  Gln Leu Phe Val Glu  Gln His Lys
    1250                 1255                 1260

His Tyr  Leu Asp Glu Ile Ile  Glu Gln Ile Ser Glu  Phe Ser Lys
    1265                 1270                 1275

Arg Val  Ile Leu Ala Asp Ala  Asn Leu Asp Lys Val  Leu Ser Ala
    1280                 1285                 1290

Tyr Asn  Lys His Arg Asp Lys  Pro Ile Arg Glu Gln  Ala Glu Asn
    1295                 1300                 1305

Ile Ile  His Leu Phe Thr Leu  Thr Asn Leu Gly Ala  Pro Arg Ala
    1310                 1315                 1320

Phe Lys  Tyr Phe Asp Thr Thr  Ile Asp Arg Lys Val  Tyr Arg Ser
    1325                 1330                 1335

Thr Lys  Glu Val Leu Asp Ala  Thr Leu Ile His Gln  Ser Ile Thr
    1340                 1345                 1350

Gly Leu  Tyr Glu Thr Arg Ile  Asp Leu Ser Gln Leu  Gly Gly Asp
    1355                 1360                 1365

Gly Thr  Ser Gly Gly Ser Ser  Gly Gly Ser Ser Gly  Ser Glu Thr
    1370                 1375                 1380

Pro Gly  Thr Ser Glu Ser Ala  Thr Pro Glu Ser Ser  Gly Gly Ser
    1385                 1390                 1395

Ser Gly  Gly Ser Ser Thr Leu  Asn Ile Glu Asp Glu  Tyr Arg Leu
    1400                 1405                 1410
```

```
His Glu  Thr Ser Lys Glu Pro  Asp Val Ser Leu Gly  Ser Thr Trp
    1415                1420                1425

Leu Ser  Asp Phe Pro Gln Ala  Trp Ala Glu Thr Gly  Gly Met Gly
    1430                1435                1440

Leu Ala  Val Arg Gln Ala Pro  Leu Ile Ile Pro Leu  Lys Ala Thr
    1445                1450                1455

Ser Thr  Pro Val Ser Ile Lys  Gln Tyr Pro Met Ser  Gln Glu Ala
    1460                1465                1470

Arg Leu  Gly Ile Lys Pro His  Ile Gln Arg Leu Leu  Asp Gln Gly
    1475                1480                1485

Ile Leu  Val Pro Cys Gln Ser  Pro Trp Asn Thr Pro  Leu Leu Pro
    1490                1495                1500

Val Lys  Lys Pro Gly Thr Asn  Asp Tyr Arg Pro Val  Gln Asp Leu
    1505                1510                1515

Arg Glu  Val Asn Lys Arg Val  Glu Asp Ile His Pro  Thr Val Pro
    1520                1525                1530

Asn Pro  Tyr Asn Leu Leu Ser  Gly Leu Pro Pro Ser  His Gln Trp
    1535                1540                1545

Tyr Thr  Val Leu Asp Leu Lys  Asp Ala Phe Phe Cys  Leu Arg Leu
    1550                1555                1560

His Pro  Thr Ser Gln Pro Leu  Phe Ala Phe Glu Trp  Arg Asp Pro
    1565                1570                1575

Glu Met  Gly Ile Ser Gly Gln  Leu Thr Trp Thr Arg  Leu Pro Gln
    1580                1585                1590

Gly Phe  Lys Asn Ser Pro Thr  Leu Phe Asn Glu Ala  Leu His Arg
    1595                1600                1605
```

```
Asp Leu  Ala Asp Phe Arg Ile  Gln His Pro Asp Leu  Ile Leu Leu
    1610                 1615                 1620

Gln Tyr  Val Asp Asp Leu Leu  Leu Ala Ala Thr Ser  Glu Leu Asp
    1625                 1630                 1635

Cys Gln  Gln Gly Thr Arg Ala  Leu Leu Gln Thr Leu  Gly Asn Leu
    1640                 1645                 1650

Gly Tyr  Arg Ala Ser Ala Lys  Lys Ala Gln Ile Cys  Gln Lys Gln
    1655                 1660                 1665

Val Lys  Tyr Leu Gly Tyr Leu  Leu Lys Glu Gly Gln  Arg Trp Leu
    1670                 1675                 1680

Thr Glu  Ala Arg Lys Glu Thr  Val Met Gly Gln Pro  Thr Pro Lys
    1685                 1690                 1695

Thr Pro  Arg Gln Leu Arg Glu  Phe Leu Gly Lys Ala  Gly Phe Cys
    1700                 1705                 1710

Arg Leu  Phe Ile Pro Gly Phe  Ala Glu Met Ala Ala  Pro Leu Tyr
    1715                 1720                 1725

Pro Leu  Thr Lys Pro Gly Thr  Leu Phe Asn Trp Gly  Pro Asp Gln
    1730                 1735                 1740

Gln Lys  Ala Tyr Gln Glu Ile  Lys Gln Ala Leu Leu  Thr Ala Pro
    1745                 1750                 1755

Ala Leu  Gly Leu Pro Asp Leu  Thr Lys Pro Phe Glu  Leu Phe Val
    1760                 1765                 1770

Asp Glu  Lys Gln Gly Tyr Ala  Lys Gly Val Leu Thr  Gln Lys Leu
    1775                 1780                 1785

Gly Pro  Trp Arg Arg Pro Val  Ala Tyr Leu Ser Lys  Lys Leu Asp
    1790                 1795                 1800

Pro Val  Ala Ala Gly Trp Pro  Pro Cys Leu Arg Met  Val Ala Ala
    1805                 1810                 1815
```

```
Ile Ala  Val Leu Thr Lys Asp  Ala Gly Lys Leu Thr  Met Gly Gln
    1820                1825                1830

Pro Leu  Val Ile Leu Ala Pro  His Ala Val Glu Ala  Leu Val Lys
    1835                1840                1845

Gln Pro  Pro Asp Arg Trp Leu  Ser Asn Ala Arg Met  Thr His Tyr
    1850                1855                1860

Gln Ala  Leu Leu Leu Asp Thr  Asp Arg Val Gln Phe  Gly Pro Val
    1865                1870                1875

Val Ala  Leu Asn Pro Ala Thr  Leu Leu Pro Leu Pro  Glu Glu Gly
    1880                1885                1890

Leu Gln  His Asn Cys Leu Asp  Ile Leu Ala Glu Ala  His Gly Thr
    1895                1900                1905

Arg Pro  Asp Leu Thr Asp Gln  Pro Leu Pro Asp Ala  Asp His Thr
    1910                1915                1920

Trp Tyr  Thr Asp Gly Ser Ser  Leu Leu Gln Glu Gly  Gln Arg Lys
    1925                1930                1935

Ala Gly  Ala Ala Val Thr Thr  Glu Thr Glu Val Ile  Trp Ala Lys
    1940                1945                1950

Ala Leu  Pro Ala Gly Thr Ser  Ala Gln Arg Ala Glu  Leu Ile Ala
    1955                1960                1965

Leu Thr  Gln Ala Leu Lys Met  Ala Glu Gly Lys Lys  Leu Asn Val
    1970                1975                1980

Tyr Thr  Asp Ser Arg Tyr Ala  Phe Ala Thr Ala His  Ile His Gly
    1985                1990                1995

Glu Ile  Tyr Arg Arg Arg Gly  Trp Leu Thr Ser Glu  Gly Lys Glu
    2000                2005                2010
```

Ile Lys Asn Lys Asp Glu Ile Leu Ala Leu Leu Lys Ala Leu Phe
    2015   2020   2025

Leu Pro Lys Arg Leu Ser Ile Ile His Cys Pro Gly His Gln Lys
    2030   2035   2040

Gly His Ser Ala Glu Ala Arg Gly Asn Arg Met Ala Asp Gln Ala
    2045   2050   2055

Ala Arg Lys Ala Ala Ile Thr Glu Thr Pro Asp Thr Ser Thr Leu
    2060   2065   2070

Leu Ile Glu Asn Ser Ser Pro
    2075   2080

<210> 45
<211> 2080
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 45

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

Gly Trp Ala Val Ile Thr Asp Glu Tyr Lys Val Pro Ser Lys Lys Phe
            20   25   30

Lys Val Leu Gly Asn Thr Asp Arg His Ser Ile Lys Lys Asn Leu Ile
        35   40   45

Gly Ala Leu Leu Phe Asp Ser Gly Glu Thr Ala Glu Ala Thr Arg Leu
    50   55   60

Lys Arg Thr Ala Arg Arg Arg Tyr Thr Arg Arg Lys Asn Arg Ile Cys
65   70   75   80

Tyr Leu Gln Glu Ile Phe Ser Asn Glu Met Ala Lys Val Asp Asp Ser
                85   90   95

```
Phe Phe His Arg Leu Glu Glu Ser Phe Leu Val Glu Glu Asp Lys Lys
            100                 105                 110

His Glu Arg His Pro Ile Phe Gly Asn Ile Val Asp Glu Val Ala Tyr
        115                 120                 125

His Glu Lys Tyr Pro Thr Ile Tyr His Leu Arg Lys Lys Leu Val Asp
    130                 135                 140

Ser Thr Asp Lys Ala Asp Leu Arg Leu Ile Tyr Leu Ala Leu Ala His
145                 150                 155                 160

Met Ile Lys Phe Arg Gly His Phe Leu Ile Glu Gly Asp Leu Asn Pro
                165                 170                 175

Asp Asn Ser Asp Val Asp Lys Leu Phe Ile Gln Leu Val Gln Thr Tyr
            180                 185                 190

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

Lys Ala Ile Leu Ser Ala Arg Leu Ser Lys Ser Arg Arg Leu Glu Asn
    210                 215                 220

Leu Ile Ala Gln Leu Pro Gly Glu Lys Lys Asn Gly Leu Phe Gly Asn
225                 230                 235                 240

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

Asp Leu Ala Glu Asp Thr Lys Leu Gln Leu Ser Lys Asp Thr Tyr Asp
            260                 265                 270

Asp Asp Leu Asp Asn Leu Leu Ala Gln Ile Gly Asp Gln Tyr Ala Asp
        275                 280                 285

Leu Phe Leu Ala Ala Lys Asn Leu Ser Asp Ala Ile Leu Leu Ser Asp
    290                 295                 300

