SEQUENCE LISTING

<110> F. HOFFMANN-LA ROCHE AG

<120> T CELL ACTIVATING BISPECIFIC ANTIGEN BINDING MOLECULES

<130> 32186

<140>
<141>

<150> EP14194147.6
<151> 2014-11-20

<160> 316

<170> PatentIn version 3.5

<210> 1
<211> 120
<212> PRT
<213> Artificial Sequence

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

<400> 1
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 Ser Tyr
20 25 30

Tyr Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45

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

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

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

<210> 2
<211> 120
<212> PRT
<213> Artificial Sequence

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

<400> 2

```
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 Ser Tyr
            20                  25                  30

Tyr Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
        35                  40                  45

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

Gln Gly Arg Val Thr Met Thr Arg Asp Thr Ser Thr Ser Thr 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 Asn Tyr Tyr Thr Gly Gly Ser Ser Ala Phe Asp Tyr Trp Gly
            100                 105                 110
```

Gln Gly Thr Leu Val Thr Val Ser
115 120

<210> 3
<211> 120
<212> PRT
<213> Artificial Sequence

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

<400> 3
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 Ser Tyr
20 25 30

Tyr Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45

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

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

Gly Thr Leu Val Thr Val Ser Ser
115 120

<210> 4
<211> 120
<212> PRT

<213> Artificial Sequence

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

<400> 4
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 Ser Tyr
20 25 30

Tyr Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45

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

Gln Gly Arg Val Thr Met Thr Arg Asp Thr Ser Thr Ser Thr 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 Asn Tyr Tyr Ile Gly Ile Val Pro Phe Asp Tyr Trp Gly Gln
100 105 110

Gly Thr Leu Val Thr Val Ser Ser
115 120

<210> 5
<211> 120
<212> PRT
<213> Artificial Sequence

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

<400> 5
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 Ser Tyr
20 25 30

Tyr Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45

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

Gln Gly Arg Val Thr Met Thr Arg Asp Thr Ser Thr Ser Thr 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 Asn Tyr Tyr Val Gly Val Ser Pro Phe Asp Tyr Trp Gly Gln
100 105 110

Gly Thr Leu Val Thr Val Ser Ser
115 120

<210> 6
<211> 120
<212> PRT
<213> Artificial Sequence

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

<400> 6
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 Ser Tyr
20 25 30

Tyr Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45

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

Gln Gly Arg Val Thr Met Thr Arg Asp Thr Ser Thr Ser Thr 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 Asn Phe Thr Val Leu Arg Val Pro Phe Asp Tyr Trp Gly Gln
100 105 110

Gly Thr Leu Val Thr Val Ser Ser
115 120

<210> 7
<211> 120
<212> PRT
<213> Artificial Sequence

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

<400> 7
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 Ser Tyr
20 25 30

Tyr Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45

Gly Ile Ile Asn Pro Ser Gly Gly Ser Thr Ser Tyr Ala Gln Lys Phe

```
    50                  55                  60

Gln Gly Arg Val Thr Met Thr Arg Asp Thr Ser Thr Ser Thr 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 Asn Tyr Tyr Ile Gly Val Val Thr Phe Asp Tyr Trp Gly Gln
            100                 105                 110

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

<210> 8
<211> 5
<212> PRT
<213> Artificial Sequence

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

<400> 8
Ser Tyr Tyr Met His
1   5

<210> 9
<211> 17
<212> PRT
<213> Artificial Sequence

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

<400> 9
Ile Ile Asn Pro Ser Gly Gly Ser Thr Ser Tyr Ala Gln Lys Phe Gln
1   5   10   15

Gly

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

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

<400> 10
Asn Tyr Tyr Ile Gly Val Val Thr Phe Asp Tyr
1 5 10

<210> 11
<211> 120
<212> PRT
<213> Artificial Sequence

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

<400> 11
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 Ser Tyr
20 25 30

Tyr Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45

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

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

Gly Thr Leu Val Thr Val Ser Ser
115 120

<210> 12
<211> 11
<212> PRT
<213> Artificial Sequence

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

<400> 12
Gly Glu Trp Arg Arg Tyr Thr Ser Phe Asp Tyr
1 5 10

<210> 13
<211> 120
<212> PRT
<213> Artificial Sequence

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

<400> 13
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 Ser Tyr
20 25 30

Tyr Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45

Gly Ile Ile Asn Pro Ser Gly Gly Ser Thr Ser Tyr Ala Gln Lys Phe

50 55 60

Gln Gly Arg Val Thr Met Thr Arg Asp Thr Ser Thr Ser Thr 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 Gly Gly Trp Ile Arg Trp Glu His Phe Asp Tyr Trp Gly Gln
100 105 110

Gly Thr Leu Val Thr Val Ser Ser
115 120

<210> 14
<211> 11
<212> PRT
<213> Artificial Sequence

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

<400> 14
Gly Gly Trp Ile Arg Trp Glu His Phe Asp Tyr
1 5 10

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

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

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

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Asn Ala

