SEQUENCE LISTING

<110> ALLOGENE THERAPEUTICS, INC.
PFIZER INC.

<120> DLL3 TARGETING CHIMERIC ANTIGEN RECEPTORS AND BINDING AGENTS

<130> AT-019/03WO

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<150> 62/969,976
<151> 2020-02-04

<150> 62/812,585
<151> 2019-03-01

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<170> PatentIn version 3.5

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Cys Ala Arg Leu Phe Asn Trp Gly Phe Ala Phe Asp Ile Trp
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peptide"

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<212> PRT
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<220>
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<400> 7
Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Glu
1   5   10   15

Thr Leu Ser Leu Thr Cys Thr Val Ser Asp Asn Ser Ile Ser Asn Tyr
            20   25   30

Tyr Trp Ser Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp Ile
        35   40   45

Ala Tyr Ile Tyr Tyr Ser Gly Thr Thr Asn Tyr Asn Pro Ser Leu Lys
    50   55   60

Ser Arg Val Thr Ile Ser Leu Asp Thr Ser Lys Asn Gln Phe Ser Leu
65   70   75   80

Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr Cys Ala
                85   90   95

Arg Leu Phe Asn Trp Gly Phe Ala Phe Asp Ile Trp Gly Gln Gly Thr
            100   105   110

Met Val Thr Val Ser Ser
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Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Ser Asn
20 25 30

Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile
35 40 45

Tyr Gly Ala Ser Thr Arg Ala Thr Gly Ile Pro Ala Arg Phe Ser Gly
50 55 60

Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln Ser
65 70 75 80

Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Asn Asn Trp Pro Leu
85 90 95

Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
100 105

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1 5 10 15

Thr Leu Ser Leu Thr Cys Thr Val Ser Asp Asn Ser Ile Ser Asn Tyr
20 25 30

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Tyr Trp Ser Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp Ile
        35                  40                  45

Ala Tyr Ile Tyr Tyr Ser Gly Thr Thr Asn Tyr Asn Pro Ser Leu Lys
    50                  55                  60

Ser Arg Val Thr Ile Ser Leu Asp Thr Ser Lys Asn Gln Phe Ser Leu
65                  70                  75                  80

Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr Cys Ala
                85                  90                  95

Arg Leu Phe Asn Trp Gly Phe Ala Phe Asp Ile Trp Gly Gln Gly Thr
            100                 105                 110

Met Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
        115                 120                 125

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Ile Val Met Thr Gln
    130                 135                 140

Ser Pro Ala Thr Leu Ser Val Ser Pro Gly Glu Arg Ala Thr Leu Ser
145                 150                 155                 160

Cys Arg Ala Ser Gln Ser Val Ser Ser Asn Leu Ala Trp Tyr Gln Gln
                165                 170                 175

Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile Tyr Gly Ala Ser Thr Arg
            180                 185                 190

Ala Thr Gly Ile Pro Ala Arg Phe Ser Gly Ser Gly Ser Gly Thr Glu
        195                 200                 205

Phe Thr Leu Thr Ile Ser Ser Leu Gln Ser Glu Asp Phe Ala Val Tyr
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Tyr Cys Gln Gln Tyr Asn Asn Trp Pro Leu Thr Phe Gly Gly Gly Thr
225                 230                 235                 240
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Lys Val Glu Ile Lys
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Gly Tyr Ile Tyr Tyr Ser Gly Thr Thr Asn Tyr Asn
1 5 10

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<223> /note="Description of Artificial Sequence: Synthetic
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<400> 14
Gly Ala Ser Ser Arg Ala Thr
1 5

<210> 15
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<400> 15
Cys Gln Gln Tyr Gly Thr Ser Pro Leu Thr Phe
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<210> 16
<211> 118
<212> PRT
<213> Artificial Sequence

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

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Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Met Lys Pro Ser Glu

1 5 10 15

Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Gly Ser Ile Ser Ser Ser
20 25 30

Tyr Trp Ser Cys Ile Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp Ile
35 40 45

Gly Tyr Ile Tyr Tyr Ser Gly Thr Thr Asn Tyr Asn Pro Ser Leu Lys
50 55 60

Ser Arg Val Thr Leu Ser Leu Asp Thr Ser Lys Asn Gln Phe Ser Leu
65 70 75 80

Arg Leu Thr Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr Cys Ala
85 90 95

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

Leu Val Thr Val Ser Ser
115

<210> 17
<211> 108
<212> PRT
<213> Artificial Sequence

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

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

Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Arg Val Ser Ser Arg
20 25 30

Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu
35 40 45

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

Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu
65   70   75   80

Pro Glu Glu Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Gly Thr Ser Pro
                85   90   95

Leu Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
            100   105

<210> 18
<211> 246
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<213> Artificial Sequence

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<400> 18
Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Met Lys Pro Ser Glu
1   5   10   15

Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Gly Ser Ile Ser Ser Ser
            20   25   30

Tyr Trp Ser Cys Ile Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp Ile
        35   40   45

Gly Tyr Ile Tyr Tyr Ser Gly Thr Thr Asn Tyr Asn Pro Ser Leu Lys
    50   55   60

Ser Arg Val Thr Leu Ser Leu Asp Thr Ser Lys Asn Gln Phe Ser Leu
65   70   75   80

Arg Leu Thr Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr Cys Ala
                85   90   95

Arg Val Ala Pro Thr Gly Phe Trp Phe Asp Tyr Trp Gly Gln Gly Thr

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            100                 105                 110

Leu Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
        115                 120                 125

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Ile Val Leu Thr Gln
    130                 135                 140

Ser Pro Gly Thr Leu Ser Leu Ser Pro Gly Glu Arg Ala Thr Leu Ser
145                 150                 155                 160

Cys Arg Ala Ser Gln Arg Val Ser Ser Arg Tyr Leu Ala Trp Tyr Gln
                165                 170                 175

Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile Tyr Gly Ala Ser Ser
            180                 185                 190

Arg Ala Thr Gly Ile Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr
        195                 200                 205

Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu Glu Phe Ala Val
    210                 215                 220

Tyr Tyr Cys Gln Gln Tyr Gly Thr Ser Pro Leu Thr Phe Gly Gly Gly
225                 230                 235                 240

Thr Lys Val Glu Ile Lys
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<400> 19
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Phe Thr Phe Ser Ser His Asp Met His
1               5
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<210> 20
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<400> 20
Ser Ala Ile Gly Ile Ala Gly Asp Thr Tyr Tyr Ser
1 5 10

<210> 21
<211> 14
<212> PRT
<213> Artificial Sequence

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<400> 21
Cys Ala Arg Ala Asn Trp Gly Glu Gly Ala Phe Asp Ile Trp
1 5 10

<210> 22
<211> 11
<212> PRT
<213> Artificial Sequence

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<400> 22
Arg Ala Ser Gln Gly Ile Ser Asp Tyr Leu Ala
1 5 10

<210> 23
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<400> 23
Ala Ala Ser Thr Leu Gln Ser
1 5

<210> 24
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<400> 24
Cys Gln Lys Tyr Asn Ser Val Pro Leu Thr Phe
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<210> 25
<211> 118
<212> PRT
<213> Artificial Sequence

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

<400> 25
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser His
20 25 30

Asp Met His Trp Val Arg Gln Ala Thr Gly Lys Gly Leu Glu Trp Val
35 40 45

Ser Ala Ile Gly Ile Ala Gly Asp Thr Tyr Tyr Ser Gly Ser Val Lys
50 55 60

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

Gln Met Asn Ser Leu Arg Ala Gly Asp Thr Ala Val Tyr Tyr Cys Ala
85 90 95

Arg Ala Asn Trp Gly Glu Gly Ala Phe Asp Ile Trp Gly Gln Gly Thr
100 105 110

Met Val Thr Val Ser Ser
115

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<211> 107
<212> PRT
<213> Artificial Sequence

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Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
1 5 10 15

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

Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ile Pro Lys Leu Leu Ile
35 40 45

Tyr Ala Ala Ser Thr Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
50 55 60

Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
65 70 75 80

Glu Asp Val Ala Thr Tyr Tyr Cys Gln Lys Tyr Asn Ser Val Pro Leu
85 90 95

Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
100 105

<210> 27

<211> 245
<212> PRT
<213> Artificial Sequence

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<400> 27
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser His
20 25 30

Asp Met His Trp Val Arg Gln Ala Thr Gly Lys Gly Leu Glu Trp Val
35 40 45

Ser Ala Ile Gly Ile Ala Gly Asp Thr Tyr Tyr Ser Gly Ser Val Lys
50 55 60

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

Gln Met Asn Ser Leu Arg Ala Gly Asp Thr Ala Val Tyr Tyr Cys Ala
85 90 95

Arg Ala Asn Trp Gly Glu Gly Ala Phe Asp Ile Trp Gly Gln Gly Thr
100 105 110

Met Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
115 120 125

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Gln Met Thr Gln
130 135 140

Ser Pro Ser Ser Leu Ser Ala Ser Val Gly Asp Arg Val Thr Ile Thr
145 150 155 160

Cys Arg Ala Ser Gln Gly Ile Ser Asp Tyr Leu Ala Trp Tyr Gln Gln
165 170 175

Lys Pro Gly Lys Ile Pro Lys Leu Leu Ile Tyr Ala Ala Ser Thr Leu
180 185 190

Gln Ser Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp
195 200 205

Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro Glu Asp Val Ala Thr Tyr
210 215 220

Tyr Cys Gln Lys Tyr Asn Ser Val Pro Leu Thr Phe Gly Gly Gly Thr
225 230 235 240

Lys Val Glu Ile Lys
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<210> 28
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<212> PRT
<213> Artificial Sequence

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<400> 28
Asp Ser Ile Ser Asn Tyr Tyr Trp Ser
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<210> 29
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<212> PRT
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<400> 29
Asp Ser Ile Ser Asn Tyr Tyr Trp Ser
1 5

<210> 30
<211> 14

<212> PRT
<213> Artificial Sequence

<220>
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<400> 30
Cys Ala Arg Val Phe Asn Trp Gly Phe Ala Phe Asp Ile Trp
1 5 10

<210> 31
<211> 12
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<400> 31
Arg Ala Ser Gln Arg Ile Ser Arg Thr Tyr Leu Ala
1 5 10

<210> 32
<211> 7
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<400> 32
Gly Ala Ser Ser Arg Ala Thr
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<210> 33
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
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<400> 33
Cys Gln Gln Tyr Gly Thr Ser Pro Leu Thr Phe
1   5   10

<210> 34
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<212> PRT
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<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 34
Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Glu
1   5   10   15

Thr Leu Ser Leu Thr Cys Thr Val Ser Asp Asp Ser Ile Ser Asn Tyr
            20   25   30

Tyr Trp Ser Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp Ile
        35   40   45

Gly Tyr Ile Phe Tyr Ser Gly Thr Thr Asn His Asn Pro Ser Leu Lys
    50   55   60

Ser Arg Leu Thr Ile Ser Leu Asp Lys Ala Lys Asn Gln Phe Ser Leu
65   70   75   80

Arg Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr Cys Ala
                85   90   95

Arg Val Phe Asn Trp Gly Phe Ala Phe Asp Ile Trp Gly Gln Gly Thr
            100   105   110

Met Val Thr Val Ser Ser
        115

<210> 35
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<212> PRT
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<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

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

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

Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu
35 40 45

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

Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu
65 70 75 80

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

Leu Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Asn
100 105

<210> 36
<211> 246
<212> PRT
<213> Artificial Sequence

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

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

Thr Leu Ser Leu Thr Cys Thr Val Ser Asp Asp Ser Ile Ser Asn Tyr
20 25 30

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Tyr Trp Ser Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp Ile
        35                  40                  45

Gly Tyr Ile Phe Tyr Ser Gly Thr Thr Asn His Asn Pro Ser Leu Lys
    50                  55                  60

Ser Arg Leu Thr Ile Ser Leu Asp Lys Ala Lys Asn Gln Phe Ser Leu
65                  70                  75                  80

Arg Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr Cys Ala
                85                  90                  95

Arg Val Phe Asn Trp Gly Phe Ala Phe Asp Ile Trp Gly Gln Gly Thr
            100                 105                 110

Met Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
        115                 120                 125

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Ile Val Leu Thr Gln
    130                 135                 140

Ser Pro Gly Thr Leu Ser Leu Ser Pro Gly Glu Arg Ala Thr Leu Ser
145                 150                 155                 160

Cys Arg Ala Ser Gln Arg Ile Ser Arg Thr Tyr Leu Ala Trp Tyr Gln
                165                 170                 175

Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile Tyr Gly Ala Ser Ser
            180                 185                 190

Arg Ala Thr Gly Ile Pro Asp Arg Phe Thr Gly Ser Gly Ser Gly Thr
        195                 200                 205

Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu Asp Phe Ala Val
    210                 215                 220

Tyr Tyr Cys Gln Gln Tyr Gly Thr Ser Pro Leu Thr Phe Gly Gly Gly
225                 230                 235                 240

Thr Lys Val Glu Ile Asn
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245

<210> 37
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<212> PRT
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<400> 37
Asn Ser Ile Ser Asn Tyr Tyr Trp Ser
1 5

<210> 38
<211> 12
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<400> 38
Ala Tyr Ile Tyr Tyr Ser Gly Thr Thr Asn Tyr Asn
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<210> 39
<211> 14
<212> PRT
<213> Artificial Sequence

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Cys Ala Arg Val Phe His Trp Gly Phe Ala Phe Asp Ile Trp
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peptide"

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Arg Ala Ser Gln Arg Val Ser Asn Thr Tyr Leu Ala
1 5 10

<210> 41
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<213> Artificial Sequence

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Gly Ala Ser Ser Arg Ala Thr
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<210> 42
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peptide"

<400> 42
Cys Gln Gln Tyr Gly Thr Ser Pro Leu Thr Phe
1 5 10

<210> 43
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<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 43
Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Glu
1 5 10 15

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Thr Leu Ser Leu Thr Cys Thr Val Ser Asp Asn Ser Ile Ser Asn Tyr
            20                  25                  30


Tyr Trp Ser Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp Ile
        35                  40                  45


Ala Tyr Ile Tyr Tyr Ser Gly Thr Thr Asn Tyr Asn Pro Ser Leu Lys
    50                  55                  60


Ser Arg Val Thr Ile Ser Leu Asp Thr Ser Lys Asn Gln Phe Ser Leu
65                  70                  75                  80


Gln Leu Ser Ser Val Thr Ala Ala Asp Ala Ala Val Tyr Tyr Cys Ala
                85                  90                  95


Arg Val Phe His Trp Gly Phe Ala Phe Asp Ile Trp Gly Gln Gly Thr
            100                 105                 110


Met Val Thr Val Ser Ser
        115


<210> 44
<211> 108
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<213> Artificial Sequence

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

<400> 44
Glu Ile Val Leu Thr Gln Ser Pro Gly Thr Leu Ser Leu Ser Pro Gly
1               5                   10                  15


Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Arg Val Ser Asn Thr
            20                  25                  30


Tyr Leu Ala Trp Tyr Gln Gln Asn Pro Gly Gln Ala Pro Arg Leu Leu
        35                  40                  45
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Ile Tyr Gly Ala Ser Ser Arg Ala Thr Gly Ile Pro Asp Arg Phe Ser
50 55 60

Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu
65 70 75 80

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

Leu Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
100 105

<210> 45
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Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Glu
1 5 10 15

Thr Leu Ser Leu Thr Cys Thr Val Ser Asp Asn Ser Ile Ser Asn Tyr
20 25 30

Tyr Trp Ser Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp Ile
35 40 45

Ala Tyr Ile Tyr Tyr Ser Gly Thr Thr Asn Tyr Asn Pro Ser Leu Lys
50 55 60

Ser Arg Val Thr Ile Ser Leu Asp Thr Ser Lys Asn Gln Phe Ser Leu
65 70 75 80

Gln Leu Ser Ser Val Thr Ala Ala Asp Ala Ala Val Tyr Tyr Cys Ala
85 90 95

Arg Val Phe His Trp Gly Phe Ala Phe Asp Ile Trp Gly Gln Gly Thr
100 105 110

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Met Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
        115                 120                 125

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Ile Val Leu Thr Gln
    130                 135                 140

Ser Pro Gly Thr Leu Ser Leu Ser Pro Gly Glu Arg Ala Thr Leu Ser
145                 150                 155                 160

Cys Arg Ala Ser Gln Arg Val Ser Asn Thr Tyr Leu Ala Trp Tyr Gln
                165                 170                 175

Gln Asn Pro Gly Gln Ala Pro Arg Leu Leu Ile Tyr Gly Ala Ser Ser
            180                 185                 190

Arg Ala Thr Gly Ile Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr
        195                 200                 205

Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu Asp Phe Ala Val
    210                 215                 220

Tyr Tyr Cys Gln Gln Tyr Gly Thr Ser Pro Leu Thr Phe Gly Gly Gly
225                 230                 235                 240

Thr Lys Val Glu Ile Lys
                245
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<210> 46
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<400> 46
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Val Ser Ile Ser Ser Tyr Tyr Trp Ser
1               5
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<210> 47
<211> 12
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<213> Artificial Sequence

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

<400> 47
Gly Tyr Ile Tyr Tyr Ser Gly Thr Thr Asn Tyr Asn
1 5 10

<210> 48
<211> 14
<212> PRT
<213> Artificial Sequence

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

<400> 48
Cys Ala Arg Leu Ser Asn Trp Gly Phe Ala Phe Asp Ile Trp
1 5 10

<210> 49
<211> 12
<212> PRT
<213> Artificial Sequence

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

<400> 49
Arg Ala Ser Gln Thr Ile Ser Ser Ser Tyr Leu Ala
1 5 10

<210> 50
<211> 7
<212> PRT
<213> Artificial Sequence

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

peptide"

<400> 50
Gly Ala Ser Ser Arg Ala Thr
1 5

<210> 51
<211> 11
<212> PRT
<213> Artificial Sequence

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

<400> 51
Cys Gln Gln Tyr Gly Trp Ser Pro Ile Thr Phe
1 5 10

<210> 52
<211> 118
<212> PRT
<213> Artificial Sequence

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

<400> 52
Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Glu
1 5 10 15

Thr Leu Ser Leu Thr Cys Thr Val Ser Asn Val Ser Ile Ser Ser Tyr
20 25 30

Tyr Trp Ser Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp Ile
35 40 45

Gly Tyr Ile Tyr Tyr Ser Gly Thr Thr Asn Tyr Asn Pro Ser Leu Lys
50 55 60

Ser Arg Val Thr Met Ser Val Asp Thr Ser Lys Asn Gln Phe Ser Leu
65 70 75 80

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Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Phe Cys Ala
                85                  90                  95


Arg Leu Ser Asn Trp Gly Phe Ala Phe Asp Ile Trp Gly Gln Gly Thr
            100                 105                 110


Met Val Thr Phe Ser Ser
        115


<210> 53
<211> 108
<212> PRT
<213> Artificial Sequence

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

<400> 53
Glu Ile Val Leu Thr Gln Ser Pro Gly Thr Leu Ser Leu Ser Pro Gly
1               5                   10                  15


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


Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu
        35                  40                  45


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


Gly Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Arg Leu Glu
65                  70                  75                  80


Pro Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Gly Trp Ser Pro
                85                  90                  95


Ile Thr Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys
            100                 105


<210> 54
<211> 246
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<212> PRT
<213> Artificial Sequence

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

<400> 54
Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Glu
1 5 10 15

Thr Leu Ser Leu Thr Cys Thr Val Ser Asn Val Ser Ile Ser Ser Tyr
20 25 30

Tyr Trp Ser Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp Ile
35 40 45

Gly Tyr Ile Tyr Tyr Ser Gly Thr Thr Asn Tyr Asn Pro Ser Leu Lys
50 55 60

Ser Arg Val Thr Met Ser Val Asp Thr Ser Lys Asn Gln Phe Ser Leu
65 70 75 80

Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Phe Cys Ala
85 90 95

Arg Leu Ser Asn Trp Gly Phe Ala Phe Asp Ile Trp Gly Gln Gly Thr
100 105 110

Met Val Thr Phe Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
115 120 125

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Ile Val Leu Thr Gln
130 135 140

Ser Pro Gly Thr Leu Ser Leu Ser Pro Gly Glu Arg Ala Thr Leu Ser
145 150 155 160

Cys Arg Ala Ser Gln Thr Ile Ser Ser Ser Tyr Leu Ala Trp Tyr Gln
165 170 175

Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile Tyr Gly Ala Ser Ser
180 185 190

Arg Ala Thr Gly Ile Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr
195 200 205

Glu Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu Asp Phe Ala Val
210 215 220

Tyr Tyr Cys Gln Gln Tyr Gly Trp Ser Pro Ile Thr Phe Gly Gln Gly
225 230 235 240

Thr Arg Leu Glu Ile Lys
245

<210> 55
<211> 9
<212> PRT
<213> Artificial Sequence

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

<400> 55
Phe Thr Phe Ser Ser Tyr Asp Met His
1 5

<210> 56
<211> 12
<212> PRT
<213> Artificial Sequence

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

<400> 56
Ser Ala Ile Gly Pro Ala Gly Asp Thr Tyr Tyr Pro
1 5 10

<210> 57
<211> 16
<212> PRT

<213> Artificial Sequence

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

<400> 57
Cys Ala Arg Ala Asp Pro Pro Tyr Tyr Tyr Tyr Gly Met Asp Val Trp
1 5 10 15

<210> 58
<211> 16
<212> PRT
<213> Artificial Sequence

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

<400> 58
Arg Ser Ser Gln Ser Leu Leu His Ser Asn Glu Tyr Asn Tyr Leu Asp
1 5 10 15

<210> 59
<211> 7
<212> PRT
<213> Artificial Sequence

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

<400> 59
Leu Gly Ser Asn Arg Ala Ser
1 5

<210> 60
<211> 11
<212> PRT
<213> Artificial Sequence

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

<400> 60

Cys Met Gln Ala Leu Glu Ile Pro Leu Thr Phe
1 5 10

<210> 61
<211> 120
<212> PRT
<213> Artificial Sequence

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

<400> 61
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr
20 25 30

Asp Met His Trp Val Arg Gln Ala Thr Gly Lys Gly Leu Glu Trp Val
35 40 45

Ser Ala Ile Gly Pro Ala Gly Asp Thr Tyr Tyr Pro Gly Ser Val Lys
50 55 60

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

Gln Met Asn Ser Leu Arg Ala Gly Asp Thr Ala Val Tyr Tyr Cys Ala
85 90 95

Arg Ala Asp Pro Pro Tyr Tyr Tyr Tyr Gly Met Asp Val Trp Gly Gln
100 105 110

Gly Thr Thr Val Thr Val Ser Ser
115 120

<210> 62
<211> 112
<212> PRT
<213> Artificial Sequence

<220>

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

<400> 62
Asp Ile Val Met Thr Gln Ser Pro Leu Ser Leu Pro Val Thr Pro Gly
1 5 10 15

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

Asn Glu Tyr Asn Tyr Leu Asp Trp Tyr Leu Gln Lys Pro Gly Gln Ser
35 40 45

Pro Gln Leu Leu Ile Tyr Leu Gly Ser Asn Arg Ala Ser Gly Val Pro
50 55 60

Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Ile Leu Lys Ile
65 70 75 80

Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln Ala
85 90 95

Leu Glu Ile Pro Leu Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
100 105 110

<210> 63
<211> 252
<212> PRT
<213> Artificial Sequence

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

<400> 63
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr
20 25 30

Asp Met His Trp Val Arg Gln Ala Thr Gly Lys Gly Leu Glu Trp Val

```
        35                  40                  45

Ser Ala Ile Gly Pro Ala Gly Asp Thr Tyr Tyr Pro Gly Ser Val Lys
    50                  55                  60

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

Gln Met Asn Ser Leu Arg Ala Gly Asp Thr Ala Val Tyr Tyr Cys Ala
                85                  90                  95

Arg Ala Asp Pro Pro Tyr Tyr Tyr Tyr Gly Met Asp Val Trp Gly Gln
            100                 105                 110

Gly Thr Thr Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly
        115                 120                 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Val Met
    130                 135                 140

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

Ile Ser Cys Arg Ser Ser Gln Ser Leu Leu His Ser Asn Glu Tyr Asn
                165                 170                 175

Tyr Leu Asp Trp Tyr Leu Gln Lys Pro Gly Gln Ser Pro Gln Leu Leu
            180                 185                 190

Ile Tyr Leu Gly Ser Asn Arg Ala Ser Gly Val Pro Asp Arg Phe Ser
        195                 200                 205

Gly Ser Gly Ser Gly Thr Asp Phe Ile Leu Lys Ile Ser Arg Val Glu
    210                 215                 220

Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln Ala Leu Glu Ile Pro
225                 230                 235                 240

Leu Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
                245                 250
```

<210> 64
<211> 11
<212> PRT
<213> Artificial Sequence

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

<400> 64
Phe Ser Leu Ser Thr Arg Gly Val Gly Val Gly
1 5 10

<210> 65
<211> 12
<212> PRT
<213> Artificial Sequence

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

<400> 65
Ala Leu Ile Tyr Trp Asn Asp Asp Lys Arg Tyr Ser
1 5 10

<210> 66
<211> 14
<212> PRT
<213> Artificial Sequence

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

<400> 66
Cys Ala Arg Ser Asn Trp Gly Asn Trp Tyr Phe Ala Leu Trp
1 5 10

<210> 67
<211> 11
<212> PRT
<213> Artificial Sequence

<220>

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

<400> 67
Arg Ala Ser Gln Ser Val Ser Ser Tyr Leu Ala
1 5 10

<210> 68
<211> 7
<212> PRT
<213> Artificial Sequence

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

<400> 68
Asp Ala Phe Tyr Arg Ala Thr
1 5

<210> 69
<211> 11
<212> PRT
<213> Artificial Sequence

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

<400> 69
Cys Gln His Arg Ser Asn Trp Pro Ile Thr Phe
1 5 10

<210> 70
<211> 120
<212> PRT
<213> Artificial Sequence

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

<400> 70
Gln Ile Thr Leu Lys Glu Ser Gly Pro Thr Leu Val Lys Pro Thr Gln
1 5 10 15

```
Thr Leu Thr Leu Thr Cys Thr Phe Ser Gly Phe Ser Leu Ser Thr Arg
            20                  25                  30

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

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

Leu Gln Thr Arg Leu Thr Ile Thr Lys Asp Thr Pro Lys Asn Gln Val
65                  70                  75                  80

Val Leu Thr Met Thr Asn Met Asp Pro Val Asp Thr Ala Thr Tyr Tyr
                85                  90                  95

Cys Ala Arg Ser Asn Trp Gly Asn Trp Tyr Phe Ala Leu Trp Gly Arg
            100                 105                 110

Gly Thr Leu Val Thr Val Ser Ser
        115                 120


<210> 71
<211> 107
<212> PRT
<213> Artificial Sequence

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

<400> 71
Glu Ile Val Leu Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly
1               5                   10                  15

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

Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile
        35                  40                  45

Tyr Asp Ala Phe Tyr Arg Ala Thr Gly Ile Pro Ala Arg Phe Ser Gly
```

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    50                  55                  60

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

Glu Asp Phe Ala Val Tyr Tyr Cys Gln His Arg Ser Asn Trp Pro Ile
                85                  90                  95

Thr Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys
            100                 105

<210> 72
<211> 247
<212> PRT
<213> Artificial Sequence

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

<400> 72
Gln Ile Thr Leu Lys Glu Ser Gly Pro Thr Leu Val Lys Pro Thr Gln
1               5                   10                  15

Thr Leu Thr Leu Thr Cys Thr Phe Ser Gly Phe Ser Leu Ser Thr Arg
            20                  25                  30

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

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

Leu Gln Thr Arg Leu Thr Ile Thr Lys Asp Thr Pro Lys Asn Gln Val
65                  70                  75                  80

Val Leu Thr Met Thr Asn Met Asp Pro Val Asp Thr Ala Thr Tyr Tyr
                85                  90                  95

Cys Ala Arg Ser Asn Trp Gly Asn Trp Tyr Phe Ala Leu Trp Gly Arg
            100                 105                 110
```

```
Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly
        115                 120                 125


Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Ile Val Leu
    130                 135                 140


Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly Glu Arg Ala Thr
145                 150                 155                 160


Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Ser Tyr Leu Ala Trp Tyr
                165                 170                 175


Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile Tyr Asp Ala Phe
            180                 185                 190


Tyr Arg Ala Thr Gly Ile Pro Ala Arg Phe Ser Gly Ser Gly Ser Gly
        195                 200                 205


Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Glu Pro Glu Asp Phe Ala
    210                 215                 220


Val Tyr Tyr Cys Gln His Arg Ser Asn Trp Pro Ile Thr Phe Gly Gln
225                 230                 235                 240


Gly Thr Arg Leu Glu Ile Lys
                245


<210> 73
<211> 9
<212> PRT
<213> Artificial Sequence

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

<400> 73
Asp Ser Ile Ser Asn Tyr Tyr Trp Thr
1               5


<210> 74
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<211> 12
<212> PRT
<213> Artificial Sequence

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

<400> 74
Gly Tyr Ile Tyr Tyr Ser Gly Thr Thr Asn Ser Asn
1 5 10

<210> 75
<211> 14
<212> PRT
<213> Artificial Sequence

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

<400> 75
Cys Ala Arg Val Phe Asn Arg Gly Phe Ala Phe Asp Ile Trp
1 5 10

<210> 76
<211> 14
<212> PRT
<213> Artificial Sequence

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

<400> 76
Cys Ala Arg Val Phe Asn Arg Gly Phe Ala Phe Asp Ile Trp
1 5 10

<210> 77
<211> 7
<212> PRT
<213> Artificial Sequence

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

<400> 77
Gly Ala Ser Ser Arg Ala Thr
1   5

<210> 78
<211> 11
<212> PRT
<213> Artificial Sequence

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

<400> 78
Cys Gln Gln Tyr Asp Thr Ser Pro Leu Thr Phe
1   5   10

<210> 79
<211> 118
<212> PRT
<213> Artificial Sequence

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

<400> 79
Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Glu
1   5   10   15

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

Tyr Trp Thr Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp Ile
        35   40   45

Gly Tyr Ile Tyr Tyr Ser Gly Thr Thr Asn Ser Asn Pro Ser Leu Lys
    50   55   60

Ser Arg Val Thr Val Ser Leu Asp Thr Ser Lys Ser Gln Phe Ser Leu
65   70   75   80

Asn Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr Cys Ala

85 90 95

Arg Val Phe Asn Arg Gly Phe Ala Phe Asp Ile Trp Gly Gln Gly Thr
100 105 110

Met Val Thr Val Ser Ser
115

<210> 80
<211> 108
<212> PRT
<213> Artificial Sequence

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

<400> 80
Glu Ile Val Leu Thr Gln Ser Pro Gly Thr Leu Ser Leu Ser Pro Gly
1 5 10 15

Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Arg Ile Ser Asn Thr
20 25 30

Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu
35 40 45

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

Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu
65 70 75 80

Pro Glu Asp Phe Ala Ala Tyr Tyr Cys Gln Gln Tyr Asp Thr Ser Pro
85 90 95

Leu Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
100 105

<210> 81
<211> 246
<212> PRT

<213> Artificial Sequence

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

<400> 81
Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Glu
1 5 10 15

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

Tyr Trp Thr Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp Ile
35 40 45

Gly Tyr Ile Tyr Tyr Ser Gly Thr Thr Asn Ser Asn Pro Ser Leu Lys
50 55 60

Ser Arg Val Thr Val Ser Leu Asp Thr Ser Lys Ser Gln Phe Ser Leu
65 70 75 80

Asn Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr Cys Ala
85 90 95

Arg Val Phe Asn Arg Gly Phe Ala Phe Asp Ile Trp Gly Gln Gly Thr
100 105 110

Met Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
115 120 125

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Ile Val Leu Thr Gln
130 135 140

Ser Pro Gly Thr Leu Ser Leu Ser Pro Gly Glu Arg Ala Thr Leu Ser
145 150 155 160

Cys Arg Ala Ser Gln Arg Ile Ser Asn Thr Tyr Leu Ala Trp Tyr Gln
165 170 175

Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile Tyr Gly Ala Ser Ser

```
            180                 185                 190


Arg Ala Thr Gly Ile Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr
        195                 200                 205


Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu Asp Phe Ala Ala
    210                 215                 220


Tyr Tyr Cys Gln Gln Tyr Asp Thr Ser Pro Leu Thr Phe Gly Gly Gly
225                 230                 235                 240


Thr Lys Val Glu Ile Lys
                245


<210> 82
<211> 11
<212> PRT
<213> Artificial Sequence

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

<400> 82
Val Ser Leu Ser Thr Ser Gly Met Cys Val Ser
1               5                   10


<210> 83
<211> 12
<212> PRT
<213> Artificial Sequence

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

<400> 83
Gly Phe Ile Asp Trp Asp Asp Asp Lys Tyr Tyr Asn
1               5                   10


<210> 84
<211> 17
<212> PRT
<213> Artificial Sequence
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<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 84
Cys Ala Arg Ile Arg Gly Tyr Ser Gly Ser Tyr Asp Ala Phe Asp Ile
1 5 10 15

Trp

<210> 85
<211> 16
<212> PRT
<213> Artificial Sequence

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

<400> 85
Arg Ser Ser Gln Ser Leu Leu His Ser Asn Gly Tyr Asn His Leu Asp
1 5 10 15

<210> 86
<211> 7
<212> PRT
<213> Artificial Sequence

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

<400> 86
Leu Gly Ser Asn Arg Ala Ser
1 5

<210> 87
<211> 11
<212> PRT
<213> Artificial Sequence

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

peptide"

<400> 87
Cys Met Gln Ala Leu Gln Thr Pro Leu Thr Phe
1 5 10

<210> 88
<211> 123
<212> PRT
<213> Artificial Sequence

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

<400> 88
Gln Val Thr Leu Arg Glu Ser Gly Pro Ala Leu Val Lys Pro Thr Gln
1 5 10 15

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

Gly Met Cys Val Ser Trp Ile Arg Gln Pro Leu Gly Lys Ala Leu Glu
35 40 45

Trp Leu Gly Phe Ile Asp Trp Asp Asp Asp Lys Tyr Tyr Asn Thr Ser
50 55 60

Leu Lys Thr Arg Leu Thr Ile Ser Lys Asp Thr Ser Lys Asn Gln Val
65 70 75 80

Val Leu Thr Met Thr Asn Met Asp Pro Val Asp Thr Ala Thr Tyr Tyr
85 90 95

Cys Ala Arg Ile Arg Gly Tyr Ser Gly Ser Tyr Asp Ala Phe Asp Ile
100 105 110

Trp Gly Gln Gly Thr Val Val Ile Val Ser Ser
115 120

<210> 89
<211> 112
<212> PRT

<213> Artificial Sequence

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

<400> 89
Asp Ile Val Met Thr Gln Ser Pro Leu Ser Leu Pro Val Thr Pro Gly
1 5 10 15

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

Asn Gly Tyr Asn His Leu Asp Trp Tyr Leu Gln Lys Pro Gly Gln Ser
35 40 45

Pro Gln Val Leu Ile Tyr Leu Gly Ser Asn Arg Ala Ser Gly Val Pro
50 55 60

Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile
65 70 75 80

Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Phe Cys Met Gln Ala
85 90 95

Leu Gln Thr Pro Leu Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
100 105 110

<210> 90
<211> 255
<212> PRT
<213> Artificial Sequence

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

<400> 90
Gln Val Thr Leu Arg Glu Ser Gly Pro Ala Leu Val Lys Pro Thr Gln
1 5 10 15

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

```
Gly Met Cys Val Ser Trp Ile Arg Gln Pro Leu Gly Lys Ala Leu Glu
        35                  40                  45

Trp Leu Gly Phe Ile Asp Trp Asp Asp Asp Lys Tyr Tyr Asn Thr Ser
    50                  55                  60

Leu Lys Thr Arg Leu Thr Ile Ser Lys Asp Thr Ser Lys Asn Gln Val
65                  70                  75                  80

Val Leu Thr Met Thr Asn Met Asp Pro Val Asp Thr Ala Thr Tyr Tyr
                85                  90                  95

Cys Ala Arg Ile Arg Gly Tyr Ser Gly Ser Tyr Asp Ala Phe Asp Ile
            100                 105                 110

Trp Gly Gln Gly Thr Val Val Ile Val Ser Ser Gly Gly Gly Gly Ser
        115                 120                 125

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

Ile Val Met Thr Gln Ser Pro Leu Ser Leu Pro Val Thr Pro Gly Glu
145                 150                 155                 160

Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Leu His Ser Asn
                165                 170                 175

Gly Tyr Asn His Leu Asp Trp Tyr Leu Gln Lys Pro Gly Gln Ser Pro
            180                 185                 190

Gln Val Leu Ile Tyr Leu Gly Ser Asn Arg Ala Ser Gly Val Pro Asp
        195                 200                 205

Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile Ser
    210                 215                 220

Arg Val Glu Ala Glu Asp Val Gly Val Tyr Phe Cys Met Gln Ala Leu
225                 230                 235                 240
```

Gln Thr Pro Leu Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
245 250 255

<210> 91
<211> 9
<212> PRT
<213> Artificial Sequence

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

<400> 91
Gly Ser Ile Ser Ser Tyr Tyr Trp Ser
1 5

<210> 92
<211> 12
<212> PRT
<213> Artificial Sequence

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

<400> 92
Gly Tyr Met Tyr Tyr Ser Gly Thr Thr Asn Tyr Asn
1 5 10

<210> 93
<211> 14
<212> PRT
<213> Artificial Sequence

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

<400> 93
Cys Ala Arg Val Gly Leu Thr Gly Phe Phe Phe Asp Tyr Trp
1 5 10

<210> 94
<211> 11
<212> PRT

<213> Artificial Sequence

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

<400> 94
Arg Ala Ser Gln Gly Ile Arg Asn Asp Leu Gly
1 5 10

<210> 95
<211> 7
<212> PRT
<213> Artificial Sequence

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

<400> 95
Ala Ala Ser Ser Leu Gln Ser
1 5

<210> 96
<211> 11
<212> PRT
<213> Artificial Sequence

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

<400> 96
Cys Leu Gln Asp Tyr Asn Tyr Pro Tyr Thr Phe
1 5 10

<210> 97
<211> 118
<212> PRT
<213> Artificial Sequence

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

<400> 97

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


Thr Leu Ser Leu Thr Cys Ser Val Ser Gly Gly Ser Ile Ser Ser Tyr
            20                  25                  30


Tyr Trp Ser Trp Ile Arg Gln Ser Pro Gly Lys Gly Leu Asp Trp Ile
        35                  40                  45


Gly Tyr Met Tyr Tyr Ser Gly Thr Thr Asn Tyr Asn Pro Ser Leu Lys
    50                  55                  60


Ser Arg Val Thr Ile Ser Val Asp Thr Ser Lys Asn Gln Phe Ser Leu
65                  70                  75                  80


Lys Leu Ser Ser Val Thr Ala Thr Asp Thr Ala Val Tyr Tyr Cys Ala
                85                  90                  95


Arg Val Gly Leu Thr Gly Phe Phe Phe Asp Tyr Trp Gly Gln Gly Thr
            100                 105                 110


Leu Val Thr Val Ser Ser
        115


<210> 98
<211> 107
<212> PRT
<213> Artificial Sequence

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

<400> 98
Ala Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
1               5                   10                  15


Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Gly Ile Arg Asn Asp
            20                  25                  30


Leu Gly Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
        35                  40                  45
```

```
Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
    50                  55                  60


Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Val Ser Ser Leu Gln Pro
65                  70                  75                  80


Glu Asp Phe Ala Thr Tyr Tyr Cys Leu Gln Asp Tyr Asn Tyr Pro Tyr
                85                  90                  95


Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
            100                 105


<210> 99
<211> 245
<212> PRT
<213> Artificial Sequence

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

<400> 99
Gln Val Gln Leu Gln Val Ser Gly Pro Gly Leu Val Lys Pro Ser Glu
1               5                   10                  15


Thr Leu Ser Leu Thr Cys Ser Val Ser Gly Gly Ser Ile Ser Ser Tyr
            20                  25                  30


Tyr Trp Ser Trp Ile Arg Gln Ser Pro Gly Lys Gly Leu Asp Trp Ile
        35                  40                  45


Gly Tyr Met Tyr Tyr Ser Gly Thr Thr Asn Tyr Asn Pro Ser Leu Lys
    50                  55                  60


Ser Arg Val Thr Ile Ser Val Asp Thr Ser Lys Asn Gln Phe Ser Leu
65                  70                  75                  80


Lys Leu Ser Ser Val Thr Ala Thr Asp Thr Ala Val Tyr Tyr Cys Ala
                85                  90                  95
```

```
Arg Val Gly Leu Thr Gly Phe Phe Phe Asp Tyr Trp Gly Gln Gly Thr
            100                 105                 110

Leu Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
        115                 120                 125

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Ile Gln Met Thr Gln
    130                 135                 140

Ser Pro Ser Ser Leu Ser Ala Ser Val Gly Asp Arg Val Thr Ile Thr
145                 150                 155                 160

Cys Arg Ala Ser Gln Gly Ile Arg Asn Asp Leu Gly Trp Tyr Gln Gln
                165                 170                 175

Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile Tyr Ala Ala Ser Ser Leu
            180                 185                 190

Gln Ser Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp
        195                 200                 205

Phe Thr Leu Thr Val Ser Ser Leu Gln Pro Glu Asp Phe Ala Thr Tyr
    210                 215                 220

Tyr Cys Leu Gln Asp Tyr Asn Tyr Pro Tyr Thr Phe Gly Gln Gly Thr
225                 230                 235                 240

Lys Leu Glu Ile Lys
                245
```

<210> 100
<211> 9
<212> PRT
<213> Artificial Sequence

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

<400> 100
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Gly Ser Ser Ser Gly Asn Tyr Trp Ser
1               5
```

<210> 101
<211> 12
<212> PRT
<213> Artificial Sequence

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

<400> 101
Gly Glu Ile Asn His Ser Gly Thr Thr Ser Tyr Asn
1 5 10

<210> 102
<211> 12
<212> PRT
<213> Artificial Sequence

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

<400> 102
Cys Ala Arg Gly Glu Leu Gly Ile Ala Asp Ser Trp
1 5 10

<210> 103
<211> 11
<212> PRT
<213> Artificial Sequence

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

<400> 103
Arg Ala Ser Gln Ser Ile Ser Arg Trp Leu Ala
1 5 10

<210> 104
<211> 7
<212> PRT
<213> Artificial Sequence

<220>

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

<400> 104
Lys Ala Ser Ser Leu Glu Ser
1 5

<210> 105
<211> 10
<212> PRT
<213> Artificial Sequence

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

<400> 105
Cys Gln Gln Tyr Asn Ser Tyr Ser Thr Phe
1 5 10

<210> 106
<211> 116
<212> PRT
<213> Artificial Sequence

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

<400> 106
Gln Val Gln Leu Gln Gln Trp Gly Gly Gly Leu Leu Lys Pro Ser Glu
1 5 10 15

Thr Leu Ser Leu Thr Cys Ala Val Tyr Gly Gly Ser Ser Ser Gly Asn
20 25 30

Tyr Trp Ser Trp Ile Arg Gln Pro Pro Gly Lys Arg Leu Glu Trp Ile
35 40 45

Gly Glu Ile Asn His Ser Gly Thr Thr Ser Tyr Asn Pro Ser Leu Lys
50 55 60

Ser Arg Val Thr Ile Ser Val Asp Thr Ser Lys Asn Gln Phe Ser Leu
65 70 75 80

```
Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr Cys Ala
                85                  90                  95


Arg Gly Glu Leu Gly Ile Ala Asp Ser Trp Gly Gln Gly Thr Leu Val
            100                 105                 110


Thr Val Ser Ser
        115


<210> 107
<211> 106
<212> PRT
<213> Artificial Sequence

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

<400> 107
Asp Ile Gln Met Thr Gln Ser Pro Ser Thr Leu Ser Ala Ser Val Gly
1               5                   10                  15


Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Ser Arg Trp
            20                  25                  30


Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
        35                  40                  45


Tyr Lys Ala Ser Ser Leu Glu Ser Gly Val Pro Ser Arg Phe Ser Gly
    50                  55                  60


Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
65                  70                  75                  80


Asp Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Tyr Asn Ser Tyr Ser Thr
                85                  90                  95


Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
            100                 105
```

<210> 108
<211> 242
<212> PRT
<213> Artificial Sequence

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

<400> 108
Gln Val Gln Leu Gln Gln Trp Gly Gly Gly Leu Leu Lys Pro Ser Glu
1 5 10 15

Thr Leu Ser Leu Thr Cys Ala Val Tyr Gly Gly Ser Ser Ser Gly Asn
20 25 30

Tyr Trp Ser Trp Ile Arg Gln Pro Pro Gly Lys Arg Leu Glu Trp Ile
35 40 45

Gly Glu Ile Asn His Ser Gly Thr Thr Ser Tyr Asn Pro Ser Leu Lys
50 55 60

Ser Arg Val Thr Ile Ser Val Asp Thr Ser Lys Asn Gln Phe Ser Leu
65 70 75 80

Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr Cys Ala
85 90 95

Arg Gly Glu Leu Gly Ile Ala Asp Ser Trp Gly Gln Gly Thr Leu Val
100 105 110

Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly
115 120 125

Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Gln Met Thr Gln Ser Pro
130 135 140

Ser Thr Leu Ser Ala Ser Val Gly Asp Arg Val Thr Ile Thr Cys Arg
145 150 155 160

Ala Ser Gln Ser Ile Ser Arg Trp Leu Ala Trp Tyr Gln Gln Lys Pro
165 170 175

```
Gly Lys Ala Pro Lys Leu Leu Ile Tyr Lys Ala Ser Ser Leu Glu Ser
            180                 185                 190


Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Glu Phe Thr
        195                 200                 205


Leu Thr Ile Ser Ser Leu Gln Pro Asp Asp Phe Ala Thr Tyr Tyr Cys
    210                 215                 220


Gln Gln Tyr Asn Ser Tyr Ser Thr Phe Gly Gln Gly Thr Lys Val Glu
225                 230                 235                 240


Ile Lys
```

<210> 109
<211> 11
<212> PRT
<213> Artificial Sequence

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

<400> 109
Gly Ser Ile Ser Ser Ser Ser Tyr Tyr Trp Gly
1   5   10

<210> 110
<211> 12
<212> PRT
<213> Artificial Sequence

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

<400> 110
Gly Ser Ile Tyr Tyr Ser Gly Asn Ile Tyr His Asn
1   5   10

<210> 111

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

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

<400> 111
Cys Ala Arg Glu Ile Ile Val Gly Ala Thr His Phe Asp Tyr Trp
1 5 10 15

<210> 112
<211> 11
<212> PRT
<213> Artificial Sequence

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

<400> 112
Arg Ala Ser Gln Gly Ile Arg Asn Asp Leu Gly
1 5 10

<210> 113
<211> 7
<212> PRT
<213> Artificial Sequence

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

<400> 113
Ala Ala Ser Ser Leu Gln Ser
1 5

<210> 114
<211> 11
<212> PRT
<213> Artificial Sequence

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

<400> 114
Cys Leu Gln Asp Tyr Asn Tyr Pro Leu Thr Phe
1   5   10

<210> 115
<211> 121
<212> PRT
<213> Artificial Sequence

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

<400> 115
Gln Leu Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Glu
1   5   10   15

Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Gly Ser Ile Ser Ser Ser
            20   25   30

Ser Tyr Tyr Trp Gly Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu Glu
        35   40   45

Trp Ile Gly Ser Ile Tyr Tyr Ser Gly Asn Ile Tyr His Asn Pro Ser
    50   55   60

Leu Lys Ser Arg Val Ser Ile Ser Val Asp Thr Ser Lys Asn Gln Phe
65   70   75   80

Ser Leu Arg Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr
                85   90   95

Cys Ala Arg Glu Ile Ile Val Gly Ala Thr His Phe Asp Tyr Trp Gly
            100   105   110

Gln Gly Thr Leu Val Thr Val Ser Ser
        115   120

<210> 116
<211> 107
<212> PRT
<213> Artificial Sequence

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

<400> 116
Ala Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
1 5 10 15

Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Gly Ile Arg Asn Asp
20 25 30

Leu Gly Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Glu Leu Leu Ile
35 40 45

Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
50 55 60

Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
65 70 75 80

Glu Asp Phe Ala Thr Tyr Tyr Cys Leu Gln Asp Tyr Asn Tyr Pro Leu
85 90 95

Thr Phe Gly Pro Gly Thr Lys Val Asp Ile Lys
100 105

<210> 117
<211> 248
<212> PRT
<213> Artificial Sequence

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

<400> 117
Gln Leu Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Glu
1 5 10 15

Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Gly Ser Ile Ser Ser Ser
20 25 30

```
Ser Tyr Tyr Trp Gly Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu Glu
        35                  40                  45

Trp Ile Gly Ser Ile Tyr Tyr Ser Gly Asn Ile Tyr His Asn Pro Ser
    50                  55                  60

Leu Lys Ser Arg Val Ser Ile Ser Val Asp Thr Ser Lys Asn Gln Phe
65                  70                  75                  80

Ser Leu Arg Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr
                85                  90                  95

Cys Ala Arg Glu Ile Ile Val Gly Ala Thr His Phe Asp Tyr Trp Gly
            100                 105                 110

Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly
        115                 120                 125

Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Ile Gln
    130                 135                 140

Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly Asp Arg Val
145                 150                 155                 160

Thr Ile Thr Cys Arg Ala Ser Gln Gly Ile Arg Asn Asp Leu Gly Trp
                165                 170                 175

Tyr Gln Gln Lys Pro Gly Lys Ala Pro Glu Leu Leu Ile Tyr Ala Ala
            180                 185                 190

Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser
        195                 200                 205

Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro Glu Asp Phe
    210                 215                 220

Ala Thr Tyr Tyr Cys Leu Gln Asp Tyr Asn Tyr Pro Leu Thr Phe Gly
225                 230                 235                 240
```

Pro Gly Thr Lys Val Asp Ile Lys
245

<210> 118
<211> 9
<212> PRT
<213> Artificial Sequence

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

<400> 118
Gly Ser Phe Ser Gly Tyr Tyr Trp Ser
1 5

<210> 119
<211> 12
<212> PRT
<213> Artificial Sequence

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

<400> 119
Gly Glu Ile Ile His Ser Gly Ser Ser Asn Tyr Asn
1 5 10

<210> 120
<211> 15
<212> PRT
<213> Artificial Sequence

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

<400> 120
Cys Ser Arg Gly Glu Tyr Gly Ser Gly Ser Arg Phe Asp Tyr Trp
1 5 10 15

<210> 121
<211> 11
<212> PRT
<213> Artificial Sequence

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

<400> 121
Arg Ala Ser Gln Gly Ile Arg Asp Asp Leu Gly
1 5 10

<210> 122
<211> 7
<212> PRT
<213> Artificial Sequence

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

<400> 122
Ala Ala Ser Ser Leu Gln Ser
1 5

<210> 123
<211> 11
<212> PRT
<213> Artificial Sequence

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

<400> 123
Cys Leu Gln Asp Tyr Asp Tyr Pro Leu Thr Phe
1 5 10

<210> 124
<211> 119
<212> PRT
<213> Artificial Sequence

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

<400> 124
Gln Val Gln Leu Gln Gln Trp Gly Ala Gly Leu Leu Lys Pro Ser Glu

1 5 10 15

Thr Leu Ser Leu Thr Cys Ala Val Tyr Gly Gly Ser Phe Ser Gly Tyr
20 25 30

Tyr Trp Ser Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp Ile
35 40 45

Gly Glu Ile Ile His Ser Gly Ser Ser Asn Tyr Asn Pro Ser Leu Lys
50 55 60

Ser Arg Val Ser Ile Ser Val Asp Thr Ser Lys Asn Gln Phe Ser Leu
65 70 75 80

Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr Cys Ser
85 90 95

Arg Gly Glu Tyr Gly Ser Gly Ser Arg Phe Asp Tyr Trp Gly Gln Gly
100 105 110

Thr Leu Val Thr Val Ser Ser
115

<210> 125
<211> 107
<212> PRT
<213> Artificial Sequence

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

<400> 125
Ala Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
1 5 10 15

Asp Arg Val Ala Ile Thr Cys Arg Ala Ser Gln Gly Ile Arg Asp Asp
20 25 30

Leu Gly Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
35 40 45

```
Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
    50                  55                  60


Ser Arg Ser Asp Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
65                  70                  75                  80


Glu Asp Phe Ala Thr Tyr Tyr Cys Leu Gln Asp Tyr Asp Tyr Pro Leu
                85                  90                  95


Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
            100                 105


<210> 126
<211> 246
<212> PRT
<213> Artificial Sequence

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

<400> 126
Gln Val Gln Leu Gln Gln Trp Gly Ala Gly Leu Leu Lys Pro Ser Glu
1               5                   10                  15


Thr Leu Ser Leu Thr Cys Ala Val Tyr Gly Gly Ser Phe Ser Gly Tyr
            20                  25                  30


Tyr Trp Ser Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp Ile
        35                  40                  45


Gly Glu Ile Ile His Ser Gly Ser Ser Asn Tyr Asn Pro Ser Leu Lys
    50                  55                  60


Ser Arg Val Ser Ile Ser Val Asp Thr Ser Lys Asn Gln Phe Ser Leu
65                  70                  75                  80


Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr Cys Ser
                85                  90                  95


Arg Gly Glu Tyr Gly Ser Gly Ser Arg Phe Asp Tyr Trp Gly Gln Gly
```

100 105 110

Thr Leu Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly
115 120 125

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Ile Gln Met Thr
130 135 140

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

Thr Cys Arg Ala Ser Gln Gly Ile Arg Asp Asp Leu Gly Trp Tyr Gln
165 170 175

Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile Tyr Ala Ala Ser Ser
180 185 190

Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly Ser Arg Ser Asp Thr
195 200 205

Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro Glu Asp Phe Ala Thr
210 215 220

Tyr Tyr Cys Leu Gln Asp Tyr Asp Tyr Pro Leu Thr Phe Gly Gly Gly
225 230 235 240

Thr Lys Val Glu Ile Lys
245

<210> 127
<211> 10
<212> PRT
<213> Artificial Sequence

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

<400> 127
Gly Ser Ile Ser Ser Asn Asn Trp Trp Ser
1 5 10

<210> 128
<211> 12
<212> PRT
<213> Artificial Sequence

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

<400> 128
Gly Asp Ile His His Ser Gly Ser Thr Asn Tyr Lys
1 5 10

<210> 129
<211> 12
<212> PRT
<213> Artificial Sequence

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

<400> 129
Cys Ala Arg Glu Ala Gly Gly Tyr Phe Asp Tyr Trp
1 5 10

<210> 130
<211> 11
<212> PRT
<213> Artificial Sequence

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

<400> 130
Arg Ala Ser Gln Ser Ile Ser Ser Trp Leu Ala
1 5 10

<210> 131
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<221> source

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

<400> 131
Lys Ala Ser Ser Leu Glu Ser
1 5

<210> 132
<211> 10
<212> PRT
<213> Artificial Sequence

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

<400> 132
Cys Gln Gln Tyr Asn Ser Tyr Ser Thr Phe
1 5 10

<210> 133
<211> 117
<212> PRT
<213> Artificial Sequence

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

<400> 133
Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Gly
1 5 10 15

Thr Leu Ser Leu Thr Cys Ala Val Ser Gly Gly Ser Ile Ser Ser Asn
20 25 30

Asn Trp Trp Ser Trp Val Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp
35 40 45

Ile Gly Asp Ile His His Ser Gly Ser Thr Asn Tyr Lys Pro Ser Leu
50 55 60

Lys Ser Arg Val Thr Ile Ser Val Asp Lys Ser Lys Asn Gln Phe Ser
65 70 75 80

Leu Asn Leu Ile Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Glu Ala Gly Gly Tyr Phe Asp Tyr Trp Gly Gln Gly Ile Leu
100 105 110

Val Thr Val Ser Ser
115

<210> 134
<211> 106
<212> PRT
<213> Artificial Sequence

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

<400> 134
Asp Ile Gln Met Thr Gln Ser Pro Ser Thr Leu Ser Ala Ser Val Gly
1 5 10 15

Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Ser Ser Trp
20 25 30

Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
35 40 45

Ser Lys Ala Ser Ser Leu Glu Ser Gly Val Pro Ser Arg Phe Ser Gly
50 55 60

Ser Gly Ser Gly Pro Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
65 70 75 80

Ala Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Tyr Asn Ser Tyr Ser Thr
85 90 95

Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
100 105

<210> 135

<211> 243
<212> PRT
<213> Artificial Sequence

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

<400> 135
Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Gly
1 5 10 15

Thr Leu Ser Leu Thr Cys Ala Val Ser Gly Gly Ser Ile Ser Ser Asn
20 25 30

Asn Trp Trp Ser Trp Val Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp
35 40 45

Ile Gly Asp Ile His His Ser Gly Ser Thr Asn Tyr Lys Pro Ser Leu
50 55 60

Lys Ser Arg Val Thr Ile Ser Val Asp Lys Ser Lys Asn Gln Phe Ser
65 70 75 80

Leu Asn Leu Ile Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Glu Ala Gly Gly Tyr Phe Asp Tyr Trp Gly Gln Gly Ile Leu
100 105 110

Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly
115 120 125

Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Gln Met Thr Gln Ser
130 135 140

Pro Ser Thr Leu Ser Ala Ser Val Gly Asp Arg Val Thr Ile Thr Cys
145 150 155 160

Arg Ala Ser Gln Ser Ile Ser Ser Trp Leu Ala Trp Tyr Gln Gln Lys
165 170 175

```
Pro Gly Lys Ala Pro Lys Leu Leu Ile Ser Lys Ala Ser Ser Leu Glu
            180                 185                 190


Ser Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly Pro Glu Phe
        195                 200                 205


Thr Leu Thr Ile Ser Ser Leu Gln Pro Ala Asp Phe Ala Thr Tyr Tyr
    210                 215                 220


Cys Gln Gln Tyr Asn Ser Tyr Ser Thr Phe Gly Gln Gly Thr Lys Leu
225                 230                 235                 240


Glu Ile Lys



<210> 136
<211> 9
<212> PRT
<213> Artificial Sequence

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

<400> 136
Gly Ser Phe Ser Gly Tyr Tyr Trp Thr
1               5


<210> 137
<211> 12
<212> PRT
<213> Artificial Sequence

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

<400> 137
Gly Glu Ile Thr His Ser Gly Ser Thr Asn Tyr Asn
1               5                   10


<210> 138
<211> 15
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<212> PRT
<213> Artificial Sequence

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

<400> 138
Cys Ala Arg Gly Glu Tyr Gly Ser Gly Ser Arg Phe Asp Tyr Trp
1 5 10 15

<210> 139
<211> 11
<212> PRT
<213> Artificial Sequence

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

<400> 139
Arg Ala Ser Gln Gly Ile Arg Asp Asp Leu Gly
1 5 10

<210> 140
<211> 7
<212> PRT
<213> Artificial Sequence

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

<400> 140
Ala Ala Ser Ser Leu Gln Ser
1 5

<210> 141
<211> 11
<212> PRT
<213> Artificial Sequence

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

<400> 141
Cys Leu Gln Asp Tyr Asp Tyr Pro Leu Thr Phe
1   5   10

<210> 142
<211> 119
<212> PRT
<213> Artificial Sequence

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

<400> 142
Gln Val Gln Leu Gln Gln Trp Gly Ala Gly Leu Leu Lys Pro Ser Glu
1   5   10   15

Thr Leu Ser Leu Thr Cys Ala Val Tyr Gly Gly Ser Phe Ser Gly Tyr
            20   25   30

Tyr Trp Thr Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp Ile
        35   40   45

Gly Glu Ile Thr His Ser Gly Ser Thr Asn Tyr Asn Pro Ser Leu Lys
    50   55   60

Ser Arg Val Ser Ile Ser Val Asp Thr Ser Lys Asn Gln Phe Ser Leu
65   70   75   80

Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr Cys Ala
                85   90   95

Arg Gly Glu Tyr Gly Ser Gly Ser Arg Phe Asp Tyr Trp Gly Gln Gly
            100   105   110

Thr Leu Val Thr Val Ser Ser
        115

<210> 143
<211> 107
<212> PRT
<213> Artificial Sequence

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

<400> 143
Ala Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
1 5 10 15

Asp Arg Val Ala Ile Thr Cys Arg Ala Ser Gln Gly Ile Arg Asp Asp
20 25 30

Leu Gly Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
35 40 45

Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
50 55 60

Ser Gly Ser Asp Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
65 70 75 80

Glu Asp Phe Ala Thr Tyr Tyr Cys Leu Gln Asp Tyr Asp Tyr Pro Leu
85 90 95

Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
100 105

<210> 144
<211> 246
<212> PRT
<213> Artificial Sequence

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

<400> 144
Gln Val Gln Leu Gln Gln Trp Gly Ala Gly Leu Leu Lys Pro Ser Glu
1 5 10 15

Thr Leu Ser Leu Thr Cys Ala Val Tyr Gly Gly Ser Phe Ser Gly Tyr
20 25 30

```
Tyr Trp Thr Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp Ile
        35                  40                  45

Gly Glu Ile Thr His Ser Gly Ser Thr Asn Tyr Asn Pro Ser Leu Lys
    50                  55                  60

Ser Arg Val Ser Ile Ser Val Asp Thr Ser Lys Asn Gln Phe Ser Leu
65                  70                  75                  80

Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr Cys Ala
                85                  90                  95

Arg Gly Glu Tyr Gly Ser Gly Ser Arg Phe Asp Tyr Trp Gly Gln Gly
            100                 105                 110

Thr Leu Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly
        115                 120                 125

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Ile Gln Met Thr
    130                 135                 140

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

Thr Cys Arg Ala Ser Gln Gly Ile Arg Asp Asp Leu Gly Trp Tyr Gln
                165                 170                 175

Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile Tyr Ala Ala Ser Ser
            180                 185                 190

Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Asp Thr
        195                 200                 205

Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro Glu Asp Phe Ala Thr
    210                 215                 220

Tyr Tyr Cys Leu Gln Asp Tyr Asp Tyr Pro Leu Thr Phe Gly Gly Gly
225                 230                 235                 240

Thr Lys Val Glu Ile Lys
```

245

<210> 145
<211> 9
<212> PRT
<213> Artificial Sequence

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

<400> 145
Gly Ser Phe Ser Gly Tyr Tyr Trp Ser
1 5

<210> 146
<211> 12
<212> PRT
<213> Artificial Sequence

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

<400> 146
Gly Glu Ile Thr His Ser Gly Ser Thr Asn Tyr Asn
1 5 10

<210> 147
<211> 15
<212> PRT
<213> Artificial Sequence

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

<400> 147
Cys Ala Arg Gly Glu Tyr Gly Ser Gly Ser Arg Phe Asp Tyr Trp
1 5 10 15

<210> 148
<211> 11
<212> PRT
<213> Artificial Sequence

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

<400> 148
Arg Ala Ser Gln Gly Ile Arg Asp Asp Leu Gly
1 5 10

<210> 149
<211> 7
<212> PRT
<213> Artificial Sequence

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

<400> 149
Ala Ala Ser Ser Leu Gln Ser
1 5

<210> 150
<211> 11
<212> PRT
<213> Artificial Sequence

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

<400> 150
Cys Leu Gln Asp Tyr Asp Tyr Pro Leu Thr Phe
1 5 10

<210> 151
<211> 119
<212> PRT
<213> Artificial Sequence

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

<400> 151
Gln Val Gln Leu Gln Gln Trp Gly Ala Gly Leu Leu Lys Pro Ser Glu
1 5 10 15

```
Thr Leu Ser Leu Thr Cys Ala Val Tyr Gly Gly Ser Phe Ser Gly Tyr
            20                  25                  30


Tyr Trp Ser Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp Ile
        35                  40                  45


Gly Glu Ile Thr His Ser Gly Ser Thr Asn Tyr Asn Pro Ser Leu Lys
    50                  55                  60


Ser Arg Val Ser Ile Ser Val Asp Thr Ser Lys Asn Gln Phe Ser Leu
65                  70                  75                  80


Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr Cys Ala
                85                  90                  95


Arg Gly Glu Tyr Gly Ser Gly Ser Arg Phe Asp Tyr Trp Gly Gln Gly
            100                 105                 110


Thr Leu Val Thr Val Ser Ser
        115


<210> 152
<211> 107
<212> PRT
<213> Artificial Sequence

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

<400> 152
Ala Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
1               5                   10                  15


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


Leu Gly Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
        35                  40                  45
```

```
Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
    50                  55                  60

Ser Gly Ser Asp Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
65                  70                  75                  80

Glu Asp Phe Ala Thr Tyr Tyr Cys Leu Gln Asp Tyr Asp Tyr Pro Leu
                85                  90                  95

Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
            100                 105
```

<210> 153
<211> 246
<212> PRT
<213> Artificial Sequence

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

<400> 153

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Gln Val Gln Leu Gln Gln Trp Gly Ala Gly Leu Leu Lys Pro Ser Glu
1               5                   10                  15

Thr Leu Ser Leu Thr Cys Ala Val Tyr Gly Gly Ser Phe Ser Gly Tyr
            20                  25                  30

Tyr Trp Ser Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp Ile
        35                  40                  45

Gly Glu Ile Thr His Ser Gly Ser Thr Asn Tyr Asn Pro Ser Leu Lys
    50                  55                  60

Ser Arg Val Ser Ile Ser Val Asp Thr Ser Lys Asn Gln Phe Ser Leu
65                  70                  75                  80

Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr Cys Ala
                85                  90                  95

Arg Gly Glu Tyr Gly Ser Gly Ser Arg Phe Asp Tyr Trp Gly Gln Gly
            100                 105                 110
```

```
Thr Leu Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly
        115                 120                 125


Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Ile Gln Met Thr
    130                 135                 140


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


Thr Cys Arg Ala Ser Gln Gly Ile Arg Asp Asp Leu Gly Trp Tyr Gln
                165                 170                 175


Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile Tyr Ala Ala Ser Ser
            180                 185                 190


Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Asp Thr
        195                 200                 205


Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro Glu Asp Phe Ala Thr
    210                 215                 220


Tyr Tyr Cys Leu Gln Asp Tyr Asp Tyr Pro Leu Thr Phe Gly Gly Gly
225                 230                 235                 240


Thr Lys Val Glu Ile Lys
                245


<210> 154
<211> 9
<212> PRT
<213> Artificial Sequence

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

<400> 154
Gly Ser Phe Ser Ala Tyr Tyr Trp Asn
1               5
```

<210> 155
<211> 12
<212> PRT
<213> Artificial Sequence

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

<400> 155
Gly Glu Ile Asn His Ser Gly Ser Thr Asn Tyr Asn
1 5 10

<210> 156
<211> 16
<212> PRT
<213> Artificial Sequence

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

<400> 156
Cys Ala Arg Gly Leu Asp Ser Ser Gly Trp Tyr Pro Phe Asp Tyr Trp
1 5 10 15

<210> 157
<211> 11
<212> PRT
<213> Artificial Sequence

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

<400> 157
Arg Ala Ser Gln Gly Ile Ser Ser Trp Leu Ala
1 5 10

<210> 158
<211> 7
<212> PRT
<213> Artificial Sequence

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

peptide"

<400> 158
Ala Ala Ser Ser Leu Gln Ser
1 5

<210> 159
<211> 11
<212> PRT
<213> Artificial Sequence

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

<400> 159
Cys Gln Gln Ala Asp Ser Phe Pro Phe Thr Phe
1 5 10

<210> 160
<211> 120
<212> PRT
<213> Artificial Sequence

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

<400> 160
Gln Val Gln Leu Gln Gln Trp Gly Ala Gly Leu Leu Lys Pro Ser Glu
1 5 10 15

Thr Leu Ser Leu Thr Cys Ala Val Tyr Gly Gly Ser Phe Ser Ala Tyr
20 25 30

Tyr Trp Asn Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp Ile
35 40 45

Gly Glu Ile Asn His Ser Gly Ser Thr Asn Tyr Asn Pro Ser Leu Lys
50 55 60

Ser Arg Val Thr Ile Ser Val Asp Thr Ser Lys Asn Gln Phe Ser Leu
65 70 75 80

```
Asn Leu Thr Ser Leu Thr Ala Ala Asp Thr Ala Val Tyr Tyr Cys Ala
                85                  90                  95


Arg Gly Leu Asp Ser Ser Gly Trp Tyr Pro Phe Asp Tyr Trp Gly Gln
            100                 105                 110


Gly Thr Leu Val Thr Val Ser Ser
        115                 120


<210> 161
<211> 107
<212> PRT
<213> Artificial Sequence

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

<400> 161
Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Val Ser Ala Ser Val Gly
1               5                   10                  15


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


Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
        35                  40                  45


Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
    50                  55                  60


Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
65                  70                  75                  80


Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Ala Asp Ser Phe Pro Phe
                85                  90                  95


Thr Phe Gly Pro Gly Thr Lys Val Asp Ile Lys
            100                 105


<210> 162
<211> 247
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<212> PRT
<213> Artificial Sequence

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

<400> 162
Gln Val Gln Leu Gln Gln Trp Gly Ala Gly Leu Leu Lys Pro Ser Glu
1 5 10 15

Thr Leu Ser Leu Thr Cys Ala Val Tyr Gly Gly Ser Phe Ser Ala Tyr
20 25 30

Tyr Trp Asn Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp Ile
35 40 45

Gly Glu Ile Asn His Ser Gly Ser Thr Asn Tyr Asn Pro Ser Leu Lys
50 55 60

Ser Arg Val Thr Ile Ser Val Asp Thr Ser Lys Asn Gln Phe Ser Leu
65 70 75 80

Asn Leu Thr Ser Leu Thr Ala Ala Asp Thr Ala Val Tyr Tyr Cys Ala
85 90 95

Arg Gly Leu Asp Ser Ser Gly Trp Tyr Pro Phe Asp Tyr Trp Gly Gln
100 105 110

Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly
115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Gln Met
130 135 140

Thr Gln Ser Pro Ser Ser Val Ser Ala Ser Val Gly Asp Arg Val Thr
145 150 155 160

Ile Thr Cys Arg Ala Ser Gln Gly Ile Ser Ser Trp Leu Ala Trp Tyr
165 170 175

Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile Tyr Ala Ala Ser
            180   185   190

Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly
        195   200   205

Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro Glu Asp Phe Ala
    210   215   220

Thr Tyr Tyr Cys Gln Gln Ala Asp Ser Phe Pro Phe Thr Phe Gly Pro
225   230   235   240

Gly Thr Lys Val Asp Ile Lys
                245

<210> 163
<211> 9
<212> PRT
<213> Artificial Sequence

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

<400> 163
Gly Ser Phe Ser Gly Asp Tyr Trp Ser
1   5

<210> 164
<211> 12
<212> PRT
<213> Artificial Sequence

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

<400> 164
Gly Glu Ile Asn His Ser Gly Ile Thr Ser Phe Asn
1   5   10

<210> 165
<211> 12
<212> PRT

<213> Artificial Sequence

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

<400> 165
Cys Ala Arg Gly Glu Leu Gly Ile Pro Asp Asn Trp
1 5 10

<210> 166
<211> 11
<212> PRT
<213> Artificial Sequence

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

<400> 166
Arg Ala Ser Gln Ser Ile Ser Arg Trp Leu Ala
1 5 10

<210> 167
<211> 7
<212> PRT
<213> Artificial Sequence

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

<400> 167
Lys Ala Ser Ser Leu Glu Ser
1 5

<210> 168
<211> 10
<212> PRT
<213> Artificial Sequence

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

<400> 168

Cys Gln Gln Tyr Asn Ser Tyr Ser Thr Phe
1 5 10

<210> 169
<211> 116
<212> PRT
<213> Artificial Sequence

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

<400> 169
Gln Val Gln Leu Gln Gln Trp Gly Ala Gly Leu Leu Lys Pro Ser Glu
1 5 10 15

Thr Leu Ser Leu Thr Cys Ala Val Phe Gly Gly Ser Phe Ser Gly Asp
20 25 30

Tyr Trp Ser Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp Ile
35 40 45

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

Ser Arg Val Thr Ile Ser Val Asp Thr Ser Lys Asn Gln Phe Ser Leu
65 70 75 80

Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr Cys Ala
85 90 95

Arg Gly Glu Leu Gly Ile Pro Asp Asn Trp Gly Gln Gly Thr Leu Val
100 105 110

Thr Val Ser Ser
115

<210> 170
<211> 106
<212> PRT
<213> Artificial Sequence

<220>

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

<400> 170
Asp Ile Gln Met Thr Gln Ser Pro Ser Thr Leu Ser Ala Ser Val Gly
1 5 10 15

Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Ser Arg Trp
20 25 30

Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
35 40 45

Tyr Lys Ala Ser Ser Leu Glu Ser Gly Val Pro Ser Arg Phe Ser Gly
50 55 60

Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
65 70 75 80

Asp Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Tyr Asn Ser Tyr Ser Thr
85 90 95

Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
100 105

<210> 171
<211> 242
<212> PRT
<213> Artificial Sequence

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

<400> 171
Gln Val Gln Leu Gln Gln Trp Gly Ala Gly Leu Leu Lys Pro Ser Glu
1 5 10 15

Thr Leu Ser Leu Thr Cys Ala Val Phe Gly Gly Ser Phe Ser Gly Asp
20 25 30

Tyr Trp Ser Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp Ile

```
        35                  40                  45

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

Ser Arg Val Thr Ile Ser Val Asp Thr Ser Lys Asn Gln Phe Ser Leu
65                  70                  75                  80

Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr Cys Ala
                85                  90                  95

Arg Gly Glu Leu Gly Ile Pro Asp Asn Trp Gly Gln Gly Thr Leu Val
            100                 105                 110

Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly
        115                 120                 125

Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Gln Met Thr Gln Ser Pro
    130                 135                 140

Ser Thr Leu Ser Ala Ser Val Gly Asp Arg Val Thr Ile Thr Cys Arg
145                 150                 155                 160

Ala Ser Gln Ser Ile Ser Arg Trp Leu Ala Trp Tyr Gln Gln Lys Pro
                165                 170                 175

Gly Lys Ala Pro Lys Leu Leu Ile Tyr Lys Ala Ser Ser Leu Glu Ser
            180                 185                 190

Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Glu Phe Thr
        195                 200                 205

Leu Thr Ile Ser Ser Leu Gln Pro Asp Asp Phe Ala Thr Tyr Tyr Cys
    210                 215                 220

Gln Gln Tyr Asn Ser Tyr Ser Thr Phe Gly Gln Gly Thr Lys Val Glu
225                 230                 235                 240

Ile Lys
```

<210> 172
<211> 10
<212> PRT
<213> Artificial Sequence

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

<400> 172
Asp Ser Ile Ser Ser Ser Asn Trp Trp Ser
1 5 10

<210> 173
<211> 12
<212> PRT
<213> Artificial Sequence

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

<400> 173
Gly Glu Val Phe His Ser Gly Ser Thr Asn Tyr Asn
1 5 10

<210> 174
<211> 13
<212> PRT
<213> Artificial Sequence

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

<400> 174
Cys Ala Arg Ala Ala Val Ala Gly Ala Leu Asp Tyr Trp
1 5 10

<210> 175
<211> 17
<212> PRT
<213> Artificial Sequence

<220>

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

<400> 175
Lys Ser Ser Gln Ser Val Leu Tyr Ser Ser Asn Asn Lys Asn Tyr Leu
1 5 10 15

Ala

<210> 176
<211> 7
<212> PRT
<213> Artificial Sequence

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

<400> 176
Trp Ala Ser Thr Arg Glu Ser
1 5

<210> 177
<211> 11
<212> PRT
<213> Artificial Sequence

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

<400> 177
Cys Gln Gln Tyr Tyr Gly Thr Ser Trp Thr Phe
1 5 10

<210> 178
<211> 118
<212> PRT
<213> Artificial Sequence

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

<400> 178
Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Gly
1   5   10   15

Thr Leu Ser Leu Thr Cys Val Val Phe Gly Asp Ser Ile Ser Ser Ser
            20   25   30

Asn Trp Trp Ser Trp Val Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp
        35   40   45

Ile Gly Glu Val Phe His Ser Gly Ser Thr Asn Tyr Asn Pro Ser Leu
    50   55   60

Lys Ser Arg Val Thr Ile Ser Val Asp Lys Ser Lys Asn Gln Phe Ser
65   70   75   80

Leu Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr Cys
                85   90   95

Ala Arg Ala Ala Val Ala Gly Ala Leu Asp Tyr Trp Gly Gln Gly Thr
            100   105   110

Leu Val Thr Val Ser Ser
        115

<210> 179
<211> 113
<212> PRT
<213> Artificial Sequence

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

<400> 179
Asp Ile Val Met Thr Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly
1   5   10   15

Glu Arg Ala Thr Ile Asn Cys Lys Ser Ser Gln Ser Val Leu Tyr Ser
            20   25   30

Ser Asn Asn Lys Asn Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln

35 40 45

Pro Pro Asn Leu Leu Val Tyr Trp Ala Ser Thr Arg Glu Ser Gly Val
50 55 60

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

Ile Ser Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln Gln
85 90 95

Tyr Tyr Gly Thr Ser Trp Thr Phe Gly Gln Gly Thr Lys Val Glu Ile
100 105 110

Lys

<210> 180
<211> 251
<212> PRT
<213> Artificial Sequence

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

<400> 180
Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Gly
1 5 10 15

Thr Leu Ser Leu Thr Cys Val Val Phe Gly Asp Ser Ile Ser Ser Ser
20 25 30

Asn Trp Trp Ser Trp Val Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp
35 40 45

Ile Gly Glu Val Phe His Ser Gly Ser Thr Asn Tyr Asn Pro Ser Leu
50 55 60

Lys Ser Arg Val Thr Ile Ser Val Asp Lys Ser Lys Asn Gln Phe Ser
65 70 75 80

```
Leu Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr Cys
                85                  90                  95

Ala Arg Ala Ala Val Ala Gly Ala Leu Asp Tyr Trp Gly Gln Gly Thr
            100                 105                 110

Leu Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
        115                 120                 125

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Val Met Thr Gln
    130                 135                 140

Ser Pro Asp Ser Leu Ala Val Ser Leu Gly Glu Arg Ala Thr Ile Asn
145                 150                 155                 160

Cys Lys Ser Ser Gln Ser Val Leu Tyr Ser Ser Asn Asn Lys Asn Tyr
                165                 170                 175

Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro Asn Leu Leu Val
            180                 185                 190

Tyr Trp Ala Ser Thr Arg Glu Ser Gly Val Pro Asp Arg Phe Ser Gly
        195                 200                 205

Ala Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Ala
    210                 215                 220

Glu Asp Val Ala Val Tyr Tyr Cys Gln Gln Tyr Tyr Gly Thr Ser Trp
225                 230                 235                 240

Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
                245                 250
```

<210> 181
<211> 11
<212> PRT
<213> Artificial Sequence

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

peptide"

<400> 181
Phe Ser Leu Ser Thr Ser Gly Leu Gly Val Gly
1 5 10

<210> 182
<211> 12
<212> PRT
<213> Artificial Sequence

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

<400> 182
Ala Leu Ile Tyr Trp Asn Asp Asp Lys Arg Tyr Ser
1 5 10

<210> 183
<211> 14
<212> PRT
<213> Artificial Sequence

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

<400> 183
Cys Val His Arg Arg Ile Ala Ala Pro Gly Ser Val Tyr Trp
1 5 10

<210> 184
<211> 11
<212> PRT
<213> Artificial Sequence

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

<400> 184
Arg Ala Ser Gln Gly Ile Ser Ser Trp Leu Ala
1 5 10

<210> 185

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

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

<400> 185
Ala Ala Ser Ser Leu Gln Ser
1 5

<210> 186
<211> 11
<212> PRT
<213> Artificial Sequence

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

<400> 186
Cys His Gln Ala Asn Ser Phe Pro Phe Thr Phe
1 5 10

<210> 187
<211> 120
<212> PRT
<213> Artificial Sequence

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

<400> 187
Gln Ile Thr Leu Arg Glu Ser Gly Pro Thr Leu Val Lys Pro Thr Gln
1 5 10 15

Thr Leu Thr Leu Thr Cys Thr Phe Ser Gly Phe Ser Leu Ser Thr Ser
20 25 30

Gly Leu Gly Val Gly Trp Ile Arg Gln Pro Pro Gly Glu Ala Leu Glu
35 40 45

Trp Leu Ala Leu Ile Tyr Trp Asn Asp Asp Lys Arg Tyr Ser Pro Ser

```
    50                  55                  60

Leu Lys Ser Arg Leu Ser Ile Thr Lys Asp Thr Ser Lys Asn Gln Val
65                  70                  75                  80

Val Leu Ile Met Thr Asn Met Asp Pro Val Asp Thr Ala Thr Tyr Tyr
                85                  90                  95

Cys Val His Arg Arg Ile Ala Ala Pro Gly Ser Val Tyr Trp Gly Gln
            100                 105                 110

Gly Thr Leu Val Thr Val Ser Ser
        115                 120


<210> 188
<211> 107
<212> PRT
<213> Artificial Sequence

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

<400> 188
Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Val Ser Ala Ser Val Gly
1               5                   10                  15

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

Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
        35                  40                  45

Ser Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
    50                  55                  60

Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
65                  70                  75                  80

Glu Asp Phe Ala Thr Tyr Tyr Cys His Gln Ala Asn Ser Phe Pro Phe
                85                  90                  95
```

Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
100 105

<210> 189
<211> 247
<212> PRT
<213> Artificial Sequence

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

<400> 189
Gln Ile Thr Leu Arg Glu Ser Gly Pro Thr Leu Val Lys Pro Thr Gln
1 5 10 15

Thr Leu Thr Leu Thr Cys Thr Phe Ser Gly Phe Ser Leu Ser Thr Ser
20 25 30

Gly Leu Gly Val Gly Trp Ile Arg Gln Pro Pro Gly Glu Ala Leu Glu
35 40 45

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

Leu Lys Ser Arg Leu Ser Ile Thr Lys Asp Thr Ser Lys Asn Gln Val
65 70 75 80

Val Leu Ile Met Thr Asn Met Asp Pro Val Asp Thr Ala Thr Tyr Tyr
85 90 95

Cys Val His Arg Arg Ile Ala Ala Pro Gly Ser Val Tyr Trp Gly Gln
100 105 110

Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly
115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Gln Met
130 135 140

Thr Gln Ser Pro Ser Ser Val Ser Ala Ser Val Gly Asp Arg Val Thr

145 150 155 160

Ile Thr Cys Arg Ala Ser Gln Gly Ile Ser Ser Trp Leu Ala Trp Tyr
165 170 175

Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile Ser Ala Ala Ser
180 185 190

Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly
195 200 205

Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro Glu Asp Phe Ala
210 215 220

Thr Tyr Tyr Cys His Gln Ala Asn Ser Phe Pro Phe Thr Phe Gly Gln
225 230 235 240

Gly Thr Lys Leu Glu Ile Lys
245

<210> 190
<211> 9
<212> PRT
<213> Artificial Sequence

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

<400> 190
Tyr Thr Leu Thr Glu Leu Ser Met His
1 5

<210> 191
<211> 13
<212> PRT
<213> Artificial Sequence

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

<400> 191

Gly Gly Phe Asp Pro Glu Asp Gly Lys Thr Ile Tyr Ala
1 5 10

<210> 192
<211> 14
<212> PRT
<213> Artificial Sequence

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

<400> 192
Cys Ala Thr Leu Leu Arg Gly Leu Asp Ala Phe Asp Val Trp
1 5 10

<210> 193
<211> 11
<212> PRT
<213> Artificial Sequence

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

<400> 193
Arg Ala Ser Gln Gly Ile Arg Asn Asp Leu Gly
1 5 10

<210> 194
<211> 7
<212> PRT
<213> Artificial Sequence

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

<400> 194
Ala Ala Ser Ser Leu Gln Ser
1 5

<210> 195
<211> 11
<212> PRT
<213> Artificial Sequence

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

<400> 195
Cys Leu Gln His Asn Ser Tyr Pro Arg Thr Phe
1 5 10

<210> 196
<211> 119
<212> PRT
<213> Artificial Sequence

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

<400> 196
Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
1 5 10 15

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

Ser Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Pro Glu Gly Met
35 40 45

Gly Gly Phe Asp Pro Glu Asp Gly Lys Thr Ile Tyr Ala Gln Lys Phe
50 55 60

Gln Gly Arg Val Thr Met Thr Glu Asp Thr Ser Ala Asp Thr Ala Tyr
65 70 75 80

Met Glu Leu Asn Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Thr Leu Leu Arg Gly Leu Asp Ala Phe Asp Val Trp Gly Gln Gly
100 105 110

Thr Met Val Thr Val Ser Ser
115

<210> 197
<211> 107
<212> PRT
<213> Artificial Sequence

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

<400> 197
Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
1 5 10 15

Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Gly Ile Arg Asn Asp
20 25 30