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

```
Met Ile Lys Leu Tyr Asp Glu His His Gln Asp Leu Thr Leu Leu Lys
                325                 330                 335

Ala Leu Val Arg Gln Gln Leu Pro Glu Lys Tyr Lys Glu Ile Phe Phe
            340                 345                 350

Asp Gln Ser Lys Asn Gly Tyr Ala Gly Tyr Ile Asp Gly Gly Ala Ser
        355                 360                 365

Gln Glu Glu Phe Tyr Lys Phe Ile Lys Pro Ile Leu Glu Lys Met Asp
    370                 375                 380

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

Lys Gln Arg Thr Phe Asp Asn Gly Ile Ile Pro His Gln Ile His Leu
                405                 410                 415

Gly Glu Leu His Ala Ile Leu Arg Arg Gln Glu Asp Phe Tyr Pro Phe
            420                 425                 430

Leu Lys Asp Asn Arg Glu Lys Ile Glu Lys Ile Leu Thr Phe Arg Ile
        435                 440                 445

Pro Tyr Tyr Val Gly Pro Leu Ala Arg Gly Asn Ser Arg Phe Ala Trp
    450                 455                 460

Met Thr Arg Lys Ser Glu Glu Thr Ile Thr Pro Trp Asn Phe Glu Lys
465                 470                 475                 480

Val Val Asp Lys Gly Ala Ser Ala Gln Ser Phe Ile Glu Arg Met Thr
                485                 490                 495

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

Leu Leu Tyr Glu Tyr Phe Thr Val Tyr Asn Glu Leu Thr Lys Val Lys
        515                 520                 525
```

```
Tyr Val Thr Glu Gly Met Arg Lys Pro Ala Phe Leu Ser Gly Asp Gln
    530                 535                 540

Lys Lys Ala Ile Val Asp Leu Leu Phe Lys Thr Asn Arg Lys Val Thr
545                 550                 555                 560

Val Lys Gln Leu Lys Glu Asp Tyr Phe Lys Lys Ile Glu Cys Phe Asp
                565                 570                 575

Ser Val Glu Ile Ser Gly Val Glu Asp Arg Phe Asn Ala Ser Leu Gly
            580                 585                 590

Thr Tyr His Asp Leu Leu Lys Ile Ile Lys Asp Lys Asp Phe Leu Asp
        595                 600                 605

Asn Glu Glu Asn Glu Asp Ile Leu Glu Asp Ile Val Leu Thr Leu Thr
    610                 615                 620

Leu Phe Glu Asp Arg Glu Met Ile Glu Glu Arg Leu Lys Thr Tyr Ala
625                 630                 635                 640

His Leu Phe Asp Asp Lys Val Met Lys Gln Leu Lys Arg Arg Arg Tyr
                645                 650                 655

Thr Gly Trp Gly Arg Leu Ser Arg Lys Leu Ile Asn Gly Ile Arg Asp
            660                 665                 670

Lys Gln Ser Gly Lys Thr Ile Leu Asp Phe Leu Lys Ser Asp Gly Phe
        675                 680                 685

Ala Asn Arg Asn Phe Ile Gln Leu Ile His Asp Asp Ser Leu Thr Phe
    690                 695                 700

Lys Glu Asp Ile Gln Lys Ala Gln Val Ser Gly Gln Gly Asp Ser Leu
705                 710                 715                 720

His Glu His Ile Ala Asn Leu Ala Gly Ser Pro Ala Ile Lys Lys Gly
                725                 730                 735

Ile Leu Gln Thr Val Lys Val Val Asp Glu Leu Val Lys Val Met Gly
            740                 745                 750
```

```
Arg His Lys Pro Glu Asn Ile Val Ile Glu Met Ala Arg Glu Asn Gln
        755                 760                 765

Thr Thr Gln Lys Gly Gln Lys Asn Ser Arg Glu Arg Met Lys Arg Ile
    770                 775                 780

Glu Glu Gly Ile Lys Glu Leu Gly Ser Gln Ile Leu Lys Glu His Pro
785                 790                 795                 800

Val Glu Asn Thr Gln Leu Gln Asn Glu Lys Leu Tyr Leu Tyr Tyr Leu
                805                 810                 815

Gln Asn Gly Arg Asp Met Tyr Val Asp Gln Glu Leu Asp Ile Asn Arg
            820                 825                 830

Leu Ser Asp Tyr Asp Val Asp Ala Ile Val Pro Gln Ser Phe Leu Lys
        835                 840                 845

Asp Asp Ser Ile Asp Asn Lys Val Leu Thr Arg Ser Asp Lys Asn Arg
    850                 855                 860

Gly Lys Ser Asp Asn Val Pro Ser Glu Glu Val Val Lys Lys Met Lys
865                 870                 875                 880

Asn Tyr Trp Arg Gln Leu Leu Asn Ala Lys Leu Ile Thr Gln Arg Lys
                885                 890                 895

Phe Asp Asn Leu Thr Lys Ala Glu Arg Gly Gly Leu Ser Glu Leu Asp
            900                 905                 910

Lys Ala Gly Phe Ile Lys Arg Gln Leu Val Glu Thr Arg Gln Ile Thr
        915                 920                 925

Lys His Val Ala Gln Ile Leu Asp Ser Arg Met Asn Thr Lys Tyr Asp
    930                 935                 940

Glu Asn Asp Lys Leu Ile Arg Glu Val Lys Val Ile Thr Leu Lys Ser
945                 950                 955                 960
```

```
Lys Leu Val Ser Asp Phe Arg Lys Asp Phe Gln Phe Tyr Lys Val Arg
               965                 970                 975

Glu Ile Asn Asn Tyr His His Ala His Asp Ala Tyr Leu Asn Ala Val
           980                 985                 990

Val Gly Thr Ala Leu Ile Lys Lys  Tyr Pro Lys Leu Glu  Ser Glu Phe
        995                1000                1005

Val Tyr  Gly Asp Tyr Lys Val  Tyr Asp Val Arg Lys  Met Ile Ala
    1010                1015                1020

Lys Ser  Glu Gln Glu Ile Gly  Lys Ala Thr Ala Lys  Tyr Phe Phe
    1025                1030                1035

Tyr Ser  Asn Ile Met Asn Phe  Phe Lys Thr Glu Ile  Thr Leu Ala
    1040                1045                1050

Asn Gly  Glu Ile Arg Lys Arg  Pro Leu Ile Glu Thr  Asn Gly Glu
    1055                1060                1065

Thr Gly  Glu Ile Val Trp Asp  Lys Gly Arg Asp Phe  Ala Thr Val
    1070                1075                1080

Arg Lys  Val Leu Ser Met Pro  Gln Val Asn Ile Val  Lys Lys Thr
    1085                1090                1095

Glu Val  Gln Thr Gly Gly Phe  Ser Lys Glu Ser Ile  Leu Pro Lys
    1100                1105                1110

Arg Asn  Ser Asp Lys Leu Ile  Ala Arg Lys Lys Asp  Trp Asp Pro
    1115                1120                1125

Lys Lys  Tyr Gly Gly Phe Asp  Ser Pro Thr Val Ala  Tyr Ser Val
    1130                1135                1140

Leu Val  Val Ala Lys Val Glu  Lys Gly Lys Ser Lys  Lys Leu Lys
    1145                1150                1155

Ser Val  Lys Glu Leu Leu Gly  Ile Thr Ile Met Glu  Arg Ser Ser
    1160                1165                1170
```

```
Phe Glu  Lys Asn Pro Ile Asp  Phe Leu Glu Ala Lys  Gly Tyr Lys
    1175                1180                1185

Glu Val  Lys Lys Asp Leu Ile  Ile Lys Leu Pro Lys  Tyr Ser Leu
    1190                1195                1200

Phe Glu  Leu Glu Asn Gly Arg  Lys Arg Met Leu Ala  Ser Ala Gly
    1205                1210                1215

Val Leu  Gln Lys Gly Asn Glu  Leu Ala Leu Pro Ser  Lys Tyr Val
    1220                1225                1230

Asn Phe  Leu Tyr Leu Ala Ser  His Tyr Glu Lys Leu  Lys Gly Ser
    1235                1240                1245

Pro Glu  Asp Asn Glu Gln Lys  Gln Leu Phe Val Glu  Gln His Lys
    1250                1255                1260

His Tyr  Leu Asp Glu Ile Ile  Glu Gln Ile Ser Glu  Phe Ser Lys
    1265                1270                1275

Arg Val  Ile Leu Ala Asp Ala  Asn Leu Asp Lys Val  Leu Ser Ala
    1280                1285                1290

Tyr Asn  Lys His Arg Asp Lys  Pro Ile Arg Glu Gln  Ala Glu Asn
    1295                1300                1305

Ile Ile  His Leu Phe Thr Leu  Thr Asn Leu Gly Ala  Pro Ala Ala
    1310                1315                1320

Phe Lys  Tyr Phe Asp Thr Thr  Ile Asp Arg Lys Arg  Tyr Thr Ser
    1325                1330                1335

Thr Lys  Glu Val Leu Asp Ala  Thr Leu Ile His Gln  Ser Ile Thr
    1340                1345                1350

Gly Leu  Tyr Glu Thr Arg Ile  Asp Leu Ser Gln Leu  Gly Gly Asp
    1355                1360                1365
```

```
Gly Thr  Ser Gly Gly Ser Ser  Gly Gly Ser Ser Gly  Ser Glu Thr
    1370                1375                1380

Pro Gly  Thr Ser Glu Ser Ala  Thr Pro Glu Ser Ser  Gly Gly Ser
    1385                1390                1395

Ser Gly  Gly Ser Ser Thr Leu  Asn Ile Glu Asp Glu  Tyr Arg Leu
    1400                1405                1410

His Glu  Thr Ser Lys Glu Pro  Asp Val Ser Leu Gly  Ser Thr Trp
    1415                1420                1425

Leu Ser  Asp Phe Pro Gln Ala  Trp Ala Glu Thr Gly  Gly Met Gly
    1430                1435                1440

Leu Ala  Val Arg Gln Ala Pro  Leu Ile Ile Pro Leu  Lys Ala Thr
    1445                1450                1455

Ser Thr  Pro Val Ser Ile Lys  Gln Tyr Pro Met Ser  Gln Glu Ala
    1460                1465                1470

Arg Leu  Gly Ile Lys Pro His  Ile Gln Arg Leu Leu  Asp Gln Gly
    1475                1480                1485

Ile Leu  Val Pro Cys Gln Ser  Pro Trp Asn Thr Pro  Leu Leu Pro
    1490                1495                1500

Val Lys  Lys Pro Gly Thr Asn  Asp Tyr Arg Pro Val  Gln Asp Leu
    1505                1510                1515

Arg Glu  Val Asn Lys Arg Val  Glu Asp Ile His Pro  Thr Val Pro
    1520                1525                1530

Asn Pro  Tyr Asn Leu Leu Ser  Gly Leu Pro Pro Ser  His Gln Trp
    1535                1540                1545

Tyr Thr  Val Leu Asp Leu Lys  Asp Ala Phe Phe Cys  Leu Arg Leu
    1550                1555                1560

His Pro  Thr Ser Gln Pro Leu  Phe Ala Phe Glu Trp  Arg Asp Pro
    1565                1570                1575
```

```
Glu Met  Gly Ile Ser Gly Gln  Leu Thr Trp Thr Arg  Leu Pro Gln
    1580                1585                1590

Gly Phe  Lys Asn Ser Pro Thr  Leu Phe Asn Glu Ala  Leu His Arg
    1595                1600                1605

Asp Leu  Ala Asp Phe Arg Ile  Gln His Pro Asp Leu  Ile Leu Leu
    1610                1615                1620

Gln Tyr  Val Asp Asp Leu Leu  Leu Ala Ala Thr Ser  Glu Leu Asp
    1625                1630                1635

Cys Gln  Gln Gly Thr Arg Ala  Leu Leu Gln Thr Leu  Gly Asn Leu
    1640                1645                1650

Gly Tyr  Arg Ala Ser Ala Lys  Lys Ala Gln Ile Cys  Gln Lys Gln
    1655                1660                1665

Val Lys  Tyr Leu Gly Tyr Leu  Leu Lys Glu Gly Gln  Arg Trp Leu
    1670                1675                1680

Thr Glu  Ala Arg Lys Glu Thr  Val Met Gly Gln Pro  Thr Pro Lys
    1685                1690                1695

Thr Pro  Arg Gln Leu Arg Glu  Phe Leu Gly Lys Ala  Gly Phe Cys
    1700                1705                1710

Arg Leu  Phe Ile Pro Gly Phe  Ala Glu Met Ala Ala  Pro Leu Tyr
    1715                1720                1725

Pro Leu  Thr Lys Pro Gly Thr  Leu Phe Asn Trp Gly  Pro Asp Gln
    1730                1735                1740

Gln Lys  Ala Tyr Gln Glu Ile  Lys Gln Ala Leu Leu  Thr Ala Pro
    1745                1750                1755

Ala Leu  Gly Leu Pro Asp Leu  Thr Lys Pro Phe Glu  Leu Phe Val
    1760                1765                1770
```

```
Asp Glu  Lys Gln Gly Tyr Ala  Lys Gly Val Leu Thr  Gln Lys Leu
    1775                1780                1785

Gly Pro  Trp Arg Arg Pro Val  Ala Tyr Leu Ser Lys  Lys Leu Asp
    1790                1795                1800

Pro Val  Ala Ala Gly Trp Pro  Pro Cys Leu Arg Met  Val Ala Ala
    1805                1810                1815

Ile Ala  Val Leu Thr Lys Asp  Ala Gly Lys Leu Thr  Met Gly Gln
    1820                1825                1830

Pro Leu  Val Ile Leu Ala Pro  His Ala Val Glu Ala  Leu Val Lys
    1835                1840                1845

Gln Pro  Pro Asp Arg Trp Leu  Ser Asn Ala Arg Met  Thr His Tyr
    1850                1855                1860

Gln Ala  Leu Leu Leu Asp Thr  Asp Arg Val Gln Phe  Gly Pro Val
    1865                1870                1875

Val Ala  Leu Asn Pro Ala Thr  Leu Leu Pro Leu Pro  Glu Glu Gly
    1880                1885                1890

Leu Gln  His Asn Cys Leu Asp  Ile Leu Ala Glu Ala  His Gly Thr
    1895                1900                1905

Arg Pro  Asp Leu Thr Asp Gln  Pro Leu Pro Asp Ala  Asp His Thr
    1910                1915                1920

Trp Tyr  Thr Asp Gly Ser Ser  Leu Leu Gln Glu Gly  Gln Arg Lys
    1925                1930                1935

Ala Gly  Ala Ala Val Thr Thr  Glu Thr Glu Val Ile  Trp Ala Lys
    1940                1945                1950

Ala Leu  Pro Ala Gly Thr Ser  Ala Gln Arg Ala Glu  Leu Ile Ala
    1955                1960                1965

Leu Thr  Gln Ala Leu Lys Met  Ala Glu Gly Lys Lys  Leu Asn Val
    1970                1975                1980
```

```
Tyr Thr  Asp Ser Arg Tyr Ala  Phe Ala Thr Ala His  Ile His Gly
    1985                1990                1995


Glu Ile  Tyr Arg Arg Arg Gly  Trp Leu Thr Ser Glu  Gly Lys Glu
    2000                2005                2010


Ile Lys  Asn Lys Asp Glu Ile  Leu Ala Leu Leu Lys  Ala Leu Phe
    2015                2020                2025


Leu Pro  Lys Arg Leu Ser Ile  Ile His Cys Pro Gly  His Gln Lys
    2030                2035                2040


Gly His  Ser Ala Glu Ala Arg  Gly Asn Arg Met Ala  Asp Gln Ala
    2045                2050                2055


Ala Arg  Lys Ala Ala Ile Thr  Glu Thr Pro Asp Thr  Ser Thr Leu
    2060                2065                2070


Leu Ile  Glu Asn Ser Ser Pro
    2075                2080


<210>  46
<211>  1368
<212>  PRT
<213>  Artificial Sequence

<220>
<223>  Synthetic

<400>  46

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


Gly Trp Ala Val Ile Thr Asp Glu Tyr Lys Val Pro Ser Lys Lys Phe
            20                  25                  30


Lys Val Leu Gly Asn Thr Asp Arg His Ser Ile Lys Lys Asn Leu Ile
        35                  40                  45


Gly Ala Leu Leu Phe Asp Ser Gly Glu Thr Ala Glu Ala Thr Arg Leu
    50                  55                  60
```

```
Lys Arg Thr Ala Arg Arg Arg Tyr Thr Arg Arg Lys Asn Arg Ile Cys
65                  70                  75                  80

Tyr Leu Gln Glu Ile Phe Ser Asn Glu Met Ala Lys Val Asp Asp Ser
                85                  90                  95

Phe Phe His Arg Leu Glu Glu Ser Phe Leu Val Glu Glu Asp Lys Lys
            100                 105                 110

His Glu Arg His Pro Ile Phe Gly Asn Ile Val Asp Glu Val Ala Tyr
        115                 120                 125

His Glu Lys Tyr Pro Thr Ile Tyr His Leu Arg Lys Lys Leu Val Asp
    130                 135                 140

Ser Thr Asp Lys Ala Asp Leu Arg Leu Ile Tyr Leu Ala Leu Ala His
145                 150                 155                 160

Met Ile Lys Phe Arg Gly His Phe Leu Ile Glu Gly Asp Leu Asn Pro
                165                 170                 175

Asp Asn Ser Asp Val Asp Lys Leu Phe Ile Gln Leu Val Gln Thr Tyr
            180                 185                 190

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

Lys Ala Ile Leu Ser Ala Arg Leu Ser Lys Ser Arg Arg Leu Glu Asn
    210                 215                 220

Leu Ile Ala Gln Leu Pro Gly Glu Lys Lys Asn Gly Leu Phe Gly Asn
225                 230                 235                 240

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

Asp Leu Ala Glu Asp Ala Lys Leu Gln Leu Ser Lys Asp Thr Tyr Asp
            260                 265                 270
```

```
Asp Asp Leu Asp Asn Leu Leu Ala Gln Ile Gly Asp Gln Tyr Ala Asp
        275                 280                 285

Leu Phe Leu Ala Ala Lys Asn Leu Ser Asp Ala Ile Leu Leu Ser Asp
    290                 295                 300

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

Met Ile Lys Arg Tyr Asp Glu His His Gln Asp Leu Thr Leu Leu Lys
                325                 330                 335

Ala Leu Val Arg Gln Gln Leu Pro Glu Lys Tyr Lys Glu Ile Phe Phe
            340                 345                 350

Asp Gln Ser Lys Asn Gly Tyr Ala Gly Tyr Ile Asp Gly Gly Ala Ser
        355                 360                 365

Gln Glu Glu Phe Tyr Lys Phe Ile Lys Pro Ile Leu Glu Lys Met Asp
    370                 375                 380

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

Lys Gln Arg Thr Phe Asp Asn Gly Ser Ile Pro His Gln Ile His Leu
                405                 410                 415

Gly Glu Leu His Ala Ile Leu Arg Arg Gln Glu Asp Phe Tyr Pro Phe
            420                 425                 430

Leu Lys Asp Asn Arg Glu Lys Ile Glu Lys Ile Leu Thr Phe Arg Ile
        435                 440                 445

Pro Tyr Tyr Val Gly Pro Leu Ala Arg Gly Asn Ser Arg Phe Ala Trp
    450                 455                 460

Met Thr Arg Lys Ser Glu Glu Thr Ile Thr Pro Trp Asn Phe Glu Glu
465                 470                 475                 480

Val Val Asp Lys Gly Ala Ser Ala Gln Ser Phe Ile Glu Arg Met Thr
                485                 490                 495
```

```
Asn Phe Asp Lys Asn Leu Pro Asn Glu Lys Val Leu Pro Lys His Ser
            500                 505                 510

Leu Leu Tyr Glu Tyr Phe Thr Val Tyr Asn Glu Leu Thr Lys Val Lys
        515                 520                 525

Tyr Val Thr Glu Gly Met Arg Lys Pro Ala Phe Leu Ser Gly Glu Gln
    530                 535                 540

Lys Lys Ala Ile Val Asp Leu Leu Phe Lys Thr Asn Arg Lys Val Thr
545                 550                 555                 560

Val Lys Gln Leu Lys Glu Asp Tyr Phe Lys Lys Ile Glu Cys Phe Asp
                565                 570                 575

Ser Val Glu Ile Ser Gly Val Glu Asp Arg Phe Asn Ala Ser Leu Gly
            580                 585                 590

Thr Tyr His Asp Leu Leu Lys Ile Ile Lys Asp Lys Asp Phe Leu Asp
        595                 600                 605

Asn Glu Glu Asn Glu Asp Ile Leu Glu Asp Ile Val Leu Thr Leu Thr
    610                 615                 620

Leu Phe Glu Asp Arg Glu Met Ile Glu Glu Arg Leu Lys Thr Tyr Ala
625                 630                 635                 640

His Leu Phe Asp Asp Lys Val Met Lys Gln Leu Lys Arg Arg Arg Tyr
                645                 650                 655

Thr Gly Trp Gly Arg Leu Ser Arg Lys Leu Ile Asn Gly Ile Arg Asp
            660                 665                 670

Lys Gln Ser Gly Lys Thr Ile Leu Asp Phe Leu Lys Ser Asp Gly Phe
        675                 680                 685

Ala Asn Arg Asn Phe Met Gln Leu Ile His Asp Asp Ser Leu Thr Phe
    690                 695                 700
```

```
Lys Glu Asp Ile Gln Lys Ala Gln Val Ser Gly Gln Gly Asp Ser Leu
705                 710                 715                 720


His Glu His Ile Ala Asn Leu Ala Gly Ser Pro Ala Ile Lys Lys Gly
                725                 730                 735


Ile Leu Gln Thr Val Lys Val Val Asp Glu Leu Val Lys Val Met Gly
            740                 745                 750


Arg His Lys Pro Glu Asn Ile Val Ile Glu Met Ala Arg Glu Asn Gln
        755                 760                 765


Thr Thr Gln Lys Gly Gln Lys Asn Ser Arg Glu Arg Met Lys Arg Ile
    770                 775                 780


Glu Glu Gly Ile Lys Glu Leu Gly Ser Gln Ile Leu Lys Glu His Pro
785                 790                 795                 800


Val Glu Asn Thr Gln Leu Gln Asn Glu Lys Leu Tyr Leu Tyr Tyr Leu
                805                 810                 815


Gln Asn Gly Arg Asp Met Tyr Val Asp Gln Glu Leu Asp Ile Asn Arg
            820                 825                 830


Leu Ser Asp Tyr Asp Val Asp His Ile Val Pro Gln Ser Phe Leu Lys
        835                 840                 845


Asp Asp Ser Ile Asp Asn Lys Val Leu Thr Arg Ser Asp Lys Asn Arg
    850                 855                 860


Gly Lys Ser Asp Asn Val Pro Ser Glu Glu Val Val Lys Lys Met Lys
865                 870                 875                 880


Asn Tyr Trp Arg Gln Leu Leu Asn Ala Lys Leu Ile Thr Gln Arg Lys
                885                 890                 895


Phe Asp Asn Leu Thr Lys Ala Glu Arg Gly Gly Leu Ser Glu Leu Asp
            900                 905                 910


Lys Ala Gly Phe Ile Lys Arg Gln Leu Val Glu Thr Arg Gln Ile Thr
        915                 920                 925
```

```
Lys His Val Ala Gln Ile Leu Asp Ser Arg Met Asn Thr Lys Tyr Asp
    930                 935                 940

Glu Asn Asp Lys Leu Ile Arg Glu Val Lys Val Ile Thr Leu Lys Ser
945                 950                 955                 960

Lys Leu Val Ser Asp Phe Arg Lys Asp Phe Gln Phe Tyr Lys Val Arg
                965                 970                 975

Glu Ile Asn Asn Tyr His His Ala His Asp Ala Tyr Leu Asn Ala Val
            980                 985                 990

Val Gly Thr Ala Leu Ile Lys Lys  Tyr Pro Lys Leu Glu  Ser Glu Phe
        995                 1000                1005

Val Tyr  Gly Asp Tyr Lys Val  Tyr Asp Val Arg Lys  Met Ile Ala
    1010                1015                1020

Lys Ser  Glu Gln Glu Ile Gly  Lys Ala Thr Ala Lys  Tyr Phe Phe
    1025                1030                1035

Tyr Ser  Asn Ile Met Asn Phe  Phe Lys Thr Glu Ile  Thr Leu Ala
    1040                1045                1050

Asn Gly  Glu Ile Arg Lys Arg  Pro Leu Ile Glu Thr  Asn Gly Glu
    1055                1060                1065

Thr Gly  Glu Ile Val Trp Asp  Lys Gly Arg Asp Phe  Ala Thr Val
    1070                1075                1080

Arg Lys  Val Leu Ser Met Pro  Gln Val Asn Ile Val  Lys Lys Thr
    1085                1090                1095

Glu Val  Gln Thr Gly Gly Phe  Ser Lys Glu Ser Ile  Arg Pro Lys
    1100                1105                1110

Arg Asn  Ser Asp Lys Leu Ile  Ala Arg Lys Lys Asp  Trp Asp Pro
    1115                1120                1125
```

```
Lys Lys  Tyr Gly Gly Phe Val  Ser Pro Thr Val Ala  Tyr Ser Val
    1130                1135                1140

Leu Val  Val Ala Lys Val Glu  Lys Gly Lys Ser Lys  Lys Leu Lys
    1145                1150                1155

Ser Val  Lys Glu Leu Leu Gly  Ile Thr Ile Met Glu  Arg Ser Ser
    1160                1165                1170

Phe Glu  Lys Asn Pro Ile Asp  Phe Leu Glu Ala Lys  Gly Tyr Lys
    1175                1180                1185

Glu Val  Lys Lys Asp Leu Ile  Ile Lys Leu Pro Lys  Tyr Ser Leu
    1190                1195                1200

Phe Glu  Leu Glu Asn Gly Arg  Lys Arg Met Leu Ala  Ser Ala Arg
    1205                1210                1215

Phe Leu  Gln Lys Gly Asn Glu  Leu Ala Leu Pro Ser  Lys Tyr Val
    1220                1225                1230

Asn Phe  Leu Tyr Leu Ala Ser  His Tyr Glu Lys Leu  Lys Gly Ser
    1235                1240                1245

Pro Glu  Asp Asn Glu Gln Lys  Gln Leu Phe Val Glu  Gln His Lys
    1250                1255                1260

His Tyr  Leu Asp Glu Ile Ile  Glu Gln Ile Ser Glu  Phe Ser Lys
    1265                1270                1275

Arg Val  Ile Leu Ala Asp Ala  Asn Leu Asp Lys Val  Leu Ser Ala
    1280                1285                1290

Tyr Asn  Lys His Arg Asp Lys  Pro Ile Arg Glu Gln  Ala Glu Asn
    1295                1300                1305

Ile Ile  His Leu Phe Thr Leu  Thr Asn Leu Gly Ala  Pro Arg Ala
    1310                1315                1320

Phe Lys  Tyr Phe Asp Thr Thr  Ile Asp Arg Lys Val  Tyr Arg Ser
    1325                1330                1335
```