```
            20                  25                  30

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

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

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

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

Tyr Cys Thr Thr Pro Trp Glu Trp Ser Trp Tyr Asp Tyr Trp Gly Gln
            100                 105                 110

Gly Thr Leu Val Thr Val Ser Ser
        115                 120


<210> 16
<211> 5
<212> PRT
<213> Artificial Sequence

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

<400> 16
Asn Ala Trp Met Ser
1               5


<210> 17
<211> 19
<212> PRT
<213> Artificial Sequence

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

peptide"

<400> 17
Arg Ile Lys Ser Lys Thr Asp Gly Gly Thr Thr Asp Tyr Ala Ala Pro
1 5 10 15

Val Lys Gly

<210> 18
<211> 9
<212> PRT
<213> Artificial Sequence

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

<400> 18
Pro Trp Glu Trp Ser Trp Tyr Asp Tyr
1 5

<210> 19
<211> 120
<212> PRT
<213> Artificial Sequence

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

<400> 19
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Lys Pro Gly Gly
1 5 10 15

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

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

Gly Arg Ile Lys Ser Lys Thr Asp Gly Gly Thr Thr Asp Tyr Ala Ala

```
    50                  55                  60

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

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

Tyr Cys Thr Thr Pro Trp Glu Trp Ser Tyr Phe Asp Tyr Trp Gly Gln
            100                 105                 110

Gly Thr Leu Val Thr Val Ser Ser
        115                 120


<210> 20
<211> 9
<212> PRT
<213> Artificial Sequence

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

<400> 20
Pro Trp Glu Trp Ser Tyr Phe Asp Tyr
1               5


<210> 21
<211> 120
<212> PRT
<213> Artificial Sequence

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

<400> 21
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Lys Pro Gly Gly
1               5                   10                  15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Asn Ala
```

20 25 30

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

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

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

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

Tyr Cys Thr Thr Pro Trp Glu Trp Ala Trp Phe Asp Tyr Trp Gly Gln
100 105 110

Gly Thr Leu Val Thr Val Ser Ser
115 120

<210> 22
<211> 9
<212> PRT
<213> Artificial Sequence

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

<400> 22
Pro Trp Glu Trp Ala Trp Phe Asp Tyr
1 5

<210> 23
<211> 120
<212> PRT
<213> Artificial Sequence

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

polypeptide"

<400> 23
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Lys Pro Gly Gly
1 5 10 15

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

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

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

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

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

Tyr Cys Thr Thr Pro Trp Glu Trp Ala Tyr Phe Asp Tyr Trp Gly Gln
100 105 110

Gly Thr Leu Val Thr Val Ser Ser
115 120

<210> 24
<211> 9
<212> PRT
<213> Artificial Sequence

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

<400> 24
Pro Trp Glu Trp Ala Tyr Phe Asp Tyr
1 5

<210> 25
<211> 120
<212> PRT
<213> Artificial Sequence

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

<400> 25
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 Ser Tyr
20 25 30

Tyr Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45

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

Gln Gly Arg Val Thr Met Thr Arg Asp Thr Ser Thr Ser Thr 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 Thr Gly Trp Ser Arg Trp Gly Tyr Met Asp Tyr Trp Gly Gln
100 105 110