Leu Gly Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Arg Leu Ile
35 40 45

Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
50 55 60

Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Thr Leu Gln Pro
65 70 75 80

Glu Asp Phe Ala Thr Tyr Tyr Cys Leu Gln His Asn Ser Tyr Pro Arg
85 90 95

Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
100 105

<210> 198
<211> 246
<212> PRT
<213> Artificial Sequence

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

<400> 198
Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
1 5 10 15

```
Ser Val Lys Val Ser Cys Lys Val Ser Gly Tyr Thr Leu Thr Glu Leu
            20                  25                  30

Ser Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Pro Glu Gly Met
        35                  40                  45

Gly Gly Phe Asp Pro Glu Asp Gly Lys Thr Ile Tyr Ala Gln Lys Phe
    50                  55                  60

Gln Gly Arg Val Thr Met Thr Glu Asp Thr Ser Ala Asp Thr Ala Tyr
65                  70                  75                  80

Met Glu Leu Asn Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
                85                  90                  95

Ala Thr Leu Leu Arg Gly Leu Asp Ala Phe Asp Val Trp Gly Gln Gly
            100                 105                 110

Thr Met Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly
        115                 120                 125

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Gln Met Thr
    130                 135                 140

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

Thr Cys Arg Ala Ser Gln Gly Ile Arg Asn Asp Leu Gly Trp Tyr Gln
                165                 170                 175

Gln Lys Pro Gly Lys Ala Pro Lys Arg Leu Ile Tyr Ala Ala Ser Ser
            180                 185                 190

Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr
        195                 200                 205

Glu Phe Thr Leu Thr Ile Ser Thr Leu Gln Pro Glu Asp Phe Ala Thr
    210                 215                 220
```

Tyr Tyr Cys Leu Gln His Asn Ser Tyr Pro Arg Thr Phe Gly Gln Gly
225 230 235 240

Thr Lys Val Glu Ile Lys
245

<210> 199
<211> 9
<212> PRT
<213> Artificial Sequence

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

<400> 199
Gly Ser Phe Ser Gly Tyr Tyr Trp Arg
1 5

<210> 200
<211> 12
<212> PRT
<213> Artificial Sequence

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

<400> 200
Gly Glu Ile Ser His Ser Gly Ser Thr Asn Tyr Asn
1 5 10

<210> 201
<211> 16
<212> PRT
<213> Artificial Sequence

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

<400> 201
Cys Ala Val Arg Gly Tyr Ser Tyr Gly Tyr Pro Leu Phe Asp Tyr Trp
1 5 10 15

<210> 202
<211> 11
<212> PRT
<213> Artificial Sequence

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

<400> 202
Arg Ala Ser Gln Gly Ile Arg Asn Asp Leu Gly
1 5 10

<210> 203
<211> 7
<212> PRT
<213> Artificial Sequence

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

<400> 203
Ala Ala Ser Ser Leu Gln Ser
1 5

<210> 204
<211> 11
<212> PRT
<213> Artificial Sequence

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

<400> 204
Cys Leu Gln Tyr Asn Ser Tyr Pro Arg Thr Phe
1 5 10

<210> 205
<211> 120
<212> PRT
<213> Artificial Sequence

<220>
<221> source

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

<400> 205
Gln Val Gln Leu Gln Gln Trp Gly Ala Gly Leu Leu Lys Pro Ser Glu
1 5 10 15

Thr Leu Ser Leu Thr Cys Ala Val Tyr Gly Gly Ser Phe Ser Gly Tyr
20 25 30

Tyr Trp Arg Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp Ile
35 40 45

Gly Glu Ile Ser His Ser Gly Ser Thr Asn Tyr Asn Pro Ser Leu Lys
50 55 60

Ser Arg Val Thr Ile Ser Val Asp Thr Ser Lys Asn Gln Phe Ser Leu
65 70 75 80

Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr Cys Ala
85 90 95

Val Arg Gly Tyr Ser Tyr Gly Tyr Pro Leu Phe Asp Tyr Trp Gly Gln
100 105 110

Gly Thr Leu Val Thr Val Ser Ser
115 120

<210> 206
<211> 107
<212> PRT
<213> Artificial Sequence

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

<400> 206
Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
1 5 10 15

Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Gly Ile Arg Asn Asp
20 25 30

```
Leu Gly Trp Tyr Gln Gln Lys Leu Gly Lys Ala Pro Lys Arg Leu Ile
        35                  40                  45


Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
    50                  55                  60


Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
65                  70                  75                  80


Glu Asp Phe Ala Thr Tyr Tyr Cys Leu Gln Tyr Asn Ser Tyr Pro Arg
                85                  90                  95


Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
            100                 105


<210> 207
<211> 247
<212> PRT
<213> Artificial Sequence

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

<400> 207
Gln Val Gln Leu Gln Gln Trp Gly Ala Gly Leu Leu Lys Pro Ser Glu
1               5                   10                  15


Thr Leu Ser Leu Thr Cys Ala Val Tyr Gly Gly Ser Phe Ser Gly Tyr
            20                  25                  30


Tyr Trp Arg Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp Ile
        35                  40                  45


Gly Glu Ile Ser His Ser Gly Ser Thr Asn Tyr Asn Pro Ser Leu Lys
    50                  55                  60


Ser Arg Val Thr Ile Ser Val Asp Thr Ser Lys Asn Gln Phe Ser Leu
65                  70                  75                  80
```

```
Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr Cys Ala
                85                  90                  95


Val Arg Gly Tyr Ser Tyr Gly Tyr Pro Leu Phe Asp Tyr Trp Gly Gln
            100                 105                 110


Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly
        115                 120                 125


Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Gln Met
    130                 135                 140


Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly Asp Arg Val Thr
145                 150                 155                 160


Ile Thr Cys Arg Ala Ser Gln Gly Ile Arg Asn Asp Leu Gly Trp Tyr
                165                 170                 175


Gln Gln Lys Leu Gly Lys Ala Pro Lys Arg Leu Ile Tyr Ala Ala Ser
            180                 185                 190


Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly
        195                 200                 205


Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro Glu Asp Phe Ala
    210                 215                 220


Thr Tyr Tyr Cys Leu Gln Tyr Asn Ser Tyr Pro Arg Thr Phe Gly Gln
225                 230                 235                 240


Gly Thr Lys Val Glu Ile Lys
                245
```

<210> 208
<211> 9
<212> PRT
<213> Artificial Sequence

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

<400> 208
Asp Ser Ile Ser Ser Asn Trp Trp Thr
1   5

<210> 209
<211> 12
<212> PRT
<213> Artificial Sequence

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

<400> 209
Gly Asp Ile His His Ser Gly Ser Thr Asn Tyr Asn
1   5   10

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

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

<400> 210
Cys Ala Arg Asp Gly Gly Gly Thr Leu Asp Tyr Trp
1   5   10

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

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

<400> 211
Arg Ala Ser Gln Ser Ile Ser Ser Trp Leu Ala
1   5   10

<210> 212
<211> 7

<212> PRT
<213> Artificial Sequence

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

<400> 212
Lys Ala Ser Thr Leu Glu Ser
1 5

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

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

<400> 213
Cys Gln Gln Tyr Asn Gly Tyr Ser Thr Phe
1 5 10

<210> 214
<211> 116
<212> PRT
<213> Artificial Sequence

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

<400> 214
Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Gly
1 5 10 15

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

Trp Trp Thr Trp Val Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp Ile
35 40 45

Gly Asp Ile His His Ser Gly Ser Thr Asn Tyr Asn Pro Ser Leu Lys
50 55 60

Ser Arg Val Thr Met Ser Val Asp Lys Ser Glu Asn Gln Phe Ser Leu
65 70 75 80

Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val Phe Tyr Cys Ala
85 90 95

Arg Asp Gly Gly Gly Thr Leu Asp Tyr Trp Gly Gln Gly Thr Leu Val
100 105 110

Thr Val Ser Ser
115

<210> 215
<211> 106
<212> PRT
<213> Artificial Sequence

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

<400> 215
Asp Ile Gln Met Thr Gln Ser Pro Ser Thr Leu Ser Ala Ser Val Gly
1 5 10 15

Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Ser Ser Trp
20 25 30

Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
35 40 45

Tyr Lys Ala Ser Thr Leu Glu Ser Gly Val Pro Ser Arg Phe Ser Gly
50 55 60

Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
65 70 75 80

Asp Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Tyr Asn Gly Tyr Ser Thr
85 90 95

Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
100 105

<210> 216
<211> 242
<212> PRT
<213> Artificial Sequence

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

<400> 216
Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Gly
1 5 10 15

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

Trp Trp Thr Trp Val Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp Ile
35 40 45

Gly Asp Ile His His Ser Gly Ser Thr Asn Tyr Asn Pro Ser Leu Lys
50 55 60

Ser Arg Val Thr Met Ser Val Asp Lys Ser Glu Asn Gln Phe Ser Leu
65 70 75 80

Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val Phe Tyr Cys Ala
85 90 95

Arg Asp Gly Gly Gly Thr Leu Asp Tyr Trp Gly Gln Gly Thr Leu Val
100 105 110

Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly
115 120 125

Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Gln Met Thr Gln Ser Pro
130 135 140

Ser Thr Leu Ser Ala Ser Val Gly Asp Arg Val Thr Ile Thr Cys Arg
145 150 155 160

```
Ala Ser Gln Ser Ile Ser Ser Trp Leu Ala Trp Tyr Gln Gln Lys Pro
                165                 170                 175


Gly Lys Ala Pro Lys Leu Leu Ile Tyr Lys Ala Ser Thr Leu Glu Ser
            180                 185                 190


Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Glu Phe Thr
        195                 200                 205


Leu Thr Ile Ser Ser Leu Gln Pro Asp Asp Phe Ala Thr Tyr Tyr Cys
    210                 215                 220


Gln Gln Tyr Asn Gly Tyr Ser Thr Phe Gly Gln Gly Thr Lys Val Glu
225                 230                 235                 240


Ile Lys
```

<210> 217
<211> 9
<212> PRT
<213> Artificial Sequence

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

<400> 217
Gly Thr Phe Thr Asn Tyr Cys Ile Ser
1   5

<210> 218
<211> 13
<212> PRT
<213> Artificial Sequence

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

<400> 218
Gly Gly Ile Ile Pro Ile Phe Gly Thr Thr Asn Tyr Ala

1 5 10

<210> 219
<211> 16
<212> PRT
<213> Artificial Sequence

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

<400> 219
Cys Ala Arg Asp Asn Gly Asp Arg Tyr Tyr Tyr Asp Met Asp Val Trp
1 5 10 15

<210> 220
<211> 13
<212> PRT
<213> Artificial Sequence

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

<400> 220
Ser Gly Ser Ser Ser Asn Ile Gly Asn Asn Tyr Val Ser
1 5 10

<210> 221
<211> 7
<212> PRT
<213> Artificial Sequence

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

<400> 221
Asp Asn Asn Lys Arg Pro Ser
1 5

<210> 222
<211> 13
<212> PRT
<213> Artificial Sequence

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

<400> 222
Cys Gly Thr Trp Asp Ser Ser Leu Ser Ala Val Val Phe
1 5 10

<210> 223
<211> 121
<212> PRT
<213> Artificial Sequence

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

<400> 223
Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ser
1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Gly Thr Phe Thr Asn Tyr
20 25 30

Cys Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45

Gly Gly Ile Ile Pro Ile Phe Gly Thr Thr Asn Tyr Ala Gln Thr Phe
50 55 60

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

Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Asp Asn Gly Asp Arg Tyr Tyr Tyr Asp Met Asp Val Trp Gly
100 105 110

Gln Gly Thr Thr Val Thr Val Ser Ser
115 120

<210> 224
<211> 110
<212> PRT
<213> Artificial Sequence

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

<400> 224
Gln Ser Val Leu Thr Gln Pro Pro Ser Val Ser Ala Ala Pro Gly Gln
1 5 10 15

Lys Val Thr Ile Ser Cys Ser Gly Ser Ser Ser Asn Ile Gly Asn Asn
20 25 30

Tyr Val Ser Trp Tyr Gln Gln Leu Pro Gly Thr Ala Pro Lys Leu Leu
35 40 45

Ile Tyr Asp Asn Asn Lys Arg Pro Ser Gly Ile Pro Asp Arg Phe Ser
50 55 60

Gly Ser Lys Ser Gly Thr Ser Ala Thr Leu Gly Ile Thr Gly Leu Gln
65 70 75 80

Thr Gly Asp Glu Ala Asp Tyr Tyr Cys Gly Thr Trp Asp Ser Ser Leu
85 90 95

Ser Ala Val Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu
100 105 110

<210> 225
<211> 251
<212> PRT
<213> Artificial Sequence

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

<400> 225
Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ser
1 5 10 15

```
Ser Val Lys Val Ser Cys Lys Ala Ser Gly Gly Thr Phe Thr Asn Tyr
            20                  25                  30

Cys Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
        35                  40                  45

Gly Gly Ile Ile Pro Ile Phe Gly Thr Thr Asn Tyr Ala Gln Thr Phe
    50                  55                  60

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

Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
                85                  90                  95

Ala Arg Asp Asn Gly Asp Arg Tyr Tyr Tyr Asp Met Asp Val Trp Gly
            100                 105                 110

Gln Gly Thr Thr Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly
        115                 120                 125

Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gln Ser Val
    130                 135                 140

Leu Thr Gln Pro Pro Ser Val Ser Ala Ala Pro Gly Gln Lys Val Thr
145                 150                 155                 160

Ile Ser Cys Ser Gly Ser Ser Ser Asn Ile Gly Asn Asn Tyr Val Ser
                165                 170                 175

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

Asn Asn Lys Arg Pro Ser Gly Ile Pro Asp Arg Phe Ser Gly Ser Lys
        195                 200                 205

Ser Gly Thr Ser Ala Thr Leu Gly Ile Thr Gly Leu Gln Thr Gly Asp
    210                 215                 220
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Glu Ala Asp Tyr Tyr Cys Gly Thr Trp Asp Ser Ser Leu Ser Ala Val
225 230 235 240

Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu
245 250

<210> 226
<211> 9
<212> PRT
<213> Artificial Sequence

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

<400> 226
Gly Thr Phe Ser Thr Tyr Ser Ile Ser
1 5

<210> 227
<211> 13
<212> PRT
<213> Artificial Sequence

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

<400> 227
Gly Gly Ile Ile Pro Ile Phe Gly Thr Thr Asn Tyr Ala
1 5 10

<210> 228
<211> 18
<212> PRT
<213> Artificial Sequence

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

<400> 228
Cys Ala Arg Asp Gly Glu Gly Ser Tyr Tyr Tyr Tyr Tyr Gly Met Asp
1 5 10 15

Val Trp

<210> 229
<211> 13
<212> PRT
<213> Artificial Sequence

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

<400> 229
Ser Gly Ser Ser Ser Asn Ile Gly Asn Asn Tyr Val Ser
1 5 10

<210> 230
<211> 7
<212> PRT
<213> Artificial Sequence

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

<400> 230
Asp Asn Asn Lys Arg Pro Ser
1 5

<210> 231
<211> 13
<212> PRT
<213> Artificial Sequence

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

<400> 231
Cys Gly Thr Trp Asp Ser Ser Leu Ser Ala Val Val Phe
1 5 10

<210> 232
<211> 123
<212> PRT
<213> Artificial Sequence

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

<400> 232
Gln Val Pro Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ser
1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Gly Thr Phe Ser Thr Tyr
20 25 30

Ser Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45

Gly Gly Ile Ile Pro Ile Phe Gly Thr Thr Asn Tyr Ala Gln Lys Phe
50 55 60

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

Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Asp Gly Glu Gly Ser Tyr Tyr Tyr Tyr Tyr Gly Met Asp Val
100 105 110

Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser
115 120

<210> 233
<211> 110
<212> PRT
<213> Artificial Sequence

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

<400> 233
Gln Ser Val Leu Thr Gln Pro Pro Ser Val Ser Ala Ala Pro Gly Gln
1 5 10 15

Lys Val Thr Ile Ser Cys Ser Gly Ser Ser Ser Asn Ile Gly Asn Asn
            20   25   30

Tyr Val Ser Trp Tyr Gln Gln Leu Pro Gly Thr Ala Pro Lys Leu Leu
        35   40   45

Ile Tyr Asp Asn Asn Lys Arg Pro Ser Gly Ile Pro Asp Arg Phe Phe
    50   55   60

Gly Ser Lys Phe Gly Thr Ser Ala Thr Leu Gly Ile Thr Gly Leu Gln
65   70   75   80

Thr Gly Asp Glu Ala Asp Tyr Tyr Cys Gly Thr Trp Asp Ser Ser Leu
                85   90   95

Ser Ala Val Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu
            100   105   110

<210> 234
<211> 253
<212> PRT
<213> Artificial Sequence

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

<400> 234
Gln Val Pro Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ser
1   5   10   15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Gly Thr Phe Ser Thr Tyr
            20   25   30

Ser Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
        35   40   45

Gly Gly Ile Ile Pro Ile Phe Gly Thr Thr Asn Tyr Ala Gln Lys Phe
    50   55   60

Gln Gly Arg Val Thr Ile Thr Ala Asp Lys Ser Thr Ser Thr Ala Tyr

65 70 75 80

Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Asp Gly Glu Gly Ser Tyr Tyr Tyr Tyr Tyr Gly Met Asp Val
100 105 110

Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser Gly Gly Gly Gly Ser
115 120 125

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

Ser Val Leu Thr Gln Pro Pro Ser Val Ser Ala Ala Pro Gly Gln Lys
145 150 155 160

Val Thr Ile Ser Cys Ser Gly Ser Ser Ser Asn Ile Gly Asn Asn Tyr
165 170 175

Val Ser Trp Tyr Gln Gln Leu Pro Gly Thr Ala Pro Lys Leu Leu Ile
180 185 190

Tyr Asp Asn Asn Lys Arg Pro Ser Gly Ile Pro Asp Arg Phe Phe Gly
195 200 205

Ser Lys Phe Gly Thr Ser Ala Thr Leu Gly Ile Thr Gly Leu Gln Thr
210 215 220

Gly Asp Glu Ala Asp Tyr Tyr Cys Gly Thr Trp Asp Ser Ser Leu Ser
225 230 235 240

Ala Val Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu
245 250

<210> 235
<211> 9
<212> PRT
<213> Artificial Sequence

<220>

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

<400> 235
Asp Ser Ile Ser Ser Tyr Tyr Trp Ser
1 5

<210> 236
<211> 12
<212> PRT
<213> Artificial Sequence

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

<400> 236
Gly Tyr Met Tyr Tyr Ser Gly Ile Thr Asn Tyr Asn
1 5 10

<210> 237
<211> 14
<212> PRT
<213> Artificial Sequence

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

<400> 237
Cys Ala Arg Leu Ser Val Ala Gly Phe Tyr Phe Asp Tyr Trp
1 5 10

<210> 238
<211> 12
<212> PRT
<213> Artificial Sequence

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

<400> 238
Arg Ala Ser Gln Ser Val Thr Arg Ser Tyr Leu Ala
1 5 10

<210> 239
<211> 7
<212> PRT
<213> Artificial Sequence

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

<400> 239
Gly Ala Ser Ser Arg Ala Thr
1 5

<210> 240
<211> 11
<212> PRT
<213> Artificial Sequence

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

<400> 240
Cys Gln Gln Tyr Gly Thr Ser Pro Leu Thr Phe
1 5 10

<210> 241
<211> 118
<212> PRT
<213> Artificial Sequence

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

<400> 241
Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Glu
1 5 10 15

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

Tyr Trp Ser Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp Ile
35 40 45

```
Gly Tyr Met Tyr Tyr Ser Gly Ile Thr Asn Tyr Asn Pro Ser Leu Lys
    50                  55                  60

Ser Arg Val Asn Ile Ser Leu Asp Thr Ser Lys Asn Gln Phe Ser Leu
65                  70                  75                  80

Lys Leu Gly Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr Cys Ala
                85                  90                  95

Arg Leu Ser Val Ala Gly Phe Tyr Phe Asp Tyr Trp Gly Gln Gly Thr
            100                 105                 110

Leu Val Thr Val Ser Ser
        115
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<210> 242
<211> 108
<212> PRT
<213> Artificial Sequence

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

<400> 242

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

Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Ser
            20                  25                  30

Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu
        35                  40                  45

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

Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Asn Arg Leu Glu
65                  70                  75                  80

Pro Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Gly Thr Ser Pro
```

85 90 95

Leu Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
100 105

<210> 243
<211> 246
<212> PRT
<213> Artificial Sequence

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

<400> 243
Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Glu
1 5 10 15

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

Tyr Trp Ser Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp Ile
35 40 45

Gly Tyr Met Tyr Tyr Ser Gly Ile Thr Asn Tyr Asn Pro Ser Leu Lys
50 55 60

Ser Arg Val Asn Ile Ser Leu Asp Thr Ser Lys Asn Gln Phe Ser Leu
65 70 75 80

Lys Leu Gly Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr Cys Ala
85 90 95

Arg Leu Ser Val Ala Gly Phe Tyr Phe Asp Tyr Trp Gly Gln Gly Thr
100 105 110

Leu Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
115 120 125

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Ile Val Leu Thr Gln
130 135 140

```
Ser Pro Gly Thr Leu Ser Leu Ser Pro Gly Glu Arg Ala Thr Leu Ser
145                 150                 155                 160


Cys Arg Ala Ser Gln Ser Val Thr Arg Ser Tyr Leu Ala Trp Tyr Gln
                165                 170                 175


Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile Tyr Gly Ala Ser Ser
            180                 185                 190


Arg Ala Thr Asp Ile Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr
        195                 200                 205


Asp Phe Thr Leu Thr Ile Asn Arg Leu Glu Pro Glu Asp Phe Ala Val
    210                 215                 220


Tyr Tyr Cys Gln Gln Tyr Gly Thr Ser Pro Leu Thr Phe Gly Gly Gly
225                 230                 235                 240


Thr Lys Val Glu Ile Lys
                245


<210> 244
<211> 9
<212> PRT
<213> Artificial Sequence

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

<400> 244
Asp Ser Ile Ser Ser Tyr Tyr Trp Ser
1               5


<210> 245
<211> 12
<212> PRT
<213> Artificial Sequence

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

<400> 245
Ser Tyr Ile Tyr Tyr Ser Gly Ile Ser Asn Tyr Asn
1   5   10

<210> 246
<211> 14
<212> PRT
<213> Artificial Sequence

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

<400> 246
Cys Ala Arg Ile Ser Val Ala Gly Phe Phe Phe Asp Asn Trp
1   5   10

<210> 247
<211> 12
<212> PRT
<213> Artificial Sequence

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

<400> 247
Arg Ala Ser Gln Ser Val Ser Ser Ser Tyr Leu Ala
1   5   10

<210> 248
<211> 7
<212> PRT
<213> Artificial Sequence

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

<400> 248
Gly Ala Ser Ser Arg Ala Ala
1   5

<210> 249
<211> 11

<212> PRT
<213> Artificial Sequence

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

<400> 249
Cys Gln Gln Tyr Gly Ile Ser Pro Leu Thr Phe
1 5 10

<210> 250
<211> 118
<212> PRT
<213> Artificial Sequence

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

<400> 250
Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Glu
1 5 10 15

Thr Leu Ser Leu Thr Cys Thr Val Ser Ser Asp Ser Ile Ser Ser Tyr
20 25 30

Tyr Trp Ser Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp Ile
35 40 45

Ser Tyr Ile Tyr Tyr Ser Gly Ile Ser Asn Tyr Asn Pro Ser Leu Lys
50 55 60

Ser Arg Val Ser Ile Ser Val Asp Thr Ser Lys Asn Gln Phe Ser Leu
65 70 75 80

Arg Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr Cys Ala
85 90 95

Arg Ile Ser Val Ala Gly Phe Phe Phe Asp Asn Trp Gly Gln Gly Thr
100 105 110

Leu Val Thr Val Ser Ser

115

<210> 251
<211> 108
<212> PRT
<213> Artificial Sequence

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

<400> 251
Glu Ile Met Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly
1 5 10 15

Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Ser Ser
20 25 30

Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu
35 40 45

Ile Tyr Gly Ala Ser Ser Arg Ala Ala Gly Val Pro Asp Arg Phe Ser
50 55 60

Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Ala
65 70 75 80

Pro Glu Asp Phe Val Val Tyr Tyr Cys Gln Gln Tyr Gly Ile Ser Pro
85 90 95

Leu Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
100 105

<210> 252
<211> 246
<212> PRT
<213> Artificial Sequence

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

<400> 252

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

Thr Leu Ser Leu Thr Cys Thr Val Ser Ser Asp Ser Ile Ser Ser Tyr
            20                  25                  30

Tyr Trp Ser Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp Ile
        35                  40                  45

Ser Tyr Ile Tyr Tyr Ser Gly Ile Ser Asn Tyr Asn Pro Ser Leu Lys
    50                  55                  60

Ser Arg Val Ser Ile Ser Val Asp Thr Ser Lys Asn Gln Phe Ser Leu
65                  70                  75                  80

Arg Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr Cys Ala
                85                  90                  95

Arg Ile Ser Val Ala Gly Phe Phe Phe Asp Asn Trp Gly Gln Gly Thr
            100                 105                 110

Leu Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
        115                 120                 125

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Ile Met Leu Thr Gln
    130                 135                 140

Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg Ala Thr Leu Ser
145                 150                 155                 160

Cys Arg Ala Ser Gln Ser Val Ser Ser Ser Tyr Leu Ala Trp Tyr Gln
                165                 170                 175

Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile Tyr Gly Ala Ser Ser
            180                 185                 190

Arg Ala Ala Gly Val Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr
        195                 200                 205

Asp Phe Thr Leu Thr Ile Ser Arg Leu Ala Pro Glu Asp Phe Val Val
```

210 215 220

Tyr Tyr Cys Gln Gln Tyr Gly Ile Ser Pro Leu Thr Phe Gly Gly Gly
225 230 235 240

Thr Lys Val Glu Ile Lys
245

<210> 253
<211> 11
<212> PRT
<213> Artificial Sequence

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

<400> 253
Asp Ser Val Ser Ser Asn Ser Ala Thr Trp Asn
1 5 10

<210> 254
<211> 14
<212> PRT
<213> Artificial Sequence

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

<400> 254
Gly Arg Thr Tyr Tyr Arg Ser Lys Trp Tyr Asp Asp Tyr Ala
1 5 10

<210> 255
<211> 16
<212> PRT
<213> Artificial Sequence

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

<400> 255
Cys Ala Gly Gly Gly Leu Val Gly Ala Pro Asp Gly Phe Asp Val Trp

1 5 10 15

<210> 256
<211> 13
<212> PRT
<213> Artificial Sequence

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

<400> 256
Ser Gly Ser Ser Ser Asn Ile Gly Ser Asp Pro Val Asn
1 5 10

<210> 257
<211> 7
<212> PRT
<213> Artificial Sequence

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

<400> 257
Ser Asn Asn Gln Arg Pro Ser
1 5

<210> 258
<211> 13
<212> PRT
<213> Artificial Sequence

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

<400> 258
Cys Ser Ala Trp Asp Asp Ser Leu Asn Gly Tyr Val Phe
1 5 10

<210> 259
<211> 124
<212> PRT
<213> Artificial Sequence

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

<400> 259
Gln Val Gln Leu Gln Gln Ser Gly Pro Gly Leu Val Lys Pro Ser Gln
1 5 10 15

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

Ser Ala Thr Trp Asn Trp Ile Arg Gln Ser Pro Ser Arg Gly Leu Glu
35 40 45

Trp Leu Gly Arg Thr Tyr Tyr Arg Ser Lys Trp Tyr Asp Asp Tyr Ala
50 55 60

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

His Leu Ser Leu His Leu Asn Ser Val Thr Pro Glu Asp Thr Ala Val
85 90 95

Tyr Tyr Cys Ala Gly Gly Gly Leu Val Gly Ala Pro Asp Gly Phe Asp
100 105 110

Val Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser
115 120

<210> 260
<211> 110
<212> PRT
<213> Artificial Sequence

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

<400> 260
Gln Ser Val Leu Thr Gln Pro Pro Ser Ala Ser Gly Thr Pro Gly Gln
1 5 10 15

Arg Val Thr Ile Ser Cys Ser Gly Ser Ser Ser Asn Ile Gly Ser Asp
            20   25   30

Pro Val Asn Trp Tyr Gln Gln Leu Pro Gly Thr Ala Pro Lys Leu Leu
        35   40   45

Ile Tyr Ser Asn Asn Gln Arg Pro Ser Gly Val Pro Asp Arg Phe Ser
    50   55   60

Gly Ser Lys Ser Gly Thr Ser Ala Ser Leu Ala Ile Ser Gly Leu Gln
65   70   75   80

Ser Glu Asp Glu Ala Asp Tyr Tyr Cys Ser Ala Trp Asp Asp Ser Leu
                85   90   95

Asn Gly Tyr Val Phe Gly Thr Gly Thr Lys Val Thr Val Leu
            100   105   110

<210> 261
<211> 254
<212> PRT
<213> Artificial Sequence

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

<400> 261
Gln Val Gln Leu Gln Gln Ser Gly Pro Gly Leu Val Lys Pro Ser Gln
1   5   10   15

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

Ser Ala Thr Trp Asn Trp Ile Arg Gln Ser Pro Ser Arg Gly Leu Glu
        35   40   45

Trp Leu Gly Arg Thr Tyr Tyr Arg Ser Lys Trp Tyr Asp Asp Tyr Ala
    50   55   60

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

```
His Leu Ser Leu His Leu Asn Ser Val Thr Pro Glu Asp Thr Ala Val
                85                  90                  95

Tyr Tyr Cys Ala Gly Gly Gly Leu Val Gly Ala Pro Asp Gly Phe Asp
            100                 105                 110

Val Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly Gly
        115                 120                 125

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

Gln Ser Val Leu Thr Gln Pro Pro Ser Ala Ser Gly Thr Pro Gly Gln
145                 150                 155                 160

Arg Val Thr Ile Ser Cys Ser Gly Ser Ser Ser Asn Ile Gly Ser Asp
                165                 170                 175

Pro Val Asn Trp Tyr Gln Gln Leu Pro Gly Thr Ala Pro Lys Leu Leu
            180                 185                 190

Ile Tyr Ser Asn Asn Gln Arg Pro Ser Gly Val Pro Asp Arg Phe Ser
        195                 200                 205

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

Ser Glu Asp Glu Ala Asp Tyr Tyr Cys Ser Ala Trp Asp Asp Ser Leu
225                 230                 235                 240

Asn Gly Tyr Val Phe Gly Thr Gly Thr Lys Val Thr Val Leu
                245                 250
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<210> 262
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<221> source

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

<400> 262
Tyr Thr Phe Thr Gly Tyr Ser Ile His
1 5

<210> 263
<211> 13
<212> PRT
<213> Artificial Sequence

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

<400> 263
Gly Trp Ile Asn Pro Asn Ser Gly Gly Thr Phe Tyr Ala
1 5 10

<210> 264
<211> 17
<212> PRT
<213> Artificial Sequence

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

<400> 264
Cys Ala Arg Asp Gly Trp Gly Asp Tyr Tyr Tyr Tyr Gly Leu Asp Val
1 5 10 15

Trp

<210> 265
<211> 11
<212> PRT
<213> Artificial Sequence

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

<400> 265

Arg Ala Ser Gln Asp Ile Ser Ser Trp Leu Ala
1   5   10

<210> 266
<211> 7
<212> PRT
<213> Artificial Sequence

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

<400> 266
Thr Ala Ser Ser Leu Gln Gly
1   5

<210> 267
<211> 11
<212> PRT
<213> Artificial Sequence

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

<400> 267
Cys Gln Gln Ala Asn Val Phe Pro Tyr Thr Phe
1   5   10

<210> 268
<211> 122
<212> PRT
<213> Artificial Sequence

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

<400> 268
Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
1   5   10   15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Gly Tyr
            20   25   30

```
Ser Ile His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
        35                  40                  45


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


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


Met Glu Leu Ser Arg Leu Arg Ser Asp Asp Thr Ala Val Tyr Tyr Cys
                85                  90                  95


Ala Arg Asp Gly Trp Gly Asp Tyr Tyr Tyr Tyr Gly Leu Asp Val Trp
            100                 105                 110


Gly Gln Gly Thr Thr Val Thr Val Ser Leu
        115                 120


<210> 269
<211> 107
<212> PRT
<213> Artificial Sequence

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

<400> 269
Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Val Ser Ala Ser Val Gly
1               5                   10                  15


Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Asp Ile Ser Ser Trp
            20                  25                  30


Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
        35                  40                  45


Tyr Thr Ala Ser Ser Leu Gln Gly Gly Val Pro Ser Arg Phe Ser Gly
    50                  55                  60


Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
65                  70                  75                  80
```

```
Glu Asp Leu Ala Thr Tyr Ser Cys Gln Gln Ala Asn Val Phe Pro Tyr
                85                  90                  95


Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
            100                 105


<210> 270
<211> 249
<212> PRT
<213> Artificial Sequence

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

<400> 270
Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
1               5                   10                  15


Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Gly Tyr
            20                  25                  30


Ser Ile His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
        35                  40                  45


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


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


Met Glu Leu Ser Arg Leu Arg Ser Asp Asp Thr Ala Val Tyr Tyr Cys
                85                  90                  95


Ala Arg Asp Gly Trp Gly Asp Tyr Tyr Tyr Tyr Gly Leu Asp Val Trp
            100                 105                 110


Gly Gln Gly Thr Thr Val Thr Val Ser Leu Gly Gly Gly Gly Ser Gly
        115                 120                 125
```

```
Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile
    130                 135                 140

Gln Met Thr Gln Ser Pro Ser Ser Val Ser Ala Ser Val Gly Asp Arg
145                 150                 155                 160

Val Thr Ile Thr Cys Arg Ala Ser Gln Asp Ile Ser Ser Trp Leu Ala
                165                 170                 175

Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile Tyr Thr
            180                 185                 190

Ala Ser Ser Leu Gln Gly Gly Val Pro Ser Arg Phe Ser Gly Ser Gly
        195                 200                 205

Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro Glu Asp
    210                 215                 220

Leu Ala Thr Tyr Ser Cys Gln Gln Ala Asn Val Phe Pro Tyr Thr Phe
225                 230                 235                 240

Gly Gln Gly Thr Lys Leu Glu Ile Lys
                245
```

<210> 271
<211> 9
<212> PRT
<213> Artificial Sequence

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

<400> 271
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Phe Thr Phe Ser Ser Tyr Ala Met Asn
1               5
```

<210> 272
<211> 13
<212> PRT
<213> Artificial Sequence

<220>

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

<400> 272
Ser Thr Ile Ser Gly Ser Gly Gly Ser Thr Tyr Tyr Ala
1 5 10

<210> 273
<211> 17
<212> PRT
<213> Artificial Sequence

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

<400> 273
Cys Ala Ile Asp Pro Glu Tyr Tyr Asp Ile Leu Thr Gly Gly Asp Tyr
1 5 10 15

Trp

<210> 274
<211> 11
<212> PRT
<213> Artificial Sequence

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

<400> 274
Arg Ala Ser Gln Gly Ile Ser Asn Tyr Leu Ala
1 5 10

<210> 275
<211> 7
<212> PRT
<213> Artificial Sequence

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

<400> 275
Ala Ala Ser Ser Leu Gln Ser
1   5

<210> 276
<211> 11
<212> PRT
<213> Artificial Sequence

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

<400> 276
Cys Leu Gln His Asp Ser Phe Pro Leu Thr Phe
1   5   10

<210> 277
<211> 122
<212> PRT
<213> Artificial Sequence

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

<400> 277
Glu Val Gln Leu Leu Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
1   5   10   15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr
            20   25   30

Ala Met Asn Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35   40   45

Ser Thr Ile Ser Gly Ser Gly Gly Ser Thr Tyr Tyr Ala Asp Ser Val
    50   55   60

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
65   70   75   80

Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Phe Tyr Cys
                85   90   95

```
Ala Ile Asp Pro Glu Tyr Tyr Asp Ile Leu Thr Gly Gly Asp Tyr Trp
            100                 105                 110


Gly Gln Gly Thr Leu Val Thr Val Ser Ser
        115                 120


<210> 278
<211> 107
<212> PRT
<213> Artificial Sequence

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

<400> 278
Asp Ile Gln Met Thr Gln Ser Pro Ser Ala Met Ser Ala Ser Val Gly
1               5                   10                  15


Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Gly Ile Ser Asn Tyr
            20                  25                  30


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


Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
    50                  55                  60


Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
65                  70                  75                  80


Glu Asp Phe Ala Thr Tyr Phe Cys Leu Gln His Asp Ser Phe Pro Leu
                85                  90                  95


Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
            100                 105


<210> 279
<211> 250
<212> PRT
<213> Artificial Sequence
```

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

<400> 279
Glu Val Gln Leu Leu Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr
20 25 30

Ala Met Asn Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45

Ser Thr Ile Ser Gly Ser Gly Gly Ser Thr Tyr Tyr Ala Asp Ser Val
50 55 60

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
65 70 75 80

Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Phe Tyr Cys
85 90 95

Ala Ile Asp Pro Glu Tyr Tyr Asp Ile Leu Thr Gly Gly Asp Tyr Trp
100 105 110

Gly Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly
115 120 125

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

Ile Gln Met Thr Gln Ser Pro Ser Ala Met Ser Ala Ser Val Gly Asp
145 150 155 160

Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Gly Ile Ser Asn Tyr Leu
165 170 175

Ala Trp Phe Gln Gln Lys Pro Gly Lys Val Pro Lys Arg Leu Ile Tyr
180 185 190

```
Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly Ser
        195                 200                 205


Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro Glu
    210                 215                 220


Asp Phe Ala Thr Tyr Phe Cys Leu Gln His Asp Ser Phe Pro Leu Thr
225                 230                 235                 240


Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
                245                 250


<210> 280
<211> 9
<212> PRT
<213> Artificial Sequence

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

<400> 280
Asp Ser Ile Ser Asn Tyr Tyr Trp Ser
1               5


<210> 281
<211> 12
<212> PRT
<213> Artificial Sequence

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

<400> 281
Ser Tyr Ile Tyr Tyr Ser Gly Ile Thr Asn Tyr Asn
1               5                   10


<210> 282
<211> 14
<212> PRT
<213> Artificial Sequence
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<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 282
Cys Ala Arg Ile Thr Val Thr Gly Phe Tyr Phe Asp Tyr Trp
1 5 10

<210> 283
<211> 12
<212> PRT
<213> Artificial Sequence

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

<400> 283
Arg Ala Ser Gln Ser Ile Ser Arg Ser Tyr Leu Ala
1 5 10

<210> 284
<211> 7
<212> PRT
<213> Artificial Sequence

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

<400> 284
Gly Ala Ser Ser Arg Ala Thr
1 5

<210> 285
<211> 11
<212> PRT
<213> Artificial Sequence

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

<400> 285
Cys Gln Gln Tyr Asp Thr Ser Pro Leu Thr Phe
1 5 10

<210> 286
<211> 118
<212> PRT
<213> Artificial Sequence

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

<400> 286
Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Glu
1 5 10 15

Thr Leu Ser Leu Thr Cys Thr Val Ser Ser Asp Ser Ile Ser Asn Tyr
20 25 30

Tyr Trp Ser Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp Ile
35 40 45

Ser Tyr Ile Tyr Tyr Ser Gly Ile Thr Asn Tyr Asn Pro Ser Leu Lys
50 55 60

Ser Arg Val Thr Ile Ser Val Asp Thr Ser Lys Asn Gln Phe Ser Leu
65 70 75 80

Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr Cys Ala
85 90 95

Arg Ile Thr Val Thr Gly Phe Tyr Phe Asp Tyr Trp Gly Gln Gly Thr
100 105 110

Leu Val Thr Val Ser Ser
115

<210> 287
<211> 108
<212> PRT
<213> Artificial Sequence

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

polypeptide"

<400> 287
Glu Ile Val Leu Thr Gln Ser Pro Gly Thr Leu Ser Leu Ser Pro Gly
1 5 10 15

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

Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg His Leu
35 40 45

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

Gly Ser Gly Ser Gly Thr Asp Phe Ile Leu Thr Ile Ser Arg Leu Glu
65 70 75 80

Pro Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Asp Thr Ser Pro
85 90 95

Leu Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
100 105

<210> 288
<211> 246
<212> PRT
<213> Artificial Sequence

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

<400> 288
Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Glu
1 5 10 15

Thr Leu Ser Leu Thr Cys Thr Val Ser Ser Asp Ser Ile Ser Asn Tyr
20 25 30

Tyr Trp Ser Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp Ile
35 40 45

```
Ser Tyr Ile Tyr Tyr Ser Gly Ile Thr Asn Tyr Asn Pro Ser Leu Lys
    50                  55                  60

Ser Arg Val Thr Ile Ser Val Asp Thr Ser Lys Asn Gln Phe Ser Leu
65                  70                  75                  80

Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr Cys Ala
                85                  90                  95

Arg Ile Thr Val Thr Gly Phe Tyr Phe Asp Tyr Trp Gly Gln Gly Thr
            100                 105                 110

Leu Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
        115                 120                 125

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Ile Val Leu Thr Gln
    130                 135                 140

Ser Pro Gly Thr Leu Ser Leu Ser Pro Gly Glu Arg Ala Thr Leu Ser
145                 150                 155                 160

Cys Arg Ala Ser Gln Ser Ile Ser Arg Ser Tyr Leu Ala Trp Tyr Gln
                165                 170                 175

Gln Lys Pro Gly Gln Ala Pro Arg His Leu Ile Tyr Gly Ala Ser Ser
            180                 185                 190

Arg Ala Thr Gly Ile Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr
        195                 200                 205

Asp Phe Ile Leu Thr Ile Ser Arg Leu Glu Pro Glu Asp Phe Ala Val
    210                 215                 220

Tyr Tyr Cys Gln Gln Tyr Asp Thr Ser Pro Leu Thr Phe Gly Gly Gly
225                 230                 235                 240

Thr Lys Val Glu Ile Lys
                245
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<210> 289
<211> 11
<212> PRT
<213> Artificial Sequence

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

<400> 289
Asp Ser Val Ser Ser Asn Ser Val Val Trp Asn
1 5 10

<210> 290
<211> 14
<212> PRT
<213> Artificial Sequence

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

<400> 290
Gly Arg Thr Tyr Tyr Arg Ser Lys Trp Tyr Asp Asp Tyr Ala
1 5 10

<210> 291
<211> 16
<212> PRT
<213> Artificial Sequence

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

<400> 291
Cys Ala Arg Gly Gly Ile Val Gly Ala Pro Asp Ala Phe Asp Ile Trp
1 5 10 15

<210> 292
<211> 13
<212> PRT
<213> Artificial Sequence

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

peptide"

<400> 292
Ser Gly Ser Ser Ser Asn Ile Gly Ser Asp Pro Val Ser
1 5 10

<210> 293
<211> 7
<212> PRT
<213> Artificial Sequence

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

<400> 293
Thr Asn Asn Gln Arg Pro Ser
1 5

<210> 294
<211> 13
<212> PRT
<213> Artificial Sequence

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

<400> 294
Cys Ala Ala Trp Asp Asp Ser Leu Asn Gly His Val Phe
1 5 10

<210> 295
<211> 124
<212> PRT
<213> Artificial Sequence

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

<400> 295
Gln Val Gln Leu Gln Gln Ser Gly Pro Gly Leu Val Lys Pro Ser Gln
1 5 10 15

Thr Leu Ser Leu Thr Cys Ala Ile Ser Gly Asp Ser Val Ser Ser Asn

20 25 30

Ser Val Val Trp Asn Trp Ile Arg Gln Ser Pro Ser Arg Gly Leu Glu
35 40 45

Trp Leu Gly Arg Thr Tyr Tyr Arg Ser Lys Trp Tyr Asp Asp Tyr Ala
50 55 60

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

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

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

Ile Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser
115 120

<210> 296
<211> 110
<212> PRT
<213> Artificial Sequence

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

<400> 296
Gln Ser Val Leu Thr Gln Pro Pro Ser Ala Ser Gly Thr Pro Gly Gln
1 5 10 15

Arg Val Thr Ile Ser Cys Ser Gly Ser Ser Ser Asn Ile Gly Ser Asp
20 25 30

Pro Val Ser Trp Tyr Gln Gln Phe Pro Gly Thr Ala Pro Lys Leu Leu
35 40 45

Ile Tyr Thr Asn Asn Gln Arg Pro Ser Gly Val Pro Asp Arg Phe Ser
50 55 60

Gly Ser Lys Ser Gly Thr Ser Ala Ser Leu Ala Ile Ser Gly Leu Gln
65 70 75 80

Ser Glu Asp Glu Ala Asp Tyr Tyr Cys Ala Ala Trp Asp Asp Ser Leu
85 90 95

Asn Gly His Val Phe Gly Thr Gly Thr Lys Val Thr Val Leu
100 105 110

<210> 297
<211> 254
<212> PRT
<213> Artificial Sequence

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

<400> 297
Gln Val Gln Leu Gln Gln Ser Gly Pro Gly Leu Val Lys Pro Ser Gln
1 5 10 15

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

Ser Val Val Trp Asn Trp Ile Arg Gln Ser Pro Ser Arg Gly Leu Glu
35 40 45

Trp Leu Gly Arg Thr Tyr Tyr Arg Ser Lys Trp Tyr Asp Asp Tyr Ala
50 55 60

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

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

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

Ile Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly Gly

```
        115                 120                 125

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

Gln Ser Val Leu Thr Gln Pro Pro Ser Ala Ser Gly Thr Pro Gly Gln
145                 150                 155                 160

Arg Val Thr Ile Ser Cys Ser Gly Ser Ser Ser Asn Ile Gly Ser Asp
                165                 170                 175

Pro Val Ser Trp Tyr Gln Gln Phe Pro Gly Thr Ala Pro Lys Leu Leu
            180                 185                 190

Ile Tyr Thr Asn Asn Gln Arg Pro Ser Gly Val Pro Asp Arg Phe Ser
        195                 200                 205

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

Ser Glu Asp Glu Ala Asp Tyr Tyr Cys Ala Ala Trp Asp Asp Ser Leu
225                 230                 235                 240

Asn Gly His Val Phe Gly Thr Gly Thr Lys Val Thr Val Leu
                245                 250


<210> 298
<211> 11
<212> PRT
<213> Artificial Sequence

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

<400> 298
Asp Ser Val Ser Ser Asn Ser Ala Val Trp Asn
1               5                   10


<210> 299
<211> 14
<212> PRT
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<213> Artificial Sequence

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

<400> 299
Gly Trp Thr Tyr Tyr Arg Ser Lys Tyr Tyr Asn Asp Tyr Ala
1 5 10

<210> 300
<211> 16
<212> PRT
<213> Artificial Sequence

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

<400> 300
Cys Thr Arg Gly Gly Ile Val Gly Ala Pro Asp Gly Phe Asp Ile Trp
1 5 10 15

<210> 301
<211> 13
<212> PRT
<213> Artificial Sequence

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

<400> 301
Ser Gly Ser Asn Ser Asn Ile Gly Ser Asn Pro Ile Asn
1 5 10

<210> 302
<211> 7
<212> PRT
<213> Artificial Sequence

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

<400> 302

Ser Asn Asn Gln Arg Pro Ser
1   5

<210> 303
<211> 13
<212> PRT
<213> Artificial Sequence

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

<400> 303
Cys Ala Ala Trp Asp Asp Ser Leu Asn Gly His Val Phe
1   5   10

<210> 304
<211> 124
<212> PRT
<213> Artificial Sequence

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

<400> 304
Gln Val Gln Leu Gln Gln Ser Gly Pro Gly Leu Val Lys Pro Ser Gln
1   5   10   15

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

Ser Ala Val Trp Asn Trp Ile Arg Gln Ser Pro Ser Arg Gly Leu Glu
        35   40   45

Trp Leu Gly Trp Thr Tyr Tyr Arg Ser Lys Tyr Tyr Asn Asp Tyr Ala
    50   55   60

Val Ser Leu Lys Ser Arg Ile Thr Ile Asn Pro Asp Thr Ser Lys Asn
65   70   75   80

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

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

Ile Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser
115 120

<210> 305
<211> 110
<212> PRT
<213> Artificial Sequence

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

<400> 305
Gln Ser Ala Leu Thr Gln Pro Pro Ser Ala Ser Gly Thr Pro Gly Gln
1 5 10 15

Arg Val Thr Ile Ser Cys Ser Gly Ser Asn Ser Asn Ile Gly Ser Asn
20 25 30

Pro Ile Asn Trp Tyr Gln Gln Leu Pro Gly Thr Ala Pro Lys Leu Leu
35 40 45

Ile Tyr Ser Asn Asn Gln Arg Pro Ser Gly Val Pro Asp Arg Phe Ser
50 55 60

Gly Ser Lys Ser Gly Thr Ser Ala Ser Leu Ala Ile Ser Gly Leu Gln
65 70 75 80

Ser Glu Asp Glu Ala Asp Tyr Tyr Cys Ala Ala Trp Asp Asp Ser Leu
85 90 95

Asn Gly His Val Phe Gly Thr Gly Thr Lys Val Thr Val Leu
100 105 110

<210> 306
<211> 254
<212> PRT
<213> Artificial Sequence

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

<400> 306
Gln Val Gln Leu Gln Gln Ser Gly Pro Gly Leu Val Lys Pro Ser Gln
1 5 10 15

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

Ser Ala Val Trp Asn Trp Ile Arg Gln Ser Pro Ser Arg Gly Leu Glu
35 40 45

Trp Leu Gly Trp Thr Tyr Tyr Arg Ser Lys Tyr Tyr Asn Asp Tyr Ala
50 55 60

Val Ser Leu Lys Ser Arg Ile Thr Ile Asn Pro Asp Thr Ser Lys Asn
65 70 75 80

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

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

Ile Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly Gly
115 120 125

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

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

Arg Val Thr Ile Ser Cys Ser Gly Ser Asn Ser Asn Ile Gly Ser Asn
165 170 175

Pro Ile Asn Trp Tyr Gln Gln Leu Pro Gly Thr Ala Pro Lys Leu Leu
180 185 190

Ile Tyr Ser Asn Asn Gln Arg Pro Ser Gly Val Pro Asp Arg Phe Ser
        195   200   205

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

Ser Glu Asp Glu Ala Asp Tyr Tyr Cys Ala Ala Trp Asp Asp Ser Leu
225   230   235   240

Asn Gly His Val Phe Gly Thr Gly Thr Lys Val Thr Val Leu
                245   250

<210> 307
<211> 9
<212> PRT
<213> Artificial Sequence

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

<400> 307
Gly Ser Ile Ser Ser Tyr Tyr Trp Ser
1   5

<210> 308
<211> 12
<212> PRT
<213> Artificial Sequence

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

<400> 308
Gly Tyr Val Tyr Tyr Ser Asp Ile Thr Asn Tyr Asn
1   5   10

<210> 309
<211> 14
<212> PRT
<213> Artificial Sequence

<220>

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

<400> 309
Cys Ala Arg Ile Gly Val Ala Gly Phe Tyr Phe Asp Tyr Trp
1 5 10

<210> 310
<211> 12
<212> PRT
<213> Artificial Sequence

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

<400> 310
Arg Ala Ser Gln Ser Val Ser Arg Arg Tyr Leu Ala
1 5 10

<210> 311
<211> 7
<212> PRT
<213> Artificial Sequence

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

<400> 311
Gly Ala Ser Ser Arg Ala Thr
1 5

<210> 312
<211> 11
<212> PRT
<213> Artificial Sequence

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

<400> 312
Cys Gln Gln Tyr Gly Thr Ser Pro Ile Thr Phe
1 5 10

<210> 313
<211> 118
<212> PRT
<213> Artificial Sequence

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

<400> 313
Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Glu
1 5 10 15

Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Gly Ser Ile Ser Ser Tyr
20 25 30

Tyr Trp Ser Trp Ile Arg Gln Ser Pro Gly Lys Gly Leu Glu Trp Ile
35 40 45

Gly Tyr Val Tyr Tyr Ser Asp Ile Thr Asn Tyr Asn Pro Ser Leu Lys
50 55 60

Ser Arg Val Thr Ile Ser Val Asp Thr Ser Lys Asn Gln Phe Ser Leu
65 70 75 80

Asn Leu Asn Ser Val Thr Ala Ala Asp Thr Ala Phe Tyr Phe Cys Ala
85 90 95

Arg Ile Gly Val Ala Gly Phe Tyr Phe Asp Tyr Trp Gly Gln Gly Thr
100 105 110

Leu Val Thr Val Ser Ser
115

<210> 314
<211> 108
<212> PRT
<213> Artificial Sequence

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

<400> 314
Glu Ile Val Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly
1   5   10   15

Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Arg Arg
            20   25   30

Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu
        35   40   45

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

Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu
65   70   75   80

Pro Glu Asp Phe Glu Val Tyr Tyr Cys Gln Gln Tyr Gly Thr Ser Pro
                85   90   95

Ile Thr Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys
            100   105

<210> 315
<211> 246
<212> PRT
<213> Artificial Sequence

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

<400> 315
Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Glu
1   5   10   15

Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Gly Ser Ile Ser Ser Tyr
            20   25   30

Tyr Trp Ser Trp Ile Arg Gln Ser Pro Gly Lys Gly Leu Glu Trp Ile
        35   40   45

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Gly Tyr Val Tyr Tyr Ser Asp Ile Thr Asn Tyr Asn Pro Ser Leu Lys
    50                  55                  60

Ser Arg Val Thr Ile Ser Val Asp Thr Ser Lys Asn Gln Phe Ser Leu
65                  70                  75                  80

Asn Leu Asn Ser Val Thr Ala Ala Asp Thr Ala Phe Tyr Phe Cys Ala
                85                  90                  95

Arg Ile Gly Val Ala Gly Phe Tyr Phe Asp Tyr Trp Gly Gln Gly Thr
            100                 105                 110

Leu Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
        115                 120                 125

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Ile Val Leu Thr Gln
    130                 135                 140

Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg Ala Thr Leu Ser
145                 150                 155                 160

Cys Arg Ala Ser Gln Ser Val Ser Arg Arg Tyr Leu Ala Trp Tyr Gln
                165                 170                 175

Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile Tyr Gly Ala Ser Ser
            180                 185                 190

Arg Ala Thr Gly Ile Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr
        195                 200                 205

Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu Asp Phe Glu Val
    210                 215                 220

Tyr Tyr Cys Gln Gln Tyr Gly Thr Ser Pro Ile Thr Phe Gly Gln Gly
225                 230                 235                 240

Thr Arg Leu Glu Ile Lys
                245
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<210> 316

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

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

<400> 316
Asp Ser Val Ser Ser Asn Ser Ala Val Trp Asn
1 5 10

<210> 317
<211> 14
<212> PRT
<213> Artificial Sequence

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

<400> 317
Gly Arg Thr Tyr Tyr Arg Ser Lys Trp Tyr Asn Asp Tyr Ala
1 5 10

<210> 318
<211> 16
<212> PRT
<213> Artificial Sequence

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

<400> 318
Phe Thr Arg Gly Gly Ile Val Gly Ala Pro Asp Ala Phe Asp Ile Trp
1 5 10 15

<210> 319
<211> 13
<212> PRT
<213> Artificial Sequence

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

<400> 319
Ser Gly Ser Ser Ser Asn Ile Gly Ser Asp Pro Ile Asn
1   5   10

<210> 320
<211> 7
<212> PRT
<213> Artificial Sequence

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

<400> 320
Ser Asn Asn Gln Arg Pro Ser
1   5

<210> 321
<211> 13
<212> PRT
<213> Artificial Sequence

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

<400> 321
Cys Ala Ala Trp Asp Asp Ser Leu Asn Gly Tyr Val Phe
1   5   10

<210> 322
<211> 124
<212> PRT
<213> Artificial Sequence

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

<400> 322
Gln Ile Gln Leu Gln Gln Ser Gly Pro Gly Leu Val Lys Pro Ser Gln
1   5   10   15

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

```
Ser Ala Val Trp Asn Trp Ile Arg Gln Ser Pro Ser Arg Gly Leu Glu
        35                  40                  45

Trp Leu Gly Arg Thr Tyr Tyr Arg Ser Lys Trp Tyr Asn Asp Tyr Ala
    50                  55                  60

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

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

Tyr Tyr Phe Thr Arg Gly Gly Ile Val Gly Ala Pro Asp Ala Phe Asp
            100                 105                 110

Ile Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser
        115                 120


<210> 323
<211> 110
<212> PRT
<213> Artificial Sequence

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

<400> 323
Gln Ser Val Leu Thr Gln Pro Pro Ser Ala Ser Gly Thr Pro Gly Gln
1               5                   10                  15

Arg Val Thr Ile Ser Cys Ser Gly Ser Ser Ser Asn Ile Gly Ser Asp
            20                  25                  30

Pro Ile Asn Trp Tyr Gln Gln Val Pro Gly Thr Ala Pro Lys Leu Leu
        35                  40                  45

Ile Tyr Ser Asn Asn Gln Arg Pro Ser Gly Val Pro Asp Arg Phe Ser
    50                  55                  60
```

```
Gly Ser Lys Ser Gly Thr Ser Ala Ser Leu Ala Ile Ser Gly Leu Gln
65                  70                  75                  80


Ser Glu Asp Glu Ala Asp Tyr Tyr Cys Ala Ala Trp Asp Asp Ser Leu
                85                  90                  95


Asn Gly Tyr Val Phe Gly Thr Gly Thr Lys Val Thr Val Leu
            100                 105                 110


<210> 324
<211> 254
<212> PRT
<213> Artificial Sequence

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

<400> 324
Gln Ile Gln Leu Gln Gln Ser Gly Pro Gly Leu Val Lys Pro Ser Gln
1               5                   10                  15


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


Ser Ala Val Trp Asn Trp Ile Arg Gln Ser Pro Ser Arg Gly Leu Glu
        35                  40                  45


Trp Leu Gly Arg Thr Tyr Tyr Arg Ser Lys Trp Tyr Asn Asp Tyr Ala
    50                  55                  60


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


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


Tyr Tyr Phe Thr Arg Gly Gly Ile Val Gly Ala Pro Asp Ala Phe Asp
            100                 105                 110


Ile Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly Gly
        115                 120                 125
```

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


Gln Ser Val Leu Thr Gln Pro Pro Ser Ala Ser Gly Thr Pro Gly Gln
145                 150                 155                 160


Arg Val Thr Ile Ser Cys Ser Gly Ser Ser Ser Asn Ile Gly Ser Asp
                165                 170                 175


Pro Ile Asn Trp Tyr Gln Gln Val Pro Gly Thr Ala Pro Lys Leu Leu
            180                 185                 190


Ile Tyr Ser Asn Asn Gln Arg Pro Ser Gly Val Pro Asp Arg Phe Ser
        195                 200                 205


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


Ser Glu Asp Glu Ala Asp Tyr Tyr Cys Ala Ala Trp Asp Asp Ser Leu
225                 230                 235                 240


Asn Gly Tyr Val Phe Gly Thr Gly Thr Lys Val Thr Val Leu
                245                 250


<210> 325
<211> 11
<212> PRT
<213> Artificial Sequence

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

<400> 325
Asp Ser Val Ser Ser Asn Ser Ala Thr Trp Asn
1               5                   10


<210> 326
<211> 14
<212> PRT
<213> Artificial Sequence
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<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 326
Gly Arg Thr Tyr Tyr Arg Ser Glu Trp Tyr Asn Asp Tyr Ala
1 5 10

<210> 327
<211> 16
<212> PRT
<213> Artificial Sequence

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

<400> 327
Cys Ala Gly Gly Gly Ile Val Gly Ala Pro Asp Gly Phe Asp Val Trp
1 5 10 15

<210> 328
<211> 13
<212> PRT
<213> Artificial Sequence

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

<400> 328
Ser Gly Ser Ser Ser Asn Ile Gly Ser Asp Pro Val Ile
1 5 10

<210> 329
<211> 7
<212> PRT
<213> Artificial Sequence

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

<400> 329
Ser Asn Asn Gln Arg Pro Ser

1 5

<210> 330
<211> 13
<212> PRT
<213> Artificial Sequence

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

<400> 330
Cys Ala Ala Trp Asp Asp Ser Leu Asn Gly Tyr Val Phe
1 5 10

<210> 331
<211> 124
<212> PRT
<213> Artificial Sequence

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

<400> 331
Gln Val Gln Leu Gln Gln Ser Gly Pro Gly Leu Val Lys Pro Ser Glu
1 5 10 15

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

Ser Ala Thr Trp Asn Trp Ile Arg Gln Ser Pro Ser Arg Gly Leu Glu
35 40 45

Trp Leu Gly Arg Thr Tyr Tyr Arg Ser Glu Trp Tyr Asn Asp Tyr Ala
50 55 60

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

His Leu Ser Leu His Leu Asn Ser Val Thr Pro Glu Asp Thr Ala Val
85 90 95

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

Val Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser
115 120

<210> 332
<211> 110
<212> PRT
<213> Artificial Sequence

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

<400> 332
Gln Ser Val Leu Thr Gln Pro Pro Ser Ala Ser Gly Thr Pro Gly Gln
1 5 10 15

Arg Val Thr Ile Ser Cys Ser Gly Ser Ser Ser Asn Ile Gly Ser Asp
20 25 30

Pro Val Ile Trp Tyr Gln Gln Leu Pro Arg Thr Ala Pro Lys Leu Leu
35 40 45

Ile Tyr Ser Asn Asn Gln Arg Pro Ser Gly Val Pro Asp Arg Phe Ser
50 55 60

Gly Ser Lys Ser Gly Thr Ser Ala Ser Leu Ala Ile Ser Gly Leu Gln
65 70 75 80

Ser Glu Asp Glu Ala Asp Tyr Tyr Cys Ala Ala Trp Asp Asp Ser Leu
85 90 95

Asn Gly Tyr Val Phe Gly Thr Gly Thr Lys Val Thr Val Leu
100 105 110

<210> 333
<211> 254
<212> PRT
<213> Artificial Sequence

<220>

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

<400> 333
Gln Val Gln Leu Gln Gln Ser Gly Pro Gly Leu Val Lys Pro Ser Glu
1 5 10 15

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

Ser Ala Thr Trp Asn Trp Ile Arg Gln Ser Pro Ser Arg Gly Leu Glu
35 40 45

Trp Leu Gly Arg Thr Tyr Tyr Arg Ser Glu Trp Tyr Asn Asp Tyr Ala
50 55 60

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

His Leu Ser Leu His Leu Asn Ser Val Thr Pro Glu Asp Thr Ala Val
85 90 95

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

Val Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly Gly
115 120 125

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

Gln Ser Val Leu Thr Gln Pro Pro Ser Ala Ser Gly Thr Pro Gly Gln
145 150 155 160

Arg Val Thr Ile Ser Cys Ser Gly Ser Ser Ser Asn Ile Gly Ser Asp
165 170 175

Pro Val Ile Trp Tyr Gln Gln Leu Pro Arg Thr Ala Pro Lys Leu Leu
180 185 190

```
Ile Tyr Ser Asn Asn Gln Arg Pro Ser Gly Val Pro Asp Arg Phe Ser
        195                 200                 205


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


Ser Glu Asp Glu Ala Asp Tyr Tyr Cys Ala Ala Trp Asp Asp Ser Leu
225                 230                 235                 240


Asn Gly Tyr Val Phe Gly Thr Gly Thr Lys Val Thr Val Leu
                245                 250


<210> 334
<211> 11
<212> PRT
<213> Artificial Sequence

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

<400> 334
Asp Ser Val Ser Ser Asn Ser Ala Thr Trp Asn
1               5                   10


<210> 335
<211> 14
<212> PRT
<213> Artificial Sequence

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

<400> 335
Ala Arg Thr Tyr Tyr Arg Ser Lys Trp Tyr Asn Asp Tyr Glu
1               5                   10


<210> 336
<211> 16
<212> PRT
<213> Artificial Sequence

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

<400> 336
Cys Ala Arg Gly Gly Ile Val Gly Ala Pro Asp Ala Phe Asp Ile Trp
1 5 10 15

<210> 337
<211> 13
<212> PRT
<213> Artificial Sequence

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

<400> 337
Ser Gly Ser Ser Ser Asn Ile Gly Ser Asn Pro Val Asn
1 5 10

<210> 338
<211> 7
<212> PRT
<213> Artificial Sequence

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

<400> 338
Ser Asn Asn Gln Arg Pro Ser
1 5

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

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

<400> 339
Cys Ser Ala Trp Asp Asp Trp Leu Asn Gly Tyr Val Phe
1 5 10

<210> 340
<211> 124
<212> PRT
<213> Artificial Sequence

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

<400> 340
Gln Val Gln Leu Gln Gln Ser Gly Pro Gly Leu Val Lys Pro Ser Gln
1 5 10 15

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

Ser Ala Thr Trp Asn Trp Ile Arg Gln Ser Pro Ser Thr Gly Leu Glu
35 40 45

Trp Leu Ala Arg Thr Tyr Tyr Arg Ser Lys Trp Tyr Asn Asp Tyr Glu
50 55 60

Val Ser Val Lys Ser Gln Ile Thr Ile Asn Pro Asp Thr Ser Lys Asn
65 70 75 80

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

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

Ile Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser
115 120

<210> 341
<211> 110
<212> PRT
<213> Artificial Sequence

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

<400> 341
Gln Ser Val Leu Thr Gln Pro Pro Ser Ala Ser Gly Thr Pro Gly Gln
1   5   10   15

Gly Val Thr Ile Ser Cys Ser Gly Ser Ser Ser Asn Ile Gly Ser Asn
            20   25   30

Pro Val Asn Trp Tyr Gln Gln Leu Pro Gly Thr Ala Pro Lys Leu Leu
        35   40   45

Ile Tyr Ser Asn Asn Gln Arg Pro Ser Gly Val Pro Asp Arg Phe Ser
    50   55   60

Asp Ser Lys Ser Gly Thr Ser Ala Ser Leu Ala Ile Ser Gly Leu Gln
65   70   75   80

Ser Glu Asp Glu Ala Asp Tyr Tyr Cys Ser Ala Trp Asp Asp Trp Leu
                85   90   95

Asn Gly Tyr Val Phe Gly Thr Gly Thr Lys Val Thr Val Leu
            100   105   110

<210> 342
<211> 254
<212> PRT
<213> Artificial Sequence

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

<400> 342
Gln Val Gln Leu Gln Gln Ser Gly Pro Gly Leu Val Lys Pro Ser Gln
1   5   10   15

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

Ser Ala Thr Trp Asn Trp Ile Arg Gln Ser Pro Ser Thr Gly Leu Glu
        35   40   45

Trp Leu Ala Arg Thr Tyr Tyr Arg Ser Lys Trp Tyr Asn Asp Tyr Glu

```
    50                  55                  60

Val Ser Val Lys Ser Gln Ile Thr Ile Asn Pro Asp Thr Ser Lys Asn
65                  70                  75                  80

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

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

Ile Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly Gly
        115                 120                 125

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

Gln Ser Val Leu Thr Gln Pro Pro Ser Ala Ser Gly Thr Pro Gly Gln
145                 150                 155                 160

Gly Val Thr Ile Ser Cys Ser Gly Ser Ser Ser Asn Ile Gly Ser Asn
                165                 170                 175

Pro Val Asn Trp Tyr Gln Gln Leu Pro Gly Thr Ala Pro Lys Leu Leu
            180                 185                 190

Ile Tyr Ser Asn Asn Gln Arg Pro Ser Gly Val Pro Asp Arg Phe Ser
        195                 200                 205

Asp Ser Lys Ser Gly Thr Ser Ala Ser Leu Ala Ile Ser Gly Leu Gln
    210                 215                 220

Ser Glu Asp Glu Ala Asp Tyr Tyr Cys Ser Ala Trp Asp Asp Trp Leu
225                 230                 235                 240

Asn Gly Tyr Val Phe Gly Thr Gly Thr Lys Val Thr Val Leu
                245                 250

<210> 343
<211> 9
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<212> PRT
<213> Artificial Sequence

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

<400> 343
Asp Ser Ile Asn Asn Tyr Phe Trp Ser
1 5

<210> 344
<211> 12
<212> PRT
<213> Artificial Sequence

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

<400> 344
Gly Tyr Phe Tyr His Arg Gly Gly Asn Asn Tyr Asn
1 5 10

<210> 345
<211> 14
<212> PRT
<213> Artificial Sequence

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

<400> 345
Cys Ala Arg Leu Ala Leu Ala Gly Phe Phe Asp Tyr Trp
1 5 10

<210> 346
<211> 11
<212> PRT
<213> Artificial Sequence

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

<400> 346
Arg Ala Ser Gln Ser Ile Ser Ser Trp Leu Ala
1   5   10

<210> 347
<211> 7
<212> PRT
<213> Artificial Sequence

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

<400> 347
Lys Ala Ser Ser Leu Glu Ser
1   5

<210> 348
<211> 11
<212> PRT
<213> Artificial Sequence

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

<400> 348
Cys Gln Gln Tyr Asn Ser Tyr Ser Arg Thr Phe
1   5   10

<210> 349
<211> 118
<212> PRT
<213> Artificial Sequence

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

<400> 349
Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Glu
1   5   10   15

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

Phe Trp Ser Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp Ile
        35   40   45

Gly Tyr Phe Tyr His Arg Gly Gly Asn Asn Tyr Asn Pro Ser Leu Lys
    50   55   60

Ser Arg Val Thr Ile Ser Ile Asp Thr Ser Lys Asn Gln Phe Ser Leu
65   70   75   80

Asn Leu Asn Ser Val Thr Ser Ala Asp Thr Ala Val Tyr Tyr Cys Ala
                85   90   95

Arg Leu Ala Leu Ala Gly Phe Phe Phe Asp Tyr Trp Gly Gln Gly Thr
            100   105   110

Leu Val Thr Val Ser Ser
        115

<210> 350
<211> 107
<212> PRT
<213> Artificial Sequence

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

<400> 350
Asp Ile Gln Met Thr Gln Ser Pro Ser Thr Leu Ser Ala Ser Val Gly
1   5   10   15

Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Ser Ser Trp
            20   25   30

Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
        35   40   45

Tyr Lys Ala Ser Ser Leu Glu Ser Gly Val Pro Ser Arg Phe Ser Gly
    50   55   60

Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro

65 70 75 80

Asp Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Tyr Asn Ser Tyr Ser Arg
85 90 95

Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
100 105

<210> 351
<211> 245
<212> PRT
<213> Artificial Sequence

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

<400> 351
Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Glu
1 5 10 15

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

Phe Trp Ser Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp Ile
35 40 45

Gly Tyr Phe Tyr His Arg Gly Gly Asn Asn Tyr Asn Pro Ser Leu Lys
50 55 60

Ser Arg Val Thr Ile Ser Ile Asp Thr Ser Lys Asn Gln Phe Ser Leu
65 70 75 80

Asn Leu Asn Ser Val Thr Ser Ala Asp Thr Ala Val Tyr Tyr Cys Ala
85 90 95

Arg Leu Ala Leu Ala Gly Phe Phe Phe Asp Tyr Trp Gly Gln Gly Thr
100 105 110

Leu Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
115 120 125

```
Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Gln Met Thr Gln
    130                 135                 140

Ser Pro Ser Thr Leu Ser Ala Ser Val Gly Asp Arg Val Thr Ile Thr
145                 150                 155                 160

Cys Arg Ala Ser Gln Ser Ile Ser Ser Trp Leu Ala Trp Tyr Gln Gln
                165                 170                 175

Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile Tyr Lys Ala Ser Ser Leu
            180                 185                 190

Glu Ser Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Glu
        195                 200                 205

Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro Asp Asp Phe Ala Thr Tyr
    210                 215                 220

Tyr Cys Gln Gln Tyr Asn Ser Tyr Ser Arg Thr Phe Gly Gln Gly Thr
225                 230                 235                 240

Lys Val Glu Ile Lys
                245
```

<210> 352
<211> 9
<212> PRT
<213> Artificial Sequence

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

<400> 352
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Gly Thr Phe Ser Thr Tyr Ser Ile Ser
1               5
```

<210> 353
<211> 13
<212> PRT
<213> Artificial Sequence

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

<400> 353
Gly Gly Ile Ile Pro Ile Phe Gly Thr Thr Asn Tyr Ala
1 5 10

<210> 354
<211> 18
<212> PRT
<213> Artificial Sequence

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

<400> 354
Cys Ala Arg Asp Gly Glu Gly Ser Tyr Tyr Tyr Tyr Tyr Gly Met Asp
1 5 10 15

Val Trp

<210> 355
<211> 13
<212> PRT
<213> Artificial Sequence

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

<400> 355
Ser Gly Ser Ser Ser Asn Ile Gly Ser Asn Tyr Val Tyr
1 5 10

<210> 356
<211> 7
<212> PRT
<213> Artificial Sequence

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

<400> 356
Ser Asn Asn Gln Arg Pro Ser
1 5

<210> 357
<211> 13
<212> PRT
<213> Artificial Sequence

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

<400> 357
Cys Ala Ala Trp Asp Asp Ser Leu Ser Gly Trp Val Phe
1 5 10

<210> 358
<211> 123
<212> PRT
<213> Artificial Sequence

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

<400> 358
Gln Val Pro Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ser
1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Gly Thr Phe Ser Thr Tyr
20 25 30

Ser Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45

Gly Gly Ile Ile Pro Ile Phe Gly Thr Thr Asn Tyr Ala Gln Lys Phe
50 55 60

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

Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys

```
                85                  90                  95

Ala Arg Asp Gly Glu Gly Ser Tyr Tyr Tyr Tyr Gly Met Asp Val
            100                 105                 110

Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser
        115                 120

<210> 359
<211> 110
<212> PRT
<213> Artificial Sequence

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

<400> 359
Gln Ser Val Leu Thr Gln Pro Pro Ser Ala Ser Gly Thr Pro Gly Gln
1               5                   10                  15

Arg Val Thr Ile Ser Cys Ser Gly Ser Ser Ser Asn Ile Gly Ser Asn
            20                  25                  30

Tyr Val Tyr Trp Tyr Gln Gln Leu Pro Gly Thr Ala Pro Lys Leu Leu
        35                  40                  45

Ile Tyr Ser Asn Asn Gln Arg Pro Ser Gly Val Pro Asp Arg Phe Ser
    50                  55                  60

Gly Ser Lys Ser Gly Thr Ser Ala Ser Leu Ala Ile Ser Gly Leu Arg
65                  70                  75                  80

Ser Glu Asp Glu Ala Asp Tyr Tyr Cys Ala Ala Trp Asp Asp Ser Leu
                85                  90                  95

Ser Gly Trp Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu
            100                 105                 110

<210> 360
<211> 253
<212> PRT
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<213> Artificial Sequence

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

<400> 360
Gln Val Pro Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ser
1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Gly Thr Phe Ser Thr Tyr
20 25 30

Ser Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45

Gly Gly Ile Ile Pro Ile Phe Gly Thr Thr Asn Tyr Ala Gln Lys Phe
50 55 60

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

Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Asp Gly Glu Gly Ser Tyr Tyr Tyr Tyr Tyr Gly Met Asp Val
100 105 110

Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser Gly Gly Gly Gly Ser
115 120 125

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

Ser Val Leu Thr Gln Pro Pro Ser Ala Ser Gly Thr Pro Gly Gln Arg
145 150 155 160

Val Thr Ile Ser Cys Ser Gly Ser Ser Ser Asn Ile Gly Ser Asn Tyr
165 170 175

Val Tyr Trp Tyr Gln Gln Leu Pro Gly Thr Ala Pro Lys Leu Leu Ile

```
            180                 185                 190


Tyr Ser Asn Asn Gln Arg Pro Ser Gly Val Pro Asp Arg Phe Ser Gly
        195                 200                 205


Ser Lys Ser Gly Thr Ser Ala Ser Leu Ala Ile Ser Gly Leu Arg Ser
    210                 215                 220


Glu Asp Glu Ala Asp Tyr Tyr Cys Ala Ala Trp Asp Asp Ser Leu Ser
225                 230                 235                 240


Gly Trp Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu
                245                 250


<210> 361
<211> 9
<212> PRT
<213> Artificial Sequence

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

<400> 361
Phe Thr Phe Ser Ser Tyr Ser Met Asn
1               5


<210> 362
<211> 13
<212> PRT
<213> Artificial Sequence

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

<400> 362
Ser Tyr Ile Ser Ser Ser Ser Ser Thr Ile Tyr Tyr Ala
1               5                   10


<210> 363
<211> 17
<212> PRT
<213> Artificial Sequence
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<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 363
Cys Ala Arg Asp Lys Glu Arg Arg Tyr Tyr Tyr Tyr Gly Met Asp Val
1 5 10 15

Trp

<210> 364
<211> 12
<212> PRT
<213> Artificial Sequence

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

<400> 364
Arg Ala Ser Gln Ser Val Ser Arg Arg Tyr Leu Ala
1 5 10

<210> 365
<211> 7
<212> PRT
<213> Artificial Sequence

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

<400> 365
Gly Ala Ser Ser Arg Ala Thr
1 5

<210> 366
<211> 11
<212> PRT
<213> Artificial Sequence

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

peptide"

<400> 366
Cys Gln Gln Phe Gly Thr Ser Pro Ile Thr Phe
1 5 10

<210> 367
<211> 122
<212> PRT
<213> Artificial Sequence

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

<400> 367
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr
20 25 30

Ser Met Asn Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45

Ser Tyr Ile Ser Ser Ser Ser Ser Thr Ile Tyr Tyr Ala Asp Ser Val
50 55 60

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Ser Leu Tyr
65 70 75 80

Leu Gln Met Asn Ser Leu Arg Asp Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Asp Lys Glu Arg Arg Tyr Tyr Tyr Tyr Gly Met Asp Val Trp
100 105 110

Gly Gln Gly Thr Thr Val Thr Val Ser Ser
115 120

<210> 368
<211> 108
<212> PRT

<213> Artificial Sequence

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

<400> 368
Glu Ile Val Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly
1 5 10 15

Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Arg Arg
20 25 30

Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu
35 40 45

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

Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu
65 70 75 80

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

Ile Thr Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys
100 105

<210> 369
<211> 250
<212> PRT
<213> Artificial Sequence

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

<400> 369
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr
20 25 30

```
Ser Met Asn Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35                  40                  45

Ser Tyr Ile Ser Ser Ser Ser Ser Thr Ile Tyr Tyr Ala Asp Ser Val
    50                  55                  60

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Ser Leu Tyr
65                  70                  75                  80

Leu Gln Met Asn Ser Leu Arg Asp Glu Asp Thr Ala Val Tyr Tyr Cys
                85                  90                  95

Ala Arg Asp Lys Glu Arg Arg Tyr Tyr Tyr Tyr Gly Met Asp Val Trp
            100                 105                 110

Gly Gln Gly Thr Thr Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly
        115                 120                 125

Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Ile
    130                 135                 140

Val Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg
145                 150                 155                 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Arg Arg Tyr Leu
                165                 170                 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile Tyr
            180                 185                 190

Gly Ala Ser Ser Arg Ala Thr Gly Ile Pro Asp Arg Phe Ser Gly Ser
        195                 200                 205

Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu
    210                 215                 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Phe Gly Thr Ser Pro Ile Thr
225                 230                 235                 240
```

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys
245 250

<210> 370
<211> 11
<212> PRT
<213> Artificial Sequence

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

<400> 370
Asp Ser Val Ser Ser Asn Ser Ala Ile Trp Asn
1 5 10

<210> 371
<211> 14
<212> PRT
<213> Artificial Sequence

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

<400> 371
Gly Gly Thr Tyr Tyr Arg Ser Met Trp Tyr Asn Asp Tyr Ala
1 5 10

<210> 372
<211> 16
<212> PRT
<213> Artificial Sequence

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

<400> 372
Cys Ser Arg Gly Gly Ile Val Gly Val Pro Asp Ala Phe Asp Ile Trp
1 5 10 15

<210> 373
<211> 13
<212> PRT

<213> Artificial Sequence

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

<400> 373
Ser Gly Ser Ser Ser Asn Ile Gly Ser Asn Thr Ala Asn
1 5 10

<210> 374
<211> 7
<212> PRT
<213> Artificial Sequence

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

<400> 374
Arg Asn Asn Gln Arg Pro Ser
1 5

<210> 375
<211> 13
<212> PRT
<213> Artificial Sequence

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

<400> 375
Cys Ala Ala Trp Asp Asp Ser Leu Asn Gly Tyr Val Phe
1 5 10

<210> 376
<211> 124
<212> PRT
<213> Artificial Sequence

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

<400> 376

```
Gln Val Gln Leu Gln Gln Ser Gly Pro Gly Leu Val Lys Pro Ser Gln
1               5                   10                  15


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


Ser Ala Ile Trp Asn Trp Ile Arg Gln Ser Pro Ser Arg Gly Leu Glu
        35                  40                  45


Trp Leu Gly Gly Thr Tyr Tyr Arg Ser Met Trp Tyr Asn Asp Tyr Ala
    50                  55                  60


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


Gln Leu Ser Leu Gln Leu Asn Ser Val Thr Pro Glu Asp Thr Ala Val
                85                  90                  95


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


Ile Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser
        115                 120


<210> 377
<211> 110
<212> PRT
<213> Artificial Sequence

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

<400> 377
Gln Ser Val Leu Thr Gln Pro Pro Ser Ala Ser Gly Thr Pro Gly Gln
1               5                   10                  15


Arg Val Thr Ile Ser Cys Ser Gly Ser Ser Ser Asn Ile Gly Ser Asn
            20                  25                  30


Thr Ala Asn Trp Tyr Gln Gln Leu Pro Gly Thr Ala Pro Arg Leu Leu
        35                  40                  45
```

```
Ile Tyr Arg Asn Asn Gln Arg Pro Ser Gly Val Pro Asp Arg Phe Ser
    50                  55                  60


Gly Ser Lys Ser Gly Thr Ser Ala Ser Leu Ala Ile Ser Gly Leu Gln
65                  70                  75                  80


Ser Glu Asp Glu Ala Asp Tyr Tyr Cys Ala Ala Trp Asp Asp Ser Leu
                85                  90                  95


Asn Gly Tyr Val Phe Gly Thr Gly Thr Lys Val Thr Val Leu
            100                 105                 110


<210> 378
<211> 254
<212> PRT
<213> Artificial Sequence

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

<400> 378
Gln Val Gln Leu Gln Gln Ser Gly Pro Gly Leu Val Lys Pro Ser Gln
1               5                   10                  15


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


Ser Ala Ile Trp Asn Trp Ile Arg Gln Ser Pro Ser Arg Gly Leu Glu
        35                  40                  45


Trp Leu Gly Gly Thr Tyr Tyr Arg Ser Met Trp Tyr Asn Asp Tyr Ala
    50                  55                  60


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


Gln Leu Ser Leu Gln Leu Asn Ser Val Thr Pro Glu Asp Thr Ala Val
                85                  90                  95
```

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

Ile Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly Gly
        115                 120                 125

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

Gln Ser Val Leu Thr Gln Pro Pro Ser Ala Ser Gly Thr Pro Gly Gln
145                 150                 155                 160

Arg Val Thr Ile Ser Cys Ser Gly Ser Ser Ser Asn Ile Gly Ser Asn
                165                 170                 175

Thr Ala Asn Trp Tyr Gln Gln Leu Pro Gly Thr Ala Pro Arg Leu Leu
            180                 185                 190

Ile Tyr Arg Asn Asn Gln Arg Pro Ser Gly Val Pro Asp Arg Phe Ser
        195                 200                 205

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

Ser Glu Asp Glu Ala Asp Tyr Tyr Cys Ala Ala Trp Asp Asp Ser Leu
225                 230                 235                 240

Asn Gly Tyr Val Phe Gly Thr Gly Thr Lys Val Thr Val Leu
                245                 250
```

<210> 379
<211> 9
<212> PRT
<213> Artificial Sequence

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

<400> 379
```
Gly Ser Ile Ser Ser Tyr Tyr Trp Thr
1               5
```

<210> 380
<211> 12
<212> PRT
<213> Artificial Sequence

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

<400> 380
Gly Tyr Ile Phe Tyr Ser Gly Thr Thr Asn Tyr Asn
1 5 10

<210> 381
<211> 14
<212> PRT
<213> Artificial Sequence

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

<400> 381
Cys Ala Arg Ile Ser Glu Lys Ser Phe Tyr Phe Asp Tyr Trp
1 5 10

<210> 382
<211> 13
<212> PRT
<213> Artificial Sequence

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

<400> 382
Ser Gly Ser Ser Ser Asn Ile Gly Ser Asn Tyr Val Tyr
1 5 10

<210> 383
<211> 7
<212> PRT
<213> Artificial Sequence

<220>

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

<400> 383
Ser Asn Asn Gln Arg Pro Ser
1 5

<210> 384
<211> 13
<212> PRT
<213> Artificial Sequence

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

<400> 384
Cys Ala Pro Trp Asp Asp Ser Leu Ser Gly Arg Val Phe
1 5 10

<210> 385
<211> 118
<212> PRT
<213> Artificial Sequence

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

<400> 385
Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Glu
1 5 10 15

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

Tyr Trp Thr Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu Asp Trp Ile
35 40 45