Thr Lys Glu Val Leu Asp Ala Thr Leu Ile His Gln Ser Ile Thr
    1340   1345   1350

Gly Leu Tyr Glu Thr Arg Ile Asp Leu Ser Gln Leu Gly Gly Asp
    1355   1360   1365

<210> 47
<211> 1368
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 47

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

Gly Trp Ala Val Ile Thr Asp Glu Tyr Lys Val Pro Ser Lys Lys Phe
            20   25   30

Lys Val Leu Gly Asn Thr Asp Arg His Ser Ile Lys Lys Asn Leu Ile
        35   40   45

Gly Ala Leu Leu Phe Asp Ser Gly Glu Thr Ala Glu Ala Thr Arg Leu
    50   55   60

Lys Arg Thr Ala Arg Arg Arg Tyr Thr Arg Arg Lys Asn Arg Ile Cys
65   70   75   80

Tyr Leu Gln Glu Ile Phe Ser Asn Glu Met Ala Lys Val Asp Asp Ser
                85   90   95

Phe Phe His Arg Leu Glu Glu Ser Phe Leu Val Glu Glu Asp Lys Lys
            100   105   110

His Glu Arg His Pro Ile Phe Gly Asn Ile Val Asp Glu Val Ala Tyr
        115   120   125

His Glu Lys Tyr Pro Thr Ile Tyr His Leu Arg Lys Lys Leu Val Asp
    130   135   140

```
Ser Thr Asp Lys Ala Asp Leu Arg Leu Ile Tyr Leu Ala Leu Ala His
145                 150                 155                 160

Met Ile Lys Phe Arg Gly His Phe Leu Ile Glu Gly Asp Leu Asn Pro
                165                 170                 175

Asp Asn Ser Asp Val Asp Lys Leu Phe Ile Gln Leu Val Gln Thr Tyr
            180                 185                 190

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

Lys Ala Ile Leu Ser Ala Arg Leu Ser Lys Ser Arg Arg Leu Glu Asn
    210                 215                 220

Leu Ile Ala Gln Leu Pro Gly Glu Lys Lys Asn Gly Leu Phe Gly Asn
225                 230                 235                 240

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

Asp Leu Ala Glu Asp Thr Lys Leu Gln Leu Ser Lys Asp Thr Tyr Asp
            260                 265                 270

Asp Asp Leu Asp Asn Leu Leu Ala Gln Ile Gly Asp Gln Tyr Ala Asp
        275                 280                 285

Leu Phe Leu Ala Ala Lys Asn Leu Ser Asp Ala Ile Leu Leu Ser Asp
    290                 295                 300

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

Met Ile Lys Leu Tyr Asp Glu His His Gln Asp Leu Thr Leu Leu Lys
                325                 330                 335

Ala Leu Val Arg Gln Gln Leu Pro Glu Lys Tyr Lys Glu Ile Phe Phe
            340                 345                 350
```

```
Asp Gln Ser Lys Asn Gly Tyr Ala Gly Tyr Ile Asp Gly Gly Ala Ser
        355                 360                 365

Gln Glu Glu Phe Tyr Lys Phe Ile Lys Pro Ile Leu Glu Lys Met Asp
    370                 375                 380

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

Lys Gln Arg Thr Phe Asp Asn Gly Ile Ile Pro His Gln Ile His Leu
                405                 410                 415

Gly Glu Leu His Ala Ile Leu Arg Arg Gln Glu Asp Phe Tyr Pro Phe
            420                 425                 430

Leu Lys Asp Asn Arg Glu Lys Ile Glu Lys Ile Leu Thr Phe Arg Ile
        435                 440                 445

Pro Tyr Tyr Val Gly Pro Leu Ala Arg Gly Asn Ser Arg Phe Ala Trp
    450                 455                 460

Met Thr Arg Lys Ser Glu Glu Thr Ile Thr Pro Trp Asn Phe Glu Lys
465                 470                 475                 480

Val Val Asp Lys Gly Ala Ser Ala Gln Ser Phe Ile Glu Arg Met Thr
                485                 490                 495

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

Leu Leu Tyr Glu Tyr Phe Thr Val Tyr Asn Glu Leu Thr Lys Val Lys
        515                 520                 525

Tyr Val Thr Glu Gly Met Arg Lys Pro Ala Phe Leu Ser Gly Asp Gln
    530                 535                 540

Lys Lys Ala Ile Val Asp Leu Leu Phe Lys Thr Asn Arg Lys Val Thr
545                 550                 555                 560

Val Lys Gln Leu Lys Glu Asp Tyr Phe Lys Lys Ile Glu Cys Phe Asp
                565                 570                 575
```

```
Ser Val Glu Ile Ser Gly Val Glu Asp Arg Phe Asn Ala Ser Leu Gly
            580                 585                 590

Thr Tyr His Asp Leu Leu Lys Ile Ile Lys Asp Lys Asp Phe Leu Asp
        595                 600                 605

Asn Glu Glu Asn Glu Asp Ile Leu Glu Asp Ile Val Leu Thr Leu Thr
    610                 615                 620

Leu Phe Glu Asp Arg Glu Met Ile Glu Glu Arg Leu Lys Thr Tyr Ala
625                 630                 635                 640

His Leu Phe Asp Asp Lys Val Met Lys Gln Leu Lys Arg Arg Arg Tyr
                645                 650                 655

Thr Gly Trp Gly Arg Leu Ser Arg Lys Leu Ile Asn Gly Ile Arg Asp
            660                 665                 670

Lys Gln Ser Gly Lys Thr Ile Leu Asp Phe Leu Lys Ser Asp Gly Phe
        675                 680                 685

Ala Asn Arg Asn Phe Ile Gln Leu Ile His Asp Asp Ser Leu Thr Phe
    690                 695                 700

Lys Glu Asp Ile Gln Lys Ala Gln Val Ser Gly Gln Gly Asp Ser Leu
705                 710                 715                 720

His Glu His Ile Ala Asn Leu Ala Gly Ser Pro Ala Ile Lys Lys Gly
                725                 730                 735

Ile Leu Gln Thr Val Lys Val Val Asp Glu Leu Val Lys Val Met Gly
            740                 745                 750

Arg His Lys Pro Glu Asn Ile Val Ile Glu Met Ala Arg Glu Asn Gln
        755                 760                 765

Thr Thr Gln Lys Gly Gln Lys Asn Ser Arg Glu Arg Met Lys Arg Ile
    770                 775                 780
```

```
Glu Glu Gly Ile Lys Glu Leu Gly Ser Gln Ile Leu Lys Glu His Pro
785                 790                 795                 800


Val Glu Asn Thr Gln Leu Gln Asn Glu Lys Leu Tyr Leu Tyr Tyr Leu
                805                 810                 815


Gln Asn Gly Arg Asp Met Tyr Val Asp Gln Glu Leu Asp Ile Asn Arg
            820                 825                 830


Leu Ser Asp Tyr Asp Val Asp His Ile Val Pro Gln Ser Phe Leu Lys
        835                 840                 845


Asp Asp Ser Ile Asp Asn Lys Val Leu Thr Arg Ser Asp Lys Asn Arg
    850                 855                 860


Gly Lys Ser Asp Asn Val Pro Ser Glu Glu Val Val Lys Lys Met Lys
865                 870                 875                 880


Asn Tyr Trp Arg Gln Leu Leu Asn Ala Lys Leu Ile Thr Gln Arg Lys
                885                 890                 895


Phe Asp Asn Leu Thr Lys Ala Glu Arg Gly Gly Leu Ser Glu Leu Asp
            900                 905                 910


Lys Ala Gly Phe Ile Lys Arg Gln Leu Val Glu Thr Arg Gln Ile Thr
        915                 920                 925


Lys His Val Ala Gln Ile Leu Asp Ser Arg Met Asn Thr Lys Tyr Asp
    930                 935                 940


Glu Asn Asp Lys Leu Ile Arg Glu Val Lys Val Ile Thr Leu Lys Ser
945                 950                 955                 960


Lys Leu Val Ser Asp Phe Arg Lys Asp Phe Gln Phe Tyr Lys Val Arg
                965                 970                 975


Glu Ile Asn Asn Tyr His His Ala His Asp Ala Tyr Leu Asn Ala Val
            980                 985                 990


Val Gly Thr Ala Leu Ile Lys Lys  Tyr Pro Lys Leu Glu  Ser Glu Phe
        995                 1000                1005
```

```
Val Tyr  Gly Asp Tyr Lys Val  Tyr Asp Val Arg Lys  Met Ile Ala
    1010                1015                1020

Lys Ser  Glu Gln Glu Ile Gly  Lys Ala Thr Ala Lys  Tyr Phe Phe
    1025                1030                1035

Tyr Ser  Asn Ile Met Asn Phe  Phe Lys Thr Glu Ile  Thr Leu Ala
    1040                1045                1050

Asn Gly  Glu Ile Arg Lys Arg  Pro Leu Ile Glu Thr  Asn Gly Glu
    1055                1060                1065

Thr Gly  Glu Ile Val Trp Asp  Lys Gly Arg Asp Phe  Ala Thr Val
    1070                1075                1080

Arg Lys  Val Leu Ser Met Pro  Gln Val Asn Ile Val  Lys Lys Thr
    1085                1090                1095

Glu Val  Gln Thr Gly Gly Phe  Ser Lys Glu Ser Ile  Leu Pro Lys
    1100                1105                1110

Arg Asn  Ser Asp Lys Leu Ile  Ala Arg Lys Lys Asp  Trp Asp Pro
    1115                1120                1125

Lys Lys  Tyr Gly Gly Phe Asp  Ser Pro Thr Val Ala  Tyr Ser Val
    1130                1135                1140

Leu Val  Val Ala Lys Val Glu  Lys Gly Lys Ser Lys  Lys Leu Lys
    1145                1150                1155

Ser Val  Lys Glu Leu Leu Gly  Ile Thr Ile Met Glu  Arg Ser Ser
    1160                1165                1170

Phe Glu  Lys Asn Pro Ile Asp  Phe Leu Glu Ala Lys  Gly Tyr Lys
    1175                1180                1185

Glu Val  Lys Lys Asp Leu Ile  Ile Lys Leu Pro Lys  Tyr Ser Leu
    1190                1195                1200
```

```
Phe Glu  Leu Glu Asn Gly Arg  Lys Arg Met Leu Ala  Ser Ala Gly
    1205                 1210                 1215


Val Leu  Gln Lys Gly Asn Glu  Leu Ala Leu Pro Ser  Lys Tyr Val
    1220                 1225                 1230


Asn Phe  Leu Tyr Leu Ala Ser  His Tyr Glu Lys Leu  Lys Gly Ser
    1235                 1240                 1245


Pro Glu  Asp Asn Glu Gln Lys  Gln Leu Phe Val Glu  Gln His Lys
    1250                 1255                 1260


His Tyr  Leu Asp Glu Ile Ile  Glu Gln Ile Ser Glu  Phe Ser Lys
    1265                 1270                 1275


Arg Val  Ile Leu Ala Asp Ala  Asn Leu Asp Lys Val  Leu Ser Ala
    1280                 1285                 1290


Tyr Asn  Lys His Arg Asp Lys  Pro Ile Arg Glu Gln  Ala Glu Asn
    1295                 1300                 1305


Ile Ile  His Leu Phe Thr Leu  Thr Asn Leu Gly Ala  Pro Ala Ala
    1310                 1315                 1320


Phe Lys  Tyr Phe Asp Thr Thr  Ile Asp Arg Lys Arg  Tyr Thr Ser
    1325                 1330                 1335


Thr Lys  Glu Val Leu Asp Ala  Thr Leu Ile His Gln  Ser Ile Thr
    1340                 1345                 1350


Gly Leu  Tyr Glu Thr Arg Ile  Asp Leu Ser Gln Leu  Gly Gly Asp
    1355                 1360                 1365


<210>  48
<211>  74
<212>  PRT
<213>  Artificial Sequence

<220>
<223>  Synthetic

<400>  48
```