Gly Thr Leu Val Thr Val Ser Ser
115 120

<210> 26
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<221> source

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

<400> 26
Thr Gly Trp Ser Arg Trp Gly Tyr Met Asp Tyr
1 5 10

<210> 27
<211> 120
<212> PRT
<213> Artificial Sequence

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

<400> 27
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 Ser Tyr
20 25 30

Tyr Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45

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

Gln Gly Arg Val Thr Met Thr Arg Asp Thr Ser Thr Ser Thr 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 Gly Glu Trp Ile Arg Tyr Tyr His Phe Asp Tyr Trp Gly Gln
100 105 110

Gly Thr Leu Val Thr Val Ser Ser
115 120

<210> 28
<211> 11
<212> PRT
<213> Artificial Sequence

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

<400> 28
Gly Glu Trp Ile Arg Tyr Tyr His Phe Asp Tyr
1 5 10

<210> 29
<211> 120
<212> PRT
<213> Artificial Sequence

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

<400> 29
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 Ser Tyr
20 25 30

Tyr Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45

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

Gln Gly Arg Val Thr Met Thr Arg Asp Thr Ser Thr Ser Thr 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 Val Gly Trp Tyr Arg Trp Gly Tyr Met Asp Tyr Trp Gly Gln
100 105 110

Gly Thr Leu Val Thr Val Ser Ser
115 120

<210> 30
<211> 11
<212> PRT
<213> Artificial Sequence

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

<400> 30
Val Gly Trp Tyr Arg Trp Gly Tyr Met Asp Tyr
1 5 10

<210> 31
<211> 109
<212> PRT
<213> Artificial Sequence

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

<400> 31
Gln Ala Val Val Thr Gln Glu Pro Ser Leu Thr Val Ser Pro Gly Gly
1 5 10 15

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

Asn Tyr Ala Asn Trp Val Gln Glu Lys Pro Gly Gln Ala Phe Arg Gly
35 40 45

Leu Ile Gly Gly Thr Asn Lys Arg Ala Pro Gly Thr Pro Ala Arg Phe
50 55 60

Ser Gly Ser Leu Leu Gly Gly Lys Ala Ala Leu Thr Leu Ser Gly Ala
65 70 75 80

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

Leu Trp Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu
100 105

<210> 32
<211> 14
<212> PRT
<213> Artificial Sequence

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

<400> 32
Gly Ser Ser Thr Gly Ala Val Thr Thr Ser Asn Tyr Ala Asn
1 5 10

<210> 33
<211> 7
<212> PRT
<213> Artificial Sequence

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

<400> 33
Gly Thr Asn Lys Arg Ala Pro
1 5

<210> 34
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<221> source

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

<400> 34
Ala Leu Trp Tyr Ser Asn Leu Trp Val
1 5

<210> 35
<211> 215
<212> PRT
<213> Artificial Sequence

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

<400> 35
Gln Ala Val Val Thr Gln Glu Pro Ser Leu Thr Val Ser Pro Gly Gly
1 5 10 15

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

Asn Tyr Ala Asn Trp Val Gln Glu Lys Pro Gly Gln Ala Phe Arg Gly
35 40 45

Leu Ile Gly Gly Thr Asn Lys Arg Ala Pro Gly Thr Pro Ala Arg Phe
50 55 60

Ser Gly Ser Leu Leu Gly Gly Lys Ala Ala Leu Thr Leu Ser Gly Ala
65 70 75 80

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

Leu Trp Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu Gly Gln Pro
100 105 110

Lys Ala Ala Pro Ser Val Thr Leu Phe Pro Pro Ser Ser Glu Glu Leu
115 120 125

```
Gln Ala Asn Lys Ala Thr Leu Val Cys Leu Ile Ser Asp Phe Tyr Pro
    130                 135                 140

Gly Ala Val Thr Val Ala Trp Lys Ala Asp Ser Ser Pro Val Lys Ala
145                 150                 155                 160

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

Ala Ser Ser Tyr Leu Ser Leu Thr Pro Glu Gln Trp Lys Ser His Arg
            180                 185                 190

Ser Tyr Ser Cys Gln Val Thr His Glu Gly Ser Thr Val Glu Lys Thr
        195                 200                 205

Val Ala Pro Thr Glu Cys Ser
    210                 215
```