Gly Tyr Ile Phe Tyr Ser Gly Thr Thr Asn Tyr Asn Pro Ser Leu Lys
50 55 60

Ser Arg Val Thr Ile Ser Leu Asp Thr Ser Lys Asn Gln Phe Ser Leu
65 70 75 80

```
Lys Leu Thr Ser Met Thr Ala Ala Asp Thr Ala Val Tyr Tyr Cys Ala
                85                  90                  95


Arg Ile Ser Glu Lys Ser Phe Tyr Phe Asp Tyr Trp Gly Gln Gly Thr
            100                 105                 110


Leu Val Thr Val Ser Ser
        115


<210> 386
<211> 110
<212> PRT
<213> Artificial Sequence

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

<400> 386
Gln Ser Val Leu Thr Gln Pro Pro Ser Ala Ser Gly Thr Pro Gly Gln
1               5                   10                  15


Arg Val Thr Ile Ser Cys Ser Gly Ser Ser Ser Asn Ile Gly Ser Asn
            20                  25                  30


Tyr Val Tyr Trp Tyr Gln Gln Leu Pro Gly Thr Ala Pro Lys Leu Leu
        35                  40                  45


Ile Tyr Ser Asn Asn Gln Arg Pro Ser Gly Val Pro Asp Arg Phe Ser
    50                  55                  60


Gly Ser Lys Ser Gly Thr Ser Ala Ser Leu Ala Ile Ser Gly Leu Arg
65                  70                  75                  80


Ser Glu Asp Glu Ala Asp Tyr Tyr Cys Ala Pro Trp Asp Asp Ser Leu
                85                  90                  95


Ser Gly Arg Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu
            100                 105                 110
```

<210> 387
<211> 248
<212> PRT
<213> Artificial Sequence

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

<400> 387
Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Glu
1 5 10 15

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

Tyr Trp Thr Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu Asp Trp Ile
35 40 45

Gly Tyr Ile Phe Tyr Ser Gly Thr Thr Asn Tyr Asn Pro Ser Leu Lys
50 55 60

Ser Arg Val Thr Ile Ser Leu Asp Thr Ser Lys Asn Gln Phe Ser Leu
65 70 75 80

Lys Leu Thr Ser Met Thr Ala Ala Asp Thr Ala Val Tyr Tyr Cys Ala
85 90 95

Arg Ile Ser Glu Lys Ser Phe Tyr Phe Asp Tyr Trp Gly Gln Gly Thr
100 105 110

Leu Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
115 120 125

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gln Ser Val Leu Thr Gln
130 135 140

Pro Pro Ser Ala Ser Gly Thr Pro Gly Gln Arg Val Thr Ile Ser Cys
145 150 155 160

Ser Gly Ser Ser Ser Asn Ile Gly Ser Asn Tyr Val Tyr Trp Tyr Gln
165 170 175

```
Gln Leu Pro Gly Thr Ala Pro Lys Leu Leu Ile Tyr Ser Asn Asn Gln
            180                 185                 190


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


Ser Ala Ser Leu Ala Ile Ser Gly Leu Arg Ser Glu Asp Glu Ala Asp
    210                 215                 220


Tyr Tyr Cys Ala Pro Trp Asp Asp Ser Leu Ser Gly Arg Val Phe Gly
225                 230                 235                 240


Gly Gly Thr Lys Leu Thr Val Leu
                245


<210> 388
<211> 9
<212> PRT
<213> Artificial Sequence

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

<400> 388
Tyr Thr Phe Thr Ser Tyr Tyr Ile His
1               5


<210> 389
<211> 13
<212> PRT
<213> Artificial Sequence

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

<400> 389
Gly Val Ile Val Pro Ser Gly Gly Ser Ile Ser Tyr Ala
1               5                   10


<210> 390
```

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

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

<400> 390
Cys Ala Arg Asp Arg Tyr Tyr Gly Asp Tyr Tyr Tyr Gly Leu Asp Val
1 5 10 15

Trp

<210> 391
<211> 11
<212> PRT
<213> Artificial Sequence

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

<400> 391
Arg Ala Ser Gln Gly Ile Asn Asn Phe Leu Ala
1 5 10

<210> 392
<211> 7
<212> PRT
<213> Artificial Sequence

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

<400> 392
Ala Ala Ser Ser Leu Gln Ser
1 5

<210> 393
<211> 11
<212> PRT
<213> Artificial Sequence

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

<400> 393
Cys Gln His Tyr Asn Ser Tyr Pro Ile Thr Phe
1 5 10

<210> 394
<211> 122
<212> PRT
<213> Artificial Sequence

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

<400> 394
Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Arg Pro Gly Ala
1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Ser Tyr
20 25 30

Tyr Ile His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45

Gly Val Ile Val Pro Ser Gly Gly Ser Ile Ser Tyr Ala Gln Lys Phe
50 55 60

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

Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Asp Arg Tyr Tyr Gly Asp Tyr Tyr Tyr Gly Leu Asp Val Trp
100 105 110

Gly Gln Gly Thr Thr Val Thr Val Ser Ser
115 120

<210> 395
<211> 107
<212> PRT
<213> Artificial Sequence

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

<400> 395
Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
1 5 10 15

Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Gly Ile Asn Asn Phe
20 25 30

Leu Ala Trp Phe Gln Gln Lys Pro Gly Lys Ala Pro Lys Ser Leu Ile
35 40 45

Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Lys Phe Ser Gly
50 55 60

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

Glu Asp Phe Ala Thr Tyr Tyr Cys Gln His Tyr Asn Ser Tyr Pro Ile
85 90 95

Thr Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys
100 105

<210> 396
<211> 249
<212> PRT
<213> Artificial Sequence

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

<400> 396
Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Arg Pro Gly Ala
1 5 10 15

```
Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Ser Tyr
            20                  25                  30

Tyr Ile His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
        35                  40                  45

Gly Val Ile Val Pro Ser Gly Gly Ser Ile Ser Tyr Ala Gln Lys Phe
    50                  55                  60

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

Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
                85                  90                  95

Ala Arg Asp Arg Tyr Tyr Gly Asp Tyr Tyr Tyr Gly Leu Asp Val Trp
            100                 105                 110

Gly Gln Gly Thr Thr Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly
        115                 120                 125

Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile
    130                 135                 140

Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly Asp Arg
145                 150                 155                 160

Val Thr Ile Thr Cys Arg Ala Ser Gln Gly Ile Asn Asn Phe Leu Ala
                165                 170                 175

Trp Phe Gln Gln Lys Pro Gly Lys Ala Pro Lys Ser Leu Ile Tyr Ala
            180                 185                 190

Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Lys Phe Ser Gly Ser Gly
        195                 200                 205

Ser Gly Thr Asp Phe Thr Leu Thr Ile Arg Ser Leu Gln Pro Glu Asp
    210                 215                 220
```

Phe Ala Thr Tyr Tyr Cys Gln His Tyr Asn Ser Tyr Pro Ile Thr Phe
225 230 235 240

Gly Gln Gly Thr Arg Leu Glu Ile Lys
245

<210> 397
<211> 9
<212> PRT
<213> Artificial Sequence

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

<400> 397
Gly Ser Ile Ser His Tyr Tyr Trp Thr
1 5

<210> 398
<211> 12
<212> PRT
<213> Artificial Sequence

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

<400> 398
Gly Tyr Ile Tyr Tyr Ser Gly Ile Thr Asn Phe Ser
1 5 10

<210> 399
<211> 14
<212> PRT
<213> Artificial Sequence

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

<400> 399
Cys Ala Gly Ile Ser Leu Ala Gly Phe Tyr Phe Asp Tyr Trp
1 5 10

<210> 400
<211> 12
<212> PRT
<213> Artificial Sequence

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

<400> 400
Arg Ala Ser Gln Ser Val Ser Arg Ser Tyr Leu Ala
1 5 10

<210> 401
<211> 7
<212> PRT
<213> Artificial Sequence

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

<400> 401
Gly Ala Ser Ser Arg Ala Thr
1 5

<210> 402
<211> 11
<212> PRT
<213> Artificial Sequence

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

<400> 402
Cys Gln Gln Tyr Ser Ile Ser Pro Leu Thr Phe
1 5 10

<210> 403
<211> 118
<212> PRT
<213> Artificial Sequence

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

polypeptide"

<400> 403
Gln Val His Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Glu
1 5 10 15

Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Gly Ser Ile Ser His Tyr
20 25 30

Tyr Trp Thr Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp Ile
35 40 45

Gly Tyr Ile Tyr Tyr Ser Gly Ile Thr Asn Phe Ser Pro Ser Leu Lys
50 55 60

Ser Arg Val Ser Ile Ser Val Asp Ser Ser Lys Asn Gln Phe Ser Leu
65 70 75 80

Asn Leu Asn Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr Cys Ala
85 90 95

Gly Ile Ser Leu Ala Gly Phe Tyr Phe Asp Tyr Trp Val Gln Gly Thr
100 105 110

Leu Val Thr Val Ser Ser
115

<210> 404
<211> 108
<212> PRT
<213> Artificial Sequence

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

<400> 404
Glu Ile Val Leu Thr Gln Ser Pro Gly Thr Leu Ser Leu Ser Pro Gly
1 5 10 15

Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Arg Ser
20 25 30

Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu
        35   40   45

Ile Tyr Gly Ala Ser Ser Arg Ala Thr Gly Val Pro Asp Arg Phe Ser
    50   55   60

Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu
65   70   75   80

Pro Glu Asp Phe Ala Val Phe Tyr Cys Gln Gln Tyr Ser Ile Ser Pro
                85   90   95

Leu Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
            100   105

<210> 405
<211> 246
<212> PRT
<213> Artificial Sequence

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

<400> 405
Gln Val His Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Glu
1   5   10   15

Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Gly Ser Ile Ser His Tyr
            20   25   30

Tyr Trp Thr Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp Ile
        35   40   45

Gly Tyr Ile Tyr Tyr Ser Gly Ile Thr Asn Phe Ser Pro Ser Leu Lys
    50   55   60

Ser Arg Val Ser Ile Ser Val Asp Ser Ser Lys Asn Gln Phe Ser Leu
65   70   75   80

Asn Leu Asn Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr Cys Ala

```
                85                  90                  95

Gly Ile Ser Leu Ala Gly Phe Tyr Phe Asp Tyr Trp Val Gln Gly Thr
            100                 105                 110

Leu Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
        115                 120                 125

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Ile Val Leu Thr Gln
    130                 135                 140

Ser Pro Gly Thr Leu Ser Leu Ser Pro Gly Glu Arg Ala Thr Leu Ser
145                 150                 155                 160

Cys Arg Ala Ser Gln Ser Val Ser Arg Ser Tyr Leu Ala Trp Tyr Gln
                165                 170                 175

Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile Tyr Gly Ala Ser Ser
            180                 185                 190

Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr
        195                 200                 205

Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu Asp Phe Ala Val
    210                 215                 220

Phe Tyr Cys Gln Gln Tyr Ser Ile Ser Pro Leu Thr Phe Gly Gly Gly
225                 230                 235                 240

Thr Lys Val Glu Ile Lys
                245
```

<210> 406
<211> 9
<212> PRT
<213> Artificial Sequence

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

<400> 406
Val Ser Ile Ser Ser Tyr Tyr Trp Ser
1   5

<210> 407
<211> 12
<212> PRT
<213> Artificial Sequence

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

<400> 407
Ala Tyr Ile Tyr Tyr Ser Gly Asn Thr Asn Tyr Ser
1   5   10

<210> 408
<211> 15
<212> PRT
<213> Artificial Sequence

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

<400> 408
Cys Thr Arg Gly Gly Ser Gly Thr Ile Asp Val Phe Asp Ile Trp
1   5   10   15

<210> 409
<211> 13
<212> PRT
<213> Artificial Sequence

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

<400> 409
Ser Gly Ser Ser Ser Asn Ile Gly Asn Asn Tyr Val Ser
1   5   10

<210> 410
<211> 7
<212> PRT

<213> Artificial Sequence

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

<400> 410
Asp Asn Asn Lys Arg Pro Ser
1 5

<210> 411
<211> 13
<212> PRT
<213> Artificial Sequence

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

<400> 411
Cys Glu Thr Trp Asp Ser Ser Leu Ser Ala Val Val Phe
1 5 10

<210> 412
<211> 119
<212> PRT
<213> Artificial Sequence

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

<400> 412
Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Glu
1 5 10 15

Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Val Ser Ile Ser Ser Tyr
20 25 30

Tyr Trp Ser Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp Ile
35 40 45

Ala Tyr Ile Tyr Tyr Ser Gly Asn Thr Asn Tyr Ser Pro Ser Leu Lys
50 55 60

```
Ser Arg Val Thr Ile Ser Val Asp Thr Ser Lys Asp Gln Leu Ser Leu
65                  70                  75                  80


Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr Cys Thr
                85                  90                  95


Arg Gly Gly Ser Gly Thr Ile Asp Val Phe Asp Ile Trp Gly Gln Gly
            100                 105                 110


Thr Met Val Ala Val Ser Ser
        115


<210> 413
<211> 110
<212> PRT
<213> Artificial Sequence

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

<400> 413
Gln Ser Val Leu Thr Gln Pro Pro Ser Val Ser Ala Ala Pro Gly Gln
1               5                   10                  15


Lys Val Thr Ile Ser Cys Ser Gly Ser Ser Ser Asn Ile Gly Asn Asn
            20                  25                  30


Tyr Val Ser Trp Tyr Gln Gln Leu Pro Gly Thr Ala Pro Lys Leu Leu
        35                  40                  45


Ile Tyr Asp Asn Asn Lys Arg Pro Ser Gly Ile Pro Asp Arg Phe Ser
    50                  55                  60


Gly Ser Lys Ser Gly Thr Ser Ala Thr Leu Gly Ile Thr Gly Leu Gln
65                  70                  75                  80


Thr Gly Asp Glu Ala Asp Tyr Tyr Cys Glu Thr Trp Asp Ser Ser Leu
                85                  90                  95


Ser Ala Val Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu
```

100 105 110

<210> 414
<211> 249
<212> PRT
<213> Artificial Sequence

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

<400> 414
Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Glu
1 5 10 15

Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Val Ser Ile Ser Ser Tyr
20 25 30

Tyr Trp Ser Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp Ile
35 40 45

Ala Tyr Ile Tyr Tyr Ser Gly Asn Thr Asn Tyr Ser Pro Ser Leu Lys
50 55 60

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

Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr Cys Thr
85 90 95

Arg Gly Gly Ser Gly Thr Ile Asp Val Phe Asp Ile Trp Gly Gln Gly
100 105 110

Thr Met Val Ala Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly
115 120 125

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gln Ser Val Leu Thr
130 135 140

Gln Pro Pro Ser Val Ser Ala Ala Pro Gly Gln Lys Val Thr Ile Ser
145 150 155 160

```
Cys Ser Gly Ser Ser Ser Asn Ile Gly Asn Asn Tyr Val Ser Trp Tyr
                165                 170                 175


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


Lys Arg Pro Ser Gly Ile Pro Asp Arg Phe Ser Gly Ser Lys Ser Gly
        195                 200                 205


Thr Ser Ala Thr Leu Gly Ile Thr Gly Leu Gln Thr Gly Asp Glu Ala
    210                 215                 220


Asp Tyr Tyr Cys Glu Thr Trp Asp Ser Ser Leu Ser Ala Val Val Phe
225                 230                 235                 240


Gly Gly Gly Thr Lys Leu Thr Val Leu
                245


<210> 415
<211> 11
<212> PRT
<213> Artificial Sequence

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

<400> 415
Asp Asn Val Ser Thr Asn Ser Ala Ala Trp Asn
1               5                   10


<210> 416
<211> 14
<212> PRT
<213> Artificial Sequence

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

<400> 416
Gly Trp Thr Tyr Tyr Arg Ser Lys Trp Tyr Asn Asp Tyr Ala
1               5                   10
```

<210> 417
<211> 13
<212> PRT
<213> Artificial Sequence

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

<400> 417
Cys Ala Arg Trp Val Asn Arg Asp Val Phe Asp Ile Trp
1 5 10

<210> 418
<211> 14
<212> PRT
<213> Artificial Sequence

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

<400> 418
Thr Gly Thr Ser Ser Asp Val Gly Ser Tyr Asn Leu Val Ser
1 5 10

<210> 419
<211> 7
<212> PRT
<213> Artificial Sequence

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

<400> 419
Glu Gly Ser Lys Arg Pro Ser
1 5

<210> 420
<211> 12
<212> PRT
<213> Artificial Sequence

<220>

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

<400> 420
Cys Cys Ser Tyr Ala Gly Ser Ser Thr Trp Val Phe
1 5 10

<210> 421
<211> 121
<212> PRT
<213> Artificial Sequence

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

<400> 421
Gln Val Gln Leu Gln Gln Ser Gly Pro Gly Leu Val Lys Pro Ser Gln
1 5 10 15

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

Ser Ala Ala Trp Asn Trp Ile Arg Gln Ser Pro Ser Arg Gly Leu Glu
35 40 45

Trp Leu Gly Trp Thr Tyr Tyr Arg Ser Lys Trp Tyr Asn Asp Tyr Ala
50 55 60

Val Ser Leu Lys Ser Arg Ile Asn Ile Asn Pro Asp Thr Ser Lys Asn
65 70 75 80

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

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

Gln Gly Thr Met Val Thr Val Ser Ser
115 120

<210> 422

<211> 110
<212> PRT
<213> Artificial Sequence

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

<400> 422
Gln Ser Ala Leu Thr Gln Pro Ala Ser Val Ser Gly Ser Pro Gly Gln
1 5 10 15

Ser Ile Thr Ile Ser Cys Thr Gly Thr Ser Ser Asp Val Gly Ser Tyr
20 25 30

Asn Leu Val Ser Trp Tyr Gln Gln His Pro Gly Lys Ala Pro Lys Leu
35 40 45

Met Ile Tyr Glu Gly Ser Lys Arg Pro Ser Gly Val Ser Asn Arg Phe
50 55 60

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

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

Ser Thr Trp Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu
100 105 110

<210> 423
<211> 251
<212> PRT
<213> Artificial Sequence

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

<400> 423
Gln Val Gln Leu Gln Gln Ser Gly Pro Gly Leu Val Lys Pro Ser Gln
1 5 10 15

```
Thr Leu Ser Leu Thr Cys Ala Ile Ser Gly Asp Asn Val Ser Thr Asn
            20                  25                  30

Ser Ala Ala Trp Asn Trp Ile Arg Gln Ser Pro Ser Arg Gly Leu Glu
        35                  40                  45

Trp Leu Gly Trp Thr Tyr Tyr Arg Ser Lys Trp Tyr Asn Asp Tyr Ala
    50                  55                  60

Val Ser Leu Lys Ser Arg Ile Asn Ile Asn Pro Asp Thr Ser Lys Asn
65                  70                  75                  80

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

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

Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly
        115                 120                 125

Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gln Ser Ala
    130                 135                 140

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

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

Ser Trp Tyr Gln Gln His Pro Gly Lys Ala Pro Lys Leu Met Ile Tyr
            180                 185                 190

Glu Gly Ser Lys Arg Pro Ser Gly Val Ser Asn Arg Phe Ser Gly Ser
        195                 200                 205

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

Asp Glu Ala Asp Tyr Tyr Cys Cys Ser Tyr Ala Gly Ser Ser Thr Trp
```

225 230 235 240

Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu
245 250

<210> 424
<211> 9
<212> PRT
<213> Artificial Sequence

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

<400> 424
Phe Thr Phe Ser Ser Tyr Gly Met His
1 5

<210> 425
<211> 13
<212> PRT
<213> Artificial Sequence

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

<400> 425
Ala Val Ile Ser Tyr Asp Gly Asn Ser Asn Tyr Tyr Ala
1 5 10

<210> 426
<211> 19
<212> PRT
<213> Artificial Sequence

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

<400> 426
Cys Ala Arg Asp Gly Ala Thr Val Thr Ser Tyr Tyr Tyr Tyr Gly Met
1 5 10 15

Asp Val Trp

<210> 427
<211> 12
<212> PRT
<213> Artificial Sequence

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

<400> 427
Arg Ala Ser Gln Ser Val Ser Arg Thr Tyr Leu Ala
1 5 10

<210> 428
<211> 7
<212> PRT
<213> Artificial Sequence

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

<400> 428
Gly Ala Ser Ser Arg Ala Thr
1 5

<210> 429
<211> 11
<212> PRT
<213> Artificial Sequence

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

<400> 429
Cys Gln Gln Tyr Gly Thr Ser Pro Ile Thr Phe
1 5 10

<210> 430
<211> 124
<212> PRT
<213> Artificial Sequence

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

<400> 430
Gln Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Arg
1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr
20 25 30

Gly Met His Trp Val Arg Gln Thr Pro Gly Lys Gly Leu Glu Trp Val
35 40 45

Ala Val Ile Ser Tyr Asp Gly Asn Ser Asn Tyr Tyr Ala Asp Ser Val
50 55 60

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
65 70 75 80

Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Asp Gly Ala Thr Val Thr Ser Tyr Tyr Tyr Tyr Gly Met Asp
100 105 110

Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser
115 120

<210> 431
<211> 108
<212> PRT
<213> Artificial Sequence

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

<400> 431
Glu Ile Val Leu Thr Gln Ser Pro Gly Thr Leu Ser Leu Ser Pro Gly
1 5 10 15

```
Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Arg Thr
            20                  25                  30

Tyr Leu Ala Trp Tyr His Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu
        35                  40                  45

Ile Tyr Gly Ala Ser Ser Arg Ala Thr Gly Ile Ser Asp Arg Phe Ser
    50                  55                  60

Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu
65                  70                  75                  80

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

Ile Thr Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys
            100                 105


<210> 432
<211> 252
<212> PRT
<213> Artificial Sequence

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

<400> 432
Gln Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Arg
1               5                   10                  15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr
            20                  25                  30

Gly Met His Trp Val Arg Gln Thr Pro Gly Lys Gly Leu Glu Trp Val
        35                  40                  45

Ala Val Ile Ser Tyr Asp Gly Asn Ser Asn Tyr Tyr Ala Asp Ser Val
    50                  55                  60

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
65                  70                  75                  80
```

```
Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
                85                  90                  95

Ala Arg Asp Gly Ala Thr Val Thr Ser Tyr Tyr Tyr Tyr Gly Met Asp
            100                 105                 110

Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser Gly Gly Gly Gly
        115                 120                 125

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

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

Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Arg Thr
                165                 170                 175

Tyr Leu Ala Trp Tyr His Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu
            180                 185                 190

Ile Tyr Gly Ala Ser Ser Arg Ala Thr Gly Ile Ser Asp Arg Phe Ser
        195                 200                 205

Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu
    210                 215                 220

Pro Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Gly Thr Ser Pro
225                 230                 235                 240

Ile Thr Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys
                245                 250
```

<210> 433
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<221> source

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

<400> 433
Asp Ser Val Ser Ser Asn Ser Ala Val Trp Asn
1 5 10

<210> 434
<211> 14
<212> PRT
<213> Artificial Sequence

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

<400> 434
Gly Arg Thr Tyr Tyr Arg Ser Lys Trp Tyr Asn Asp Tyr Ala
1 5 10

<210> 435
<211> 16
<212> PRT
<213> Artificial Sequence

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

<400> 435
Cys Ala Arg Gly Gly Ile Val Gly Ala Pro Asp Gly Phe Asp Ile Trp
1 5 10 15

<210> 436
<211> 17
<212> PRT
<213> Artificial Sequence

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

<400> 436
Lys Ser Ser Gln Ser Val Leu Asp Ser Ser Asn Asn Asn Asn Tyr Phe
1 5 10 15

Ala

<210> 437
<211> 7
<212> PRT
<213> Artificial Sequence

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

<400> 437
Trp Ala Ser Ser Arg Glu Ser
1 5

<210> 438
<211> 11
<212> PRT
<213> Artificial Sequence

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

<400> 438
Cys Gln Gln Tyr Tyr Ser Thr Pro Tyr Thr Phe
1 5 10

<210> 439
<211> 124
<212> PRT
<213> Artificial Sequence

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

<400> 439
Gln Val Gln Leu Gln Gln Ser Gly Pro Gly Leu Val Lys Pro Ser Gln
1 5 10 15

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

```
Ser Ala Val Trp Asn Trp Ile Arg Gln Ser Pro Ser Arg Gly Leu Glu
        35                  40                  45

Trp Leu Gly Arg Thr Tyr Tyr Arg Ser Lys Trp Tyr Asn Asp Tyr Ala
    50                  55                  60

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

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

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

Ile Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser
        115                 120
```

<210> 440
<211> 113
<212> PRT
<213> Artificial Sequence

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

<400> 440

```
Asp Ile Val Met Thr Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly
1               5                   10                  15

Glu Arg Ala Thr Ile Asn Cys Lys Ser Ser Gln Ser Val Leu Asp Ser
            20                  25                  30

Ser Asn Asn Asn Asn Tyr Phe Ala Trp Tyr Gln Gln Arg Pro Gly Gln
        35                  40                  45

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

Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr
65                  70                  75                  80
```

Ile Ser Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln Gln
85 90 95

Tyr Tyr Ser Thr Pro Tyr Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile
100 105 110

Lys

<210> 441
<211> 257
<212> PRT
<213> Artificial Sequence

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

<400> 441
Gln Val Gln Leu Gln Gln Ser Gly Pro Gly Leu Val Lys Pro Ser Gln
1 5 10 15

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

Ser Ala Val Trp Asn Trp Ile Arg Gln Ser Pro Ser Arg Gly Leu Glu
35 40 45

Trp Leu Gly Arg Thr Tyr Tyr Arg Ser Lys Trp Tyr Asn Asp Tyr Ala
50 55 60

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

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

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

```
Ile Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly Gly
        115                 120                 125

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

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

Glu Arg Ala Thr Ile Asn Cys Lys Ser Ser Gln Ser Val Leu Asp Ser
                165                 170                 175

Ser Asn Asn Asn Asn Tyr Phe Ala Trp Tyr Gln Gln Arg Pro Gly Gln
            180                 185                 190

Pro Pro His Leu Leu Ile Tyr Trp Ala Ser Ser Arg Glu Ser Gly Val
        195                 200                 205

Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr
    210                 215                 220

Ile Ser Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln Gln
225                 230                 235                 240

Tyr Tyr Ser Thr Pro Tyr Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile
                245                 250                 255

Lys
```

<210> 442
<211> 11
<212> PRT
<213> Artificial Sequence

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

<400> 442
```
Asp Ser Val Ser Ser Asn Thr Thr Ala Trp Lys
1               5                   10
```

<210> 443
<211> 14
<212> PRT
<213> Artificial Sequence

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

<400> 443
Gly Trp Thr Tyr Tyr Arg Ser Lys Trp Tyr Tyr Asp Tyr Thr
1 5 10

<210> 444
<211> 13
<212> PRT
<213> Artificial Sequence

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

<400> 444
Cys Ala Arg Trp Ile Phe His Asp Ala Phe Asp Ile Trp
1 5 10

<210> 445
<211> 13
<212> PRT
<213> Artificial Sequence

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

<400> 445
Ser Gly Ser Ser Ser Asn Ile Gly Ser Asn Thr Val Asn
1 5 10

<210> 446
<211> 7
<212> PRT
<213> Artificial Sequence

<220>

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

<400> 446
Thr Asn Asn Gln Arg Pro Ser
1 5

<210> 447
<211> 13
<212> PRT
<213> Artificial Sequence

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

<400> 447
Cys Ser Thr Trp Asp Asp Ser Leu Asn Gly Pro Val Phe
1 5 10

<210> 448
<211> 121
<212> PRT
<213> Artificial Sequence

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

<400> 448
Gln Val Gln Leu Gln Gln Ser Gly Pro Gly Leu Val Lys Pro Ser Gln
1 5 10 15

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

Thr Thr Ala Trp Lys Trp Ser Arg Gln Ser Pro Ser Lys Gly Leu Glu
35 40 45

Trp Leu Gly Trp Thr Tyr Tyr Arg Ser Lys Trp Tyr Tyr Asp Tyr Thr
50 55 60

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

```
Gln Phe Ser Leu Gln Leu Asn Ser Val Thr Pro Glu Asp Thr Ala Val
                85                  90                  95


Tyr Tyr Cys Ala Arg Trp Ile Phe His Asp Ala Phe Asp Ile Trp Gly
            100                 105                 110


Gln Gly Thr Met Val Thr Val Ser Ser
        115                 120


<210> 449
<211> 110
<212> PRT
<213> Artificial Sequence

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

<400> 449
Gln Ser Ala Leu Thr Gln Pro Pro Ser Ala Ser Gly Thr Pro Gly Gln
1               5                   10                  15


Arg Val Thr Ile Ser Cys Ser Gly Ser Ser Ser Asn Ile Gly Ser Asn
            20                  25                  30


Thr Val Asn Trp Tyr Gln Gln Leu Pro Gly Thr Ala Pro Lys Leu Leu
        35                  40                  45


Ile Tyr Thr Asn Asn Gln Arg Pro Ser Gly Val Pro Asp Arg Phe Ser
    50                  55                  60


Gly Ser Lys Ser Gly Thr Ser Ala Ser Leu Ala Ile Ser Gly Leu Gln
65                  70                  75                  80


Ser Glu Asp Glu Ala Asp Tyr Phe Cys Ser Thr Trp Asp Asp Ser Leu
                85                  90                  95


Asn Gly Pro Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu
            100                 105                 110
```

<210> 450
<211> 251
<212> PRT
<213> Artificial Sequence

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

<400> 450
Gln Val Gln Leu Gln Gln Ser Gly Pro Gly Leu Val Lys Pro Ser Gln
1 5 10 15

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

Thr Thr Ala Trp Lys Trp Ser Arg Gln Ser Pro Ser Lys Gly Leu Glu
35 40 45

Trp Leu Gly Trp Thr Tyr Tyr Arg Ser Lys Trp Tyr Tyr Asp Tyr Thr
50 55 60

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

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

Tyr Tyr Cys Ala Arg Trp Ile Phe His Asp Ala Phe Asp Ile Trp Gly
100 105 110

Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly
115 120 125

Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gln Ser Ala
130 135 140

Leu Thr Gln Pro Pro Ser Ala Ser Gly Thr Pro Gly Gln Arg Val Thr
145 150 155 160

Ile Ser Cys Ser Gly Ser Ser Ser Asn Ile Gly Ser Asn Thr Val Asn
165 170 175

```
Trp Tyr Gln Gln Leu Pro Gly Thr Ala Pro Lys Leu Leu Ile Tyr Thr
            180                 185                 190


Asn Asn Gln Arg Pro Ser Gly Val Pro Asp Arg Phe Ser Gly Ser Lys
        195                 200                 205


Ser Gly Thr Ser Ala Ser Leu Ala Ile Ser Gly Leu Gln Ser Glu Asp
    210                 215                 220


Glu Ala Asp Tyr Phe Cys Ser Thr Trp Asp Asp Ser Leu Asn Gly Pro
225                 230                 235                 240


Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu
                245                 250


<210> 451
<211> 9
<212> PRT
<213> Artificial Sequence

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

<400> 451
Asp Ser Ile Ser Ser Leu Ser Trp Ser
1               5


<210> 452
<211> 12
<212> PRT
<213> Artificial Sequence

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

<400> 452
Gly Tyr Leu Tyr Tyr Ser Gly Ser Thr Asp Tyr Asn
1               5                   10


<210> 453
```

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

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

<400> 453
Cys Ala Arg Gly Arg Arg Ala Phe Asp Ile Trp
1 5 10

<210> 454
<211> 11
<212> PRT
<213> Artificial Sequence

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

<400> 454
Arg Gly Ser Gln Gly Ile Ser Asn Tyr Leu Ala
1 5 10

<210> 455
<211> 7
<212> PRT
<213> Artificial Sequence

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

<400> 455
Ala Ala Ser Ser Leu Glu Ser
1 5

<210> 456
<211> 11
<212> PRT
<213> Artificial Sequence

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

<400> 456
Cys Gln Gln Tyr Tyr Asn Tyr Pro Ile Thr Phe
1   5   10

<210> 457
<211> 115
<212> PRT
<213> Artificial Sequence

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

<400> 457
Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Glu
1   5   10   15

Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Asp Ser Ile Ser Ser Leu
            20   25   30

Ser Trp Ser Trp Ile Arg Gln Thr Pro Gly Glu Gly Leu Glu Trp Ile
        35   40   45

Gly Tyr Leu Tyr Tyr Ser Gly Ser Thr Asp Tyr Asn Pro Ser Leu Lys
    50   55   60

Ser Arg Val Thr Ile Ser Val Asp Thr Ser Lys Asn Gln Phe Ser Leu
65   70   75   80

Lys Leu Arg Ser Val Ala Ala Ala Asp Thr Ala Leu Tyr Tyr Cys Ala
                85   90   95

Arg Gly Arg Arg Ala Phe Asp Ile Trp Gly Gln Gly Thr Met Val Thr
            100   105   110

Val Ser Ser
        115

<210> 458
<211> 107
<212> PRT
<213> Artificial Sequence

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

<400> 458
Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
1 5 10 15

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

Leu Ala Trp Phe Gln Gln Arg Pro Gly Lys Ala Pro Lys Ser Leu Ile
35 40 45

Tyr Ala Ala Ser Ser Leu Glu Ser Gly Val Pro Ser Lys Phe Ser Gly
50 55 60

Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ile Ser Leu Gln Pro
65 70 75 80

Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Tyr Tyr Asn Tyr Pro Ile
85 90 95

Thr Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys
100 105

<210> 459
<211> 242
<212> PRT
<213> Artificial Sequence

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

<400> 459
Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Glu
1 5 10 15

Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Asp Ser Ile Ser Ser Leu
20 25 30

```
Ser Trp Ser Trp Ile Arg Gln Thr Pro Gly Glu Gly Leu Glu Trp Ile
        35                  40                  45

Gly Tyr Leu Tyr Tyr Ser Gly Ser Thr Asp Tyr Asn Pro Ser Leu Lys
    50                  55                  60

Ser Arg Val Thr Ile Ser Val Asp Thr Ser Lys Asn Gln Phe Ser Leu
65                  70                  75                  80

Lys Leu Arg Ser Val Ala Ala Ala Asp Thr Ala Leu Tyr Tyr Cys Ala
                85                  90                  95

Arg Gly Arg Arg Ala Phe Asp Ile Trp Gly Gln Gly Thr Met Val Thr
            100                 105                 110

Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly
        115                 120                 125

Gly Ser Gly Gly Gly Gly Ser Asp Ile Gln Met Thr Gln Ser Pro Ser
    130                 135                 140

Ser Leu Ser Ala Ser Val Gly Asp Arg Val Thr Ile Thr Cys Arg Gly
145                 150                 155                 160

Ser Gln Gly Ile Ser Asn Tyr Leu Ala Trp Phe Gln Gln Arg Pro Gly
                165                 170                 175

Lys Ala Pro Lys Ser Leu Ile Tyr Ala Ala Ser Ser Leu Glu Ser Gly
            180                 185                 190

Val Pro Ser Lys Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu
        195                 200                 205

Thr Ile Ile Ser Leu Gln Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Gln
    210                 215                 220

Gln Tyr Tyr Asn Tyr Pro Ile Thr Phe Gly Gln Gly Thr Arg Leu Glu
225                 230                 235                 240
```

Ile Lys

<210> 460
<211> 9
<212> PRT
<213> Artificial Sequence

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

<400> 460
Tyr Thr Phe Thr Gly Tyr Tyr Met His
1 5

<210> 461
<211> 13
<212> PRT
<213> Artificial Sequence

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

<400> 461
Gly Trp Ile Asn Pro Asn Ser Gly Gly Thr Asn Tyr Ala
1 5 10

<210> 462
<211> 17
<212> PRT
<213> Artificial Sequence

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

<400> 462
Cys Ala Lys Asp Gly Gly Gly Asp Phe Tyr Phe Tyr Gly Met Asp Val
1 5 10 15

Trp

<210> 463
<211> 14
<212> PRT
<213> Artificial Sequence

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

<400> 463
Gly Leu Ser Ser Gly Ser Val Ser Thr Ser Tyr Tyr Pro Ser
1 5 10

<210> 464
<211> 7
<212> PRT
<213> Artificial Sequence

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

<400> 464
Ser Thr Asp Thr Arg Ser Ser
1 5

<210> 465
<211> 12
<212> PRT
<213> Artificial Sequence

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

<400> 465
Cys Val Leu Tyr Met Gly Ser Gly Ile Ser Val Phe
1 5 10

<210> 466
<211> 122
<212> PRT
<213> Artificial Sequence

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

polypeptide"

<400> 466
Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
1   5   10   15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Gly Tyr
            20   25   30

Tyr Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
        35   40   45

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

Gln Gly Arg Val Thr Met Thr Arg Asp Thr Ser Val Ser Thr Ala Tyr
65   70   75   80

Met Glu Leu Ser Arg Leu Thr Ser Asp Asp Thr Ala Ile Tyr Tyr Cys
                85   90   95

Ala Lys Asp Gly Gly Gly Asp Phe Tyr Phe Tyr Gly Met Asp Val Trp
            100   105   110

Gly Gln Gly Thr Thr Val Thr Val Ser Ser
        115   120

<210> 467
<211> 110
<212> PRT
<213> Artificial Sequence

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

<400> 467
Gln Thr Val Val Thr Gln Glu Pro Ser Phe Ser Val Ser Pro Gly Gly
1   5   10   15

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

```
Tyr Tyr Pro Ser Cys Phe Gln Gln Thr Pro Gly Gln Ala Pro Arg Thr
        35                  40                  45

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

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

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

Gly Ile Ser Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu
            100                 105                 110
```

<210> 468
<211> 252
<212> PRT
<213> Artificial Sequence

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

<400> 468

```
Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
1               5                   10                  15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Gly Tyr
            20                  25                  30

Tyr Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
        35                  40                  45

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

Gln Gly Arg Val Thr Met Thr Arg Asp Thr Ser Val Ser Thr Ala Tyr
65                  70                  75                  80

Met Glu Leu Ser Arg Leu Thr Ser Asp Asp Thr Ala Ile Tyr Tyr Cys
```

```
                85                  90                  95

Ala Lys Asp Gly Gly Gly Asp Phe Tyr Phe Tyr Gly Met Asp Val Trp
            100                 105                 110

Gly Gln Gly Thr Thr Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly
        115                 120                 125

Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gln Thr
    130                 135                 140

Val Val Thr Gln Glu Pro Ser Phe Ser Val Ser Pro Gly Gly Thr Val
145                 150                 155                 160

Thr Leu Thr Cys Gly Leu Ser Ser Gly Ser Val Ser Thr Ser Tyr Tyr
                165                 170                 175

Pro Ser Cys Phe Gln Gln Thr Pro Gly Gln Ala Pro Arg Thr Leu Ile
            180                 185                 190

Tyr Ser Thr Asp Thr Arg Ser Ser Gly Val Pro Asp Arg Phe Ser Gly
        195                 200                 205

Ser Ile Leu Gly Asn Lys Ala Ala Leu Thr Ile Thr Gly Ala Gln Ala
    210                 215                 220

Asp Asp Glu Ser Asp Tyr Tyr Cys Val Leu Tyr Met Gly Ser Gly Ile
225                 230                 235                 240

Ser Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu
                245                 250
```

<210> 469
<211> 113
<212> PRT
<213> Artificial Sequence

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

<400> 469
Leu Arg Val Lys Phe Ser Arg Ser Ala Asp Ala Pro Ala Tyr Lys Gln
1   5   10   15

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

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

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

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

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

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

Arg

<210> 470
<211> 25
<212> PRT
<213> Artificial Sequence

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

<220>
<221> SITE
<222> (1)..(25)
<223> /note="This sequence may encompass 1-5 'Gly Gly Gly Gly Ser'
      repeating units"

<220>
<221> source
<223> /note="See specification as filed for detailed description

of substitutions and preferred embodiments"

<400> 470
Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly
1 5 10 15

Gly Gly Gly Ser Gly Gly Gly Gly Ser
20 25

<210> 471
<211> 16
<212> PRT
<213> Artificial Sequence

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

<400> 471
Glu Leu Pro Thr Gln Gly Thr Phe Ser Asn Val Ser Thr Asn Val Ser
1 5 10 15

<210> 472
<211> 15
<212> PRT
<213> Artificial Sequence

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

<400> 472
Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
1 5 10 15

<210> 473
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic 8xHis tag"

<400> 473
His His His His His His His His

1 5

<210> 474
<211> 571
<212> PRT
<213> Artificial Sequence

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

<400> 474
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Gly Gly Gly Gly Ser Cys Pro Tyr Ser Asn Pro
20 25 30

Ser Leu Cys Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Val
35 40 45

Gln Leu Leu Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly Ser Leu
50 55 60

Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr Ala Met
65 70 75 80

Asn Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val Ser Thr
85 90 95

Ile Ser Gly Ser Gly Gly Ser Thr Tyr Tyr Ala Asp Ser Val Lys Gly
100 105 110

Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr Leu Gln
115 120 125

Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Phe Tyr Cys Ala Ile
130 135 140

Asp Pro Glu Tyr Tyr Asp Ile Leu Thr Gly Gly Asp Tyr Trp Gly Gln
145 150 155 160

```
Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly
                165                 170                 175

Gly Ser Gly Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Gln
            180                 185                 190

Met Thr Gln Ser Pro Ser Ala Met Ser Ala Ser Val Gly Asp Arg Val
        195                 200                 205

Thr Ile Thr Cys Arg Ala Ser Gln Gly Ile Ser Asn Tyr Leu Ala Trp
    210                 215                 220

Phe Gln Gln Lys Pro Gly Lys Val Pro Lys Arg Leu Ile Tyr Ala Ala
225                 230                 235                 240

Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser
                245                 250                 255

Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro Glu Asp Phe
            260                 265                 270

Ala Thr Tyr Phe Cys Leu Gln His Asp Ser Phe Pro Leu Thr Phe Gly
        275                 280                 285

Gly Gly Thr Lys Val Glu Ile Lys Gly Ser Gly Gly Gly Gly Ser Cys
    290                 295                 300

Pro Tyr Ser Asn Pro Ser Leu Cys Ser Gly Gly Gly Gly Ser Glu Leu
305                 310                 315                 320

Pro Thr Gln Gly Thr Phe Ser Asn Val Ser Thr Asn Val Ser Pro Ala
                325                 330                 335

Lys Pro Thr Thr Thr Ala Cys Pro Tyr Ser Asn Pro Ser Leu Cys Thr
            340                 345                 350

Thr Thr Pro Ala Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser
        355                 360                 365
```

```
Gln Pro Leu Ser Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly
    370                 375                 380

Ala Val His Thr Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp
385                 390                 395                 400

Ala Pro Leu Ala Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile
                405                 410                 415

Thr Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe
            420                 425                 430

Met Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg
        435                 440                 445

Phe Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser
    450                 455                 460

Arg Ser Ala Asp Ala Pro Ala Tyr Gln Gln Gly Gln Asn Gln Leu Tyr
465                 470                 475                 480

Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys
                485                 490                 495

Arg Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn
            500                 505                 510

Pro Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu
        515                 520                 525

Ala Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly
    530                 535                 540

His Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr
545                 550                 555                 560

Asp Ala Leu His Met Gln Ala Leu Pro Pro Arg
                565                 570
```

<210> 475

<211> 541
<212> PRT
<213> Artificial Sequence

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

<400> 475
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Glu Val Gln Leu Leu Glu Ser Gly Gly Gly Leu
20 25 30

Val Gln Pro Gly Gly Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe
35 40 45

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

Gly Leu Glu Trp Val Ser Thr Ile Ser Gly Ser Gly Gly Ser Thr Tyr
65 70 75 80

Tyr Ala Asp Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser
85 90 95

Lys Asn Thr Leu Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr
100 105 110

Ala Val Phe Tyr Cys Ala Ile Asp Pro Glu Tyr Tyr Asp Ile Leu Thr
115 120 125

Gly Gly Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Gly
130 135 140

Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Gly Ser Gly
145 150 155 160

Gly Gly Gly Ser Asp Ile Gln Met Thr Gln Ser Pro Ser Ala Met Ser
165 170 175

```
Ala Ser Val Gly Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Gly
            180                 185                 190

Ile Ser Asn Tyr Leu Ala Trp Phe Gln Gln Lys Pro Gly Lys Val Pro
        195                 200                 205

Lys Arg Leu Ile Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser
    210                 215                 220

Arg Phe Ser Gly Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser
225                 230                 235                 240

Ser Leu Gln Pro Glu Asp Phe Ala Thr Tyr Phe Cys Leu Gln His Asp
                245                 250                 255

Ser Phe Pro Leu Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Gly
            260                 265                 270

Ser Gly Gly Gly Gly Ser Cys Pro Tyr Ser Asn Pro Ser Leu Cys Ser
        275                 280                 285

Gly Gly Gly Gly Ser Cys Pro Tyr Ser Asn Pro Ser Leu Cys Ser Gly
    290                 295                 300

Gly Gly Gly Ser Thr Thr Thr Ala Cys Pro Tyr Ser Asn Pro Ser Leu
305                 310                 315                 320

Cys Thr Thr Thr Pro Ala Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile
                325                 330                 335

Ala Ser Gln Pro Leu Ser Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala
            340                 345                 350

Gly Gly Ala Val His Thr Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr
        355                 360                 365

Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly Val Leu Leu Leu Ser Leu
    370                 375                 380
```

```
Val Ile Thr Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln
385                 390                 395                 400


Pro Phe Met Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser
                405                 410                 415


Cys Arg Phe Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg Val Lys
            420                 425                 430


Phe Ser Arg Ser Ala Asp Ala Pro Ala Tyr Gln Gln Gly Gln Asn Gln
        435                 440                 445


Leu Tyr Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu
    450                 455                 460


Asp Lys Arg Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg
465                 470                 475                 480


Lys Asn Pro Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met
                485                 490                 495


Ala Glu Ala Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly
            500                 505                 510


Lys Gly His Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp
        515                 520                 525


Thr Tyr Asp Ala Leu His Met Gln Ala Leu Pro Pro Arg
    530                 535                 540


<210> 476
<211> 529
<212> PRT
<213> Artificial Sequence

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

<400> 476
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1               5                   10                  15
```

```
His Ala Ala Arg Pro Gly Gly Gly Gly Ser Cys Pro Tyr Ser Asn Pro
            20                  25                  30

Ser Leu Cys Gly Gly Gly Gly Ser Glu Val Gln Leu Leu Glu Ser Gly
        35                  40                  45

Gly Gly Leu Val Gln Pro Gly Gly Ser Leu Arg Leu Ser Cys Ala Ala
    50                  55                  60

Ser Gly Phe Thr Phe Ser Ser Tyr Ala Met Asn Trp Val Arg Gln Ala
65                  70                  75                  80

Pro Gly Lys Gly Leu Glu Trp Val Ser Thr Ile Ser Gly Ser Gly Gly
                85                  90                  95

Ser Thr Tyr Tyr Ala Asp Ser Val Lys Gly Arg Phe Thr Ile Ser Arg
            100                 105                 110

Asp Asn Ser Lys Asn Thr Leu Tyr Leu Gln Met Asn Ser Leu Arg Ala
        115                 120                 125

Glu Asp Thr Ala Val Phe Tyr Cys Ala Ile Asp Pro Glu Tyr Tyr Asp
    130                 135                 140

Ile Leu Thr Gly Gly Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr Val
145                 150                 155                 160

Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly
                165                 170                 175

Gly Ser Gly Gly Gly Gly Ser Asp Ile Gln Met Thr Gln Ser Pro Ser
            180                 185                 190

Ala Met Ser Ala Ser Val Gly Asp Arg Val Thr Ile Thr Cys Arg Ala
        195                 200                 205

Ser Gln Gly Ile Ser Asn Tyr Leu Ala Trp Phe Gln Gln Lys Pro Gly
    210                 215                 220
```

```
Lys Val Pro Lys Arg Leu Ile Tyr Ala Ala Ser Ser Leu Gln Ser Gly
225                 230                 235                 240

Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Glu Phe Thr Leu
                245                 250                 255

Thr Ile Ser Ser Leu Gln Pro Glu Asp Phe Ala Thr Tyr Phe Cys Leu
            260                 265                 270

Gln His Asp Ser Phe Pro Leu Thr Phe Gly Gly Gly Thr Lys Val Glu
        275                 280                 285

Ile Lys Gly Gly Gly Gly Ser Cys Pro Tyr Ser Asn Pro Ser Leu Cys
    290                 295                 300

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

Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser Leu Arg Pro Glu Ala Cys
                325                 330                 335

Arg Pro Ala Ala Gly Gly Ala Val His Thr Arg Gly Leu Asp Phe Ala
            340                 345                 350

Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly Val Leu
        355                 360                 365

Leu Leu Ser Leu Val Ile Thr Lys Arg Gly Arg Lys Lys Leu Leu Tyr
    370                 375                 380

Ile Phe Lys Gln Pro Phe Met Arg Pro Val Gln Thr Thr Gln Glu Glu
385                 390                 395                 400

Asp Gly Cys Ser Cys Arg Phe Pro Glu Glu Glu Glu Gly Gly Cys Glu
                405                 410                 415

Leu Arg Val Lys Phe Ser Arg Ser Ala Asp Ala Pro Ala Tyr Gln Gln
            420                 425                 430
```

Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu
        435   440   445

Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg Asp Pro Glu Met Gly Gly
    450   455   460

Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu Tyr Asn Glu Leu Gln
465   470   475   480

Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile Gly Met Lys Gly Glu
                485   490   495

Arg Arg Arg Gly Lys Gly His Asp Gly Leu Tyr Gln Gly Leu Ser Thr
            500   505   510

Ala Thr Lys Asp Thr Tyr Asp Ala Leu His Met Gln Ala Leu Pro Pro
        515   520   525

Arg

<210> 477
<211> 21
<212> PRT
<213> Homo sapiens

<400> 477
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1   5   10   15

His Ala Ala Arg Pro
            20

<210> 478
<211> 20
<212> PRT
<213> Artificial Sequence

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

<400> 478

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

Gly Gly Gly Ser
            20

<210> 479
<211> 66
<212> PRT
<213> Homo sapiens

<400> 479
Thr Thr Thr Pro Ala Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala
1   5   10   15

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

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

Trp Ala Pro Leu Ala Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val
    50   55   60

Ile Thr
65

<210> 480
<211> 42
<212> PRT
<213> Homo sapiens

<400> 480
Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met
1   5   10   15

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

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

<210> 481

<211> 113
<212> PRT
<213> Homo sapiens

<400> 481
Leu Arg Val Lys Phe Ser Arg Ser Ala Asp Ala Pro Ala Tyr Gln Gln
1   5   10   15

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

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

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

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

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

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

Arg

<210> 482
<211> 486
<212> PRT
<213> Artificial Sequence

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

<400> 482
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1   5   10   15

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

```
            20                  25                  30

Val Lys Pro Ser Glu Thr Leu Ser Leu Thr Cys Thr Val Ser Asp Asn
        35                  40                  45

Ser Ile Ser Asn Tyr Tyr Trp Ser Trp Ile Arg Gln Pro Pro Gly Lys
    50                  55                  60

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

Asn Pro Ser Leu Lys Ser Arg Val Thr Ile Ser Leu Asp Thr Ser Lys
                85                  90                  95

Asn Gln Phe Ser Leu Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala
            100                 105                 110

Val Tyr Tyr Cys Ala Arg Leu Phe Asn Trp Gly Phe Ala Phe Asp Ile
        115                 120                 125

Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly Gly Ser
    130                 135                 140

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu
145                 150                 155                 160

Ile Val Met Thr Gln Ser Pro Ala Thr Leu Ser Val Ser Pro Gly Glu
                165                 170                 175

Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Ser Asn Leu
            180                 185                 190

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile Tyr
        195                 200                 205

Gly Ala Ser Thr Arg Ala Thr Gly Ile Pro Ala Arg Phe Ser Gly Ser
    210                 215                 220

Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln Ser Glu
225                 230                 235                 240
```

```
Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Asn Asn Trp Pro Leu Thr
                245                 250                 255

Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Thr Thr Thr Pro Ala Pro
            260                 265                 270

Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser Leu
        275                 280                 285

Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr Arg
    290                 295                 300

Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala Gly
305                 310                 315                 320

Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr Lys Arg Gly Arg
                325                 330                 335

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

Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu Glu Glu
        355                 360                 365

Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg Ser Ala Asp Ala
    370                 375                 380

Pro Ala Tyr Gln Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn Leu
385                 390                 395                 400

Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg Asp
                405                 410                 415

Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu
            420                 425                 430

Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile
        435                 440                 445
```

Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His Asp Gly Leu Tyr
    450   455   460

Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu His Met
465   470   475   480

Gln Ala Leu Pro Pro Arg
                485

<210> 483
<211> 487
<212> PRT
<213> Artificial Sequence

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

<400> 483
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1   5   10   15

His Ala Ala Arg Pro Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu
            20   25   30

Met Lys Pro Ser Glu Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Gly
        35   40   45

Ser Ile Ser Ser Ser Tyr Trp Ser Cys Ile Arg Gln Pro Pro Gly Lys
    50   55   60

Gly Leu Glu Trp Ile Gly Tyr Ile Tyr Tyr Ser Gly Thr Thr Asn Tyr
65   70   75   80

Asn Pro Ser Leu Lys Ser Arg Val Thr Leu Ser Leu Asp Thr Ser Lys
                85   90   95

Asn Gln Phe Ser Leu Arg Leu Thr Ser Val Thr Ala Ala Asp Thr Ala
            100   105   110

Val Tyr Tyr Cys Ala Arg Val Ala Pro Thr Gly Phe Trp Phe Asp Tyr

```
        115                 120                 125

Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly Gly Ser
    130                 135                 140

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu
145                 150                 155                 160

Ile Val Leu Thr Gln Ser Pro Gly Thr Leu Ser Leu Ser Pro Gly Glu
                165                 170                 175

Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Arg Val Ser Ser Arg Tyr
            180                 185                 190

Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile
        195                 200                 205

Tyr Gly Ala Ser Ser Arg Ala Thr Gly Ile Pro Asp Arg Phe Ser Gly
    210                 215                 220

Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro
225                 230                 235                 240

Glu Glu Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Gly Thr Ser Pro Leu
                245                 250                 255

Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Thr Thr Thr Pro Ala
            260                 265                 270

Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser
        275                 280                 285

Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr
    290                 295                 300

Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala
305                 310                 315                 320

Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr Lys Arg Gly
                325                 330                 335
```

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

Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu Glu
        355                 360                 365

Glu Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg Ser Ala Asp
    370                 375                 380

Ala Pro Ala Tyr Gln Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn
385                 390                 395                 400

Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg
                405                 410                 415

Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly
            420                 425                 430

Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu
        435                 440                 445

Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His Asp Gly Leu
    450                 455                 460

Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu His
465                 470                 475                 480

Met Gln Ala Leu Pro Pro Arg
                485
```

<210> 484
<211> 486
<212> PRT
<213> Artificial Sequence

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

<400> 484

```
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1               5                  10                  15

His Ala Ala Arg Pro Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu
            20                  25                  30

Val Gln Pro Gly Gly Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe
        35                  40                  45

Thr Phe Ser Ser His Asp Met His Trp Val Arg Gln Ala Thr Gly Lys
    50                  55                  60

Gly Leu Glu Trp Val Ser Ala Ile Gly Ile Ala Gly Asp Thr Tyr Tyr
65                  70                  75                  80

Ser Gly Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Glu Asn Ala Lys
                85                  90                  95

Asn Ser Leu Tyr Leu Gln Met Asn Ser Leu Arg Ala Gly Asp Thr Ala
            100                 105                 110

Val Tyr Tyr Cys Ala Arg Ala Asn Trp Gly Glu Gly Ala Phe Asp Ile
        115                 120                 125

Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly Gly Ser
    130                 135                 140

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp
145                 150                 155                 160

Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly Asp
                165                 170                 175

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

Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ile Pro Lys Leu Leu Ile Tyr
        195                 200                 205

Ala Ala Ser Thr Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly Ser
```

```
    210                 215                 220

Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro Glu
225                 230                 235                 240

Asp Val Ala Thr Tyr Tyr Cys Gln Lys Tyr Asn Ser Val Pro Leu Thr
                245                 250                 255

Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Thr Thr Thr Pro Ala Pro
            260                 265                 270

Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser Leu
        275                 280                 285

Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr Arg
    290                 295                 300

Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala Gly
305                 310                 315                 320

Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr Lys Arg Gly Arg
                325                 330                 335

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

Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu Glu Glu
        355                 360                 365

Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg Ser Ala Asp Ala
    370                 375                 380

Pro Ala Tyr Gln Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn Leu
385                 390                 395                 400

Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg Asp
                405                 410                 415

Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu
            420                 425                 430
```

```
Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile
        435                 440                 445


Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His Asp Gly Leu Tyr
    450                 455                 460


Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu His Met
465                 470                 475                 480


Gln Ala Leu Pro Pro Arg
                485


<210> 485
<211> 487
<212> PRT
<213> Artificial Sequence

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

<400> 485
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1               5                   10                  15


His Ala Ala Arg Pro Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu
            20                  25                  30


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


Ser Ile Ser Asn Tyr Tyr Trp Ser Trp Ile Arg Gln Pro Pro Gly Lys
    50                  55                  60


Gly Leu Glu Trp Ile Gly Tyr Ile Phe Tyr Ser Gly Thr Thr Asn His
65                  70                  75                  80


Asn Pro Ser Leu Lys Ser Arg Leu Thr Ile Ser Leu Asp Lys Ala Lys
                85                  90                  95
```

```
Asn Gln Phe Ser Leu Arg Leu Ser Ser Val Thr Ala Ala Asp Thr Ala
            100                 105                 110

Val Tyr Tyr Cys Ala Arg Val Phe Asn Trp Gly Phe Ala Phe Asp Ile
        115                 120                 125

Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly Gly Ser
    130                 135                 140

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu
145                 150                 155                 160

Ile Val Leu Thr Gln Ser Pro Gly Thr Leu Ser Leu Ser Pro Gly Glu
                165                 170                 175

Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Arg Ile Ser Arg Thr Tyr
            180                 185                 190

Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile
        195                 200                 205

Tyr Gly Ala Ser Ser Arg Ala Thr Gly Ile Pro Asp Arg Phe Thr Gly
    210                 215                 220

Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro
225                 230                 235                 240

Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Gly Thr Ser Pro Leu
                245                 250                 255

Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Asn Thr Thr Thr Pro Ala
            260                 265                 270

Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser
        275                 280                 285

Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr
    290                 295                 300

Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala
```

305 310 315 320

Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr Lys Arg Gly
325 330 335

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

Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu Glu
355 360 365

Glu Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg Ser Ala Asp
370 375 380

Ala Pro Ala Tyr Gln Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn
385 390 395 400

Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg
405 410 415

Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly
420 425 430

Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu
435 440 445

Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His Asp Gly Leu
450 455 460

Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu His
465 470 475 480

Met Gln Ala Leu Pro Pro Arg
485

<210> 486
<211> 487
<212> PRT
<213> Artificial Sequence

<220>

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

<400> 486
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu
20 25 30

Val Lys Pro Ser Glu Thr Leu Ser Leu Thr Cys Thr Val Ser Asp Asn
35 40 45

Ser Ile Ser Asn Tyr Tyr Trp Ser Trp Ile Arg Gln Pro Pro Gly Lys
50 55 60

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

Asn Pro Ser Leu Lys Ser Arg Val Thr Ile Ser Leu Asp Thr Ser Lys
85 90 95

Asn Gln Phe Ser Leu Gln Leu Ser Ser Val Thr Ala Ala Asp Ala Ala
100 105 110

Val Tyr Tyr Cys Ala Arg Val Phe His Trp Gly Phe Ala Phe Asp Ile
115 120 125

Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly Gly Ser
130 135 140

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu
145 150 155 160

Ile Val Leu Thr Gln Ser Pro Gly Thr Leu Ser Leu Ser Pro Gly Glu
165 170 175

Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Arg Val Ser Asn Thr Tyr
180 185 190

```
Leu Ala Trp Tyr Gln Gln Asn Pro Gly Gln Ala Pro Arg Leu Leu Ile
        195                 200                 205

Tyr Gly Ala Ser Ser Arg Ala Thr Gly Ile Pro Asp Arg Phe Ser Gly
    210                 215                 220

Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro
225                 230                 235                 240

Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Gly Thr Ser Pro Leu
                245                 250                 255

Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Thr Thr Thr Pro Ala
            260                 265                 270

Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser
        275                 280                 285

Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr
    290                 295                 300

Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala
305                 310                 315                 320

Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr Lys Arg Gly
                325                 330                 335

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

Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu Glu
        355                 360                 365

Glu Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg Ser Ala Asp
    370                 375                 380

Ala Pro Ala Tyr Gln Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn
385                 390                 395                 400

Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg
```

405 410 415

Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly
420 425 430

Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu
435 440 445

Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His Asp Gly Leu
450 455 460

Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu His
465 470 475 480

Met Gln Ala Leu Pro Pro Arg
485

<210> 487
<211> 487
<212> PRT
<213> Artificial Sequence

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

<400> 487
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu
20 25 30

Val Lys Pro Ser Glu Thr Leu Ser Leu Thr Cys Thr Val Ser Asn Val
35 40 45

Ser Ile Ser Ser Tyr Tyr Trp Ser Trp Ile Arg Gln Pro Pro Gly Lys
50 55 60

Gly Leu Glu Trp Ile Gly Tyr Ile Tyr Tyr Ser Gly Thr Thr Asn Tyr
65 70 75 80

```
Asn Pro Ser Leu Lys Ser Arg Val Thr Met Ser Val Asp Thr Ser Lys
                85                  90                  95

Asn Gln Phe Ser Leu Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala
            100                 105                 110

Val Tyr Phe Cys Ala Arg Leu Ser Asn Trp Gly Phe Ala Phe Asp Ile
        115                 120                 125

Trp Gly Gln Gly Thr Met Val Thr Phe Ser Ser Gly Gly Gly Gly Ser
    130                 135                 140

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu
145                 150                 155                 160

Ile Val Leu Thr Gln Ser Pro Gly Thr Leu Ser Leu Ser Pro Gly Glu
                165                 170                 175

Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Thr Ile Ser Ser Ser Tyr
            180                 185                 190

Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile
        195                 200                 205

Tyr Gly Ala Ser Ser Arg Ala Thr Gly Ile Pro Asp Arg Phe Ser Gly
    210                 215                 220

Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro
225                 230                 235                 240

Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Gly Trp Ser Pro Ile
                245                 250                 255

Thr Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Thr Thr Thr Pro Ala
            260                 265                 270

Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser
        275                 280                 285
```

```
Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr
    290                 295                 300

Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala
305                 310                 315                 320

Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr Lys Arg Gly
                325                 330                 335

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

Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu Glu
        355                 360                 365

Glu Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg Ser Ala Asp
    370                 375                 380

Ala Pro Ala Tyr Gln Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn
385                 390                 395                 400

Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg
                405                 410                 415

Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly
            420                 425                 430

Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu
        435                 440                 445

Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His Asp Gly Leu
    450                 455                 460

Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu His
465                 470                 475                 480

Met Gln Ala Leu Pro Pro Arg
                485
```

<210> 488

<211> 493
<212> PRT
<213> Artificial Sequence

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

<400> 488
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu
20 25 30

Val Gln Pro Gly Gly Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe
35 40 45

Thr Phe Ser Ser Tyr Asp Met His Trp Val Arg Gln Ala Thr Gly Lys
50 55 60

Gly Leu Glu Trp Val Ser Ala Ile Gly Pro Ala Gly Asp Thr Tyr Tyr
65 70 75 80

Pro Gly Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Glu Asn Ala Lys
85 90 95

Asn Ser Leu Tyr Leu Gln Met Asn Ser Leu Arg Ala Gly Asp Thr Ala
100 105 110

Val Tyr Tyr Cys Ala Arg Ala Asp Pro Pro Tyr Tyr Tyr Tyr Gly Met
115 120 125

Asp Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser Gly Gly Gly
130 135 140

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly
145 150 155 160

Ser Asp Ile Val Met Thr Gln Ser Pro Leu Ser Leu Pro Val Thr Pro
165 170 175

```
Gly Glu Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Leu His
            180                 185                 190

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

Ser Pro Gln Leu Leu Ile Tyr Leu Gly Ser Asn Arg Ala Ser Gly Val
    210                 215                 220

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

Ile Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln
                245                 250                 255

Ala Leu Glu Ile Pro Leu Thr Phe Gly Gly Gly Thr Lys Val Glu Ile
            260                 265                 270

Lys Thr Thr Thr Pro Ala Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile
        275                 280                 285

Ala Ser Gln Pro Leu Ser Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala
    290                 295                 300

Gly Gly Ala Val His Thr Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr
305                 310                 315                 320

Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly Val Leu Leu Leu Ser Leu
                325                 330                 335

Val Ile Thr Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln
            340                 345                 350

Pro Phe Met Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser
        355                 360                 365

Cys Arg Phe Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg Val Lys
    370                 375                 380
```

```
Phe Ser Arg Ser Ala Asp Ala Pro Ala Tyr Gln Gln Gly Gln Asn Gln
385                 390                 395                 400


Leu Tyr Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu
                405                 410                 415


Asp Lys Arg Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg
            420                 425                 430


Lys Asn Pro Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met
        435                 440                 445


Ala Glu Ala Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly
    450                 455                 460


Lys Gly His Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp
465                 470                 475                 480


Thr Tyr Asp Ala Leu His Met Gln Ala Leu Pro Pro Arg
                485                 490


<210> 489
<211> 488
<212> PRT
<213> Artificial Sequence

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

<400> 489
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1               5                   10                  15


His Ala Ala Arg Pro Gln Ile Thr Leu Lys Glu Ser Gly Pro Thr Leu
            20                  25                  30


Val Lys Pro Thr Gln Thr Leu Thr Leu Thr Cys Thr Phe Ser Gly Phe
        35                  40                  45


Ser Leu Ser Thr Arg Gly Val Gly Val Gly Trp Ile Arg Gln Pro Pro
    50                  55                  60
```

```
Gly Lys Ala Leu Glu Trp Leu Ala Leu Ile Tyr Trp Asn Asp Asp Lys
65                  70                  75                  80

Arg Tyr Ser Pro Ser Leu Gln Thr Arg Leu Thr Ile Thr Lys Asp Thr
                85                  90                  95

Pro Lys Asn Gln Val Val Leu Thr Met Thr Asn Met Asp Pro Val Asp
            100                 105                 110

Thr Ala Thr Tyr Tyr Cys Ala Arg Ser Asn Trp Gly Asn Trp Tyr Phe
        115                 120                 125

Ala Leu Trp Gly Arg Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly
    130                 135                 140

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly
145                 150                 155                 160

Ser Glu Ile Val Leu Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro
                165                 170                 175

Gly Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Ser
            180                 185                 190

Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu
        195                 200                 205

Ile Tyr Asp Ala Phe Tyr Arg Ala Thr Gly Ile Pro Ala Arg Phe Ser
    210                 215                 220

Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Glu
225                 230                 235                 240

Pro Glu Asp Phe Ala Val Tyr Tyr Cys Gln His Arg Ser Asn Trp Pro
                245                 250                 255

Ile Thr Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Thr Thr Thr Pro
            260                 265                 270
```

```
Ala Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu
        275                 280                 285

Ser Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His
    290                 295                 300

Thr Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu
305                 310                 315                 320

Ala Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr Lys Arg
                325                 330                 335

Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met Arg Pro
            340                 345                 350

Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu
        355                 360                 365

Glu Glu Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg Ser Ala
    370                 375                 380

Asp Ala Pro Ala Tyr Gln Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu
385                 390                 395                 400

Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly
                405                 410                 415

Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu
            420                 425                 430

Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser
        435                 440                 445

Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His Asp Gly
    450                 455                 460

Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu
465                 470                 475                 480
```

His Met Gln Ala Leu Pro Pro Arg
485

<210> 490
<211> 487
<212> PRT
<213> Artificial Sequence

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

<400> 490
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu
20 25 30

Val Lys Pro Ser Glu Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Asp
35 40 45

Ser Ile Ser Asn Tyr Tyr Trp Thr Trp Ile Arg Gln Pro Pro Gly Lys
50 55 60

Gly Leu Glu Trp Ile Gly Tyr Ile Tyr Tyr Ser Gly Thr Thr Asn Ser
65 70 75 80

Asn Pro Ser Leu Lys Ser Arg Val Thr Val Ser Leu Asp Thr Ser Lys
85 90 95

Ser Gln Phe Ser Leu Asn Leu Ser Ser Val Thr Ala Ala Asp Thr Ala
100 105 110

Val Tyr Tyr Cys Ala Arg Val Phe Asn Arg Gly Phe Ala Phe Asp Ile
115 120 125

Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly Gly Ser
130 135 140

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu
145 150 155 160

```
Ile Val Leu Thr Gln Ser Pro Gly Thr Leu Ser Leu Ser Pro Gly Glu
                165                 170                 175

Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Arg Ile Ser Asn Thr Tyr
            180                 185                 190

Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile
        195                 200                 205

Tyr Gly Ala Ser Ser Arg Ala Thr Gly Ile Pro Asp Arg Phe Ser Gly
    210                 215                 220

Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro
225                 230                 235                 240

Glu Asp Phe Ala Ala Tyr Tyr Cys Gln Gln Tyr Asp Thr Ser Pro Leu
                245                 250                 255

Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Thr Thr Thr Pro Ala
            260                 265                 270

Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser
        275                 280                 285

Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr
    290                 295                 300

Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala
305                 310                 315                 320

Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr Lys Arg Gly
                325                 330                 335

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

Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu Glu
        355                 360                 365
```

Glu Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg Ser Ala Asp
370 375 380

Ala Pro Ala Tyr Gln Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn
385 390 395 400

Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg
405 410 415

Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly
420 425 430

Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu
435 440 445

Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His Asp Gly Leu
450 455 460

Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu His
465 470 475 480

Met Gln Ala Leu Pro Pro Arg
485

<210> 491
<211> 496
<212> PRT
<213> Artificial Sequence

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

<400> 491
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

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

Val Lys Pro Thr Gln Thr Leu Thr Leu Thr Cys Thr Val Ser Gly Val

```
        35                  40                  45

Ser Leu Ser Thr Ser Gly Met Cys Val Ser Trp Ile Arg Gln Pro Leu
    50                  55                  60

Gly Lys Ala Leu Glu Trp Leu Gly Phe Ile Asp Trp Asp Asp Asp Lys
65                  70                  75                  80

Tyr Tyr Asn Thr Ser Leu Lys Thr Arg Leu Thr Ile Ser Lys Asp Thr
                85                  90                  95

Ser Lys Asn Gln Val Val Leu Thr Met Thr Asn Met Asp Pro Val Asp
            100                 105                 110

Thr Ala Thr Tyr Tyr Cys Ala Arg Ile Arg Gly Tyr Ser Gly Ser Tyr
        115                 120                 125

Asp Ala Phe Asp Ile Trp Gly Gln Gly Thr Val Val Ile Val Ser Ser
    130                 135                 140

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly
145                 150                 155                 160

Gly Gly Gly Ser Asp Ile Val Met Thr Gln Ser Pro Leu Ser Leu Pro
                165                 170                 175

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

Leu Leu His Ser Asn Gly Tyr Asn His Leu Asp Trp Tyr Leu Gln Lys
        195                 200                 205

Pro Gly Gln Ser Pro Gln Val Leu Ile Tyr Leu Gly Ser Asn Arg Ala
    210                 215                 220

Ser Gly Val Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe
225                 230                 235                 240

Thr Leu Lys Ile Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Phe
                245                 250                 255
```

```
Cys Met Gln Ala Leu Gln Thr Pro Leu Thr Phe Gly Gly Gly Thr Lys
            260                 265                 270

Val Glu Ile Lys Thr Thr Thr Pro Ala Pro Arg Pro Pro Thr Pro Ala
        275                 280                 285

Pro Thr Ile Ala Ser Gln Pro Leu Ser Leu Arg Pro Glu Ala Cys Arg
    290                 295                 300

Pro Ala Ala Gly Gly Ala Val His Thr Arg Gly Leu Asp Phe Ala Cys
305                 310                 315                 320

Asp Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly Val Leu Leu
                325                 330                 335

Leu Ser Leu Val Ile Thr Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile
            340                 345                 350

Phe Lys Gln Pro Phe Met Arg Pro Val Gln Thr Thr Gln Glu Glu Asp
        355                 360                 365

Gly Cys Ser Cys Arg Phe Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu
    370                 375                 380

Arg Val Lys Phe Ser Arg Ser Ala Asp Ala Pro Ala Tyr Gln Gln Gly
385                 390                 395                 400

Gln Asn Gln Leu Tyr Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr
                405                 410                 415

Asp Val Leu Asp Lys Arg Arg Gly Arg Asp Pro Glu Met Gly Gly Lys
            420                 425                 430

Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys
        435                 440                 445

Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg
    450                 455                 460
```

Arg Arg Gly Lys Gly His Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala
465 470 475 480

Thr Lys Asp Thr Tyr Asp Ala Leu His Met Gln Ala Leu Pro Pro Arg
485 490 495

<210> 492
<211> 486
<212> PRT
<213> Artificial Sequence

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

<400> 492
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Gln Val Gln Leu Gln Val Ser Gly Pro Gly Leu
20 25 30

Val Lys Pro Ser Glu Thr Leu Ser Leu Thr Cys Ser Val Ser Gly Gly
35 40 45

Ser Ile Ser Ser Tyr Tyr Trp Ser Trp Ile Arg Gln Ser Pro Gly Lys
50 55 60

Gly Leu Asp Trp Ile Gly Tyr Met Tyr Tyr Ser Gly Thr Thr Asn Tyr
65 70 75 80

Asn Pro Ser Leu Lys Ser Arg Val Thr Ile Ser Val Asp Thr Ser Lys
85 90 95

Asn Gln Phe Ser Leu Lys Leu Ser Ser Val Thr Ala Thr Asp Thr Ala
100 105 110

Val Tyr Tyr Cys Ala Arg Val Gly Leu Thr Gly Phe Phe Asp Tyr
115 120 125

Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly Gly Ser

```
    130                 135                 140

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala
145                 150                 155                 160

Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly Asp
                165                 170                 175

Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Gly Ile Arg Asn Asp Leu
            180                 185                 190

Gly Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile Tyr
        195                 200                 205

Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly Ser
    210                 215                 220

Gly Ser Gly Thr Asp Phe Thr Leu Thr Val Ser Ser Leu Gln Pro Glu
225                 230                 235                 240

Asp Phe Ala Thr Tyr Tyr Cys Leu Gln Asp Tyr Asn Tyr Pro Tyr Thr
                245                 250                 255

Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys Thr Thr Thr Pro Ala Pro
            260                 265                 270

Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser Leu
        275                 280                 285

Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr Arg
    290                 295                 300

Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala Gly
305                 310                 315                 320

Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr Lys Arg Gly Arg
                325                 330                 335

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

```
Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu Glu Glu
        355                 360                 365

Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg Ser Ala Asp Ala
    370                 375                 380

Pro Ala Tyr Gln Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn Leu
385                 390                 395                 400

Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg Asp
                405                 410                 415

Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu
            420                 425                 430

Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile
        435                 440                 445

Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His Asp Gly Leu Tyr
    450                 455                 460

Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu His Met
465                 470                 475                 480

Gln Ala Leu Pro Pro Arg
                485
```

<210> 493
<211> 483
<212> PRT
<213> Artificial Sequence

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

<400> 493

```
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1               5                   10                  15
```

```
His Ala Ala Arg Pro Gln Val Gln Leu Gln Gln Trp Gly Gly Gly Leu
            20                  25                  30

Leu Lys Pro Ser Glu Thr Leu Ser Leu Thr Cys Ala Val Tyr Gly Gly
        35                  40                  45

Ser Ser Ser Gly Asn Tyr Trp Ser Trp Ile Arg Gln Pro Pro Gly Lys
    50                  55                  60

Arg Leu Glu Trp Ile Gly Glu Ile Asn His Ser Gly Thr Thr Ser Tyr
65                  70                  75                  80

Asn Pro Ser Leu Lys Ser Arg Val Thr Ile Ser Val Asp Thr Ser Lys
                85                  90                  95

Asn Gln Phe Ser Leu Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala
            100                 105                 110

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

Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly
    130                 135                 140

Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Gln
145                 150                 155                 160

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

Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Ser Arg Trp Leu Ala Trp
            180                 185                 190

Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile Tyr Lys Ala
        195                 200                 205

Ser Ser Leu Glu Ser Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser
    210                 215                 220

Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro Asp Asp Phe
```

225 230 235 240

Ala Thr Tyr Tyr Cys Gln Gln Tyr Asn Ser Tyr Ser Thr Phe Gly Gln
245 250 255

Gly Thr Lys Val Glu Ile Lys Thr Thr Thr Pro Ala Pro Arg Pro Pro
260 265 270

Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser Leu Arg Pro Glu
275 280 285

Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr Arg Gly Leu Asp
290 295 300

Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly
305 310 315 320

Val Leu Leu Leu Ser Leu Val Ile Thr Lys Arg Gly Arg Lys Lys Leu
325 330 335

Leu Tyr Ile Phe Lys Gln Pro Phe Met Arg Pro Val Gln Thr Thr Gln
340 345 350

Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu Glu Glu Glu Gly Gly
355 360 365

Cys Glu Leu Arg Val Lys Phe Ser Arg Ser Ala Asp Ala Pro Ala Tyr
370 375 380

Gln Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn Leu Gly Arg Arg
385 390 395 400

Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg Asp Pro Glu Met
405 410 415

Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu Tyr Asn Glu
420 425 430

Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile Gly Met Lys
435 440 445

```
Gly Glu Arg Arg Arg Gly Lys Gly His Asp Gly Leu Tyr Gln Gly Leu
    450                 455                 460


Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu His Met Gln Ala Leu
465                 470                 475                 480


Pro Pro Arg



<210> 494
<211> 489
<212> PRT
<213> Artificial Sequence

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

<400> 494
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1               5                   10                  15


His Ala Ala Arg Pro Gln Leu Gln Leu Gln Glu Ser Gly Pro Gly Leu
            20                  25                  30


Val Lys Pro Ser Glu Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Gly
        35                  40                  45


Ser Ile Ser Ser Ser Ser Tyr Tyr Trp Gly Trp Ile Arg Gln Pro Pro
    50                  55                  60


Gly Lys Gly Leu Glu Trp Ile Gly Ser Ile Tyr Tyr Ser Gly Asn Ile
65                  70                  75                  80


Tyr His Asn Pro Ser Leu Lys Ser Arg Val Ser Ile Ser Val Asp Thr
                85                  90                  95


Ser Lys Asn Gln Phe Ser Leu Arg Leu Ser Ser Val Thr Ala Ala Asp
            100                 105                 110
```

```
Thr Ala Val Tyr Tyr Cys Ala Arg Glu Ile Ile Val Gly Ala Thr His
        115                 120                 125

Phe Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly
    130                 135                 140

Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly
145                 150                 155                 160

Gly Ser Ala Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser
                165                 170                 175

Val Gly Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Gly Ile Arg
            180                 185                 190

Asn Asp Leu Gly Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Glu Leu
        195                 200                 205

Leu Ile Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe
    210                 215                 220

Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu
225                 230                 235                 240

Gln Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Leu Gln Asp Tyr Asn Tyr
                245                 250                 255

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

Pro Ala Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro
        275                 280                 285

Leu Ser Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala Val
    290                 295                 300

His Thr Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro
305                 310                 315                 320

Leu Ala Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr Lys
```

```
                325                 330                 335

Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met Arg
            340                 345                 350

Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro
        355                 360                 365

Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg Ser
    370                 375                 380

Ala Asp Ala Pro Ala Tyr Gln Gln Gly Gln Asn Gln Leu Tyr Asn Glu
385                 390                 395                 400

Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg
                405                 410                 415

Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln
            420                 425                 430

Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr
        435                 440                 445

Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His Asp
    450                 455                 460

Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala
465                 470                 475                 480

Leu His Met Gln Ala Leu Pro Pro Arg
                485
```

<210> 495
<211> 487
<212> PRT
<213> Artificial Sequence

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

<400> 495
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1   5   10   15

His Ala Ala Arg Pro Gln Val Gln Leu Gln Gln Trp Gly Ala Gly Leu
            20   25   30

Leu Lys Pro Ser Glu Thr Leu Ser Leu Thr Cys Ala Val Tyr Gly Gly
        35   40   45

Ser Phe Ser Gly Tyr Tyr Trp Ser Trp Ile Arg Gln Pro Pro Gly Lys
    50   55   60

Gly Leu Glu Trp Ile Gly Glu Ile Ile His Ser Gly Ser Ser Asn Tyr
65   70   75   80

Asn Pro Ser Leu Lys Ser Arg Val Ser Ile Ser Val Asp Thr Ser Lys
                85   90   95

Asn Gln Phe Ser Leu Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala
            100   105   110

Val Tyr Tyr Cys Ser Arg Gly Glu Tyr Gly Ser Gly Ser Arg Phe Asp
        115   120   125

Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly Gly
    130   135   140

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
145   150   155   160

Ala Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
                165   170   175

Asp Arg Val Ala Ile Thr Cys Arg Ala Ser Gln Gly Ile Arg Asp Asp
            180   185   190

Leu Gly Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
        195   200   205

```
Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
    210                 215                 220

Ser Arg Ser Asp Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
225                 230                 235                 240

Glu Asp Phe Ala Thr Tyr Tyr Cys Leu Gln Asp Tyr Asp Tyr Pro Leu
                245                 250                 255

Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Thr Thr Thr Pro Ala
            260                 265                 270

Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser
        275                 280                 285

Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr
    290                 295                 300

Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala
305                 310                 315                 320

Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr Lys Arg Gly
                325                 330                 335

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

Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu Glu
        355                 360                 365

Glu Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg Ser Ala Asp
    370                 375                 380

Ala Pro Ala Tyr Gln Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn
385                 390                 395                 400

Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg
                405                 410                 415

Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly
```

420 425 430

Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu
435 440 445

Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His Asp Gly Leu
450 455 460

Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu His
465 470 475 480

Met Gln Ala Leu Pro Pro Arg
485

<210> 496
<211> 484
<212> PRT
<213> Artificial Sequence

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

<400> 496
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu
20 25 30

Val Lys Pro Ser Gly Thr Leu Ser Leu Thr Cys Ala Val Ser Gly Gly
35 40 45

Ser Ile Ser Ser Asn Asn Trp Trp Ser Trp Val Arg Gln Pro Pro Gly
50 55 60

Lys Gly Leu Glu Trp Ile Gly Asp Ile His His Ser Gly Ser Thr Asn
65 70 75 80

Tyr Lys Pro Ser Leu Lys Ser Arg Val Thr Ile Ser Val Asp Lys Ser
85 90 95

```
Lys Asn Gln Phe Ser Leu Asn Leu Ile Ser Val Thr Ala Ala Asp Thr
            100                 105                 110

Ala Val Tyr Tyr Cys Ala Arg Glu Ala Gly Gly Tyr Phe Asp Tyr Trp
        115                 120                 125

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

Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile
145                 150                 155                 160

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

Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Ser Ser Trp Leu Ala
            180                 185                 190

Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile Ser Lys
        195                 200                 205

Ala Ser Ser Leu Glu Ser Gly Val Pro Ser Arg Phe Ser Gly Ser Gly
    210                 215                 220

Ser Gly Pro Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro Ala Asp
225                 230                 235                 240

Phe Ala Thr Tyr Tyr Cys Gln Gln Tyr Asn Ser Tyr Ser Thr Phe Gly
                245                 250                 255

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

Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser Leu Arg Pro
        275                 280                 285

Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr Arg Gly Leu
    290                 295                 300
```

```
Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys
305                 310                 315                 320

Gly Val Leu Leu Leu Ser Leu Val Ile Thr Lys Arg Gly Arg Lys Lys
                325                 330                 335

Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met Arg Pro Val Gln Thr Thr
            340                 345                 350

Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu Glu Glu Glu Gly
        355                 360                 365

Gly Cys Glu Leu Arg Val Lys Phe Ser Arg Ser Ala Asp Ala Pro Ala
    370                 375                 380

Tyr Gln Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn Leu Gly Arg
385                 390                 395                 400

Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg Asp Pro Glu
                405                 410                 415

Met Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu Tyr Asn
            420                 425                 430

Glu Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile Gly Met
        435                 440                 445

Lys Gly Glu Arg Arg Arg Gly Lys Gly His Asp Gly Leu Tyr Gln Gly
    450                 455                 460

Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu His Met Gln Ala
465                 470                 475                 480

Leu Pro Pro Arg
```