Ser Glu Lys Gly Lys Gln His Ala Glu Ile Leu Phe Leu Asp Lys Ile
1   5   10   15

Arg Ser Met Glu Leu Ser Gln Val Thr Ile Thr Cys Tyr Leu Thr Trp
            20   25   30

Ser Pro Cys Pro Asn Cys Ala Trp Gln Leu Ala Ala Phe Lys Arg Asp
        35   40   45

Arg Pro Asp Leu Ile Leu His Ile Tyr Thr Ser Arg Leu Tyr Phe His
    50   55   60

Trp Lys Arg Pro Phe Gln Lys Gly Leu Cys
65   70

<210> 49
<211> 74
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 49

Ser Glu Lys Gly Lys Gln His Ala Glu Ile Leu Phe Leu Asp Lys Ile
1   5   10   15

Arg Ser Met Glu Leu Ser Gln Val Thr Ile Thr Cys Tyr Leu Thr Trp
            20   25   30

Ser Pro Cys Pro Asn Cys Ala Trp Gln Leu Ala Ala Phe Lys Arg Asp
        35   40   45

Arg Pro Asp Leu Ile Pro His Ile Tyr Thr Ser Arg Leu Tyr Phe His
    50   55   60

Trp Lys Arg Pro Phe Gln Lys Gly Leu Cys
65   70

<210> 50
<211> 74
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 50

Ser Glu Lys Gly Lys Gln His Ala Glu Ile Leu Phe Leu Asp Lys Ile
1   5   10   15

Arg Ser Met Glu Leu Ser Gln Val Thr Ile Thr Cys Tyr Leu Thr Trp
            20   25   30

Ser Pro Cys Pro Asn Cys Ala Trp Arg Leu Ala Ala Phe Lys Arg Asp
        35   40   45

Arg Pro Asp Leu Ile Leu His Ile Tyr Thr Ser Arg Leu Tyr Phe His
    50   55   60

Trp Lys Arg Pro Phe Gln Lys Gly Leu Cys
65   70

<210> 51
<211> 74
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 51

Ser Glu Lys Gly Lys Gln His Ala Glu Ile Leu Phe Leu Asn Lys Ile
1   5   10   15

Arg Ser Met Glu Leu Ser Gln Val Thr Ile Thr Cys Tyr Leu Thr Trp
            20   25   30

Ser Pro Cys Pro Asn Cys Ala Trp Gln Leu Ala Ala Phe Lys Lys Asp
        35   40   45

Arg Pro Asp Leu Ile Leu His Ile Tyr Thr Ser Arg Leu Tyr Phe His
    50   55   60

Trp Lys Arg Pro Phe Gln Lys Gly Leu Cys
65   70

<210> 52
<211> 74
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 52

Ser Lys Lys Gly Lys Gln His Ala Glu Ile Leu Phe Leu Asp Lys Ile
1 5 10 15

Arg Ser Met Glu Leu Ser Gln Val Thr Ile Thr Cys Tyr Leu Thr Trp
20 25 30

Ser Pro Cys Pro Asn Cys Ala Trp Gln Leu Ala Ala Phe Lys Arg Asp
35 40 45

His Pro Asp Leu Ile Leu His Ile Tyr Thr Ser Arg Leu Tyr Phe His
50 55 60

Trp Lys Arg Pro Phe Gln Lys Gly Leu Cys
65 70

<210> 53
<211> 74
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 53

Ser Lys Lys Gly Lys Gln His Ala Glu Ile Leu Phe Leu Glu Lys Ile
1 5 10 15

Arg Ser Met Glu Leu Ser Gln Met Arg Ile Thr Cys Tyr Leu Thr Trp
20 25 30

Ser Pro Cys Pro Asn Cys Ala Trp Gln Leu Ala Ala Phe Gln Lys Asp
35 40 45

Arg Pro Asp Leu Ile Leu His Ile Tyr Thr Ser Arg Leu Tyr Phe His
    50   55   60

Trp Arg Arg Ile Phe Gln Lys Gly Leu Cys
65   70

<210> 54
<211> 74
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 54

Ser Lys Lys Gly Lys Gln His Ala Glu Ile Leu Phe Leu Glu Lys Ile
1   5   10   15

Arg Ser Met Glu Leu Ser Gln Met Arg Ile Thr Cys Tyr Leu Thr Trp
            20   25   30

Ser Pro Cys Pro Asn Cys Ala Trp Gln Leu Ala Ala Phe Gln Lys Asp
        35   40   45

Arg Pro Asp Leu Ile Leu His Ile Tyr Thr Ser Arg Leu Tyr Phe His
    50   55   60

Trp Arg Arg Ile Phe Gln Lys Gly Leu Cys
65   70

<210> 55
<211> 74
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 55

Ser Lys Lys Gly Lys Gln His Ala Glu Ile Leu Phe Leu Asp Lys Ile
1   5   10   15

Arg Ser Met Glu Leu Ser Gln Val Arg Ile Thr Cys Tyr Leu Thr Trp
            20   25   30

Ser Pro Cys Pro Asn Cys Ala Trp Gln Leu Glu Thr Phe Lys Lys Asp
        35   40   45

Arg Pro Asp Leu Ile Leu His Ile Tyr Thr Ser Arg Leu Tyr Phe His
    50   55   60

Trp Lys Arg Ala Phe Gln Glu Gly Leu Cys
65   70

<210> 56
<211> 75
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 56

Ser Lys Lys Gly Lys Pro His Ala Glu Ile Leu Phe Leu Asp Lys Met
1   5   10   15

Trp Ser Met Glu Glu Leu Ser Gln Val Arg Ile Thr Cys Tyr Leu Thr
            20   25   30

Trp Ser Pro Cys Pro Asn Cys Ala Arg Gln Leu Ala Ala Phe Lys Lys
        35   40   45

Asp His Pro Gly Leu Ile Leu Arg Ile Tyr Thr Ser Arg Leu Tyr Phe
    50   55   60

Tyr Trp Arg Arg Lys Phe Gln Lys Gly Leu Cys
65   70   75

<210> 57
<211> 73
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 57

Lys Lys Gly Glu Gln His Val Glu Ile Leu Phe Leu Glu Lys Met Arg
1 5 10 15

Ser Met Glu Leu Ser Gln Val Arg Ile Thr Cys Tyr Leu Thr Trp Ser
20 25 30

Pro Cys Pro Asn Cys Ala Arg Gln Leu Ala Ala Phe Lys Lys Asp His
35 40 45

Pro Asp Leu Ile Leu Arg Ile Tyr Thr Ser Arg Leu Tyr Phe Tyr Trp
50 55 60

Arg Lys Lys Phe Gln Lys Gly Leu Cys
65 70

<210> 58
<211> 74
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 58

Ser Lys Lys Gly Arg Gln His Ala Glu Ile Leu Phe Leu Glu Lys Val
1 5 10 15

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

Ser Pro Cys Pro Asn Cys Ala Trp Gln Leu Ala Ala Phe Lys Met Asp
35 40 45

His Pro Asp Leu Ile Leu Arg Ile Tyr Ala Ser Arg Leu Tyr Phe His
50 55 60

Trp Arg Arg Ala Phe Gln Lys Gly Leu Cys
65 70

<210> 59
<211> 73
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 59

Asn Lys Lys Gly Lys His Ala Glu Ile Leu Phe Ile Asp Glu Met Arg
1   5   10   15

Ser Leu Glu Leu Gly Gln Val Gln Ile Thr Cys Tyr Leu Thr Trp Ser
            20   25   30

Pro Cys Pro Asn Cys Ala Gln Glu Leu Ala Ala Phe Lys Ser Asp His
        35   40   45

Pro Asp Leu Val Leu Arg Ile Tyr Thr Ser Arg Leu Tyr Phe His Trp
    50   55   60

Arg Arg Lys Tyr Gln Glu Gly Leu Cys
65   70

<210> 60
<211> 73
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 60

Asn Lys Lys Gly Lys His Ala Glu Ile Leu Phe Ile Asp Glu Met Arg
1   5   10   15

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

Pro Cys Pro Asn Cys Ala Gln Lys Leu Ala Ala Phe Lys Lys Asp His
        35   40   45

Pro Asp Leu Val Leu Arg Val Tyr Thr Ser Arg Leu Tyr Phe His Trp
    50   55   60

Arg Arg Lys Tyr Gln Glu Gly Leu Cys
65   70

<210> 61
<211> 73
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 61

Asn Lys Lys Asp Lys His Ala Glu Ile Leu Phe Ile Asp Lys Met Arg
1 5 10 15

Ser Leu Glu Leu Cys Gln Val Arg Ile Thr Cys Tyr Leu Thr Trp Ser
20 25 30

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

Pro Asp Leu Val Leu Arg Ile Tyr Thr Ser Arg Leu Tyr Phe His Trp
50 55 60

Arg Arg Lys Tyr Gln Glu Gly Leu Cys
65 70

<210> 62
<211> 73
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 62

Asn Lys Lys Gly Lys His Ala Glu Ile Leu Phe Ile Asp Glu Met Arg
1 5 10 15

Ser Leu Lys Leu Ser Gln Glu Arg Ile Thr Cys Tyr Leu Thr Trp Ser
20 25 30

Pro Cys Pro Asn Cys Ala Gln Glu Leu Ala Ala Phe Lys Arg Asp His
35 40 45

Pro Gly Leu Val Leu Arg Ile Tyr Ala Ser Arg Leu Tyr Phe His Trp
    50   55   60

Arg Arg Lys Tyr Gln Glu Gly Leu Cys
65   70

<210> 63
<211> 72
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 63

Asn Lys Arg Ala Lys His Ala Glu Ile Leu Leu Ile Asp Met Met Arg
1   5   10   15

Ser Met Glu Leu Gly Gln Val Gln Ile Thr Cys Tyr Ile Thr Trp Ser
            20   25   30

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

Pro Asp Leu Val Leu Arg Ile Tyr Ala Ser Arg Leu Tyr Phe His Trp
    50   55   60

Lys Arg Lys Phe Gln Lys Gly Leu
65   70

<210> 64
<211> 73
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 64

Asn Lys Lys Gly Arg His Ala Glu Ile Cys Leu Ile Asp Glu Met Arg
1   5   10   15

Ser Leu Gly Leu Gly Lys Ala Gln Ile Thr Cys Tyr Leu Thr Trp Ser
            20   25   30

Pro Cys Arg Lys Cys Ala Gln Glu Leu Ala Thr Phe Lys Lys Asp His
        35   40   45

Pro Asp Leu Val Leu Arg Val Tyr Ala Ser Arg Leu Tyr Phe His Trp
    50   55   60

Ser Arg Lys Tyr Gln Gln Gly Leu Cys
65   70

<210> 65
<211> 75
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 65

Asn Lys Lys Gly His His Ala Glu Ile Arg Phe Ile Glu Arg Ile Arg
1   5   10   15

Ser Met Gly Leu Asp Pro Ser Gln Asp Tyr Gln Ile Thr Cys Tyr Leu
            20   25   30

Thr Trp Ser Pro Cys Leu Asp Cys Ala Phe Lys Leu Ala Lys Leu Lys
        35   40   45