<210> 36
<211> 125
<212> PRT
<213> Artificial Sequence

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

<400> 36

```
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 Thr Tyr
            20                  25                  30

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

Ser Arg Ile Arg Ser Lys Tyr Asn Asn Tyr Ala Thr Tyr Tyr Ala Asp
    50                  55                  60
```

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


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


Tyr Cys Val Arg His Gly Asn Phe Gly Asn Ser Tyr Val Ser Trp Phe
            100                 105                 110


Ala Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
        115                 120                 125


<210> 37
<211> 5
<212> PRT
<213> Artificial Sequence

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

<400> 37
Thr Tyr Ala Met Asn
1               5


<210> 38
<211> 19
<212> PRT
<213> Artificial Sequence

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

<400> 38
Arg Ile Arg Ser Lys Tyr Asn Asn Tyr Ala Thr Tyr Tyr Ala Asp Ser
1               5                   10                  15


Val Lys Gly
```

<210> 39
<211> 14
<212> PRT
<213> Artificial Sequence

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

<400> 39
His Gly Asn Phe Gly Asn Ser Tyr Val Ser Trp Phe Ala Tyr
1 5 10

<210> 40
<211> 228
<212> PRT
<213> Artificial Sequence

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

<400> 40
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 Thr Tyr
20 25 30

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

Ser Arg Ile Arg Ser Lys Tyr Asn Asn Tyr Ala Thr Tyr Tyr Ala Asp
50 55 60

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

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

```
Tyr Cys Val Arg His Gly Asn Phe Gly Asn Ser Tyr Val Ser Trp Phe
            100                 105                 110


Ala Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Ala Ser Thr
        115                 120                 125


Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser
    130                 135                 140


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


Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His
                165                 170                 175


Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser
            180                 185                 190


Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys
        195                 200                 205


Asn Val Asn His Lys Pro Ser Asn Thr Lys Val Asp Lys Lys Val Glu
    210                 215                 220


Pro Lys Ser Cys
225
```

<210> 41
<211> 121
<212> PRT
<213> Artificial Sequence

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

<400> 41

```
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 Ser Ser Tyr
20 25 30

Ala 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 Ala 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 Ala Val Phe Tyr Arg Ala Trp Tyr Ser Phe Asp Tyr Trp Gly
100 105 110

Gln Gly Thr Thr Val Thr Val Ser Ser
115 120

<210> 42
<211> 5
<212> PRT
<213> Artificial Sequence

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

<400> 42
Ser Tyr Ala Ile Ser
1 5

<210> 43
<211> 17
<212> PRT
<213> Artificial Sequence

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

<400> 43
Gly Ile Ile Pro Ile Phe Gly Thr Ala Asn Tyr Ala Gln Lys Phe Gln
1 5 10 15

Gly

<210> 44
<211> 12
<212> PRT
<213> Artificial Sequence

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

<400> 44
Ala Val Phe Tyr Arg Ala Trp Tyr Ser Phe Asp Tyr
1 5 10

<210> 45
<211> 107
<212> PRT
<213> Artificial Sequence

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

<400> 45
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 Asp 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 Thr Ser Pro Pro Pro
                85                  90                  95

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

<210> 46
<211> 11
<212> PRT
<213> Artificial Sequence

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

<400> 46
Arg Ala Ser Gln Ser Ile Ser Ser Trp Leu Ala
1   5   10

<210> 47
<211> 7
<212> PRT
<213> Artificial Sequence

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

<400> 47
Asp Ala Ser Ser Leu Glu Ser
1   5

<210> 48

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

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

<400> 48
Gln Gln Tyr Thr Ser Pro Pro Pro Thr
1 5

<210> 49
<211> 119
<212> PRT
<213> Artificial Sequence

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

<400> 49
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 Ser Tyr
20 25 30

Tyr Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45

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

Gln Gly Arg Val Thr Met Thr His Asp Thr Ser Thr Ser Thr 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 Ser Phe Phe Thr Gly Phe His Leu Asp Tyr Trp Gly Gln Gly