<210> 497
<211> 487
<212> PRT
<213> Artificial Sequence

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

<400> 497
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Gln Val Gln Leu Gln Gln Trp Gly Ala Gly Leu
20 25 30

Leu Lys Pro Ser Glu Thr Leu Ser Leu Thr Cys Ala Val Tyr Gly Gly
35 40 45

Ser Phe Ser Gly Tyr Tyr Trp Thr Trp Ile Arg Gln Pro Pro Gly Lys
50 55 60

Gly Leu Glu Trp Ile Gly Glu Ile Thr His Ser Gly Ser Thr Asn Tyr
65 70 75 80

Asn Pro Ser Leu Lys Ser Arg Val Ser Ile Ser Val Asp Thr Ser Lys
85 90 95

Asn Gln Phe Ser Leu Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala
100 105 110

Val Tyr Tyr Cys Ala Arg Gly Glu Tyr Gly Ser Gly Ser Arg Phe Asp
115 120 125

Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly Gly
130 135 140

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
145 150 155 160

Ala Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
165 170 175

Asp Arg Val Ala Ile Thr Cys Arg Ala Ser Gln Gly Ile Arg Asp Asp
180 185 190

```
Leu Gly Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
        195                 200                 205

Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
    210                 215                 220

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

Glu Asp Phe Ala Thr Tyr Tyr Cys Leu Gln Asp Tyr Asp Tyr Pro Leu
                245                 250                 255

Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Thr Thr Thr Pro Ala
            260                 265                 270

Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser
        275                 280                 285

Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr
    290                 295                 300

Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala
305                 310                 315                 320

Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr Lys Arg Gly
                325                 330                 335

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

Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu Glu
        355                 360                 365

Glu Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg Ser Ala Asp
    370                 375                 380

Ala Pro Ala Tyr Gln Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn
385                 390                 395                 400
```

```
Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg
                405                 410                 415


Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly
            420                 425                 430


Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu
        435                 440                 445


Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His Asp Gly Leu
    450                 455                 460


Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu His
465                 470                 475                 480


Met Gln Ala Leu Pro Pro Arg
                485


<210> 498
<211> 487
<212> PRT
<213> Artificial Sequence

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

<400> 498
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1               5                   10                  15


His Ala Ala Arg Pro Gln Val Gln Leu Gln Gln Trp Gly Ala Gly Leu
            20                  25                  30


Leu Lys Pro Ser Glu Thr Leu Ser Leu Thr Cys Ala Val Tyr Gly Gly
        35                  40                  45


Ser Phe Ser Gly Tyr Tyr Trp Ser Trp Ile Arg Gln Pro Pro Gly Lys
    50                  55                  60


Gly Leu Glu Trp Ile Gly Glu Ile Thr His Ser Gly Ser Thr Asn Tyr
65                  70                  75                  80
```

```
Asn Pro Ser Leu Lys Ser Arg Val Ser Ile Ser Val Asp Thr Ser Lys
                85                  90                  95

Asn Gln Phe Ser Leu Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala
            100                 105                 110

Val Tyr Tyr Cys Ala Arg Gly Glu Tyr Gly Ser Gly Ser Arg Phe Asp
        115                 120                 125

Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly Gly
    130                 135                 140

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
145                 150                 155                 160

Ala Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
                165                 170                 175

Asp Arg Val Ala Leu Thr Cys Arg Ala Ser Gln Gly Ile Arg Asp Asp
            180                 185                 190

Leu Gly Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
        195                 200                 205

Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
    210                 215                 220

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

Glu Asp Phe Ala Thr Tyr Tyr Cys Leu Gln Asp Tyr Asp Tyr Pro Leu
                245                 250                 255

Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Thr Thr Thr Pro Ala
            260                 265                 270

Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser
        275                 280                 285
```

```
Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr
    290                 295                 300

Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala
305                 310                 315                 320

Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr Lys Arg Gly
                325                 330                 335

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

Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu Glu
        355                 360                 365

Glu Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg Ser Ala Asp
    370                 375                 380

Ala Pro Ala Tyr Gln Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn
385                 390                 395                 400

Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg
                405                 410                 415

Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly
            420                 425                 430

Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu
        435                 440                 445

Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His Asp Gly Leu
    450                 455                 460

Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu His
465                 470                 475                 480

Met Gln Ala Leu Pro Pro Arg
                485
```

<210> 499
<211> 488
<212> PRT
<213> Artificial Sequence

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

<400> 499
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Gln Val Gln Leu Gln Gln Trp Gly Ala Gly Leu
20 25 30

Leu Lys Pro Ser Glu Thr Leu Ser Leu Thr Cys Ala Val Tyr Gly Gly
35 40 45

Ser Phe Ser Ala Tyr Tyr Trp Asn Trp Ile Arg Gln Pro Pro Gly Lys
50 55 60

Gly Leu Glu Trp Ile Gly Glu Ile Asn His Ser Gly Ser Thr Asn Tyr
65 70 75 80

Asn Pro Ser Leu Lys Ser Arg Val Thr Ile Ser Val Asp Thr Ser Lys
85 90 95

Asn Gln Phe Ser Leu Asn Leu Thr Ser Leu Thr Ala Ala Asp Thr Ala
100 105 110

Val Tyr Tyr Cys Ala Arg Gly Leu Asp Ser Ser Gly Trp Tyr Pro Phe
115 120 125

Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly
130 135 140

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly
145 150 155 160

Ser Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Val Ser Ala Ser Val
165 170 175

```
Gly Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Gly Ile Ser Ser
            180                 185                 190

Trp Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu
        195                 200                 205

Ile Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser
    210                 215                 220

Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln
225                 230                 235                 240

Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Ala Asp Ser Phe Pro
                245                 250                 255

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

Ala Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu
        275                 280                 285

Ser Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His
    290                 295                 300

Thr Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu
305                 310                 315                 320

Ala Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr Lys Arg
                325                 330                 335

Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met Arg Pro
            340                 345                 350

Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu
        355                 360                 365

Glu Glu Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg Ser Ala
    370                 375                 380
```

```
Asp Ala Pro Ala Tyr Gln Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu
385                 390                 395                 400


Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly
                405                 410                 415


Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu
            420                 425                 430


Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser
        435                 440                 445


Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His Asp Gly
    450                 455                 460


Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu
465                 470                 475                 480


His Met Gln Ala Leu Pro Pro Arg
                485


<210> 500
<211> 483
<212> PRT
<213> Artificial Sequence

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

<400> 500
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1               5                   10                  15


His Ala Ala Arg Pro Gln Val Gln Leu Gln Gln Trp Gly Ala Gly Leu
            20                  25                  30


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


Ser Phe Ser Gly Asp Tyr Trp Ser Trp Ile Arg Gln Pro Pro Gly Lys
```

```
    50                  55                  60

Gly Leu Glu Trp Ile Gly Glu Ile Asn His Ser Gly Ile Thr Ser Phe
65                  70                  75                  80

Asn Pro Ser Leu Lys Ser Arg Val Thr Ile Ser Val Asp Thr Ser Lys
                85                  90                  95

Asn Gln Phe Ser Leu Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala
            100                 105                 110

Val Tyr Tyr Cys Ala Arg Gly Glu Leu Gly Ile Pro Asp Asn Trp Gly
        115                 120                 125

Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly
    130                 135                 140

Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Gln
145                 150                 155                 160

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

Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Ser Arg Trp Leu Ala Trp
            180                 185                 190

Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile Tyr Lys Ala
        195                 200                 205

Ser Ser Leu Glu Ser Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser
    210                 215                 220

Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro Asp Asp Phe
225                 230                 235                 240

Ala Thr Tyr Tyr Cys Gln Gln Tyr Asn Ser Tyr Ser Thr Phe Gly Gln
                245                 250                 255

Gly Thr Lys Val Glu Ile Lys Thr Thr Thr Pro Ala Pro Arg Pro Pro
            260                 265                 270
```

```
Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser Leu Arg Pro Glu
        275                 280                 285

Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr Arg Gly Leu Asp
    290                 295                 300

Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly
305                 310                 315                 320

Val Leu Leu Leu Ser Leu Val Ile Thr Lys Arg Gly Arg Lys Lys Leu
                325                 330                 335

Leu Tyr Ile Phe Lys Gln Pro Phe Met Arg Pro Val Gln Thr Thr Gln
            340                 345                 350

Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu Glu Glu Glu Gly Gly
        355                 360                 365

Cys Glu Leu Arg Val Lys Phe Ser Arg Ser Ala Asp Ala Pro Ala Tyr
    370                 375                 380

Gln Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn Leu Gly Arg Arg
385                 390                 395                 400

Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg Asp Pro Glu Met
                405                 410                 415

Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu Tyr Asn Glu
            420                 425                 430

Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile Gly Met Lys
        435                 440                 445

Gly Glu Arg Arg Arg Gly Lys Gly His Asp Gly Leu Tyr Gln Gly Leu
    450                 455                 460

Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu His Met Gln Ala Leu
465                 470                 475                 480
```

Pro Pro Arg

<210> 501
<211> 492
<212> PRT
<213> Artificial Sequence

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

<400> 501
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu
20 25 30

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

Ser Ile Ser Ser Ser Asn Trp Trp Ser Trp Val Arg Gln Pro Pro Gly
50 55 60

Lys Gly Leu Glu Trp Ile Gly Glu Val Phe His Ser Gly Ser Thr Asn
65 70 75 80

Tyr Asn Pro Ser Leu Lys Ser Arg Val Thr Ile Ser Val Asp Lys Ser
85 90 95

Lys Asn Gln Phe Ser Leu Lys Leu Ser Ser Val Thr Ala Ala Asp Thr
100 105 110

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

Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly Gly Ser
130 135 140

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp

```
145                 150                 155                 160

Ile Val Met Thr Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly Glu
                165                 170                 175

Arg Ala Thr Ile Asn Cys Lys Ser Ser Gln Ser Val Leu Tyr Ser Ser
            180                 185                 190

Asn Asn Lys Asn Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Pro
        195                 200                 205

Pro Asn Leu Leu Val Tyr Trp Ala Ser Thr Arg Glu Ser Gly Val Pro
    210                 215                 220

Asp Arg Phe Ser Gly Ala Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile
225                 230                 235                 240

Ser Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln Gln Tyr
                245                 250                 255

Tyr Gly Thr Ser Trp Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
            260                 265                 270

Thr Thr Thr Pro Ala Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala
        275                 280                 285

Ser Gln Pro Leu Ser Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly
    290                 295                 300

Gly Ala Val His Thr Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile
305                 310                 315                 320

Trp Ala Pro Leu Ala Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val
                325                 330                 335

Ile Thr Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro
            340                 345                 350

Phe Met Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys
        355                 360                 365
```

```
Arg Phe Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg Val Lys Phe
    370                 375                 380


Ser Arg Ser Ala Asp Ala Pro Ala Tyr Gln Gln Gly Gln Asn Gln Leu
385                 390                 395                 400


Tyr Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp
                405                 410                 415


Lys Arg Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys
            420                 425                 430


Asn Pro Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala
        435                 440                 445


Glu Ala Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys
    450                 455                 460


Gly His Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr
465                 470                 475                 480


Tyr Asp Ala Leu His Met Gln Ala Leu Pro Pro Arg
                485                 490


<210> 502
<211> 488
<212> PRT
<213> Artificial Sequence

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

<400> 502
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1               5                   10                  15


His Ala Ala Arg Pro Gln Ile Thr Leu Arg Glu Ser Gly Pro Thr Leu
            20                  25                  30
```

```
Val Lys Pro Thr Gln Thr Leu Thr Leu Thr Cys Thr Phe Ser Gly Phe
        35                  40                  45

Ser Leu Ser Thr Ser Gly Leu Gly Val Gly Trp Ile Arg Gln Pro Pro
    50                  55                  60

Gly Glu Ala Leu Glu Trp Leu Ala Leu Ile Tyr Trp Asn Asp Asp Lys
65                  70                  75                  80

Arg Tyr Ser Pro Ser Leu Lys Ser Arg Leu Ser Ile Thr Lys Asp Thr
                85                  90                  95

Ser Lys Asn Gln Val Val Leu Ile Met Thr Asn Met Asp Pro Val Asp
            100                 105                 110

Thr Ala Thr Tyr Tyr Cys Val His Arg Arg Ile Ala Ala Pro Gly Ser
        115                 120                 125

Val Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly
    130                 135                 140

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly
145                 150                 155                 160

Ser Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Val Ser Ala Ser Val
                165                 170                 175

Gly Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Gly Ile Ser Ser
            180                 185                 190

Trp Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu
        195                 200                 205

Ile Ser Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser
    210                 215                 220

Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln
225                 230                 235                 240

Pro Glu Asp Phe Ala Thr Tyr Tyr Cys His Gln Ala Asn Ser Phe Pro
```

```
                245                 250                 255

Phe Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys Thr Thr Thr Pro
            260                 265                 270

Ala Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu
        275                 280                 285

Ser Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His
    290                 295                 300

Thr Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu
305                 310                 315                 320

Ala Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr Lys Arg
                325                 330                 335

Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met Arg Pro
            340                 345                 350

Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu
        355                 360                 365

Glu Glu Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg Ser Ala
    370                 375                 380

Asp Ala Pro Ala Tyr Gln Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu
385                 390                 395                 400

Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly
                405                 410                 415

Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu
            420                 425                 430

Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser
        435                 440                 445

Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His Asp Gly
    450                 455                 460
```

```
Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu
465                 470                 475                 480


His Met Gln Ala Leu Pro Pro Arg
                485


<210> 503
<211> 487
<212> PRT
<213> Artificial Sequence

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

<400> 503
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1               5                   10                  15


His Ala Ala Arg Pro Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val
            20                  25                  30


Lys Lys Pro Gly Ala Ser Val Lys Val Ser Cys Lys Val Ser Gly Tyr
        35                  40                  45


Thr Leu Thr Glu Leu Ser Met His Trp Val Arg Gln Ala Pro Gly Lys
    50                  55                  60


Gly Pro Glu Gly Met Gly Gly Phe Asp Pro Glu Asp Gly Lys Thr Ile
65                  70                  75                  80


Tyr Ala Gln Lys Phe Gln Gly Arg Val Thr Met Thr Glu Asp Thr Ser
                85                  90                  95


Ala Asp Thr Ala Tyr Met Glu Leu Asn Ser Leu Arg Ser Glu Asp Thr
            100                 105                 110


Ala Val Tyr Tyr Cys Ala Thr Leu Leu Arg Gly Leu Asp Ala Phe Asp
        115                 120                 125
```

```
Val Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly Gly
    130                 135                 140

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
145                 150                 155                 160

Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
                165                 170                 175

Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Gly Ile Arg Asn Asp
            180                 185                 190

Leu Gly Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Arg Leu Ile
        195                 200                 205

Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
    210                 215                 220

Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Thr Leu Gln Pro
225                 230                 235                 240

Glu Asp Phe Ala Thr Tyr Tyr Cys Leu Gln His Asn Ser Tyr Pro Arg
                245                 250                 255

Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys Thr Thr Thr Pro Ala
            260                 265                 270

Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser
        275                 280                 285

Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr
    290                 295                 300

Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala
305                 310                 315                 320

Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr Lys Arg Gly
                325                 330                 335

Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met Arg Pro Val
```

340 345 350

Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu Glu
355 360 365

Glu Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg Ser Ala Asp
370 375 380

Ala Pro Ala Tyr Gln Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn
385 390 395 400

Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg
405 410 415

Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly
420 425 430

Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu
435 440 445

Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His Asp Gly Leu
450 455 460

Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu His
465 470 475 480

Met Gln Ala Leu Pro Pro Arg
485

<210> 504
<211> 488
<212> PRT
<213> Artificial Sequence

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

<400> 504
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

```
His Ala Ala Arg Pro Gln Val Gln Leu Gln Gln Trp Gly Ala Gly Leu
            20                  25                  30

Leu Lys Pro Ser Glu Thr Leu Ser Leu Thr Cys Ala Val Tyr Gly Gly
        35                  40                  45

Ser Phe Ser Gly Tyr Tyr Trp Arg Trp Ile Arg Gln Pro Pro Gly Lys
    50                  55                  60

Gly Leu Glu Trp Ile Gly Glu Ile Ser His Ser Gly Ser Thr Asn Tyr
65                  70                  75                  80

Asn Pro Ser Leu Lys Ser Arg Val Thr Ile Ser Val Asp Thr Ser Lys
                85                  90                  95

Asn Gln Phe Ser Leu Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala
            100                 105                 110

Val Tyr Tyr Cys Ala Val Arg Gly Tyr Ser Tyr Gly Tyr Pro Leu Phe
        115                 120                 125

Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly
    130                 135                 140

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly
145                 150                 155                 160

Ser Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val
                165                 170                 175

Gly Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Gly Ile Arg Asn
            180                 185                 190

Asp Leu Gly Trp Tyr Gln Gln Lys Leu Gly Lys Ala Pro Lys Arg Leu
        195                 200                 205

Ile Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser
    210                 215                 220
```

```
Gly Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln
225                 230                 235                 240

Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Leu Gln Tyr Asn Ser Tyr Pro
                245                 250                 255

Arg Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys Thr Thr Thr Pro
            260                 265                 270

Ala Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu
        275                 280                 285

Ser Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His
    290                 295                 300

Thr Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu
305                 310                 315                 320

Ala Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr Lys Arg
                325                 330                 335

Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met Arg Pro
            340                 345                 350

Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu
        355                 360                 365

Glu Glu Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg Ser Ala
    370                 375                 380

Asp Ala Pro Ala Tyr Gln Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu
385                 390                 395                 400

Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly
                405                 410                 415

Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu
            420                 425                 430

Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser
```

```
        435                 440                 445

Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His Asp Gly
    450                 455                 460

Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu
465                 470                 475                 480

His Met Gln Ala Leu Pro Pro Arg
                485
```

<210> 505
<211> 483
<212> PRT
<213> Artificial Sequence

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

<400> 505

```
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1               5                   10                  15

His Ala Ala Arg Pro Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu
            20                  25                  30

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

Ser Ile Ser Ser Asn Trp Trp Thr Trp Val Arg Gln Pro Pro Gly Lys
    50                  55                  60

Gly Leu Glu Trp Ile Gly Asp Ile His His Ser Gly Ser Thr Asn Tyr
65                  70                  75                  80

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

Asn Gln Phe Ser Leu Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala
            100                 105                 110
```

```
Val Phe Tyr Cys Ala Arg Asp Gly Gly Gly Thr Leu Asp Tyr Trp Gly
        115                 120                 125

Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly
    130                 135                 140

Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Gln
145                 150                 155                 160

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

Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Ser Ser Trp Leu Ala Trp
            180                 185                 190

Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile Tyr Lys Ala
        195                 200                 205

Ser Thr Leu Glu Ser Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser
    210                 215                 220

Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro Asp Asp Phe
225                 230                 235                 240

Ala Thr Tyr Tyr Cys Gln Gln Tyr Asn Gly Tyr Ser Thr Phe Gly Gln
                245                 250                 255

Gly Thr Lys Val Glu Ile Lys Thr Thr Thr Pro Ala Pro Arg Pro Pro
            260                 265                 270

Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser Leu Arg Pro Glu
        275                 280                 285

Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr Arg Gly Leu Asp
    290                 295                 300

Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly
305                 310                 315                 320
```

```
Val Leu Leu Leu Ser Leu Val Ile Thr Lys Arg Gly Arg Lys Lys Leu
                325                 330                 335

Leu Tyr Ile Phe Lys Gln Pro Phe Met Arg Pro Val Gln Thr Thr Gln
            340                 345                 350

Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu Glu Glu Glu Gly Gly
        355                 360                 365

Cys Glu Leu Arg Val Lys Phe Ser Arg Ser Ala Asp Ala Pro Ala Tyr
    370                 375                 380

Gln Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn Leu Gly Arg Arg
385                 390                 395                 400

Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg Asp Pro Glu Met
                405                 410                 415

Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu Tyr Asn Glu
            420                 425                 430

Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile Gly Met Lys
        435                 440                 445

Gly Glu Arg Arg Arg Gly Lys Gly His Asp Gly Leu Tyr Gln Gly Leu
    450                 455                 460

Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu His Met Gln Ala Leu
465                 470                 475                 480

Pro Pro Arg
```

<210> 506
<211> 492
<212> PRT
<213> Artificial Sequence

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

<400> 506
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1   5   10   15

His Ala Ala Arg Pro Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val
            20   25   30

Lys Lys Pro Gly Ser Ser Val Lys Val Ser Cys Lys Ala Ser Gly Gly
        35   40   45

Thr Phe Thr Asn Tyr Cys Ile Ser Trp Val Arg Gln Ala Pro Gly Gln
    50   55   60

Gly Leu Glu Trp Met Gly Gly Ile Ile Pro Ile Phe Gly Thr Thr Asn
65   70   75   80

Tyr Ala Gln Thr Phe Gln Gly Arg Val Thr Ile Thr Ala Asp Lys Ser
                85   90   95

Thr Ser Thr Ala Tyr Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr
            100   105   110

Ala Val Tyr Tyr Cys Ala Arg Asp Asn Gly Asp Arg Tyr Tyr Tyr Asp
        115   120   125

Met Asp Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser Gly Gly
    130   135   140

Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly
145   150   155   160

Gly Ser Gln Ser Val Leu Thr Gln Pro Pro Ser Val Ser Ala Ala Pro
                165   170   175

Gly Gln Lys Val Thr Ile Ser Cys Ser Gly Ser Ser Ser Asn Ile Gly
            180   185   190

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

```
Leu Leu Ile Tyr Asp Asn Asn Lys Arg Pro Ser Gly Ile Pro Asp Arg
    210                 215                 220

Phe Ser Gly Ser Lys Ser Gly Thr Ser Ala Thr Leu Gly Ile Thr Gly
225                 230                 235                 240

Leu Gln Thr Gly Asp Glu Ala Asp Tyr Tyr Cys Gly Thr Trp Asp Ser
                245                 250                 255

Ser Leu Ser Ala Val Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu
            260                 265                 270

Thr Thr Thr Pro Ala Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala
        275                 280                 285

Ser Gln Pro Leu Ser Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly
    290                 295                 300

Gly Ala Val His Thr Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile
305                 310                 315                 320

Trp Ala Pro Leu Ala Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val
                325                 330                 335

Ile Thr Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro
            340                 345                 350

Phe Met Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys
        355                 360                 365

Arg Phe Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg Val Lys Phe
    370                 375                 380

Ser Arg Ser Ala Asp Ala Pro Ala Tyr Gln Gln Gly Gln Asn Gln Leu
385                 390                 395                 400

Tyr Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp
                405                 410                 415
```

Lys Arg Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys
420 425 430

Asn Pro Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala
435 440 445

Glu Ala Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys
450 455 460

Gly His Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr
465 470 475 480

Tyr Asp Ala Leu His Met Gln Ala Leu Pro Pro Arg
485 490

<210> 507
<211> 494
<212> PRT
<213> Artificial Sequence

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

<400> 507
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Gln Val Pro Leu Val Gln Ser Gly Ala Glu Val
20 25 30

Lys Lys Pro Gly Ser Ser Val Lys Val Ser Cys Lys Ala Ser Gly Gly
35 40 45

Thr Phe Ser Thr Tyr Ser Ile Ser Trp Val Arg Gln Ala Pro Gly Gln
50 55 60

Gly Leu Glu Trp Met Gly Gly Ile Ile Pro Ile Phe Gly Thr Thr Asn
65 70 75 80

Tyr Ala Gln Lys Phe Gln Gly Arg Val Thr Ile Thr Ala Asp Lys Ser
85 90 95

```
Thr Ser Thr Ala Tyr Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr
            100                 105                 110

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

Tyr Gly Met Asp Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser
    130                 135                 140

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly
145                 150                 155                 160

Gly Gly Gly Ser Gln Ser Val Leu Thr Gln Pro Pro Ser Val Ser Ala
                165                 170                 175

Ala Pro Gly Gln Lys Val Thr Ile Ser Cys Ser Gly Ser Ser Ser Asn
            180                 185                 190

Ile Gly Asn Asn Tyr Val Ser Trp Tyr Gln Gln Leu Pro Gly Thr Ala
        195                 200                 205

Pro Lys Leu Leu Ile Tyr Asp Asn Asn Lys Arg Pro Ser Gly Ile Pro
    210                 215                 220

Asp Arg Phe Phe Gly Ser Lys Phe Gly Thr Ser Ala Thr Leu Gly Ile
225                 230                 235                 240

Thr Gly Leu Gln Thr Gly Asp Glu Ala Asp Tyr Tyr Cys Gly Thr Trp
                245                 250                 255

Asp Ser Ser Leu Ser Ala Val Val Phe Gly Gly Gly Thr Lys Leu Thr
            260                 265                 270

Val Leu Thr Thr Thr Pro Ala Pro Arg Pro Pro Thr Pro Ala Pro Thr
        275                 280                 285

Ile Ala Ser Gln Pro Leu Ser Leu Arg Pro Glu Ala Cys Arg Pro Ala
    290                 295                 300
```

```
Ala Gly Gly Ala Val His Thr Arg Gly Leu Asp Phe Ala Cys Asp Ile
305                 310                 315                 320

Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly Val Leu Leu Leu Ser
                325                 330                 335

Leu Val Ile Thr Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys
            340                 345                 350

Gln Pro Phe Met Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys
        355                 360                 365

Ser Cys Arg Phe Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg Val
    370                 375                 380

Lys Phe Ser Arg Ser Ala Asp Ala Pro Ala Tyr Gln Gln Gly Gln Asn
385                 390                 395                 400

Gln Leu Tyr Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val
                405                 410                 415

Leu Asp Lys Arg Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg
            420                 425                 430

Arg Lys Asn Pro Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys
        435                 440                 445

Met Ala Glu Ala Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg
    450                 455                 460

Gly Lys Gly His Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys
465                 470                 475                 480

Asp Thr Tyr Asp Ala Leu His Met Gln Ala Leu Pro Pro Arg
                485                 490
```

<210> 508
<211> 487
<212> PRT
<213> Artificial Sequence

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

<400> 508
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu
20 25 30

Val Lys Pro Ser Glu Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Asp
35 40 45

Ser Ile Ser Ser Tyr Tyr Trp Ser Trp Ile Arg Gln Pro Pro Gly Lys
50 55 60

Gly Leu Glu Trp Ile Gly Tyr Met Tyr Tyr Ser Gly Ile Thr Asn Tyr
65 70 75 80

Asn Pro Ser Leu Lys Ser Arg Val Asn Ile Ser Leu Asp Thr Ser Lys
85 90 95

Asn Gln Phe Ser Leu Lys Leu Gly Ser Val Thr Ala Ala Asp Thr Ala
100 105 110

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

Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly Gly Ser
130 135 140

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu
145 150 155 160

Ile Val Leu Thr Gln Ser Pro Gly Thr Leu Ser Leu Ser Pro Gly Glu
165 170 175

Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Ser Tyr
180 185 190

```
Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile
        195                 200                 205

Tyr Gly Ala Ser Ser Arg Ala Thr Asp Ile Pro Asp Arg Phe Ser Gly
    210                 215                 220

Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Asn Arg Leu Glu Pro
225                 230                 235                 240

Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Gly Thr Ser Pro Leu
                245                 250                 255

Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Thr Thr Thr Pro Ala
            260                 265                 270

Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser
        275                 280                 285

Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr
    290                 295                 300

Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala
305                 310                 315                 320

Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr Lys Arg Gly
                325                 330                 335

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

Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu Glu
        355                 360                 365

Glu Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg Ser Ala Asp
    370                 375                 380

Ala Pro Ala Tyr Gln Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn
385                 390                 395                 400
```

Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg
405 410 415

Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly
420 425 430

Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu
435 440 445

Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His Asp Gly Leu
450 455 460

Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu His
465 470 475 480

Met Gln Ala Leu Pro Pro Arg
485

<210> 509
<211> 487
<212> PRT
<213> Artificial Sequence

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

<400> 509
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu
20 25 30

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

Ser Ile Ser Ser Tyr Tyr Trp Ser Trp Ile Arg Gln Pro Pro Gly Lys
50 55 60

Gly Leu Glu Trp Ile Ser Tyr Ile Tyr Tyr Ser Gly Ile Ser Asn Tyr

```
65                  70                  75                  80

Asn Pro Ser Leu Lys Ser Arg Val Ser Ile Ser Val Asp Thr Ser Lys
                85                  90                  95

Asn Gln Phe Ser Leu Arg Leu Ser Ser Val Thr Ala Ala Asp Thr Ala
            100                 105                 110

Val Tyr Tyr Cys Ala Arg Ile Ser Val Ala Gly Phe Phe Phe Asp Asn
        115                 120                 125

Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly Gly Ser
    130                 135                 140

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu
145                 150                 155                 160

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

Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Ser Ser Tyr
            180                 185                 190

Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile
        195                 200                 205

Tyr Gly Ala Ser Ser Arg Ala Ala Gly Val Pro Asp Arg Phe Ser Gly
    210                 215                 220

Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Ala Pro
225                 230                 235                 240

Glu Asp Phe Val Val Tyr Tyr Cys Gln Gln Tyr Gly Ile Ser Pro Leu
                245                 250                 255

Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Thr Thr Thr Pro Ala
            260                 265                 270

Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser
        275                 280                 285
```

```
Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr
    290                 295                 300

Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala
305                 310                 315                 320

Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr Lys Arg Gly
                325                 330                 335

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

Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu Glu
        355                 360                 365

Glu Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg Ser Ala Asp
    370                 375                 380

Ala Pro Ala Tyr Gln Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn
385                 390                 395                 400

Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg
                405                 410                 415

Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly
            420                 425                 430

Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu
        435                 440                 445

Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His Asp Gly Leu
    450                 455                 460

Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu His
465                 470                 475                 480

Met Gln Ala Leu Pro Pro Arg
                485
```

<210> 510
<211> 495
<212> PRT
<213> Artificial Sequence

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

<400> 510
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Gln Val Gln Leu Gln Gln Ser Gly Pro Gly Leu
20 25 30

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

Ser Val Ser Ser Asn Ser Ala Thr Trp Asn Trp Ile Arg Gln Ser Pro
50 55 60

Ser Arg Gly Leu Glu Trp Leu Gly Arg Thr Tyr Tyr Arg Ser Lys Trp
65 70 75 80

Tyr Asp Asp Tyr Ala Val Ser Val Lys Ser Arg Ile Thr Ile Asn Pro
85 90 95

Asp Thr Ser Lys Asn His Leu Ser Leu His Leu Asn Ser Val Thr Pro
100 105 110

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

Pro Asp Gly Phe Asp Val Trp Gly Gln Gly Thr Met Val Thr Val Ser
130 135 140

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
145 150 155 160

Gly Gly Gly Gly Ser Gln Ser Val Leu Thr Gln Pro Pro Ser Ala Ser

```
                165                 170                 175

Gly Thr Pro Gly Gln Arg Val Thr Ile Ser Cys Ser Gly Ser Ser Ser
            180                 185                 190

Asn Ile Gly Ser Asp Pro Val Asn Trp Tyr Gln Gln Leu Pro Gly Thr
        195                 200                 205

Ala Pro Lys Leu Leu Ile Tyr Ser Asn Asn Gln Arg Pro Ser Gly Val
    210                 215                 220

Pro Asp Arg Phe Ser Gly Ser Lys Ser Gly Thr Ser Ala Ser Leu Ala
225                 230                 235                 240

Ile Ser Gly Leu Gln Ser Glu Asp Glu Ala Asp Tyr Tyr Cys Ser Ala
                245                 250                 255

Trp Asp Asp Ser Leu Asn Gly Tyr Val Phe Gly Thr Gly Thr Lys Val
            260                 265                 270

Thr Val Leu Thr Thr Thr Pro Ala Pro Arg Pro Pro Thr Pro Ala Pro
        275                 280                 285

Thr Ile Ala Ser Gln Pro Leu Ser Leu Arg Pro Glu Ala Cys Arg Pro
    290                 295                 300

Ala Ala Gly Gly Ala Val His Thr Arg Gly Leu Asp Phe Ala Cys Asp
305                 310                 315                 320

Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly Val Leu Leu Leu
                325                 330                 335

Ser Leu Val Ile Thr Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe
            340                 345                 350

Lys Gln Pro Phe Met Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly
        355                 360                 365

Cys Ser Cys Arg Phe Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg
    370                 375                 380
```

```
Val Lys Phe Ser Arg Ser Ala Asp Ala Pro Ala Tyr Gln Gln Gly Gln
385                 390                 395                 400


Asn Gln Leu Tyr Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp
                405                 410                 415


Val Leu Asp Lys Arg Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro
            420                 425                 430


Arg Arg Lys Asn Pro Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp
        435                 440                 445


Lys Met Ala Glu Ala Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg
    450                 455                 460


Arg Gly Lys Gly His Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr
465                 470                 475                 480


Lys Asp Thr Tyr Asp Ala Leu His Met Gln Ala Leu Pro Pro Arg
                485                 490                 495


<210> 511
<211> 490
<212> PRT
<213> Artificial Sequence

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

<400> 511
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1               5                   10                  15


His Ala Ala Arg Pro Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val
            20                  25                  30


Lys Lys Pro Gly Ala Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr
        35                  40                  45
```

```
Thr Phe Thr Gly Tyr Ser Ile His Trp Val Arg Gln Ala Pro Gly Gln
    50                  55                  60

Gly Leu Glu Trp Met Gly Trp Ile Asn Pro Asn Ser Gly Gly Thr Phe
65                  70                  75                  80

Tyr Ala Gln Lys Phe Gln Gly Arg Val Thr Met Thr Arg Asp Thr Ser
                85                  90                  95

Ile Ser Thr Val Tyr Met Glu Leu Ser Arg Leu Arg Ser Asp Asp Thr
            100                 105                 110

Ala Val Tyr Tyr Cys Ala Arg Asp Gly Trp Gly Asp Tyr Tyr Tyr Tyr
        115                 120                 125

Gly Leu Asp Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Leu Gly
    130                 135                 140

Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly
145                 150                 155                 160

Gly Gly Ser Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Val Ser Ala
                165                 170                 175

Ser Val Gly Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Asp Ile
            180                 185                 190

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

Leu Leu Ile Tyr Thr Ala Ser Ser Leu Gln Gly Gly Val Pro Ser Arg
    210                 215                 220

Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser
225                 230                 235                 240

Leu Gln Pro Glu Asp Leu Ala Thr Tyr Ser Cys Gln Gln Ala Asn Val
                245                 250                 255

Phe Pro Tyr Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys Thr Thr
```

```
            260                 265                 270

Thr Pro Ala Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln
        275                 280                 285

Pro Leu Ser Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala
    290                 295                 300

Val His Thr Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala
305                 310                 315                 320

Pro Leu Ala Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr
                325                 330                 335

Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met
            340                 345                 350

Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe
        355                 360                 365

Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg
    370                 375                 380

Ser Ala Asp Ala Pro Ala Tyr Gln Gln Gly Gln Asn Gln Leu Tyr Asn
385                 390                 395                 400

Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg
                405                 410                 415

Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro
            420                 425                 430

Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala
        435                 440                 445

Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His
    450                 455                 460

Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp
465                 470                 475                 480
```

```
Ala Leu His Met Gln Ala Leu Pro Pro Arg
                485                 490


<210> 512
<211> 491
<212> PRT
<213> Artificial Sequence

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

<400> 512
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1               5                   10                  15


His Ala Ala Arg Pro Glu Val Gln Leu Leu Glu Ser Gly Gly Gly Leu
            20                  25                  30


Val Gln Pro Gly Gly Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe
        35                  40                  45


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


Gly Leu Glu Trp Val Ser Thr Ile Ser Gly Ser Gly Gly Ser Thr Tyr
65                  70                  75                  80


Tyr Ala Asp Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser
                85                  90                  95


Lys Asn Thr Leu Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr
            100                 105                 110


Ala Val Phe Tyr Cys Ala Ile Asp Pro Glu Tyr Tyr Asp Ile Leu Thr
        115                 120                 125


Gly Gly Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Gly
    130                 135                 140
```

```
Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Gly Ser Gly
145                 150                 155                 160

Gly Gly Gly Ser Asp Ile Gln Met Thr Gln Ser Pro Ser Ala Met Ser
                165                 170                 175

Ala Ser Val Gly Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Gly
            180                 185                 190

Ile Ser Asn Tyr Leu Ala Trp Phe Gln Gln Lys Pro Gly Lys Val Pro
        195                 200                 205

Lys Arg Leu Ile Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser
    210                 215                 220

Arg Phe Ser Gly Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser
225                 230                 235                 240

Ser Leu Gln Pro Glu Asp Phe Ala Thr Tyr Phe Cys Leu Gln His Asp
                245                 250                 255

Ser Phe Pro Leu Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Thr
            260                 265                 270

Thr Thr Pro Ala Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser
        275                 280                 285

Gln Pro Leu Ser Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly
    290                 295                 300

Ala Val His Thr Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp
305                 310                 315                 320

Ala Pro Leu Ala Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile
                325                 330                 335

Thr Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe
            340                 345                 350

Met Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg
```

355 360 365

Phe Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser
370 375 380

Arg Ser Ala Asp Ala Pro Ala Tyr Gln Gln Gly Gln Asn Gln Leu Tyr
385 390 395 400

Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys
405 410 415

Arg Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn
420 425 430

Pro Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu
435 440 445

Ala Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly
450 455 460

His Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr
465 470 475 480

Asp Ala Leu His Met Gln Ala Leu Pro Pro Arg
485 490

<210> 513
<211> 487
<212> PRT
<213> Artificial Sequence

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

<400> 513
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu
20 25 30

```
Val Lys Pro Ser Glu Thr Leu Ser Leu Thr Cys Thr Val Ser Ser Asp
        35                  40                  45

Ser Ile Ser Asn Tyr Tyr Trp Ser Trp Ile Arg Gln Pro Pro Gly Lys
    50                  55                  60

Gly Leu Glu Trp Ile Ser Tyr Ile Tyr Tyr Ser Gly Ile Thr Asn Tyr
65                  70                  75                  80

Asn Pro Ser Leu Lys Ser Arg Val Thr Ile Ser Val Asp Thr Ser Lys
                85                  90                  95

Asn Gln Phe Ser Leu Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala
            100                 105                 110

Val Tyr Tyr Cys Ala Arg Ile Thr Val Thr Gly Phe Tyr Phe Asp Tyr
        115                 120                 125

Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly Gly Ser
    130                 135                 140

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu
145                 150                 155                 160

Ile Val Leu Thr Gln Ser Pro Gly Thr Leu Ser Leu Ser Pro Gly Glu
                165                 170                 175

Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Ile Ser Arg Ser Tyr
            180                 185                 190

Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg His Leu Ile
        195                 200                 205

Tyr Gly Ala Ser Ser Arg Ala Thr Gly Ile Pro Asp Arg Phe Ser Gly
    210                 215                 220

Ser Gly Ser Gly Thr Asp Phe Ile Leu Thr Ile Ser Arg Leu Glu Pro
225                 230                 235                 240
```

```
Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Asp Thr Ser Pro Leu
                245                 250                 255

Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Thr Thr Thr Pro Ala
            260                 265                 270

Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser
        275                 280                 285

Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr
    290                 295                 300

Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala
305                 310                 315                 320

Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr Lys Arg Gly
                325                 330                 335

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

Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu Glu
        355                 360                 365

Glu Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg Ser Ala Asp
    370                 375                 380

Ala Pro Ala Tyr Gln Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn
385                 390                 395                 400

Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg
                405                 410                 415

Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly
            420                 425                 430

Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu
        435                 440                 445

Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His Asp Gly Leu
```

```
    450                 455                 460

Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu His
465                 470                 475                 480

Met Gln Ala Leu Pro Pro Arg
                485

<210> 514
<211> 495
<212> PRT
<213> Artificial Sequence

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

<400> 514
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1               5                   10                  15

His Ala Ala Arg Pro Gln Val Gln Leu Gln Gln Ser Gly Pro Gly Leu
            20                  25                  30

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

Ser Val Ser Ser Asn Ser Val Val Trp Asn Trp Ile Arg Gln Ser Pro
    50                  55                  60

Ser Arg Gly Leu Glu Trp Leu Gly Arg Thr Tyr Tyr Arg Ser Lys Trp
65                  70                  75                  80

Tyr Asp Asp Tyr Ala Val Ser Val Lys Ser Arg Ile Thr Ile Asn Pro
                85                  90                  95

Asp Thr Ser Lys Asn Gln Phe Ser Leu Gln Leu Asn Ser Val Thr Pro
            100                 105                 110

Glu Asp Thr Ala Val Tyr His Cys Ala Arg Gly Gly Ile Val Gly Ala
        115                 120                 125
```

```
Pro Asp Ala Phe Asp Ile Trp Gly Gln Gly Thr Met Val Thr Val Ser
    130                 135                 140

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
145                 150                 155                 160

Gly Gly Gly Gly Ser Gln Ser Val Leu Thr Gln Pro Pro Ser Ala Ser
                165                 170                 175

Gly Thr Pro Gly Gln Arg Val Thr Ile Ser Cys Ser Gly Ser Ser Ser
            180                 185                 190

Asn Ile Gly Ser Asp Pro Val Ser Trp Tyr Gln Gln Phe Pro Gly Thr
        195                 200                 205

Ala Pro Lys Leu Leu Ile Tyr Thr Asn Asn Gln Arg Pro Ser Gly Val
    210                 215                 220

Pro Asp Arg Phe Ser Gly Ser Lys Ser Gly Thr Ser Ala Ser Leu Ala
225                 230                 235                 240

Ile Ser Gly Leu Gln Ser Glu Asp Glu Ala Asp Tyr Tyr Cys Ala Ala
                245                 250                 255

Trp Asp Asp Ser Leu Asn Gly His Val Phe Gly Thr Gly Thr Lys Val
            260                 265                 270

Thr Val Leu Thr Thr Thr Pro Ala Pro Arg Pro Pro Thr Pro Ala Pro
        275                 280                 285

Thr Ile Ala Ser Gln Pro Leu Ser Leu Arg Pro Glu Ala Cys Arg Pro
    290                 295                 300

Ala Ala Gly Gly Ala Val His Thr Arg Gly Leu Asp Phe Ala Cys Asp
305                 310                 315                 320

Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly Val Leu Leu Leu
                325                 330                 335
```

Ser Leu Val Ile Thr Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe
340 345 350

Lys Gln Pro Phe Met Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly
355 360 365

Cys Ser Cys Arg Phe Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg
370 375 380

Val Lys Phe Ser Arg Ser Ala Asp Ala Pro Ala Tyr Gln Gln Gly Gln
385 390 395 400

Asn Gln Leu Tyr Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp
405 410 415

Val Leu Asp Lys Arg Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro
420 425 430

Arg Arg Lys Asn Pro Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp
435 440 445

Lys Met Ala Glu Ala Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg
450 455 460

Arg Gly Lys Gly His Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr
465 470 475 480

Lys Asp Thr Tyr Asp Ala Leu His Met Gln Ala Leu Pro Pro Arg
485 490 495

<210> 515
<211> 495
<212> PRT
<213> Artificial Sequence

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

<400> 515
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

```
His Ala Ala Arg Pro Gln Val Gln Leu Gln Gln Ser Gly Pro Gly Leu
            20                  25                  30

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

Ser Val Ser Ser Asn Ser Ala Val Trp Asn Trp Ile Arg Gln Ser Pro
    50                  55                  60

Ser Arg Gly Leu Glu Trp Leu Gly Trp Thr Tyr Tyr Arg Ser Lys Tyr
65                  70                  75                  80

Tyr Asn Asp Tyr Ala Val Ser Leu Lys Ser Arg Ile Thr Ile Asn Pro
                85                  90                  95

Asp Thr Ser Lys Asn Gln Phe Ser Leu Gln Leu Asn Ser Leu Thr Pro
            100                 105                 110

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

Pro Asp Gly Phe Asp Ile Trp Gly Gln Gly Thr Met Val Thr Val Ser
    130                 135                 140

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
145                 150                 155                 160

Gly Gly Gly Gly Ser Gln Ser Ala Leu Thr Gln Pro Pro Ser Ala Ser
                165                 170                 175

Gly Thr Pro Gly Gln Arg Val Thr Ile Ser Cys Ser Gly Ser Asn Ser
            180                 185                 190

Asn Ile Gly Ser Asn Pro Ile Asn Trp Tyr Gln Gln Leu Pro Gly Thr
        195                 200                 205

Ala Pro Lys Leu Leu Ile Tyr Ser Asn Asn Gln Arg Pro Ser Gly Val
    210                 215                 220
```

```
Pro Asp Arg Phe Ser Gly Ser Lys Ser Gly Thr Ser Ala Ser Leu Ala
225                 230                 235                 240

Ile Ser Gly Leu Gln Ser Glu Asp Glu Ala Asp Tyr Tyr Cys Ala Ala
                245                 250                 255

Trp Asp Asp Ser Leu Asn Gly His Val Phe Gly Thr Gly Thr Lys Val
            260                 265                 270

Thr Val Leu Thr Thr Thr Pro Ala Pro Arg Pro Pro Thr Pro Ala Pro
        275                 280                 285

Thr Ile Ala Ser Gln Pro Leu Ser Leu Arg Pro Glu Ala Cys Arg Pro
    290                 295                 300

Ala Ala Gly Gly Ala Val His Thr Arg Gly Leu Asp Phe Ala Cys Asp
305                 310                 315                 320

Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly Val Leu Leu Leu
                325                 330                 335

Ser Leu Val Ile Thr Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe
            340                 345                 350

Lys Gln Pro Phe Met Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly
        355                 360                 365

Cys Ser Cys Arg Phe Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg
    370                 375                 380

Val Lys Phe Ser Arg Ser Ala Asp Ala Pro Ala Tyr Gln Gln Gly Gln
385                 390                 395                 400

Asn Gln Leu Tyr Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp
                405                 410                 415

Val Leu Asp Lys Arg Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro
            420                 425                 430
```

Arg Arg Lys Asn Pro Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp
435 440 445

Lys Met Ala Glu Ala Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg
450 455 460

Arg Gly Lys Gly His Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr
465 470 475 480

Lys Asp Thr Tyr Asp Ala Leu His Met Gln Ala Leu Pro Pro Arg
485 490 495

<210> 516
<211> 487
<212> PRT
<213> Artificial Sequence

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

<400> 516
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu
20 25 30

Val Lys Pro Ser Glu Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Gly
35 40 45

Ser Ile Ser Ser Tyr Tyr Trp Ser Trp Ile Arg Gln Ser Pro Gly Lys
50 55 60

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

Asn Pro Ser Leu Lys Ser Arg Val Thr Ile Ser Val Asp Thr Ser Lys
85 90 95

Asn Gln Phe Ser Leu Asn Leu Asn Ser Val Thr Ala Ala Asp Thr Ala
100 105 110

```
Phe Tyr Phe Cys Ala Arg Ile Gly Val Ala Gly Phe Tyr Phe Asp Tyr
        115                 120                 125

Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly Gly Ser
    130                 135                 140

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu
145                 150                 155                 160

Ile Val Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu
                165                 170                 175

Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Arg Arg Tyr
            180                 185                 190

Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile
        195                 200                 205

Tyr Gly Ala Ser Ser Arg Ala Thr Gly Ile Pro Asp Arg Phe Ser Gly
    210                 215                 220

Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro
225                 230                 235                 240

Glu Asp Phe Glu Val Tyr Tyr Cys Gln Gln Tyr Gly Thr Ser Pro Ile
                245                 250                 255

Thr Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Thr Thr Thr Pro Ala
            260                 265                 270

Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser
        275                 280                 285

Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr
    290                 295                 300

Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala
305                 310                 315                 320
```

```
Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr Lys Arg Gly
                325                 330                 335

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

Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu Glu
        355                 360                 365

Glu Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg Ser Ala Asp
    370                 375                 380

Ala Pro Ala Tyr Gln Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn
385                 390                 395                 400

Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg
                405                 410                 415

Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly
            420                 425                 430

Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu
        435                 440                 445

Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His Asp Gly Leu
    450                 455                 460

Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu His
465                 470                 475                 480

Met Gln Ala Leu Pro Pro Arg
                485
```

<210> 517
<211> 495
<212> PRT
<213> Artificial Sequence

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

polypeptide"

<400> 517

```
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1               5                  10                  15

His Ala Ala Arg Pro Gln Ile Gln Leu Gln Gln Ser Gly Pro Gly Leu
            20                  25                  30

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

Ser Val Ser Ser Asn Ser Ala Val Trp Asn Trp Ile Arg Gln Ser Pro
    50                  55                  60

Ser Arg Gly Leu Glu Trp Leu Gly Arg Thr Tyr Tyr Arg Ser Lys Trp
65                  70                  75                  80

Tyr Asn Asp Tyr Ala Val Ser Val Lys Ser Arg Ile Thr Ile Lys Pro
                85                  90                  95

Asp Thr Ala Lys Asn Gln Phe Ser Leu Gln Leu Asn Ser Val Thr Pro
            100                 105                 110

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

Pro Asp Ala Phe Asp Ile Trp Gly Gln Gly Thr Met Val Thr Val Ser
    130                 135                 140

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
145                 150                 155                 160

Gly Gly Gly Gly Ser Gln Ser Val Leu Thr Gln Pro Pro Ser Ala Ser
                165                 170                 175

Gly Thr Pro Gly Gln Arg Val Thr Ile Ser Cys Ser Gly Ser Ser Ser
            180                 185                 190

Asn Ile Gly Ser Asp Pro Ile Asn Trp Tyr Gln Gln Val Pro Gly Thr
        195                 200                 205
```

```
Ala Pro Lys Leu Leu Ile Tyr Ser Asn Asn Gln Arg Pro Ser Gly Val
    210                 215                 220

Pro Asp Arg Phe Ser Gly Ser Lys Ser Gly Thr Ser Ala Ser Leu Ala
225                 230                 235                 240

Ile Ser Gly Leu Gln Ser Glu Asp Glu Ala Asp Tyr Tyr Cys Ala Ala
                245                 250                 255

Trp Asp Asp Ser Leu Asn Gly Tyr Val Phe Gly Thr Gly Thr Lys Val
            260                 265                 270

Thr Val Leu Thr Thr Thr Pro Ala Pro Arg Pro Pro Thr Pro Ala Pro
        275                 280                 285

Thr Ile Ala Ser Gln Pro Leu Ser Leu Arg Pro Glu Ala Cys Arg Pro
    290                 295                 300

Ala Ala Gly Gly Ala Val His Thr Arg Gly Leu Asp Phe Ala Cys Asp
305                 310                 315                 320

Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly Val Leu Leu Leu
                325                 330                 335

Ser Leu Val Ile Thr Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe
            340                 345                 350

Lys Gln Pro Phe Met Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly
        355                 360                 365

Cys Ser Cys Arg Phe Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg
    370                 375                 380

Val Lys Phe Ser Arg Ser Ala Asp Ala Pro Ala Tyr Gln Gln Gly Gln
385                 390                 395                 400

Asn Gln Leu Tyr Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp
                405                 410                 415
```

```
Val Leu Asp Lys Arg Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro
            420                 425                 430

Arg Arg Lys Asn Pro Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp
        435                 440                 445

Lys Met Ala Glu Ala Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg
    450                 455                 460

Arg Gly Lys Gly His Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr
465                 470                 475                 480

Lys Asp Thr Tyr Asp Ala Leu His Met Gln Ala Leu Pro Pro Arg
                485                 490                 495
```

<210> 518
<211> 495
<212> PRT
<213> Artificial Sequence

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

<400> 518

```
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1               5                   10                  15

His Ala Ala Arg Pro Gln Val Gln Leu Gln Gln Ser Gly Pro Gly Leu
            20                  25                  30

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

Ser Val Ser Ser Asn Ser Ala Thr Trp Asn Trp Ile Arg Gln Ser Pro
    50                  55                  60

Ser Arg Gly Leu Glu Trp Leu Gly Arg Thr Tyr Tyr Arg Ser Glu Trp
65                  70                  75                  80

Tyr Asn Asp Tyr Ala Val Ser Val Lys Ser Arg Ile Thr Ile Asn Pro
```

```
                85                  90                  95

Asp Thr Ser Lys Asn His Leu Ser Leu His Leu Asn Ser Val Thr Pro
            100                 105                 110

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

Pro Asp Gly Phe Asp Val Trp Gly Gln Gly Thr Met Val Thr Val Ser
    130                 135                 140

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
145                 150                 155                 160

Gly Gly Gly Gly Ser Gln Ser Val Leu Thr Gln Pro Pro Ser Ala Ser
                165                 170                 175

Gly Thr Pro Gly Gln Arg Val Thr Ile Ser Cys Ser Gly Ser Ser Ser
            180                 185                 190

Asn Ile Gly Ser Asp Pro Val Ile Trp Tyr Gln Gln Leu Pro Arg Thr
        195                 200                 205

Ala Pro Lys Leu Leu Ile Tyr Ser Asn Asn Gln Arg Pro Ser Gly Val
    210                 215                 220

Pro Asp Arg Phe Ser Gly Ser Lys Ser Gly Thr Ser Ala Ser Leu Ala
225                 230                 235                 240

Ile Ser Gly Leu Gln Ser Glu Asp Glu Ala Asp Tyr Tyr Cys Ala Ala
                245                 250                 255

Trp Asp Asp Ser Leu Asn Gly Tyr Val Phe Gly Thr Gly Thr Lys Val
            260                 265                 270

Thr Val Leu Thr Thr Thr Pro Ala Pro Arg Pro Pro Thr Pro Ala Pro
        275                 280                 285

Thr Ile Ala Ser Gln Pro Leu Ser Leu Arg Pro Glu Ala Cys Arg Pro
    290                 295                 300
```

```
Ala Ala Gly Gly Ala Val His Thr Arg Gly Leu Asp Phe Ala Cys Asp
305                 310                 315                 320

Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly Val Leu Leu Leu
                325                 330                 335

Ser Leu Val Ile Thr Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe
            340                 345                 350

Lys Gln Pro Phe Met Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly
        355                 360                 365

Cys Ser Cys Arg Phe Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg
    370                 375                 380

Val Lys Phe Ser Arg Ser Ala Asp Ala Pro Ala Tyr Gln Gln Gly Gln
385                 390                 395                 400

Asn Gln Leu Tyr Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp
                405                 410                 415

Val Leu Asp Lys Arg Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro
            420                 425                 430

Arg Arg Lys Asn Pro Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp
        435                 440                 445

Lys Met Ala Glu Ala Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg
    450                 455                 460

Arg Gly Lys Gly His Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr
465                 470                 475                 480

Lys Asp Thr Tyr Asp Ala Leu His Met Gln Ala Leu Pro Pro Arg
                485                 490                 495
```

<210> 519
<211> 495
<212> PRT

<213> Artificial Sequence

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

<400> 519
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Gln Val Gln Leu Gln Gln Ser Gly Pro Gly Leu
20 25 30

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

Ser Val Ser Ser Asn Ser Ala Thr Trp Asn Trp Ile Arg Gln Ser Pro
50 55 60

Ser Thr Gly Leu Glu Trp Leu Ala Arg Thr Tyr Tyr Arg Ser Lys Trp
65 70 75 80

Tyr Asn Asp Tyr Glu Val Ser Val Lys Ser Gln Ile Thr Ile Asn Pro
85 90 95

Asp Thr Ser Lys Asn Gln Phe Ser Leu Gln Leu Asn Ser Val Thr Pro
100 105 110

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

Pro Asp Ala Phe Asp Ile Trp Gly Gln Gly Thr Met Val Thr Val Ser
130 135 140

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
145 150 155 160

Gly Gly Gly Gly Ser Gln Ser Val Leu Thr Gln Pro Pro Ser Ala Ser
165 170 175

Gly Thr Pro Gly Gln Gly Val Thr Ile Ser Cys Ser Gly Ser Ser Ser

```
            180                 185                 190

Asn Ile Gly Ser Asn Pro Val Asn Trp Tyr Gln Gln Leu Pro Gly Thr
        195                 200                 205

Ala Pro Lys Leu Leu Ile Tyr Ser Asn Asn Gln Arg Pro Ser Gly Val
    210                 215                 220

Pro Asp Arg Phe Ser Asp Ser Lys Ser Gly Thr Ser Ala Ser Leu Ala
225                 230                 235                 240

Ile Ser Gly Leu Gln Ser Glu Asp Glu Ala Asp Tyr Tyr Cys Ser Ala
                245                 250                 255

Trp Asp Asp Trp Leu Asn Gly Tyr Val Phe Gly Thr Gly Thr Lys Val
            260                 265                 270

Thr Val Leu Thr Thr Thr Pro Ala Pro Arg Pro Pro Thr Pro Ala Pro
        275                 280                 285

Thr Ile Ala Ser Gln Pro Leu Ser Leu Arg Pro Glu Ala Cys Arg Pro
    290                 295                 300

Ala Ala Gly Gly Ala Val His Thr Arg Gly Leu Asp Phe Ala Cys Asp
305                 310                 315                 320

Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly Val Leu Leu Leu
                325                 330                 335

Ser Leu Val Ile Thr Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe
            340                 345                 350

Lys Gln Pro Phe Met Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly
        355                 360                 365

Cys Ser Cys Arg Phe Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg
    370                 375                 380

Val Lys Phe Ser Arg Ser Ala Asp Ala Pro Ala Tyr Gln Gln Gly Gln
385                 390                 395                 400
```

```
Asn Gln Leu Tyr Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp
                405                 410                 415


Val Leu Asp Lys Arg Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro
            420                 425                 430


Arg Arg Lys Asn Pro Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp
        435                 440                 445


Lys Met Ala Glu Ala Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg
    450                 455                 460


Arg Gly Lys Gly His Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr
465                 470                 475                 480


Lys Asp Thr Tyr Asp Ala Leu His Met Gln Ala Leu Pro Pro Arg
                485                 490                 495


<210> 520
<211> 486
<212> PRT
<213> Artificial Sequence

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

<400> 520
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1               5                   10                  15


His Ala Ala Arg Pro Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu
            20                  25                  30


Val Lys Pro Ser Glu Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Asp
        35                  40                  45


Ser Ile Asn Asn Tyr Phe Trp Ser Trp Ile Arg Gln Pro Pro Gly Lys
    50                  55                  60
```

```
Gly Leu Glu Trp Ile Gly Tyr Phe Tyr His Arg Gly Gly Asn Asn Tyr
65                  70                  75                  80

Asn Pro Ser Leu Lys Ser Arg Val Thr Ile Ser Ile Asp Thr Ser Lys
                85                  90                  95

Asn Gln Phe Ser Leu Asn Leu Asn Ser Val Thr Ser Ala Asp Thr Ala
            100                 105                 110

Val Tyr Tyr Cys Ala Arg Leu Ala Leu Ala Gly Phe Phe Asp Tyr
        115                 120                 125

Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly Gly Ser
    130                 135                 140

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp
145                 150                 155                 160

Ile Gln Met Thr Gln Ser Pro Ser Thr Leu Ser Ala Ser Val Gly Asp
                165                 170                 175

Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Ser Ser Trp Leu
            180                 185                 190

Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile Tyr
        195                 200                 205

Lys Ala Ser Ser Leu Glu Ser Gly Val Pro Ser Arg Phe Ser Gly Ser
    210                 215                 220

Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro Asp
225                 230                 235                 240

Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Tyr Asn Ser Tyr Ser Arg Thr
                245                 250                 255

Phe Gly Gln Gly Thr Lys Val Glu Ile Lys Thr Thr Thr Pro Ala Pro
            260                 265                 270

Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser Leu
```

```
        275                 280                 285

Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr Arg
    290                 295                 300

Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala Gly
305                 310                 315                 320

Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr Lys Arg Gly Arg
                325                 330                 335

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

Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu Glu Glu
        355                 360                 365

Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg Ser Ala Asp Ala
    370                 375                 380

Pro Ala Tyr Gln Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn Leu
385                 390                 395                 400

Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg Asp
                405                 410                 415

Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu
            420                 425                 430

Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile
        435                 440                 445

Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His Asp Gly Leu Tyr
    450                 455                 460

Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu His Met
465                 470                 475                 480

Gln Ala Leu Pro Pro Arg
                485
```

<210> 521
<211> 494
<212> PRT
<213> Artificial Sequence

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

<400> 521
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Gln Val Pro Leu Val Gln Ser Gly Ala Glu Val
20 25 30

Lys Lys Pro Gly Ser Ser Val Lys Val Ser Cys Lys Ala Ser Gly Gly
35 40 45

Thr Phe Ser Thr Tyr Ser Ile Ser Trp Val Arg Gln Ala Pro Gly Gln
50 55 60

Gly Leu Glu Trp Met Gly Gly Ile Ile Pro Ile Phe Gly Thr Thr Asn
65 70 75 80

Tyr Ala Gln Lys Phe Gln Gly Arg Val Thr Ile Thr Ala Asp Lys Ser
85 90 95

Thr Ser Thr Ala Tyr Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr
100 105 110

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

Tyr Gly Met Asp Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser
130 135 140

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly
145 150 155 160

```
Gly Gly Gly Ser Gln Ser Val Leu Thr Gln Pro Pro Ser Ala Ser Gly
                165                 170                 175

Thr Pro Gly Gln Arg Val Thr Ile Ser Cys Ser Gly Ser Ser Ser Asn
            180                 185                 190

Ile Gly Ser Asn Tyr Val Tyr Trp Tyr Gln Gln Leu Pro Gly Thr Ala
        195                 200                 205

Pro Lys Leu Leu Ile Tyr Ser Asn Asn Gln Arg Pro Ser Gly Val Pro
    210                 215                 220

Asp Arg Phe Ser Gly Ser Lys Ser Gly Thr Ser Ala Ser Leu Ala Ile
225                 230                 235                 240

Ser Gly Leu Arg Ser Glu Asp Glu Ala Asp Tyr Tyr Cys Ala Ala Trp
                245                 250                 255

Asp Asp Ser Leu Ser Gly Trp Val Phe Gly Gly Gly Thr Lys Leu Thr
            260                 265                 270

Val Leu Thr Thr Thr Pro Ala Pro Arg Pro Pro Thr Pro Ala Pro Thr
        275                 280                 285

Ile Ala Ser Gln Pro Leu Ser Leu Arg Pro Glu Ala Cys Arg Pro Ala
    290                 295                 300

Ala Gly Gly Ala Val His Thr Arg Gly Leu Asp Phe Ala Cys Asp Ile
305                 310                 315                 320

Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly Val Leu Leu Leu Ser
                325                 330                 335

Leu Val Ile Thr Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys
            340                 345                 350

Gln Pro Phe Met Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys
        355                 360                 365

Ser Cys Arg Phe Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg Val
```

370 375 380

Lys Phe Ser Arg Ser Ala Asp Ala Pro Ala Tyr Gln Gln Gly Gln Asn
385 390 395 400

Gln Leu Tyr Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val
405 410 415

Leu Asp Lys Arg Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg
420 425 430

Arg Lys Asn Pro Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys
435 440 445

Met Ala Glu Ala Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg
450 455 460

Gly Lys Gly His Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys
465 470 475 480

Asp Thr Tyr Asp Ala Leu His Met Gln Ala Leu Pro Pro Arg
485 490

<210> 522
<211> 491
<212> PRT
<213> Artificial Sequence

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

<400> 522
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu
20 25 30

Val Gln Pro Gly Gly Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe
35 40 45

```
Thr Phe Ser Ser Tyr Ser Met Asn Trp Val Arg Gln Ala Pro Gly Lys
    50                  55                  60

Gly Leu Glu Trp Val Ser Tyr Ile Ser Ser Ser Ser Ser Thr Ile Tyr
65                  70                  75                  80

Tyr Ala Asp Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala
                85                  90                  95

Lys Asn Ser Leu Tyr Leu Gln Met Asn Ser Leu Arg Asp Glu Asp Thr
            100                 105                 110

Ala Val Tyr Tyr Cys Ala Arg Asp Lys Glu Arg Arg Tyr Tyr Tyr Tyr
        115                 120                 125

Gly Met Asp Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser Gly
    130                 135                 140

Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly
145                 150                 155                 160

Gly Gly Ser Glu Ile Val Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu
                165                 170                 175

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

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

Arg Leu Leu Ile Tyr Gly Ala Ser Ser Arg Ala Thr Gly Ile Pro Asp
    210                 215                 220

Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser
225                 230                 235                 240

Arg Leu Glu Pro Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Phe Gly
                245                 250                 255
```

```
Thr Ser Pro Ile Thr Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Thr
            260                 265                 270

Thr Thr Pro Ala Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser
        275                 280                 285

Gln Pro Leu Ser Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly
    290                 295                 300

Ala Val His Thr Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp
305                 310                 315                 320

Ala Pro Leu Ala Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile
                325                 330                 335

Thr Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe
            340                 345                 350

Met Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg
        355                 360                 365

Phe Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser
    370                 375                 380

Arg Ser Ala Asp Ala Pro Ala Tyr Gln Gln Gly Gln Asn Gln Leu Tyr
385                 390                 395                 400

Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys
                405                 410                 415

Arg Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn
            420                 425                 430

Pro Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu
        435                 440                 445

Ala Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly
    450                 455                 460

His Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr
```

```
465                 470                 475                 480


Asp Ala Leu His Met Gln Ala Leu Pro Pro Arg
                485                 490


<210> 523
<211> 495
<212> PRT
<213> Artificial Sequence

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

<400> 523
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1               5                   10                  15


His Ala Ala Arg Pro Gln Val Gln Leu Gln Gln Ser Gly Pro Gly Leu
            20                  25                  30


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


Ser Val Ser Ser Asn Ser Ala Ile Trp Asn Trp Ile Arg Gln Ser Pro
    50                  55                  60


Ser Arg Gly Leu Glu Trp Leu Gly Gly Thr Tyr Tyr Arg Ser Met Trp
65                  70                  75                  80


Tyr Asn Asp Tyr Ala Val Ser Val Lys Ser Arg Ile Thr Ile Asn Pro
                85                  90                  95


Asp Thr Ser Lys Asn Gln Leu Ser Leu Gln Leu Asn Ser Val Thr Pro
            100                 105                 110


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


Pro Asp Ala Phe Asp Ile Trp Gly Gln Gly Thr Met Val Thr Val Ser
    130                 135                 140
```

```
Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
145                 150                 155                 160

Gly Gly Gly Gly Ser Gln Ser Val Leu Thr Gln Pro Pro Ser Ala Ser
                165                 170                 175

Gly Thr Pro Gly Gln Arg Val Thr Ile Ser Cys Ser Gly Ser Ser Ser
            180                 185                 190

Asn Ile Gly Ser Asn Thr Ala Asn Trp Tyr Gln Gln Leu Pro Gly Thr
        195                 200                 205

Ala Pro Arg Leu Leu Ile Tyr Arg Asn Asn Gln Arg Pro Ser Gly Val
    210                 215                 220

Pro Asp Arg Phe Ser Gly Ser Lys Ser Gly Thr Ser Ala Ser Leu Ala
225                 230                 235                 240

Ile Ser Gly Leu Gln Ser Glu Asp Glu Ala Asp Tyr Tyr Cys Ala Ala
                245                 250                 255

Trp Asp Asp Ser Leu Asn Gly Tyr Val Phe Gly Thr Gly Thr Lys Val
            260                 265                 270

Thr Val Leu Thr Thr Thr Pro Ala Pro Arg Pro Pro Thr Pro Ala Pro
        275                 280                 285

Thr Ile Ala Ser Gln Pro Leu Ser Leu Arg Pro Glu Ala Cys Arg Pro
    290                 295                 300

Ala Ala Gly Gly Ala Val His Thr Arg Gly Leu Asp Phe Ala Cys Asp
305                 310                 315                 320

Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly Val Leu Leu Leu
                325                 330                 335

Ser Leu Val Ile Thr Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe
            340                 345                 350
```

```
Lys Gln Pro Phe Met Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly
        355                 360                 365

Cys Ser Cys Arg Phe Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg
    370                 375                 380

Val Lys Phe Ser Arg Ser Ala Asp Ala Pro Ala Tyr Gln Gln Gly Gln
385                 390                 395                 400

Asn Gln Leu Tyr Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp
                405                 410                 415

Val Leu Asp Lys Arg Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro
            420                 425                 430

Arg Arg Lys Asn Pro Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp
        435                 440                 445

Lys Met Ala Glu Ala Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg
    450                 455                 460

Arg Gly Lys Gly His Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr
465                 470                 475                 480

Lys Asp Thr Tyr Asp Ala Leu His Met Gln Ala Leu Pro Pro Arg
                485                 490                 495


<210> 524
<211> 489
<212> PRT
<213> Artificial Sequence

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

<400> 524
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1               5                   10                  15

His Ala Ala Arg Pro Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu
            20                  25                  30
```

```
Val Lys Pro Ser Glu Thr Leu Ser Leu Thr Cys Asn Val Ser Asp Gly
        35                  40                  45

Ser Ile Ser Ser Tyr Tyr Trp Thr Trp Ile Arg Gln Pro Pro Gly Lys
    50                  55                  60

Gly Leu Asp Trp Ile Gly Tyr Ile Phe Tyr Ser Gly Thr Thr Asn Tyr
65                  70                  75                  80

Asn Pro Ser Leu Lys Ser Arg Val Thr Ile Ser Leu Asp Thr Ser Lys
                85                  90                  95

Asn Gln Phe Ser Leu Lys Leu Thr Ser Met Thr Ala Ala Asp Thr Ala
            100                 105                 110

Val Tyr Tyr Cys Ala Arg Ile Ser Glu Lys Ser Phe Tyr Phe Asp Tyr
        115                 120                 125

Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly Gly Ser
    130                 135                 140

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gln
145                 150                 155                 160

Ser Val Leu Thr Gln Pro Pro Ser Ala Ser Gly Thr Pro Gly Gln Arg
                165                 170                 175

Val Thr Ile Ser Cys Ser Gly Ser Ser Ser Asn Ile Gly Ser Asn Tyr
            180                 185                 190

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

Tyr Ser Asn Asn Gln Arg Pro Ser Gly Val Pro Asp Arg Phe Ser Gly
    210                 215                 220

Ser Lys Ser Gly Thr Ser Ala Ser Leu Ala Ile Ser Gly Leu Arg Ser
225                 230                 235                 240
```

```
Glu Asp Glu Ala Asp Tyr Tyr Cys Ala Pro Trp Asp Asp Ser Leu Ser
                245                 250                 255

Gly Arg Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu Thr Thr Thr
            260                 265                 270

Pro Ala Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro
        275                 280                 285

Leu Ser Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala Val
    290                 295                 300

His Thr Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro
305                 310                 315                 320

Leu Ala Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr Lys
                325                 330                 335

Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met Arg
            340                 345                 350

Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro
        355                 360                 365

Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg Ser
    370                 375                 380

Ala Asp Ala Pro Ala Tyr Gln Gln Gly Gln Asn Gln Leu Tyr Asn Glu
385                 390                 395                 400

Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg
                405                 410                 415

Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln
            420                 425                 430

Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr
        435                 440                 445
```

Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His Asp
    450   455   460

Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala
465   470   475   480

Leu His Met Gln Ala Leu Pro Pro Arg
                485

<210> 525
<211> 490
<212> PRT
<213> Artificial Sequence

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

<400> 525
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1   5   10   15

His Ala Ala Arg Pro Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val
            20   25   30

Lys Arg Pro Gly Ala Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr
        35   40   45

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

Gly Leu Glu Trp Met Gly Val Ile Val Pro Ser Gly Gly Ser Ile Ser
65   70   75   80

Tyr Ala Gln Lys Phe Gln Gly Arg Val Thr Met Thr Arg Asp Thr Ser
                85   90   95

Thr Asn Ile Val Tyr Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr
            100   105   110

Ala Val Tyr Tyr Cys Ala Arg Asp Arg Tyr Tyr Gly Asp Tyr Tyr Tyr
        115   120   125

```
Gly Leu Asp Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser Gly
    130                 135                 140

Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly
145                 150                 155                 160

Gly Gly Ser Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala
                165                 170                 175

Ser Val Gly Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Gly Ile
            180                 185                 190

Asn Asn Phe Leu Ala Trp Phe Gln Gln Lys Pro Gly Lys Ala Pro Lys
        195                 200                 205

Ser Leu Ile Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Lys
    210                 215                 220

Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Arg Ser
225                 230                 235                 240

Leu Gln Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Gln His Tyr Asn Ser
                245                 250                 255

Tyr Pro Ile Thr Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Thr Thr
            260                 265                 270

Thr Pro Ala Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln
        275                 280                 285

Pro Leu Ser Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala
    290                 295                 300

Val His Thr Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala
305                 310                 315                 320

Pro Leu Ala Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr
                325                 330                 335
```

```
Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met
            340                 345                 350

Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe
        355                 360                 365

Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg
    370                 375                 380

Ser Ala Asp Ala Pro Ala Tyr Gln Gln Gly Gln Asn Gln Leu Tyr Asn
385                 390                 395                 400

Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg
                405                 410                 415

Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro
            420                 425                 430

Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala
        435                 440                 445

Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His
    450                 455                 460

Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp
465                 470                 475                 480

Ala Leu His Met Gln Ala Leu Pro Pro Arg
                485                 490
```

<210> 526
<211> 487
<212> PRT
<213> Artificial Sequence

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

<400> 526

```
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
```

```
1               5                   10                  15

His Ala Ala Arg Pro Gln Val His Leu Gln Glu Ser Gly Pro Gly Leu
            20                  25                  30

Val Lys Pro Ser Glu Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Gly
        35                  40                  45

Ser Ile Ser His Tyr Tyr Trp Thr Trp Ile Arg Gln Pro Pro Gly Lys
    50                  55                  60

Gly Leu Glu Trp Ile Gly Tyr Ile Tyr Tyr Ser Gly Ile Thr Asn Phe
65                  70                  75                  80

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

Asn Gln Phe Ser Leu Asn Leu Asn Ser Val Thr Ala Ala Asp Thr Ala
            100                 105                 110

Val Tyr Tyr Cys Ala Gly Ile Ser Leu Ala Gly Phe Tyr Phe Asp Tyr
        115                 120                 125

Trp Val Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly Gly Ser
    130                 135                 140

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu
145                 150                 155                 160

Ile Val Leu Thr Gln Ser Pro Gly Thr Leu Ser Leu Ser Pro Gly Glu
                165                 170                 175

Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Arg Ser Tyr
            180                 185                 190

Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile
        195                 200                 205

Tyr Gly Ala Ser Ser Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly
    210                 215                 220
```

```
Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro
225                 230                 235                 240

Glu Asp Phe Ala Val Phe Tyr Cys Gln Gln Tyr Ser Ile Ser Pro Leu
                245                 250                 255

Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Thr Thr Thr Pro Ala
            260                 265                 270

Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser
        275                 280                 285

Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr
    290                 295                 300

Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala
305                 310                 315                 320

Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr Lys Arg Gly
                325                 330                 335

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

Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu Glu
        355                 360                 365

Glu Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg Ser Ala Asp
    370                 375                 380

Ala Pro Ala Tyr Gln Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn
385                 390                 395                 400

Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg
                405                 410                 415

Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly
            420                 425                 430
```

```
Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu
        435                 440                 445


Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His Asp Gly Leu
    450                 455                 460


Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu His
465                 470                 475                 480


Met Gln Ala Leu Pro Pro Arg
                485


<210> 527
<211> 490
<212> PRT
<213> Artificial Sequence

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

<400> 527
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1               5                   10                  15


His Ala Ala Arg Pro Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu
            20                  25                  30


Val Lys Pro Ser Glu Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Val
        35                  40                  45


Ser Ile Ser Ser Tyr Tyr Trp Ser Trp Ile Arg Gln Pro Pro Gly Lys
    50                  55                  60


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


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


Asp Gln Leu Ser Leu Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala
```

```
            100                 105                 110

Val Tyr Tyr Cys Thr Arg Gly Gly Ser Gly Thr Ile Asp Val Phe Asp
        115                 120                 125

Ile Trp Gly Gln Gly Thr Met Val Ala Val Ser Ser Gly Gly Gly Gly
    130                 135                 140

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
145                 150                 155                 160

Gln Ser Val Leu Thr Gln Pro Pro Ser Val Ser Ala Ala Pro Gly Gln
                165                 170                 175

Lys Val Thr Ile Ser Cys Ser Gly Ser Ser Ser Asn Ile Gly Asn Asn
            180                 185                 190

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

Ile Tyr Asp Asn Asn Lys Arg Pro Ser Gly Ile Pro Asp Arg Phe Ser
    210                 215                 220

Gly Ser Lys Ser Gly Thr Ser Ala Thr Leu Gly Ile Thr Gly Leu Gln
225                 230                 235                 240

Thr Gly Asp Glu Ala Asp Tyr Tyr Cys Glu Thr Trp Asp Ser Ser Leu
                245                 250                 255

Ser Ala Val Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu Thr Thr
            260                 265                 270

Thr Pro Ala Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln
        275                 280                 285

Pro Leu Ser Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala
    290                 295                 300

Val His Thr Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala
305                 310                 315                 320
```

```
Pro Leu Ala Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr
                325                 330                 335

Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met
            340                 345                 350

Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe
        355                 360                 365

Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg
    370                 375                 380

Ser Ala Asp Ala Pro Ala Tyr Gln Gln Gly Gln Asn Gln Leu Tyr Asn
385                 390                 395                 400

Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg
                405                 410                 415

Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro
            420                 425                 430

Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala
        435                 440                 445

Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His
    450                 455                 460

Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp
465                 470                 475                 480

Ala Leu His Met Gln Ala Leu Pro Pro Arg
                485                 490
```

<210> 528
<211> 492
<212> PRT
<213> Artificial Sequence

<220>
<221> source

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

<400> 528
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Gln Val Gln Leu Gln Gln Ser Gly Pro Gly Leu
20 25 30

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

Asn Val Ser Thr Asn Ser Ala Ala Trp Asn Trp Ile Arg Gln Ser Pro
50 55 60

Ser Arg Gly Leu Glu Trp Leu Gly Trp Thr Tyr Tyr Arg Ser Lys Trp
65 70 75 80

Tyr Asn Asp Tyr Ala Val Ser Leu Lys Ser Arg Ile Asn Ile Asn Pro
85 90 95

Asp Thr Ser Lys Asn Gln Phe Ser Leu Gln Leu Asn Ser Val Thr Pro
100 105 110

Glu Asp Thr Ala Val Tyr Tyr Cys Ala Arg Trp Val Asn Arg Asp Val
115 120 125

Phe Asp Ile Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly
130 135 140

Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly
145 150 155 160

Gly Ser Gln Ser Ala Leu Thr Gln Pro Ala Ser Val Ser Gly Ser Pro
165 170 175

Gly Gln Ser Ile Thr Ile Ser Cys Thr Gly Thr Ser Ser Asp Val Gly
180 185 190

Ser Tyr Asn Leu Val Ser Trp Tyr Gln Gln His Pro Gly Lys Ala Pro

```
        195                 200                 205

Lys Leu Met Ile Tyr Glu Gly Ser Lys Arg Pro Ser Gly Val Ser Asn
    210                 215                 220

Arg Phe Ser Gly Ser Lys Ser Gly Asn Thr Ala Ser Leu Thr Ile Ser
225                 230                 235                 240

Gly Leu Gln Ala Glu Asp Glu Ala Asp Tyr Tyr Cys Cys Ser Tyr Ala
                245                 250                 255

Gly Ser Ser Thr Trp Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu
            260                 265                 270

Thr Thr Thr Pro Ala Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala
        275                 280                 285

Ser Gln Pro Leu Ser Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly
    290                 295                 300

Gly Ala Val His Thr Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile
305                 310                 315                 320

Trp Ala Pro Leu Ala Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val
                325                 330                 335

Ile Thr Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro
            340                 345                 350

Phe Met Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys
        355                 360                 365

Arg Phe Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg Val Lys Phe
    370                 375                 380

Ser Arg Ser Ala Asp Ala Pro Ala Tyr Gln Gln Gly Gln Asn Gln Leu
385                 390                 395                 400

Tyr Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp
                405                 410                 415
```

```
Lys Arg Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys
            420                 425                 430

Asn Pro Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala
        435                 440                 445

Glu Ala Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys
    450                 455                 460

Gly His Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr
465                 470                 475                 480

Tyr Asp Ala Leu His Met Gln Ala Leu Pro Pro Arg
                485                 490


<210> 529
<211> 493
<212> PRT
<213> Artificial Sequence

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

<400> 529
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1               5                   10                  15

His Ala Ala Arg Pro Gln Val Gln Leu Val Glu Ser Gly Gly Gly Val
            20                  25                  30

Val Gln Pro Gly Arg Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe
        35                  40                  45

Thr Phe Ser Ser Tyr Gly Met His Trp Val Arg Gln Thr Pro Gly Lys
    50                  55                  60

Gly Leu Glu Trp Val Ala Val Ile Ser Tyr Asp Gly Asn Ser Asn Tyr
65                  70                  75                  80
```

```
Tyr Ala Asp Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser
                85                  90                  95

Lys Asn Thr Leu Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr
            100                 105                 110

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

Tyr Tyr Gly Met Asp Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser
    130                 135                 140

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
145                 150                 155                 160

Gly Gly Gly Gly Ser Glu Ile Val Leu Thr Gln Ser Pro Gly Thr Leu
                165                 170                 175

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

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

Ala Pro Arg Leu Leu Ile Tyr Gly Ala Ser Ser Arg Ala Thr Gly Ile
    210                 215                 220

Ser Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr
225                 230                 235                 240

Ile Ser Arg Leu Glu Pro Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln
                245                 250                 255

Tyr Gly Thr Ser Pro Ile Thr Phe Gly Gln Gly Thr Arg Leu Glu Ile
            260                 265                 270

Lys Thr Thr Thr Pro Ala Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile
        275                 280                 285

Ala Ser Gln Pro Leu Ser Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala
```

290 295 300

Gly Gly Ala Val His Thr Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr
305 310 315 320

Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly Val Leu Leu Leu Ser Leu
325 330 335

Val Ile Thr Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln
340 345 350

Pro Phe Met Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser
355 360 365

Cys Arg Phe Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg Val Lys
370 375 380

Phe Ser Arg Ser Ala Asp Ala Pro Ala Tyr Gln Gln Gly Gln Asn Gln
385 390 395 400

Leu Tyr Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu
405 410 415

Asp Lys Arg Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg
420 425 430

Lys Asn Pro Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met
435 440 445

Ala Glu Ala Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly
450 455 460

Lys Gly His Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp
465 470 475 480

Thr Tyr Asp Ala Leu His Met Gln Ala Leu Pro Pro Arg
485 490

<210> 530
<211> 498

<212> PRT
<213> Artificial Sequence

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

<400> 530
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Gln Val Gln Leu Gln Gln Ser Gly Pro Gly Leu
20 25 30

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

Ser Val Ser Ser Asn Ser Ala Val Trp Asn Trp Ile Arg Gln Ser Pro
50 55 60

Ser Arg Gly Leu Glu Trp Leu Gly Arg Thr Tyr Tyr Arg Ser Lys Trp
65 70 75 80

Tyr Asn Asp Tyr Ala Val Ser Val Lys Ser Arg Ile Thr Ile Asn Pro
85 90 95

Asp Thr Ser Arg Asn Gln Phe Ser Leu Gln Leu Asn Ser Val Thr Pro
100 105 110

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

Pro Asp Gly Phe Asp Ile Trp Gly Gln Gly Thr Met Val Thr Val Ser
130 135 140

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
145 150 155 160

Gly Gly Gly Gly Ser Asp Ile Val Met Thr Gln Ser Pro Asp Ser Leu
165 170 175

```
Ala Val Ser Leu Gly Glu Arg Ala Thr Ile Asn Cys Lys Ser Ser Gln
            180                 185                 190

Ser Val Leu Asp Ser Ser Asn Asn Asn Asn Tyr Phe Ala Trp Tyr Gln
        195                 200                 205

Gln Arg Pro Gly Gln Pro Pro His Leu Leu Ile Tyr Trp Ala Ser Ser
    210                 215                 220

Arg Glu Ser Gly Val Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr
225                 230                 235                 240

Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Ala Glu Asp Val Ala Val
                245                 250                 255

Tyr Tyr Cys Gln Gln Tyr Tyr Ser Thr Pro Tyr Thr Phe Gly Gln Gly
            260                 265                 270

Thr Lys Leu Glu Ile Lys Thr Thr Thr Pro Ala Pro Arg Pro Pro Thr
        275                 280                 285

Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser Leu Arg Pro Glu Ala
    290                 295                 300

Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr Arg Gly Leu Asp Phe
305                 310                 315                 320

Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly Val
                325                 330                 335

Leu Leu Leu Ser Leu Val Ile Thr Lys Arg Gly Arg Lys Lys Leu Leu
            340                 345                 350

Tyr Ile Phe Lys Gln Pro Phe Met Arg Pro Val Gln Thr Thr Gln Glu
        355                 360                 365

Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu Glu Glu Glu Gly Gly Cys
    370                 375                 380

Glu Leu Arg Val Lys Phe Ser Arg Ser Ala Asp Ala Pro Ala Tyr Gln
```

385 390 395 400

Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn Leu Gly Arg Arg Glu
405 410 415

Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg Asp Pro Glu Met Gly
420 425 430

Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu Tyr Asn Glu Leu
435 440 445

Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile Gly Met Lys Gly
450 455 460

Glu Arg Arg Arg Gly Lys Gly His Asp Gly Leu Tyr Gln Gly Leu Ser
465 470 475 480

Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu His Met Gln Ala Leu Pro
485 490 495