Lys Asp Phe Pro Arg Leu Thr Leu Arg Ile Phe Thr Ser Arg Leu Tyr
    50   55   60

Phe His Trp Ile Arg Lys Phe Gln Lys Gly Leu
65   70   75

<210> 66
<211> 72
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 66

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Asn Lys Lys Gly Lys His Ala Glu Ala Arg Phe Val Asp Lys Met Arg
1               5                   10                  15


Ser Met Gln Leu Asp His Ala Leu Ile Thr Cys Tyr Leu Thr Trp Ser
            20                  25                  30


Pro Cys Leu Asp Cys Ser Gln Lys Leu Ala Ala Leu Lys Arg Asp His
        35                  40                  45


Pro Gly Leu Thr Leu Arg Ile Phe Thr Ser Arg Leu Tyr Phe His Trp
    50                  55                  60


Val Lys Lys Phe Gln Glu Gly Leu
65                  70
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<210> 67
<211> 76
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 67

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Ser Pro Gln Lys Gly His His Ala Glu Ser Arg Phe Ile Lys Arg Ile
1               5                   10                  15


Ser Ser Met Asp Leu Asp Arg Ser Arg Ser Tyr Gln Ile Thr Cys Phe
            20                  25                  30


Leu Thr Trp Ser Pro Cys Pro Ser Cys Ala Gln Glu Leu Ala Ser Phe
        35                  40                  45


Lys Arg Ala His Pro His Leu Arg Phe Gln Ile Phe Val Ser Arg Leu
    50                  55                  60


Tyr Phe His Trp Lys Arg Ser Tyr Gln Ala Gly Leu
65                  70                  75
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<210> 68
<211> 74
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 68

Lys Lys Gly Tyr His Ala Glu Ser Arg Phe Ile Lys Arg Ile Cys Ser
1   5   10   15

Met Asp Leu Gly Gln Asp Gln Ser Tyr Gln Val Thr Cys Phe Leu Thr
            20   25   30

Trp Ser Pro Cys Pro His Cys Ala Gln Glu Leu Val Ser Phe Lys Arg
        35   40   45

Ala His Pro His Leu Arg Leu Gln Ile Phe Thr Ala Arg Leu Phe Phe
    50   55   60

His Trp Lys Arg Ser Tyr Gln Glu Gly Leu
65   70

<210> 69
<211> 74
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 69

Lys Lys Gly Gln His Ala Glu Ile Arg Phe Ile Glu Arg Ile His Ser
1   5   10   15

Met Ala Leu Asp Gln Ala Arg Ser Tyr Gln Ile Thr Cys Phe Leu Thr
            20   25   30

Trp Ser Pro Cys Pro Phe Cys Ala Gln Glu Leu Ala Ser Phe Lys Ser
        35   40   45

Thr His Pro Arg Val His Leu Gln Ile Phe Val Ser Arg Leu Tyr Phe
    50   55   60

His Trp Lys Arg Ser Tyr Gln Glu Gly Leu
65   70

<210> 70
<211> 75
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 70

Asn Lys Lys Gly His His Ala Glu Ile Arg Phe Ile Lys Lys Ile Arg
1 5 10 15

Ser Leu Asp Leu Asp Gln Ser Gln Asn Tyr Glu Val Thr Cys Tyr Leu
20 25 30

Thr Trp Ser Pro Cys Pro Asp Cys Ala Gln Glu Leu Val Ala Leu Thr
35 40 45

Arg Ser His Pro His Val Arg Leu Arg Leu Phe Thr Ser Arg Leu Tyr
50 55 60

Phe His Trp Phe Trp Ser Phe Gln Glu Gly Leu
65 70 75

<210> 71
<211> 72
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 71

Asn Arg His Ala Glu Ile Cys Phe Ile Asp Glu Ile Glu Ser Met Gly
1 5 10 15

Leu Asp Lys Thr Gln Cys Tyr Glu Val Thr Cys Tyr Leu Thr Trp Ser
20 25 30

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

Val His Leu Asn Leu Arg Ile Phe Ala Ser Arg Leu Tyr Tyr His Trp
    50   55   60

Arg Ser Ser Tyr Gln Lys Gly Leu
65   70

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

<220>
<223> Synthetic

<400> 72

Asn Arg His Ala Glu Ile Cys Phe Ile Asp Glu Ile Glu Ser Met Gly
1   5   10   15

Leu Asp Lys Thr Gln Cys Tyr Glu Val Thr Cys Tyr Leu Thr Trp Ser
            20   25   30

Pro Cys Pro Ser Cys Ala Gln Lys Leu Val Ala Phe Ala Lys Ala Gln
        35   40   45

Asp His Leu Asn Leu Arg Ile Phe Ala Ser Arg Leu Tyr Tyr His Trp
    50   55   60

Arg Arg Arg Tyr Lys Glu Gly Leu
65   70

<210> 73
<211> 70
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 73

His Val Glu Ile Cys Phe Ile Asp Lys Ile Ala Ser Met Glu Leu Asp
1   5   10   15

Lys Thr Gln Cys Tyr Asp Val Thr Cys Tyr Leu Thr Trp Ser Pro Cys
            20   25   30

Pro Ser Cys Ala Gln Lys Leu Ala Ala Phe Ala Lys Ala Gln Asp His
        35   40   45

Leu Asn Leu Arg Ile Phe Ala Ser Arg Leu Tyr Tyr His Trp Arg Arg
    50   55   60

Ser Tyr Gln Lys Gly Leu
65   70

<210> 74
<211> 75
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 74

Asn Lys Lys Lys Cys His Ala Glu Ile Cys Phe Ile Asn Glu Ile Lys
1   5   10   15

Ser Met Gly Leu Asp Glu Thr Gln Cys Tyr Gln Val Thr Cys Tyr Leu
            20   25   30

Thr Trp Ser Pro Cys Ser Ser Cys Ala Trp Glu Leu Val Asp Phe Ile
        35   40   45

Lys Ala His Asp His Leu Asn Leu Gly Ile Phe Ala Ser Arg Leu Tyr
    50   55   60

Tyr His Trp Cys Lys Pro Gln Gln Lys Gly Leu
65   70   75

<210> 75
<211> 76
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 75

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Glu Asn Lys Lys Lys Cys His Ala Glu Ile Cys Phe Ile Asn Glu Ile
1               5                   10                  15


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


Leu Thr Trp Ser Pro Cys Ser Ser Cys Ala Trp Glu Leu Val Asp Phe
        35                  40                  45


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


Tyr Tyr His Trp Cys Lys Pro Gln Gln Lys Gly Leu
65                  70                  75


<210>  76
<211>  75
<212>  PRT
<213>  Artificial Sequence

<220>
<223>  Synthetic

<400>  76

Asn Lys Lys Lys Cys His Ala Glu Ile Cys Phe Ile Asn Glu Ile Lys
1               5                   10                  15


Ser Met Gly Leu Asp Glu Thr Gln Cys Tyr Gln Val Thr Cys Tyr Leu
            20                  25                  30


Thr Trp Ser Pro Cys Ser Ser Cys Ala Trp Lys Leu Val Asp Phe Ile
        35                  40                  45


Gln Ala His Asp His Leu Asn Leu Arg Ile Phe Ala Ser Arg Leu Tyr
    50                  55                  60


Tyr His Trp Cys Lys Pro Gln Gln Glu Gly Leu
65                  70                  75


<210>  77
<211>  75
<212>  PRT
<213>  Artificial Sequence
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<220>
<223> Synthetic

<400> 77

Asn Lys Lys Lys Arg His Ala Glu Ile Arg Phe Ile Asn Lys Ile Lys
1   5   10   15

Ser Met Gly Leu Asp Glu Thr Gln Cys Tyr Gln Val Thr Cys Tyr Leu
            20   25   30

Thr Trp Ser Pro Cys Pro Ser Cys Ala Trp Glu Leu Val Asp Phe Ile
        35   40   45

Lys Ala His Asp His Leu Asn Leu Gly Ile Phe Ala Ser Arg Leu Tyr
    50   55   60

Tyr His Trp Cys Arg His Gln Gln Glu Gly Leu
65   70   75

<210> 78
<211> 75
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 78

Asn Lys Lys Lys Asp His Ala Glu Ile Arg Phe Ile Asn Lys Ile Lys
1   5   10   15

Ser Met Gly Leu Asp Glu Thr Gln Cys Tyr Gln Val Thr Cys Tyr Leu
            20   25   30

Thr Trp Ser Pro Cys Pro Ser Cys Ala Gly Glu Leu Val Asp Phe Ile
        35   40   45

Lys Ala His Arg His Leu Asn Leu Arg Ile Phe Ala Ser Arg Leu Tyr
    50   55   60

Tyr His Trp Arg Pro Asn Tyr Gln Glu Gly Leu
65   70   75

<210> 79
<211> 75
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 79

Asn Lys Lys Lys Glu His Ala Glu Ile Arg Phe Ile Asn Lys Ile Lys
1 5 10 15

Ser Met Gly Leu Asp Glu Thr Gln Cys Tyr Gln Val Thr Cys Tyr Leu
20 25 30

Thr Trp Ser Pro Cys Pro Ser Cys Ala Gly Lys Leu Val Asp Phe Ile
35 40 45

Lys Ala His His His Leu Asn Leu Arg Ile Phe Ala Ser Arg Leu Tyr
50 55 60

Tyr His Trp Arg Pro Asn Tyr Gln Glu Gly Leu
65 70 75

<210> 80
<211> 75
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 80

Asn Lys Lys Lys His His Ala Glu Ile His Phe Ile Asn Lys Ile Lys
1 5 10 15

Ser Met Gly Leu Asp Glu Thr Gln Cys Tyr Gln Val Thr Cys Tyr Leu
20 25 30

Thr Trp Ser Pro Cys Pro Ser Cys Ala Arg Glu Leu Val Asp Phe Ile
35 40 45

Lys Ala His Arg His Leu Asn Leu Arg Ile Phe Ala Ser Arg Leu Tyr
    50   55   60

Tyr His Trp Arg Pro His Tyr Gln Glu Gly Leu
65   70   75

<210> 81
<211> 75
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 81

Asn Lys Lys Gln Arg His Ala Glu Ile Arg Phe Ile Asp Lys Ile Asn
1   5   10   15

Ser Leu Asp Leu Asn Pro Ser Gln Ser Tyr Lys Ile Ile Cys Tyr Ile
            20   25   30

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

Thr Arg Asn Asn His Leu Lys Leu Glu Ile Phe Ala Ser Arg Leu Tyr
    50   55   60

Phe His Trp Ile Lys Pro Phe Lys Met Gly Leu
65   70   75

<210> 82
<211> 75
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 82

Asn Lys Lys Gln Arg His Ala Glu Ile Arg Phe Ile Asp Lys Ile Asn
1   5   10   15

Ser Leu Asp Leu Asn Pro Ser Gln Ser Tyr Lys Ile Ile Cys Tyr Ile
            20   25   30

Thr Trp Ser Pro Cys Pro Asn Cys Ala Ser Glu Leu Val Asp Phe Ile
35 40 45

Thr Arg Asn Asp His Leu Asp Leu Gln Ile Phe Ala Ser Arg Leu Tyr
50 55 60

Phe His Trp Ile Lys Pro Phe Lys Arg Gly Leu
65 70 75

<210> 83
<211> 75
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 83

Asn Lys Lys Gln Arg His Ala Glu Ile Arg Phe Ile Asp Lys Ile Asn
1 5 10 15

Ser Leu Asn Leu Asp Arg Arg Gln Ser Tyr Lys Ile Ile Cys Tyr Ile
20 25 30

Thr Trp Ser Pro Cys Pro Arg Cys Ala Ser Glu Leu Val Asp Phe Ile
35 40 45

Thr Gly Asn Asp His Leu Asn Leu Gln Ile Phe Ala Ser Arg Leu Tyr
50 55 60

Phe His Trp Lys Lys Pro Phe Gln Arg Gly Leu
65 70 75

<210> 84
<211> 75
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 84

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Asn Lys Lys Lys Arg His Ala Glu Ile Arg Phe Ile Asp Lys Ile Asn
1               5                   10                  15


Ser Leu Asn Leu Asp Gln Asn Gln Cys Tyr Arg Ile Ile Cys Tyr Val
            20                  25                  30


Thr Trp Ser Pro Cys His Asn Cys Ala Lys Glu Leu Val Asp Phe Ile
        35                  40                  45


Ser Asn Arg His His Leu Ser Leu Gln Leu Phe Ala Ser Arg Leu Tyr
    50                  55                  60


Phe His Trp Val Arg Cys Tyr Gln Arg Gly Leu
65                  70                  75


<210>  85
<211>  75
<212>  PRT
<213>  Artificial Sequence

<220>
<223>  Synthetic

<400>  85

Asn Lys Lys Lys Arg His Ala Glu Ile Arg Phe Ile Asp Lys Ile Lys
1               5                   10                  15


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


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


Arg Asp Tyr Pro Arg Leu Ser Leu Gln Ile Phe Ala Ser Arg Leu Tyr
    50                  55                  60


Phe His Trp Arg Arg Arg Ser Ile Gln Gly Leu
65                  70                  75


<210>  86
<211>  75
<212>  PRT
<213>  Artificial Sequence
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<220>
<223> Synthetic

<400> 86

Asn Lys Lys Lys Arg His Ala Glu Ile Arg Phe Ile Asp Lys Ile Asn
1   5   10   15

Ser Leu Gly Leu Asp Gln Asp Gln Ser Tyr Glu Ile Thr Cys Tyr Val
            20   25   30

Thr Trp Ser Pro Cys Ala Thr Cys Ala Cys Lys Leu Ile Lys Phe Thr
        35   40   45

Arg Lys Phe Pro Asn Leu Ser Leu Arg Ile Phe Val Ser Arg Leu Tyr
    50   55   60

Tyr His Trp Phe Arg Gln Asn Gln Gln Gly Leu
65   70   75

<210> 87
<211> 74
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 87

Lys Lys Lys Arg His Ala Glu Ile Arg Phe Ile Asp Ser Ile Arg Ala
1   5   10   15

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

Trp Ser Pro Cys Pro Thr Cys Ala Lys Glu Leu Ala Met Phe Val Gln
        35   40   45