100 105 110

Thr Leu Val Thr Val Ser Ser
115

<210> 50
<211> 10
<212> PRT
<213> Artificial Sequence

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

<400> 50
Ser Phe Phe Thr Gly Phe His Leu Asp Tyr
1 5 10

<210> 51
<211> 109
<212> PRT
<213> Artificial Sequence

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

<400> 51
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 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 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 Thr Asn Glu His
85 90 95

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

<210> 52
<211> 12
<212> PRT
<213> Artificial Sequence

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

<400> 52
Arg Ala Ser Gln Ser Val Ser Ser Ser Tyr Leu Ala
1 5 10

<210> 53
<211> 7
<212> PRT
<213> Artificial Sequence

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

<400> 53
Gly Ala Ser Ser Arg Ala Thr
1 5

<210> 54
<211> 10
<212> PRT
<213> Artificial Sequence

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

<400> 54
Gln Gln Tyr Thr Asn Glu His Tyr Tyr Thr
1 5 10

<210> 55
<211> 117
<212> PRT
<213> Artificial Sequence

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

<400> 55
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 Ser Tyr
20 25 30

Tyr Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45

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

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

Val Thr Val Ser Ser
115

<210> 56

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

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

<400> 56
Ile Ile Asn Pro Ser Gly Gly Pro Thr Ser Tyr Ala Gln Lys Phe Gln
1 5 10 15

Gly

<210> 57
<211> 8
<212> PRT
<213> Artificial Sequence

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

<400> 57
Gly Asp Phe Ala Trp Leu Asp Tyr
1 5

<210> 58
<211> 112
<212> PRT
<213> Artificial Sequence

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

<400> 58
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 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 Thr 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


Ser Ile Met Asn Arg Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
            100                 105                 110


<210> 59
<211> 16
<212> PRT
<213> Artificial Sequence

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

<400> 59
Arg Ser Ser Gln Ser Leu Leu His Ser Asn Gly Tyr Asn Tyr Leu Asp
1               5                   10                  15


<210> 60
<211> 7
<212> PRT
<213> Artificial Sequence

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

<400> 60
Leu Gly Ser Asn Arg Ala Ser
1               5
```

<210> 61
<211> 9
<212> PRT
<213> Artificial Sequence

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

<400> 61
Met Gln Ala Ser Ile Met Asn Arg Thr
1 5

<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 Gly 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 Thr 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

Ser Ile Met Ser Arg Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
100 105 110

<210> 63
<211> 9
<212> PRT
<213> Artificial Sequence

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

<400> 63
Met Gln Ala Ser Ile Met Ser Arg Thr
1 5

<210> 64
<211> 112
<212> PRT
<213> Artificial Sequence

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

<400> 64
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 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 Thr 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

Ser Ile Met Gln Arg Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
100 105 110

<210> 65
<211> 9
<212> PRT
<213> Artificial Sequence

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

<400> 65
Met Gln Ala Ser Ile Met Gln Arg Thr
1 5

<210> 66
<211> 112
<212> PRT
<213> Artificial Sequence

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

<400> 66
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 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 Thr 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


Ser Ile Met Asn Arg Ala Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
            100                 105                 110


<210> 67
<211> 9
<212> PRT
<213> Artificial Sequence

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

<400> 67
Met Gln Ala Ser Ile Met Asn Arg Ala
1               5


<210> 68
<211> 112
<212> PRT
<213> Artificial Sequence

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

<400> 68
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 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 Thr 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

Ser Ile Met Asn Arg Asn Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
100 105 110

<210> 69
<211> 9
<212> PRT
<213> Artificial Sequence

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

<400> 69
Met Gln Ala Ser Ile Met Asn Arg Asn
1 5

<210> 70
<211> 116
<212> PRT
<213> Artificial Sequence

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

<400> 70
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 Ser Tyr
20 25 30