Pro Arg

<210> 531
<211> 492
<212> PRT
<213> Artificial Sequence

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

<400> 531
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Gln Val Gln Leu Gln Gln Ser Gly Pro Gly Leu
20 25 30

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

```
Ser Val Ser Ser Asn Thr Thr Ala Trp Lys Trp Ser Arg Gln Ser Pro
    50                  55                  60

Ser Lys Gly Leu Glu Trp Leu Gly Trp Thr Tyr Tyr Arg Ser Lys Trp
65                  70                  75                  80

Tyr Tyr Asp Tyr Thr Val Ser Val Lys Ser Arg Ile Thr Ile Asn Pro
                85                  90                  95

Asp Thr Ser Lys Asn Gln Phe Ser Leu Gln Leu Asn Ser Val Thr Pro
            100                 105                 110

Glu Asp Thr Ala Val Tyr Tyr Cys Ala Arg Trp Ile Phe His Asp Ala
        115                 120                 125

Phe Asp Ile Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly
    130                 135                 140

Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly
145                 150                 155                 160

Gly Ser Gln Ser Ala Leu Thr Gln Pro Pro Ser Ala Ser Gly Thr Pro
                165                 170                 175

Gly Gln Arg Val Thr Ile Ser Cys Ser Gly Ser Ser Ser Asn Ile Gly
            180                 185                 190

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

Leu Leu Ile Tyr Thr Asn Asn Gln Arg Pro Ser Gly Val Pro Asp Arg
    210                 215                 220

Phe Ser Gly Ser Lys Ser Gly Thr Ser Ala Ser Leu Ala Ile Ser Gly
225                 230                 235                 240

Leu Gln Ser Glu Asp Glu Ala Asp Tyr Phe Cys Ser Thr Trp Asp Asp
                245                 250                 255
```

```
Ser Leu Asn Gly Pro Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu
            260                 265                 270

Thr Thr Thr Pro Ala Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala
        275                 280                 285

Ser Gln Pro Leu Ser Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly
    290                 295                 300

Gly Ala Val His Thr Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile
305                 310                 315                 320

Trp Ala Pro Leu Ala Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val
                325                 330                 335

Ile Thr Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro
            340                 345                 350

Phe Met Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys
        355                 360                 365

Arg Phe Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg Val Lys Phe
    370                 375                 380

Ser Arg Ser Ala Asp Ala Pro Ala Tyr Gln Gln Gly Gln Asn Gln Leu
385                 390                 395                 400

Tyr Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp
                405                 410                 415

Lys Arg Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys
            420                 425                 430

Asn Pro Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala
        435                 440                 445

Glu Ala Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys
    450                 455                 460

Gly His Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr
```

```
465                 470                 475                 480


Tyr Asp Ala Leu His Met Gln Ala Leu Pro Pro Arg
                485                 490


<210> 532
<211> 483
<212> PRT
<213> Artificial Sequence

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

<400> 532
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1               5                   10                  15


His Ala Ala Arg Pro Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu
            20                  25                  30


Val Lys Pro Ser Glu Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Asp
        35                  40                  45


Ser Ile Ser Ser Leu Ser Trp Ser Trp Ile Arg Gln Thr Pro Gly Glu
    50                  55                  60


Gly Leu Glu Trp Ile Gly Tyr Leu Tyr Tyr Ser Gly Ser Thr Asp Tyr
65                  70                  75                  80


Asn Pro Ser Leu Lys Ser Arg Val Thr Ile Ser Val Asp Thr Ser Lys
                85                  90                  95


Asn Gln Phe Ser Leu Lys Leu Arg Ser Val Ala Ala Ala Asp Thr Ala
            100                 105                 110


Leu Tyr Tyr Cys Ala Arg Gly Arg Arg Ala Phe Asp Ile Trp Gly Gln
        115                 120                 125


Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly
    130                 135                 140
```

```
Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Gln Met
145                 150                 155                 160

Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly Asp Arg Val Thr
                165                 170                 175

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

Gln Gln Arg Pro Gly Lys Ala Pro Lys Ser Leu Ile Tyr Ala Ala Ser
        195                 200                 205

Ser Leu Glu Ser Gly Val Pro Ser Lys Phe Ser Gly Ser Gly Ser Gly
    210                 215                 220

Thr Asp Phe Thr Leu Thr Ile Ile Ser Leu Gln Pro Glu Asp Phe Ala
225                 230                 235                 240

Thr Tyr Tyr Cys Gln Gln Tyr Tyr Asn Tyr Pro Ile Thr Phe Gly Gln
                245                 250                 255

Gly Thr Arg Leu Glu Ile Lys Thr Thr Thr Pro Ala Pro Arg Pro Pro
            260                 265                 270

Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser Leu Arg Pro Glu
        275                 280                 285

Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr Arg Gly Leu Asp
    290                 295                 300

Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly
305                 310                 315                 320

Val Leu Leu Leu Ser Leu Val Ile Thr Lys Arg Gly Arg Lys Lys Leu
                325                 330                 335

Leu Tyr Ile Phe Lys Gln Pro Phe Met Arg Pro Val Gln Thr Thr Gln
            340                 345                 350
```

Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu Glu Glu Glu Gly Gly
355 360 365

Cys Glu Leu Arg Val Lys Phe Ser Arg Ser Ala Asp Ala Pro Ala Tyr
370 375 380

Gln Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn Leu Gly Arg Arg
385 390 395 400

Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg Asp Pro Glu Met
405 410 415

Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu Tyr Asn Glu
420 425 430

Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile Gly Met Lys
435 440 445

Gly Glu Arg Arg Arg Gly Lys Gly His Asp Gly Leu Tyr Gln Gly Leu
450 455 460

Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu His Met Gln Ala Leu
465 470 475 480

Pro Pro Arg

<210> 533
<211> 493
<212> PRT
<213> Artificial Sequence

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

<400> 533
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val
20 25 30

```
Lys Lys Pro Gly Ala Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr
        35                  40                  45

Thr Phe Thr Gly Tyr Tyr Met His Trp Val Arg Gln Ala Pro Gly Gln
    50                  55                  60

Gly Leu Glu Trp Met Gly Trp Ile Asn Pro Asn Ser Gly Gly Thr Asn
65                  70                  75                  80

Tyr Ala Gln Lys Phe Gln Gly Arg Val Thr Met Thr Arg Asp Thr Ser
                85                  90                  95

Val Ser Thr Ala Tyr Met Glu Leu Ser Arg Leu Thr Ser Asp Asp Thr
            100                 105                 110

Ala Ile Tyr Tyr Cys Ala Lys Asp Gly Gly Gly Asp Phe Tyr Phe Tyr
        115                 120                 125

Gly Met Asp Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser Gly
    130                 135                 140

Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly
145                 150                 155                 160

Gly Gly Ser Gln Thr Val Val Thr Gln Glu Pro Ser Phe Ser Val Ser
                165                 170                 175

Pro Gly Gly Thr Val Thr Leu Thr Cys Gly Leu Ser Ser Gly Ser Val
            180                 185                 190

Ser Thr Ser Tyr Tyr Pro Ser Cys Phe Gln Gln Thr Pro Gly Gln Ala
        195                 200                 205

Pro Arg Thr Leu Ile Tyr Ser Thr Asp Thr Arg Ser Ser Gly Val Pro
    210                 215                 220

Asp Arg Phe Ser Gly Ser Ile Leu Gly Asn Lys Ala Ala Leu Thr Ile
225                 230                 235                 240
```

```
Thr Gly Ala Gln Ala Asp Asp Glu Ser Asp Tyr Tyr Cys Val Leu Tyr
                245                 250                 255

Met Gly Ser Gly Ile Ser Val Phe Gly Gly Gly Thr Lys Leu Thr Val
            260                 265                 270

Leu Thr Thr Thr Pro Ala Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile
        275                 280                 285

Ala Ser Gln Pro Leu Ser Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala
    290                 295                 300

Gly Gly Ala Val His Thr Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr
305                 310                 315                 320

Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly Val Leu Leu Leu Ser Leu
                325                 330                 335

Val Ile Thr Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln
            340                 345                 350

Pro Phe Met Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser
        355                 360                 365

Cys Arg Phe Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg Val Lys
    370                 375                 380

Phe Ser Arg Ser Ala Asp Ala Pro Ala Tyr Gln Gln Gly Gln Asn Gln
385                 390                 395                 400

Leu Tyr Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu
                405                 410                 415

Asp Lys Arg Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg
            420                 425                 430

Lys Asn Pro Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met
        435                 440                 445
```

Ala Glu Ala Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly
    450   455   460

Lys Gly His Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp
465   470   475   480

Thr Tyr Asp Ala Leu His Met Gln Ala Leu Pro Pro Arg
                485   490

<210> 534
<211> 15
<212> PRT
<213> Artificial Sequence

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

<400> 534
Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
1   5   10   15

<210> 535
<211> 18
<212> PRT
<213> Artificial Sequence

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

<400> 535
Gly Ser Thr Ser Gly Ser Gly Lys Pro Gly Ser Gly Glu Gly Ser Thr
1   5   10   15

Lys Gly

<210> 536
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<221> source

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

<400> 536
Cys Pro Tyr Ser Asn Pro Ser Leu Cys
1 5

<210> 537
<211> 24
<212> PRT
<213> Artificial Sequence

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

<400> 537
Asn Ser Glu Leu Leu Ser Leu Ile Asn Asp Met Pro Ile Thr Asn Asp
1 5 10 15

Gln Lys Lys Leu Met Ser Asn Asn
20

<210> 538
<211> 12
<212> PRT
<213> Artificial Sequence

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

<400> 538
Cys Gln Phe Asp Leu Ser Thr Arg Arg Leu Lys Cys
1 5 10

<210> 539
<211> 12
<212> PRT
<213> Artificial Sequence

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

<400> 539

Cys Gln Tyr Asn Leu Ser Ser Arg Ala Leu Lys Cys
1   5   10

<210> 540
<211> 12
<212> PRT
<213> Artificial Sequence

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

<400> 540
Cys Val Trp Gln Arg Trp Gln Lys Ser Tyr Val Cys
1   5   10

<210> 541
<211> 12
<212> PRT
<213> Artificial Sequence

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

<400> 541
Cys Met Trp Asp Arg Phe Ser Arg Trp Tyr Lys Cys
1   5   10

<210> 542
<211> 25
<212> PRT
<213> Artificial Sequence

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

<400> 542
Ser Phe Val Leu Asn Trp Tyr Arg Met Ser Pro Ser Asn Gln Thr Asp
1   5   10   15

Lys Leu Ala Ala Phe Pro Glu Asp Arg
            20   25

<210> 543
<211> 19
<212> PRT
<213> Artificial Sequence

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

<400> 543
Ser Gly Thr Tyr Leu Cys Gly Ala Ile Ser Leu Ala Pro Lys Ala Gln
1 5 10 15

Ile Lys Glu

<210> 544
<211> 24
<212> PRT
<213> Artificial Sequence

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

<400> 544
Glu Leu Pro Thr Gln Gly Thr Phe Ser Asn Val Ser Thr Asn Val Ser
1 5 10 15

Pro Ala Lys Pro Thr Thr Thr Ala
20

<210> 545
<211> 12
<212> PRT
<213> Artificial Sequence

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

<400> 545
Gly Gln Asn Asp Thr Ser Gln Thr Ser Ser Pro Ser
1 5 10

<210> 546
<211> 16
<212> PRT
<213> Homo sapiens

<400> 546
Gly Leu Ala Val Ser Thr Ile Ser Ser Phe Phe Pro Pro Gly Tyr Gln
1   5   10   15

<210> 547
<211> 45
<212> PRT
<213> Homo sapiens

<400> 547
Thr Thr Thr Pro Ala Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala
1   5   10   15

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

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

<210> 548
<211> 231
<212> PRT
<213> Homo sapiens

<400> 548
Glu Pro Lys Ser Pro Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala
1   5   10   15

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

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

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

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

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

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

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

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

Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp
145                 150                 155                 160

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

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

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

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

Leu Ser Leu Ser Pro Gly Lys
225                 230


<210> 549
<211> 21
<212> PRT
<213> Homo sapiens

<400> 549
Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly Val Leu Leu Leu
1               5                   10                  15

Ser Leu Val Ile Thr
            20
```

<210> 550
<211> 27
<212> PRT
<213> Homo sapiens

<400> 550
Phe Trp Val Leu Val Val Val Gly Gly Val Leu Ala Cys Tyr Ser Leu
1   5   10   15

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

<210> 551
<211> 41
<212> PRT
<213> Homo sapiens

<400> 551
Arg Ser Lys Arg Ser Arg Leu Leu His Ser Asp Tyr Met Asn Met Thr
1   5   10   15

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

Pro Arg Asp Phe Ala Ala Tyr Arg Ser
        35   40

<210> 552
<211> 136
<212> PRT
<213> Artificial Sequence

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

<400> 552
Cys Pro Tyr Ser Asn Pro Ser Leu Cys Ser Gly Gly Gly Gly Ser Glu
1   5   10   15

Leu Pro Thr Gln Gly Thr Phe Ser Asn Val Ser Thr Asn Val Ser Pro
            20   25   30

```
Ala Lys Pro Thr Thr Thr Ala Cys Pro Tyr Ser Asn Pro Ser Leu Cys
        35                  40                  45


Ser Gly Gly Gly Gly Ser Pro Ala Pro Arg Pro Pro Thr Pro Ala Pro
    50                  55                  60


Thr Ile Ala Ser Gln Pro Leu Ser Leu Arg Pro Glu Ala Cys Arg Pro
65                  70                  75                  80


Ala Ala Gly Gly Ala Val His Thr Arg Gly Leu Asp Phe Ala Cys Asp
                85                  90                  95


Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly Val Leu Leu Leu
            100                 105                 110


Ser Leu Val Ile Thr Leu Tyr Cys Asn His Arg Asn Arg Arg Arg Val
        115                 120                 125


Cys Lys Cys Pro Arg Pro Val Val
    130                 135


<210> 553
<211> 21
<212> PRT
<213> Artificial Sequence

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

<400> 553
Met Gly Thr Ser Leu Leu Cys Trp Met Ala Leu Cys Leu Leu Gly Ala
1               5                   10                  15


Asp His Ala Asp Ala
            20


<210> 554
<211> 157
<212> PRT
<213> Artificial Sequence

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

<400> 554
Met Gly Thr Ser Leu Leu Cys Trp Met Ala Leu Cys Leu Leu Gly Ala
1 5 10 15

Asp His Ala Asp Ala Cys Pro Tyr Ser Asn Pro Ser Leu Cys Ser Gly
20 25 30

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

Thr Asn Val Ser Pro Ala Lys Pro Thr Thr Thr Ala Cys Pro Tyr Ser
50 55 60

Asn Pro Ser Leu Cys Ser Gly Gly Gly Gly Ser Pro Ala Pro Arg Pro
65 70 75 80

Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser Leu Arg Pro
85 90 95

Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr Arg Gly Leu
100 105 110

Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys
115 120 125

Gly Val Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr Cys Asn His Arg
130 135 140

Asn Arg Arg Arg Val Cys Lys Cys Pro Arg Pro Val Val
145 150 155

<210> 555
<211> 63
<212> DNA
<213> Homo sapiens

<400> 555
atggcactcc ccgtaactgc tctgctgctg ccgttggcat tgctcctgca cgccgcacgc 60

ccg 63

<210> 556
<211> 624
<212> PRT
<213> Homo sapiens

<400> 556
Met Glu Thr Asp Thr Leu Leu Leu Trp Val Leu Leu Leu Trp Val Pro
1 5 10 15

Gly Ser Thr Gly Tyr Pro Tyr Asp Val Pro Asp Tyr Ala Gly Met Leu
20 25 30

Ala Gly Val Phe Glu Leu Gln Ile His Ser Phe Gly Pro Gly Pro Gly
35 40 45

Pro Gly Ala Pro Arg Ser Pro Cys Ser Ala Arg Leu Pro Cys Arg Leu
50 55 60

Phe Phe Arg Val Cys Leu Lys Pro Gly Leu Ser Glu Glu Ala Ala Glu
65 70 75 80

Ser Pro Cys Ala Leu Gly Ala Ala Leu Ser Ala Arg Gly Pro Val Tyr
85 90 95

Thr Glu Gln Pro Gly Ala Pro Ala Pro Asp Leu Pro Leu Pro Asp Gly
100 105 110

Leu Leu Gln Val Pro Phe Arg Asp Ala Trp Pro Gly Thr Phe Ser Phe
115 120 125

Ile Ile Glu Thr Trp Arg Glu Glu Leu Gly Asp Gln Ile Gly Gly Pro
130 135 140

Ala Trp Ser Leu Leu Ala Arg Val Ala Gly Arg Arg Arg Leu Ala Ala
145 150 155 160

Gly Gly Pro Trp Ala Arg Asp Ile Gln Arg Ala Gly Ala Trp Glu Leu
165 170 175

```
Arg Phe Ser Tyr Arg Ala Arg Cys Glu Pro Pro Ala Val Gly Thr Ala
            180                 185                 190

Cys Thr Arg Leu Cys Arg Pro Arg Ser Ala Pro Ser Arg Cys Gly Pro
        195                 200                 205

Gly Leu Arg Pro Cys Ala Pro Leu Glu Asp Glu Cys Glu Ala Pro Leu
    210                 215                 220

Val Cys Arg Ala Gly Cys Ser Pro Glu His Gly Phe Cys Glu Gln Pro
225                 230                 235                 240

Gly Glu Cys Arg Cys Leu Glu Gly Trp Thr Gly Pro Leu Cys Thr Val
                245                 250                 255

Pro Val Ser Thr Ser Ser Cys Leu Ser Pro Arg Gly Pro Ser Ser Ala
            260                 265                 270

Thr Thr Gly Cys Leu Val Pro Gly Pro Gly Pro Cys Asp Gly Asn Pro
        275                 280                 285

Cys Ala Asn Gly Gly Ser Cys Ser Glu Thr Pro Arg Ser Phe Glu Cys
    290                 295                 300

Thr Cys Pro Arg Gly Phe Tyr Gly Leu Arg Cys Glu Val Ser Gly Val
305                 310                 315                 320

Thr Cys Ala Asp Gly Pro Cys Phe Asn Gly Gly Leu Cys Val Gly Gly
                325                 330                 335

Ala Asp Pro Asp Ser Ala Tyr Ile Cys His Cys Pro Pro Gly Phe Gln
            340                 345                 350

Gly Ser Asn Cys Glu Lys Arg Val Asp Arg Cys Ser Leu Gln Pro Cys
        355                 360                 365

Arg Asn Gly Gly Leu Cys Leu Asp Leu Gly His Ala Leu Arg Cys Arg
    370                 375                 380

Cys Arg Ala Gly Phe Ala Gly Pro Arg Cys Glu His Asp Leu Asp Asp
```

385 390 395 400

Cys Ala Gly Arg Ala Cys Ala Asn Gly Gly Thr Cys Val Glu Gly Gly
405 410 415

Gly Ala His Arg Cys Ser Cys Ala Leu Gly Phe Gly Gly Arg Asp Cys
420 425 430

Arg Glu Arg Ala Asp Pro Cys Ala Ala Arg Pro Cys Ala His Gly Gly
435 440 445

Arg Cys Tyr Ala His Phe Ser Gly Leu Val Cys Ala Cys Ala Pro Gly
450 455 460

Tyr Met Gly Ala Arg Cys Glu Phe Pro Val His Pro Asp Gly Ala Ser
465 470 475 480

Ala Leu Pro Ala Ala Pro Pro Gly Leu Arg Pro Gly Asp Pro Gln Arg
485 490 495

Tyr Leu Leu Pro Pro Ala Leu Gly Leu Leu Val Ala Ala Gly Val Ala
500 505 510

Gly Ala Ala Leu Leu Leu Val His Val Arg Arg Arg Gly His Ser Gln
515 520 525

Asp Ala Gly Ser Arg Leu Leu Ala Gly Thr Pro Glu Pro Ser Val His
530 535 540

Ala Leu Pro Asp Ala Leu Asn Asn Leu Arg Thr Gln Glu Gly Ser Gly
545 550 555 560

Asp Gly Pro Ser Ser Ser Val Asp Trp Asn Arg Pro Glu Asp Val Asp
565 570 575

Pro Gln Gly Ile Tyr Val Ile Ser Ala Pro Ser Ile Tyr Ala Arg Glu
580 585 590

Val Ala Thr Pro Leu Phe Pro Pro Leu His Thr Gly Arg Ala Gly Gln
595 600 605

```
Arg Gln His Leu Leu Phe Pro Tyr Pro Ser Ser Ile Leu Ser Val Lys
    610                 615                 620


<210> 557
<211> 477
<212> PRT
<213> Artificial Sequence

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

<400> 557
Met Glu Thr Asp Thr Leu Leu Leu Trp Val Leu Leu Leu Trp Val Pro
1               5                   10                  15


Gly Ser Thr Gly Tyr Pro Tyr Asp Val Pro Asp Tyr Ala Gly Met Leu
            20                  25                  30


Gly Ser Ala Arg Cys Glu Pro Pro Ala Val Gly Thr Ala Cys Thr Arg
        35                  40                  45


Leu Cys Arg Pro Arg Ser Ala Pro Ser Arg Cys Gly Pro Gly Leu Arg
    50                  55                  60


Pro Cys Ala Pro Leu Glu Asp Glu Cys Glu Ala Pro Leu Val Cys Arg
65                  70                  75                  80


Ala Gly Cys Ser Pro Glu His Gly Phe Cys Glu Gln Pro Gly Glu Cys
                85                  90                  95


Arg Cys Leu Glu Gly Trp Thr Gly Pro Leu Cys Thr Val Pro Val Ser
            100                 105                 110


Thr Ser Ser Cys Leu Ser Pro Arg Gly Pro Ser Ser Ala Thr Thr Gly
        115                 120                 125


Cys Leu Val Pro Gly Pro Gly Pro Cys Asp Gly Asn Pro Cys Ala Asn
    130                 135                 140
```

```
Gly Gly Ser Cys Ser Glu Thr Pro Arg Ser Phe Glu Cys Thr Cys Pro
145                 150                 155                 160


Arg Gly Phe Tyr Gly Leu Arg Cys Glu Val Ser Gly Val Thr Cys Ala
                165                 170                 175


Asp Gly Pro Cys Phe Asn Gly Gly Leu Cys Val Gly Gly Ala Asp Pro
            180                 185                 190


Asp Ser Ala Tyr Ile Cys His Cys Pro Pro Gly Phe Gln Gly Ser Asn
        195                 200                 205


Cys Glu Lys Arg Val Asp Arg Cys Ser Leu Gln Pro Cys Arg Asn Gly
    210                 215                 220


Gly Leu Cys Leu Asp Leu Gly His Ala Leu Arg Cys Arg Cys Arg Ala
225                 230                 235                 240


Gly Phe Ala Gly Pro Arg Cys Glu His Asp Leu Asp Asp Cys Ala Gly
                245                 250                 255


Arg Ala Cys Ala Asn Gly Gly Thr Cys Val Glu Gly Gly Gly Ala His
            260                 265                 270


Arg Cys Ser Cys Ala Leu Gly Phe Gly Gly Arg Asp Cys Arg Glu Arg
        275                 280                 285


Ala Asp Pro Cys Ala Ala Arg Pro Cys Ala His Gly Gly Arg Cys Tyr
    290                 295                 300


Ala His Phe Ser Gly Leu Val Cys Ala Cys Ala Pro Gly Tyr Met Gly
305                 310                 315                 320


Ala Arg Cys Glu Phe Pro Val His Pro Asp Gly Ala Ser Ala Leu Pro
                325                 330                 335


Ala Ala Pro Pro Gly Leu Arg Pro Gly Asp Pro Gln Arg Tyr Leu Leu
            340                 345                 350


Pro Pro Ala Leu Gly Leu Leu Val Ala Ala Gly Val Ala Gly Ala Ala
```

```
        355                 360                 365

Leu Leu Leu Val His Val Arg Arg Arg Gly His Ser Gln Asp Ala Gly
    370                 375                 380

Ser Arg Leu Leu Ala Gly Thr Pro Glu Pro Ser Val His Ala Leu Pro
385                 390                 395                 400

Asp Ala Leu Asn Asn Leu Arg Thr Gln Glu Gly Ser Gly Asp Gly Pro
                405                 410                 415

Ser Ser Ser Val Asp Trp Asn Arg Pro Glu Asp Val Asp Pro Gln Gly
            420                 425                 430

Ile Tyr Val Ile Ser Ala Pro Ser Ile Tyr Ala Arg Glu Val Ala Thr
        435                 440                 445

Pro Leu Phe Pro Pro Leu His Thr Gly Arg Ala Gly Gln Arg Gln His
    450                 455                 460

Leu Leu Phe Pro Tyr Pro Ser Ser Ile Leu Ser Val Lys
465                 470                 475


<210> 558
<211> 437
<212> PRT
<213> Artificial Sequence

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

<400> 558
Met Glu Thr Asp Thr Leu Leu Leu Trp Val Leu Leu Leu Trp Val Pro
1               5                   10                  15

Gly Ser Thr Gly Tyr Pro Tyr Asp Val Pro Asp Tyr Ala Gly Met Leu
            20                  25                  30

Gly Ser Ala Pro Leu Val Cys Arg Ala Gly Cys Ser Pro Glu His Gly
        35                  40                  45
```

```
Phe Cys Glu Gln Pro Gly Glu Cys Arg Cys Leu Glu Gly Trp Thr Gly
    50                  55                  60

Pro Leu Cys Thr Val Pro Val Ser Thr Ser Ser Cys Leu Ser Pro Arg
65                  70                  75                  80

Gly Pro Ser Ser Ala Thr Thr Gly Cys Leu Val Pro Gly Pro Gly Pro
                85                  90                  95

Cys Asp Gly Asn Pro Cys Ala Asn Gly Gly Ser Cys Ser Glu Thr Pro
            100                 105                 110

Arg Ser Phe Glu Cys Thr Cys Pro Arg Gly Phe Tyr Gly Leu Arg Cys
        115                 120                 125

Glu Val Ser Gly Val Thr Cys Ala Asp Gly Pro Cys Phe Asn Gly Gly
    130                 135                 140

Leu Cys Val Gly Gly Ala Asp Pro Asp Ser Ala Tyr Ile Cys His Cys
145                 150                 155                 160

Pro Pro Gly Phe Gln Gly Ser Asn Cys Glu Lys Arg Val Asp Arg Cys
                165                 170                 175

Ser Leu Gln Pro Cys Arg Asn Gly Gly Leu Cys Leu Asp Leu Gly His
            180                 185                 190

Ala Leu Arg Cys Arg Cys Arg Ala Gly Phe Ala Gly Pro Arg Cys Glu
        195                 200                 205

His Asp Leu Asp Asp Cys Ala Gly Arg Ala Cys Ala Asn Gly Gly Thr
    210                 215                 220

Cys Val Glu Gly Gly Gly Ala His Arg Cys Ser Cys Ala Leu Gly Phe
225                 230                 235                 240

Gly Gly Arg Asp Cys Arg Glu Arg Ala Asp Pro Cys Ala Ala Arg Pro
                245                 250                 255
```

```
Cys Ala His Gly Gly Arg Cys Tyr Ala His Phe Ser Gly Leu Val Cys
            260                 265                 270

Ala Cys Ala Pro Gly Tyr Met Gly Ala Arg Cys Glu Phe Pro Val His
        275                 280                 285

Pro Asp Gly Ala Ser Ala Leu Pro Ala Ala Pro Pro Gly Leu Arg Pro
    290                 295                 300

Gly Asp Pro Gln Arg Tyr Leu Leu Pro Pro Ala Leu Gly Leu Leu Val
305                 310                 315                 320

Ala Ala Gly Val Ala Gly Ala Ala Leu Leu Leu Val His Val Arg Arg
                325                 330                 335

Arg Gly His Ser Gln Asp Ala Gly Ser Arg Leu Leu Ala Gly Thr Pro
            340                 345                 350

Glu Pro Ser Val His Ala Leu Pro Asp Ala Leu Asn Asn Leu Arg Thr
        355                 360                 365

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

Pro Glu Asp Val Asp Pro Gln Gly Ile Tyr Val Ile Ser Ala Pro Ser
385                 390                 395                 400

Ile Tyr Ala Arg Glu Val Ala Thr Pro Leu Phe Pro Pro Leu His Thr
                405                 410                 415

Gly Arg Ala Gly Gln Arg Gln His Leu Leu Phe Pro Tyr Pro Ser Ser
            420                 425                 430

Ile Leu Ser Val Lys
        435
```

<210> 559
<211> 379
<212> PRT
<213> Artificial Sequence

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

<400> 559
Met Glu Thr Asp Thr Leu Leu Leu Trp Val Leu Leu Leu Trp Val Pro
1   5   10   15

Gly Ser Thr Gly Tyr Pro Tyr Asp Val Pro Asp Tyr Ala Gly Met Leu
            20   25   30

Gly Ser Gly Pro Gly Pro Cys Asp Gly Asn Pro Cys Ala Asn Gly Gly
        35   40   45

Ser Cys Ser Glu Thr Pro Arg Ser Phe Glu Cys Thr Cys Pro Arg Gly
    50   55   60

Phe Tyr Gly Leu Arg Cys Glu Val Ser Gly Val Thr Cys Ala Asp Gly
65   70   75   80

Pro Cys Phe Asn Gly Gly Leu Cys Val Gly Gly Ala Asp Pro Asp Ser
                85   90   95

Ala Tyr Ile Cys His Cys Pro Pro Gly Phe Gln Gly Ser Asn Cys Glu
            100   105   110

Lys Arg Val Asp Arg Cys Ser Leu Gln Pro Cys Arg Asn Gly Gly Leu
        115   120   125

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

Ala Gly Pro Arg Cys Glu His Asp Leu Asp Asp Cys Ala Gly Arg Ala
145   150   155   160

Cys Ala Asn Gly Gly Thr Cys Val Glu Gly Gly Gly Ala His Arg Cys
                165   170   175

Ser Cys Ala Leu Gly Phe Gly Gly Arg Asp Cys Arg Glu Arg Ala Asp
            180   185   190

```
Pro Cys Ala Ala Arg Pro Cys Ala His Gly Gly Arg Cys Tyr Ala His
        195                 200                 205

Phe Ser Gly Leu Val Cys Ala Cys Ala Pro Gly Tyr Met Gly Ala Arg
    210                 215                 220

Cys Glu Phe Pro Val His Pro Asp Gly Ala Ser Ala Leu Pro Ala Ala
225                 230                 235                 240

Pro Pro Gly Leu Arg Pro Gly Asp Pro Gln Arg Tyr Leu Leu Pro Pro
                245                 250                 255

Ala Leu Gly Leu Leu Val Ala Ala Gly Val Ala Gly Ala Ala Leu Leu
            260                 265                 270

Leu Val His Val Arg Arg Arg Gly His Ser Gln Asp Ala Gly Ser Arg
        275                 280                 285

Leu Leu Ala Gly Thr Pro Glu Pro Ser Val His Ala Leu Pro Asp Ala
    290                 295                 300

Leu Asn Asn Leu Arg Thr Gln Glu Gly Ser Gly Asp Gly Pro Ser Ser
305                 310                 315                 320

Ser Val Asp Trp Asn Arg Pro Glu Asp Val Asp Pro Gln Gly Ile Tyr
                325                 330                 335

Val Ile Ser Ala Pro Ser Ile Tyr Ala Arg Glu Val Ala Thr Pro Leu
            340                 345                 350

Phe Pro Pro Leu His Thr Gly Arg Ala Gly Gln Arg Gln His Leu Leu
        355                 360                 365

Phe Pro Tyr Pro Ser Ser Ile Leu Ser Val Lys
    370                 375
```

<210> 560
<211> 341
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 560
Met Glu Thr Asp Thr Leu Leu Leu Trp Val Leu Leu Leu Trp Val Pro
1   5   10   15

Gly Ser Thr Gly Tyr Pro Tyr Asp Val Pro Asp Tyr Ala Gly Met Leu
            20   25   30

Gly Ser Ser Gly Val Thr Cys Ala Asp Gly Pro Cys Phe Asn Gly Gly
        35   40   45

Leu Cys Val Gly Gly Ala Asp Pro Asp Ser Ala Tyr Ile Cys His Cys
    50   55   60

Pro Pro Gly Phe Gln Gly Ser Asn Cys Glu Lys Arg Val Asp Arg Cys
65   70   75   80

Ser Leu Gln Pro Cys Arg Asn Gly Gly Leu Cys Leu Asp Leu Gly His
                85   90   95

Ala Leu Arg Cys Arg Cys Arg Ala Gly Phe Ala Gly Pro Arg Cys Glu
            100   105   110

His Asp Leu Asp Asp Cys Ala Gly Arg Ala Cys Ala Asn Gly Gly Thr
        115   120   125

Cys Val Glu Gly Gly Gly Ala His Arg Cys Ser Cys Ala Leu Gly Phe
    130   135   140

Gly Gly Arg Asp Cys Arg Glu Arg Ala Asp Pro Cys Ala Ala Arg Pro
145   150   155   160

Cys Ala His Gly Gly Arg Cys Tyr Ala His Phe Ser Gly Leu Val Cys
                165   170   175

Ala Cys Ala Pro Gly Tyr Met Gly Ala Arg Cys Glu Phe Pro Val His
            180   185   190

```
Pro Asp Gly Ala Ser Ala Leu Pro Ala Ala Pro Pro Gly Leu Arg Pro
        195                 200                 205

Gly Asp Pro Gln Arg Tyr Leu Leu Pro Pro Ala Leu Gly Leu Leu Val
    210                 215                 220

Ala Ala Gly Val Ala Gly Ala Ala Leu Leu Leu Val His Val Arg Arg
225                 230                 235                 240

Arg Gly His Ser Gln Asp Ala Gly Ser Arg Leu Leu Ala Gly Thr Pro
                245                 250                 255

Glu Pro Ser Val His Ala Leu Pro Asp Ala Leu Asn Asn Leu Arg Thr
            260                 265                 270

Gln Glu Gly Ser Gly Asp Gly Pro Ser Ser Ser Val Asp Trp Asn Arg
        275                 280                 285

Pro Glu Asp Val Asp Pro Gln Gly Ile Tyr Val Ile Ser Ala Pro Ser
    290                 295                 300

Ile Tyr Ala Arg Glu Val Ala Thr Pro Leu Phe Pro Pro Leu His Thr
305                 310                 315                 320

Gly Arg Ala Gly Gln Arg Gln His Leu Leu Phe Pro Tyr Pro Ser Ser
                325                 330                 335

Ile Leu Ser Val Lys
            340
```

<210> 561
<211> 300
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 561

```
Met Glu Thr Asp Thr Leu Leu Leu Trp Val Leu Leu Leu Trp Val Pro
1               5                  10                  15

Gly Ser Thr Gly Tyr Pro Tyr Asp Val Pro Asp Tyr Ala Gly Met Leu
            20                  25                  30

Gly Ser Arg Val Asp Arg Cys Ser Leu Gln Pro Cys Arg Asn Gly Gly
        35                  40                  45

Leu Cys Leu Asp Leu Gly His Ala Leu Arg Cys Arg Cys Arg Ala Gly
    50                  55                  60

Phe Ala Gly Pro Arg Cys Glu His Asp Leu Asp Asp Cys Ala Gly Arg
65                  70                  75                  80

Ala Cys Ala Asn Gly Gly Thr Cys Val Glu Gly Gly Gly Ala His Arg
                85                  90                  95

Cys Ser Cys Ala Leu Gly Phe Gly Gly Arg Asp Cys Arg Glu Arg Ala
            100                 105                 110

Asp Pro Cys Ala Ala Arg Pro Cys Ala His Gly Gly Arg Cys Tyr Ala
        115                 120                 125

His Phe Ser Gly Leu Val Cys Ala Cys Ala Pro Gly Tyr Met Gly Ala
    130                 135                 140

Arg Cys Glu Phe Pro Val His Pro Asp Gly Ala Ser Ala Leu Pro Ala
145                 150                 155                 160

Ala Pro Pro Gly Leu Arg Pro Gly Asp Pro Gln Arg Tyr Leu Leu Pro
                165                 170                 175

Pro Ala Leu Gly Leu Leu Val Ala Ala Gly Val Ala Gly Ala Ala Leu
            180                 185                 190

Leu Leu Val His Val Arg Arg Arg Gly His Ser Gln Asp Ala Gly Ser
        195                 200                 205

Arg Leu Leu Ala Gly Thr Pro Glu Pro Ser Val His Ala Leu Pro Asp
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    210                 215                 220

Ala Leu Asn Asn Leu Arg Thr Gln Glu Gly Ser Gly Asp Gly Pro Ser
225                 230                 235                 240

Ser Ser Val Asp Trp Asn Arg Pro Glu Asp Val Asp Pro Gln Gly Ile
                245                 250                 255

Tyr Val Ile Ser Ala Pro Ser Ile Tyr Ala Arg Glu Val Ala Thr Pro
            260                 265                 270

Leu Phe Pro Pro Leu His Thr Gly Arg Ala Gly Gln Arg Gln His Leu
        275                 280                 285

Leu Phe Pro Tyr Pro Ser Ser Ile Leu Ser Val Lys
    290                 295                 300


<210> 562
<211> 262
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 562
Met Glu Thr Asp Thr Leu Leu Leu Trp Val Leu Leu Leu Trp Val Pro
1               5                   10                  15

Gly Ser Thr Gly Tyr Pro Tyr Asp Val Pro Asp Tyr Ala Gly Met Leu
            20                  25                  30

Gly Ser Asp Leu Asp Asp Cys Ala Gly Arg Ala Cys Ala Asn Gly Gly
        35                  40                  45

Thr Cys Val Glu Gly Gly Gly Ala His Arg Cys Ser Cys Ala Leu Gly
    50                  55                  60

Phe Gly Gly Arg Asp Cys Arg Glu Arg Ala Asp Pro Cys Ala Ala Arg
65                  70                  75                  80
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Pro Cys Ala His Gly Gly Arg Cys Tyr Ala His Phe Ser Gly Leu Val
                85                  90                  95

Cys Ala Cys Ala Pro Gly Tyr Met Gly Ala Arg Cys Glu Phe Pro Val
            100                 105                 110

His Pro Asp Gly Ala Ser Ala Leu Pro Ala Ala Pro Pro Gly Leu Arg
        115                 120                 125

Pro Gly Asp Pro Gln Arg Tyr Leu Leu Pro Pro Ala Leu Gly Leu Leu
    130                 135                 140

Val Ala Ala Gly Val Ala Gly Ala Ala Leu Leu Leu Val His Val Arg
145                 150                 155                 160

Arg Arg Gly His Ser Gln Asp Ala Gly Ser Arg Leu Leu Ala Gly Thr
                165                 170                 175

Pro Glu Pro Ser Val His Ala Leu Pro Asp Ala Leu Asn Asn Leu Arg
            180                 185                 190

Thr Gln Glu Gly Ser Gly Asp Gly Pro Ser Ser Ser Val Asp Trp Asn
        195                 200                 205

Arg Pro Glu Asp Val Asp Pro Gln Gly Ile Tyr Val Ile Ser Ala Pro
    210                 215                 220

Ser Ile Tyr Ala Arg Glu Val Ala Thr Pro Leu Phe Pro Pro Leu His
225                 230                 235                 240

Thr Gly Arg Ala Gly Gln Arg Gln His Leu Leu Phe Pro Tyr Pro Ser
                245                 250                 255

Ser Ile Leu Ser Val Lys
            260
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<210> 563
<211> 224
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 563
Met Glu Thr Asp Thr Leu Leu Leu Trp Val Leu Leu Leu Trp Val Pro
1 5 10 15

Gly Ser Thr Gly Tyr Pro Tyr Asp Val Pro Asp Tyr Ala Gly Met Leu
20 25 30

Gly Ser Arg Ala Asp Pro Cys Ala Ala Arg Pro Cys Ala His Gly Gly
35 40 45

Arg Cys Tyr Ala His Phe Ser Gly Leu Val Cys Ala Cys Ala Pro Gly
50 55 60

Tyr Met Gly Ala Arg Cys Glu Phe Pro Val His Pro Asp Gly Ala Ser
65 70 75 80

Ala Leu Pro Ala Ala Pro Pro Gly Leu Arg Pro Gly Asp Pro Gln Arg
85 90 95

Tyr Leu Leu Pro Pro Ala Leu Gly Leu Leu Val Ala Ala Gly Val Ala
100 105 110

Gly Ala Ala Leu Leu Leu Val His Val Arg Arg Arg Gly His Ser Gln
115 120 125

Asp Ala Gly Ser Arg Leu Leu Ala Gly Thr Pro Glu Pro Ser Val His
130 135 140

Ala Leu Pro Asp Ala Leu Asn Asn Leu Arg Thr Gln Glu Gly Ser Gly
145 150 155 160

Asp Gly Pro Ser Ser Ser Val Asp Trp Asn Arg Pro Glu Asp Val Asp
165 170 175

Pro Gln Gly Ile Tyr Val Ile Ser Ala Pro Ser Ile Tyr Ala Arg Glu
180 185 190

Val Ala Thr Pro Leu Phe Pro Pro Leu His Thr Gly Arg Ala Gly Gln
195 200 205

Arg Gln His Leu Leu Phe Pro Tyr Pro Ser Ser Ile Leu Ser Val Lys
210 215 220

<210> 564
<211> 45
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic oligonucleotide"

<400> 564
ggcggtggag gctccggagg gggggctct ggcggagggg gctcc 45

<210> 565
<211> 524
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 565
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Gly Gly Gly Gly Ser Cys Pro Tyr Ser Asn Pro
20 25 30

Ser Leu Cys Gly Gly Gly Gly Ser Cys Pro Tyr Ser Asn Pro Ser Leu
35 40 45

Cys Gly Gly Gly Gly Ser Glu Val Gln Leu Leu Glu Ser Gly Gly Gly
50 55 60

Leu Val Gln Pro Gly Gly Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly
65 70 75 80

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Phe Thr Phe Ser Ser Tyr Ala Met Asn Trp Val Arg Gln Ala Pro Gly
                85                  90                  95

Lys Gly Leu Glu Trp Val Ser Thr Ile Ser Gly Ser Gly Gly Ser Thr
            100                 105                 110

Tyr Tyr Ala Asp Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn
        115                 120                 125

Ser Lys Asn Thr Leu Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp
    130                 135                 140

Thr Ala Val Phe Tyr Cys Ala Ile Asp Pro Glu Tyr Tyr Asp Ile Leu
145                 150                 155                 160

Thr Gly Gly Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
                165                 170                 175

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Gly Ser
            180                 185                 190

Gly Gly Gly Gly Ser Asp Ile Gln Met Thr Gln Ser Pro Ser Ala Met
        195                 200                 205

Ser Ala Ser Val Gly Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln
    210                 215                 220

Gly Ile Ser Asn Tyr Leu Ala Trp Phe Gln Gln Lys Pro Gly Lys Val
225                 230                 235                 240

Pro Lys Arg Leu Ile Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro
                245                 250                 255

Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile
            260                 265                 270

Ser Ser Leu Gln Pro Glu Asp Phe Ala Thr Tyr Phe Cys Leu Gln His
        275                 280                 285
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Asp Ser Phe Pro Leu Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
    290                 295                 300

Thr Thr Thr Pro Ala Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala
305                 310                 315                 320

Ser Gln Pro Leu Ser Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly
                325                 330                 335

Gly Ala Val His Thr Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile
            340                 345                 350

Trp Ala Pro Leu Ala Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val
        355                 360                 365

Ile Thr Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro
    370                 375                 380

Phe Met Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys
385                 390                 395                 400

Arg Phe Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg Val Lys Phe
                405                 410                 415

Ser Arg Ser Ala Asp Ala Pro Ala Tyr Gln Gln Gly Gln Asn Gln Leu
            420                 425                 430

Tyr Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp
        435                 440                 445

Lys Arg Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys
    450                 455                 460

Asn Pro Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala
465                 470                 475                 480

Glu Ala Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys
                485                 490                 495
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Gly His Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr
500 505 510

Tyr Asp Ala Leu His Met Gln Ala Leu Pro Pro Arg
515 520

<210> 566
<211> 54
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic oligonucleotide"

<400> 566
gggtctacat ccggctccgg gaagcccgga agtggcgaag gtagtacaaa gggg 54

<210> 567
<211> 123
<212> DNA
<213> Homo sapiens

<400> 567
agatccaaaa gaagccgcct gctccatagc gattacatga atatgactcc acgccgccct 60

ggccccacaa ggaaacacta ccagccttac gcaccaccta gagatttcgc tgcctatcgg 120

agc 123

<210> 568
<211> 126
<212> DNA
<213> Homo sapiens

<400> 568
aagcgcggca ggaagaagct cctctacatt tttaagcagc cttttatgag gcccgtacag 60

acaacacagg aggaagatgg ctgtagctgc agatttcccg aggaggagga aggtgggtgc 120

gagctg 126

<210> 569
<211> 336
<212> DNA
<213> Homo sapiens

<400> 569
agggtgaagt tttccagatc tgcagatgca ccagcgtatc agcagggcca gaaccaactg 60

tataacgagc tcaacctggg acgcagggaa gagtatgacg ttttggacaa gcgcagagga 120

cgggaccctg agatgggtgg caaaccaaga cgaaaaaacc cccaggaggg tctctataat 180

gagctgcaga aggataagat ggctgaagcc tattctgaaa taggcatgaa aggagagcgg 240

agaaggggaa aagggcacga cggtttgtac cagggactca gcactgctac gaaggatact 300

tatgacgctc tccacatgca agccctgcca cctagg 336

<210> 570
<211> 1458
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 570
atggctctgc ccgtcaccgc tctgctgctg cctctggctc tgctgctgca cgccgcacga 60

ccacaggtcc aggtgcagct gcaggagagc ggcccaggcc tggtgaagcc atctgagaca 120

ctgagcctga cctgcacagt gagcgataac tccatctcta attactattg gtcctggatc 180

aggcagcccc ctggcaaggg cctggagtgg atcgcctaca tctactattc tggcaccaca 240

aactataatc ccagcctgaa gtccagagtg accatctccc tggacacatc taagaaccag 300

ttctccctga agctgagctc cgtgaccgca gcagatacag ccgtgtacta ttgtgcccgg 360

ctgtttaatt ggggcttcgc ctttgacatc tggggccagg gcaccatggt gacagtgtct 420

agcggaggag gaggaagcgg aggaggaggg tccggaggcg ggggatctga gatcgtgatg 480

acccagtctc cagccacact gtccgtgtct cccggcgaga gggccaccct gagctgcaga 540

gccagccagt ccgtgagctc caacctggcc tggtaccagc agaagcctgg ccaggcacct 600

cggctgctga tctatggagc atccaccagg gccacaggaa tccctgcacg cttctctgga 660

agcggatccg gcacagagtt taccctgaca atctctagcc tgcagtctga ggacttcgcc 720

gtgtactatt gtcagcagta caacaattgg cccctgacct ttggcggcgg cacaaaggtg 780

gagatcaaga ccacaactcc tgcacctagg ccacctaccc cagcacctac aattgctagt 840

cagccactgt cactgcgacc agaggcatgt cgacctgcag ctggaggagc agtgcataca 900

aggggactgg actttgcctg cgatatctac atttgggctc ctctggcagg aacatgtggc 960

gtgctgctgc tgagcctggt catcactctg tactgcaagc gaggccggaa gaaactgctg 1020

tatattttca aacagccctt tatgcgacct gtgcagacca cacaggagga agatgggtgc 1080

tcctgtcggt tccccgagga agaggaagga ggctgtgagc tgcgggtcaa gttttccaga 1140

tctgcagacg cccctgctta ccagcagggc cagaaccagc tgtataacga gctgaatctg 1200

gggcggagag aggaatacga cgtgctggat aaaaggcgcg ggagagaccc agaaatgggg 1260

ggaaagccac gacggaaaaa cccccaggag ggactgtaca atgaactgca gaaggataaa 1320

atggcagagg cctattccga aatcgggatg aagggagaaa gaaggcgagg caaaggacac 1380

gacggactgt accaggggct gtctaccgcc acaaaggaca cctatgatgc tctgcatatg 1440

caggcactgc cacccagg 1458

<210> 571
<211> 1455
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 571
atggctctgc ccgtcaccgc tctgctgctg cctctggctc tgctgctgca cgccgcacga 60

ccacaggtgc agctgcagga gtctggccca ggcctgatga agcccagcga gacactgtcc 120

ctgacctgca cagtgtctgg cggcagcatc agctcctctt actggagctg tatcaggcag 180

ccccctggca agggcctgga gtggatcggc tacatctact attccggcac cacaaactat 240

aatccttccc tgaagtctcg ggtgaccctg tctctggaca caagcaagaa ccagttctcc 300

ctgagactga cctctgtgac agccgccgat accgccgtgt actattgcgc cagagtggcc 360

cccacaggct tctggtttga ctattggggc cagggcaccc tggtgacagt gagctccgga 420

ggaggaggaa gcggaggagg agggtccgga ggcgggggat ctgagatcgt gctgacccag 480

tccccaggca cactgtccct gtctcccggc gagagagcca ccctgagctg cagggcctcc 540

cagagagtga gctccaggta cctggcctgg tatcagcaga agcctggcca ggcccccaga 600

ctgctgatct acggagcatc tagccgcgcc accggaatcc cagaccggtt cagcggatcc 660

ggatctggca cagacttcac cctgacaatc tctagactgg agcctgagga gttcgccgtg 720

tactattgtc agcagtatgg caccagccca ctgacatttg gcggcggcac aaaggtggag 780

atcaagacca caactcctgc acctaggcca cctaccccag cacctacaat tgctagtcag 840

ccactgtcac tgcgaccaga ggcatgtcga cctgcagctg gaggagcagt gcatacaagg 900

ggactggact ttgcctgcga tatctacatt tgggctcctc tggcaggaac atgtggcgtg 960

ctgctgctga gcctggtcat cactctgtac tgcaagcgag gccggaagaa actgctgtat 1020

attttcaaac agcccttat gcgacctgtg cagaccacac aggaggaaga tgggtgctcc 1080

tgtcggttcc ccgaggaaga ggaaggaggc tgtgagctgc gggtcaagtt ttccagatct 1140

gcagacgccc ctgcttacca gcagggccag aaccagctgt ataacgagct gaatctgggg 1200

cggagagagg aatacgacgt gctggataaa aggcgcggga gagacccaga aatgggggga 1260

aagccacgac ggaaaaaccc ccaggaggga ctgtacaatg aactgcagaa ggataaaatg 1320

gcagaggcct attccgaaat cgggatgaag ggagaaagaa ggcgaggcaa aggacacgac 1380

ggactgtacc aggggctgtc taccgccaca aaggacacct atgatgctct gcatatgcag 1440

gcactgccac ccagg 1455

<210> 572
<211> 1470
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 572
atggctctgc ccgtcaccgc tctgctgctg cctctggctc tgctgctgca cgccgcacga 60

ccacaggtcc agctggtcca gtcaggggcc gaggtgaaga aacctggggc ttctgtgaag 120

gtcagttgca aagctagtgg atactcattc cctgattact atatcaactg ggtgcgccag 180

gcaccaggac agggactgga gtggatggga tggatctact tcgctagcgg caactccgaa 240

tataatcaga agtttacagg cagagtgact atgaccaggg acacaagctc ctctactgcc 300

tatatggagc tgagttcact gcggagtgaa gataccgcag tgtacttctg cgcctctctg 360

tacgactatg attggtattt tgacgtctgg ggacagggca ctatggtgac cgtcagctcc 420

ggaggaggag gaagcggagg aggagggtcc ggaggcgggg gatctgatat cgtgatgaca 480

cagactcccc tgtcactgag cgtcactcca ggagagccag catccatttc ttgtaagtct 540

agtcagtcac tggtgcacag caacggaaat acctacctgc attggtatct gcagaagcct 600

ggccagagcc cacagctgct gatctacaaa gtgtccaata ggttctctgg cgtcccagac 660

cgctttagtg ggtcaggaag cggcgccgat ttcaccctga aaattagccg cgtggaggct 720

gaagacgtgg gcgtctacta ttgcgcagag acaagccacg tcccctggac ttttgggcag 780

ggaaccaagc tggaaatcaa aaccacaact cctgcaccta ggccacctac cccagcacct 840

acaattgcta gtcagccact gtcactgcga ccagaggcat gtcgacctgc agctggagga 900

gcagtgcata caaggggact ggactttgcc tgcgatatct acatttgggc tcctctggca 960

ggaacatgtg gcgtgctgct gctgagcctg gtcatcactc tgtactgcaa gcgaggccgg 1020

aagaaactgc tgtatatttt caaacagccc tttatgcgac ctgtgcagac cacacaggag 1080

gaagatgggt gctcctgtcg gttccccgag gaagaggaag gaggctgtga gctgcgggtc 1140

aagttttcca gatctgcaga cgcccctgct taccagcagg gccagaacca gctgtataac 1200

gagctgaatc tggggcggag agaggaatac gacgtgctgg ataaaaggcg cgggagagac 1260

ccagaaatgg ggggaaagcc acgacggaaa aacccccagg agggactgta caatgaactg 1320

cagaaggata aaatggcaga ggcctattcc gaaatcggga tgaagggaga aagaaggcga 1380

ggcaaaggac acgacggact gtaccagggg ctgtctaccg ccacaaagga cacctatgat 1440

gctctgcata tgcaggcact gccacccagg 1470

<210> 573
<211> 1470
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 573
atggctctgc ctgtcaccgc tctgctgctg cctctggctc tgctgctgca cgcggcgcgc 60

ccgcaggtgc agctgcagga gtctggccca ggcctggtga agccctctga gacactgagc 120

ctgacctgca cagtgagcga cgattccatc tctaactact attggtcctg gatcaggcag 180

ccccctggca agggcctgga gtggatcggc tacatcttct attccggcac cacaaaccac 240

aatcccagcc tgaagtcccg gctgacaatc tccctggaca aggccaagaa ccagttctct 300

ctgagactga gctccgtgac cgccgccgat acagccgtgt actattgtgc cagagtgttc 360

aactggggct tcgcctttga catctggggc cagggcacca tggtgacagt gtctagcggc 420

ggcggcggct ctggaggagg aggcagcggc ggaggaggct ccggaggcgg cggctctgag 480

atcgtgctga cccagtctcc aggcacactg tctctgagcc ccggcgagag ggccaccctg 540

agctgccgcg cctcccagcg gatctctaga acatacctgg cctggtatca gcagaagcct 600

ggccaggccc ccagactgct gatctacgga gcaagcagcc gggccaccgg aatccccgac 660

agattcaccg gctccggctc tggcacagac ttcaccctga caatcagcag actggagcct 720

gaggacttcg ccgtgtacta ttgtcagcag tatggcacct ccccactgac atttggcggc 780

ggcacaaagg tggagatcaa caccacaacc ccagcaccta ggccacctac acctgcacca 840

accatcgcca gccagcctct gtccctgaga ccagaggcct gtaggccagc agcaggagga 900

gcagtgcaca cccggggcct ggacttcgcc tgcgatatct acatctgggc accactggca 960

ggaacatgtg gcgtgctgct gctgtccctg gtcatcaccc tgtactgcaa gagaggcagg 1020

aagaagctgc tgtatatctt caagcagccc ttcatgagac ccgtgcagac aacccaggag 1080

gaggacggct gcagctgtag gttcccagag gaggaggagg gaggatgtga gctgcgcgtg 1140

aagttttccc ggtctgccga tgcacctgca taccagcagg gacagaacca gctgtataac 1200

gagctgaatc tgggccggag agaggagtac gacgtgctgg ataagaggag gggaagggac 1260

cctgagatgg gaggcaagcc tcggagaaag aacccacagg agggcctgta caatgagctg 1320

cagaaggaca agatggccga ggcctatagc gagatcggca tgaagggaga gaggcgccgg 1380

ggcaagggac acgatggcct gtatcagggc ctgtcaaccg ctacaaaaga tacctacgat 1440

gctctgcaca tgcaggctct gccaccaaga 1470

<210> 574
<211> 1470
<212> DNA

<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 574
atggctctgc ctgtcaccgc tctgctgctg cctctggctc tgctgctgca cgcggcgcgc 60

ccgcaggtgc agctgcagga gagcggccca ggcctggtga agccatctga gacactgagc 120

ctgacctgca cagtgagcga taactccatc tctaattact attggtcctg gatcaggcag 180

ccccctggca agggcctgga gtggatcgcc tacatctact attctggcac cacaaactat 240

aatcccagcc tgaagtccag agtgaccatc tccctggaca catctaagaa ccagttctcc 300

ctgcagctga gctccgtgac agcagcagat gcagccgtgt actattgtgc cagagtgttc 360

cactggggct tcgcctttga catctggggc cagggcacca tggtgacagt gtctagcggc 420

ggcggcggct ctggaggagg aggcagcggc ggaggaggct ccggaggcgg cggctctgag 480

atcgtgctga cccagagccc aggcacactg tctctgagcc ccggcgagag ggccaccctg 540

tcctgccggg cctctcagag agtgagcaac acatacctgg cctggtatca gcagaatccc 600

ggccaggccc ccagactgct gatctacgga gcaagctcca gggccaccgg aatcccagac 660

cgcttctccg gatctggaag cggcacagac ttcaccctga caatctcccg gctggagcct 720

gaggacttcg ccgtgtacta ttgtcagcag tatggcacct ctccactgac atttggcggc 780

ggcaccaagg tggagatcaa gaccacaacc ccagcaccta ggccacctac acctgcacca 840

accatcgcca gccagcctct gtccctgaga ccagaggcct gtaggccagc agcaggagga 900

gcagtgcaca cccggggcct ggacttcgcc tgcgatatct acatctgggc accactggca 960

ggaacatgtg gcgtgctgct gctgtccctg gtcatcaccc tgtactgcaa gagaggcagg 1020

aagaagctgc tgtatatctt caagcagccc ttcatgagac ccgtgcagac aacccaggag 1080

gaggacggct gcagctgtag gttcccagag gaggaggagg gaggatgtga gctgcgcgtg 1140

aagttttccc ggtctgccga tgcacctgca taccagcagg gacagaacca gctgtataac 1200

gagctgaatc tgggccggag agaggagtac gacgtgctgg ataagaggag gggaagggac 1260

cctgagatgg gaggcaagcc tcggagaaag aacccacagg agggcctgta caatgagctg 1320

cagaaggaca agatggccga ggcctatagc gagatcggca tgaagggaga gaggcgccgg 1380

ggcaagggac acgatggcct gtatcagggc ctgtcaaccg ctacaaaaga tacctacgat 1440

gctctgcaca tgcaggctct gccaccaaga 1470

<210> 575
<211> 1455
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 575
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ccacaggtgc agctgcagga gagcggccca ggcctggtga agccatccga gaccctgtct 120

ctgacctgca cagtgagcaa cgtgtccatc agctcctact attggtcttg gatcaggcag 180

ccccctggca agggactgga gtggatcggc tacatctact atagcggcac cacaaactat 240

aatccctctc tgaagagcag agtgaccatg agcgtggaca catccaagaa ccagttctcc 300

ctgaagctgt ctagcgtgac cgccgccgat acagccgtgt acttttgtgc ccggctgtct 360

aattggggct tcgcctttga catctggggc cagggcacca tggtgacatt ctcctctgga 420

ggaggaggaa gcggaggagg agggtccgga ggcgggggat ctgagatcgt gctgacccag 480

tctccaggca cactgtctct gagccccggc gagagggcca ccctgtcctg cagagcctct 540

cagacaatca gctcctctta cctggcctgg tatcagcaga agcctggcca ggcacctcgg 600

ctgctgatct acggagcaag ctccagggcc accggaatcc cagaccgctt ctccggatct 660

ggaagcggca cagagtttac cctgacaatc agccggctgg agcctgagga tttcgccgtg 720

tactattgtc agcagtatgg ctggtcccca atcacctttg gccagggcac aaggctggag 780

atcaagacca caactcctgc acctaggcca cctaccccag cacctacaat tgctagtcag 840

ccactgtcac tgcgaccaga ggcatgtcga cctgcagctg gaggagcagt gcatacaagg 900

ggactggact ttgcctgcga tatctacatt tgggctcctc tggcaggaac atgtggcgtg 960

ctgctgctga gcctggtcat cactctgtac tgcaagcgag gccggaagaa actgctgtat 1020

attttcaaac agcccttat gcgacctgtg cagaccacac aggaggaaga tgggtgctcc 1080

tgtcggttcc ccgaggaaga ggaaggaggc tgtgagctgc gggtcaagtt ttccagatct 1140

gcagacgccc ctgcttacca gcagggccag aaccagctgt ataacgagct gaatctgggg 1200

cggagagagg aatacgacgt gctggataaa aggcgcggga gagacccaga aatgggggga 1260

aagccacgac ggaaaaaccc ccaggaggga ctgtacaatg aactgcagaa ggataaaatg 1320

gcagaggcct attccgaaat cgggatgaag ggagaaagaa ggcgaggcaa aggacacgac 1380

ggactgtacc aggggctgtc taccgccaca aaggacacct atgatgctct gcatatgcag 1440

gcactgccac ccagg 1455

<210> 576
<211> 1473
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 576
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ccagaggtgc agctggtgga gagcggagga ggactggtgc agcctggcgg atccctgagg 120

ctgtcttgcg cagcaagcgg cttcaccttt agctcctacg acatgcactg ggtgaggcag 180

gcaacaggca agggactgga gtgggtgtcc gccatcggac cagccggcga tacctactat 240

cccggctctg tgaagggccg gttcacaatc tccagagaga acgccaagaa ttctctgtat 300

ctgcagatga acagcctgag ggcaggcgac accgccgtgt actattgtgc cagagccgac 360

cccccttact attactatgg catggacgtg tggggccagg gcaccacagt gacagtgtct 420

agcggaggag gaggaagcgg aggaggaggg tccggaggcg ggggatctga catcgtgatg 480

acccagtccc ctctgtctct gcccgtgaca cctggcgagc cagcctctat cagctgcagg 540

agctcccaga gcctgctgca ctccaacgag tacaattatc tggattggta cctgcagaag 600

cctggccagt cccctcagct gctgatctat ctgggctcta acagggcaag cggagtgcca 660

gacagattct ccggctctgg cagcggcacc gacttcatcc tgaagatctc tcgggtggag 720

gcagaggacg tgggcgtgta ctattgtatg caggccctgg agatcccact gaccttcggc 780

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gcaggaacat gtggcgtgct gctgctgagc ctggtcatca ctctgtactg caagcgaggc 1020

cggaagaaac tgctgtatat tttcaaacag ccctttatgc gacctgtgca gaccacacag 1080

gaggaagatg ggtgctcctg tcggttcccc gaggaagagg aaggaggctg tgagctgcgg 1140

gtcaagtttt ccagatctgc agacgcccct gcttaccagc agggccagaa ccagctgtat 1200

aacgagctga atctggggcg gagagaggaa tacgacgtgc tggataaaag gcgcgggaga 1260

gacccagaaa tgggggggaaa gccacgacgg aaaaaccccc aggagggact gtacaatgaa 1320

ctgcagaagg ataaaatggc agaggcctat tccgaaatcg ggatgaaggg agaaagaagg 1380

cgaggcaaag gacacgacgg actgtaccag gggctgtcta ccgccacaaa ggacacctat 1440

gatgctctgc atatgcaggc actgccaccc agg 1473

<210> 577
<211> 1458
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 577
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ccacagatca cactgaagga gagcggccca accctggtga agcccaccca gacactgacc 120

ctgacatgca ccttctccgg cttttctctg agcaccagag gcgtgggagt gggatggatc 180

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tctaactggg gcaattggta cttcgcactg tggggaaggg gcacactggt gaccgtgagc 420

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acccagtctc cagccacact gtccctgtct cccggcgaga gggccaccct gagctgcaga 540

gccagccagt ccgtgagctc ctacctggcc tggtatcagc agaagcctgg ccaggcacct 600

cggctgctga tctacgacgc cttctatagg gccaccggca tcccagcacg cttctctgga 660

agcggatccg gcacagactt taccctgaca atctctagcc tggagcctga ggatttcgcc 720

gtgtactatt gtcagcaccg gtccaactgg ccaatcacct ttggccaggg cacaaggctg 780

gagatcaaga ccacaactcc tgcacctagg ccacctaccc cagcacctac aattgctagt 840

cagccactgt cactgcgacc agaggcatgt cgacctgcag ctggaggagc agtgcataca 900

aggggactgg actttgcctg cgatatctac atttgggctc ctctggcagg aacatgtggc 960

gtgctgctgc tgagcctggt catcactctg tactgcaagc gaggccggaa gaaactgctg 1020

tatattttca aacagccctt tatgcgacct gtgcagacca cacaggagga agatgggtgc 1080

tcctgtcggt tccccgagga agaggaagga ggctgtgagc tgcgggtcaa gttttccaga 1140

tctgcagacg cccctgctta ccagcagggc cagaaccagc tgtataacga gctgaatctg 1200

gggcggagag aggaatacga cgtgctggat aaaaggcgcg ggagagaccc agaaatgggg 1260

ggaaagccac gacggaaaaa ccccccaggag ggactgtaca atgaactgca gaaggataaa 1320

atggcagagg cctattccga aatcgggatg aagggagaaa gaaggcgagg caaaggacac 1380

gacggactgt accaggggct gtctaccgcc acaaaggaca cctatgatgc tctgcatatg 1440

caggcactgc cacccagg 1458

<210> 578
<211> 1470
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 578
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ccgcaggtgc agctgcagga gagcggccca ggcctggtga agccatctga gaccctgagc 120

ctgacctgca cagtgtccgg cgattccatc tctaactact attggacatg gatcaggcag 180

ccccctggca agggactgga gtggatcggc tacatctact attctggcac cacaaactct 240

aatcccagcc tgaagagccg ggtgaccgtg tccctggaca caagcaagtc ccagttctct 300

ctgaacctga gctccgtgac cgccgccgat acagccgtgt actattgtgc cagagtgttc 360

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ggcggcggct ctggaggagg aggcagcggc ggaggaggct ccggaggcgg cggctctgag 480

atcgtgctga cccagagccc aggcacactg tctctgagcc ccggcgagag ggccaccctg 540

tcctgccggg cctctcagag aatcagcaac acatacctgg cctggtatca gcagaagcct 600

ggccaggccc ccagactgct gatctacgga gcaagctcca gggccaccgg aatcccagac 660

cgcttctccg gatctggaag cggcacagac ttcaccctga caatctccag gctggagcct 720

gaggacttcg cagcctacta ttgtcagcag tatgatacct ctccactgac atttggcggc 780

ggcaccaagg tggagatcaa gaccacaacc ccagcaccta ggccacctac acctgcacca 840

accatcgcca gccagcctct gtccctgaga ccagaggcct gtaggccagc agcaggagga 900

gcagtgcaca cccggggcct ggacttcgcc tgcgatatct acatctgggc accactggca 960

ggaacatgtg gcgtgctgct gctgtccctg gtcatcaccc tgtactgcaa gagaggcagg 1020

aagaagctgc tgtatatctt caagcagccc ttcatgagac ccgtgcagac aacccaggag 1080

gaggacggct gcagctgtag gttcccagag gaggaggagg gaggatgtga gctgcgcgtg 1140

aagttttccc ggtctgccga tgcacctgca taccagcagg gacagaacca gctgtataac 1200

gagctgaatc tgggccggag agaggagtac gacgtgctgg ataagaggag gggaagggac 1260

cctgagatgg gaggcaagcc tcggagaaag aacccacagg agggcctgta caatgagctg 1320

cagaaggaca agatggccga ggcctatagc gagatcggca tgaagggaga gaggcgccgg 1380

ggcaagggac acgatggcct gtatcagggc ctgtcaaccg ctacaaaaga tacctacgat 1440

gctctgcaca tgcaggctct gccaccaaga 1470

<210> 579
<211> 1482
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 579

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ctgacatgca ccgtgagcgg cgtgtctctg agcacctccg gcatgtgcgt gagctggatc 180

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tactataaca caagcctgaa gacacgcctg accatctcca aggacacctc taagaaccag 300

gtggtgctga caatgaccaa tatggatccc gtggacacag ccacctacta ttgcgcccgg 360

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atcgtgagct ccggaggagg aggaagcgga ggaggagggt ccggaggcgg gggatctgac 480

atcgtgatga cccagtcccc tctgtctctg cccgtgacac ctggcgagcc agcctctatc 540

agctgcagga gctcccagag cctgctgcac tccaacggct acaatcacct ggattggtat 600

ctgcagaagc ctggccagtc ccctcaggtg ctgatctacc tgggctctaa cagggcaagc 660

ggagtgccag acagattctc cggatctgga agcggaaccg acttcaccct gaagatctct 720

cgggtggagg cagaggacgt gggcgtgtat ttctgtatgc aggccctgca gacccccctg 780

acatttggcg gcggcaccaa ggtggagatc aagaccacaa ctcctgcacc taggccacct 840

accccagcac ctacaattgc tagtcagcca ctgtcactgc gaccagaggc atgtcgacct 900

gcagctggag gagcagtgca tacaagggga ctggactttg cctgcgatat ctacatttgg 960

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cagctgtata acgagctgaa tctggggcgg agagaggaat acgacgtgct ggataaaagg 1260

cgcgggagag acccagaaat ggggggaaag ccacgacgga aaaaccccca ggagggactg 1320

tacaatgaac tgcagaagga taaaatggca gaggcctatt ccgaaatcgg gatgaaggga 1380

gaaagaaggc gaggcaaagg acacgacgga ctgtaccagg ggctgtctac cgccacaaag 1440

gacacctatg atgctctgca tatgcaggca ctgccaccca gg 1482

<210> 580
<211> 1452

<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 580
atggctctgc ccgtcaccgc tctgctgctg cctctggctc tgctgctgca cgccgcacga 60

ccacaggtgc agctgcaggt gtccggccct ggcctggtga agccttccga gacactgtct 120

ctgacctgca gcgtgtccgg cggctctatc agctcctact attggtcttg gatcaggcag 180

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aatccctctc tgaagagcag agtgacaatc agcgtggaca cctccaagaa ccagttttcc 300

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tcccctagct ccctgagcgc ctccgtgggc gacagggtga ccatcacatg cagagcctct 540

cagggcatca ggaacgatct gggctggtat cagcagaagc ccggcaaggc ccctaagctg 600

ctgatctacg cagcatctag cctgcagtct ggagtgccaa gccggttctc tggaagcgga 660

tccggcaccg actttaccct gacagtgtcc tctctgcagc cagaggactt cgccacatac 720

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ctggactttg cctgcgatat ctacatttgg gctcctctgg caggaacatg tggcgtgctg 960

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cggttccccg aggaagagga aggaggctgt gagctgcggg tcaagttttc cagatctgca 1140

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agagaggaat acgacgtgct ggataaaagg cgcgggagag acccagaaat gggggggaaag 1260

ccacgacgga aaaaccccca ggagggactg tacaatgaac tgcagaagga taaaatggca 1320

gaggcctatt ccgaaatcgg gatgaaggga gaaagaaggc gaggcaaagg acacgacgga 1380

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ctgccaccca gg 1452

<210> 581
<211> 1443
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 581
atggctctgc ccgtcaccgc tctgctgctg cctctggctc tgctgctgca cgccgcacga 60

ccacaggtgc agctgcagca gtggggagga ggactgctga agccctccga gaccctgtct 120

ctgacatgcg ccgtgtacgg aggaagctcc tctggaaact attggtcctg gatccggcag 180

ccccctggca agagactgga gtggatcggc gagatcaacc acagcggcac cacatcctac 240

aatccttctc tgaagagcag ggtgaccatc tctgtggaca caagcaagaa tcagttctcc 300

ctgaagctga gctccgtgac cgcagcagat acagccgtgt actattgcgc cagaggcgag 360

ctgggaatcg cagacagctg gggacagggc accctggtga cagtgtctag cggaggagga 420

ggaagcggag gaggagggtc cggaggcggg ggatctgata tccagatgac ccagtctccc 480

agcacactgt ccgcctctgt gggcgacagg gtgaccatca catgtcgcgc cagccagtcc 540

atctctcggt ggctggcctg gtaccagcag aagccaggca aggcccccaa gctgctgatc 600

tataaggcct cctctctgga gtccggcgtg ccttctagat tcagcggctc cggctctggc 660

accgagttta ccctgacaat cagctccctg cagccagacg atttcgccac ctactattgt 720

cagcagtaca acagctattc cacctttggc cagggcacaa aggtggagat caagaccaca 780

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ccctttatgc gacctgtgca gaccacacag gaggaagatg ggtgctcctg tcggttcccc 1080

gaggaagagg aaggaggctg tgagctgcgg gtcaagtttt ccagatctgc agacgcccct 1140

gcttaccagc agggccagaa ccagctgtat aacgagctga atctggggcg gagagaggaa 1200

tacgacgtgc tggataaaag gcgcgggaga gacccagaaa tgggggggaaa gccacgacgg 1260

aaaaaccccc aggagggact gtacaatgaa ctgcagaagg ataaaatggc agaggcctat 1320

tccgaaatcg ggatgaaggg agaaagaagg cgaggcaaag gacacgacgg actgtaccag 1380

gggctgtcta ccgccacaaa ggacacctat gatgctctgc atatgcaggc actgccaccc 1440

agg 1443

<210> 582
<211> 1476
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 582
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ccgcagctgc agctgcagga gtccggccct ggcctggtga agccatccga gaccctgtct 120

ctgacctgca cagtgagcgg cggctccatc agctcctcta gctactattg gggctggatc 180

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aagccaggca aggcccccga gctgctgatc tatgccgcct cctctctgca gtctggcgtg 660

ccaagcagat tcagcggctc cggctctggc accgacttta ccctgacaat cagctccctg 720

cagcccgagg acttcgccac atactattgt ctgcaggatt acaattatcc cctgaccttt 780

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agggaccctg agatgggagg caagcctcgg agaaagaacc cacaggaggg cctgtacaat 1320

gagctgcaga aggacaagat ggccgaggcc tatagcgaga tcggcatgaa gggagagagg 1380

cgccggggca agggacacga tggcctgtat cagggcctgt caaccgctac aaaagatacc 1440

tacgatgctc tgcacatgca ggctctgcca ccaaga 1476

<210> 583
<211> 1455
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 583
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ccacaggtgc agctgcagca gtggggagca ggactgctga agccctccga gaccctgtct 120

ctgacatgcg ccgtgtacgg aggaagcttc tccggatact attggtcctg gatcaggcag 180

ccccctggca agggactgga gtggatcggc gagatcatcc actctggcag ctccaactat 240

aatccttctc tgaagagccg ggtgtctatc agcgtggaca cctctaagaa ccagttcagc 300

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cagtccccaa gctccctgag cgcctccgtg ggcgataggg tggccatcac atgtagggca 540

agccagggaa tcagggacga tctgggctgg taccagcaga agccaggcaa ggcccccaag 600

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agatccgaca ccgacttcac cctgacaatc tcctctctgc agcctgagga cttcgccaca 720

tactattgtc tgcaggacta cgattatcca ctgacctttg gcggcggcac aaaggtggag 780

atcaagacca caactcctgc acctaggcca cctaccccag cacctacaat tgctagtcag 840

ccactgtcac tgcgaccaga ggcatgtcga cctgcagctg gaggagcagt gcatacaagg 900

ggactggact ttgcctgcga tatctacatt tgggctcctc tggcaggaac atgtggcgtg 960

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tgtcggttcc ccgaggaaga ggaaggaggc tgtgagctgc gggtcaagtt ttccagatct 1140

gcagacgccc ctgcttacca gcagggccag aaccagctgt ataacgagct gaatctgggg 1200

cggagagagg aatacgacgt gctggataaa aggcgcggga gagacccaga aatgggggga 1260

aagccacgac ggaaaaaccc ccaggaggga ctgtacaatg aactgcagaa ggataaaatg 1320

gcagaggcct attccgaaat cgggatgaag ggagaaagaa ggcgaggcaa aggacacgac 1380

ggactgtacc aggggctgtc taccgccaca aaggacacct atgatgctct gcatatgcag 1440

gcactgccac ccagg 1455

<210> 584
<211> 1461
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 584
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ccgcaggtgc agctgcagga gtccggccct ggcctggtga agccaagcgg caccctgtcc 120

ctgacatgcg ccgtgtctgg cggcagcatc agctccaaca attggtggag ctgggtgagg 180

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tacaagccat ccctgaagtc tcgcgtgaca atctctgtgg acaagagcaa gaaccagttc 300

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<211> 1455
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<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
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gcagaggcct attccgaaat cgggatgaag ggagaaagaa ggcgaggcaa aggacacgac 1380

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polynucleotide"

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<211> 1458
<212> DNA
<213> Artificial Sequence

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<221> source
<223> /note="Description of Artificial Sequence: Synthetic
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tcctgtcggt tccccgagga agaggaagga ggctgtgagc tgcgggtcaa gttttccaga 1140

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<210> 588
<211> 1443
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
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ctgacatgcg ccgtgttcgg cggctctttt agcggcgact actggagctg gatcaggcag 180

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tataaggcat cctctctgga gagcggagtg ccatccaggt tctctggaag cggatccgga 660

accgagttta ccctgacaat cagctccctg cagcctgacg atttcgccac atactattgt 720

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ccctttatgc gacctgtgca gaccacacag gaggaagatg ggtgctcctg tcggttcccc 1080

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aaaaaccccc aggagggact gtacaatgaa ctgcagaagg ataaaatggc agaggcctat 1320

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agg 1443

<210> 589
<211> 1485
<212> DNA
<213> Artificial Sequence

<220>
<221> source
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polynucleotide"

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ggagagaggc gccggggcaa gggacacgat ggcctgtatc agggcctgtc aaccgctaca 1440

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<210> 590
<211> 1458
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

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acctactatt gtcaccaggc caattccttc ccttttacat tcggccaggg caccaagctg 780

gagatcaaga ccacaactcc tgcacctagg ccacctaccc cagcacctac aattgctagt 840

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aggggactgg actttgcctg cgatatctac atttgggctc ctctggcagg aacatgtggc 960

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<211> 1455
<212> DNA
<213> Artificial Sequence

<220>
<221> source
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polynucleotide"

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gtgtcttgca aggtgagcgg ctacaccctg acagagctgt ctatgcactg ggtgcgccag 180

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gcagaggcct attccgaaat cgggatgaag ggagaaagaa ggcgaggcaa aggacacgac 1380

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<210> 592
<211> 1458
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

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agcggatccg gaaccgagtt taccctgaca atctctagcc tgcagcctga ggacttcgcc 720

acatactatt gtctgcagta taatagctac ccacggacct ttggccaggg cacaaaggtg 780

gagatcaaga ccacaactcc tgcacctagg ccacctaccc cagcacctac aattgctagt 840

cagccactgt cactgcgacc agaggcatgt cgacctgcag ctggaggagc agtgcataca 900

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tcctgtcggt tccccgagga agaggaagga ggctgtgagc tgcgggtcaa gttttccaga 1140

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atggcagagg cctattccga aatcgggatg aagggagaaa gaaggcgagg caaaggacac 1380

gacggactgt accaggggct gtctaccgcc acaaaggaca cctatgatgc tctgcatatg 1440

caggcactgc cacccagg 1458

<210> 593
<211> 1443
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 593
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ccacaggtgc agctgcagga gagcggccct ggcctggtga agccatccgg caccctgtct 120

ctgacatgcg ccgtgagcgg cgactccatc agctccaact ggtggacatg ggtgaggcag 180

ccccctggca agggactgga gtggatcggc gatatccacc actccggctc taccaactac 240

aatccatctc tgaagagccg cgtgacaatg agcgtggaca agtccgagaa tcagttctcc 300

ctgaagctgt ctagcgtgac cgccgccgat acagccgtgt tttactgcgc cagagacgga 360

ggaggcaccc tggattattg gggccagggc accctggtga cagtgtcctc tggaggagga 420

ggaagcggag gaggagggtc cggaggcggg ggatctgaca tccagatgac ccagagccca 480

tccacactgt ctgccagcgt gggcgatcgg gtgaccatca catgtagagc ctcccagtct 540

atcagctcct ggctggcctg gtaccagcag aagccaggca aggcccccaa gctgctgatc 600

tataaggcat ctaccctgga gagcggagtg ccatccaggt tcagcggatc cggatctggc 660

acagagttta ccctgacaat ctctagcctg cagcctgacg atttcgccac ctactattgt 720

cagcagtaca acggctatag cacctttggc cagggcacaa aggtggagat caagaccaca 780

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cgaccagagg catgtcgacc tgcagctgga ggagcagtgc atacaagggg actggacttt 900

gcctgcgata tctacatttg ggctcctctg gcaggaacat gtggcgtgct gctgctgagc 960

ctggtcatca ctctgtactg caagcgaggc cggaagaaac tgctgtatat tttcaaacag 1020

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cccttttatgc gacctgtgca gaccacacag gaggaagatg ggtgctcctg tcggttcccc     1080

gaggaagagg aaggaggctg tgagctgcgg gtcaagtttt ccagatctgc agacgcccct     1140

gcttaccagc agggccagaa ccagctgtat aacgagctga atctggggcg gagagaggaa     1200

tacgacgtgc tggataaaag gcgcgggaga gacccagaaa tgggggggaaa gccacgacgg     1260

aaaaaccccc aggagggact gtacaatgaa ctgcagaagg ataaaatggc agaggcctat     1320

tccgaaatcg ggatgaaggg agaaagaagg cgaggcaaag gacacgacgg actgtaccag     1380

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agg                                                                  1443
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<210> 594
<211> 1485
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 594
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cctcaggtgc agctggtgca gtctggcgcc gaggtgaaga agccaggcag ctccgtgaag      120

gtgtcctgca aggcctctgg cggcacattc accaactatt gtatcagctg ggtgagacag      180

gccccaggcc agggactgga gtggatggga ggaatcatcc ccatcttcgg caccacaaat      240

tatgcccaga cctttcaggg ccgggtgaca atcaccgccg acaagtctac aagcaccgcc      300

tacatggagc tgtctagcct gagatccgag gatacagccg tgtactattg cgccagagac      360

aacggcgata gatactatta cgacatggac gtgtggggcc agggcaccac agtgaccgtg      420

tcctctggag gaggaggcag cggcggagga ggctccggag gcggcggctc tggcggcggc      480

ggctcccagt ctgtgctgac acagccacct agcgtgtccg ccgcccctgg ccagaaggtg      540

accatctctt gtagcggcag ctcctctaat atcggcaaca attacgtgag ctggtaccag      600

cagctgccag gcacagcccc caagctgctg atctacgaca acaataagag gcctagcggc      660

atcccagatc gcttctccgg ctctaagagc ggcacatccg ccaccctggg catcacagga      720
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ctgcagaccg gcgacgaggc agattattac tgcggaacct gggacagctc cctgagcgcc 780

gtggtgtttg gaggaggcac aaagctgacc gtgctgacca caacccctgc ccctaggcca 840

cctaccccag cacctacaat tgctagtcag ccactgtcac tgcgaccaga ggcatgtcga 900

cctgcagctg gaggagcagt gcatacaagg ggactggact ttgcctgcga tatctacatt 960

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cagaccacac aggaggaaga tgggtgctcc tgtcggttcc ccgaggaaga ggaaggaggc 1140

tgtgagctgc gggtcaagtt ttccagatct gcagacgccc ctgcttacca gcagggccag 1200

aaccagctgt ataacgagct gaatctgggg cggagagagg aatacgacgt gctggataaa 1260

aggcgcggga gagacccaga aatgggggga aagccacgac ggaaaaaccc ccaggaggga 1320

ctgtacaatg aactgcagaa ggataaaatg gcagaggcct attccgaaat cgggatgaag 1380

ggagaaagaa ggcgaggcaa aggacacgac ggactgtacc aggggctgtc taccgccaca 1440

aaggacacct atgatgctct gcatatgcag gcactgccac ccagg 1485

<210> 595
<211> 1491
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 595
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ccacaggtgc ccctggtgca gagcggagca gaggtgaaga agcccggcag ctccgtgaag 120

gtgagctgca aggcctccgg cggcacattc tccacctatt ctatcagctg ggtgcggcag 180

gcccctggcc agggactgga gtggatggga ggaatcatcc caatcttcgg caccacaaac 240

tatgcccaga agtttcaggg cagggtgaca atcaccgccg acaagtccac atctaccgcc 300

tacatggagc tgtctagcct gaggtccgag gacacagccg tgtactattg tgcccgcgat 360

ggcgagggct cttactatta ctattacgga atggacgtgt ggggacaggg aaccacagtg 420

accgtgtcct ctggcggcgg cggctctgga ggaggaggca gcggcggagg aggctccgga 480

ggcggcggca gccagtccgt gctgacacag ccaccttctg tgagcgccgc ccctggccag 540

aaggtgacca tctcctgctc tggcagctcc tctaatatcg gcaacaatta tgtgagctgg 600

taccagcagc tgcctggcac agccccaaag ctgctgatct acgacaacaa taagcggccc 660

tccggcatcc ctgatagatt ctttggctct aagttcggca caagcgccac cctgggcatc 720

acaggactgc agaccggcga cgaggcagat tattactgtg gaacctggga cagctccctg 780

agcgccgtgg tgtttggagg aggcacaaag ctgaccgtgc tgaccacaac ccctgcccct 840

aggccaccta ccccagcacc tacaattgct agtcagccac tgtcactgcg accagaggca 900

tgtcgacctg cagctggagg agcagtgcat acaaggggac tggactttgc ctgcgatatc 960

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cctgtgcaga ccacacagga ggaagatggg tgctcctgtc ggttccccga ggaagaggaa 1140

ggaggctgtg agctgcgggt caagttttcc agatctgcag acgcccctgc ttaccagcag 1200

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gataaaaggc gcgggagaga cccagaaatg gggggaaagc cacgacggaa aaacccccag 1320

gagggactgt acaatgaact gcagaaggat aaaatggcag aggcctattc cgaaatcggg 1380

atgaagggag aaagaaggcg aggcaaagga cacgacggac tgtaccaggg gctgtctacc 1440

gccacaaagg acacctatga tgctctgcat atgcaggcac tgccacccag g 1491

<210> 596
<211> 1470
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 596
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ccacaggtgc agctgcagga gtccggccct ggcctggtga agccatctga gaccctgagc 120

ctgacatgta ccgtgtccgg cgattctatc agctcctact attggtcttg gatcaggcag 180

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ccccctggca agggactgga gtggatcggc tacatgtact atagcggcat cacaaactat      240

aatcctagcc tgaagtcccg cgtgaacatc tccctggaca cctctaagaa tcagttcagc      300

ctgaagctgg gctccgtgac agcagcagat accgccgtgt actattgcgc aaggctgtcc      360

gtggcaggct tctactttga ctattggggc cagggcacac tggtgaccgt gtctagcggc      420

ggcggcggct ctggaggagg aggcagcggc ggaggaggct ccggcggcgg cggctctgag      480

atcgtgctga cacagagccc aggcaccctg agcctgtccc ccggcgagcg ggccacactg      540

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ggccaggccc ccagactgct gatctacggc gcctcctcta gggccacaga catcccagat      660

cgcttctccg gctctggcag cggaaccgac tttacactga ccatcaacag actggagcct      720

gaggatttcg ccgtgtacta ttgccagcag tacggcacaa gcccactgac ctttggcggc      780

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acaattgcta gtcagccact gtcactgcga ccagaggcat gtcgacctgc agctggagga      900

gcagtgcata caaggggact ggactttgcc tgcgatatct acatttgggc tcctctggca      960

ggaacatgtg gcgtgctgct gctgagcctg gtcatcactc tgtactgcaa gcgaggccgg     1020

aagaaactgc tgtatatttt caaacagccc tttatgcgac ctgtgcagac cacacaggag     1080

gaagatgggt gctcctgtcg gttccccgag gaagaggaag gaggctgtga gctgcgggtc     1140

aagttttcca gatctgcaga cgcccctgct taccagcagg gccagaacca gctgtataac     1200

gagctgaatc tggggcggag agaggaatac gacgtgctgg ataaaaggcg cgggagagac     1260

ccagaaatgg ggggaaagcc acgacggaaa aacccccagg agggactgta caatgaactg     1320

cagaaggata aaatggcaga ggcctattcc gaaatcggga tgaagggaga aagaaggcga     1380

ggcaaaggac acgacggact gtaccagggg ctgtctaccg ccacaaagga cacctatgat     1440

gctctgcata tgcaggcact gccacccagg                                      1470
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<210> 597
<211> 1470
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic

polynucleotide"

<400> 597
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ccacaggtgc agctgcagga gagcggccct ggcctggtga agccatctga gaccctgagc 120

ctgacatgta ccgtgagctc cgattccatc tctagctact attggtcttg gatcagacag 180

ccccctggca agggcctgga gtggatctcc tacatctact attccggcat ctctaactat 240

aatcctagcc tgaagagccg ggtgagcatc tctgtggaca cctccaagaa ccagttttct 300

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gtggccggct tctttttcga caattggggc cagggcacac tggtgaccgt gagctccgga 420

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cgcttttccg gctctggcag cggcaccgat ttcacactga ccatctctcg cctggccct 720

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ccagaaatgg ggggaaagcc acgacggaaa aacccccagg agggactgta caatgaactg 1320

cagaaggata aaatggcaga ggcctattcc gaaatcggga tgaagggaga aagaaggcga 1380

ggcaaaggac acgacggact gtaccagggg ctgtctaccg ccacaaagga cacctatgat 1440

gctctgcata tgcaggcact gccacccagg 1470

<210> 598
<211> 1494
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

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ctgacctgtg ccatctctgg cgacagcgtg agctccaaca gcgccacatg gaattggatc 180

aggcagtccc catctcgcgg cctggagtgg ctgggacgga cctactatag atccaagtgg 240

tacgacgatt atgccgtgtc cgtgaagtct cgcatcacaa tcaaccctga cacctccaag 300

aatcacctgt ctctgcacct gaacagcgtg acaccagagg ataccgccgt gtactattgc 360

gcaggaggag gactggtggg cgcccctgac ggattcgacg tgtggggcca gggcacaatg 420

gtgaccgtgt ctagcggcgg cggcggctct ggaggaggag gcagcggcgg aggaggctcc 480

ggaggcggcg gctctcagtc cgtgctgaca cagcccccтt ctgccagcgg aacacccggc 540

cagcgggtga ccatctcctg ttctggctcc tctagcaaca tcggctccga ccctgtgaat 600

tggtaccagc agctgccagg cacagccccc aagctgctga tctatagcaa caatcagcgg 660

ccttccggcg tgccagatag attcagcggc tccaagtctg gcaccagcgc ctccctggca 720

atctctggac tgcagagcga ggacgaggcc gattactatt gctccgcctg ggacgattct 780

ctgaatggct acgtgtttgg cacaggcacc aaggtgaccg tgctgaccac aaccccagca 840

cctaggccac ctacacctgc accaaccatc gccagccagc ctctgtccct gagaccagag 900

gcctgtaggc cagcagcagg aggagcagtg cacacccggg gcctggactt cgcctgcgat 960

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gagggaggat gtgagctgcg cgtgaagttt tcccggtctg ccgatgcacc tgcataccag 1200

cagggacaga accagctgta taacgagctg aatctgggcc ggagagagga gtacgacgtg 1260

ctggataaga ggaggggaag ggaccctgag atgggaggca agcctcggag aaagaaccca 1320

caggagggcc tgtacaatga gctgcagaag gacaagatgg ccgaggccta tagcgagatc 1380

ggcatgaagg gagagaggcg ccggggcaag ggacacgatg gcctgtatca gggcctgtca 1440

accgctacaa aagataccta cgatgctctg cacatgcagg ctctgccacc aaga 1494

<210> 599
<211> 1479
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 599
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ccgcaggtgc agctggtgca gagcggagca gaggtgaaga agcctggcgc cagcgtgaag 120

gtgtcctgca aggcctctgg ctacacattc accggctatt ctatccactg ggtgcgccag 180

gcccctggcc agggactgga gtggatgggc tggatcaacc caaatagcgg cggcaccttc 240

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gtgccatccc ggttcagcgg ctccggctct ggaacagact ttacactgac catcagctcc 720

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ccactggcag gaacatgtgg cgtgctgctg ctgtccctgg tcatcaccct gtactgcaag 1020

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acccaggagg aggacggctg cagctgtagg ttcccagagg aggaggaggg aggatgtgag 1140

ctgcgcgtga agttttcccg gtctgccgat gcacctgcat accagcaggg acagaaccag 1200

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acctacgatg ctctgcacat gcaggctctg ccaccaaga 1479

<210> 600
<211> 1479
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

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cagaagcccg gcaaggtgcc taagcggctg atctatgcag catcctctct gcagagcgga 660

gtgccttcca gattctctgg cagcggctcc ggcacagagt ttacactgac catcagctcc 720

ctgcagcccg aggacttcgc cacctacttt tgtctgcagc acgattcctt ccctctgaca 780

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ccactggcag gaacatgtgg cgtgctgctg ctgtccctgg tcatcaccct gtactgcaag 1020

agaggcagga agaagctgct gtatatcttc aagcagccct tcatgagacc cgtgcagaca 1080

acccaggagg aggacggctg cagctgtagg ttcccagagg aggaggaggg aggatgtgag 1140

ctgcgcgtga agttttcccg gtctgccgat gcacctgcat accagcaggg acagaaccag 1200

ctgtataacg agctgaatct gggccggaga gaggagtacg acgtgctgga taagaggagg 1260

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<210> 601
<211> 1470
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

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ctgacatgta ccgtgagctc cgattctatc agcaactact attggagctg gatcaggcag 180

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ggccaggccc ccagacacct gatctacgga gcaagctcca gggccaccgg catccccgac 660

cgcttctccg gctctggcag cggcacagac ttcatcctga ccatctccag actggagcct 720

gaggacttcg ccgtgtacta ttgccagcag tacgatacaa gcccactgac ctttggcggc 780

ggcaccaagg tggagatcaa gaccacaacc ccagcaccta ggccacctac acctgcacca 840

accatcgcca gccagcctct gtccctgaga ccagaggcct gtaggccagc agcaggagga 900

gcagtgcaca cccggggcct ggacttcgcc tgcgatatct acatctgggc accactggca 960

ggaacatgtg gcgtgctgct gctgtccctg gtcatcaccc tgtactgcaa gagaggcagg 1020

aagaagctgc tgtatatctt caagcagccc ttcatgagac ccgtgcagac aacccaggag 1080

gaggacggct gcagctgtag gttcccagag gaggaggagg gaggatgtga gctgcgcgtg 1140

aagttttccc ggtctgccga tgcacctgca taccagcagg gacagaacca gctgtataac 1200

gagctgaatc tgggccggag agaggagtac gacgtgctgg ataagaggag gggaagggac 1260

cctgagatgg gaggcaagcc tcggagaaag aacccacagg agggcctgta caatgagctg 1320

cagaaggaca agatggccga ggcctatagc gagatcggca tgaagggaga gaggcgccgg 1380

ggcaagggac acgatggcct gtatcagggc ctgtcaaccg ctacaaaaga tacctacgat 1440

gctctgcaca tgcaggctct gccaccaaga 1470

<210> 602
<211> 1494
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 602
atggcactgc cagtgacagc cctgctgctg ccactggccc tgctgctgca cgccgcccgg 60

ccacaggtgc agctgcagca gagcggccct ggcctggtga agcctagcca gacactgtcc 120

ctgacctgtg ccatctctgg cgacagcgtg agctccaaca gcgtggtgtg gaattggatc 180

aggcagtccc catctcgcgg cctggagtgg ctgggacgga cctactatag atccaagtgg 240

tacgacgatt atgccgtgtc cgtgaagtct aggatcacaa tcaaccctga caccagcaag 300

aatcagttct ccctgcagct gaactctgtg acaccagagg ataccgccgt gtaccactgc 360

gccagaggcg gaatcgtggg cgcccctgac gcctttgata tctggggcca gggcacaatg 420

gtgaccgtgt ctagcggagg aggaggcagc ggaggaggag gctccggagg cggcggctct 480

ggcggcggcg gcagccagtc cgtgctgacc cagccacctt ctgccagcgg aacacccggc 540

cagcgggtga ccatctcctg ttctggctcc tctagcaaca tcggctctga ccctgtgagc 600

tggtaccagc agttcccagg cacagccccc aagctgctga tctataccaa caatcagcgg 660

cctagcggcg tgccagatcg gttcagcggc tccaagtctg gcacaagcgc ctccctggca 720

atctccggac tgcagtctga ggacgaggcc gattactatt gcgccgcctg ggacgattcc 780

ctgaatggcc acgtgttcgg cacaggcacc aaggtgaccg tgctgaccac aacccccgcc 840

cctaggccac ctaccccagc acctacaatt gctagtcagc cactgtcact gcgaccagag 900

gcatgtcgac ctgcagctgg aggagcagtg catacaaggg gactggactt tgcctgcgat 960

atctacattt gggctcctct ggcaggaaca tgtggcgtgc tgctgctgag cctggtcatc 1020

actctgtact gcaagcgagg ccggaagaaa ctgctgtata ttttcaaaca gcccttt atg 1080

cgacctgtgc agaccacaca ggaggaagat gggtgctcct gtcggttccc cgaggaagag 1140

gaaggaggct gtgagctgcg ggtcaagttt tccagatctg cagacgcccc tgcttaccag 1200

cagggccaga accagctgta taacgagctg aatctggggc ggagagagga atacgacgtg 1260

ctggataaaa ggcgcgggag agacccagaa atgggggaa agccacgacg gaaaaacccc 1320

caggagggac tgtacaatga actgcagaag gataaaatgg cagaggccta ttccgaaatc 1380

gggatgaagg gagaaagaag gcgaggcaaa ggacacgacg gactgtacca ggggctgtct 1440

accgccacaa aggacaccta tgatgctctg catatgcagg cactgccacc cagg 1494

<210> 603
<211> 1494
<212> DNA
<213> Artificial Sequence

<220>
<221> source

<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 603
atggccctgc cagtgaccgc cctgctgctg ccactggccc tgctgctgca cgccgcccgg 60

ccacaggtgc agctgcagca gtccggccct ggcctggtga agccttctca gacactgagc 120

ctgacctgtg ccatctccgg cgactctgtg agctccaact ctgccgtgtg gaattggatc 180

agacagtccc cctctagagg cctggagtgg ctgggctgga catactatcg gagcaagtac 240

tataacgact acgccgtgag cctgaagtcc agaatcacaa tcaaccctga taccagcaag 300

aatcagttct ccctgcagct gaacagcctg acaccagagg ataccgccgt gtactattgc 360

accaggggcg gaatcgtggg cgcccctgac ggctttgata tctggggcca gggcacaatg 420

gtgaccgtgt ctagcggagg aggaggcagc ggaggaggag gctccggagg cggcggctct 480

ggcggcggcg gcagccagtc cgccctgaca cagccacctt ctgccagcgg aacacccggc 540

cagcgcgtga ccatctcctg ttctggcagc aactccaata tcggctccaa ccctatcaat 600

tggtaccagc agctgccagg cacagccccc aagctgctga tctatagcaa caatcagagg 660

ccttccggcg tgccagaccg cttctctggc agcaagtccg gcacctctgc cagcctggca 720

atctccggac tgcagtctga ggacgaggcc gattactatt gcgcagcatg ggacgatagc 780

ctgaacggac acgtgtttgg cacaggcacc aaggtgaccg tgctgaccac aacccccgcc 840

cctaggccac ctaccccagc acctacaatt gctagtcagc cactgtcact gcgaccagag 900

gcatgtcgac ctgcagctgg aggagcagtg catacaaggg gactggactt tgcctgcgat 960

atctacattt gggctcctct ggcaggaaca tgtggcgtgc tgctgctgag cctggtcatc 1020

actctgtact gcaagcgagg ccggaagaaa ctgctgtata ttttcaaaca gcccttt atg 1080

cgacctgtgc agaccacaca ggaggaagat gggtgctcct gtcggttccc cgaggaagag 1140

gaaggaggct gtgagctgcg ggtcaagttt tccagatctg cagacgcccc tgcttaccag 1200

cagggccaga accagctgta taacgagctg aatctggggc ggagagagga atacgacgtg 1260

ctggataaaa ggcgcgggag agacccagaa atgggggaa agccacgacg gaaaaacccc 1320

caggagggac tgtacaatga actgcagaag gataaaatgg cagaggccta ttccgaaatc 1380

gggatgaagg gagaaagaag gcgaggcaaa ggacacgacg gactgtacca ggggctgtct 1440

accgccacaa aggacaccta tgatgctctg catatgcagg cactgccacc cagg 1494

<210> 604
<211> 1470
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 604
atggcactgc ctgtgacagc cctgctgctg ccactggccc tgctgctgca cgccgcccgg 60

ccccaggtgc agctgcagga gagcggccca ggcctggtga agccaagcga gaccctgtcc 120

ctgacatgta ccgtgtctgg cggcagcatc agctcctact attggtcctg gatcagacag 180

tctcctggca agggcctgga gtggatcggc tacgtgtact attccgacat caccaactat 240

aatccatccc tgaagtctag agtgacaatc tctgtggata ccagcaagaa ccagttcagc 300

ctgaacctga acagcgtgac agccgccgac accgccttct acttttgcgc caggatcggc 360

gtggccggct tctactttga ttattggggc cagggcacac tggtgaccgt gtctagcggc 420

ggcggcggct ctggaggagg aggcagcggc ggaggaggct ccggcggcgg cggctctgag 480

atcgtgctga cacagagccc agacaccctg agcctgtccc ctggcgagag ggccacactg 540

tcctgtaggg catctcagag cgtgtcccgg agatacctgg cctggtatca gcagaagcct 600

ggccaggcac ctcgcctgct gatctacgga gcatcctctc gggccacagg catccccgac 660

agattctctg gcagcggctc cggaaccgac ttcaccctga ccatctctag gctggagcca 720

gaggatttcg aggtgtacta ttgccagcag tatggcacat ccccaatcac ctttggccag 780

ggaacccgcc tggagatcaa gaccacaacc cctgccccta ggccacctac cccagcacct 840

acaattgcta gtcagccact gtcactgcga ccagaggcat gtcgacctgc agctggagga 900

gcagtgcata caaggggact ggactttgcc tgcgatatct acatttgggc tcctctggca 960

ggaacatgtg gcgtgctgct gctgagcctg gtcatcactc tgtactgcaa gcgaggccgg 1020

aagaaactgc tgtatatttt caaacagccc tttatgcgac ctgtgcagac cacacaggag 1080

gaagatgggt gctcctgtcg gttccccgag gaagaggaag gaggctgtga gctgcgggtc 1140

aagttttcca gatctgcaga cgcccctgct taccagcagg gccagaacca gctgtataac 1200

gagctgaatc tggggcggag agaggaatac gacgtgctgg ataaaaggcg cgggagagac 1260

ccagaaatgg ggggaaagcc acgacggaaa aacccccagg agggactgta caatgaactg 1320

cagaaggata aaatggcaga ggcctattcc gaaatcggga tgaagggaga aagaaggcga 1380

ggcaaaggac acgacggact gtaccagggg ctgtctaccg ccacaaagga cacctatgat 1440

gctctgcata tgcaggcact gccacccagg 1470

<210> 605
<211> 1494
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 605
atggccctgc cagtgaccgc cctgctgctg ccactggccc tgctgctgca cgccgcccgg 60

ccacagatcc agctgcagca gtccggccct ggcctggtga agcctagcca gacactgtcc 120

ctgacctgcg ccatctctgg cgacagcgtg agctccaact ctgccgtgtg gaattggatc 180

aggcagtccc catctcgcgg cctggagtgg ctgggaagga catactatag aagcaagtgg 240

tacaacgact atgccgtgtc cgtgaagtct aggatcacaa tcaagcctga taccgccaag 300

aaccagttct ccctgcagct gaacagcgtg acaccagagg ataccgccgt gtactatttc 360

acccgcggcg gaatcgtggg cgcccctgac gcctttgata tctggggcca gggcacaatg 420

gtgaccgtgt ctagcggagg aggaggcagc ggaggaggag gctccggagg cggcggctct 480

ggcggcggcg gcagccagtc cgtgctgaca cagccccctt ctgccagcgg aacacccggc 540

cagcgggtga ccatctcctg ctctggctcc tctagcaaca tcggctccga ccctatcaat 600

tggtaccagc aggtgccagg cacagccccc aagctgctga tctatagcaa caatcagcgg 660

ccttccggcg tgccagatag attcagcggc tccaagtctg gcaccagcgc ctccctggca 720

atctctggac tgcagagcga ggacgaggcc gattactatt gtgccgcctg ggacgatagc 780

ctgaatggct acgtgtttgg cacaggcacc aaggtgaccg tgctgaccac aacccccgcc 840

cctaggccac ctaccccagc acctacaatt gctagtcagc cactgtcact gcgaccagag 900

gcatgtcgac ctgcagctgg aggagcagtg catacaaggg gactggactt tgcctgcgat 960

atctacattt gggctcctct ggcaggaaca tgtggcgtgc tgctgctgag cctggtcatc 1020

actctgtact gcaagcgagg ccggaagaaa ctgctgtata ttttcaaaca gccctttatg 1080

cgacctgtgc agaccacaca ggaggaagat gggtgctcct gtcggttccc cgaggaagag 1140

gaaggaggct gtgagctgcg ggtcaagttt tccagatctg cagacgcccc tgcttaccag 1200

cagggccaga accagctgta taacgagctg aatctggggc ggagagagga atacgacgtg 1260

ctggataaaa ggcgcgggag agacccagaa atgggggaa agccacgacg gaaaaacccc 1320

caggagggac tgtacaatga actgcagaag gataaaatgg cagaggccta ttccgaaatc 1380

gggatgaagg gagaaagaag gcgaggcaaa ggacacgacg gactgtacca ggggctgtct 1440

accgccacaa aggacaccta tgatgctctg catatgcagg cactgccacc cagg 1494

<210> 606
<211> 1494
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 606
atggccctgc cagtgaccgc cctgctgctg ccactggccc tgctgctgca cgccgcccgg 60

ccacaggtgc agctgcagca gagcggccct ggcctggtga agcctagcga gacactgtcc 120

ctgacctgtg ccatctctgg cgacagcgtg agctccaaca gcgccacatg gaattggatc 180

aggcagtccc catctcgcgg cctggagtgg ctgggacgga cctactatag atccgagtgg 240

tacaacgact atgccgtgtc cgtgaagtct cggatcacaa tcaaccctga tacctccaag 300

aatcacctgt ctctgcacct gaatagcgtg acaccagagg ataccgccgt gtactattgc 360

gcaggaggag gaatcgtggg cgcccctgac ggattcgacg tgtggggcca gggcacaatg 420

gtgaccgtgt ctagcggagg aggaggctcc ggaggaggag gctctggcgg cggcggcagc 480

ggaggcggcg gcagccagtc cgtgctgaca cagccacctt ctgccagcgg aacacccggc 540

cagagggtga ccatctcctg ttctggctcc tctagcaaca tcggcagcga ccctgtgatc 600

tggtaccagc agctgccacg cacagccccc aagctgctga tctattccaa caatcagcgg 660

ccttctggcg tgccagatag attcagcggc tccaagtctg gcaccagcgc ctccctggca 720

atctctggac tgcagagcga ggacgaggcc gattactatt gcgccgcctg ggacgattcc 780

ctgaatggct acgtgtttgg cacaggcacc aaggtgaccg tgctgaccac aacccccgcc 840

cctaggccac ctaccccagc acctacaatt gctagtcagc cactgtcact gcgaccagag 900

gcatgtcgac ctgcagctgg aggagcagtg catacaaggg gactggactt tgcctgcgat 960

atctacattt gggctcctct ggcaggaaca tgtggcgtgc tgctgctgag cctggtcatc 1020

actctgtact gcaagcgagg ccggaagaaa ctgctgtata ttttcaaaca gcccttt atg 1080

cgacctgtgc agaccacaca ggaggaagat gggtgctcct gtcggttccc cgaggaagag 1140

gaaggaggct gtgagctgcg ggtcaagttt tccagatctg cagacgcccc tgcttaccag 1200

cagggccaga accagctgta taacgagctg aatctggggc ggagagagga atacgacgtg 1260

ctggataaaa ggcgcgggag agacccagaa atgggggaa agccacgacg gaaaaacccc 1320

caggagggac tgtacaatga actgcagaag gataaaatgg cagaggccta ttccgaaatc 1380

gggatgaagg gagaaagaag gcgaggcaaa ggacacgacg gactgtacca ggggctgtct 1440

accgccacaa aggacaccta tgatgctctg catatgcagg cactgccacc cagg 1494

<210> 607
<211> 1494
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 607
atggcactgc cagtgacagc cctgctgctg ccactggccc tgctgctgca cgccgcccgg 60

ccacaggtgc agctgcagca gagcggccct ggcctggtga agcctagcca gacactgtcc 120

ctgacctgtg ccatctctgg cgacagcgtg agctccaaca gcgccacctg gaattggatc 180

aggcagtccc catctacagg actggagtgg ctggcacgga cctactatag atccaagtgg 240

tacaacgact atgaggtgtc cgtgaagtct cagatcacaa tcaaccctga tacctccaag 300

aatcagttct ctctgcagct gaatagcgtg acaccagagg ataccgccgt gtactattgc 360

gccagaggcg gaatcgtggg cgcccctgac gcctttgata tctggggcca gggcacaatg 420

gtgaccgtgt ctagcggagg aggaggctcc ggaggaggag gctctggcgg cggcggcagc 480

ggaggcggcg gcagccagtc cgtgctgaca cagccccctt ctgccagcgg aacacccggc 540

cagggagtga ccatctcctg ttctggctcc tctagcaaca tcggcagcaa ccctgtgaat 600

tggtaccagc agctgccagg cacagccccc aagctgctga tctattccaa caatcagagg 660

ccttctggcg tgccagaccg cttcagcgat tccaagtctg gcaccagcgc ctccctggca 720

atctctggac tgcagagcga ggacgaggcc gattactatt gctccgcctg ggacgattgg 780

ctgaatggct acgtgtttgg cacaggcacc aaggtgaccg tgctgaccac aacccccgcc 840

cctaggccac ctaccccagc acctacaatt gctagtcagc cactgtcact gcgaccagag 900

gcatgtcgac ctgcagctgg aggagcagtg catacaaggg gactggactt tgcctgcgat 960

atctacattt gggctcctct ggcaggaaca tgtggcgtgc tgctgctgag cctggtcatc 1020

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cgacctgtgc agaccacaca ggaggaagat gggtgctcct gtcggttccc cgaggaagag 1140

gaaggaggct gtgagctgcg ggtcaagttt tccagatctg cagacgcccc tgcttaccag 1200

cagggccaga accagctgta taacgagctg aatctggggc ggagagagga atacgacgtg 1260

ctggataaaa ggcgcgggag agacccagaa atgggggaa agccacgacg gaaaaacccc 1320

caggagggac tgtacaatga actgcagaag gataaaatgg cagaggccta ttccgaaatc 1380

gggatgaagg gagaaagaag gcgaggcaaa ggacacgacg gactgtacca ggggctgtct 1440

accgccacaa aggacaccta tgatgctctg catatgcagg cactgccacc cagg 1494

<210> 608
<211> 1467
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 608
atggcactgc cagtgacagc cctgctgctg cctctggccc tgctgctgca cgccgccagg 60

cctcaggtgc agctgcagga gtccggccct ggcctggtga agccatccga gaccctgtct 120

ctgacatgca ccgtgtccgg cgattctatc aacaattact tttggagctg gatcagacag 180

ccccctggca agggactgga gtggatcggc tacttctatc acaggggcgg caacaattat 240

aacccaagcc tgaagtcccg cgtgacaatc agcatcgaca cctccaagaa tcagttcagc 300

ctgaacctga acagcgtgac aagcgccgat accgccgtgt actattgtgc ccggctggcc 360

ctggccggct tctttttcga ctactggggc cagggcacac tggtgaccgt gagctccgga 420

ggaggaggct ccggcggcgg aggctctggc ggcggcggct ccggaggcgg cggcagcgac 480

atccagatga cacagtctcc aagcaccctg tccgcctctg tgggcgatag ggtgacaatc 540

acctgcagag ccagccagtc catctctagc tggctggcct ggtaccagca gaagccaggc 600

aaggccccca agctgctgat ctataaggcc tcctctctgg agtctggcgt gccaagccgg 660

ttttctggca gcggctccgg cacagagttc acactgacca tcagctccct gcagcccgac 720

gattttgcca cctactattg tcagcagtac aactcttata gcagaacatt cggccagggc 780

accaaggtgg agatcaagac cacaacccct gcccctaggc cacctacccc agcacctaca 840

attgctagtc agccactgtc actgcgacca gaggcatgtc gacctgcagc tggaggagca 900

gtgcatacaa ggggactgga ctttgcctgc gatatctaca tttgggctcc tctggcagga 960

acatgtggcg tgctgctgct gagcctggtc atcactctgt actgcaagcg aggccggaag 1020

aaactgctgt atattttcaa acagcccttt atgcgacctg tgcagaccac acaggaggaa 1080

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ctgaatctgg ggcggagaga ggaatacgac gtgctggata aaaggcgcgg gagagaccca 1260

gaaatggggg gaaagccacg acggaaaaac ccccaggagg gactgtacaa tgaactgcag 1320

aaggataaaa tggcagaggc ctattccgaa atcgggatga agggagaaag aaggcgaggc 1380

aaaggacacg acggactgta ccaggggctg tctaccgcca caaaggacac ctatgatgct 1440

ctgcatatgc aggcactgcc acccagg 1467

<210> 609
<211> 1491
<212> DNA
<213> Artificial Sequence

<220>

<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 609
atggcactgc cagtgacagc cctgctgctg ccactggccc tgctgctgca cgccgcccgg 60

ccacaggtgc ccctggtgca gtccggagca gaggtgaaga agcccggcag ctccgtgaag 120

gtgtcttgca aggccagcgg cggcacattc agcacctaca gcatctcctg ggtgcggcag 180

gcccctggcc agggactgga gtggatggga ggaatcatcc caatcttcgg caccacaaac 240

tacgcccaga agtttcaggg cagagtgaca atcaccgccg acaagtctac aagcaccgcc 300

tatatggagc tgtctagcct gaggtctgag gacaccgccg tgtactattg tgcccgcgat 360

ggcgagggca gctactatta ctattacgga atggacgtgt ggggacaggg aaccacagtg 420

acagtgtcct ctggaggagg aggcagcggc ggaggaggct ccggaggcgg cggctctggc 480

ggcggcggct cccagtctgt gctgacccag ccacctagcg cctccggaac acccggccag 540

agggtgacca tctcttgcag cggcagctcc tctaacatcg gctccaatta cgtgtactgg 600

tatcagcagc tgcctggcac agccccaaag ctgctgatct acagcaacaa tcagcggccc 660

tccggcgtgc ctgacagatt ctccggctct aagagcggca cctccgcctc tctggcaatc 720

tccggactgc gctctgagga cgaggcagat tattactgtg cagcatggga cgatagcctg 780

tccggatggg tgtttggagg aggaacaaag ctgaccgtgc tgaccacaac ccctgcccct 840

aggccaccta ccccagcacc tacaattgct agtcagccac tgtcactgcg accagaggca 900

tgtcgacctg cagctggagg agcagtgcat acaaggggac tggactttgc ctgcgatatc 960

tacatttggg ctcctctggc aggaacatgt ggcgtgctgc tgctgagcct ggtcatcact 1020

ctgtactgca agcgaggccg gaagaaactg ctgtatattt tcaaacagcc ctttatgcga 1080

cctgtgcaga ccacacagga ggaagatggg tgctcctgtc ggttccccga ggaagaggaa 1140

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gataaaaggc gcgggagaga cccagaaatg gggggaaagc cacgacggaa aaacccccag 1320

gagggactgt acaatgaact gcagaaggat aaaatggcag aggcctattc cgaaatcggg 1380

atgaagggag aaagaaggcg aggcaaagga cacgacggac tgtaccaggg gctgtctacc 1440

gccacaaagg acacctatga tgctctgcat atgcaggcac tgccacccag g 1491

<210> 610
<211> 1482
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 610
atggcactgc cagtgacagc cctgctgctg ccactggccc tgctgctgca cgccgccaga 60

cccgaggtgc agctggtgga gtccggagga ggactggtgc agcctggcgg ctccctgagg 120

ctgtcttgcg cagcaagcgg cttcaccttt agctcctaca gcatgaactg ggtgagacag 180

gcccccggca agggactgga gtgggtgtct tatatctcta gctcctctag cacaatctac 240

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gtgtcctctg gcggcggcgg ctccggaggc ggcggctctg gaggaggagg cagcggcgga 480

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aggctggagc cagaggattt tgccgtgtac tattgtcagc agttcggcac aagcccaatc 780

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accccagcac ctacaattgc tagtcagcca ctgtcactgc gaccagaggc atgtcgacct 900

gcagctggag gagcagtgca tacaagggga ctggactttg cctgcgatat ctacatttgg 960

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aagcgaggcc ggaagaaact gctgtatatt ttcaaacagc cctttatgcg acctgtgcag 1080

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gagctgcggg tcaagttttc cagatctgca gacgcccctg cttaccagca gggccagaac 1200

cagctgtata acgagctgaa tctggggcgg agagaggaat acgacgtgct ggataaaagg 1260

cgcgggagag acccagaaat ggggggaaag ccacgacgga aaaaccccca ggagggactg 1320

tacaatgaac tgcagaagga taaaatggca gaggcctatt ccgaaatcgg gatgaaggga 1380

gaaagaaggc gaggcaaagg acacgacgga ctgtaccagg ggctgtctac cgccacaaag 1440

gacacctatg atgctctgca tatgcaggca ctgccaccca gg 1482

<210> 611
<211> 1494
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

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ctggcctgtg ccatctctgg cgacagcgtg agctccaact ccgccatctg gaattggatc 180

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tacaacgact atgccgtgtc cgtgaagtct agaatcacaa tcaaccctga tacctccaag 300

aatcagctgt ctctgcagct gaatagcgtg acaccagagg ataccgccgt gtactattgc 360

agccggggcg gaatcgtggg agtgccagac gccttcgata tctggggcca gggcacaatg 420

gtgaccgtgt ctagcggagg aggaggctcc ggaggaggag gctctggcgg cggcggcagc 480

ggaggcggcg gcagccagtc cgtgctgacc cagccacctt ctgccagcgg aacacccggc 540

cagcgggtga ccatctcctg ttctggctcc tctagcaaca tcggcagcaa cacagccaat 600

tggtaccagc agctgccagg caccgcaccc aggctgctga tctatcggaa caatcagaga 660

ccttccggag tgccagaccg cttcagcggc tccaagtctg gcacaagcgc ctccctggcc 720

atctctggcc tgcagagcga ggacgaggcc gattactatt gcgccgcctg ggacgatagc 780

ctgaatggct acgtgtttgg cacaggcacc aaggtgaccg tgctgaccac aacccctgcc 840

cctaggccac ctaccccagc acctacaatt gctagtcagc cactgtcact gcgaccagag 900

gcatgtcgac ctgcagctgg aggagcagtg catacaaggg gactggactt tgcctgcgat 960

atctacattt gggctcctct ggcaggaaca tgtggcgtgc tgctgctgag cctggtcatc 1020

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cgacctgtgc agaccacaca ggaggaagat gggtgctcct gtcggttccc cgaggaagag 1140

gaaggaggct gtgagctgcg ggtcaagttt tccagatctg cagacgcccc tgcttaccag 1200

cagggccaga accagctgta taacgagctg aatctggggc ggagagagga atacgacgtg 1260

ctggataaaa ggcgcgggag agacccagaa atggggggaa agccacgacg gaaaaacccc 1320

caggagggac tgtacaatga actgcagaag gataaaatgg cagaggccta ttccgaaatc 1380

gggatgaagg gagaaagaag gcgaggcaaa ggacacgacg gactgtacca ggggctgtct 1440

accgccacaa aggacaccta tgatgctctg catatgcagg cactgccacc cagg 1494

<210> 612
<211> 1476
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 612
atggcactgc ctgtgacagc cctgctgctg ccactggccc tgctgctgca cgccgcccgg 60

ccacaggtgc agctgcagga gtccggccca ggcctggtga agccatctga gacactgagc 120

ctgacctgca acgtgtctga tggcagcatc agctcctact attggacctg gatcagacag 180

ccccctggca agggactgga ctggatcggc tatatcttct acagcggcac cacaaactat 240

aatccctccc tgaagtctag agtgacaatc tccctggaca cctctaagaa tcagttttct 300

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gagaagtcct tctattttga ctactggggc cagggcacac tggtgaccgt gtctagcgga 420

ggaggaggct ccggaggagg aggctctggc ggcggcggca gcggaggcgg cggctcccag 480

tctgtgctga cccagccacc aagcgcctcc ggaacacctg gccagcgcgt gaccatctct 540

tgtagcggct cctctagcaa catcggctcc aattacgtgt attggtacca gcagctgcct 600

ggcacagccc caaagctgct gatctactcc aacaatcagc ggcccagcgg cgtgcctgat 660

agattctccg gctctaagag cggcacctcc gcctctctgg caatcagcgg actgaggtcc 720

gaggacgagg cagattacta ttgtgcacca tgggacgata gcctgtccgg ccgcgtgttt 780

ggaggaggaa caaagctgac cgtgctgacc acaacccctg cccctaggcc acctacccca 840

gcacctacaa ttgctagtca gccactgtca ctgcgaccag aggcatgtcg acctgcagct 900

ggaggagcag tgcatacaag gggactggac tttgcctgcg atatctacat ttgggctcct 960

ctggcaggaa catgtggcgt gctgctgctg agcctggtca tcactctgta ctgcaagcga 1020

ggccggaaga aactgctgta tattttcaaa cagcccttta tgcgacctgt gcagaccaca 1080

caggaggaag atgggtgctc ctgtcggttc cccgaggaag aggaaggagg ctgtgagctg 1140

cgggtcaagt tttccagatc tgcagacgcc cctgcttacc agcagggcca gaaccagctg 1200

tataacgagc tgaatctggg gcggagagag gaatacgacg tgctggataa aaggcgcggg 1260

agagacccag aaatgggggg aaagccacga cggaaaaacc cccaggaggg actgtacaat 1320

gaactgcaga aggataaaat ggcagaggcc tattccgaaa tcgggatgaa gggagaaaga 1380

aggcgaggca aaggacacga cggactgtac caggggctgt ctaccgccac aaaggacacc 1440

tatgatgctc tgcatatgca ggcactgcca cccagg 1476

<210> 613
<211> 1479
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 613
atggccctgc cagtgaccgc cctgctgctg ccactggccc tgctgctgca cgccgccagg 60

ccccaggtgc agctggtgca gagcggagca gaggtgaagc gccctggcgc aagcgtgaag 120

gtgtcctgca aggcctctgg ctatacattc accagctact atatccactg ggtgaggcag 180

gcccctggcc agggactgga gtggatgggc gtgatcgtgc catccggcgg ctctatcagc 240

tatgcccaga agtttcaggg cagggtgaca atgacccgcg acacaagcac caacatcgtg 300

tacatggagc tgagctccct gcggtccgag gatacagccg tgtactattg tgccagagac 360

agatactatg gcgattacta ttacggactg gacgtgtggg gacagggaac cacagtgacc 420

gtgtctagcg gcggcggcgg ctctggagga ggaggcagcg gcggaggagg ctccggcggc 480

ggcggctctg acatccagat gacacagtcc ccttcctctc tgtccgcctc tgtgggcgat 540

cgggtgacaa tcacctgcag agcctctcag ggcatcaaca atttcctggc ctggtttcag 600

cagaagcccg gcaaggcccc taagtccctg atctacgcag caagctccct gcagagcgga 660

gtgccatcca agttcagcgg ctccggctct ggcacagact ttacactgac catccggtct 720

ctgcagccag aggatttcgc cacctattac tgtcagcact ataatagcta ccccatcaca 780

tttggccagg gcaccagact ggagatcaag accacaaccc ccgcccctag gccacctacc 840

ccagcaccta caattgctag tcagccactg tcactgcgac cagaggcatg tcgacctgca 900

gctggaggag cagtgcatac aaggggactg gactttgcct gcgatatcta catttgggct 960

cctctggcag gaacatgtgg cgtgctgctg ctgagcctgg tcatcactct gtactgcaag 1020

cgaggccgga agaaactgct gtatattttc aaacagccct ttatgcgacc tgtgcagacc 1080

acacaggagg aagatgggtg ctcctgtcgg ttccccgagg aagaggaagg aggctgtgag 1140

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ctgtataacg agctgaatct ggggcggaga gaggaatacg acgtgctgga taaaaggcgc 1260

gggagagacc cagaaatggg gggaaagcca cgacggaaaa acccccagga gggactgtac 1320

aatgaactgc agaaggataa aatggcagag gcctattccg aaatcgggat gaagggagaa 1380

agaaggcgag gcaaaggaca cgacggactg taccaggggc tgtctaccgc cacaaaggac 1440

acctatgatg ctctgcatat gcaggcactg ccacccagg 1479

<210> 614
<211> 1470
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

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ccacaggtgc acctgcagga gtctggccct ggcctggtga agccatctga gacactgagc 120

ctgacatgta ccgtgagcgg cggcagcatc tcccactact attggacctg gatcaggcag 180

ccccctggca agggactgga gtggatcggc tacatctact attccggcat caccaacttc 240

tctcctagcc tgaagtctcg cgtgtccatc tctgtggaca gctccaagaa tcagttcagc 300

ctgaacctga acagcgtgac agccgccgat accgccgtgt actattgcgc cggcatctcc 360

ctggccggct tctactttga ctattgggtg cagggcacac tggtgaccgt gtctagcgga 420

ggaggaggca gcggaggagg aggctccgga ggcggcggct ctggcggcgg cggcagcgag 480

atcgtgctga cacagagccc aggcaccctg agcctgtccc ccggcgagcg ggccaccctg 540

tcctgtagag cctctcagag cgtgtcccgg tcttacctgg cctggtatca gcagaagcca 600

ggccaggccc ccagactgct gatctatgga gcatcctcta gggccacagg agtgccagac 660

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ccagaaatgg ggggaaagcc acgacggaaa aacccccagg agggactgta caatgaactg 1320

cagaaggata aaatggcaga ggcctattcc gaaatcggga tgaagggaga aagaaggcga 1380

ggcaaaggac acgacggact gtaccagggg ctgtctaccg ccacaaagga cacctatgat 1440

gctctgcata tgcaggcact gccacccagg 1470

<210> 615
<211> 1479
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

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ccccaggtgc agctgcagga gtccggccca ggcctggtga agccaagcga gaccctgtcc 120

ctgacatgca ccgtgtccgg cgtgtctatc agctcctact attggagctg gatcaggcag 180

ccccctggca agggactgga gtggatcgcc tacatctact attccggcaa caccaattat 240

tctcctagcc tgaagtctcg cgtgacaatc tctgtggaca ccagcaagga tcagctgtct 300

ctgaagctgt ctagcgtgac agccgccgac accgccgtgt actattgcac aaggggcggc 360

agcggaacca tcgacgtgtt cgatatctgg ggacagggaa ccatggtggc cgtgtcctct 420

ggcggcggcg gctccggagg cggcggctct ggaggaggag gcagcggcgg aggaggctcc 480

cagtctgtgc tgacacagcc accaagcgtg tccgccgccc caggccagaa ggtgaccatc 540

tcttgtagcg gcagctcctc taacatcggc aacaattacg tgtcctggta tcagcagctg 600

cctggcacag ccccaaagct gctgatctac gacaacaata agcggcccag cggcatccct 660

gatagattct ccggctctaa gagcggcaca tccgccaccc tgggcatcac aggactgcag 720

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ccagcaccta caattgctag tcagccactg tcactgcgac cagaggcatg tcgacctgca 900

gctggaggag cagtgcatac aaggggactg gactttgcct gcgatatcta catttgggct 960

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acacaggagg aagatgggtg ctcctgtcgg ttccccgagg aagaggaagg aggctgtgag 1140

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ctgtataacg agctgaatct ggggcggaga gaggaatacg acgtgctgga taaaaggcgc 1260

gggagagacc cagaaatggg gggaaagcca cgacggaaaa acccccagga gggactgtac 1320

aatgaactgc agaaggataa aatggcagag gcctattccg aaatcgggat gaagggagaa 1380

agaaggcgag gcaaaggaca cgacggactg taccaggggc tgtctaccgc cacaaaggac 1440

acctatgatg ctctgcatat gcaggcactg ccacccagg 1479

<210> 616
<211> 1485
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

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cctcaggtgc agctgcagca gagcggccca ggcctggtga agccatccca gacactgtct 120

ctgacctgcg ccatctccgg cgacaacgtg tccacaaatt ctgccgcctg gaactggatc 180

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tacaatgact atgccgtgag cctgaagtcc cgcatcaaca tcaatccaga tacctccaag 300

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ggctctcaga gcgccctgac acagccagca tccgtgtctg gcagccctgg ccagagcatc 540

accatctcct gtacaggcac ctctagcgac gtgggctcct acaatctggt gtcttggtat 600

cagcagcacc ccggcaaggc ccctaagctg atgatctacg agggcagcaa gaggccatct 660

ggcgtgagca acagattctc cggctctaag agcggcaata cagcctctct gaccatcagc 720

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aggcgcggga gagacccaga aatgggggga aagccacgac ggaaaaaccc ccaggaggga 1320

ctgtacaatg aactgcagaa ggataaaatg gcagaggcct attccgaaat cgggatgaag 1380

ggagaaagaa ggcgaggcaa aggacacgac ggactgtacc aggggctgtc taccgccaca 1440

aaggacacct atgatgctct gcatatgcag gcactgccac ccagg 1485

<210> 617
<211> 1488
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 617
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ccccaggtgc agctggtgga gtccggagga ggagtggtgc agcctggccg gtctctgaga 120

ctgagctgcg cagcatccgg cttcaccttc agctcctacg gaatgcactg ggtgcggcag 180

acccctggca agggactgga gtgggtggcc gtgatctcct atgacggcaa ctctaattac 240

tatgccgata gcgtgaaggg caggttcaca atctctcgcg acaacagcaa gaataccctg 300

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ggcgagcggg ccacactgtc ttgcagagcc tctcagagcg tgtccaggac ctacctggcc 600

tggtatcacc agaagcctgg ccaggcacct cgcctgctga tctacggagc atcctctagg 660

gccacaggca tcagcgaccg cttctctggc agcggctccg gaaccgactt caccctgacc 720

atctcccggc tggagccaga ggacttcgcc gtgtactatt gtcagcagta tggcacatcc 780

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ccacctaccc cagcacctac aattgctagt cagccactgt cactgcgacc agaggcatgt 900

cgacctgcag ctggaggagc agtgcataca aggggactgg actttgcctg cgatatctac 960

atttgggctc ctctggcagg aacatgtggc gtgctgctgc tgagcctggt catcactctg 1020

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gtgcagacca cacaggagga agatgggtgc tcctgtcggt tccccgagga agaggaagga 1140

ggctgtgagc tgcgggtcaa gttttccaga tctgcagacg cccctgctta ccagcagggc 1200

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aaaaggcgcg ggagagaccc agaaatgggg ggaaagccac gacggaaaaa cccccaggag 1320

ggactgtaca atgaactgca gaaggataaa atggcagagg cctattccga aatcgggatg 1380

aagggagaaa gaaggcgagg caaaggacac gacggactgt accaggggct gtctaccgcc 1440

acaaaggaca cctatgatgc tctgcatatg caggcactgc cacccagg 1488

<210> 618
<211> 1503
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

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ctgacctgcg ccatctctgg cgacagcgtg agctccaact ccgccgtgtg gaattggatc 180

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ggcgagaggg caaccatcaa ctgtaagtcc tctcagagcg tgctggacag ctccaacaat 600

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aacaattact tcgcctggta tcagcagaga cctggccagc cccctcacct gctgatctac      660

tgggcatcta gccgggagag cggagtgcca gacagattct ctggcagcgg ctccggcaca      720

gacttcaccc tgaccatctc ctctctgcag gccgaggatg tggccgtgta ctattgtcag      780

cagtactatt ccacaccata tacctttggc cagggcacca agctggagat caagaccaca      840

acccccgccc ctaggccacc taccccagca cctacaattg ctagtcagcc actgtcactg      900

cgaccagagg catgtcgacc tgcagctgga ggagcagtgc atacaagggg actggacttt      960

gcctgcgata tctacatttg ggctcctctg gcaggaacat gtggcgtgct gctgctgagc     1020

ctggtcatca ctctgtactg caagcgaggc cggaagaaac tgctgtatat tttcaaacag     1080

ccctttatgc gacctgtgca gaccacacag gaggaagatg ggtgctcctg tcggttcccc     1140

gaggaagagg aaggaggctg tgagctgcgg gtcaagtttt ccagatctgc agacgccccc     1200

gcttaccagc agggccagaa ccagctgtat aacgagctga atctggggcg gagagaggaa     1260

tacgacgtgc tggataaaag gcgcgggaga gacccagaaa tgggggggaaa gccacgacgg     1320

aaaaaccccc aggagggact gtacaatgaa ctgcagaagg ataaaatggc agaggcctat     1380

tccgaaatcg ggatgaaggg agaaagaagg cgaggcaaag gacacgacgg actgtaccag     1440

gggctgtcta ccgccacaaa ggacacctat gatgctctgc atatgcaggc actgccaccc     1500

agg                                                                  1503
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<210> 619
<211> 1485
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 619
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atggccctgc cagtgaccgc cctgctgctg ccactggccc tgctgctgca cgccgcccgg       60

ccacaggtgc agctgcagca gagcggccct ggcctggtga agcctagcca gacactgtcc      120

ctgacctgcg ccatctctgg cgacagcgtg agctccaaca ccacagcctg gaagtggagc      180

agacagtccc cctctaaggg cctggagtgg ctgggctgga catactatag gtccaagtgg      240

tactatgact acaccgtgtc cgtgaagtct cgcatcacaa tcaaccccga tacctccaag      300
```