Asp His Pro His Ile Ser Leu Arg Leu Phe Ala Ser Arg Leu Tyr Phe
    50   55   60

His Trp Arg Trp Lys Tyr Gln Glu Gly Leu
65   70

<210> 88
<211> 74
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 88

Lys Lys Lys Arg His Ala Glu Ile Arg Phe Ile Asp Asn Ile Lys Ala
1 5 10 15

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

Trp Ser Pro Cys Pro Thr Cys Ala Lys Glu Leu Val Ala Phe Val Arg
35 40 45

Asp His Arg His Ile Ser Leu Arg Leu Phe Ala Ser Arg Leu Tyr Phe
50 55 60

His Trp Leu Arg Glu Asn Lys Lys Gly Leu
65 70

<210> 89
<211> 75
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 89

Asn Lys Lys Lys Arg His Ala Glu Ile Arg Phe Ile Asp Lys Ile Arg
1 5 10 15

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

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

Arg Asp His Pro His Val Arg Leu Arg Leu Phe Ala Ser Arg Leu Tyr
    50   55   60

Phe His Trp Leu Arg Lys Tyr Gln Glu Gly Leu
65   70   75

<210> 90
<211> 75
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 90

Asn Lys Lys Lys Arg His Ala Glu Ile Cys Phe Ile Asp Lys Ile Lys
1   5   10   15

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

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

Lys Asp Asn Pro His Leu Ser Leu Arg Ile Phe Ala Ser Arg Leu Tyr
    50   55   60

Val His Trp Arg Trp Lys Tyr Gln Gln Gly Leu
65   70   75

<210> 91
<211> 75
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 91

Asn Lys Lys Lys Arg His Ala Glu Ile Cys Phe Ile Asp Lys Ile Lys
1   5   10   15

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

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

Lys Asp Asn Pro His Leu Ser Leu Arg Ile Phe Ala Ser Arg Leu Tyr
    50   55   60

Val His Trp Arg Trp Lys Tyr Gln Gln Gly Leu
65   70   75

<210> 92
<211> 75
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 92

Asn Lys Lys His Arg His Ala Glu Val Arg Phe Ile Ala Lys Ile Arg
1   5   10   15

Ser Met Ser Leu Asp Leu Asp Gln Lys His Gln Leu Thr Cys Tyr Leu
            20   25   30

Thr Trp Ser Pro Cys Pro Ser Cys Ala Gln Glu Leu Val Thr Phe Met
        35   40   45

Ala Glu Ser Arg His Leu Asn Leu Gln Val Phe Val Ser Arg Leu Tyr
    50   55   60

Phe His Trp Gln Arg Asp Phe Gln Gln Gly Leu
65   70   75

<210> 93
<211> 110
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 93

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


Arg Ser Asn Leu Leu Trp Asn Thr Gly Val Phe Arg Gly Gln Met Tyr
            20                  25                  30


Ser Gln Pro Glu His His Ala Glu Met Cys Phe Leu Ser Trp Phe Cys
        35                  40                  45


Gly Asn Gln Leu Pro Ala Tyr Lys Cys Phe Gln Ile Thr Trp Phe Val
    50                  55                  60


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


Ala Glu Tyr Pro Asn Val Thr Leu Thr Ile Ser Thr Ala Arg Leu Tyr
                85                  90                  95


Tyr Tyr Trp Glu Arg Asp Tyr Arg Arg Ala Leu Cys Arg Leu
            100                 105                 110
```

<210> 94
<211> 110
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 94

```
Gly Arg Ser Tyr Thr Trp Leu Cys Tyr Glu Val Lys Ile Arg Arg Gly
1               5                   10                  15


His Ser Asn Leu Leu Trp Asp Thr Gly Val Phe Arg Gly Gln Met Tyr
            20                  25                  30


Ser Gln Pro Glu His His Ala Glu Met Tyr Phe Leu Ser Trp Phe Cys
        35                  40                  45


Gly Asn Gln Leu Pro Ala Tyr Lys Cys Phe Gln Ile Thr Trp Phe Val
    50                  55                  60
```

```
Ser Trp Thr Pro Cys Pro Asp Cys Val Ala Lys Leu Ala Glu Phe Leu
65                  70                  75                  80


Ala Glu His Pro Asn Val Thr Leu Thr Ile Ser Ala Ala Arg Leu Tyr
                85                  90                  95


Tyr Tyr Trp Glu Arg Asp Tyr Arg Arg Ala Leu Cys Arg Leu
            100                 105                 110


<210>  95
<211>  110
<212>  PRT
<213>  Artificial Sequence

<220>
<223>  Synthetic

<400>  95

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


His Ser Asn Leu Leu Trp Asp Thr Gly Val Phe Arg Gly Gln Met Tyr
            20                  25                  30


Ser Gln Pro Glu His His Ala Glu Met Cys Phe Leu Ser Trp Phe Cys
        35                  40                  45


Gly Asn Gln Leu Ser Ala Tyr Lys Cys Phe Gln Ile Thr Trp Phe Val
    50                  55                  60


Ser Trp Thr Pro Cys Pro Asp Cys Val Ala Lys Leu Ala Lys Phe Leu
65                  70                  75                  80


Ala Glu His Pro Asn Val Thr Leu Thr Ile Ser Ala Ala Arg Leu Tyr
                85                  90                  95


Tyr Tyr Trp Glu Arg Asp Tyr Arg Arg Ala Leu Cys Arg Leu
            100                 105                 110


<210>  96
<211>  98
<212>  PRT
<213>  Artificial Sequence
```

<220>
<223> Synthetic

<400> 96

Arg Asn Thr Val Trp Leu Cys Tyr Glu Val Lys Thr Lys Gly Pro Ser
1   5   10   15

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

Pro Gln Tyr His Ala Glu Met Cys Phe Leu Ser Trp Phe Cys Gly Asn
        35   40   45

Gln Leu Pro Ala Tyr Lys Cys Phe Gln Ile Thr Trp Phe Val Ser Trp
    50   55   60

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

His Pro Asn Val Thr Leu Thr Ile Ser Ala Ala Arg Leu Tyr Tyr Tyr
                85   90   95

Trp Glu

<210> 97
<211> 108
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 97

Arg Asn Thr Val Trp Leu Cys Tyr Glu Val Lys Thr Lys Gly Pro Ser
1   5   10   15

Arg Pro Arg Leu Asp Thr Lys Ile Phe Arg Gly Gln Val Tyr Phe Glu
            20   25   30

Pro Gln Tyr His Ala Glu Met Cys Phe Leu Ser Trp Phe Cys Gly Asn
        35   40   45

```
Gln Leu Pro Ala Tyr Lys Cys Phe Gln Ile Thr Trp Phe Val Ser Trp
    50                  55                  60

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

His Pro Asn Val Thr Leu Thr Ile Ser Ala Ala Arg Leu Tyr Tyr Tyr
                85                  90                  95

Trp Glu Arg Asp Tyr Arg Arg Ala Leu Cys Arg Leu
            100                 105
```

<210> 98
<211> 108
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 98

```
Arg Asn Thr Val Trp Leu Cys Tyr Glu Val Lys Thr Lys Gly Pro Ser
1               5                   10                  15

Arg Pro Arg Leu Asp Ala Lys Ile Phe Arg Gly Gln Val Tyr Ser Gln
            20                  25                  30

Pro Glu His His Ala Glu Met Cys Phe Leu Ser Trp Phe Cys Gly Asn
        35                  40                  45

Gln Leu Pro Ala Tyr Lys Cys Phe Gln Ile Thr Trp Phe Val Ser Trp
    50                  55                  60

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

His Pro Asn Val Thr Leu Thr Ile Ser Ala Ala Arg Leu Tyr Tyr Tyr
                85                  90                  95

Trp Glu Arg Asp Tyr Arg Arg Ala Leu Cys Arg Leu
            100                 105
```

<210> 99
<211> 108
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 99

Arg Asn Thr Val Trp Leu Cys Tyr Glu Val Lys Thr Arg Gly Pro Ser
1 5 10 15

Met Pro Thr Trp Gly Thr Lys Ile Phe Arg Gly Gln Val Cys Phe Glu
20 25 30

Pro Gln Tyr His Ala Glu Met Cys Phe Leu Ser Arg Phe Cys Gly Asn
35 40 45

Gln Leu Pro Ala Tyr Lys Arg Phe Gln Ile Thr Trp Phe Val Ser Trp
50 55 60

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

His Pro Asn Val Thr Leu Thr Ile Ser Ala Ala Arg Leu Tyr Tyr Tyr
85 90 95

Trp Glu Thr Asp Tyr Arg Arg Ala Leu Cys Arg Leu
100 105

<210> 100
<211> 108
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 100

Arg Asn Thr Val Trp Leu Cys Tyr Glu Val Lys Thr Arg Gly Pro Ser
1 5 10 15

Met Pro Thr Trp Gly Thr Lys Ile Phe Arg Gly Gln Val Cys Phe Glu
            20   25   30

Pro Gln Tyr His Ala Glu Met Cys Phe Leu Ser Arg Phe Cys Gly Asn
        35   40   45

Gln Leu Pro Ala Tyr Lys Arg Phe Gln Ile Thr Trp Phe Val Ser Trp
    50   55   60

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

His Pro Asn Val Thr Leu Thr Ile Ser Ala Ala Arg Leu Tyr Tyr Tyr
                85   90   95

Trp Glu Thr Asp Tyr Arg Arg Ala Leu Cys Arg Leu
            100   105

<210> 101
<211> 108
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 101

Arg Asn Thr Val Trp Leu Cys Tyr Glu Val Lys Thr Arg Gly Pro Ser
1   5   10   15

Met Pro Thr Trp Gly Ala Lys Ile Phe Arg Gly Gln Val Tyr Phe Glu
            20   25   30

Pro Gln Tyr His Ala Glu Met Cys Phe Leu Ser Trp Phe Cys Gly Asn
        35   40   45

Gln Leu Pro Ala Tyr Lys Arg Phe Gln Ile Thr Trp Phe Val Ser Trp
    50   55   60

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

His Pro Asn Val Thr Leu Thr Ile Ser Ala Ala Arg Leu Tyr Tyr Tyr
85 90 95

Trp Glu Thr Asp Tyr Arg Arg Ala Leu Cys Arg Leu
100 105

<210> 102
<211> 101
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 102

Arg Asn Thr Val Trp Leu Cys Tyr Lys Val Lys Thr Arg Gly Pro Ser
1 5 10 15

Met Pro Thr Trp Gly Thr Lys Ile Phe Arg Gly Gln Val Tyr Phe Gln
20 25 30

Pro Gln Tyr His Ala Glu Met Cys Phe Leu Ser Trp Phe Cys Gly Asn
35 40 45

Gln Leu Pro Ala Tyr Lys Arg Phe Gln Ile Thr Trp Phe Val Ser Trp
50 55 60

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

His Pro Asn Val Thr Leu Thr Ile Ser Ala Ala Arg Leu Tyr Tyr Tyr
85 90 95

Trp Glu Thr Asp Tyr
100

<210> 103
<211> 108
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 103

Arg Asn Thr Val Trp Leu Cys Tyr Glu Val Lys Thr Arg Gly Pro Ser
1 5 10 15

Met Pro Thr Trp Asp Thr Lys Ile Phe Arg Gly Gln Val Tyr Ser Lys
20 25 30

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

Gln Leu Pro Ala Tyr Lys Arg Phe Gln Ile Thr Trp Phe Val Ser Trp
50 55 60

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

His Pro Asn Val Thr Leu Thr Ile Ser Ala Ala Arg Leu Tyr Tyr Tyr
85 90 95

Trp Glu Thr Asp Tyr Arg Arg Ala Leu Cys Arg Leu
100 105

<210> 104
<211> 108
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 104

Arg Asn Thr Val Trp Leu Cys Tyr Glu Val Lys Thr Arg Gly Pro Ser
1 5 10 15

Met Pro Thr Trp Gly Thr Lys Ile Phe Arg Gly Gln Val Tyr Phe Gln
20 25 30

Pro Gln Tyr His Ala Glu Met Cys Phe Leu Ser Arg Phe Cys Gly Asn
35 40 45

Gln Leu Pro Ala Tyr Lys Arg Phe Gln Ile Thr Trp Phe Val Ser Trp
50 55 60

```
Asn Pro Cys Pro Asp Cys Val Ala Lys Val Ile Glu Phe Leu Ala Glu
65                  70                  75                  80


His Pro Asn Val Thr Leu Thr Ile Ser Ala Ala Arg Leu Tyr Tyr Tyr
                85                  90                  95


Trp Gly Arg Asp Trp Arg Arg Ala Leu Arg Arg Leu
            100                 105


<210>  105
<211>  110
<212>  PRT
<213>  Artificial Sequence

<220>
<223>  Synthetic

<400>  105

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


Pro Ser Lys Leu Pro Trp Tyr Thr Gly Val Phe Arg Gly Gln Val Tyr
            20                  25                  30


Ser Lys Pro Glu His His Ala Glu Met Cys Phe Leu Ser Arg Phe Cys
        35                  40                  45


Gly Asn Gln Leu Pro Ala Tyr Lys Arg Phe Gln Ile Thr Trp Phe Val
    50                  55                  60


Ser Trp Asn Pro Cys Pro Asp Cys Val Ala Lys Val Ile Glu Phe Leu
65                  70                  75                  80


Ala Glu His Pro Asn Val Thr Leu Thr Ile Ser Ala Ala Arg Leu Tyr
                85                  90                  95


Tyr Tyr Trp Ser Arg Asp Trp Gln Arg Ala Leu Cys Arg Leu
            100                 105                 110


<210>  106
<211>  110
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<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 106

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

Pro Ser Lys Leu Pro Trp Asp Thr Gly Val Phe Arg Gly Gln Val Tyr
            20   25   30

Ser Lys Pro Glu His His Ala Glu Met Cys Phe Leu Ser Arg Phe Cys
        35   40   45

Gly Asn Gln Leu Pro Ala Tyr Lys Arg Phe Gln Ile Thr Trp Phe Val
    50   55   60

Ser Trp Asn Pro Cys Pro Asp Cys Val Ala Lys Val Ile Glu Phe Leu
65   70   75   80

Ala Glu His Pro Asn Val Thr Leu Thr Ile Ser Thr Ala Arg Leu Tyr
                85   90   95

Tyr Tyr Trp Gly Arg Asp Trp Gln Arg Ala Leu Cys Arg Leu
            100   105   110

<210> 107
<211> 110
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 107

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

Pro Ser Lys Leu Pro Trp Asp Thr Gly Val Phe Arg Gly Gln Val Tyr
            20   25   30

Ser Lys Pro Glu His His Ala Glu Met Cys Phe Leu Ser Arg Phe Cys
35 40 45

Gly Asn Gln Leu Pro Ala Tyr Lys Arg Phe Gln Ile Thr Trp Phe Val
50 55 60

Ser Trp Asn Pro Cys Pro Asp Cys Val Ala Lys Val Ile Glu Phe Leu
65 70 75 80

Ala Glu His Pro Asn Val Thr Leu Thr Ile Ser Thr Ala Arg Leu Tyr
85 90 95

Tyr Tyr Trp Gly Arg Asp Trp Gln Arg Ala Leu Cys Arg Leu
100 105 110

<210> 108
<211> 110
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 108

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

Pro Ser Lys Leu Pro Trp Asp Thr Gly Val Phe Arg Gly Gln Val Tyr
20 25 30

Ser Lys Pro Glu His His Ala Glu Met Cys Phe Leu Ser Arg Phe Cys
35 40 45

Gly Asn Gln Leu Pro Ala Tyr Lys Arg Phe Gln Ile Thr Trp Phe Val
50 55 60

Ser Trp Asn Pro Cys Pro Asp Cys Val Val Lys Val Ile Glu Phe Leu
65 70 75 80

Ala Glu His Pro Asn Val Thr Leu Thr Ile Ser Thr Ala Arg Leu Tyr
85 90 95

Tyr Tyr Trp Gly Arg Asp Trp Gln Arg Ala Leu Cys Arg Leu
100 105 110

<210> 109
<211> 110
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 109

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

Pro Ser Lys Leu Pro Trp Tyr Thr Gly Val Phe Arg Gly Gln Val Tyr
20 25 30

Ser Lys Pro Glu His His Ala Glu Met Cys Phe Leu Ser Arg Phe Cys
35 40 45

Gly Asn Gln Leu Pro Ala Tyr Lys Arg Phe Gln Ile Thr Trp Phe Val
50 55 60

Ser Trp Asn Pro Cys Pro Asp Cys Val Ala Lys Val Ile Glu Phe Leu
65 70 75 80

Ala Glu His Pro Asn Val Thr Leu Thr Ile Phe Thr Ala Arg Leu Tyr
85 90 95

Tyr Tyr Trp Gly Arg Asp Trp Gln Arg Ala Leu Cys Arg Leu
100 105 110

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

<220>
<223> Synthetic

<400> 110

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

Pro Ser Lys Leu Pro Trp Asp Thr Gly Val Phe Arg Gly Gln Val Tyr
            20   25   30