aatcagttct ctctgcagct gaatagcgtg acacctgagg ataccgccgt gtactattgc 360

gccaggtgga tcttccacga cgcctttgat atctggggcc agggcacaat ggtgaccgtg 420

tctagcggag gaggaggctc cggaggagga ggctctggcg gcggcggcag cggaggcggc 480

ggcagccagt ccgccctgac acagccacct tctgccagcg gaacacctgg ccagagagtg 540

accatctcct gttctggctc ctctagcaac atcggcagca acaccgtgaa ttggtaccag 600

cagctgccag gcacagcccc caagctgctg atctatacca acaatcagag gccttccgga 660

gtgccagacc ggttcagcgg ctccaagtct ggcacaagcg cctccctggc catctctggc 720

ctgcagagcg aggacgaggc cgattatttc tgttccacct gggacgattc tctgaatgga 780

cccgtgttcg gaggaggaac aaagctgacc gtgctgacca caaccccagc ccctaggcca 840

cctaccccag cacctacaat tgctagtcag ccactgtcac tgcgaccaga ggcatgtcga 900

cctgcagctg gaggagcagt gcatacaagg ggactggact ttgcctgcga tatctacatt 960

tgggctcctc tggcaggaac atgtggcgtg ctgctgctga gcctggtcat cactctgtac 1020

tgcaagcgag gccggaagaa actgctgtat attttcaaac agcccttat gcgacctgtg 1080

cagaccacac aggaggaaga tgggtgctcc tgtcggttcc ccgaggaaga ggaaggaggc 1140

tgtgagctgc gggtcaagtt ttccagatct gcagacgccc ctgcttacca gcagggccag 1200

aaccagctgt ataacgagct gaatctgggg cggagagagg aatacgacgt gctggataaa 1260

aggcgcggga gagacccaga aatgggggga aagccacgac ggaaaaaccc ccaggaggga 1320

ctgtacaatg aactgcagaa ggataaaatg gcagaggcct attccgaaat cgggatgaag 1380

ggagaaagaa ggcgaggcaa aggacacgac ggactgtacc aggggctgtc taccgccaca 1440

aaggacacct atgatgctct gcatatgcag gcactgccac ccagg 1485

<210> 620
<211> 1458
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 620

atggcactgc ctgtgacagc cctgctgctg ccactggccc tgctgctgca cgccgccaga 60

ccccaggtgc agctgcagga gtccggccca ggcctggtga agccaagcga gaccctgtcc 120

ctgacatgca ccgtgtctgg cgacagcatc agctccctgt cttggagctg gatcaggcag 180

acaccaggcg agggcctgga gtggatcggc tacctgtact attccggctc taccgactat 240

aacccctccc tgaagtctcg cgtgacaatc tctgtggata ccagcaagaa tcagttctct 300

ctgaagctgc ggagcgtggc tgccgccgac acagccctgt actattgcgc cagaggccgg 360

agagcctttg atatctgggg ccagggcaca atggtgaccg tgtctagcgg aggaggaggc 420

tccggaggag gaggctctgg cggcggcggc agcggaggcg gcggctccga catccagatg 480

acccagagcc cttcctctct gagcgcctcc gtgggcgata gggtgacaat cacctgtcgc 540

ggctcccagg gcatctctaa ctacctggca tggttccagc agcggcccgg caaggcacct 600

aagtctctga tctatgcagc aagctccctg gagagcggag tgccatccaa gttctctggc 660

agcggctccg gcacagactt tacactgacc atcatcagcc tgcagcccga ggatttcgcc 720

acctactatt gtcagcagta ctataattac cctatcacat ttggccaggg cacccggctg 780

gagatcaaga ccacaacccc tgcccctagg ccacctaccc cagcacctac aattgctagt 840

cagccactgt cactgcgacc agaggcatgt cgacctgcag ctggaggagc agtgcataca 900

aggggactgg actttgcctg cgatatctac atttgggctc ctctggcagg aacatgtggc 960

gtgctgctgc tgagcctggt catcactctg tactgcaagc gaggccggaa gaaactgctg 1020

tatattttca aacagccctt tatgcgacct gtgcagacca cacaggagga agatgggtgc 1080

tcctgtcggt tccccgagga agaggaagga ggctgtgagc tgcgggtcaa gttttccaga 1140

tctgcagacg cccctgctta ccagcagggc cagaaccagc tgtataacga gctgaatctg 1200

gggcggagag aggaatacga cgtgctggat aaaaggcgcg ggagagaccc agaaatgggg 1260

ggaaagccac gacggaaaaa cccccaggag ggactgtaca atgaactgca gaaggataaa 1320

atggcagagg cctattccga aatcgggatg aagggagaaa gaaggcgagg caaaggacac 1380

gacggactgt accaggggct gtctaccgcc acaaaggaca cctatgatgc tctgcatatg 1440

caggcactgc cacccagg 1458

<210> 621
<211> 1488

<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 621
atggcactgc ctgtgaccgc cctgctgctg ccactggccc tgctgctgca cgccgcccgg 60

ccacaggtgc agctggtgca gtctggagca gaggtgaaga agcctggcgc aagcgtgaag 120

gtgtcctgca aggcctctgg ctacacattc accggctact atatgcactg ggtgagacag 180

gcccctggcc agggactgga gtggatgggc tggatcaacc ctaatagcgg cggcaccaac 240

tacgcccaga agtttcaggg ccgggtgaca atgaccagag acaccagcgt gtccacagcc 300

tatatggagc tgagcaggct gacctccgac gatacagcca tctactattg tgccaaggac 360

ggcggcggcg atttctactt ttatggcatg gacgtgtggg gccagggcac cacagtgacc 420

gtgagctccg gcggcggcgg ctctggagga ggaggcagcg gcggaggagg ctccggagga 480

ggcggctctc agaccgtggt gacacaggag ccatctttca gcgtgtcccc cggcggaaca 540

gtgaccctga catgcggcct gtctagcggc tctgtgagca catcctacta tcctagctgt 600

ttccagcaga cccccggcca ggcacctaga acactgatct actccaccga cacaaggtcc 660

tctggcgtgc cagatcgctt ttctggcagc atcctgggca ataaggccgc cctgaccatc 720

acaggagcac aggccgacga tgagtccgac tactattgcg tgctgtatat gggctccgga 780

atcagcgtgt tcggaggagg caccaagctg acagtgctga ccacaacccc cgcccctagg 840

ccacctaccc cagcacctac aattgctagt cagccactgt cactgcgacc agaggcatgt 900

cgacctgcag ctggaggagc agtgcataca aggggactgg actttgcctg cgatatctac 960

atttgggctc ctctggcagg aacatgtggc gtgctgctgc tgagcctggt catcactctg 1020

tactgcaagc gaggccggaa gaaactgctg tatattttca aacagccctt tatgcgacct 1080

gtgcagacca cacaggagga agatgggtgc tcctgtcggt tccccgagga agaggaagga 1140

ggctgtgagc tgcgggtcaa gttttccaga tctgcagacg cccctgctta ccagcagggc 1200

cagaaccagc tgtataacga gctgaatctg gggcggagag aggaatacga cgtgctggat 1260

aaaaggcgcg ggagagaccc agaaatgggg ggaaagccac gacggaaaaa cccccaggag 1320

ggactgtaca atgaactgca gaaggataaa atggcagagg cctattccga aatcgggatg 1380

aagggagaaa gaaggcgagg caaaggacac gacggactgt accaggggct gtctaccgcc 1440

acaaaggaca cctatgatgc tctgcatatg caggcactgc cacccagg 1488

<210> 622
<211> 569
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 622
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Gly Gly Gly Gly Ser Cys Pro Tyr Ser Asn Pro
20 25 30

Ser Leu Cys Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gln Leu
35 40 45

Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Glu Thr Leu
50 55 60

Ser Leu Thr Cys Thr Val Ser Gly Gly Ser Ile Ser Ser Ser Ser Tyr
65 70 75 80

Tyr Trp Gly Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp Ile
85 90 95

Gly Ser Ile Tyr Tyr Ser Gly Asn Ile Tyr His Asn Pro Ser Leu Lys
100 105 110

Ser Arg Val Ser Ile Ser Val Asp Thr Ser Lys Asn Gln Phe Ser Leu
115 120 125

Arg Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr Cys Ala
130 135 140

```
Arg Glu Ile Ile Val Gly Ala Thr His Phe Asp Tyr Trp Gly Gln Gly
145                 150                 155                 160


Thr Leu Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly
                165                 170                 175


Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Ile Gln Met Thr
            180                 185                 190


Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly Asp Arg Val Thr Ile
        195                 200                 205


Thr Cys Arg Ala Ser Gln Gly Ile Arg Asn Asp Leu Gly Trp Tyr Gln
    210                 215                 220


Gln Lys Pro Gly Lys Ala Pro Glu Leu Leu Ile Tyr Ala Ala Ser Ser
225                 230                 235                 240


Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr
                245                 250                 255


Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro Glu Asp Phe Ala Thr
            260                 265                 270


Tyr Tyr Cys Leu Gln Asp Tyr Asn Tyr Pro Leu Thr Phe Gly Pro Gly
        275                 280                 285


Thr Lys Val Asp Ile Lys Gly Ser Gly Gly Gly Gly Ser Cys Pro Tyr
    290                 295                 300


Ser Asn Pro Ser Leu Cys Ser Gly Gly Gly Gly Ser Glu Leu Pro Thr
305                 310                 315                 320


Gln Gly Thr Phe Ser Asn Val Ser Thr Asn Val Ser Pro Ala Lys Pro
                325                 330                 335


Thr Thr Thr Ala Cys Pro Tyr Ser Asn Pro Ser Leu Cys Thr Thr Thr
            340                 345                 350
```

```
Pro Ala Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro
        355                 360                 365

Leu Ser Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala Val
    370                 375                 380

His Thr Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro
385                 390                 395                 400

Leu Ala Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr Lys
                405                 410                 415

Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met Arg
            420                 425                 430

Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro
        435                 440                 445

Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg Ser
    450                 455                 460

Ala Asp Ala Pro Ala Tyr Gln Gln Gly Gln Asn Gln Leu Tyr Asn Glu
465                 470                 475                 480

Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg
                485                 490                 495

Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln
            500                 505                 510

Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr
        515                 520                 525

Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His Asp
    530                 535                 540

Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala
545                 550                 555                 560

Leu His Met Gln Ala Leu Pro Pro Arg
```

565

<210> 623
<211> 539
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 623
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Gln Leu Gln Leu Gln Glu Ser Gly Pro Gly Leu
20 25 30

Val Lys Pro Ser Glu Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Gly
35 40 45

Ser Ile Ser Ser Ser Ser Tyr Tyr Trp Gly Trp Ile Arg Gln Pro Pro
50 55 60

Gly Lys Gly Leu Glu Trp Ile Gly Ser Ile Tyr Tyr Ser Gly Asn Ile
65 70 75 80

Tyr His Asn Pro Ser Leu Lys Ser Arg Val Ser Ile Ser Val Asp Thr
85 90 95

Ser Lys Asn Gln Phe Ser Leu Arg Leu Ser Ser Val Thr Ala Ala Asp
100 105 110

Thr Ala Val Tyr Tyr Cys Ala Arg Glu Ile Ile Val Gly Ala Thr His
115 120 125

Phe Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly
130 135 140

Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly
145 150 155 160

```
Gly Ser Ala Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser
                165                 170                 175

Val Gly Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Gly Ile Arg
            180                 185                 190

Asn Asp Leu Gly Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Glu Leu
        195                 200                 205

Leu Ile Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe
    210                 215                 220

Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu
225                 230                 235                 240

Gln Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Leu Gln Asp Tyr Asn Tyr
                245                 250                 255

Pro Leu Thr Phe Gly Pro Gly Thr Lys Val Asp Ile Lys Gly Ser Gly
            260                 265                 270

Gly Gly Gly Ser Cys Pro Tyr Ser Asn Pro Ser Leu Cys Ser Gly Gly
        275                 280                 285

Gly Gly Ser Cys Pro Tyr Ser Asn Pro Ser Leu Cys Ser Gly Gly Gly
    290                 295                 300

Gly Ser Thr Thr Thr Ala Cys Pro Tyr Ser Asn Pro Ser Leu Cys Thr
305                 310                 315                 320

Thr Thr Pro Ala Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser
                325                 330                 335

Gln Pro Leu Ser Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly
            340                 345                 350

Ala Val His Thr Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp
        355                 360                 365
```

```
Ala Pro Leu Ala Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile
    370                 375                 380

Thr Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe
385                 390                 395                 400

Met Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg
                405                 410                 415

Phe Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser
            420                 425                 430

Arg Ser Ala Asp Ala Pro Ala Tyr Gln Gln Gly Gln Asn Gln Leu Tyr
        435                 440                 445

Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys
    450                 455                 460

Arg Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn
465                 470                 475                 480

Pro Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu
                485                 490                 495

Ala Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly
            500                 505                 510

His Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr
        515                 520                 525

Asp Ala Leu His Met Gln Ala Leu Pro Pro Arg
    530                 535
```

<210> 624
<211> 527
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 624
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1   5   10   15

His Ala Ala Arg Pro Gly Gly Gly Gly Ser Cys Pro Tyr Ser Asn Pro
            20   25   30

Ser Leu Cys Gly Gly Gly Gly Ser Gln Leu Gln Leu Gln Glu Ser Gly
        35   40   45

Pro Gly Leu Val Lys Pro Ser Glu Thr Leu Ser Leu Thr Cys Thr Val
    50   55   60

Ser Gly Gly Ser Ile Ser Ser Ser Ser Tyr Tyr Trp Gly Trp Ile Arg
65   70   75   80

Gln Pro Pro Gly Lys Gly Leu Glu Trp Ile Gly Ser Ile Tyr Tyr Ser
                85   90   95

Gly Asn Ile Tyr His Asn Pro Ser Leu Lys Ser Arg Val Ser Ile Ser
            100   105   110

Val Asp Thr Ser Lys Asn Gln Phe Ser Leu Arg Leu Ser Ser Val Thr
        115   120   125

Ala Ala Asp Thr Ala Val Tyr Tyr Cys Ala Arg Glu Ile Ile Val Gly
    130   135   140

Ala Thr His Phe Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser
145   150   155   160

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
                165   170   175

Gly Gly Gly Gly Ser Ala Ile Gln Met Thr Gln Ser Pro Ser Ser Leu
            180   185   190

Ser Ala Ser Val Gly Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln
        195   200   205

```
Gly Ile Arg Asn Asp Leu Gly Trp Tyr Gln Gln Lys Pro Gly Lys Ala
    210                 215                 220

Pro Glu Leu Leu Ile Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro
225                 230                 235                 240

Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile
                245                 250                 255

Ser Ser Leu Gln Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Leu Gln Asp
            260                 265                 270

Tyr Asn Tyr Pro Leu Thr Phe Gly Pro Gly Thr Lys Val Asp Ile Lys
        275                 280                 285

Gly Gly Gly Gly Ser Cys Pro Tyr Ser Asn Pro Ser Leu Cys Gly Gly
    290                 295                 300

Gly Gly Ser Thr Thr Thr Pro Ala Pro Arg Pro Pro Thr Pro Ala Pro
305                 310                 315                 320

Thr Ile Ala Ser Gln Pro Leu Ser Leu Arg Pro Glu Ala Cys Arg Pro
                325                 330                 335

Ala Ala Gly Gly Ala Val His Thr Arg Gly Leu Asp Phe Ala Cys Asp
            340                 345                 350

Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly Val Leu Leu Leu
        355                 360                 365

Ser Leu Val Ile Thr Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe
    370                 375                 380

Lys Gln Pro Phe Met Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly
385                 390                 395                 400

Cys Ser Cys Arg Phe Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg
                405                 410                 415
```

Val Lys Phe Ser Arg Ser Ala Asp Ala Pro Ala Tyr Gln Gln Gly Gln
420 425 430

Asn Gln Leu Tyr Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp
435 440 445

Val Leu Asp Lys Arg Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro
450 455 460

Arg Arg Lys Asn Pro Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp
465 470 475 480

Lys Met Ala Glu Ala Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg
485 490 495

Arg Gly Lys Gly His Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr
500 505 510

Lys Asp Thr Tyr Asp Ala Leu His Met Gln Ala Leu Pro Pro Arg
515 520 525

<210> 625
<211> 522
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 625
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Gly Gly Gly Gly Ser Cys Pro Tyr Ser Asn Pro
20 25 30

Ser Leu Cys Gly Gly Gly Gly Ser Cys Pro Tyr Ser Asn Pro Ser Leu
35 40 45

Cys Gly Gly Gly Gly Ser Gln Leu Gln Leu Gln Glu Ser Gly Pro Gly
50 55 60

```
Leu Val Lys Pro Ser Glu Thr Leu Ser Leu Thr Cys Thr Val Ser Gly
65                  70                  75                  80

Gly Ser Ile Ser Ser Ser Ser Tyr Tyr Trp Gly Trp Ile Arg Gln Pro
                85                  90                  95

Pro Gly Lys Gly Leu Glu Trp Ile Gly Ser Ile Tyr Tyr Ser Gly Asn
            100                 105                 110

Ile Tyr His Asn Pro Ser Leu Lys Ser Arg Val Ser Ile Ser Val Asp
        115                 120                 125

Thr Ser Lys Asn Gln Phe Ser Leu Arg Leu Ser Ser Val Thr Ala Ala
    130                 135                 140

Asp Thr Ala Val Tyr Tyr Cys Ala Arg Glu Ile Ile Val Gly Ala Thr
145                 150                 155                 160

His Phe Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Gly
                165                 170                 175

Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly
            180                 185                 190

Gly Gly Ser Ala Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala
        195                 200                 205

Ser Val Gly Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Gly Ile
    210                 215                 220

Arg Asn Asp Leu Gly Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Glu
225                 230                 235                 240

Leu Leu Ile Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg
                245                 250                 255

Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser
            260                 265                 270
```

```
Leu Gln Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Leu Gln Asp Tyr Asn
        275                 280                 285

Tyr Pro Leu Thr Phe Gly Pro Gly Thr Lys Val Asp Ile Lys Thr Thr
    290                 295                 300

Thr Pro Ala Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln
305                 310                 315                 320

Pro Leu Ser Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala
                325                 330                 335

Val His Thr Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala
            340                 345                 350

Pro Leu Ala Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr
        355                 360                 365

Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met
    370                 375                 380

Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe
385                 390                 395                 400

Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg
                405                 410                 415

Ser Ala Asp Ala Pro Ala Tyr Gln Gln Gly Gln Asn Gln Leu Tyr Asn
            420                 425                 430

Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg
        435                 440                 445

Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro
    450                 455                 460

Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala
465                 470                 475                 480
```

Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His
485 490 495

Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp
500 505 510

Ala Leu His Met Gln Ala Leu Pro Pro Arg
515 520

<210> 626
<211> 545
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 626
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Gln Val Gln Leu Gln Gln Ser Gly Pro Gly Leu
20 25 30

Val Lys Pro Ser Gln Thr Leu Ser Leu Thr Cys Ala Ile Ser Gly Asp
35 40 45

Ser Val Ser Ser Asn Ser Ala Thr Trp Asn Trp Ile Arg Gln Ser Pro
50 55 60

Ser Arg Gly Leu Glu Trp Leu Gly Arg Thr Tyr Tyr Arg Ser Lys Trp
65 70 75 80

Tyr Asp Asp Tyr Ala Val Ser Val Lys Ser Arg Ile Thr Ile Asn Pro
85 90 95

Asp Thr Ser Lys Asn His Leu Ser Leu His Leu Asn Ser Val Thr Pro
100 105 110

Glu Asp Thr Ala Val Tyr Tyr Cys Ala Gly Gly Gly Leu Val Gly Ala
115 120 125

```
Pro Asp Gly Phe Asp Val Trp Gly Gln Gly Thr Met Val Thr Val Ser
    130                 135                 140

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
145                 150                 155                 160

Gly Gly Gly Gly Ser Gln Ser Val Leu Thr Gln Pro Pro Ser Ala Ser
                165                 170                 175

Gly Thr Pro Gly Gln Arg Val Thr Ile Ser Cys Ser Gly Ser Ser Ser
            180                 185                 190

Asn Ile Gly Ser Asp Pro Val Asn Trp Tyr Gln Gln Leu Pro Gly Thr
        195                 200                 205

Ala Pro Lys Leu Leu Ile Tyr Ser Asn Asn Gln Arg Pro Ser Gly Val
    210                 215                 220

Pro Asp Arg Phe Ser Gly Ser Lys Ser Gly Thr Ser Ala Ser Leu Ala
225                 230                 235                 240

Ile Ser Gly Leu Gln Ser Glu Asp Glu Ala Asp Tyr Tyr Cys Ser Ala
                245                 250                 255

Trp Asp Asp Ser Leu Asn Gly Tyr Val Phe Gly Thr Gly Thr Lys Val
            260                 265                 270

Thr Val Leu Gly Ser Gly Gly Gly Gly Ser Cys Pro Tyr Ser Asn Pro
        275                 280                 285

Ser Leu Cys Ser Gly Gly Gly Gly Ser Cys Pro Tyr Ser Asn Pro Ser
    290                 295                 300

Leu Cys Ser Gly Gly Gly Gly Ser Thr Thr Thr Ala Cys Pro Tyr Ser
305                 310                 315                 320

Asn Pro Ser Leu Cys Thr Thr Thr Pro Ala Pro Arg Pro Pro Thr Pro
                325                 330                 335
```

```
Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser Leu Arg Pro Glu Ala Cys
            340                 345                 350

Arg Pro Ala Ala Gly Gly Ala Val His Thr Arg Gly Leu Asp Phe Ala
        355                 360                 365

Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly Val Leu
    370                 375                 380

Leu Leu Ser Leu Val Ile Thr Lys Arg Gly Arg Lys Lys Leu Leu Tyr
385                 390                 395                 400

Ile Phe Lys Gln Pro Phe Met Arg Pro Val Gln Thr Thr Gln Glu Glu
                405                 410                 415

Asp Gly Cys Ser Cys Arg Phe Pro Glu Glu Glu Glu Gly Gly Cys Glu
            420                 425                 430

Leu Arg Val Lys Phe Ser Arg Ser Ala Asp Ala Pro Ala Tyr Gln Gln
        435                 440                 445

Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu
    450                 455                 460

Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg Asp Pro Glu Met Gly Gly
465                 470                 475                 480

Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu Tyr Asn Glu Leu Gln
                485                 490                 495

Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile Gly Met Lys Gly Glu
            500                 505                 510

Arg Arg Arg Gly Lys Gly His Asp Gly Leu Tyr Gln Gly Leu Ser Thr
        515                 520                 525

Ala Thr Lys Asp Thr Tyr Asp Ala Leu His Met Gln Ala Leu Pro Pro
    530                 535                 540
```

Arg
545

<210> 627
<211> 533
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 627
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Gly Gly Gly Gly Ser Cys Pro Tyr Ser Asn Pro
20 25 30

Ser Leu Cys Gly Gly Gly Gly Ser Gln Val Gln Leu Gln Gln Ser Gly
35 40 45

Pro Gly Leu Val Lys Pro Ser Gln Thr Leu Ser Leu Thr Cys Ala Ile
50 55 60

Ser Gly Asp Ser Val Ser Ser Asn Ser Ala Thr Trp Asn Trp Ile Arg
65 70 75 80

Gln Ser Pro Ser Arg Gly Leu Glu Trp Leu Gly Arg Thr Tyr Tyr Arg
85 90 95

Ser Lys Trp Tyr Asp Asp Tyr Ala Val Ser Val Lys Ser Arg Ile Thr
100 105 110

Ile Asn Pro Asp Thr Ser Lys Asn His Leu Ser Leu His Leu Asn Ser
115 120 125

Val Thr Pro Glu Asp Thr Ala Val Tyr Tyr Cys Ala Gly Gly Gly Leu
130 135 140

Val Gly Ala Pro Asp Gly Phe Asp Val Trp Gly Gln Gly Thr Met Val
145 150 155 160

```
Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly
                165                 170                 175

Gly Gly Ser Gly Gly Gly Gly Ser Gln Ser Val Leu Thr Gln Pro Pro
            180                 185                 190

Ser Ala Ser Gly Thr Pro Gly Gln Arg Val Thr Ile Ser Cys Ser Gly
        195                 200                 205

Ser Ser Ser Asn Ile Gly Ser Asp Pro Val Asn Trp Tyr Gln Gln Leu
    210                 215                 220

Pro Gly Thr Ala Pro Lys Leu Leu Ile Tyr Ser Asn Asn Gln Arg Pro
225                 230                 235                 240

Ser Gly Val Pro Asp Arg Phe Ser Gly Ser Lys Ser Gly Thr Ser Ala
                245                 250                 255

Ser Leu Ala Ile Ser Gly Leu Gln Ser Glu Asp Glu Ala Asp Tyr Tyr
            260                 265                 270

Cys Ser Ala Trp Asp Asp Ser Leu Asn Gly Tyr Val Phe Gly Thr Gly
        275                 280                 285

Thr Lys Val Thr Val Leu Gly Gly Gly Gly Ser Cys Pro Tyr Ser Asn
    290                 295                 300

Pro Ser Leu Cys Gly Gly Gly Gly Ser Thr Thr Thr Pro Ala Pro Arg
305                 310                 315                 320

Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser Leu Arg
                325                 330                 335

Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr Arg Gly
            340                 345                 350

Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr
        355                 360                 365
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Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr Lys Arg Gly Arg Lys
    370                 375                 380

Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met Arg Pro Val Gln Thr
385                 390                 395                 400

Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu Glu Glu Glu
                405                 410                 415

Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg Ser Ala Asp Ala Pro
            420                 425                 430

Ala Tyr Gln Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn Leu Gly
        435                 440                 445

Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg Asp Pro
    450                 455                 460

Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu Tyr
465                 470                 475                 480

Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile Gly
                485                 490                 495

Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His Asp Gly Leu Tyr Gln
            500                 505                 510

Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu His Met Gln
        515                 520                 525

Ala Leu Pro Pro Arg
    530


<210> 628
<211> 528
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
```

polypeptide"

<400> 628
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Gly Gly Gly Gly Ser Cys Pro Tyr Ser Asn Pro
20 25 30

Ser Leu Cys Gly Gly Gly Gly Ser Cys Pro Tyr Ser Asn Pro Ser Leu
35 40 45

Cys Gly Gly Gly Gly Ser Gln Val Gln Leu Gln Gln Ser Gly Pro Gly
50 55 60

Leu Val Lys Pro Ser Gln Thr Leu Ser Leu Thr Cys Ala Ile Ser Gly
65 70 75 80

Asp Ser Val Ser Ser Asn Ser Ala Thr Trp Asn Trp Ile Arg Gln Ser
85 90 95

Pro Ser Arg Gly Leu Glu Trp Leu Gly Arg Thr Tyr Tyr Arg Ser Lys
100 105 110

Trp Tyr Asp Asp Tyr Ala Val Ser Val Lys Ser Arg Ile Thr Ile Asn
115 120 125

Pro Asp Thr Ser Lys Asn His Leu Ser Leu His Leu Asn Ser Val Thr
130 135 140

Pro Glu Asp Thr Ala Val Tyr Tyr Cys Ala Gly Gly Gly Leu Val Gly
145 150 155 160

Ala Pro Asp Gly Phe Asp Val Trp Gly Gln Gly Thr Met Val Thr Val
165 170 175

Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly
180 185 190

Ser Gly Gly Gly Gly Ser Gln Ser Val Leu Thr Gln Pro Pro Ser Ala
195 200 205

```
Ser Gly Thr Pro Gly Gln Arg Val Thr Ile Ser Cys Ser Gly Ser Ser
    210                 215                 220

Ser Asn Ile Gly Ser Asp Pro Val Asn Trp Tyr Gln Gln Leu Pro Gly
225                 230                 235                 240

Thr Ala Pro Lys Leu Leu Ile Tyr Ser Asn Asn Gln Arg Pro Ser Gly
                245                 250                 255

Val Pro Asp Arg Phe Ser Gly Ser Lys Ser Gly Thr Ser Ala Ser Leu
            260                 265                 270

Ala Ile Ser Gly Leu Gln Ser Glu Asp Glu Ala Asp Tyr Tyr Cys Ser
        275                 280                 285

Ala Trp Asp Asp Ser Leu Asn Gly Tyr Val Phe Gly Thr Gly Thr Lys
    290                 295                 300

Val Thr Val Leu Thr Thr Thr Pro Ala Pro Arg Pro Pro Thr Pro Ala
305                 310                 315                 320

Pro Thr Ile Ala Ser Gln Pro Leu Ser Leu Arg Pro Glu Ala Cys Arg
                325                 330                 335

Pro Ala Ala Gly Gly Ala Val His Thr Arg Gly Leu Asp Phe Ala Cys
            340                 345                 350

Asp Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly Val Leu Leu
        355                 360                 365

Leu Ser Leu Val Ile Thr Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile
    370                 375                 380

Phe Lys Gln Pro Phe Met Arg Pro Val Gln Thr Thr Gln Glu Glu Asp
385                 390                 395                 400

Gly Cys Ser Cys Arg Phe Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu
                405                 410                 415
```

Arg Val Lys Phe Ser Arg Ser Ala Asp Ala Pro Ala Tyr Gln Gln Gly
            420   425   430

Gln Asn Gln Leu Tyr Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr
        435   440   445

Asp Val Leu Asp Lys Arg Arg Gly Arg Asp Pro Glu Met Gly Gly Lys
    450   455   460

Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys
465   470   475   480

Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg
                485   490   495

Arg Arg Gly Lys Gly His Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala
            500   505   510

Thr Lys Asp Thr Tyr Asp Ala Leu His Met Gln Ala Leu Pro Pro Arg
        515   520   525

<210> 629
<211> 249
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 629
Glu Val Gln Leu Leu Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
1   5   10   15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr
            20   25   30

Ala Met Asn Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35   40   45

Ser Thr Ile Ser Gly Ser Gly Gly Ser Thr Tyr Tyr Ala Asp Ser Val

```
    50                  55                  60

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
65                  70                  75                  80

Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Phe Tyr Cys
                85                  90                  95

Ala Ile Asp Pro Glu Tyr Tyr Asp Ile Leu Thr Gly Gly Asp Tyr Trp
            100                 105                 110

Gly Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly
        115                 120                 125

Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile
    130                 135                 140

Gln Met Thr Gln Ser Pro Ser Ala Met Ser Ala Ser Val Gly Asp Arg
145                 150                 155                 160

Val Thr Ile Thr Cys Arg Ala Ser Gln Gly Ile Ser Asn Tyr Leu Ala
                165                 170                 175

Trp Phe Gln Gln Lys Pro Gly Lys Val Pro Lys Arg Leu Ile Tyr Ala
            180                 185                 190

Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly Ser Gly
        195                 200                 205

Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro Glu Asp
    210                 215                 220

Phe Ala Thr Tyr Phe Cys Leu Gln His Asp Ser Phe Pro Leu Thr Phe
225                 230                 235                 240

Gly Gly Gly Thr Lys Val Glu Ile Lys
                245
```

<210> 630
<211> 60

<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
oligonucleotide"

<400> 630
ggcggcggcg gctctggagg aggaggcagc ggcggaggag gctccggagg cggcggctct 60

<210> 631
<211> 1467
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 631
atggctctgc ccgtcaccgc tctgctgctg cctctggctc tgctgctgca cgccgcacga 60

ccagaggtgc agctggtgga gagcggagga ggcctggtgc agcctggcgg cagcctgagg 120

ctgtcctgcg cagcatctgg cttcaccttt agctcccacg acatgcactg ggtgaggcag 180

gcaacaggca agggcctgga gtgggtgtcc gccatcggaa tcgcaggcga tacctactat 240

tccggctctg tgaagggccg gttcacaatc agcagagaga acgccaagaa ttccctgtac 300

ctgcagatga actctctgag ggccggcgac accgccgtgt actattgtgc cagagccaat 360

tggggcgagg gcgcctttga tatctggggc cagggcacca tggtgacagt gtctagcggc 420

ggcggcggct ctggaggagg aggcagcggc ggaggaggct ccggaggcgg cggctctgac 480

atccagatga cacagtctcc tagctccctg tccgcctctg tgggcgaccg ggtgaccatc 540

acatgcagag ccagccaggg catctccgat tacctggcct ggtatcagca gaagcccggc 600

aagatcccta agctgctgat ctacgcagca tctaccctgc agagcggagt gccatcccgg 660

ttcagcggat ccggatctgg aacagacttt accctgacaa tctctagcct gcagccagag 720

gatgtggcca cctactattg tcagaagtat aactccgtgc cactgacctt cggcggagga 780

acaaaggtgg agatcaagac cacaactcct gcacctaggc cacctacccc agcacctaca 840

attgctagtc agccactgtc actgcgacca gaggcatgtc gacctgcagc tggaggagca 900

gtgcatacaa ggggactgga ctttgcctgc gatatctaca tttgggctcc tctggcagga 960

acatgtggcg tgctgctgct gagcctggtc atcactctgt actgcaagcg aggccggaag 1020

aaactgctgt atattttcaa acagcccttt atgcgacctg tgcagaccac acaggaggaa 1080

gatgggtgct cctgtcggtt ccccgaggaa gaggaaggag gctgtgagct gcgggtcaag 1140

ttttccagat ctgcagacgc ccctgcttac cagcagggcc agaaccagct gtataacgag 1200

ctgaatctgg ggcggagaga ggaatacgac gtgctggata aaaggcgcgg gagagaccca 1260

gaaatggggg gaaagccacg acggaaaaac ccccaggagg gactgtacaa tgaactgcag 1320

aaggataaaa tggcagaggc ctattccgaa atcgggatga agggagaaag aaggcgaggc 1380

aaaggacacg acggactgta ccaggggctg tctaccgcca caaaggacac ctatgatgct 1440

ctgcatatgc aggcactgcc acccagg 1467

<210> 632
<211> 489
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 632
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu
20 25 30

Val Lys Pro Ser Glu Thr Leu Ser Leu Thr Cys Thr Val Ser Asp Asn
35 40 45

Ser Ile Ser Asn Tyr Tyr Trp Ser Trp Ile Arg Gln Pro Pro Gly Lys
50 55 60

Gly Leu Glu Trp Ile Ala Tyr Ile Tyr Tyr Ser Gly Thr Thr Asn Tyr
65 70 75 80

Asn Pro Ser Leu Lys Ser Arg Val Thr Ile Ser Leu Asp Thr Ser Lys

```
                85                  90                  95

Asn Gln Phe Ser Leu Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala
            100                 105                 110

Val Tyr Tyr Cys Ala Arg Leu Phe Asn Trp Gly Phe Ala Phe Asp Ile
        115                 120                 125

Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly Gly Ser
    130                 135                 140

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu
145                 150                 155                 160

Ile Val Met Thr Gln Ser Pro Ala Thr Leu Ser Val Ser Pro Gly Glu
                165                 170                 175

Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Ser Asn Leu
            180                 185                 190

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile Tyr
        195                 200                 205

Gly Ala Ser Thr Arg Ala Thr Gly Ile Pro Ala Arg Phe Ser Gly Ser
    210                 215                 220

Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln Ser Glu
225                 230                 235                 240

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Asn Asn Trp Pro Leu Thr
                245                 250                 255

Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Thr Thr Thr Pro Ala Pro
            260                 265                 270

Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser Leu
        275                 280                 285

Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr Arg
    290                 295                 300
```

```
Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala Gly
305                 310                 315                 320

Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr Cys Lys
                325                 330                 335

Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met Arg
            340                 345                 350

Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro
        355                 360                 365

Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg Ser
    370                 375                 380

Ala Asp Ala Pro Ala Tyr Gln Gln Gly Gln Asn Gln Leu Tyr Asn Glu
385                 390                 395                 400

Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg
                405                 410                 415

Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln
            420                 425                 430

Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr
        435                 440                 445

Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His Asp
    450                 455                 460

Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala
465                 470                 475                 480

Leu His Met Gln Ala Leu Pro Pro Arg
                485
```

<210> 633
<211> 490
<212> PRT

<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 633
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu
20 25 30

Met Lys Pro Ser Glu Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Gly
35 40 45

Ser Ile Ser Ser Ser Tyr Trp Ser Cys Ile Arg Gln Pro Pro Gly Lys
50 55 60

Gly Leu Glu Trp Ile Gly Tyr Ile Tyr Tyr Ser Gly Thr Thr Asn Tyr
65 70 75 80

Asn Pro Ser Leu Lys Ser Arg Val Thr Leu Ser Leu Asp Thr Ser Lys
85 90 95

Asn Gln Phe Ser Leu Arg Leu Thr Ser Val Thr Ala Ala Asp Thr Ala
100 105 110

Val Tyr Tyr Cys Ala Arg Val Ala Pro Thr Gly Phe Trp Phe Asp Tyr
115 120 125

Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly Gly Ser
130 135 140

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu
145 150 155 160

Ile Val Leu Thr Gln Ser Pro Gly Thr Leu Ser Leu Ser Pro Gly Glu
165 170 175

Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Arg Val Ser Ser Arg Tyr

```
            180                 185                 190

Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile
        195                 200                 205

Tyr Gly Ala Ser Ser Arg Ala Thr Gly Ile Pro Asp Arg Phe Ser Gly
    210                 215                 220

Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro
225                 230                 235                 240

Glu Glu Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Gly Thr Ser Pro Leu
                245                 250                 255

Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Thr Thr Thr Pro Ala
            260                 265                 270

Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser
        275                 280                 285

Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr
    290                 295                 300

Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala
305                 310                 315                 320

Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr Cys
                325                 330                 335

Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met
            340                 345                 350

Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe
        355                 360                 365

Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg
    370                 375                 380

Ser Ala Asp Ala Pro Ala Tyr Gln Gln Gly Gln Asn Gln Leu Tyr Asn
385                 390                 395                 400
```

```
Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg
                405                 410                 415


Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro
            420                 425                 430


Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala
        435                 440                 445


Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His
    450                 455                 460


Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp
465                 470                 475                 480


Ala Leu His Met Gln Ala Leu Pro Pro Arg
                485                 490


<210> 634
<211> 489
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 634
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1               5                   10                  15


His Ala Ala Arg Pro Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu
            20                  25                  30


Val Gln Pro Gly Gly Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe
        35                  40                  45


Thr Phe Ser Ser His Asp Met His Trp Val Arg Gln Ala Thr Gly Lys
    50                  55                  60
```

```
Gly Leu Glu Trp Val Ser Ala Ile Gly Ile Ala Gly Asp Thr Tyr Tyr
65                  70                  75                  80

Ser Gly Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Glu Asn Ala Lys
                85                  90                  95

Asn Ser Leu Tyr Leu Gln Met Asn Ser Leu Arg Ala Gly Asp Thr Ala
            100                 105                 110

Val Tyr Tyr Cys Ala Arg Ala Asn Trp Gly Glu Gly Ala Phe Asp Ile
        115                 120                 125

Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly Gly Ser
    130                 135                 140

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp
145                 150                 155                 160

Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly Asp
                165                 170                 175

Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Gly Ile Ser Asp Tyr Leu
            180                 185                 190

Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ile Pro Lys Leu Leu Ile Tyr
        195                 200                 205

Ala Ala Ser Thr Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly Ser
    210                 215                 220

Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro Glu
225                 230                 235                 240

Asp Val Ala Thr Tyr Tyr Cys Gln Lys Tyr Asn Ser Val Pro Leu Thr
                245                 250                 255

Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Thr Thr Thr Pro Ala Pro
            260                 265                 270

Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser Leu
```

```
        275                 280                 285

Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr Arg
    290                 295                 300

Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala Gly
305                 310                 315                 320

Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr Cys Lys
                325                 330                 335

Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met Arg
            340                 345                 350

Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro
        355                 360                 365

Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg Ser
    370                 375                 380

Ala Asp Ala Pro Ala Tyr Gln Gln Gly Gln Asn Gln Leu Tyr Asn Glu
385                 390                 395                 400

Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg
                405                 410                 415

Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln
            420                 425                 430

Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr
        435                 440                 445

Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His Asp
    450                 455                 460

Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala
465                 470                 475                 480

Leu His Met Gln Ala Leu Pro Pro Arg
                485
```

<210> 635
<211> 490
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 635
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu
20 25 30

Val Lys Pro Ser Glu Thr Leu Ser Leu Thr Cys Thr Val Ser Asp Asp
35 40 45

Ser Ile Ser Asn Tyr Tyr Trp Ser Trp Ile Arg Gln Pro Pro Gly Lys
50 55 60

Gly Leu Glu Trp Ile Gly Tyr Ile Phe Tyr Ser Gly Thr Thr Asn His
65 70 75 80

Asn Pro Ser Leu Lys Ser Arg Leu Thr Ile Ser Leu Asp Lys Ala Lys
85 90 95

Asn Gln Phe Ser Leu Arg Leu Ser Ser Val Thr Ala Ala Asp Thr Ala
100 105 110

Val Tyr Tyr Cys Ala Arg Val Phe Asn Trp Gly Phe Ala Phe Asp Ile
115 120 125

Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly Gly Ser
130 135 140

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu
145 150 155 160

```
Ile Val Leu Thr Gln Ser Pro Gly Thr Leu Ser Leu Ser Pro Gly Glu
                165                 170                 175

Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Arg Ile Ser Arg Thr Tyr
            180                 185                 190

Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile
        195                 200                 205

Tyr Gly Ala Ser Ser Arg Ala Thr Gly Ile Pro Asp Arg Phe Thr Gly
    210                 215                 220

Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro
225                 230                 235                 240

Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Gly Thr Ser Pro Leu
                245                 250                 255

Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Asn Thr Thr Thr Pro Ala
            260                 265                 270

Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser
        275                 280                 285

Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr
    290                 295                 300

Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala
305                 310                 315                 320

Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr Cys
                325                 330                 335

Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met
            340                 345                 350

Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe
        355                 360                 365

Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg
```

370 375 380

Ser Ala Asp Ala Pro Ala Tyr Gln Gln Gly Gln Asn Gln Leu Tyr Asn
385 390 395 400

Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg
405 410 415

Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro
420 425 430

Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala
435 440 445

Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His
450 455 460

Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp
465 470 475 480

Ala Leu His Met Gln Ala Leu Pro Pro Arg
485 490

<210> 636
<211> 490
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 636
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu
20 25 30

Val Lys Pro Ser Glu Thr Leu Ser Leu Thr Cys Thr Val Ser Asp Asn
35 40 45

```
Ser Ile Ser Asn Tyr Tyr Trp Ser Trp Ile Arg Gln Pro Pro Gly Lys
    50                  55                  60

Gly Leu Glu Trp Ile Ala Tyr Ile Tyr Tyr Ser Gly Thr Thr Asn Tyr
65                  70                  75                  80

Asn Pro Ser Leu Lys Ser Arg Val Thr Ile Ser Leu Asp Thr Ser Lys
                85                  90                  95

Asn Gln Phe Ser Leu Gln Leu Ser Ser Val Thr Ala Ala Asp Ala Ala
            100                 105                 110

Val Tyr Tyr Cys Ala Arg Val Phe His Trp Gly Phe Ala Phe Asp Ile
        115                 120                 125

Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly Gly Ser
    130                 135                 140

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu
145                 150                 155                 160

Ile Val Leu Thr Gln Ser Pro Gly Thr Leu Ser Leu Ser Pro Gly Glu
                165                 170                 175

Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Arg Val Ser Asn Thr Tyr
            180                 185                 190

Leu Ala Trp Tyr Gln Gln Asn Pro Gly Gln Ala Pro Arg Leu Leu Ile
        195                 200                 205

Tyr Gly Ala Ser Ser Arg Ala Thr Gly Ile Pro Asp Arg Phe Ser Gly
    210                 215                 220

Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro
225                 230                 235                 240

Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Gly Thr Ser Pro Leu
                245                 250                 255
```

```
Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Thr Thr Thr Pro Ala
            260                 265                 270

Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser
        275                 280                 285

Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr
    290                 295                 300

Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala
305                 310                 315                 320

Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr Cys
                325                 330                 335

Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met
            340                 345                 350

Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe
        355                 360                 365

Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg
    370                 375                 380

Ser Ala Asp Ala Pro Ala Tyr Gln Gln Gly Gln Asn Gln Leu Tyr Asn
385                 390                 395                 400

Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg
                405                 410                 415

Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro
            420                 425                 430

Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala
        435                 440                 445

Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His
    450                 455                 460

Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp
```

465 470 475 480

Ala Leu His Met Gln Ala Leu Pro Pro Arg
485 490

<210> 637
<211> 490
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 637
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu
20 25 30

Val Lys Pro Ser Glu Thr Leu Ser Leu Thr Cys Thr Val Ser Asn Val
35 40 45

Ser Ile Ser Ser Tyr Tyr Trp Ser Trp Ile Arg Gln Pro Pro Gly Lys
50 55 60

Gly Leu Glu Trp Ile Gly Tyr Ile Tyr Tyr Ser Gly Thr Thr Asn Tyr
65 70 75 80

Asn Pro Ser Leu Lys Ser Arg Val Thr Met Ser Val Asp Thr Ser Lys
85 90 95

Asn Gln Phe Ser Leu Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala
100 105 110

Val Tyr Phe Cys Ala Arg Leu Ser Asn Trp Gly Phe Ala Phe Asp Ile
115 120 125

Trp Gly Gln Gly Thr Met Val Thr Phe Ser Ser Gly Gly Gly Gly Ser
130 135 140

```
Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu
145                 150                 155                 160

Ile Val Leu Thr Gln Ser Pro Gly Thr Leu Ser Leu Ser Pro Gly Glu
                165                 170                 175

Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Thr Ile Ser Ser Ser Tyr
            180                 185                 190

Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile
        195                 200                 205

Tyr Gly Ala Ser Ser Arg Ala Thr Gly Ile Pro Asp Arg Phe Ser Gly
    210                 215                 220

Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro
225                 230                 235                 240

Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Gly Trp Ser Pro Ile
                245                 250                 255

Thr Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Thr Thr Thr Pro Ala
            260                 265                 270

Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser
        275                 280                 285

Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr
    290                 295                 300

Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala
305                 310                 315                 320

Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr Cys
                325                 330                 335

Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met
            340                 345                 350
```

```
Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe
        355                 360                 365

Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg
    370                 375                 380

Ser Ala Asp Ala Pro Ala Tyr Gln Gln Gly Gln Asn Gln Leu Tyr Asn
385                 390                 395                 400

Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg
                405                 410                 415

Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro
            420                 425                 430

Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala
        435                 440                 445

Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His
    450                 455                 460

Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp
465                 470                 475                 480

Ala Leu His Met Gln Ala Leu Pro Pro Arg
                485                 490
```

<210> 638
<211> 496
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 638

```
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1               5                   10                  15

His Ala Ala Arg Pro Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu
            20                  25                  30
```

```
Val Gln Pro Gly Gly Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe
        35                  40                  45

Thr Phe Ser Ser Tyr Asp Met His Trp Val Arg Gln Ala Thr Gly Lys
    50                  55                  60

Gly Leu Glu Trp Val Ser Ala Ile Gly Pro Ala Gly Asp Thr Tyr Tyr
65                  70                  75                  80

Pro Gly Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Glu Asn Ala Lys
                85                  90                  95

Asn Ser Leu Tyr Leu Gln Met Asn Ser Leu Arg Ala Gly Asp Thr Ala
            100                 105                 110

Val Tyr Tyr Cys Ala Arg Ala Asp Pro Pro Tyr Tyr Tyr Tyr Gly Met
        115                 120                 125

Asp Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser Gly Gly Gly
    130                 135                 140

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly
145                 150                 155                 160

Ser Asp Ile Val Met Thr Gln Ser Pro Leu Ser Leu Pro Val Thr Pro
                165                 170                 175

Gly Glu Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Leu His
            180                 185                 190

Ser Asn Glu Tyr Asn Tyr Leu Asp Trp Tyr Leu Gln Lys Pro Gly Gln
        195                 200                 205

Ser Pro Gln Leu Leu Ile Tyr Leu Gly Ser Asn Arg Ala Ser Gly Val
    210                 215                 220

Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Ile Leu Lys
225                 230                 235                 240
```

```
Ile Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln
                245                 250                 255

Ala Leu Glu Ile Pro Leu Thr Phe Gly Gly Gly Thr Lys Val Glu Ile
            260                 265                 270

Lys Thr Thr Thr Pro Ala Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile
        275                 280                 285

Ala Ser Gln Pro Leu Ser Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala
    290                 295                 300

Gly Gly Ala Val His Thr Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr
305                 310                 315                 320

Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly Val Leu Leu Leu Ser Leu
                325                 330                 335

Val Ile Thr Leu Tyr Cys Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile
            340                 345                 350

Phe Lys Gln Pro Phe Met Arg Pro Val Gln Thr Thr Gln Glu Glu Asp
        355                 360                 365

Gly Cys Ser Cys Arg Phe Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu
    370                 375                 380

Arg Val Lys Phe Ser Arg Ser Ala Asp Ala Pro Ala Tyr Gln Gln Gly
385                 390                 395                 400

Gln Asn Gln Leu Tyr Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr
                405                 410                 415

Asp Val Leu Asp Lys Arg Arg Gly Arg Asp Pro Glu Met Gly Gly Lys
            420                 425                 430

Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys
        435                 440                 445
```

Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg
    450   455   460

Arg Arg Gly Lys Gly His Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala
465   470   475   480

Thr Lys Asp Thr Tyr Asp Ala Leu His Met Gln Ala Leu Pro Pro Arg
                485   490   495

<210> 639
<211> 491
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 639
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1   5   10   15

His Ala Ala Arg Pro Gln Ile Thr Leu Lys Glu Ser Gly Pro Thr Leu
            20   25   30

Val Lys Pro Thr Gln Thr Leu Thr Leu Thr Cys Thr Phe Ser Gly Phe
        35   40   45

Ser Leu Ser Thr Arg Gly Val Gly Val Gly Trp Ile Arg Gln Pro Pro
    50   55   60

Gly Lys Ala Leu Glu Trp Leu Ala Leu Ile Tyr Trp Asn Asp Asp Lys
65   70   75   80

Arg Tyr Ser Pro Ser Leu Gln Thr Arg Leu Thr Ile Thr Lys Asp Thr
                85   90   95

Pro Lys Asn Gln Val Val Leu Thr Met Thr Asn Met Asp Pro Val Asp
            100   105   110

Thr Ala Thr Tyr Tyr Cys Ala Arg Ser Asn Trp Gly Asn Trp Tyr Phe
        115   120   125

```
Ala Leu Trp Gly Arg Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly
    130                 135                 140

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly
145                 150                 155                 160

Ser Glu Ile Val Leu Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro
                165                 170                 175

Gly Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Ser
            180                 185                 190

Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu
        195                 200                 205

Ile Tyr Asp Ala Phe Tyr Arg Ala Thr Gly Ile Pro Ala Arg Phe Ser
    210                 215                 220

Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Glu
225                 230                 235                 240

Pro Glu Asp Phe Ala Val Tyr Tyr Cys Gln His Arg Ser Asn Trp Pro
                245                 250                 255

Ile Thr Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Thr Thr Thr Pro
            260                 265                 270

Ala Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu
        275                 280                 285

Ser Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His
    290                 295                 300

Thr Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu
305                 310                 315                 320

Ala Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr
                325                 330                 335
```

```
Cys Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe
            340                 345                 350

Met Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg
        355                 360                 365

Phe Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser
    370                 375                 380

Arg Ser Ala Asp Ala Pro Ala Tyr Gln Gln Gly Gln Asn Gln Leu Tyr
385                 390                 395                 400

Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys
                405                 410                 415

Arg Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn
            420                 425                 430

Pro Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu
        435                 440                 445

Ala Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly
    450                 455                 460

His Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr
465                 470                 475                 480

Asp Ala Leu His Met Gln Ala Leu Pro Pro Arg
                485                 490
```

<210> 640
<211> 490
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 640

```
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
```

```
1               5                   10                  15

His Ala Ala Arg Pro Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu
            20                  25                  30

Val Lys Pro Ser Glu Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Asp
        35                  40                  45

Ser Ile Ser Asn Tyr Tyr Trp Thr Trp Ile Arg Gln Pro Pro Gly Lys
    50                  55                  60

Gly Leu Glu Trp Ile Gly Tyr Ile Tyr Tyr Ser Gly Thr Thr Asn Ser
65                  70                  75                  80

Asn Pro Ser Leu Lys Ser Arg Val Thr Val Ser Leu Asp Thr Ser Lys
                85                  90                  95

Ser Gln Phe Ser Leu Asn Leu Ser Ser Val Thr Ala Ala Asp Thr Ala
            100                 105                 110

Val Tyr Tyr Cys Ala Arg Val Phe Asn Arg Gly Phe Ala Phe Asp Ile
        115                 120                 125

Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly Gly Ser
    130                 135                 140

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu
145                 150                 155                 160

Ile Val Leu Thr Gln Ser Pro Gly Thr Leu Ser Leu Ser Pro Gly Glu
                165                 170                 175

Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Arg Ile Ser Asn Thr Tyr
            180                 185                 190

Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile
        195                 200                 205

Tyr Gly Ala Ser Ser Arg Ala Thr Gly Ile Pro Asp Arg Phe Ser Gly
    210                 215                 220
```

```
Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro
225                 230                 235                 240

Glu Asp Phe Ala Ala Tyr Tyr Cys Gln Gln Tyr Asp Thr Ser Pro Leu
                245                 250                 255

Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Thr Thr Thr Pro Ala
            260                 265                 270

Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser
        275                 280                 285

Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr
    290                 295                 300

Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala
305                 310                 315                 320

Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr Cys
                325                 330                 335

Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met
            340                 345                 350

Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe
        355                 360                 365

Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg
    370                 375                 380

Ser Ala Asp Ala Pro Ala Tyr Gln Gln Gly Gln Asn Gln Leu Tyr Asn
385                 390                 395                 400

Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg
                405                 410                 415

Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro
            420                 425                 430
```

Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala
435 440 445

Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His
450 455 460

Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp
465 470 475 480

Ala Leu His Met Gln Ala Leu Pro Pro Arg
485 490

<210> 641
<211> 499
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 641
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Gln Val Thr Leu Arg Glu Ser Gly Pro Ala Leu
20 25 30

Val Lys Pro Thr Gln Thr Leu Thr Leu Thr Cys Thr Val Ser Gly Val
35 40 45

Ser Leu Ser Thr Ser Gly Met Cys Val Ser Trp Ile Arg Gln Pro Leu
50 55 60

Gly Lys Ala Leu Glu Trp Leu Gly Phe Ile Asp Trp Asp Asp Asp Lys
65 70 75 80

Tyr Tyr Asn Thr Ser Leu Lys Thr Arg Leu Thr Ile Ser Lys Asp Thr
85 90 95

Ser Lys Asn Gln Val Val Leu Thr Met Thr Asn Met Asp Pro Val Asp

```
            100                 105                 110

Thr Ala Thr Tyr Tyr Cys Ala Arg Ile Arg Gly Tyr Ser Gly Ser Tyr
        115                 120                 125

Asp Ala Phe Asp Ile Trp Gly Gln Gly Thr Val Val Ile Val Ser Ser
    130                 135                 140

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly
145                 150                 155                 160

Gly Gly Gly Ser Asp Ile Val Met Thr Gln Ser Pro Leu Ser Leu Pro
                165                 170                 175

Val Thr Pro Gly Glu Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser
            180                 185                 190

Leu Leu His Ser Asn Gly Tyr Asn His Leu Asp Trp Tyr Leu Gln Lys
        195                 200                 205

Pro Gly Gln Ser Pro Gln Val Leu Ile Tyr Leu Gly Ser Asn Arg Ala
    210                 215                 220

Ser Gly Val Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe
225                 230                 235                 240

Thr Leu Lys Ile Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Phe
                245                 250                 255

Cys Met Gln Ala Leu Gln Thr Pro Leu Thr Phe Gly Gly Gly Thr Lys
            260                 265                 270

Val Glu Ile Lys Thr Thr Thr Pro Ala Pro Arg Pro Pro Thr Pro Ala
        275                 280                 285

Pro Thr Ile Ala Ser Gln Pro Leu Ser Leu Arg Pro Glu Ala Cys Arg
    290                 295                 300

Pro Ala Ala Gly Gly Ala Val His Thr Arg Gly Leu Asp Phe Ala Cys
305                 310                 315                 320
```

```
Asp Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly Val Leu Leu
                325                 330                 335

Leu Ser Leu Val Ile Thr Leu Tyr Cys Lys Arg Gly Arg Lys Lys Leu
            340                 345                 350

Leu Tyr Ile Phe Lys Gln Pro Phe Met Arg Pro Val Gln Thr Thr Gln
        355                 360                 365

Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu Glu Glu Glu Gly Gly
    370                 375                 380

Cys Glu Leu Arg Val Lys Phe Ser Arg Ser Ala Asp Ala Pro Ala Tyr
385                 390                 395                 400

Gln Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn Leu Gly Arg Arg
                405                 410                 415

Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg Asp Pro Glu Met
            420                 425                 430

Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu Tyr Asn Glu
        435                 440                 445

Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile Gly Met Lys
    450                 455                 460

Gly Glu Arg Arg Arg Gly Lys Gly His Asp Gly Leu Tyr Gln Gly Leu
465                 470                 475                 480

Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu His Met Gln Ala Leu
                485                 490                 495

Pro Pro Arg
```

<210> 642
<211> 489
<212> PRT

<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 642
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Gln Val Gln Leu Gln Val Ser Gly Pro Gly Leu
20 25 30

Val Lys Pro Ser Glu Thr Leu Ser Leu Thr Cys Ser Val Ser Gly Gly
35 40 45

Ser Ile Ser Ser Tyr Tyr Trp Ser Trp Ile Arg Gln Ser Pro Gly Lys
50 55 60

Gly Leu Asp Trp Ile Gly Tyr Met Tyr Tyr Ser Gly Thr Thr Asn Tyr
65 70 75 80

Asn Pro Ser Leu Lys Ser Arg Val Thr Ile Ser Val Asp Thr Ser Lys
85 90 95

Asn Gln Phe Ser Leu Lys Leu Ser Ser Val Thr Ala Thr Asp Thr Ala
100 105 110

Val Tyr Tyr Cys Ala Arg Val Gly Leu Thr Gly Phe Phe Phe Asp Tyr
115 120 125

Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly Gly Ser
130 135 140

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala
145 150 155 160

Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly Asp
165 170 175

Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Gly Ile Arg Asn Asp Leu

```
            180                 185                 190

Gly Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile Tyr
        195                 200                 205

Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly Ser
    210                 215                 220

Gly Ser Gly Thr Asp Phe Thr Leu Thr Val Ser Ser Leu Gln Pro Glu
225                 230                 235                 240

Asp Phe Ala Thr Tyr Tyr Cys Leu Gln Asp Tyr Asn Tyr Pro Tyr Thr
                245                 250                 255

Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys Thr Thr Thr Pro Ala Pro
            260                 265                 270

Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser Leu
        275                 280                 285

Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr Arg
    290                 295                 300

Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala Gly
305                 310                 315                 320

Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr Cys Lys
                325                 330                 335

Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met Arg
            340                 345                 350

Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro
        355                 360                 365

Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg Ser
    370                 375                 380

Ala Asp Ala Pro Ala Tyr Gln Gln Gly Gln Asn Gln Leu Tyr Asn Glu
385                 390                 395                 400
```

```
Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg
                405                 410                 415


Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln
            420                 425                 430


Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr
        435                 440                 445


Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His Asp
    450                 455                 460


Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala
465                 470                 475                 480


Leu His Met Gln Ala Leu Pro Pro Arg
                485


<210> 643
<211> 486
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 643
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1               5                   10                  15


His Ala Ala Arg Pro Gln Val Gln Leu Gln Gln Trp Gly Gly Gly Leu
            20                  25                  30


Leu Lys Pro Ser Glu Thr Leu Ser Leu Thr Cys Ala Val Tyr Gly Gly
        35                  40                  45


Ser Ser Ser Gly Asn Tyr Trp Ser Trp Ile Arg Gln Pro Pro Gly Lys
    50                  55                  60
```

```
Arg Leu Glu Trp Ile Gly Glu Ile Asn His Ser Gly Thr Thr Ser Tyr
65                  70                  75                  80

Asn Pro Ser Leu Lys Ser Arg Val Thr Ile Ser Val Asp Thr Ser Lys
                85                  90                  95

Asn Gln Phe Ser Leu Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala
            100                 105                 110

Val Tyr Tyr Cys Ala Arg Gly Glu Leu Gly Ile Ala Asp Ser Trp Gly
        115                 120                 125

Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly
    130                 135                 140

Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Gln
145                 150                 155                 160

Met Thr Gln Ser Pro Ser Thr Leu Ser Ala Ser Val Gly Asp Arg Val
                165                 170                 175

Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Ser Arg Trp Leu Ala Trp
            180                 185                 190

Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile Tyr Lys Ala
        195                 200                 205

Ser Ser Leu Glu Ser Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser
    210                 215                 220

Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro Asp Asp Phe
225                 230                 235                 240

Ala Thr Tyr Tyr Cys Gln Gln Tyr Asn Ser Tyr Ser Thr Phe Gly Gln
                245                 250                 255

Gly Thr Lys Val Glu Ile Lys Thr Thr Thr Pro Ala Pro Arg Pro Pro
            260                 265                 270

Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser Leu Arg Pro Glu
```

```
        275                 280                 285

Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr Arg Gly Leu Asp
    290                 295                 300

Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly
305                 310                 315                 320

Val Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr Cys Lys Arg Gly Arg
                325                 330                 335

Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met Arg Pro Val Gln
            340                 345                 350

Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu Glu Glu
        355                 360                 365

Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg Ser Ala Asp Ala
    370                 375                 380

Pro Ala Tyr Gln Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn Leu
385                 390                 395                 400

Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg Asp
                405                 410                 415

Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu
            420                 425                 430

Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile
        435                 440                 445

Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His Asp Gly Leu Tyr
    450                 455                 460

Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu His Met
465                 470                 475                 480

Gln Ala Leu Pro Pro Arg
                485
```

<210> 644
<211> 492
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 644
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Gln Leu Gln Leu Gln Glu Ser Gly Pro Gly Leu
20 25 30

Val Lys Pro Ser Glu Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Gly
35 40 45

Ser Ile Ser Ser Ser Ser Tyr Tyr Trp Gly Trp Ile Arg Gln Pro Pro
50 55 60

Gly Lys Gly Leu Glu Trp Ile Gly Ser Ile Tyr Tyr Ser Gly Asn Ile
65 70 75 80

Tyr His Asn Pro Ser Leu Lys Ser Arg Val Ser Ile Ser Val Asp Thr
85 90 95

Ser Lys Asn Gln Phe Ser Leu Arg Leu Ser Ser Val Thr Ala Ala Asp
100 105 110

Thr Ala Val Tyr Tyr Cys Ala Arg Glu Ile Ile Val Gly Ala Thr His
115 120 125

Phe Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly
130 135 140

Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly
145 150 155 160

```
Gly Ser Ala Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser
                165                 170                 175

Val Gly Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Gly Ile Arg
            180                 185                 190

Asn Asp Leu Gly Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Glu Leu
        195                 200                 205

Leu Ile Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe
    210                 215                 220

Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu
225                 230                 235                 240

Gln Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Leu Gln Asp Tyr Asn Tyr
                245                 250                 255

Pro Leu Thr Phe Gly Pro Gly Thr Lys Val Asp Ile Lys Thr Thr Thr
            260                 265                 270

Pro Ala Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro
        275                 280                 285

Leu Ser Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala Val
    290                 295                 300

His Thr Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro
305                 310                 315                 320

Leu Ala Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr Leu
                325                 330                 335

Tyr Cys Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro
            340                 345                 350

Phe Met Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys
        355                 360                 365

Arg Phe Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg Val Lys Phe
```

370 375 380

Ser Arg Ser Ala Asp Ala Pro Ala Tyr Gln Gln Gly Gln Asn Gln Leu
385 390 395 400

Tyr Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp
405 410 415

Lys Arg Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys
420 425 430

Asn Pro Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala
435 440 445

Glu Ala Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys
450 455 460

Gly His Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr
465 470 475 480

Tyr Asp Ala Leu His Met Gln Ala Leu Pro Pro Arg
485 490

<210> 645
<211> 490
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 645
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Gln Val Gln Leu Gln Gln Trp Gly Ala Gly Leu
20 25 30

Leu Lys Pro Ser Glu Thr Leu Ser Leu Thr Cys Ala Val Tyr Gly Gly
35 40 45

```
Ser Phe Ser Gly Tyr Tyr Trp Ser Trp Ile Arg Gln Pro Pro Gly Lys
    50                  55                  60

Gly Leu Glu Trp Ile Gly Glu Ile Ile His Ser Gly Ser Ser Asn Tyr
65                  70                  75                  80

Asn Pro Ser Leu Lys Ser Arg Val Ser Ile Ser Val Asp Thr Ser Lys
                85                  90                  95

Asn Gln Phe Ser Leu Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala
            100                 105                 110

Val Tyr Tyr Cys Ser Arg Gly Glu Tyr Gly Ser Gly Ser Arg Phe Asp
        115                 120                 125

Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly Gly
    130                 135                 140

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
145                 150                 155                 160

Ala Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
                165                 170                 175

Asp Arg Val Ala Ile Thr Cys Arg Ala Ser Gln Gly Ile Arg Asp Asp
            180                 185                 190

Leu Gly Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
        195                 200                 205

Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
    210                 215                 220

Ser Arg Ser Asp Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
225                 230                 235                 240

Glu Asp Phe Ala Thr Tyr Tyr Cys Leu Gln Asp Tyr Asp Tyr Pro Leu
                245                 250                 255
```

```
Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Thr Thr Thr Pro Ala
            260                 265                 270

Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser
        275                 280                 285

Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr
    290                 295                 300

Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala
305                 310                 315                 320

Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr Cys
                325                 330                 335

Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met
            340                 345                 350

Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe
        355                 360                 365

Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg
    370                 375                 380

Ser Ala Asp Ala Pro Ala Tyr Gln Gln Gly Gln Asn Gln Leu Tyr Asn
385                 390                 395                 400

Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg
                405                 410                 415

Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro
            420                 425                 430

Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala
        435                 440                 445

Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His
    450                 455                 460

Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp
```

```
465                 470                 475                 480


Ala Leu His Met Gln Ala Leu Pro Pro Arg
                485                 490


<210> 646
<211> 487
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 646
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1               5                   10                  15


His Ala Ala Arg Pro Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu
            20                  25                  30


Val Lys Pro Ser Gly Thr Leu Ser Leu Thr Cys Ala Val Ser Gly Gly
        35                  40                  45


Ser Ile Ser Ser Asn Asn Trp Trp Ser Trp Val Arg Gln Pro Pro Gly
    50                  55                  60


Lys Gly Leu Glu Trp Ile Gly Asp Ile His His Ser Gly Ser Thr Asn
65                  70                  75                  80


Tyr Lys Pro Ser Leu Lys Ser Arg Val Thr Ile Ser Val Asp Lys Ser
                85                  90                  95


Lys Asn Gln Phe Ser Leu Asn Leu Ile Ser Val Thr Ala Ala Asp Thr
            100                 105                 110


Ala Val Tyr Tyr Cys Ala Arg Glu Ala Gly Gly Tyr Phe Asp Tyr Trp
        115                 120                 125


Gly Gln Gly Ile Leu Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly
    130                 135                 140
```

```
Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile
145                 150                 155                 160

Gln Met Thr Gln Ser Pro Ser Thr Leu Ser Ala Ser Val Gly Asp Arg
                165                 170                 175

Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Ser Ser Trp Leu Ala
            180                 185                 190

Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile Ser Lys
        195                 200                 205

Ala Ser Ser Leu Glu Ser Gly Val Pro Ser Arg Phe Ser Gly Ser Gly
    210                 215                 220

Ser Gly Pro Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro Ala Asp
225                 230                 235                 240

Phe Ala Thr Tyr Tyr Cys Gln Gln Tyr Asn Ser Tyr Ser Thr Phe Gly
                245                 250                 255

Gln Gly Thr Lys Leu Glu Ile Lys Thr Thr Thr Pro Ala Pro Arg Pro
            260                 265                 270

Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser Leu Arg Pro
        275                 280                 285

Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr Arg Gly Leu
    290                 295                 300

Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys
305                 310                 315                 320

Gly Val Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr Cys Lys Arg Gly
                325                 330                 335

Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met Arg Pro Val
            340                 345                 350
```

```
Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu Glu
        355                 360                 365

Glu Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg Ser Ala Asp
    370                 375                 380

Ala Pro Ala Tyr Gln Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn
385                 390                 395                 400

Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg
                405                 410                 415

Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly
            420                 425                 430

Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu
        435                 440                 445

Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His Asp Gly Leu
    450                 455                 460

Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu His
465                 470                 475                 480

Met Gln Ala Leu Pro Pro Arg
                485
```

<210> 647
<211> 490
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 647

```
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1               5                   10                  15

His Ala Ala Arg Pro Gln Val Gln Leu Gln Gln Trp Gly Ala Gly Leu
            20                  25                  30
```

```
Leu Lys Pro Ser Glu Thr Leu Ser Leu Thr Cys Ala Val Tyr Gly Gly
        35                  40                  45

Ser Phe Ser Gly Tyr Tyr Trp Thr Trp Ile Arg Gln Pro Pro Gly Lys
    50                  55                  60

Gly Leu Glu Trp Ile Gly Glu Ile Thr His Ser Gly Ser Thr Asn Tyr
65                  70                  75                  80

Asn Pro Ser Leu Lys Ser Arg Val Ser Ile Ser Val Asp Thr Ser Lys
                85                  90                  95

Asn Gln Phe Ser Leu Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala
            100                 105                 110

Val Tyr Tyr Cys Ala Arg Gly Glu Tyr Gly Ser Gly Ser Arg Phe Asp
        115                 120                 125

Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly Gly
    130                 135                 140

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
145                 150                 155                 160

Ala Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
                165                 170                 175

Asp Arg Val Ala Ile Thr Cys Arg Ala Ser Gln Gly Ile Arg Asp Asp
            180                 185                 190

Leu Gly Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
        195                 200                 205

Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
    210                 215                 220

Ser Gly Ser Asp Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
225                 230                 235                 240
```

```
Glu Asp Phe Ala Thr Tyr Tyr Cys Leu Gln Asp Tyr Asp Tyr Pro Leu
                245                 250                 255

Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Thr Thr Thr Pro Ala
            260                 265                 270

Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser
        275                 280                 285

Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr
    290                 295                 300

Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala
305                 310                 315                 320

Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr Cys
                325                 330                 335

Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met
            340                 345                 350

Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe
        355                 360                 365

Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg
    370                 375                 380

Ser Ala Asp Ala Pro Ala Tyr Gln Gln Gly Gln Asn Gln Leu Tyr Asn
385                 390                 395                 400

Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg
                405                 410                 415

Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro
            420                 425                 430

Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala
        435                 440                 445
```

Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His
    450   455   460

Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp
465   470   475   480

Ala Leu His Met Gln Ala Leu Pro Pro Arg
                485   490

<210> 648
<211> 490
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 648
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1   5   10   15

His Ala Ala Arg Pro Gln Val Gln Leu Gln Gln Trp Gly Ala Gly Leu
            20   25   30

Leu Lys Pro Ser Glu Thr Leu Ser Leu Thr Cys Ala Val Tyr Gly Gly
        35   40   45

Ser Phe Ser Gly Tyr Tyr Trp Ser Trp Ile Arg Gln Pro Pro Gly Lys
    50   55   60

Gly Leu Glu Trp Ile Gly Glu Ile Thr His Ser Gly Ser Thr Asn Tyr
65   70   75   80

Asn Pro Ser Leu Lys Ser Arg Val Ser Ile Ser Val Asp Thr Ser Lys
                85   90   95

Asn Gln Phe Ser Leu Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala
            100   105   110

Val Tyr Tyr Cys Ala Arg Gly Glu Tyr Gly Ser Gly Ser Arg Phe Asp
        115   120   125

```
Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly Gly
    130                 135                 140

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
145                 150                 155                 160

Ala Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
                165                 170                 175

Asp Arg Val Ala Leu Thr Cys Arg Ala Ser Gln Gly Ile Arg Asp Asp
            180                 185                 190

Leu Gly Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
        195                 200                 205

Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
    210                 215                 220

Ser Gly Ser Asp Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
225                 230                 235                 240

Glu Asp Phe Ala Thr Tyr Tyr Cys Leu Gln Asp Tyr Asp Tyr Pro Leu
                245                 250                 255

Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Thr Thr Thr Pro Ala
            260                 265                 270

Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser
        275                 280                 285

Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr
    290                 295                 300

Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala
305                 310                 315                 320

Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr Cys
                325                 330                 335
```

```
Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met
            340                 345                 350

Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe
        355                 360                 365

Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg
    370                 375                 380

Ser Ala Asp Ala Pro Ala Tyr Gln Gln Gly Gln Asn Gln Leu Tyr Asn
385                 390                 395                 400

Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg
                405                 410                 415

Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro
            420                 425                 430

Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala
        435                 440                 445

Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His
    450                 455                 460

Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp
465                 470                 475                 480

Ala Leu His Met Gln Ala Leu Pro Pro Arg
                485                 490
```

<210> 649
<211> 491
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 649

```
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
```

```
1               5                   10                  15

His Ala Ala Arg Pro Gln Val Gln Leu Gln Gln Trp Gly Ala Gly Leu
            20                  25                  30

Leu Lys Pro Ser Glu Thr Leu Ser Leu Thr Cys Ala Val Tyr Gly Gly
        35                  40                  45

Ser Phe Ser Ala Tyr Tyr Trp Asn Trp Ile Arg Gln Pro Pro Gly Lys
    50                  55                  60

Gly Leu Glu Trp Ile Gly Glu Ile Asn His Ser Gly Ser Thr Asn Tyr
65                  70                  75                  80

Asn Pro Ser Leu Lys Ser Arg Val Thr Ile Ser Val Asp Thr Ser Lys
                85                  90                  95

Asn Gln Phe Ser Leu Asn Leu Thr Ser Leu Thr Ala Ala Asp Thr Ala
            100                 105                 110

Val Tyr Tyr Cys Ala Arg Gly Leu Asp Ser Ser Gly Trp Tyr Pro Phe
        115                 120                 125

Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly
    130                 135                 140

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly
145                 150                 155                 160

Ser Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Val Ser Ala Ser Val
                165                 170                 175

Gly Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Gly Ile Ser Ser
            180                 185                 190

Trp Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu
        195                 200                 205

Ile Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser
    210                 215                 220
```

```
Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln
225                 230                 235                 240

Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Ala Asp Ser Phe Pro
                245                 250                 255

Phe Thr Phe Gly Pro Gly Thr Lys Val Asp Ile Lys Thr Thr Thr Pro
            260                 265                 270

Ala Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu
        275                 280                 285

Ser Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His
    290                 295                 300

Thr Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu
305                 310                 315                 320

Ala Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr
                325                 330                 335

Cys Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe
            340                 345                 350

Met Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg
        355                 360                 365

Phe Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser
    370                 375                 380

Arg Ser Ala Asp Ala Pro Ala Tyr Gln Gln Gly Gln Asn Gln Leu Tyr
385                 390                 395                 400

Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys
                405                 410                 415

Arg Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn
            420                 425                 430
```

Pro Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu
        435   440   445

Ala Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly
    450   455   460

His Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr
465   470   475   480

Asp Ala Leu His Met Gln Ala Leu Pro Pro Arg
                485   490

<210> 650
<211> 486
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 650
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1   5   10   15

His Ala Ala Arg Pro Gln Val Gln Leu Gln Gln Trp Gly Ala Gly Leu
            20   25   30

Leu Lys Pro Ser Glu Thr Leu Ser Leu Thr Cys Ala Val Phe Gly Gly
        35   40   45

Ser Phe Ser Gly Asp Tyr Trp Ser Trp Ile Arg Gln Pro Pro Gly Lys
    50   55   60

Gly Leu Glu Trp Ile Gly Glu Ile Asn His Ser Gly Ile Thr Ser Phe
65   70   75   80

Asn Pro Ser Leu Lys Ser Arg Val Thr Ile Ser Val Asp Thr Ser Lys
                85   90   95

Asn Gln Phe Ser Leu Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala

```
            100                 105                 110

Val Tyr Tyr Cys Ala Arg Gly Glu Leu Gly Ile Pro Asp Asn Trp Gly
        115                 120                 125

Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly
    130                 135                 140

Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Gln
145                 150                 155                 160

Met Thr Gln Ser Pro Ser Thr Leu Ser Ala Ser Val Gly Asp Arg Val
                165                 170                 175

Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Ser Arg Trp Leu Ala Trp
            180                 185                 190

Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile Tyr Lys Ala
        195                 200                 205

Ser Ser Leu Glu Ser Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser
    210                 215                 220

Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro Asp Asp Phe
225                 230                 235                 240

Ala Thr Tyr Tyr Cys Gln Gln Tyr Asn Ser Tyr Ser Thr Phe Gly Gln
                245                 250                 255

Gly Thr Lys Val Glu Ile Lys Thr Thr Thr Pro Ala Pro Arg Pro Pro
            260                 265                 270

Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser Leu Arg Pro Glu
        275                 280                 285

Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr Arg Gly Leu Asp
    290                 295                 300

Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly
305                 310                 315                 320
```

```
Val Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr Cys Lys Arg Gly Arg
                325                 330                 335

Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met Arg Pro Val Gln
            340                 345                 350

Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu Glu Glu
        355                 360                 365

Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg Ser Ala Asp Ala
    370                 375                 380

Pro Ala Tyr Gln Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn Leu
385                 390                 395                 400

Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg Asp
                405                 410                 415

Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu
            420                 425                 430

Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile
        435                 440                 445

Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His Asp Gly Leu Tyr
    450                 455                 460

Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu His Met
465                 470                 475                 480

Gln Ala Leu Pro Pro Arg
                485
```

<210> 651
<211> 495
<212> PRT
<213> Artificial Sequence

<220>
<221> source

<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 651

```
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1               5                  10                  15

His Ala Ala Arg Pro Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu
            20                  25                  30

Val Lys Pro Ser Gly Thr Leu Ser Leu Thr Cys Val Val Phe Gly Asp
        35                  40                  45

Ser Ile Ser Ser Ser Asn Trp Trp Ser Trp Val Arg Gln Pro Pro Gly
    50                  55                  60

Lys Gly Leu Glu Trp Ile Gly Glu Val Phe His Ser Gly Ser Thr Asn
65                  70                  75                  80

Tyr Asn Pro Ser Leu Lys Ser Arg Val Thr Ile Ser Val Asp Lys Ser
                85                  90                  95

Lys Asn Gln Phe Ser Leu Lys Leu Ser Ser Val Thr Ala Ala Asp Thr
            100                 105                 110

Ala Val Tyr Tyr Cys Ala Arg Ala Ala Val Ala Gly Ala Leu Asp Tyr
        115                 120                 125

Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly Gly Ser
    130                 135                 140

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp
145                 150                 155                 160

Ile Val Met Thr Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly Glu
                165                 170                 175

Arg Ala Thr Ile Asn Cys Lys Ser Ser Gln Ser Val Leu Tyr Ser Ser
            180                 185                 190

Asn Asn Lys Asn Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Pro
```

```
        195                 200                 205

Pro Asn Leu Leu Val Tyr Trp Ala Ser Thr Arg Glu Ser Gly Val Pro
    210                 215                 220

Asp Arg Phe Ser Gly Ala Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile
225                 230                 235                 240

Ser Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln Gln Tyr
                245                 250                 255

Tyr Gly Thr Ser Trp Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
            260                 265                 270

Thr Thr Thr Pro Ala Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala
        275                 280                 285

Ser Gln Pro Leu Ser Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly
    290                 295                 300

Gly Ala Val His Thr Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile
305                 310                 315                 320

Trp Ala Pro Leu Ala Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val
                325                 330                 335

Ile Thr Leu Tyr Cys Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe
            340                 345                 350

Lys Gln Pro Phe Met Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly
        355                 360                 365

Cys Ser Cys Arg Phe Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg
    370                 375                 380

Val Lys Phe Ser Arg Ser Ala Asp Ala Pro Ala Tyr Gln Gln Gly Gln
385                 390                 395                 400

Asn Gln Leu Tyr Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp
                405                 410                 415
```

```
Val Leu Asp Lys Arg Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro
            420                 425                 430

Arg Arg Lys Asn Pro Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp
        435                 440                 445

Lys Met Ala Glu Ala Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg
    450                 455                 460

Arg Gly Lys Gly His Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr
465                 470                 475                 480

Lys Asp Thr Tyr Asp Ala Leu His Met Gln Ala Leu Pro Pro Arg
                485                 490                 495
```

<210> 652
<211> 491
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 652

```
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1               5                   10                  15

His Ala Ala Arg Pro Gln Ile Thr Leu Arg Glu Ser Gly Pro Thr Leu
            20                  25                  30

Val Lys Pro Thr Gln Thr Leu Thr Leu Thr Cys Thr Phe Ser Gly Phe
        35                  40                  45

Ser Leu Ser Thr Ser Gly Leu Gly Val Gly Trp Ile Arg Gln Pro Pro
    50                  55                  60

Gly Glu Ala Leu Glu Trp Leu Ala Leu Ile Tyr Trp Asn Asp Asp Lys
65                  70                  75                  80
```

```
Arg Tyr Ser Pro Ser Leu Lys Ser Arg Leu Ser Ile Thr Lys Asp Thr
                85                  90                  95

Ser Lys Asn Gln Val Val Leu Ile Met Thr Asn Met Asp Pro Val Asp
            100                 105                 110

Thr Ala Thr Tyr Tyr Cys Val His Arg Arg Ile Ala Ala Pro Gly Ser
        115                 120                 125

Val Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly
    130                 135                 140

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly
145                 150                 155                 160

Ser Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Val Ser Ala Ser Val
                165                 170                 175

Gly Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Gly Ile Ser Ser
            180                 185                 190

Trp Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu
        195                 200                 205

Ile Ser Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser
    210                 215                 220

Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln
225                 230                 235                 240

Pro Glu Asp Phe Ala Thr Tyr Tyr Cys His Gln Ala Asn Ser Phe Pro
                245                 250                 255

Phe Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys Thr Thr Thr Pro
            260                 265                 270

Ala Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu
        275                 280                 285

Ser Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His
```

290 295 300

Thr Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu
305 310 315 320

Ala Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr
325 330 335

Cys Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe
340 345 350

Met Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg
355 360 365

Phe Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser
370 375 380

Arg Ser Ala Asp Ala Pro Ala Tyr Gln Gln Gly Gln Asn Gln Leu Tyr
385 390 395 400

Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys
405 410 415

Arg Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn
420 425 430

Pro Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu
435 440 445

Ala Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly
450 455 460

His Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr
465 470 475 480

Asp Ala Leu His Met Gln Ala Leu Pro Pro Arg
485 490

<210> 653
<211> 490

<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 653
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val
20 25 30

Lys Lys Pro Gly Ala Ser Val Lys Val Ser Cys Lys Val Ser Gly Tyr
35 40 45

Thr Leu Thr Glu Leu Ser Met His Trp Val Arg Gln Ala Pro Gly Lys
50 55 60

Gly Pro Glu Gly Met Gly Gly Phe Asp Pro Glu Asp Gly Lys Thr Ile
65 70 75 80

Tyr Ala Gln Lys Phe Gln Gly Arg Val Thr Met Thr Glu Asp Thr Ser
85 90 95

Ala Asp Thr Ala Tyr Met Glu Leu Asn Ser Leu Arg Ser Glu Asp Thr
100 105 110

Ala Val Tyr Tyr Cys Ala Thr Leu Leu Arg Gly Leu Asp Ala Phe Asp
115 120 125

Val Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly Gly
130 135 140

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
145 150 155 160

Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
165 170 175

```
Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Gly Ile Arg Asn Asp
            180                 185                 190

Leu Gly Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Arg Leu Ile
        195                 200                 205

Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
    210                 215                 220

Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Thr Leu Gln Pro
225                 230                 235                 240

Glu Asp Phe Ala Thr Tyr Tyr Cys Leu Gln His Asn Ser Tyr Pro Arg
                245                 250                 255

Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys Thr Thr Thr Pro Ala
            260                 265                 270

Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser
        275                 280                 285

Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr
    290                 295                 300

Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala
305                 310                 315                 320

Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr Cys
                325                 330                 335

Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met
            340                 345                 350

Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe
        355                 360                 365

Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg
    370                 375                 380

Ser Ala Asp Ala Pro Ala Tyr Gln Gln Gly Gln Asn Gln Leu Tyr Asn
```

385 390 395 400

Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg
405 410 415

Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro
420 425 430

Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala
435 440 445

Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His
450 455 460

Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp
465 470 475 480

Ala Leu His Met Gln Ala Leu Pro Pro Arg
485 490

<210> 654
<211> 491
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 654
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Gln Val Gln Leu Gln Gln Trp Gly Ala Gly Leu
20 25 30

Leu Lys Pro Ser Glu Thr Leu Ser Leu Thr Cys Ala Val Tyr Gly Gly
35 40 45

Ser Phe Ser Gly Tyr Tyr Trp Arg Trp Ile Arg Gln Pro Pro Gly Lys
50 55 60

```
Gly Leu Glu Trp Ile Gly Glu Ile Ser His Ser Gly Ser Thr Asn Tyr
65                  70                  75                  80

Asn Pro Ser Leu Lys Ser Arg Val Thr Ile Ser Val Asp Thr Ser Lys
                85                  90                  95

Asn Gln Phe Ser Leu Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala
            100                 105                 110

Val Tyr Tyr Cys Ala Val Arg Gly Tyr Ser Tyr Gly Tyr Pro Leu Phe
        115                 120                 125

Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly
    130                 135                 140

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly
145                 150                 155                 160

Ser Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val
                165                 170                 175

Gly Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Gly Ile Arg Asn
            180                 185                 190

Asp Leu Gly Trp Tyr Gln Gln Lys Leu Gly Lys Ala Pro Lys Arg Leu
        195                 200                 205

Ile Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser
    210                 215                 220

Gly Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln
225                 230                 235                 240

Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Leu Gln Tyr Asn Ser Tyr Pro
                245                 250                 255

Arg Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys Thr Thr Thr Pro
            260                 265                 270
```

```
Ala Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu
        275                 280                 285

Ser Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His
    290                 295                 300

Thr Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu
305                 310                 315                 320

Ala Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr
                325                 330                 335

Cys Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe
            340                 345                 350

Met Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg
        355                 360                 365

Phe Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser
    370                 375                 380

Arg Ser Ala Asp Ala Pro Ala Tyr Gln Gln Gly Gln Asn Gln Leu Tyr
385                 390                 395                 400

Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys
                405                 410                 415

Arg Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn
            420                 425                 430

Pro Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu
        435                 440                 445

Ala Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly
    450                 455                 460

His Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr
465                 470                 475                 480

Asp Ala Leu His Met Gln Ala Leu Pro Pro Arg
```

485 490

<210> 655
<211> 486
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 655
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu
20 25 30

Val Lys Pro Ser Gly Thr Leu Ser Leu Thr Cys Ala Val Ser Gly Asp
35 40 45

Ser Ile Ser Ser Asn Trp Trp Thr Trp Val Arg Gln Pro Pro Gly Lys
50 55 60

Gly Leu Glu Trp Ile Gly Asp Ile His His Ser Gly Ser Thr Asn Tyr
65 70 75 80

Asn Pro Ser Leu Lys Ser Arg Val Thr Met Ser Val Asp Lys Ser Glu
85 90 95

Asn Gln Phe Ser Leu Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala
100 105 110

Val Phe Tyr Cys Ala Arg Asp Gly Gly Gly Thr Leu Asp Tyr Trp Gly
115 120 125

Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly
130 135 140

Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Gln
145 150 155 160

```
Met Thr Gln Ser Pro Ser Thr Leu Ser Ala Ser Val Gly Asp Arg Val
                165                 170                 175

Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Ser Ser Trp Leu Ala Trp
            180                 185                 190

Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile Tyr Lys Ala
        195                 200                 205

Ser Thr Leu Glu Ser Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser
    210                 215                 220

Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro Asp Asp Phe
225                 230                 235                 240

Ala Thr Tyr Tyr Cys Gln Gln Tyr Asn Gly Tyr Ser Thr Phe Gly Gln
                245                 250                 255

Gly Thr Lys Val Glu Ile Lys Thr Thr Thr Pro Ala Pro Arg Pro Pro
            260                 265                 270

Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser Leu Arg Pro Glu
        275                 280                 285

Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr Arg Gly Leu Asp
    290                 295                 300

Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly
305                 310                 315                 320

Val Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr Cys Lys Arg Gly Arg
                325                 330                 335

Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met Arg Pro Val Gln
            340                 345                 350

Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu Glu Glu
        355                 360                 365
```

```
Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg Ser Ala Asp Ala
    370                 375                 380

Pro Ala Tyr Gln Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn Leu
385                 390                 395                 400

Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg Asp
                405                 410                 415

Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu
            420                 425                 430

Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile
        435                 440                 445

Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His Asp Gly Leu Tyr
    450                 455                 460

Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu His Met
465                 470                 475                 480

Gln Ala Leu Pro Pro Arg
                485
```

<210> 656
<211> 495
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 656

```
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1               5                   10                  15

His Ala Ala Arg Pro Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val
            20                  25                  30

Lys Lys Pro Gly Ser Ser Val Lys Val Ser Cys Lys Ala Ser Gly Gly
        35                  40                  45
```

```
Thr Phe Thr Asn Tyr Cys Ile Ser Trp Val Arg Gln Ala Pro Gly Gln
    50                  55                  60

Gly Leu Glu Trp Met Gly Gly Ile Ile Pro Ile Phe Gly Thr Thr Asn
65                  70                  75                  80

Tyr Ala Gln Thr Phe Gln Gly Arg Val Thr Ile Thr Ala Asp Lys Ser
                85                  90                  95

Thr Ser Thr Ala Tyr Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr
            100                 105                 110

Ala Val Tyr Tyr Cys Ala Arg Asp Asn Gly Asp Arg Tyr Tyr Tyr Asp
        115                 120                 125

Met Asp Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser Gly Gly
    130                 135                 140

Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly
145                 150                 155                 160

Gly Ser Gln Ser Val Leu Thr Gln Pro Pro Ser Val Ser Ala Ala Pro
                165                 170                 175

Gly Gln Lys Val Thr Ile Ser Cys Ser Gly Ser Ser Ser Asn Ile Gly
            180                 185                 190

Asn Asn Tyr Val Ser Trp Tyr Gln Gln Leu Pro Gly Thr Ala Pro Lys
        195                 200                 205

Leu Leu Ile Tyr Asp Asn Asn Lys Arg Pro Ser Gly Ile Pro Asp Arg
    210                 215                 220

Phe Ser Gly Ser Lys Ser Gly Thr Ser Ala Thr Leu Gly Ile Thr Gly
225                 230                 235                 240

Leu Gln Thr Gly Asp Glu Ala Asp Tyr Tyr Cys Gly Thr Trp Asp Ser
                245                 250                 255
```

```
Ser Leu Ser Ala Val Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu
            260                 265                 270

Thr Thr Thr Pro Ala Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala
        275                 280                 285

Ser Gln Pro Leu Ser Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly
    290                 295                 300

Gly Ala Val His Thr Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile
305                 310                 315                 320

Trp Ala Pro Leu Ala Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val
                325                 330                 335

Ile Thr Leu Tyr Cys Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe
            340                 345                 350

Lys Gln Pro Phe Met Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly
        355                 360                 365

Cys Ser Cys Arg Phe Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg
    370                 375                 380

Val Lys Phe Ser Arg Ser Ala Asp Ala Pro Ala Tyr Gln Gln Gly Gln
385                 390                 395                 400

Asn Gln Leu Tyr Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp
                405                 410                 415

Val Leu Asp Lys Arg Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro
            420                 425                 430

Arg Arg Lys Asn Pro Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp
        435                 440                 445

Lys Met Ala Glu Ala Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg
    450                 455                 460
```

Arg Gly Lys Gly His Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr
465 470 475 480

Lys Asp Thr Tyr Asp Ala Leu His Met Gln Ala Leu Pro Pro Arg
485 490 495

<210> 657
<211> 497
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 657
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Gln Val Pro Leu Val Gln Ser Gly Ala Glu Val
20 25 30

Lys Lys Pro Gly Ser Ser Val Lys Val Ser Cys Lys Ala Ser Gly Gly
35 40 45

Thr Phe Ser Thr Tyr Ser Ile Ser Trp Val Arg Gln Ala Pro Gly Gln
50 55 60

Gly Leu Glu Trp Met Gly Gly Ile Ile Pro Ile Phe Gly Thr Thr Asn
65 70 75 80

Tyr Ala Gln Lys Phe Gln Gly Arg Val Thr Ile Thr Ala Asp Lys Ser
85 90 95

Thr Ser Thr Ala Tyr Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr
100 105 110

Ala Val Tyr Tyr Cys Ala Arg Asp Gly Glu Gly Ser Tyr Tyr Tyr Tyr
115 120 125

Tyr Gly Met Asp Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser
130 135 140

```
Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly
145                 150                 155                 160

Gly Gly Gly Ser Gln Ser Val Leu Thr Gln Pro Pro Ser Val Ser Ala
                165                 170                 175

Ala Pro Gly Gln Lys Val Thr Ile Ser Cys Ser Gly Ser Ser Ser Asn
            180                 185                 190

Ile Gly Asn Asn Tyr Val Ser Trp Tyr Gln Gln Leu Pro Gly Thr Ala
        195                 200                 205

Pro Lys Leu Leu Ile Tyr Asp Asn Asn Lys Arg Pro Ser Gly Ile Pro
    210                 215                 220

Asp Arg Phe Phe Gly Ser Lys Phe Gly Thr Ser Ala Thr Leu Gly Ile
225                 230                 235                 240

Thr Gly Leu Gln Thr Gly Asp Glu Ala Asp Tyr Tyr Cys Gly Thr Trp
                245                 250                 255

Asp Ser Ser Leu Ser Ala Val Val Phe Gly Gly Gly Thr Lys Leu Thr
            260                 265                 270

Val Leu Thr Thr Thr Pro Ala Pro Arg Pro Pro Thr Pro Ala Pro Thr
        275                 280                 285

Ile Ala Ser Gln Pro Leu Ser Leu Arg Pro Glu Ala Cys Arg Pro Ala
    290                 295                 300

Ala Gly Gly Ala Val His Thr Arg Gly Leu Asp Phe Ala Cys Asp Ile
305                 310                 315                 320

Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly Val Leu Leu Leu Ser
                325                 330                 335

Leu Val Ile Thr Leu Tyr Cys Lys Arg Gly Arg Lys Lys Leu Leu Tyr
            340                 345                 350
```

```
Ile Phe Lys Gln Pro Phe Met Arg Pro Val Gln Thr Thr Gln Glu Glu
        355                 360                 365

Asp Gly Cys Ser Cys Arg Phe Pro Glu Glu Glu Glu Gly Gly Cys Glu
    370                 375                 380

Leu Arg Val Lys Phe Ser Arg Ser Ala Asp Ala Pro Ala Tyr Gln Gln
385                 390                 395                 400

Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu
                405                 410                 415

Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg Asp Pro Glu Met Gly Gly
            420                 425                 430

Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu Tyr Asn Glu Leu Gln
        435                 440                 445

Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile Gly Met Lys Gly Glu
    450                 455                 460

Arg Arg Arg Gly Lys Gly His Asp Gly Leu Tyr Gln Gly Leu Ser Thr
465                 470                 475                 480

Ala Thr Lys Asp Thr Tyr Asp Ala Leu His Met Gln Ala Leu Pro Pro
                485                 490                 495

Arg
```

<210> 658
<211> 490
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 658
```
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
```

```
1               5                   10                  15

His Ala Ala Arg Pro Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu
            20                  25                  30

Val Lys Pro Ser Glu Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Asp
        35                  40                  45

Ser Ile Ser Ser Tyr Tyr Trp Ser Trp Ile Arg Gln Pro Pro Gly Lys
    50                  55                  60

Gly Leu Glu Trp Ile Gly Tyr Met Tyr Tyr Ser Gly Ile Thr Asn Tyr
65                  70                  75                  80

Asn Pro Ser Leu Lys Ser Arg Val Asn Ile Ser Leu Asp Thr Ser Lys
                85                  90                  95

Asn Gln Phe Ser Leu Lys Leu Gly Ser Val Thr Ala Ala Asp Thr Ala
            100                 105                 110

Val Tyr Tyr Cys Ala Arg Leu Ser Val Ala Gly Phe Tyr Phe Asp Tyr
        115                 120                 125

Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly Gly Ser
    130                 135                 140

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu
145                 150                 155                 160

Ile Val Leu Thr Gln Ser Pro Gly Thr Leu Ser Leu Ser Pro Gly Glu
                165                 170                 175

Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Ser Tyr
            180                 185                 190

Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile
        195                 200                 205

Tyr Gly Ala Ser Ser Arg Ala Thr Asp Ile Pro Asp Arg Phe Ser Gly
    210                 215                 220
```

```
Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Asn Arg Leu Glu Pro
225                 230                 235                 240

Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Gly Thr Ser Pro Leu
                245                 250                 255

Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Thr Thr Thr Pro Ala
            260                 265                 270

Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser
        275                 280                 285

Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr
    290                 295                 300

Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala
305                 310                 315                 320

Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr Cys
                325                 330                 335

Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met
            340                 345                 350

Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe
        355                 360                 365

Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg
    370                 375                 380

Ser Ala Asp Ala Pro Ala Tyr Gln Gln Gly Gln Asn Gln Leu Tyr Asn
385                 390                 395                 400

Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg
                405                 410                 415

Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro
            420                 425                 430
```

Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala
        435   440   445

Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His
    450   455   460

Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp
465   470   475   480

Ala Leu His Met Gln Ala Leu Pro Pro Arg
                485   490

<210> 659
<211> 490
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 659
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1   5   10   15

His Ala Ala Arg Pro Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu
            20   25   30

Val Lys Pro Ser Glu Thr Leu Ser Leu Thr Cys Thr Val Ser Ser Asp
        35   40   45

Ser Ile Ser Ser Tyr Tyr Trp Ser Trp Ile Arg Gln Pro Pro Gly Lys
    50   55   60

Gly Leu Glu Trp Ile Ser Tyr Ile Tyr Tyr Ser Gly Ile Ser Asn Tyr
65   70   75   80

Asn Pro Ser Leu Lys Ser Arg Val Ser Ile Ser Val Asp Thr Ser Lys
                85   90   95

Asn Gln Phe Ser Leu Arg Leu Ser Ser Val Thr Ala Ala Asp Thr Ala

```
            100                 105                 110

Val Tyr Tyr Cys Ala Arg Ile Ser Val Ala Gly Phe Phe Phe Asp Asn
        115                 120                 125

Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly Gly Ser
    130                 135                 140

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu
145                 150                 155                 160

Ile Met Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu
                165                 170                 175

Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Ser Ser Tyr
            180                 185                 190

Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile
        195                 200                 205

Tyr Gly Ala Ser Ser Arg Ala Ala Gly Val Pro Asp Arg Phe Ser Gly
    210                 215                 220

Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Ala Pro
225                 230                 235                 240

Glu Asp Phe Val Val Tyr Tyr Cys Gln Gln Tyr Gly Ile Ser Pro Leu
                245                 250                 255

Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Thr Thr Thr Pro Ala
            260                 265                 270

Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser
        275                 280                 285

Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr
    290                 295                 300

Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala
305                 310                 315                 320
```

```
Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr Cys
                325                 330                 335

Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met
            340                 345                 350

Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe
        355                 360                 365

Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg
    370                 375                 380

Ser Ala Asp Ala Pro Ala Tyr Gln Gln Gly Gln Asn Gln Leu Tyr Asn
385                 390                 395                 400

Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg
                405                 410                 415

Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro
            420                 425                 430

Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala
        435                 440                 445

Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His
    450                 455                 460

Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp
465                 470                 475                 480

Ala Leu His Met Gln Ala Leu Pro Pro Arg
                485                 490
```

<210> 660
<211> 498
<212> PRT
<213> Artificial Sequence

<220>
<221> source

<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 660
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Gln Val Gln Leu Gln Gln Ser Gly Pro Gly Leu
20 25 30

Val Lys Pro Ser Gln Thr Leu Ser Leu Thr Cys Ala Ile Ser Gly Asp
35 40 45

Ser Val Ser Ser Asn Ser Ala Thr Trp Asn Trp Ile Arg Gln Ser Pro
50 55 60

Ser Arg Gly Leu Glu Trp Leu Gly Arg Thr Tyr Tyr Arg Ser Lys Trp
65 70 75 80

Tyr Asp Asp Tyr Ala Val Ser Val Lys Ser Arg Ile Thr Ile Asn Pro
85 90 95

Asp Thr Ser Lys Asn His Leu Ser Leu His Leu Asn Ser Val Thr Pro
100 105 110

Glu Asp Thr Ala Val Tyr Tyr Cys Ala Gly Gly Gly Leu Val Gly Ala
115 120 125

Pro Asp Gly Phe Asp Val Trp Gly Gln Gly Thr Met Val Thr Val Ser
130 135 140

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
145 150 155 160

Gly Gly Gly Gly Ser Gln Ser Val Leu Thr Gln Pro Pro Ser Ala Ser
165 170 175

Gly Thr Pro Gly Gln Arg Val Thr Ile Ser Cys Ser Gly Ser Ser Ser
180 185 190

Asn Ile Gly Ser Asp Pro Val Asn Trp Tyr Gln Gln Leu Pro Gly Thr

```
        195                 200                 205

Ala Pro Lys Leu Leu Ile Tyr Ser Asn Asn Gln Arg Pro Ser Gly Val
    210                 215                 220

Pro Asp Arg Phe Ser Gly Ser Lys Ser Gly Thr Ser Ala Ser Leu Ala
225                 230                 235                 240

Ile Ser Gly Leu Gln Ser Glu Asp Glu Ala Asp Tyr Tyr Cys Ser Ala
                245                 250                 255

Trp Asp Asp Ser Leu Asn Gly Tyr Val Phe Gly Thr Gly Thr Lys Val
            260                 265                 270

Thr Val Leu Thr Thr Thr Pro Ala Pro Arg Pro Pro Thr Pro Ala Pro
        275                 280                 285

Thr Ile Ala Ser Gln Pro Leu Ser Leu Arg Pro Glu Ala Cys Arg Pro
    290                 295                 300

Ala Ala Gly Gly Ala Val His Thr Arg Gly Leu Asp Phe Ala Cys Asp
305                 310                 315                 320

Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly Val Leu Leu Leu
                325                 330                 335

Ser Leu Val Ile Thr Leu Tyr Cys Lys Arg Gly Arg Lys Lys Leu Leu
            340                 345                 350

Tyr Ile Phe Lys Gln Pro Phe Met Arg Pro Val Gln Thr Thr Gln Glu
        355                 360                 365

Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu Glu Glu Glu Gly Gly Cys
    370                 375                 380

Glu Leu Arg Val Lys Phe Ser Arg Ser Ala Asp Ala Pro Ala Tyr Gln
385                 390                 395                 400

Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn Leu Gly Arg Arg Glu
                405                 410                 415
```

```
Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg Asp Pro Glu Met Gly
            420                 425                 430

Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu Tyr Asn Glu Leu
        435                 440                 445

Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile Gly Met Lys Gly
    450                 455                 460

Glu Arg Arg Arg Gly Lys Gly His Asp Gly Leu Tyr Gln Gly Leu Ser
465                 470                 475                 480

Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu His Met Gln Ala Leu Pro
                485                 490                 495

Pro Arg
```

<210> 661
<211> 493
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 661

```
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1               5                   10                  15

His Ala Ala Arg Pro Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val
            20                  25                  30

Lys Lys Pro Gly Ala Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr
        35                  40                  45

Thr Phe Thr Gly Tyr Ser Ile His Trp Val Arg Gln Ala Pro Gly Gln
    50                  55                  60
```

```
Gly Leu Glu Trp Met Gly Trp Ile Asn Pro Asn Ser Gly Gly Thr Phe
65                  70                  75                  80

Tyr Ala Gln Lys Phe Gln Gly Arg Val Thr Met Thr Arg Asp Thr Ser
                85                  90                  95

Ile Ser Thr Val Tyr Met Glu Leu Ser Arg Leu Arg Ser Asp Asp Thr
            100                 105                 110

Ala Val Tyr Tyr Cys Ala Arg Asp Gly Trp Gly Asp Tyr Tyr Tyr Tyr
        115                 120                 125

Gly Leu Asp Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Leu Gly
    130                 135                 140

Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly
145                 150                 155                 160

Gly Gly Ser Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Val Ser Ala
                165                 170                 175

Ser Val Gly Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Asp Ile
            180                 185                 190

Ser Ser Trp Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys
        195                 200                 205

Leu Leu Ile Tyr Thr Ala Ser Ser Leu Gln Gly Gly Val Pro Ser Arg
    210                 215                 220

Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser
225                 230                 235                 240

Leu Gln Pro Glu Asp Leu Ala Thr Tyr Ser Cys Gln Gln Ala Asn Val
                245                 250                 255

Phe Pro Tyr Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys Thr Thr
            260                 265                 270

Thr Pro Ala Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln
```

```
        275                 280                 285

Pro Leu Ser Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala
    290                 295                 300

Val His Thr Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala
305                 310                 315                 320

Pro Leu Ala Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr
                325                 330                 335

Leu Tyr Cys Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln
            340                 345                 350

Pro Phe Met Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser
        355                 360                 365

Cys Arg Phe Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg Val Lys
    370                 375                 380

Phe Ser Arg Ser Ala Asp Ala Pro Ala Tyr Gln Gln Gly Gln Asn Gln
385                 390                 395                 400

Leu Tyr Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu
                405                 410                 415

Asp Lys Arg Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg
            420                 425                 430

Lys Asn Pro Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met
        435                 440                 445

Ala Glu Ala Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly
    450                 455                 460

Lys Gly His Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp
465                 470                 475                 480

Thr Tyr Asp Ala Leu His Met Gln Ala Leu Pro Pro Arg
                485                 490
```

<210> 662
<211> 493
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 662
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Glu Val Gln Leu Leu Glu Ser Gly Gly Gly Leu
20 25 30

Val Gln Pro Gly Gly Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe
35 40 45

Thr Phe Ser Ser Tyr Ala Met Asn Trp Val Arg Gln Ala Pro Gly Lys
50 55 60

Gly Leu Glu Trp Val Ser Thr Ile Ser Gly Ser Gly Gly Ser Thr Tyr
65 70 75 80

Tyr Ala Asp Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser
85 90 95

Lys Asn Thr Leu Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr
100 105 110

Ala Val Phe Tyr Cys Ala Ile Asp Pro Glu Tyr Tyr Asp Ile Leu Thr
115 120 125

Gly Gly Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Gly
130 135 140

Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly
145 150 155 160

```
Gly Gly Ser Asp Ile Gln Met Thr Gln Ser Pro Ser Ala Met Ser Ala
                165                 170                 175

Ser Val Gly Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Gly Ile
            180                 185                 190

Ser Asn Tyr Leu Ala Trp Phe Gln Gln Lys Pro Gly Lys Val Pro Lys
        195                 200                 205

Arg Leu Ile Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg
    210                 215                 220

Phe Ser Gly Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser
225                 230                 235                 240

Leu Gln Pro Glu Asp Phe Ala Thr Tyr Phe Cys Leu Gln His Asp Ser
                245                 250                 255

Phe Pro Leu Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Thr Thr
            260                 265                 270

Thr Pro Ala Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln
        275                 280                 285

Pro Leu Ser Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala
    290                 295                 300

Val His Thr Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala
305                 310                 315                 320

Pro Leu Ala Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr
                325                 330                 335

Leu Tyr Cys Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln
            340                 345                 350

Pro Phe Met Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser
        355                 360                 365

Cys Arg Phe Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg Val Lys
```

370 375 380

Phe Ser Arg Ser Ala Asp Ala Pro Ala Tyr Gln Gln Gly Gln Asn Gln
385 390 395 400

Leu Tyr Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu
405 410 415

Asp Lys Arg Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg
420 425 430

Lys Asn Pro Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met
435 440 445

Ala Glu Ala Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly
450 455 460

Lys Gly His Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp
465 470 475 480

Thr Tyr Asp Ala Leu His Met Gln Ala Leu Pro Pro Arg
485 490

<210> 663
<211> 490
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 663
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu
20 25 30

Val Lys Pro Ser Glu Thr Leu Ser Leu Thr Cys Thr Val Ser Ser Asp
35 40 45

```
Ser Ile Ser Asn Tyr Tyr Trp Ser Trp Ile Arg Gln Pro Pro Gly Lys
    50                  55                  60

Gly Leu Glu Trp Ile Ser Tyr Ile Tyr Tyr Ser Gly Ile Thr Asn Tyr
65                  70                  75                  80

Asn Pro Ser Leu Lys Ser Arg Val Thr Ile Ser Val Asp Thr Ser Lys
                85                  90                  95

Asn Gln Phe Ser Leu Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala
            100                 105                 110

Val Tyr Tyr Cys Ala Arg Ile Thr Val Thr Gly Phe Tyr Phe Asp Tyr
        115                 120                 125

Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly Gly Ser
    130                 135                 140

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu
145                 150                 155                 160

Ile Val Leu Thr Gln Ser Pro Gly Thr Leu Ser Leu Ser Pro Gly Glu
                165                 170                 175

Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Ile Ser Arg Ser Tyr
            180                 185                 190

Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg His Leu Ile
        195                 200                 205

Tyr Gly Ala Ser Ser Arg Ala Thr Gly Ile Pro Asp Arg Phe Ser Gly
    210                 215                 220

Ser Gly Ser Gly Thr Asp Phe Ile Leu Thr Ile Ser Arg Leu Glu Pro
225                 230                 235                 240

Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Asp Thr Ser Pro Leu
                245                 250                 255
```

```
Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Thr Thr Thr Pro Ala
            260                 265                 270

Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser
        275                 280                 285

Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr
    290                 295                 300

Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala
305                 310                 315                 320

Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr Cys
                325                 330                 335

Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met
            340                 345                 350

Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe
        355                 360                 365

Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg
    370                 375                 380

Ser Ala Asp Ala Pro Ala Tyr Gln Gln Gly Gln Asn Gln Leu Tyr Asn
385                 390                 395                 400

Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg
                405                 410                 415

Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro
            420                 425                 430

Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala
        435                 440                 445

Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His
    450                 455                 460

Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp
```

```
465                 470                 475                 480


Ala Leu His Met Gln Ala Leu Pro Pro Arg
                485                 490


<210> 664
<211> 498
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 664
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1               5                   10                  15


His Ala Ala Arg Pro Gln Val Gln Leu Gln Gln Ser Gly Pro Gly Leu
            20                  25                  30


Val Lys Pro Ser Gln Thr Leu Ser Leu Thr Cys Ala Ile Ser Gly Asp
        35                  40                  45


Ser Val Ser Ser Asn Ser Val Val Trp Asn Trp Ile Arg Gln Ser Pro
    50                  55                  60


Ser Arg Gly Leu Glu Trp Leu Gly Arg Thr Tyr Tyr Arg Ser Lys Trp
65                  70                  75                  80


Tyr Asp Asp Tyr Ala Val Ser Val Lys Ser Arg Ile Thr Ile Asn Pro
                85                  90                  95


Asp Thr Ser Lys Asn Gln Phe Ser Leu Gln Leu Asn Ser Val Thr Pro
            100                 105                 110


Glu Asp Thr Ala Val Tyr His Cys Ala Arg Gly Gly Ile Val Gly Ala
        115                 120                 125


Pro Asp Ala Phe Asp Ile Trp Gly Gln Gly Thr Met Val Thr Val Ser
    130                 135                 140
```

```
Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
145                 150                 155                 160

Gly Gly Gly Gly Ser Gln Ser Val Leu Thr Gln Pro Pro Ser Ala Ser
                165                 170                 175

Gly Thr Pro Gly Gln Arg Val Thr Ile Ser Cys Ser Gly Ser Ser Ser
            180                 185                 190

Asn Ile Gly Ser Asp Pro Val Ser Trp Tyr Gln Gln Phe Pro Gly Thr
        195                 200                 205

Ala Pro Lys Leu Leu Ile Tyr Thr Asn Asn Gln Arg Pro Ser Gly Val
    210                 215                 220

Pro Asp Arg Phe Ser Gly Ser Lys Ser Gly Thr Ser Ala Ser Leu Ala
225                 230                 235                 240

Ile Ser Gly Leu Gln Ser Glu Asp Glu Ala Asp Tyr Tyr Cys Ala Ala
                245                 250                 255

Trp Asp Asp Ser Leu Asn Gly His Val Phe Gly Thr Gly Thr Lys Val
            260                 265                 270

Thr Val Leu Thr Thr Thr Pro Ala Pro Arg Pro Pro Thr Pro Ala Pro
        275                 280                 285

Thr Ile Ala Ser Gln Pro Leu Ser Leu Arg Pro Glu Ala Cys Arg Pro
    290                 295                 300

Ala Ala Gly Gly Ala Val His Thr Arg Gly Leu Asp Phe Ala Cys Asp
305                 310                 315                 320

Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly Val Leu Leu Leu
                325                 330                 335

Ser Leu Val Ile Thr Leu Tyr Cys Lys Arg Gly Arg Lys Lys Leu Leu
            340                 345                 350
```

```
Tyr Ile Phe Lys Gln Pro Phe Met Arg Pro Val Gln Thr Thr Gln Glu
        355                 360                 365

Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu Glu Glu Glu Gly Gly Cys
    370                 375                 380

Glu Leu Arg Val Lys Phe Ser Arg Ser Ala Asp Ala Pro Ala Tyr Gln
385                 390                 395                 400

Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn Leu Gly Arg Arg Glu
                405                 410                 415

Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg Asp Pro Glu Met Gly
            420                 425                 430

Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu Tyr Asn Glu Leu
        435                 440                 445

Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile Gly Met Lys Gly
    450                 455                 460

Glu Arg Arg Arg Gly Lys Gly His Asp Gly Leu Tyr Gln Gly Leu Ser
465                 470                 475                 480

Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu His Met Gln Ala Leu Pro
                485                 490                 495

Pro Arg
```

<210> 665
<211> 498
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 665

```
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1               5                   10                  15
```

```
His Ala Ala Arg Pro Gln Val Gln Leu Gln Gln Ser Gly Pro Gly Leu
            20                  25                  30

Val Lys Pro Ser Gln Thr Leu Ser Leu Thr Cys Ala Ile Ser Gly Asp
        35                  40                  45

Ser Val Ser Ser Asn Ser Ala Val Trp Asn Trp Ile Arg Gln Ser Pro
    50                  55                  60

Ser Arg Gly Leu Glu Trp Leu Gly Trp Thr Tyr Tyr Arg Ser Lys Tyr
65                  70                  75                  80

Tyr Asn Asp Tyr Ala Val Ser Leu Lys Ser Arg Ile Thr Ile Asn Pro
                85                  90                  95

Asp Thr Ser Lys Asn Gln Phe Ser Leu Gln Leu Asn Ser Leu Thr Pro
            100                 105                 110

Glu Asp Thr Ala Val Tyr Tyr Cys Thr Arg Gly Gly Ile Val Gly Ala
        115                 120                 125

Pro Asp Gly Phe Asp Ile Trp Gly Gln Gly Thr Met Val Thr Val Ser
    130                 135                 140

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
145                 150                 155                 160

Gly Gly Gly Gly Ser Gln Ser Ala Leu Thr Gln Pro Pro Ser Ala Ser
                165                 170                 175

Gly Thr Pro Gly Gln Arg Val Thr Ile Ser Cys Ser Gly Ser Asn Ser
            180                 185                 190

Asn Ile Gly Ser Asn Pro Ile Asn Trp Tyr Gln Gln Leu Pro Gly Thr
        195                 200                 205

Ala Pro Lys Leu Leu Ile Tyr Ser Asn Asn Gln Arg Pro Ser Gly Val
    210                 215                 220
```

```
Pro Asp Arg Phe Ser Gly Ser Lys Ser Gly Thr Ser Ala Ser Leu Ala
225                 230                 235                 240

Ile Ser Gly Leu Gln Ser Glu Asp Glu Ala Asp Tyr Tyr Cys Ala Ala
                245                 250                 255

Trp Asp Asp Ser Leu Asn Gly His Val Phe Gly Thr Gly Thr Lys Val
            260                 265                 270

Thr Val Leu Thr Thr Thr Pro Ala Pro Arg Pro Pro Thr Pro Ala Pro
        275                 280                 285

Thr Ile Ala Ser Gln Pro Leu Ser Leu Arg Pro Glu Ala Cys Arg Pro
    290                 295                 300

Ala Ala Gly Gly Ala Val His Thr Arg Gly Leu Asp Phe Ala Cys Asp
305                 310                 315                 320

Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly Val Leu Leu Leu
                325                 330                 335

Ser Leu Val Ile Thr Leu Tyr Cys Lys Arg Gly Arg Lys Lys Leu Leu
            340                 345                 350

Tyr Ile Phe Lys Gln Pro Phe Met Arg Pro Val Gln Thr Thr Gln Glu
        355                 360                 365

Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu Glu Glu Glu Gly Gly Cys
    370                 375                 380

Glu Leu Arg Val Lys Phe Ser Arg Ser Ala Asp Ala Pro Ala Tyr Gln
385                 390                 395                 400

Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn Leu Gly Arg Arg Glu
                405                 410                 415

Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg Asp Pro Glu Met Gly
            420                 425                 430
```

Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu Tyr Asn Glu Leu
435 440 445

Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile Gly Met Lys Gly
450 455 460

Glu Arg Arg Arg Gly Lys Gly His Asp Gly Leu Tyr Gln Gly Leu Ser
465 470 475 480

Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu His Met Gln Ala Leu Pro
485 490 495

Pro Arg

<210> 666
<211> 490
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 666
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu
20 25 30

Val Lys Pro Ser Glu Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Gly
35 40 45

Ser Ile Ser Ser Tyr Tyr Trp Ser Trp Ile Arg Gln Ser Pro Gly Lys
50 55 60

Gly Leu Glu Trp Ile Gly Tyr Val Tyr Tyr Ser Asp Ile Thr Asn Tyr
65 70 75 80

Asn Pro Ser Leu Lys Ser Arg Val Thr Ile Ser Val Asp Thr Ser Lys
85 90 95

```
Asn Gln Phe Ser Leu Asn Leu Asn Ser Val Thr Ala Ala Asp Thr Ala
            100                 105                 110

Phe Tyr Phe Cys Ala Arg Ile Gly Val Ala Gly Phe Tyr Phe Asp Tyr
        115                 120                 125

Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly Gly Ser
    130                 135                 140

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu
145                 150                 155                 160

Ile Val Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu
                165                 170                 175

Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Arg Arg Tyr
            180                 185                 190

Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile
        195                 200                 205

Tyr Gly Ala Ser Ser Arg Ala Thr Gly Ile Pro Asp Arg Phe Ser Gly
    210                 215                 220

Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro
225                 230                 235                 240

Glu Asp Phe Glu Val Tyr Tyr Cys Gln Gln Tyr Gly Thr Ser Pro Ile
                245                 250                 255

Thr Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Thr Thr Thr Pro Ala
            260                 265                 270

Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser
        275                 280                 285

Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr
    290                 295                 300
```

```
Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala
305                 310                 315                 320

Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr Cys
                325                 330                 335

Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met
            340                 345                 350

Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe
        355                 360                 365

Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg
    370                 375                 380

Ser Ala Asp Ala Pro Ala Tyr Gln Gln Gly Gln Asn Gln Leu Tyr Asn
385                 390                 395                 400

Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg
                405                 410                 415

Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro
            420                 425                 430

Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala
        435                 440                 445

Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His
    450                 455                 460

Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp
465                 470                 475                 480

Ala Leu His Met Gln Ala Leu Pro Pro Arg
                485                 490
```

<210> 667
<211> 498
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 667
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Gln Ile Gln Leu Gln Gln Ser Gly Pro Gly Leu
20 25 30