Ser Lys Pro Glu His His Ala Glu Met Cys Phe Leu Ser Arg Phe Cys
        35   40   45

Gly Asn Gln Leu Pro Ala Tyr Lys Arg Phe Gln Ile Thr Trp Phe Val
    50   55   60

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

Ala Glu His Pro Asn Val Thr Leu Thr Ile Ser Thr Ala Arg Leu Tyr
                85   90   95

Tyr Tyr Trp Gly Arg Asp Trp Gln Arg Ala Leu Cys Arg Leu
            100   105   110

<210> 111
<211> 110
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 111

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

Pro Ser Lys Leu Pro Trp Asp Thr Gly Val Phe Arg Gly Gln Val Tyr
            20   25   30

Ser Glu Pro Glu His His Ala Glu Met Tyr Phe Leu Ser Trp Phe Cys
        35   40   45

Gly Asn Gln Leu Pro Ala Tyr Lys Arg Phe Gln Ile Thr Trp Phe Val
    50   55   60

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

```
Thr Glu His Pro Asn Val Thr Leu Thr Ile Ser Ala Ala Arg Leu Tyr
                85                  90                  95


Tyr Tyr Arg Gly Arg Asp Trp Arg Arg Ala Leu Cys Arg Leu
            100                 105                 110


<210>  112
<211>  110
<212>  PRT
<213>  Artificial Sequence

<220>
<223>  Synthetic

<400>  112

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


Pro Ser Lys Leu Pro Trp Asp Thr Gly Val Phe Arg Gly Gln Val Tyr
            20                  25                  30


Ser Glu Pro Glu His His Ala Glu Met Tyr Phe Leu Ser Trp Phe Cys
        35                  40                  45


Gly Asn Gln Leu Pro Ala Tyr Lys Arg Phe Gln Ile Thr Trp Phe Val
    50                  55                  60


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


Thr Glu His Pro Asn Val Thr Leu Thr Ile Ser Ala Ala Arg Leu Tyr
                85                  90                  95


Tyr Tyr Arg Gly Arg Asp Trp Arg Arg Ala Leu Cys Arg Leu
            100                 105                 110


<210>  113
<211>  110
<212>  PRT
<213>  Artificial Sequence

<220>
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<223> Synthetic

<400> 113

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

Pro Ser Lys Leu Pro Trp Asp Thr Gly Val Phe Arg Gly Gln Met Tyr
20 25 30

Ser Lys Pro Glu His His Ala Glu Met Cys Phe Leu Ser Trp Phe Cys
35 40 45

Gly Asn Gln Leu Pro Ala His Lys Arg Phe Gln Ile Thr Trp Phe Val
50 55 60

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

Ala Glu Tyr Pro Asn Val Thr Leu Thr Ile Ser Ala Ala Arg Leu Tyr
85 90 95

Tyr Tyr Trp Glu Thr Asp Tyr Arg Arg Ala Leu Cys Arg Leu
100 105 110

<210> 114
<211> 109
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 114

Arg Ser Tyr Thr Trp Leu Cys Tyr Glu Val Lys Ile Arg Lys Asp Pro
1 5 10 15

Ser Lys Leu Pro Trp Asp Thr Gly Val Phe Arg Gly Gln Met Tyr Phe
20 25 30

Gln Pro Glu Tyr His Ala Glu Met Cys Phe Leu Ser Trp Phe Cys Gly
35 40 45

```
Asn Gln Leu Pro Ala Tyr Lys Arg Phe Gln Ile Thr Trp Phe Val Ser
    50                  55                  60

Trp Thr Pro Cys Pro Asp Cys Val Ala Lys Val Ala Val Phe Leu Ala
65                  70                  75                  80

Glu His Pro Asn Val Thr Leu Thr Ile Ser Ala Ala Arg Leu Tyr Tyr
                85                  90                  95

Tyr Trp Glu Lys Asp Trp Gln Arg Ala Leu Cys Arg Leu
            100                 105
```

<210> 115
<211> 110
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<220>
<221> misc_feature
<222> (103)..(103)
<223> Xaa can be any naturally occurring amino acid

<400> 115

```
Gly Arg Ser Tyr Thr Trp Leu Cys Tyr Glu Val Lys Ile Lys Lys Tyr
1               5                   10                  15

Pro Ser Lys Leu Leu Trp Asp Thr Gly Val Phe Gln Gly Gln Val Tyr
            20                  25                  30

Phe Gln Pro Gln Tyr His Ala Glu Met Cys Phe Leu Ser Arg Phe Cys
        35                  40                  45

Gly Asn Gln Leu Pro Ala Tyr Lys Arg Phe Gln Ile Thr Trp Phe Val
    50                  55                  60

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

Ala Glu His Pro Asn Val Thr Leu Thr Ile Ser Ala Ala Arg Leu Tyr
                85                  90                  95
```

Tyr Tyr Trp Glu Lys Asp Xaa Arg Arg Ala Leu Arg Arg Leu
100 105 110

<210> 116
<211> 110
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 116

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

Pro Ser Lys Leu Leu Trp Asp Thr Gly Val Phe Gln Gly Gln Val Tyr
20 25 30

Phe Gln Pro Gln Tyr His Ala Glu Met Cys Phe Leu Ser Arg Phe Cys
35 40 45

Gly Asn Gln Leu Pro Ala Tyr Lys Arg Phe Gln Ile Thr Trp Phe Val
50 55 60

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

Ala Glu His Pro Asn Val Thr Leu Thr Ile Ser Ala Ala Arg Leu Tyr
85 90 95

Tyr Tyr Trp Gly Arg Asp Trp Arg Arg Ala Leu Arg Arg Leu
100 105 110

<210> 117
<211> 122
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 117

```
Gly Arg Arg Tyr Thr Trp Leu Cys Tyr Glu Val Lys Ile Lys Lys Asp
1               5                   10                  15


Pro Ser Lys Leu Pro Trp Asp Thr Gly Val Phe Pro Gly Gln Val Arg
            20                  25                  30


Pro Lys Phe Gln Ser Asn Arg Arg Tyr Glu Val Tyr Phe Gln Pro Gln
        35                  40                  45


Tyr His Ala Glu Met Tyr Phe Leu Ser Trp Phe Cys Gly Asn Gln Leu
    50                  55                  60


Pro Ala Tyr Lys His Phe Gln Ile Thr Trp Phe Val Ser Trp Asn Pro
65                  70                  75                  80


Cys Pro Asp Cys Val Ala Lys Val Thr Glu Phe Leu Ala Glu His Arg
                85                  90                  95


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


Lys Asp Trp Arg Arg Ala Leu Cys Arg Leu
        115                 120


<210>  118
<211>  106
<212>  PRT
<213>  Artificial Sequence

<220>
<223>  Synthetic

<400>  118

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


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


Tyr His Ala Glu Met Tyr Phe Leu Ser Trp Phe Cys Gly Asn Gln Leu
        35                  40                  45
```

Pro Ala Tyr Lys His Phe Gln Ile Thr Trp Phe Val Ser Trp Asn Pro
    50   55   60

Cys Pro Asp Cys Val Ala Lys Val Thr Glu Phe Leu Ala Glu His Arg
65   70   75   80

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

Lys Asp Trp Arg Arg Ala Leu Cys Arg Leu
            100   105

<210> 119
<211> 122
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 119

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

Pro Ser Lys Leu Pro Trp Asp Thr Gly Val Phe Pro Gly Gln Val Arg
            20   25   30

Pro Lys Phe Gln Ser Asn Arg Arg Gln Lys Val Tyr Phe Gln Pro Gln
        35   40   45

Tyr His Ala Glu Met Tyr Phe Leu Ser Trp Phe Cys Gly Asn Gln Leu
    50   55   60

Pro Ala Tyr Lys His Phe Gln Ile Thr Trp Phe Val Ser Trp Asn Pro
65   70   75   80

Cys Pro Asp Cys Val Ala Lys Val Thr Glu Phe Leu Ala Glu His Arg
                85   90   95

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

Lys Asp Trp Arg Arg Ala Leu Cys Arg Leu
        115   120

<210> 120
<211> 122
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 120

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

Pro Ser Lys Leu Pro Trp Asp Thr Gly Val Phe Gln Gly Gln Val Arg
            20   25   30

Pro Lys Phe Gln Ser Asn Arg Arg Tyr Glu Val Tyr Phe Gln Pro Gln
        35   40   45

Tyr His Ala Glu Met Cys Phe Leu Ser Trp Phe Cys Gly Asn Gln Leu
    50   55   60

Pro Ala Tyr Lys His Phe Gln Ile Thr Trp Phe Val Ser Trp Asn Pro
65   70   75   80

Cys Pro Asp Cys Val Ala Lys Val Thr Glu Phe Leu Ala Glu His Pro
                85   90   95

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

Lys Asp Trp Arg Arg Ala Leu Cys Arg Leu
        115   120

<210> 121
<211> 131
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 121

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

Pro Ser Lys Leu Pro Trp Asp Thr Gly Val Phe Arg Gly Gln Val Arg
20 25 30

Pro Lys Leu Gln Ser Asn Arg Arg Tyr Glu Leu Ser Asn Trp Glu Cys
35 40 45

Arg Lys Arg Val Tyr Phe Gln Pro Gln Tyr His Ala Glu Met Tyr Phe
50 55 60

Leu Ser Trp Phe Cys Gly Asn Gln Leu Pro Ala Asn Lys Arg Phe Gln
65 70 75 80

Ile Thr Trp Phe Ala Ser Trp Asn Pro Cys Pro Asp Cys Val Ala Lys
85 90 95

Val Thr Glu Phe Leu Ala Glu His Pro Asn Val Thr Leu Thr Ile Ser
100 105 110

Val Ala Arg Leu Tyr Tyr Tyr Arg Gly Lys Asp Trp Arg Arg Ala Leu
115 120 125

Arg Arg Leu
130

<210> 122
<211> 110
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 122

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

Pro Ser Lys Leu Pro Trp Asp Thr Gly Val Phe Arg Gly Gln Val Tyr
20 25 30

```
Phe Gln Pro Gln Tyr His Ala Glu Met Tyr Phe Leu Ser Trp Phe Cys
        35                  40                  45


Gly Asn Gln Leu Pro Ala Asn Lys Arg Phe Gln Ile Thr Trp Phe Ala
    50                  55                  60


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


Ala Glu His Pro Asn Val Thr Leu Thr Ile Ser Val Ala Arg Leu Tyr
                85                  90                  95


Tyr Tyr Arg Gly Lys Asp Trp Arg Arg Ala Leu Arg Arg Leu
            100                 105                 110
```

<210> 123
<211> 110
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 123

```
Gly Arg Ser Tyr Thr Trp Leu Cys Tyr Glu Val Lys Ile Arg Lys Asp
1               5                   10                  15


Pro Ser Lys Leu Pro Trp Asp Thr Gly Val Phe Arg Asp Gln Val Tyr
            20                  25                  30


Phe Gln Pro Gln Tyr His Ala Glu Met Cys Phe Leu Ser Trp Phe Cys
        35                  40                  45


Gly Asn Gln Leu Pro Ala Asn Lys Arg Phe Gln Ile Thr Trp Phe Val
    50                  55                  60


Ser Trp Asn Pro Cys Pro Asp Cys Val Thr Lys Val Thr Glu Phe Leu
65                  70                  75                  80


Ala Glu His Pro Asn Val Thr Leu Thr Ile Ser Val Ala Arg Leu Tyr
                85                  90                  95
```

Tyr Tyr Arg Gly Lys Asp Trp Arg Arg Ala Leu Arg Arg Leu
100 105 110

<210> 124
<211> 110
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 124

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

Pro Ser Lys Leu Pro Trp Tyr Thr Gly Val Phe Arg Gly Gln Val Tyr
20 25 30

Phe Gln Pro Gln Tyr His Ala Glu Met Cys Phe Leu Ser Trp Phe Cys
35 40 45

Gly Asn Gln Leu Pro Ala Asn Lys Arg Phe Gln Ile Thr Trp Phe Val
50 55 60

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

Ala Glu His Pro Asn Val Thr Leu Thr Ile Ser Val Ala Arg Leu Tyr
85 90 95

Tyr Tyr Arg Gly Lys Asp Trp Arg Arg Ala Leu Arg Arg Leu
100 105 110

<210> 125
<211> 110
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 125

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1               5                   10                  15

Pro Ser Lys Leu Pro Trp Asp Thr Gly Val Phe Arg Gly Gln Val Tyr
            20                  25                  30

Phe Gln Pro Gln Tyr His Ala Glu Met Cys Phe Leu Ser Trp Phe Cys
        35                  40                  45

Gly Asn Gln Leu Pro Ala Tyr Lys Arg Phe Gln Ile Thr Trp Phe Val
    50                  55                  60

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

Ala Glu His Pro Asn Val Thr Leu Thr Ile Ser Val Ala Arg Leu Tyr
                85                  90                  95

Tyr Tyr Arg Gly Lys Asp Trp Arg Arg Ala Leu Cys Arg Leu
            100                 105                 110
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<213> Artificial Sequence

<220>
<223> Synthetic

<400> 126

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

Ser Ser Asn Leu Leu Trp Asn Thr Gly Val Phe Arg Gly Pro Val Pro
            20                  25                  30

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

Asn His Ala Glu Met Cys Phe Leu Ser Trp Phe Cys Gly Asn Arg Leu
    50                  55                  60
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Pro Ala Asn Arg Arg Phe Gln Ile Thr Trp Phe Val Ser Trp Asn Pro
65                  70                  75                  80


Cys Leu Pro Cys Val Val Lys Val Thr Lys Phe Leu Ala Glu His Pro
                85                  90                  95


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


Arg Glu Trp Arg Arg Val Leu Arg Arg Leu
        115                 120
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<211> 122
<212> PRT
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<220>
<223> Synthetic

<400> 127

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


Cys Ser Asn Leu Ile Trp Asp Thr Gly Val Phe Arg Gly Pro Val Leu
            20                  25                  30


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


Asn His Ala Glu Met Cys Phe Phe Ser Trp Phe Cys Gly Asn Arg Leu
    50                  55                  60


Pro Ala Asn Arg Arg Phe Gln Ile Thr Trp Phe Val Ser Trp Asn Pro
65                  70                  75                  80


Cys Leu Pro Cys Val Val Lys Val Thr Lys Phe Leu Ala Glu His Pro
                85                  90                  95


Asn Val Thr Leu Thr Ile Ser Ala Ala Arg Leu Tyr Tyr Tyr Gln Asp
            100                 105                 110
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Arg Glu Trp Arg Arg Val Leu Arg Arg Leu
115 120

<210> 128
<211> 122
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 128

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

Cys Ser Asn Leu Ile Trp Asp Thr Gly Val Phe Arg Gly Pro Val Leu
20 25 30

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

Asn His Ala Glu Met Cys Phe Phe Ser Trp Phe Cys Gly Asn Arg Leu
50 55 60

Pro Ala Asn Arg Arg Phe Gln Ile Thr Trp Phe Val Ser Trp Asn Pro
65 70 75 80

Cys Leu Pro Cys Val Val Lys Val Thr Lys Phe Leu Ala Glu His Pro
85 90 95

Asn Val Thr Leu Thr Ile Ser Ala Ala Arg Leu Tyr Tyr Tyr Gln Asp
100 105 110

Arg Glu Trp Arg Arg Val Leu Arg Arg Leu
115 120

<210> 129
<211> 122
<212> PRT
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<400> 129

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

Arg Ser Asn Leu Leu Trp Asp Thr Gly Val Phe Arg Gly Pro Val Leu
20 25 30

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

Asn His Ala Glu Met Cys Phe Leu Ser Trp Phe Cys Gly Asn Arg Leu
50 55 60

Pro Ala Asn Arg Arg Phe Gln Ile Thr Trp Phe Val Ser Trp Asn Pro
65 70 75 80

Cys Leu Pro Cys Val Val Lys Val Thr Lys Phe Leu Ala Glu His Pro
85 90 95

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

Arg Asp Trp Arg Trp Val Leu Leu Arg Leu
115 120

<210> 130
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<212> PRT
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<400> 130

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

Pro Ser Lys Leu Pro Trp Asp Lys Gly Val Phe Arg Gly Gln Val Leu
20 25 30

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

Asn His Ala Glu Met Cys Phe Leu Ser Trp Phe Cys Gly Asn Gln Leu
    50   55   60

Pro Ala Asn Arg Arg Phe Gln Ile Thr Trp Phe Val Ser Trp Asn Pro
65   70   75   80

Cys Leu Pro Cys Val Ala Lys Val Thr Glu Phe Leu Ala Glu His Pro
                85   90   95

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

Arg Asp Trp Arg Arg Ala Leu Arg Arg Leu
        115   120

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<212> PRT
<213> Artificial Sequence

<220>
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<400> 131

Gly Lys Lys Tyr Thr Trp Leu Cys Tyr Glu Val Lys Ile Lys Lys Asp
1   5   10   15

Thr Ser Lys Leu Pro Trp Asn Thr Gly Val Phe Arg Gly Gln Val Asn
            20   25   30

Phe Asn Pro Glu His His Ala Glu Met Tyr Phe Leu Ser Trp Phe Arg
        35   40   45

Gly Lys Leu Leu Pro Ala Cys Lys Arg Ser Gln Ile Thr Trp Phe Val
    50   55   60

Ser Trp Asn Pro Cys Leu Tyr Cys Val Ala Lys Val Ala Glu Phe Leu
65   70   75   80

Ala Glu His Pro Asn Val Thr Leu Thr Val Ser Thr Ala Arg Leu Tyr
                85   90   95

Cys Tyr Trp Lys Lys Asp Trp Arg Arg Ala Leu Arg Lys Leu
100 105 110

<210> 132
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<400> 132

Gly Lys Lys Tyr Thr Trp Leu Cys Tyr Glu Val Lys Ile Lys Lys Asp
1 5 10 15

Thr Ser Lys Leu Pro Trp Asn Thr Gly Val Phe Arg Gly Gln Val Asn
20 25 30

Phe Asn Pro Glu His His Ala Glu Met Tyr Phe Leu Ser Trp Phe Arg
35 40 45

Gly Lys Leu Leu Pro Ala Cys Lys Arg Ser Gln Ile Thr Trp Phe Val
50 55 60

Ser Trp Asn Pro Cys Leu Tyr Cys Val Ala Lys Val Ala Glu Phe Leu
65 70 75 80

Ala Glu His Pro Asn Val Thr Leu Thr Val Ser Thr Ala Arg Leu Tyr
85 90 95

Cys Tyr Trp Lys Lys Asp Trp Arg Arg Ala Leu Arg Lys Leu
100 105 110

<210> 133
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<212> PRT
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<400> 133

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1               5                   10                  15


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


Phe Glu Pro Gln Asn His Ala Glu Met Cys Phe Leu Ser Trp Phe Cys
        35                  40                  45


Gly Asn Gln Leu Pro Ala Tyr Glu Cys Cys Gln Ile Thr Trp Phe Val
    50                  55                  60


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


Ala Glu His Pro Asn Val Thr Leu Thr Ile Ser Ala Ala Arg Leu Tyr
                85                  90                  95


Tyr Tyr Arg Gly Arg Asp Trp Arg Arg Ala Leu Arg Arg Leu
            100                 105                 110
```

<210> 134
<211> 110
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<400> 134

```
Gly Arg Arg Tyr Thr Trp Leu Cys Tyr Glu Val Lys Ile Ser Lys Asp
1               5                   10                  15


Pro Ser Lys Leu Pro Trp Asp Thr Gly Ile Phe Arg Gly Gln Val Tyr
            20                  25                  30


Phe Glu Pro Gln Tyr His Ala Glu Met Cys Phe Leu Ser Trp Tyr Cys
        35                  40                  45


Gly Asn Gln Leu Pro Ala Tyr Lys Cys Phe Gln Ile Thr Trp Phe Val
    50                  55                  60
```

```
Ser Trp Thr Pro Cys Pro Asp Cys Val Gly Lys Val Ala Glu Phe Leu
65                  70                  75                  80


Ala Glu His Pro Asn Val Thr Leu Thr Ile Ser Ala Ala Arg Leu Tyr
                85                  90                  95


Tyr Tyr Trp Glu Thr Asp Tyr Arg Arg Ala Leu Cys Arg Leu
            100                 105                 110
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<210> 135
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<212> PRT
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<220>
<223> Synthetic

<400> 135

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Arg Asn Tyr Thr Trp Leu Cys Tyr Glu Val Lys Ile Arg Lys Asp Pro
1               5                   10                  15


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


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


His Ala Glu Met Cys Phe Leu Ser Trp Phe Cys Gly Asn Gln Leu Ser
    50                  55                  60


Ala Tyr Glu Arg Phe Gln Ile Thr Trp Phe Val Ser Trp Thr Pro Cys
65                  70                  75                  80


Pro Asp Cys Val Ala Met Leu Ala Glu Phe Leu Ala Glu His Pro Asn
                85                  90                  95


Val Thr Leu Thr Val Ser Ala Ala Arg Leu Tyr Tyr Tyr Trp Glu Arg
            100                 105                 110


Asp Tyr Arg Gly Ala Leu Arg Arg Leu
        115                 120
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<211> 126
<212> RNA
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<220>
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<400> 136
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agggccuagc aaguucaaau aaggcuaguc cguuaucaac uugaaaaagu ggcaccgagu 120

cggugc 126

<210> 137
<211> 126
<212> RNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 137
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agggccuagc aaguucaaau aaggcuaguc cguuaucaac uugaaaaagu ggcaccgagu 120

cggugc 126

<210> 138
<211> 126
<212> RNA
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<220>
<223> Synthetic

<400> 138
gccccauguc gacuacaucg guuugagagc uaggccaaca ugaggaucac ccaugucugc 60

agggccuagc aaguucaaau aaggcuaguc cguuaucaac uugaaaaagu ggcaccgagu 120

cggugc 126

<210> 139
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<212> RNA
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<220>

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agggccuagc aaguucaaau aaggcuaguc cguuaucaac uugaaaaagu ggcaccgagu 120

cggugc 126

<210> 140
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<212> RNA
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accuuggcuu uguuccuccc guuugagagc uaggccaaca ugaggaucac ccaugucugc 60

agggccuagc aaguucaaau aaggcuaguc cguuaucaac uugaaaaagu ggcaccgagu 120

cggugc 126

<210> 141
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<212> RNA
<213> Artificial Sequence

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<400> 141
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agggccuagc aaguucaaau aaggcuaguc cguuaucaac uugaaaaagu ggcaccgagu 120

cggugc 126

<210> 142
<211> 126
<212> RNA
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<400> 142
guggugcugc ugccccuggc guuugagagc uaggccaaca ugaggaucac ccaugucugc 60

agggccuagc aaguucaaau aaggcuaguc cguuaucaac uugaaaaagu ggcaccgagu 120

cggugc 126

<210> 143
<211> 126
<212> RNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 143
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agggccuagc aaguucaaau aaggcuaguc cguuaucaac uugaaaaagu ggcaccgagu 120

cggugc 126

<210> 144
<211> 126
<212> RNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 144
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agggccuagc aaguucaaau aaggcuaguc cguuaucaac uugaaaaagu ggcaccgagu 120

cggugc 126

<210> 145
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<212> RNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 145
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agggccuagc aaguucaaau aaggcuaguc cguuaucaac uugaaaaagu ggcaccgagu 120

cggugc 126

<210> 146
<211> 126

<212> RNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 146
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agggccuagc aaguucaaau aaggcuaguc cguuaucaac uugaaaaagu ggcaccgagu 120

cggugc 126

<210> 147
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<212> RNA
<213> Artificial Sequence

<220>
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<400> 147
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agggccuagc aaguucaaau aaggcuaguc cguuaucaac uugaaaaagu ggcaccgagu 120

cggugc 126

<210> 148
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<212> RNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 148
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agggccuagc aaguucaaau aaggcuaguc cguuaucaac uugaaaaagu ggcaccgagu 120

cggugc 126

<210> 149
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<212> RNA
<213> Artificial Sequence

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<223> Synthetic

<400> 149
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agggccuagc aaguucaaau aaggcuaguc cguuaucaac uugaaaaagu ggcaccgagu 120

cggugc 126

<210> 150
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<212> RNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 150
aggucuggaa ugcaaaguca guuugagagc uaggccaaca ugaggaucac ccaugucugc 60

agggccuagc aaguucaaau aaggcuaguc cguuaucaac uugaaaaagu ggcaccgagu 120

cggugc 126

<210> 151
<211> 126
<212> RNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 151
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caaauaaggc uaguccguua ucaacuuggg cccugaagaa gggcccaagu ggcaccgagu 120

cggugc 126

<210> 152
<211> 126
<212> RNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 152
caggcccagg cugcccgccg guuugagagc uagggcccug aagaagggcc cuagcaaguu 60

caaauaaggc uaguccguua ucaacuuggg cccugaagaa gggcccaagu ggcaccgagu 120

cggugc 126

<210> 153
<211> 126
<212> RNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 153
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caaauaaggc uaguccguua ucaacuuggg cccugaagaa gggcccaagu ggcaccgagu 120

cggugc 126

<210> 154
<211> 126
<212> RNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 154
cacagacagg uaagcacggc guuugagagc uagggcccug aagaagggcc cuagcaaguu 60

caaauaaggc uaguccguua ucaacuuggg cccugaagaa gggcccaagu ggcaccgagu 120

cggugc 126

<210> 155
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<212> RNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 155
aagccagcug guccagccug guuugagagc uagggcccug aagaagggcc cuagcaaguu 60

caaauaaggc uaguccguua ucaacuuggg cccugaagaa gggcccaagu ggcaccgagu 120

cggugc 126

<210> 156
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<213> Artificial Sequence

<220>
<223> Synthetic

<400> 156
gguccagccu gugggccac guuugagagc uagggcccug aagaagggcc cuagcaaguu 60

caaauaaggc uaguccguua ucaacuuggg cccugaagaa gggcccaagu ggcaccgagu 120

cggugc 126

<210> 157
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<212> RNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 157
cgccugccag cgccuggcga guuugagagc uagggcccug aagaagggcc cuagcaaguu 60

caaauaaggc uaguccguua ucaacuuggg cccugaagaa gggcccaagu ggcaccgagu 120

cggugc 126

<210> 158
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<213> Artificial Sequence

<220>
<223> Synthetic

<400> 158
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caaauaaggc uaguccguua ucaacuuggg cccugaagaa gggcccaagu ggcaccgagu 120

cggugc 126

<210> 159
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<400> 159
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caaauaaggc uaguccguua ucaacuuggg cccugaagaa gggcccaagu ggcaccgagu 120

cggugc 126

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<400> 160
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caaauaaggc uaguccguua ucaacuuggg cccugaagaa gggcccaagu ggcaccgagu 120

cggugc 126

<210> 161
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<212> RNA
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<400> 161
cuaccccagg ccaacugcag guuugagagc uagggcccug aagaagggcc cuagcaaguu 60

caaauaaggc uaguccguua ucaacuuggg cccugaagaa gggcccaagu ggcaccgagu 120

cggugc 126

<210> 162
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<212> RNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 162
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caaauaaggc uaguccguua ucaacuuggg cccugaagaa gggcccaagu ggcaccgagu 120

cggugc 126

<210> 163
<211> 126
<212> RNA
<213> Artificial Sequence

<220>
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<400> 163
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caaauaaggc uaguccguua ucaacuuggg cccugaagaa gggcccaagu ggcaccgagu 120

cggugc 126

<210> 164
<211> 126
<212> RNA
<213> Artificial Sequence

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<223> Synthetic

<400> 164
ccaaccagug cgugggccac guuugagagc uagggcccug aagaagggcc cuagcaaguu 60

caaauaaggc uaguccguua ucaacuuggg cccugaagaa gggcccaagu ggcaccgagu 120

cggugc 126

<210> 165
<211> 126
<212> RNA
<213> Artificial Sequence

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<223> Synthetic

<400> 165
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caaauaaggc uaguccguua ucaacuuggg cccugaagaa gggcccaagu ggcaccgagu 120

cggugc 126

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<210> 167
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<400> 167
gagacccacc tctcgcagtc aga 23

<210> 168
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<400> 168
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<210> 169
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<400> 169
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<210> 170
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<400> 170
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<210> 171
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<210> 172
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<210> 173
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<210> 174
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<400> 174
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<210> 175
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<400> 175
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<210> 176
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<400> 176
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<210> 177
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<400> 177
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<210> 178
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<400> 178
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<210> 179
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<400> 179
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<210> 180
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<400> 180
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<210> 181
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<400> 181
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<210> 182
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<400> 182
caggcccagg ctgcccgccg ggg 23

<210> 183
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<400> 183
tctttgccca gagcatcccg tgg 23

<210> 184
<211> 23
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<223> Synthetic

<400> 184
cacagacagg taagcacggc cgt 23

<210> 185
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<223> Synthetic

<400> 185
aagccagctg gtccagcctg tgg 23

<210> 186
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<400> 186
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<210> 187
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<210> 188
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<400> 191
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<210> 192
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<210> 193
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