Val Lys Pro Ser Gln Thr Leu Ser Leu Thr Cys Ala Ile Ser Gly Asp
35 40 45

Ser Val Ser Ser Asn Ser Ala Val Trp Asn Trp Ile Arg Gln Ser Pro
50 55 60

Ser Arg Gly Leu Glu Trp Leu Gly Arg Thr Tyr Tyr Arg Ser Lys Trp
65 70 75 80

Tyr Asn Asp Tyr Ala Val Ser Val Lys Ser Arg Ile Thr Ile Lys Pro
85 90 95

Asp Thr Ala Lys Asn Gln Phe Ser Leu Gln Leu Asn Ser Val Thr Pro
100 105 110

Glu Asp Thr Ala Val Tyr Tyr Phe Thr Arg Gly Gly Ile Val Gly Ala
115 120 125

Pro Asp Ala Phe Asp Ile Trp Gly Gln Gly Thr Met Val Thr Val Ser
130 135 140

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
145 150 155 160

Gly Gly Gly Gly Ser Gln Ser Val Leu Thr Gln Pro Pro Ser Ala Ser
165 170 175

Gly Thr Pro Gly Gln Arg Val Thr Ile Ser Cys Ser Gly Ser Ser Ser
180 185 190

```
Asn Ile Gly Ser Asp Pro Ile Asn Trp Tyr Gln Gln Val Pro Gly Thr
        195                 200                 205

Ala Pro Lys Leu Leu Ile Tyr Ser Asn Asn Gln Arg Pro Ser Gly Val
    210                 215                 220

Pro Asp Arg Phe Ser Gly Ser Lys Ser Gly Thr Ser Ala Ser Leu Ala
225                 230                 235                 240

Ile Ser Gly Leu Gln Ser Glu Asp Glu Ala Asp Tyr Tyr Cys Ala Ala
                245                 250                 255

Trp Asp Asp Ser Leu Asn Gly Tyr Val Phe Gly Thr Gly Thr Lys Val
            260                 265                 270

Thr Val Leu Thr Thr Thr Pro Ala Pro Arg Pro Pro Thr Pro Ala Pro
        275                 280                 285

Thr Ile Ala Ser Gln Pro Leu Ser Leu Arg Pro Glu Ala Cys Arg Pro
    290                 295                 300

Ala Ala Gly Gly Ala Val His Thr Arg Gly Leu Asp Phe Ala Cys Asp
305                 310                 315                 320

Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly Val Leu Leu Leu
                325                 330                 335

Ser Leu Val Ile Thr Leu Tyr Cys Lys Arg Gly Arg Lys Lys Leu Leu
            340                 345                 350

Tyr Ile Phe Lys Gln Pro Phe Met Arg Pro Val Gln Thr Thr Gln Glu
        355                 360                 365

Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu Glu Glu Glu Gly Gly Cys
    370                 375                 380

Glu Leu Arg Val Lys Phe Ser Arg Ser Ala Asp Ala Pro Ala Tyr Gln
385                 390                 395                 400
```

Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn Leu Gly Arg Arg Glu
405 410 415

Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg Asp Pro Glu Met Gly
420 425 430

Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu Tyr Asn Glu Leu
435 440 445

Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile Gly Met Lys Gly
450 455 460

Glu Arg Arg Arg Gly Lys Gly His Asp Gly Leu Tyr Gln Gly Leu Ser
465 470 475 480

Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu His Met Gln Ala Leu Pro
485 490 495

Pro Arg

<210> 668
<211> 498
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 668
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Gln Val Gln Leu Gln Gln Ser Gly Pro Gly Leu
20 25 30

Val Lys Pro Ser Glu Thr Leu Ser Leu Thr Cys Ala Ile Ser Gly Asp
35 40 45

Ser Val Ser Ser Asn Ser Ala Thr Trp Asn Trp Ile Arg Gln Ser Pro

```
    50                  55                  60

Ser Arg Gly Leu Glu Trp Leu Gly Arg Thr Tyr Tyr Arg Ser Glu Trp
65                  70                  75                  80

Tyr Asn Asp Tyr Ala Val Ser Val Lys Ser Arg Ile Thr Ile Asn Pro
                85                  90                  95

Asp Thr Ser Lys Asn His Leu Ser Leu His Leu Asn Ser Val Thr Pro
            100                 105                 110

Glu Asp Thr Ala Val Tyr Tyr Cys Ala Gly Gly Gly Ile Val Gly Ala
        115                 120                 125

Pro Asp Gly Phe Asp Val Trp Gly Gln Gly Thr Met Val Thr Val Ser
    130                 135                 140

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
145                 150                 155                 160

Gly Gly Gly Gly Ser Gln Ser Val Leu Thr Gln Pro Pro Ser Ala Ser
                165                 170                 175

Gly Thr Pro Gly Gln Arg Val Thr Ile Ser Cys Ser Gly Ser Ser Ser
            180                 185                 190

Asn Ile Gly Ser Asp Pro Val Ile Trp Tyr Gln Gln Leu Pro Arg Thr
        195                 200                 205

Ala Pro Lys Leu Leu Ile Tyr Ser Asn Asn Gln Arg Pro Ser Gly Val
    210                 215                 220

Pro Asp Arg Phe Ser Gly Ser Lys Ser Gly Thr Ser Ala Ser Leu Ala
225                 230                 235                 240

Ile Ser Gly Leu Gln Ser Glu Asp Glu Ala Asp Tyr Tyr Cys Ala Ala
                245                 250                 255

Trp Asp Asp Ser Leu Asn Gly Tyr Val Phe Gly Thr Gly Thr Lys Val
            260                 265                 270
```

```
Thr Val Leu Thr Thr Thr Pro Ala Pro Arg Pro Pro Thr Pro Ala Pro
        275                 280                 285

Thr Ile Ala Ser Gln Pro Leu Ser Leu Arg Pro Glu Ala Cys Arg Pro
    290                 295                 300

Ala Ala Gly Gly Ala Val His Thr Arg Gly Leu Asp Phe Ala Cys Asp
305                 310                 315                 320

Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly Val Leu Leu Leu
                325                 330                 335

Ser Leu Val Ile Thr Leu Tyr Cys Lys Arg Gly Arg Lys Lys Leu Leu
            340                 345                 350

Tyr Ile Phe Lys Gln Pro Phe Met Arg Pro Val Gln Thr Thr Gln Glu
        355                 360                 365

Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu Glu Glu Glu Gly Gly Cys
    370                 375                 380

Glu Leu Arg Val Lys Phe Ser Arg Ser Ala Asp Ala Pro Ala Tyr Gln
385                 390                 395                 400

Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn Leu Gly Arg Arg Glu
                405                 410                 415

Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg Asp Pro Glu Met Gly
            420                 425                 430

Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu Tyr Asn Glu Leu
        435                 440                 445

Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile Gly Met Lys Gly
    450                 455                 460

Glu Arg Arg Arg Gly Lys Gly His Asp Gly Leu Tyr Gln Gly Leu Ser
465                 470                 475                 480
```

Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu His Met Gln Ala Leu Pro
485 490 495

Pro Arg

<210> 669
<211> 498
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 669
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Gln Val Gln Leu Gln Gln Ser Gly Pro Gly Leu
20 25 30

Val Lys Pro Ser Gln Thr Leu Ser Leu Thr Cys Ala Ile Ser Gly Asp
35 40 45

Ser Val Ser Ser Asn Ser Ala Thr Trp Asn Trp Ile Arg Gln Ser Pro
50 55 60

Ser Thr Gly Leu Glu Trp Leu Ala Arg Thr Tyr Tyr Arg Ser Lys Trp
65 70 75 80

Tyr Asn Asp Tyr Glu Val Ser Val Lys Ser Gln Ile Thr Ile Asn Pro
85 90 95

Asp Thr Ser Lys Asn Gln Phe Ser Leu Gln Leu Asn Ser Val Thr Pro
100 105 110

Glu Asp Thr Ala Val Tyr Tyr Cys Ala Arg Gly Gly Ile Val Gly Ala
115 120 125

Pro Asp Ala Phe Asp Ile Trp Gly Gln Gly Thr Met Val Thr Val Ser

```
    130                 135                 140

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
145                 150                 155                 160

Gly Gly Gly Gly Ser Gln Ser Val Leu Thr Gln Pro Pro Ser Ala Ser
                165                 170                 175

Gly Thr Pro Gly Gln Gly Val Thr Ile Ser Cys Ser Gly Ser Ser Ser
            180                 185                 190

Asn Ile Gly Ser Asn Pro Val Asn Trp Tyr Gln Gln Leu Pro Gly Thr
        195                 200                 205

Ala Pro Lys Leu Leu Ile Tyr Ser Asn Asn Gln Arg Pro Ser Gly Val
    210                 215                 220

Pro Asp Arg Phe Ser Asp Ser Lys Ser Gly Thr Ser Ala Ser Leu Ala
225                 230                 235                 240

Ile Ser Gly Leu Gln Ser Glu Asp Glu Ala Asp Tyr Tyr Cys Ser Ala
                245                 250                 255

Trp Asp Asp Trp Leu Asn Gly Tyr Val Phe Gly Thr Gly Thr Lys Val
            260                 265                 270

Thr Val Leu Thr Thr Thr Pro Ala Pro Arg Pro Pro Thr Pro Ala Pro
        275                 280                 285

Thr Ile Ala Ser Gln Pro Leu Ser Leu Arg Pro Glu Ala Cys Arg Pro
    290                 295                 300

Ala Ala Gly Gly Ala Val His Thr Arg Gly Leu Asp Phe Ala Cys Asp
305                 310                 315                 320

Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly Val Leu Leu Leu
                325                 330                 335

Ser Leu Val Ile Thr Leu Tyr Cys Lys Arg Gly Arg Lys Lys Leu Leu
            340                 345                 350
```

```
Tyr Ile Phe Lys Gln Pro Phe Met Arg Pro Val Gln Thr Thr Gln Glu
        355                 360                 365

Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu Glu Glu Glu Gly Gly Cys
    370                 375                 380

Glu Leu Arg Val Lys Phe Ser Arg Ser Ala Asp Ala Pro Ala Tyr Gln
385                 390                 395                 400

Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn Leu Gly Arg Arg Glu
                405                 410                 415

Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg Asp Pro Glu Met Gly
            420                 425                 430

Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu Tyr Asn Glu Leu
        435                 440                 445

Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile Gly Met Lys Gly
    450                 455                 460

Glu Arg Arg Arg Gly Lys Gly His Asp Gly Leu Tyr Gln Gly Leu Ser
465                 470                 475                 480

Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu His Met Gln Ala Leu Pro
                485                 490                 495

Pro Arg
```

<210> 670
<211> 489
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 670

```
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1               5                  10                  15

His Ala Ala Arg Pro Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu
            20                  25                  30

Val Lys Pro Ser Glu Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Asp
        35                  40                  45

Ser Ile Asn Asn Tyr Phe Trp Ser Trp Ile Arg Gln Pro Pro Gly Lys
    50                  55                  60

Gly Leu Glu Trp Ile Gly Tyr Phe Tyr His Arg Gly Gly Asn Asn Tyr
65                  70                  75                  80

Asn Pro Ser Leu Lys Ser Arg Val Thr Ile Ser Ile Asp Thr Ser Lys
                85                  90                  95

Asn Gln Phe Ser Leu Asn Leu Asn Ser Val Thr Ser Ala Asp Thr Ala
            100                 105                 110

Val Tyr Tyr Cys Ala Arg Leu Ala Leu Ala Gly Phe Phe Phe Asp Tyr
        115                 120                 125

Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly Gly Ser
    130                 135                 140

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp
145                 150                 155                 160

Ile Gln Met Thr Gln Ser Pro Ser Thr Leu Ser Ala Ser Val Gly Asp
                165                 170                 175

Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Ser Ser Trp Leu
            180                 185                 190

Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile Tyr
        195                 200                 205

Lys Ala Ser Ser Leu Glu Ser Gly Val Pro Ser Arg Phe Ser Gly Ser
```

```
    210                 215                 220

Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro Asp
225                 230                 235                 240

Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Tyr Asn Ser Tyr Ser Arg Thr
                245                 250                 255

Phe Gly Gln Gly Thr Lys Val Glu Ile Lys Thr Thr Thr Pro Ala Pro
            260                 265                 270

Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser Leu
        275                 280                 285

Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr Arg
    290                 295                 300

Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala Gly
305                 310                 315                 320

Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr Cys Lys
                325                 330                 335

Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met Arg
            340                 345                 350

Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro
        355                 360                 365

Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg Ser
    370                 375                 380

Ala Asp Ala Pro Ala Tyr Gln Gln Gly Gln Asn Gln Leu Tyr Asn Glu
385                 390                 395                 400

Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg
                405                 410                 415

Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln
            420                 425                 430
```

```
Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr
        435                 440                 445


Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His Asp
    450                 455                 460


Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala
465                 470                 475                 480


Leu His Met Gln Ala Leu Pro Pro Arg
                485


<210> 671
<211> 497
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 671
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1               5                   10                  15


His Ala Ala Arg Pro Gln Val Pro Leu Val Gln Ser Gly Ala Glu Val
            20                  25                  30


Lys Lys Pro Gly Ser Ser Val Lys Val Ser Cys Lys Ala Ser Gly Gly
        35                  40                  45


Thr Phe Ser Thr Tyr Ser Ile Ser Trp Val Arg Gln Ala Pro Gly Gln
    50                  55                  60


Gly Leu Glu Trp Met Gly Gly Ile Ile Pro Ile Phe Gly Thr Thr Asn
65                  70                  75                  80


Tyr Ala Gln Lys Phe Gln Gly Arg Val Thr Ile Thr Ala Asp Lys Ser
                85                  90                  95
```

```
Thr Ser Thr Ala Tyr Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr
            100                 105                 110

Ala Val Tyr Tyr Cys Ala Arg Asp Gly Glu Gly Ser Tyr Tyr Tyr Tyr
        115                 120                 125

Tyr Gly Met Asp Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser
    130                 135                 140

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly
145                 150                 155                 160

Gly Gly Gly Ser Gln Ser Val Leu Thr Gln Pro Pro Ser Ala Ser Gly
                165                 170                 175

Thr Pro Gly Gln Arg Val Thr Ile Ser Cys Ser Gly Ser Ser Ser Asn
            180                 185                 190

Ile Gly Ser Asn Tyr Val Tyr Trp Tyr Gln Gln Leu Pro Gly Thr Ala
        195                 200                 205

Pro Lys Leu Leu Ile Tyr Ser Asn Asn Gln Arg Pro Ser Gly Val Pro
    210                 215                 220

Asp Arg Phe Ser Gly Ser Lys Ser Gly Thr Ser Ala Ser Leu Ala Ile
225                 230                 235                 240

Ser Gly Leu Arg Ser Glu Asp Glu Ala Asp Tyr Tyr Cys Ala Ala Trp
                245                 250                 255

Asp Asp Ser Leu Ser Gly Trp Val Phe Gly Gly Gly Thr Lys Leu Thr
            260                 265                 270

Val Leu Thr Thr Thr Pro Ala Pro Arg Pro Pro Thr Pro Ala Pro Thr
        275                 280                 285

Ile Ala Ser Gln Pro Leu Ser Leu Arg Pro Glu Ala Cys Arg Pro Ala
    290                 295                 300

Ala Gly Gly Ala Val His Thr Arg Gly Leu Asp Phe Ala Cys Asp Ile
```

305 310 315 320

Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly Val Leu Leu Leu Ser
325 330 335

Leu Val Ile Thr Leu Tyr Cys Lys Arg Gly Arg Lys Lys Leu Leu Tyr
340 345 350

Ile Phe Lys Gln Pro Phe Met Arg Pro Val Gln Thr Thr Gln Glu Glu
355 360 365

Asp Gly Cys Ser Cys Arg Phe Pro Glu Glu Glu Glu Gly Gly Cys Glu
370 375 380

Leu Arg Val Lys Phe Ser Arg Ser Ala Asp Ala Pro Ala Tyr Gln Gln
385 390 395 400

Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu
405 410 415

Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg Asp Pro Glu Met Gly Gly
420 425 430

Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu Tyr Asn Glu Leu Gln
435 440 445

Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile Gly Met Lys Gly Glu
450 455 460

Arg Arg Arg Gly Lys Gly His Asp Gly Leu Tyr Gln Gly Leu Ser Thr
465 470 475 480

Ala Thr Lys Asp Thr Tyr Asp Ala Leu His Met Gln Ala Leu Pro Pro
485 490 495

Arg

<210> 672
<211> 494

<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 672
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu
20 25 30

Val Gln Pro Gly Gly Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe
35 40 45

Thr Phe Ser Ser Tyr Ser Met Asn Trp Val Arg Gln Ala Pro Gly Lys
50 55 60

Gly Leu Glu Trp Val Ser Tyr Ile Ser Ser Ser Ser Ser Thr Ile Tyr
65 70 75 80

Tyr Ala Asp Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala
85 90 95

Lys Asn Ser Leu Tyr Leu Gln Met Asn Ser Leu Arg Asp Glu Asp Thr
100 105 110

Ala Val Tyr Tyr Cys Ala Arg Asp Lys Glu Arg Arg Tyr Tyr Tyr Tyr
115 120 125

Gly Met Asp Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser Gly
130 135 140

Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly
145 150 155 160

Gly Gly Ser Glu Ile Val Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu
165 170 175

```
Ser Pro Gly Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val
            180                 185                 190

Ser Arg Arg Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro
        195                 200                 205

Arg Leu Leu Ile Tyr Gly Ala Ser Ser Arg Ala Thr Gly Ile Pro Asp
    210                 215                 220

Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser
225                 230                 235                 240

Arg Leu Glu Pro Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Phe Gly
                245                 250                 255

Thr Ser Pro Ile Thr Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Thr
            260                 265                 270

Thr Thr Pro Ala Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser
        275                 280                 285

Gln Pro Leu Ser Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly
    290                 295                 300

Ala Val His Thr Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp
305                 310                 315                 320

Ala Pro Leu Ala Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile
                325                 330                 335

Thr Leu Tyr Cys Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys
            340                 345                 350

Gln Pro Phe Met Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys
        355                 360                 365

Ser Cys Arg Phe Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg Val
    370                 375                 380

Lys Phe Ser Arg Ser Ala Asp Ala Pro Ala Tyr Gln Gln Gly Gln Asn
```

385 390 395 400

Gln Leu Tyr Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val
405 410 415

Leu Asp Lys Arg Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg
420 425 430

Arg Lys Asn Pro Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys
435 440 445

Met Ala Glu Ala Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg
450 455 460

Gly Lys Gly His Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys
465 470 475 480

Asp Thr Tyr Asp Ala Leu His Met Gln Ala Leu Pro Pro Arg
485 490

<210> 673
<211> 498
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 673
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Gln Val Gln Leu Gln Gln Ser Gly Pro Gly Leu
20 25 30

Val Lys Pro Ser Gln Thr Leu Ser Leu Ala Cys Ala Ile Ser Gly Asp
35 40 45

Ser Val Ser Ser Asn Ser Ala Ile Trp Asn Trp Ile Arg Gln Ser Pro
50 55 60

```
Ser Arg Gly Leu Glu Trp Leu Gly Gly Thr Tyr Tyr Arg Ser Met Trp
65                  70                  75                  80

Tyr Asn Asp Tyr Ala Val Ser Val Lys Ser Arg Ile Thr Ile Asn Pro
                85                  90                  95

Asp Thr Ser Lys Asn Gln Leu Ser Leu Gln Leu Asn Ser Val Thr Pro
            100                 105                 110

Glu Asp Thr Ala Val Tyr Tyr Cys Ser Arg Gly Gly Ile Val Gly Val
        115                 120                 125

Pro Asp Ala Phe Asp Ile Trp Gly Gln Gly Thr Met Val Thr Val Ser
    130                 135                 140

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
145                 150                 155                 160

Gly Gly Gly Gly Ser Gln Ser Val Leu Thr Gln Pro Pro Ser Ala Ser
                165                 170                 175

Gly Thr Pro Gly Gln Arg Val Thr Ile Ser Cys Ser Gly Ser Ser Ser
            180                 185                 190

Asn Ile Gly Ser Asn Thr Ala Asn Trp Tyr Gln Gln Leu Pro Gly Thr
        195                 200                 205

Ala Pro Arg Leu Leu Ile Tyr Arg Asn Asn Gln Arg Pro Ser Gly Val
    210                 215                 220

Pro Asp Arg Phe Ser Gly Ser Lys Ser Gly Thr Ser Ala Ser Leu Ala
225                 230                 235                 240

Ile Ser Gly Leu Gln Ser Glu Asp Glu Ala Asp Tyr Tyr Cys Ala Ala
                245                 250                 255

Trp Asp Asp Ser Leu Asn Gly Tyr Val Phe Gly Thr Gly Thr Lys Val
            260                 265                 270
```

```
Thr Val Leu Thr Thr Thr Pro Ala Pro Arg Pro Pro Thr Pro Ala Pro
        275                 280                 285

Thr Ile Ala Ser Gln Pro Leu Ser Leu Arg Pro Glu Ala Cys Arg Pro
    290                 295                 300

Ala Ala Gly Gly Ala Val His Thr Arg Gly Leu Asp Phe Ala Cys Asp
305                 310                 315                 320

Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly Val Leu Leu Leu
                325                 330                 335

Ser Leu Val Ile Thr Leu Tyr Cys Lys Arg Gly Arg Lys Lys Leu Leu
            340                 345                 350

Tyr Ile Phe Lys Gln Pro Phe Met Arg Pro Val Gln Thr Thr Gln Glu
        355                 360                 365

Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu Glu Glu Glu Gly Gly Cys
    370                 375                 380

Glu Leu Arg Val Lys Phe Ser Arg Ser Ala Asp Ala Pro Ala Tyr Gln
385                 390                 395                 400

Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn Leu Gly Arg Arg Glu
                405                 410                 415

Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg Asp Pro Glu Met Gly
            420                 425                 430

Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu Tyr Asn Glu Leu
        435                 440                 445

Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile Gly Met Lys Gly
    450                 455                 460

Glu Arg Arg Arg Gly Lys Gly His Asp Gly Leu Tyr Gln Gly Leu Ser
465                 470                 475                 480

Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu His Met Gln Ala Leu Pro
```

485 490 495

Pro Arg

<210> 674
<211> 492
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 674
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu
20 25 30

Val Lys Pro Ser Glu Thr Leu Ser Leu Thr Cys Asn Val Ser Asp Gly
35 40 45

Ser Ile Ser Ser Tyr Tyr Trp Thr Trp Ile Arg Gln Pro Pro Gly Lys
50 55 60

Gly Leu Asp Trp Ile Gly Tyr Ile Phe Tyr Ser Gly Thr Thr Asn Tyr
65 70 75 80

Asn Pro Ser Leu Lys Ser Arg Val Thr Ile Ser Leu Asp Thr Ser Lys
85 90 95

Asn Gln Phe Ser Leu Lys Leu Thr Ser Met Thr Ala Ala Asp Thr Ala
100 105 110

Val Tyr Tyr Cys Ala Arg Ile Ser Glu Lys Ser Phe Tyr Phe Asp Tyr
115 120 125

Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly Gly Ser
130 135 140

```
Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gln
145                 150                 155                 160

Ser Val Leu Thr Gln Pro Pro Ser Ala Ser Gly Thr Pro Gly Gln Arg
                165                 170                 175

Val Thr Ile Ser Cys Ser Gly Ser Ser Ser Asn Ile Gly Ser Asn Tyr
            180                 185                 190

Val Tyr Trp Tyr Gln Gln Leu Pro Gly Thr Ala Pro Lys Leu Leu Ile
        195                 200                 205

Tyr Ser Asn Asn Gln Arg Pro Ser Gly Val Pro Asp Arg Phe Ser Gly
    210                 215                 220

Ser Lys Ser Gly Thr Ser Ala Ser Leu Ala Ile Ser Gly Leu Arg Ser
225                 230                 235                 240

Glu Asp Glu Ala Asp Tyr Tyr Cys Ala Pro Trp Asp Asp Ser Leu Ser
                245                 250                 255

Gly Arg Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu Thr Thr Thr
            260                 265                 270

Pro Ala Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro
        275                 280                 285

Leu Ser Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala Val
    290                 295                 300

His Thr Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro
305                 310                 315                 320

Leu Ala Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr Leu
                325                 330                 335

Tyr Cys Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro
            340                 345                 350
```

```
Phe Met Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys
        355                 360                 365


Arg Phe Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg Val Lys Phe
    370                 375                 380


Ser Arg Ser Ala Asp Ala Pro Ala Tyr Gln Gln Gly Gln Asn Gln Leu
385                 390                 395                 400


Tyr Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp
                405                 410                 415


Lys Arg Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys
            420                 425                 430


Asn Pro Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala
        435                 440                 445


Glu Ala Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys
    450                 455                 460


Gly His Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr
465                 470                 475                 480


Tyr Asp Ala Leu His Met Gln Ala Leu Pro Pro Arg
                485                 490


<210> 675
<211> 493
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 675
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1               5                   10                  15


His Ala Ala Arg Pro Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val
            20                  25                  30
```

```
Lys Arg Pro Gly Ala Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr
        35                  40                  45

Thr Phe Thr Ser Tyr Tyr Ile His Trp Val Arg Gln Ala Pro Gly Gln
    50                  55                  60

Gly Leu Glu Trp Met Gly Val Ile Val Pro Ser Gly Gly Ser Ile Ser
65                  70                  75                  80

Tyr Ala Gln Lys Phe Gln Gly Arg Val Thr Met Thr Arg Asp Thr Ser
                85                  90                  95

Thr Asn Ile Val Tyr Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr
            100                 105                 110

Ala Val Tyr Tyr Cys Ala Arg Asp Arg Tyr Tyr Gly Asp Tyr Tyr Tyr
        115                 120                 125

Gly Leu Asp Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser Gly
    130                 135                 140

Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly
145                 150                 155                 160

Gly Gly Ser Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala
                165                 170                 175

Ser Val Gly Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Gly Ile
            180                 185                 190

Asn Asn Phe Leu Ala Trp Phe Gln Gln Lys Pro Gly Lys Ala Pro Lys
        195                 200                 205

Ser Leu Ile Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Lys
    210                 215                 220

Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Arg Ser
225                 230                 235                 240
```

```
Leu Gln Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Gln His Tyr Asn Ser
                245                 250                 255

Tyr Pro Ile Thr Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Thr Thr
            260                 265                 270

Thr Pro Ala Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln
        275                 280                 285

Pro Leu Ser Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala
    290                 295                 300

Val His Thr Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala
305                 310                 315                 320

Pro Leu Ala Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr
                325                 330                 335

Leu Tyr Cys Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln
            340                 345                 350

Pro Phe Met Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser
        355                 360                 365

Cys Arg Phe Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg Val Lys
    370                 375                 380

Phe Ser Arg Ser Ala Asp Ala Pro Ala Tyr Gln Gln Gly Gln Asn Gln
385                 390                 395                 400

Leu Tyr Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu
                405                 410                 415

Asp Lys Arg Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg
            420                 425                 430

Lys Asn Pro Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met
        435                 440                 445
```

Ala Glu Ala Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly
    450   455   460

Lys Gly His Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp
465   470   475   480

Thr Tyr Asp Ala Leu His Met Gln Ala Leu Pro Pro Arg
                485   490

<210> 676
<211> 490
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 676
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1   5   10   15

His Ala Ala Arg Pro Gln Val His Leu Gln Glu Ser Gly Pro Gly Leu
            20   25   30

Val Lys Pro Ser Glu Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Gly
        35   40   45

Ser Ile Ser His Tyr Tyr Trp Thr Trp Ile Arg Gln Pro Pro Gly Lys
    50   55   60

Gly Leu Glu Trp Ile Gly Tyr Ile Tyr Tyr Ser Gly Ile Thr Asn Phe
65   70   75   80

Ser Pro Ser Leu Lys Ser Arg Val Ser Ile Ser Val Asp Ser Ser Lys
                85   90   95

Asn Gln Phe Ser Leu Asn Leu Asn Ser Val Thr Ala Ala Asp Thr Ala
            100   105   110

Val Tyr Tyr Cys Ala Gly Ile Ser Leu Ala Gly Phe Tyr Phe Asp Tyr
        115   120   125

```
Trp Val Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly Gly Ser
    130                 135                 140

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu
145                 150                 155                 160

Ile Val Leu Thr Gln Ser Pro Gly Thr Leu Ser Leu Ser Pro Gly Glu
                165                 170                 175

Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Arg Ser Tyr
            180                 185                 190

Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile
        195                 200                 205

Tyr Gly Ala Ser Ser Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly
    210                 215                 220

Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro
225                 230                 235                 240

Glu Asp Phe Ala Val Phe Tyr Cys Gln Gln Tyr Ser Ile Ser Pro Leu
                245                 250                 255

Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Thr Thr Thr Pro Ala
            260                 265                 270

Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser
        275                 280                 285

Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr
    290                 295                 300

Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala
305                 310                 315                 320

Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr Cys
                325                 330                 335
```

```
Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met
            340                 345                 350

Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe
        355                 360                 365

Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg
    370                 375                 380

Ser Ala Asp Ala Pro Ala Tyr Gln Gln Gly Gln Asn Gln Leu Tyr Asn
385                 390                 395                 400

Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg
                405                 410                 415

Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro
            420                 425                 430

Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala
        435                 440                 445

Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His
    450                 455                 460

Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp
465                 470                 475                 480

Ala Leu His Met Gln Ala Leu Pro Pro Arg
                485                 490
```

<210> 677
<211> 493
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 677
```
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
```

```
1               5                   10                  15

His Ala Ala Arg Pro Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu
            20                  25                  30

Val Lys Pro Ser Glu Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Val
        35                  40                  45

Ser Ile Ser Ser Tyr Tyr Trp Ser Trp Ile Arg Gln Pro Pro Gly Lys
    50                  55                  60

Gly Leu Glu Trp Ile Ala Tyr Ile Tyr Tyr Ser Gly Asn Thr Asn Tyr
65                  70                  75                  80

Ser Pro Ser Leu Lys Ser Arg Val Thr Ile Ser Val Asp Thr Ser Lys
                85                  90                  95

Asp Gln Leu Ser Leu Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala
            100                 105                 110

Val Tyr Tyr Cys Thr Arg Gly Gly Ser Gly Thr Ile Asp Val Phe Asp
        115                 120                 125

Ile Trp Gly Gln Gly Thr Met Val Ala Val Ser Ser Gly Gly Gly Gly
    130                 135                 140

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
145                 150                 155                 160

Gln Ser Val Leu Thr Gln Pro Pro Ser Val Ser Ala Ala Pro Gly Gln
                165                 170                 175

Lys Val Thr Ile Ser Cys Ser Gly Ser Ser Ser Asn Ile Gly Asn Asn
            180                 185                 190

Tyr Val Ser Trp Tyr Gln Gln Leu Pro Gly Thr Ala Pro Lys Leu Leu
        195                 200                 205

Ile Tyr Asp Asn Asn Lys Arg Pro Ser Gly Ile Pro Asp Arg Phe Ser
    210                 215                 220
```

```
Gly Ser Lys Ser Gly Thr Ser Ala Thr Leu Gly Ile Thr Gly Leu Gln
225                 230                 235                 240

Thr Gly Asp Glu Ala Asp Tyr Tyr Cys Glu Thr Trp Asp Ser Ser Leu
                245                 250                 255

Ser Ala Val Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu Thr Thr
            260                 265                 270

Thr Pro Ala Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln
        275                 280                 285

Pro Leu Ser Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala
    290                 295                 300

Val His Thr Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala
305                 310                 315                 320

Pro Leu Ala Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr
                325                 330                 335

Leu Tyr Cys Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln
            340                 345                 350

Pro Phe Met Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser
        355                 360                 365

Cys Arg Phe Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg Val Lys
    370                 375                 380

Phe Ser Arg Ser Ala Asp Ala Pro Ala Tyr Gln Gln Gly Gln Asn Gln
385                 390                 395                 400

Leu Tyr Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu
                405                 410                 415

Asp Lys Arg Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg
            420                 425                 430
```

Lys Asn Pro Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met
435 440 445

Ala Glu Ala Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly
450 455 460

Lys Gly His Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp
465 470 475 480

Thr Tyr Asp Ala Leu His Met Gln Ala Leu Pro Pro Arg
485 490

<210> 678
<211> 495
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 678
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Gln Val Gln Leu Gln Gln Ser Gly Pro Gly Leu
20 25 30

Val Lys Pro Ser Gln Thr Leu Ser Leu Thr Cys Ala Ile Ser Gly Asp
35 40 45

Asn Val Ser Thr Asn Ser Ala Ala Trp Asn Trp Ile Arg Gln Ser Pro
50 55 60

Ser Arg Gly Leu Glu Trp Leu Gly Trp Thr Tyr Tyr Arg Ser Lys Trp
65 70 75 80

Tyr Asn Asp Tyr Ala Val Ser Leu Lys Ser Arg Ile Asn Ile Asn Pro
85 90 95

Asp Thr Ser Lys Asn Gln Phe Ser Leu Gln Leu Asn Ser Val Thr Pro

```
            100                 105                 110

Glu Asp Thr Ala Val Tyr Tyr Cys Ala Arg Trp Val Asn Arg Asp Val
        115                 120                 125

Phe Asp Ile Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly
    130                 135                 140

Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly
145                 150                 155                 160

Gly Ser Gln Ser Ala Leu Thr Gln Pro Ala Ser Val Ser Gly Ser Pro
                165                 170                 175

Gly Gln Ser Ile Thr Ile Ser Cys Thr Gly Thr Ser Ser Asp Val Gly
            180                 185                 190

Ser Tyr Asn Leu Val Ser Trp Tyr Gln Gln His Pro Gly Lys Ala Pro
        195                 200                 205

Lys Leu Met Ile Tyr Glu Gly Ser Lys Arg Pro Ser Gly Val Ser Asn
    210                 215                 220

Arg Phe Ser Gly Ser Lys Ser Gly Asn Thr Ala Ser Leu Thr Ile Ser
225                 230                 235                 240

Gly Leu Gln Ala Glu Asp Glu Ala Asp Tyr Tyr Cys Cys Ser Tyr Ala
                245                 250                 255

Gly Ser Ser Thr Trp Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu
            260                 265                 270

Thr Thr Thr Pro Ala Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala
        275                 280                 285

Ser Gln Pro Leu Ser Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly
    290                 295                 300

Gly Ala Val His Thr Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile
305                 310                 315                 320
```

```
Trp Ala Pro Leu Ala Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val
                325                 330                 335

Ile Thr Leu Tyr Cys Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe
            340                 345                 350

Lys Gln Pro Phe Met Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly
        355                 360                 365

Cys Ser Cys Arg Phe Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg
    370                 375                 380

Val Lys Phe Ser Arg Ser Ala Asp Ala Pro Ala Tyr Gln Gln Gly Gln
385                 390                 395                 400

Asn Gln Leu Tyr Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp
                405                 410                 415

Val Leu Asp Lys Arg Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro
            420                 425                 430

Arg Arg Lys Asn Pro Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp
        435                 440                 445

Lys Met Ala Glu Ala Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg
    450                 455                 460

Arg Gly Lys Gly His Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr
465                 470                 475                 480

Lys Asp Thr Tyr Asp Ala Leu His Met Gln Ala Leu Pro Pro Arg
                485                 490                 495
```

<210> 679
<211> 496
<212> PRT
<213> Artificial Sequence

<220>
<221> source

<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 679
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Gln Val Gln Leu Val Glu Ser Gly Gly Gly Val
20 25 30

Val Gln Pro Gly Arg Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe
35 40 45

Thr Phe Ser Ser Tyr Gly Met His Trp Val Arg Gln Thr Pro Gly Lys
50 55 60

Gly Leu Glu Trp Val Ala Val Ile Ser Tyr Asp Gly Asn Ser Asn Tyr
65 70 75 80

Tyr Ala Asp Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser
85 90 95

Lys Asn Thr Leu Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr
100 105 110

Ala Val Tyr Tyr Cys Ala Arg Asp Gly Ala Thr Val Thr Ser Tyr Tyr
115 120 125

Tyr Tyr Gly Met Asp Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser
130 135 140

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
145 150 155 160

Gly Gly Gly Gly Ser Glu Ile Val Leu Thr Gln Ser Pro Gly Thr Leu
165 170 175

Ser Leu Ser Pro Gly Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln
180 185 190

Ser Val Ser Arg Thr Tyr Leu Ala Trp Tyr His Gln Lys Pro Gly Gln

```
        195                 200                 205

Ala Pro Arg Leu Leu Ile Tyr Gly Ala Ser Ser Arg Ala Thr Gly Ile
    210                 215                 220

Ser Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr
225                 230                 235                 240

Ile Ser Arg Leu Glu Pro Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln
                245                 250                 255

Tyr Gly Thr Ser Pro Ile Thr Phe Gly Gln Gly Thr Arg Leu Glu Ile
            260                 265                 270

Lys Thr Thr Thr Pro Ala Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile
        275                 280                 285

Ala Ser Gln Pro Leu Ser Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala
    290                 295                 300

Gly Gly Ala Val His Thr Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr
305                 310                 315                 320

Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly Val Leu Leu Leu Ser Leu
                325                 330                 335

Val Ile Thr Leu Tyr Cys Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile
            340                 345                 350

Phe Lys Gln Pro Phe Met Arg Pro Val Gln Thr Thr Gln Glu Glu Asp
        355                 360                 365

Gly Cys Ser Cys Arg Phe Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu
    370                 375                 380

Arg Val Lys Phe Ser Arg Ser Ala Asp Ala Pro Ala Tyr Gln Gln Gly
385                 390                 395                 400

Gln Asn Gln Leu Tyr Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr
                405                 410                 415
```

Asp Val Leu Asp Lys Arg Arg Gly Arg Asp Pro Glu Met Gly Gly Lys
420 425 430

Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys
435 440 445

Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg
450 455 460

Arg Arg Gly Lys Gly His Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala
465 470 475 480

Thr Lys Asp Thr Tyr Asp Ala Leu His Met Gln Ala Leu Pro Pro Arg
485 490 495

<210> 680
<211> 501
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 680
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Gln Val Gln Leu Gln Gln Ser Gly Pro Gly Leu
20 25 30

Val Lys Pro Ser Gln Thr Leu Ser Leu Thr Cys Ala Ile Ser Gly Asp
35 40 45

Ser Val Ser Ser Asn Ser Ala Val Trp Asn Trp Ile Arg Gln Ser Pro
50 55 60

Ser Arg Gly Leu Glu Trp Leu Gly Arg Thr Tyr Tyr Arg Ser Lys Trp
65 70 75 80

```
Tyr Asn Asp Tyr Ala Val Ser Val Lys Ser Arg Ile Thr Ile Asn Pro
                85                  90                  95

Asp Thr Ser Arg Asn Gln Phe Ser Leu Gln Leu Asn Ser Val Thr Pro
            100                 105                 110

Glu Asp Thr Ala Val Tyr Tyr Cys Ala Arg Gly Gly Ile Val Gly Ala
        115                 120                 125

Pro Asp Gly Phe Asp Ile Trp Gly Gln Gly Thr Met Val Thr Val Ser
    130                 135                 140

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
145                 150                 155                 160

Gly Gly Gly Gly Ser Asp Ile Val Met Thr Gln Ser Pro Asp Ser Leu
                165                 170                 175

Ala Val Ser Leu Gly Glu Arg Ala Thr Ile Asn Cys Lys Ser Ser Gln
            180                 185                 190

Ser Val Leu Asp Ser Ser Asn Asn Asn Asn Tyr Phe Ala Trp Tyr Gln
        195                 200                 205

Gln Arg Pro Gly Gln Pro Pro His Leu Leu Ile Tyr Trp Ala Ser Ser
    210                 215                 220

Arg Glu Ser Gly Val Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr
225                 230                 235                 240

Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Ala Glu Asp Val Ala Val
                245                 250                 255

Tyr Tyr Cys Gln Gln Tyr Tyr Ser Thr Pro Tyr Thr Phe Gly Gln Gly
            260                 265                 270

Thr Lys Leu Glu Ile Lys Thr Thr Thr Pro Ala Pro Arg Pro Pro Thr
        275                 280                 285

Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser Leu Arg Pro Glu Ala
```

```
    290                 295                 300

Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr Arg Gly Leu Asp Phe
305                 310                 315                 320

Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly Val
                325                 330                 335

Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr Cys Lys Arg Gly Arg Lys
            340                 345                 350

Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met Arg Pro Val Gln Thr
        355                 360                 365

Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu Glu Glu Glu
    370                 375                 380

Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg Ser Ala Asp Ala Pro
385                 390                 395                 400

Ala Tyr Gln Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn Leu Gly
                405                 410                 415

Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg Asp Pro
            420                 425                 430

Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu Tyr
        435                 440                 445

Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile Gly
    450                 455                 460

Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His Asp Gly Leu Tyr Gln
465                 470                 475                 480

Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu His Met Gln
                485                 490                 495

Ala Leu Pro Pro Arg
            500
```

<210> 681
<211> 495
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 681
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Gln Val Gln Leu Gln Gln Ser Gly Pro Gly Leu
20 25 30

Val Lys Pro Ser Gln Thr Leu Ser Leu Thr Cys Ala Ile Ser Gly Asp
35 40 45

Ser Val Ser Ser Asn Thr Thr Ala Trp Lys Trp Ser Arg Gln Ser Pro
50 55 60

Ser Lys Gly Leu Glu Trp Leu Gly Trp Thr Tyr Tyr Arg Ser Lys Trp
65 70 75 80

Tyr Tyr Asp Tyr Thr Val Ser Val Lys Ser Arg Ile Thr Ile Asn Pro
85 90 95

Asp Thr Ser Lys Asn Gln Phe Ser Leu Gln Leu Asn Ser Val Thr Pro
100 105 110

Glu Asp Thr Ala Val Tyr Tyr Cys Ala Arg Trp Ile Phe His Asp Ala
115 120 125

Phe Asp Ile Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly
130 135 140

Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly
145 150 155 160

```
Gly Ser Gln Ser Ala Leu Thr Gln Pro Pro Ser Ala Ser Gly Thr Pro
                165                 170                 175

Gly Gln Arg Val Thr Ile Ser Cys Ser Gly Ser Ser Ser Asn Ile Gly
            180                 185                 190

Ser Asn Thr Val Asn Trp Tyr Gln Gln Leu Pro Gly Thr Ala Pro Lys
        195                 200                 205

Leu Leu Ile Tyr Thr Asn Asn Gln Arg Pro Ser Gly Val Pro Asp Arg
    210                 215                 220

Phe Ser Gly Ser Lys Ser Gly Thr Ser Ala Ser Leu Ala Ile Ser Gly
225                 230                 235                 240

Leu Gln Ser Glu Asp Glu Ala Asp Tyr Phe Cys Ser Thr Trp Asp Asp
                245                 250                 255

Ser Leu Asn Gly Pro Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu
            260                 265                 270

Thr Thr Thr Pro Ala Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala
        275                 280                 285

Ser Gln Pro Leu Ser Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly
    290                 295                 300

Gly Ala Val His Thr Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile
305                 310                 315                 320

Trp Ala Pro Leu Ala Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val
                325                 330                 335

Ile Thr Leu Tyr Cys Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe
            340                 345                 350

Lys Gln Pro Phe Met Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly
        355                 360                 365

Cys Ser Cys Arg Phe Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg
```

370 375 380

Val Lys Phe Ser Arg Ser Ala Asp Ala Pro Ala Tyr Gln Gln Gly Gln
385 390 395 400

Asn Gln Leu Tyr Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp
405 410 415

Val Leu Asp Lys Arg Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro
420 425 430

Arg Arg Lys Asn Pro Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp
435 440 445

Lys Met Ala Glu Ala Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg
450 455 460

Arg Gly Lys Gly His Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr
465 470 475 480

Lys Asp Thr Tyr Asp Ala Leu His Met Gln Ala Leu Pro Pro Arg
485 490 495

<210> 682
<211> 486
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 682
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu
20 25 30

Val Lys Pro Ser Glu Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Asp
35 40 45

```
Ser Ile Ser Ser Leu Ser Trp Ser Trp Ile Arg Gln Thr Pro Gly Glu
    50                  55                  60

Gly Leu Glu Trp Ile Gly Tyr Leu Tyr Tyr Ser Gly Ser Thr Asp Tyr
65                  70                  75                  80

Asn Pro Ser Leu Lys Ser Arg Val Thr Ile Ser Val Asp Thr Ser Lys
                85                  90                  95

Asn Gln Phe Ser Leu Lys Leu Arg Ser Val Ala Ala Ala Asp Thr Ala
            100                 105                 110

Leu Tyr Tyr Cys Ala Arg Gly Arg Arg Ala Phe Asp Ile Trp Gly Gln
        115                 120                 125

Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly
    130                 135                 140

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Gln Met
145                 150                 155                 160

Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly Asp Arg Val Thr
                165                 170                 175

Ile Thr Cys Arg Gly Ser Gln Gly Ile Ser Asn Tyr Leu Ala Trp Phe
            180                 185                 190

Gln Gln Arg Pro Gly Lys Ala Pro Lys Ser Leu Ile Tyr Ala Ala Ser
        195                 200                 205

Ser Leu Glu Ser Gly Val Pro Ser Lys Phe Ser Gly Ser Gly Ser Gly
    210                 215                 220

Thr Asp Phe Thr Leu Thr Ile Ile Ser Leu Gln Pro Glu Asp Phe Ala
225                 230                 235                 240

Thr Tyr Tyr Cys Gln Gln Tyr Tyr Asn Tyr Pro Ile Thr Phe Gly Gln
                245                 250                 255
```

```
Gly Thr Arg Leu Glu Ile Lys Thr Thr Thr Pro Ala Pro Arg Pro Pro
            260                 265                 270

Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser Leu Arg Pro Glu
        275                 280                 285

Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr Arg Gly Leu Asp
    290                 295                 300

Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly
305                 310                 315                 320

Val Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr Cys Lys Arg Gly Arg
                325                 330                 335

Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met Arg Pro Val Gln
            340                 345                 350

Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu Glu Glu
        355                 360                 365

Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg Ser Ala Asp Ala
    370                 375                 380

Pro Ala Tyr Gln Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn Leu
385                 390                 395                 400

Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg Asp
                405                 410                 415

Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu
            420                 425                 430

Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile
        435                 440                 445

Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His Asp Gly Leu Tyr
    450                 455                 460

Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu His Met
```

465 470 475 480

Gln Ala Leu Pro Pro Arg
485

<210> 683
<211> 496
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 683
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val
20 25 30

Lys Lys Pro Gly Ala Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr
35 40 45

Thr Phe Thr Gly Tyr Tyr Met His Trp Val Arg Gln Ala Pro Gly Gln
50 55 60

Gly Leu Glu Trp Met Gly Trp Ile Asn Pro Asn Ser Gly Gly Thr Asn
65 70 75 80

Tyr Ala Gln Lys Phe Gln Gly Arg Val Thr Met Thr Arg Asp Thr Ser
85 90 95

Val Ser Thr Ala Tyr Met Glu Leu Ser Arg Leu Thr Ser Asp Asp Thr
100 105 110

Ala Ile Tyr Tyr Cys Ala Lys Asp Gly Gly Gly Asp Phe Tyr Phe Tyr
115 120 125

Gly Met Asp Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser Gly
130 135 140

```
Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly
145                 150                 155                 160


Gly Gly Ser Gln Thr Val Val Thr Gln Glu Pro Ser Phe Ser Val Ser
                165                 170                 175


Pro Gly Gly Thr Val Thr Leu Thr Cys Gly Leu Ser Ser Gly Ser Val
            180                 185                 190


Ser Thr Ser Tyr Tyr Pro Ser Cys Phe Gln Gln Thr Pro Gly Gln Ala
        195                 200                 205


Pro Arg Thr Leu Ile Tyr Ser Thr Asp Thr Arg Ser Ser Gly Val Pro
    210                 215                 220


Asp Arg Phe Ser Gly Ser Ile Leu Gly Asn Lys Ala Ala Leu Thr Ile
225                 230                 235                 240


Thr Gly Ala Gln Ala Asp Asp Glu Ser Asp Tyr Tyr Cys Val Leu Tyr
                245                 250                 255


Met Gly Ser Gly Ile Ser Val Phe Gly Gly Gly Thr Lys Leu Thr Val
            260                 265                 270


Leu Thr Thr Thr Pro Ala Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile
        275                 280                 285


Ala Ser Gln Pro Leu Ser Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala
    290                 295                 300


Gly Gly Ala Val His Thr Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr
305                 310                 315                 320


Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly Val Leu Leu Leu Ser Leu
                325                 330                 335


Val Ile Thr Leu Tyr Cys Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile
            340                 345                 350
```

```
Phe Lys Gln Pro Phe Met Arg Pro Val Gln Thr Thr Gln Glu Glu Asp
        355                 360                 365

Gly Cys Ser Cys Arg Phe Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu
    370                 375                 380

Arg Val Lys Phe Ser Arg Ser Ala Asp Ala Pro Ala Tyr Gln Gln Gly
385                 390                 395                 400

Gln Asn Gln Leu Tyr Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr
                405                 410                 415

Asp Val Leu Asp Lys Arg Arg Gly Arg Asp Pro Glu Met Gly Gly Lys
            420                 425                 430

Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys
        435                 440                 445

Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg
    450                 455                 460

Arg Arg Gly Lys Gly His Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala
465                 470                 475                 480

Thr Lys Asp Thr Tyr Asp Ala Leu His Met Gln Ala Leu Pro Pro Arg
                485                 490                 495
```

<210> 684
<211> 572
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 684

```
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1               5                   10                  15

His Ala Ala Arg Pro Gly Gly Gly Gly Ser Cys Pro Tyr Ser Asn Pro
            20                  25                  30
```

```
Ser Leu Cys Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gln Leu
        35                  40                  45

Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Glu Thr Leu
    50                  55                  60

Ser Leu Thr Cys Thr Val Ser Gly Gly Ser Ile Ser Ser Ser Ser Tyr
65                  70                  75                  80

Tyr Trp Gly Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp Ile
                85                  90                  95

Gly Ser Ile Tyr Tyr Ser Gly Asn Ile Tyr His Asn Pro Ser Leu Lys
            100                 105                 110

Ser Arg Val Ser Ile Ser Val Asp Thr Ser Lys Asn Gln Phe Ser Leu
        115                 120                 125

Arg Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr Cys Ala
    130                 135                 140

Arg Glu Ile Ile Val Gly Ala Thr His Phe Asp Tyr Trp Gly Gln Gly
145                 150                 155                 160

Thr Leu Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly
                165                 170                 175

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Ile Gln Met Thr
            180                 185                 190

Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly Asp Arg Val Thr Ile
        195                 200                 205

Thr Cys Arg Ala Ser Gln Gly Ile Arg Asn Asp Leu Gly Trp Tyr Gln
    210                 215                 220

Gln Lys Pro Gly Lys Ala Pro Glu Leu Leu Ile Tyr Ala Ala Ser Ser
225                 230                 235                 240
```

```
Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr
                245                 250                 255

Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro Glu Asp Phe Ala Thr
            260                 265                 270

Tyr Tyr Cys Leu Gln Asp Tyr Asn Tyr Pro Leu Thr Phe Gly Pro Gly
        275                 280                 285

Thr Lys Val Asp Ile Lys Gly Ser Gly Gly Gly Gly Ser Cys Pro Tyr
    290                 295                 300

Ser Asn Pro Ser Leu Cys Ser Gly Gly Gly Gly Ser Glu Leu Pro Thr
305                 310                 315                 320

Gln Gly Thr Phe Ser Asn Val Ser Thr Asn Val Ser Pro Ala Lys Pro
                325                 330                 335

Thr Thr Thr Ala Cys Pro Tyr Ser Asn Pro Ser Leu Cys Thr Thr Thr
            340                 345                 350

Pro Ala Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro
        355                 360                 365

Leu Ser Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala Val
    370                 375                 380

His Thr Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro
385                 390                 395                 400

Leu Ala Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr Leu
                405                 410                 415

Tyr Cys Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro
            420                 425                 430

Phe Met Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys
        435                 440                 445
```

```
Arg Phe Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg Val Lys Phe
    450                 455                 460

Ser Arg Ser Ala Asp Ala Pro Ala Tyr Gln Gln Gly Gln Asn Gln Leu
465                 470                 475                 480

Tyr Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp
                485                 490                 495

Lys Arg Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys
            500                 505                 510

Asn Pro Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala
        515                 520                 525

Glu Ala Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys
    530                 535                 540

Gly His Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr
545                 550                 555                 560

Tyr Asp Ala Leu His Met Gln Ala Leu Pro Pro Arg
                565                 570
```

<210> 685
<211> 542
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 685

```
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1               5                   10                  15

His Ala Ala Arg Pro Gln Leu Gln Leu Gln Glu Ser Gly Pro Gly Leu
            20                  25                  30

Val Lys Pro Ser Glu Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Gly
        35                  40                  45
```

```
Ser Ile Ser Ser Ser Ser Tyr Tyr Trp Gly Trp Ile Arg Gln Pro Pro
    50                  55                  60

Gly Lys Gly Leu Glu Trp Ile Gly Ser Ile Tyr Tyr Ser Gly Asn Ile
65                  70                  75                  80

Tyr His Asn Pro Ser Leu Lys Ser Arg Val Ser Ile Ser Val Asp Thr
                85                  90                  95

Ser Lys Asn Gln Phe Ser Leu Arg Leu Ser Ser Val Thr Ala Ala Asp
            100                 105                 110

Thr Ala Val Tyr Tyr Cys Ala Arg Glu Ile Ile Val Gly Ala Thr His
        115                 120                 125

Phe Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly
    130                 135                 140

Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly
145                 150                 155                 160

Gly Ser Ala Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser
                165                 170                 175

Val Gly Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Gly Ile Arg
            180                 185                 190

Asn Asp Leu Gly Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Glu Leu
        195                 200                 205

Leu Ile Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe
    210                 215                 220

Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu
225                 230                 235                 240

Gln Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Leu Gln Asp Tyr Asn Tyr
                245                 250                 255
```

```
Pro Leu Thr Phe Gly Pro Gly Thr Lys Val Asp Ile Lys Gly Ser Gly
            260                 265                 270

Gly Gly Gly Ser Cys Pro Tyr Ser Asn Pro Ser Leu Cys Ser Gly Gly
        275                 280                 285

Gly Gly Ser Cys Pro Tyr Ser Asn Pro Ser Leu Cys Ser Gly Gly Gly
    290                 295                 300

Gly Ser Thr Thr Thr Ala Cys Pro Tyr Ser Asn Pro Ser Leu Cys Thr
305                 310                 315                 320

Thr Thr Pro Ala Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser
                325                 330                 335

Gln Pro Leu Ser Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly
            340                 345                 350

Ala Val His Thr Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp
        355                 360                 365

Ala Pro Leu Ala Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile
    370                 375                 380

Thr Leu Tyr Cys Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys
385                 390                 395                 400

Gln Pro Phe Met Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys
                405                 410                 415

Ser Cys Arg Phe Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg Val
            420                 425                 430

Lys Phe Ser Arg Ser Ala Asp Ala Pro Ala Tyr Gln Gln Gly Gln Asn
        435                 440                 445

Gln Leu Tyr Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val
    450                 455                 460
```

Leu Asp Lys Arg Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg
465 470 475 480

Arg Lys Asn Pro Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys
485 490 495

Met Ala Glu Ala Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg
500 505 510

Gly Lys Gly His Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys
515 520 525

Asp Thr Tyr Asp Ala Leu His Met Gln Ala Leu Pro Pro Arg
530 535 540

<210> 686
<211> 530
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 686
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Gly Gly Gly Gly Ser Cys Pro Tyr Ser Asn Pro
20 25 30

Ser Leu Cys Gly Gly Gly Gly Ser Gln Leu Gln Leu Gln Glu Ser Gly
35 40 45

Pro Gly Leu Val Lys Pro Ser Glu Thr Leu Ser Leu Thr Cys Thr Val
50 55 60

Ser Gly Gly Ser Ile Ser Ser Ser Ser Tyr Tyr Trp Gly Trp Ile Arg
65 70 75 80

Gln Pro Pro Gly Lys Gly Leu Glu Trp Ile Gly Ser Ile Tyr Tyr Ser
85 90 95

```
Gly Asn Ile Tyr His Asn Pro Ser Leu Lys Ser Arg Val Ser Ile Ser
            100                 105                 110

Val Asp Thr Ser Lys Asn Gln Phe Ser Leu Arg Leu Ser Ser Val Thr
        115                 120                 125

Ala Ala Asp Thr Ala Val Tyr Tyr Cys Ala Arg Glu Ile Ile Val Gly
    130                 135                 140

Ala Thr His Phe Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser
145                 150                 155                 160

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
                165                 170                 175

Gly Gly Gly Gly Ser Ala Ile Gln Met Thr Gln Ser Pro Ser Ser Leu
            180                 185                 190

Ser Ala Ser Val Gly Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln
        195                 200                 205

Gly Ile Arg Asn Asp Leu Gly Trp Tyr Gln Gln Lys Pro Gly Lys Ala
    210                 215                 220

Pro Glu Leu Leu Ile Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro
225                 230                 235                 240

Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile
                245                 250                 255

Ser Ser Leu Gln Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Leu Gln Asp
            260                 265                 270

Tyr Asn Tyr Pro Leu Thr Phe Gly Pro Gly Thr Lys Val Asp Ile Lys
        275                 280                 285

Gly Gly Gly Gly Ser Cys Pro Tyr Ser Asn Pro Ser Leu Cys Gly Gly
    290                 295                 300
```

```
Gly Gly Ser Thr Thr Thr Pro Ala Pro Arg Pro Pro Thr Pro Ala Pro
305                 310                 315                 320

Thr Ile Ala Ser Gln Pro Leu Ser Leu Arg Pro Glu Ala Cys Arg Pro
                325                 330                 335

Ala Ala Gly Gly Ala Val His Thr Arg Gly Leu Asp Phe Ala Cys Asp
            340                 345                 350

Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly Val Leu Leu Leu
        355                 360                 365

Ser Leu Val Ile Thr Leu Tyr Cys Lys Arg Gly Arg Lys Lys Leu Leu
    370                 375                 380

Tyr Ile Phe Lys Gln Pro Phe Met Arg Pro Val Gln Thr Thr Gln Glu
385                 390                 395                 400

Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu Glu Glu Glu Gly Gly Cys
                405                 410                 415

Glu Leu Arg Val Lys Phe Ser Arg Ser Ala Asp Ala Pro Ala Tyr Gln
            420                 425                 430

Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn Leu Gly Arg Arg Glu
        435                 440                 445

Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg Asp Pro Glu Met Gly
    450                 455                 460

Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu Tyr Asn Glu Leu
465                 470                 475                 480

Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile Gly Met Lys Gly
                485                 490                 495

Glu Arg Arg Arg Gly Lys Gly His Asp Gly Leu Tyr Gln Gly Leu Ser
            500                 505                 510
```

Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu His Met Gln Ala Leu Pro
515 520 525

Pro Arg
530

<210> 687
<211> 525
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 687
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Gly Gly Gly Gly Ser Cys Pro Tyr Ser Asn Pro
20 25 30

Ser Leu Cys Gly Gly Gly Gly Ser Cys Pro Tyr Ser Asn Pro Ser Leu
35 40 45

Cys Gly Gly Gly Gly Ser Gln Leu Gln Leu Gln Glu Ser Gly Pro Gly
50 55 60

Leu Val Lys Pro Ser Glu Thr Leu Ser Leu Thr Cys Thr Val Ser Gly
65 70 75 80

Gly Ser Ile Ser Ser Ser Ser Tyr Tyr Trp Gly Trp Ile Arg Gln Pro
85 90 95

Pro Gly Lys Gly Leu Glu Trp Ile Gly Ser Ile Tyr Tyr Ser Gly Asn
100 105 110

Ile Tyr His Asn Pro Ser Leu Lys Ser Arg Val Ser Ile Ser Val Asp
115 120 125

Thr Ser Lys Asn Gln Phe Ser Leu Arg Leu Ser Ser Val Thr Ala Ala
130 135 140

```
Asp Thr Ala Val Tyr Tyr Cys Ala Arg Glu Ile Ile Val Gly Ala Thr
145                 150                 155                 160

His Phe Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Gly
                165                 170                 175

Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly
            180                 185                 190

Gly Gly Ser Ala Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala
        195                 200                 205

Ser Val Gly Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Gly Ile
    210                 215                 220

Arg Asn Asp Leu Gly Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Glu
225                 230                 235                 240

Leu Leu Ile Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg
                245                 250                 255

Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser
            260                 265                 270

Leu Gln Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Leu Gln Asp Tyr Asn
        275                 280                 285

Tyr Pro Leu Thr Phe Gly Pro Gly Thr Lys Val Asp Ile Lys Thr Thr
    290                 295                 300

Thr Pro Ala Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln
305                 310                 315                 320

Pro Leu Ser Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala
                325                 330                 335

Val His Thr Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala
            340                 345                 350
```

```
Pro Leu Ala Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr
        355                 360                 365

Leu Tyr Cys Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln
    370                 375                 380

Pro Phe Met Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser
385                 390                 395                 400

Cys Arg Phe Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg Val Lys
                405                 410                 415

Phe Ser Arg Ser Ala Asp Ala Pro Ala Tyr Gln Gln Gly Gln Asn Gln
            420                 425                 430

Leu Tyr Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu
        435                 440                 445

Asp Lys Arg Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg
    450                 455                 460

Lys Asn Pro Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met
465                 470                 475                 480

Ala Glu Ala Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly
                485                 490                 495

Lys Gly His Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp
            500                 505                 510

Thr Tyr Asp Ala Leu His Met Gln Ala Leu Pro Pro Arg
        515                 520                 525


<210> 688
<211> 548
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
```

polypeptide"

<400> 688

```
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1               5                  10                  15

His Ala Ala Arg Pro Gln Val Gln Leu Gln Gln Ser Gly Pro Gly Leu
            20                  25                  30

Val Lys Pro Ser Gln Thr Leu Ser Leu Thr Cys Ala Ile Ser Gly Asp
        35                  40                  45

Ser Val Ser Ser Asn Ser Ala Thr Trp Asn Trp Ile Arg Gln Ser Pro
    50                  55                  60

Ser Arg Gly Leu Glu Trp Leu Gly Arg Thr Tyr Tyr Arg Ser Lys Trp
65                  70                  75                  80

Tyr Asp Asp Tyr Ala Val Ser Val Lys Ser Arg Ile Thr Ile Asn Pro
                85                  90                  95

Asp Thr Ser Lys Asn His Leu Ser Leu His Leu Asn Ser Val Thr Pro
            100                 105                 110

Glu Asp Thr Ala Val Tyr Tyr Cys Ala Gly Gly Gly Leu Val Gly Ala
        115                 120                 125

Pro Asp Gly Phe Asp Val Trp Gly Gln Gly Thr Met Val Thr Val Ser
    130                 135                 140

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
145                 150                 155                 160

Gly Gly Gly Gly Ser Gln Ser Val Leu Thr Gln Pro Pro Ser Ala Ser
                165                 170                 175

Gly Thr Pro Gly Gln Arg Val Thr Ile Ser Cys Ser Gly Ser Ser Ser
            180                 185                 190

Asn Ile Gly Ser Asp Pro Val Asn Trp Tyr Gln Gln Leu Pro Gly Thr
        195                 200                 205
```

```
Ala Pro Lys Leu Leu Ile Tyr Ser Asn Asn Gln Arg Pro Ser Gly Val
    210                 215                 220

Pro Asp Arg Phe Ser Gly Ser Lys Ser Gly Thr Ser Ala Ser Leu Ala
225                 230                 235                 240

Ile Ser Gly Leu Gln Ser Glu Asp Glu Ala Asp Tyr Tyr Cys Ser Ala
                245                 250                 255

Trp Asp Asp Ser Leu Asn Gly Tyr Val Phe Gly Thr Gly Thr Lys Val
            260                 265                 270

Thr Val Leu Gly Ser Gly Gly Gly Gly Ser Cys Pro Tyr Ser Asn Pro
        275                 280                 285

Ser Leu Cys Ser Gly Gly Gly Gly Ser Cys Pro Tyr Ser Asn Pro Ser
    290                 295                 300

Leu Cys Ser Gly Gly Gly Gly Ser Thr Thr Thr Ala Cys Pro Tyr Ser
305                 310                 315                 320

Asn Pro Ser Leu Cys Thr Thr Thr Pro Ala Pro Arg Pro Pro Thr Pro
                325                 330                 335

Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser Leu Arg Pro Glu Ala Cys
            340                 345                 350

Arg Pro Ala Ala Gly Gly Ala Val His Thr Arg Gly Leu Asp Phe Ala
        355                 360                 365

Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly Val Leu
    370                 375                 380

Leu Leu Ser Leu Val Ile Thr Leu Tyr Cys Lys Arg Gly Arg Lys Lys
385                 390                 395                 400

Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met Arg Pro Val Gln Thr Thr
                405                 410                 415
```

```
Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu Glu Glu Glu Gly
            420                 425                 430

Gly Cys Glu Leu Arg Val Lys Phe Ser Arg Ser Ala Asp Ala Pro Ala
        435                 440                 445

Tyr Gln Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn Leu Gly Arg
    450                 455                 460

Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg Asp Pro Glu
465                 470                 475                 480

Met Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu Tyr Asn
                485                 490                 495

Glu Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile Gly Met
            500                 505                 510

Lys Gly Glu Arg Arg Arg Gly Lys Gly His Asp Gly Leu Tyr Gln Gly
        515                 520                 525

Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu His Met Gln Ala
    530                 535                 540

Leu Pro Pro Arg
545
```

<210> 689
<211> 536
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 689

```
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1               5                   10                  15

His Ala Ala Arg Pro Gly Gly Gly Gly Ser Cys Pro Tyr Ser Asn Pro
```

```
            20                  25                  30

Ser Leu Cys Gly Gly Gly Gly Ser Gln Val Gln Leu Gln Gln Ser Gly
        35                  40                  45

Pro Gly Leu Val Lys Pro Ser Gln Thr Leu Ser Leu Thr Cys Ala Ile
    50                  55                  60

Ser Gly Asp Ser Val Ser Ser Asn Ser Ala Thr Trp Asn Trp Ile Arg
65                  70                  75                  80

Gln Ser Pro Ser Arg Gly Leu Glu Trp Leu Gly Arg Thr Tyr Tyr Arg
                85                  90                  95

Ser Lys Trp Tyr Asp Asp Tyr Ala Val Ser Val Lys Ser Arg Ile Thr
            100                 105                 110

Ile Asn Pro Asp Thr Ser Lys Asn His Leu Ser Leu His Leu Asn Ser
        115                 120                 125

Val Thr Pro Glu Asp Thr Ala Val Tyr Tyr Cys Ala Gly Gly Gly Leu
    130                 135                 140

Val Gly Ala Pro Asp Gly Phe Asp Val Trp Gly Gln Gly Thr Met Val
145                 150                 155                 160

Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly
                165                 170                 175

Gly Gly Ser Gly Gly Gly Gly Ser Gln Ser Val Leu Thr Gln Pro Pro
            180                 185                 190

Ser Ala Ser Gly Thr Pro Gly Gln Arg Val Thr Ile Ser Cys Ser Gly
        195                 200                 205

Ser Ser Ser Asn Ile Gly Ser Asp Pro Val Asn Trp Tyr Gln Gln Leu
    210                 215                 220

Pro Gly Thr Ala Pro Lys Leu Leu Ile Tyr Ser Asn Asn Gln Arg Pro
225                 230                 235                 240
```

```
Ser Gly Val Pro Asp Arg Phe Ser Gly Ser Lys Ser Gly Thr Ser Ala
                245                 250                 255

Ser Leu Ala Ile Ser Gly Leu Gln Ser Glu Asp Glu Ala Asp Tyr Tyr
            260                 265                 270

Cys Ser Ala Trp Asp Asp Ser Leu Asn Gly Tyr Val Phe Gly Thr Gly
        275                 280                 285

Thr Lys Val Thr Val Leu Gly Gly Gly Gly Ser Cys Pro Tyr Ser Asn
    290                 295                 300

Pro Ser Leu Cys Gly Gly Gly Gly Ser Thr Thr Thr Pro Ala Pro Arg
305                 310                 315                 320

Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser Leu Arg
                325                 330                 335

Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr Arg Gly
            340                 345                 350

Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr
        355                 360                 365

Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr Cys Lys Arg
    370                 375                 380

Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met Arg Pro
385                 390                 395                 400

Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu
                405                 410                 415

Glu Glu Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg Ser Ala
            420                 425                 430

Asp Ala Pro Ala Tyr Gln Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu
        435                 440                 445
```

Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly
    450   455   460

Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu
465   470   475   480

Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser
                485   490   495

Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His Asp Gly
            500   505   510

Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu
        515   520   525

His Met Gln Ala Leu Pro Pro Arg
    530   535

<210> 690
<211> 531
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 690
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1   5   10   15

His Ala Ala Arg Pro Gly Gly Gly Gly Ser Cys Pro Tyr Ser Asn Pro
            20   25   30

Ser Leu Cys Gly Gly Gly Gly Ser Cys Pro Tyr Ser Asn Pro Ser Leu
        35   40   45

Cys Gly Gly Gly Gly Ser Gln Val Gln Leu Gln Gln Ser Gly Pro Gly
    50   55   60

Leu Val Lys Pro Ser Gln Thr Leu Ser Leu Thr Cys Ala Ile Ser Gly

```
65                  70                  75                  80

Asp Ser Val Ser Ser Asn Ser Ala Thr Trp Asn Trp Ile Arg Gln Ser
                85                  90                  95

Pro Ser Arg Gly Leu Glu Trp Leu Gly Arg Thr Tyr Tyr Arg Ser Lys
            100                 105                 110

Trp Tyr Asp Asp Tyr Ala Val Ser Val Lys Ser Arg Ile Thr Ile Asn
        115                 120                 125

Pro Asp Thr Ser Lys Asn His Leu Ser Leu His Leu Asn Ser Val Thr
    130                 135                 140

Pro Glu Asp Thr Ala Val Tyr Tyr Cys Ala Gly Gly Gly Leu Val Gly
145                 150                 155                 160

Ala Pro Asp Gly Phe Asp Val Trp Gly Gln Gly Thr Met Val Thr Val
                165                 170                 175

Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly
            180                 185                 190

Ser Gly Gly Gly Gly Ser Gln Ser Val Leu Thr Gln Pro Pro Ser Ala
        195                 200                 205

Ser Gly Thr Pro Gly Gln Arg Val Thr Ile Ser Cys Ser Gly Ser Ser
    210                 215                 220

Ser Asn Ile Gly Ser Asp Pro Val Asn Trp Tyr Gln Gln Leu Pro Gly
225                 230                 235                 240

Thr Ala Pro Lys Leu Leu Ile Tyr Ser Asn Asn Gln Arg Pro Ser Gly
                245                 250                 255

Val Pro Asp Arg Phe Ser Gly Ser Lys Ser Gly Thr Ser Ala Ser Leu
            260                 265                 270

Ala Ile Ser Gly Leu Gln Ser Glu Asp Glu Ala Asp Tyr Tyr Cys Ser
        275                 280                 285
```

```
Ala Trp Asp Asp Ser Leu Asn Gly Tyr Val Phe Gly Thr Gly Thr Lys
    290                 295                 300

Val Thr Val Leu Thr Thr Thr Pro Ala Pro Arg Pro Pro Thr Pro Ala
305                 310                 315                 320

Pro Thr Ile Ala Ser Gln Pro Leu Ser Leu Arg Pro Glu Ala Cys Arg
                325                 330                 335

Pro Ala Ala Gly Gly Ala Val His Thr Arg Gly Leu Asp Phe Ala Cys
            340                 345                 350

Asp Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly Val Leu Leu
        355                 360                 365

Leu Ser Leu Val Ile Thr Leu Tyr Cys Lys Arg Gly Arg Lys Lys Leu
    370                 375                 380

Leu Tyr Ile Phe Lys Gln Pro Phe Met Arg Pro Val Gln Thr Thr Gln
385                 390                 395                 400

Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu Glu Glu Glu Gly Gly
                405                 410                 415

Cys Glu Leu Arg Val Lys Phe Ser Arg Ser Ala Asp Ala Pro Ala Tyr
            420                 425                 430

Gln Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn Leu Gly Arg Arg
        435                 440                 445

Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg Asp Pro Glu Met
    450                 455                 460

Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu Tyr Asn Glu
465                 470                 475                 480

Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile Gly Met Lys
                485                 490                 495
```

Gly Glu Arg Arg Arg Gly Lys Gly His Asp Gly Leu Tyr Gln Gly Leu
500 505 510

Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu His Met Gln Ala Leu
515 520 525

Pro Pro Arg
530

<210> 691
<211> 573
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 691
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Gly Gly Gly Gly Ser Cys Pro Tyr Ser Asn Pro
20 25 30

Ser Leu Cys Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Val
35 40 45

Gln Leu Leu Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly Ser Leu
50 55 60

Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr Ala Met
65 70 75 80

Asn Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val Ser Thr
85 90 95

Ile Ser Gly Ser Gly Gly Ser Thr Tyr Tyr Ala Asp Ser Val Lys Gly
100 105 110

Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr Leu Gln

```
        115                 120                 125

Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Phe Tyr Cys Ala Ile
    130                 135                 140

Asp Pro Glu Tyr Tyr Asp Ile Leu Thr Gly Gly Asp Tyr Trp Gly Gln
145                 150                 155                 160

Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly
                165                 170                 175

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Gln Met
            180                 185                 190

Thr Gln Ser Pro Ser Ala Met Ser Ala Ser Val Gly Asp Arg Val Thr
        195                 200                 205

Ile Thr Cys Arg Ala Ser Gln Gly Ile Ser Asn Tyr Leu Ala Trp Phe
    210                 215                 220

Gln Gln Lys Pro Gly Lys Val Pro Lys Arg Leu Ile Tyr Ala Ala Ser
225                 230                 235                 240

Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly
                245                 250                 255

Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro Glu Asp Phe Ala
            260                 265                 270

Thr Tyr Phe Cys Leu Gln His Asp Ser Phe Pro Leu Thr Phe Gly Gly
        275                 280                 285

Gly Thr Lys Val Glu Ile Lys Gly Ser Gly Gly Gly Gly Ser Cys Pro
    290                 295                 300

Tyr Ser Asn Pro Ser Leu Cys Ser Gly Gly Gly Gly Ser Glu Leu Pro
305                 310                 315                 320

Thr Gln Gly Thr Phe Ser Asn Val Ser Thr Asn Val Ser Pro Ala Lys
                325                 330                 335
```

```
Pro Thr Thr Thr Ala Cys Pro Tyr Ser Asn Pro Ser Leu Cys Thr Thr
            340                 345                 350

Thr Pro Ala Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln
        355                 360                 365

Pro Leu Ser Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala
    370                 375                 380

Val His Thr Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala
385                 390                 395                 400

Pro Leu Ala Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr
                405                 410                 415

Leu Tyr Cys Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln
            420                 425                 430

Pro Phe Met Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser
        435                 440                 445

Cys Arg Phe Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg Val Lys
    450                 455                 460

Phe Ser Arg Ser Ala Asp Ala Pro Ala Tyr Gln Gln Gly Gln Asn Gln
465                 470                 475                 480

Leu Tyr Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu
                485                 490                 495

Asp Lys Arg Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg
            500                 505                 510

Lys Asn Pro Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met
        515                 520                 525

Ala Glu Ala Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly
    530                 535                 540
```

```
Lys Gly His Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp
545                 550                 555                 560


Thr Tyr Asp Ala Leu His Met Gln Ala Leu Pro Pro Arg
                565                 570


<210> 692
<211> 543
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 692
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1               5                   10                  15


His Ala Ala Arg Pro Glu Val Gln Leu Leu Glu Ser Gly Gly Gly Leu
            20                  25                  30


Val Gln Pro Gly Gly Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe
        35                  40                  45


Thr Phe Ser Ser Tyr Ala Met Asn Trp Val Arg Gln Ala Pro Gly Lys
    50                  55                  60


Gly Leu Glu Trp Val Ser Thr Ile Ser Gly Ser Gly Gly Ser Thr Tyr
65                  70                  75                  80


Tyr Ala Asp Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser
                85                  90                  95


Lys Asn Thr Leu Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr
            100                 105                 110


Ala Val Phe Tyr Cys Ala Ile Asp Pro Glu Tyr Tyr Asp Ile Leu Thr
        115                 120                 125


Gly Gly Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Gly
```

```
    130                 135                 140

Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly
145                 150                 155                 160

Gly Gly Ser Asp Ile Gln Met Thr Gln Ser Pro Ser Ala Met Ser Ala
                165                 170                 175

Ser Val Gly Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Gly Ile
            180                 185                 190

Ser Asn Tyr Leu Ala Trp Phe Gln Gln Lys Pro Gly Lys Val Pro Lys
        195                 200                 205

Arg Leu Ile Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg
    210                 215                 220

Phe Ser Gly Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser
225                 230                 235                 240

Leu Gln Pro Glu Asp Phe Ala Thr Tyr Phe Cys Leu Gln His Asp Ser
                245                 250                 255

Phe Pro Leu Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Gly Ser
            260                 265                 270

Gly Gly Gly Gly Ser Cys Pro Tyr Ser Asn Pro Ser Leu Cys Ser Gly
        275                 280                 285

Gly Gly Gly Ser Cys Pro Tyr Ser Asn Pro Ser Leu Cys Ser Gly Gly
    290                 295                 300

Gly Gly Ser Thr Thr Thr Ala Cys Pro Tyr Ser Asn Pro Ser Leu Cys
305                 310                 315                 320

Thr Thr Thr Pro Ala Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala
                325                 330                 335

Ser Gln Pro Leu Ser Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly
            340                 345                 350
```

```
Gly Ala Val His Thr Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile
        355                 360                 365

Trp Ala Pro Leu Ala Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val
    370                 375                 380

Ile Thr Leu Tyr Cys Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe
385                 390                 395                 400

Lys Gln Pro Phe Met Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly
                405                 410                 415

Cys Ser Cys Arg Phe Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg
            420                 425                 430

Val Lys Phe Ser Arg Ser Ala Asp Ala Pro Ala Tyr Gln Gln Gly Gln
        435                 440                 445

Asn Gln Leu Tyr Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp
    450                 455                 460

Val Leu Asp Lys Arg Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro
465                 470                 475                 480

Arg Arg Lys Asn Pro Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp
                485                 490                 495

Lys Met Ala Glu Ala Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg
            500                 505                 510

Arg Gly Lys Gly His Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr
        515                 520                 525

Lys Asp Thr Tyr Asp Ala Leu His Met Gln Ala Leu Pro Pro Arg
    530                 535                 540
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<210> 693
<211> 531
<212> PRT

<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 693
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Gly Gly Gly Gly Ser Cys Pro Tyr Ser Asn Pro
20 25 30

Ser Leu Cys Gly Gly Gly Gly Ser Glu Val Gln Leu Leu Glu Ser Gly
35 40 45

Gly Gly Leu Val Gln Pro Gly Gly Ser Leu Arg Leu Ser Cys Ala Ala
50 55 60

Ser Gly Phe Thr Phe Ser Ser Tyr Ala Met Asn Trp Val Arg Gln Ala
65 70 75 80

Pro Gly Lys Gly Leu Glu Trp Val Ser Thr Ile Ser Gly Ser Gly Gly
85 90 95

Ser Thr Tyr Tyr Ala Asp Ser Val Lys Gly Arg Phe Thr Ile Ser Arg
100 105 110

Asp Asn Ser Lys Asn Thr Leu Tyr Leu Gln Met Asn Ser Leu Arg Ala
115 120 125

Glu Asp Thr Ala Val Phe Tyr Cys Ala Ile Asp Pro Glu Tyr Tyr Asp
130 135 140

Ile Leu Thr Gly Gly Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr Val
145 150 155 160

Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly
165 170 175

Ser Gly Gly Gly Gly Ser Asp Ile Gln Met Thr Gln Ser Pro Ser Ala

```
            180                 185                 190

Met Ser Ala Ser Val Gly Asp Arg Val Thr Ile Thr Cys Arg Ala Ser
        195                 200                 205

Gln Gly Ile Ser Asn Tyr Leu Ala Trp Phe Gln Gln Lys Pro Gly Lys
    210                 215                 220

Val Pro Lys Arg Leu Ile Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val
225                 230                 235                 240

Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr
                245                 250                 255

Ile Ser Ser Leu Gln Pro Glu Asp Phe Ala Thr Tyr Phe Cys Leu Gln
            260                 265                 270

His Asp Ser Phe Pro Leu Thr Phe Gly Gly Gly Thr Lys Val Glu Ile
        275                 280                 285

Lys Gly Gly Gly Gly Ser Cys Pro Tyr Ser Asn Pro Ser Leu Cys Gly
    290                 295                 300

Gly Gly Gly Ser Thr Thr Thr Pro Ala Pro Arg Pro Pro Thr Pro Ala
305                 310                 315                 320

Pro Thr Ile Ala Ser Gln Pro Leu Ser Leu Arg Pro Glu Ala Cys Arg
                325                 330                 335

Pro Ala Ala Gly Gly Ala Val His Thr Arg Gly Leu Asp Phe Ala Cys
            340                 345                 350

Asp Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly Val Leu Leu
        355                 360                 365

Leu Ser Leu Val Ile Thr Leu Tyr Cys Lys Arg Gly Arg Lys Lys Leu
    370                 375                 380

Leu Tyr Ile Phe Lys Gln Pro Phe Met Arg Pro Val Gln Thr Thr Gln
385                 390                 395                 400
```

```
Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu Glu Glu Glu Gly Gly
                405                 410                 415


Cys Glu Leu Arg Val Lys Phe Ser Arg Ser Ala Asp Ala Pro Ala Tyr
            420                 425                 430


Gln Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn Leu Gly Arg Arg
        435                 440                 445


Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg Asp Pro Glu Met
    450                 455                 460


Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu Tyr Asn Glu
465                 470                 475                 480


Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile Gly Met Lys
                485                 490                 495


Gly Glu Arg Arg Arg Gly Lys Gly His Asp Gly Leu Tyr Gln Gly Leu
            500                 505                 510


Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu His Met Gln Ala Leu
        515                 520                 525


Pro Pro Arg
    530


<210> 694
<211> 526
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 694
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1               5                   10                  15
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His Ala Ala Arg Pro Gly Gly Gly Gly Ser Cys Pro Tyr Ser Asn Pro
            20                  25                  30

Ser Leu Cys Gly Gly Gly Gly Ser Cys Pro Tyr Ser Asn Pro Ser Leu
        35                  40                  45

Cys Gly Gly Gly Gly Ser Glu Val Gln Leu Leu Glu Ser Gly Gly Gly
    50                  55                  60

Leu Val Gln Pro Gly Gly Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly
65                  70                  75                  80

Phe Thr Phe Ser Ser Tyr Ala Met Asn Trp Val Arg Gln Ala Pro Gly
                85                  90                  95

Lys Gly Leu Glu Trp Val Ser Thr Ile Ser Gly Ser Gly Gly Ser Thr
            100                 105                 110

Tyr Tyr Ala Asp Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn
        115                 120                 125

Ser Lys Asn Thr Leu Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp
    130                 135                 140

Thr Ala Val Phe Tyr Cys Ala Ile Asp Pro Glu Tyr Tyr Asp Ile Leu
145                 150                 155                 160

Thr Gly Gly Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
                165                 170                 175

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly
            180                 185                 190

Gly Gly Gly Ser Asp Ile Gln Met Thr Gln Ser Pro Ser Ala Met Ser
        195                 200                 205

Ala Ser Val Gly Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Gly
    210                 215                 220

Ile Ser Asn Tyr Leu Ala Trp Phe Gln Gln Lys Pro Gly Lys Val Pro
```

```
225                 230                 235                 240

Lys Arg Leu Ile Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser
                245                 250                 255

Arg Phe Ser Gly Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser
            260                 265                 270

Ser Leu Gln Pro Glu Asp Phe Ala Thr Tyr Phe Cys Leu Gln His Asp
        275                 280                 285

Ser Phe Pro Leu Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Thr
    290                 295                 300

Thr Thr Pro Ala Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser
305                 310                 315                 320

Gln Pro Leu Ser Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly
                325                 330                 335

Ala Val His Thr Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp
            340                 345                 350

Ala Pro Leu Ala Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile
        355                 360                 365

Thr Leu Tyr Cys Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys
    370                 375                 380

Gln Pro Phe Met Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys
385                 390                 395                 400

Ser Cys Arg Phe Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg Val
                405                 410                 415

Lys Phe Ser Arg Ser Ala Asp Ala Pro Ala Tyr Gln Gln Gly Gln Asn
            420                 425                 430

Gln Leu Tyr Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val
        435                 440                 445
```

```
Leu Asp Lys Arg Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg
    450                 455                 460


Arg Lys Asn Pro Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys
465                 470                 475                 480


Met Ala Glu Ala Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg
                485                 490                 495


Gly Lys Gly His Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys
            500                 505                 510


Asp Thr Tyr Asp Ala Leu His Met Gln Ala Leu Pro Pro Arg
        515                 520                 525


<210> 695
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      peptide"

<400> 695
Gly Tyr Ile Phe Tyr Ser Gly Thr Thr Asn His Asn
1               5                   10


<210> 696
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      peptide"

<400> 696
Arg Ala Ser Gln Arg Ile Ser Asn Thr Tyr Leu Ala
1               5                   10
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