```
Tyr Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
        35                  40                  45

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

Gln Gly Arg Val Thr Met Thr Arg Asp Thr Ser Thr Ser Thr 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 Ser Tyr Ile Asp Met Asp Tyr Trp Gly Gln Gly Thr Leu Val
            100                 105                 110

Thr Val Ser Ser
        115


<210> 71
<211> 7
<212> PRT
<213> Artificial Sequence

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

<400> 71
Ser Tyr Ile Asp Met Asp Tyr
1               5


<210> 72
<211> 107
<212> PRT
<213> Artificial Sequence

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

<400> 72
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 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 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 Asp Asn Trp Ser Pro
85 90 95

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

<210> 73
<211> 8
<212> PRT
<213> Artificial Sequence

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

<400> 73
Gln Gln Asp Asn Trp Ser Pro Thr
1 5

<210> 74
<211> 116
<212> PRT
<213> Artificial Sequence

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

<400> 74
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 Ser Tyr
20 25 30

Tyr Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45

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

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

Thr Val Ser Ser
115

<210> 75
<211> 7
<212> PRT
<213> Artificial Sequence

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

<400> 75
Ser Tyr Val Asp Met Asp Tyr

1 5

<210> 76
<211> 107
<212> PRT
<213> Artificial Sequence

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

<400> 76
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 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 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 Asp Ile Trp Ser Pro
85 90 95

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

<210> 77
<211> 8
<212> PRT
<213> Artificial Sequence

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

peptide"

<400> 77
Gln Gln Asp Ile Trp Ser Pro Thr
1 5

<210> 78
<211> 121
<212> PRT
<213> Artificial Sequence

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

<400> 78
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 Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45

Ser Ala 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 Tyr Tyr Cys
85 90 95

Ala Lys Asp Ser Ser Tyr Val Glu Trp Tyr Ala Phe Asp Tyr Trp Gly
100 105 110

Gln Gly Thr Leu Val Thr Val Ser Ser
115 120

<210> 79
<211> 5
<212> PRT
<213> Artificial Sequence

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

<400> 79
Ser Tyr Ala Met Ser
1 5

<210> 80
<211> 17
<212> PRT
<213> Artificial Sequence

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

<400> 80
Ala Ile Ser Gly Ser Gly Gly Ser Thr Tyr Tyr Ala Asp Ser Val Lys
1 5 10 15

Gly

<210> 81
<211> 12
<212> PRT
<213> Artificial Sequence

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

<400> 81
Asp Ser Ser Tyr Val Glu Trp Tyr Ala Phe Asp Tyr
1 5 10

<210> 82

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

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

<400> 82
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 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 Asp Ser Thr Leu Thr Ile Ser Arg Leu Glu
65 70 75 80

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

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

<210> 83
<211> 9
<212> PRT
<213> Artificial Sequence

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

<400> 83
Gln Gln Pro Thr Ser Ser Pro Ile Thr

1 5

<210> 84
<211> 103
<212> PRT
<213> Artificial Sequence

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

<400> 84
Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Ser Ser Lys
1 5 10 15

Ser Thr Ser Gly Gly Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr
20 25 30

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

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

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

Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn Thr Lys Val Asp Lys
85 90 95

Lys Val Glu Pro Lys Ser Cys
100

<210> 85
<211> 103
<212> PRT
<213> Artificial Sequence

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

polypeptide"

<400> 85
Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Ser Ser Lys
1 5 10 15

Ser Thr Ser Gly Gly Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr
20 25 30

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

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

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

Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn Thr Lys Val Asp Lys
85 90 95

Lys Val Glu Pro Lys Ser Cys
100

<210> 86
<211> 214
<212> PRT
<213> Artificial Sequence

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

<400> 86
Gln Ala Val Val Thr Gln Glu Pro Ser Leu Thr Val Ser Pro Gly Gly
1 5 10 15

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

```
Asn Tyr Ala Asn Trp Val Gln Glu Lys Pro Gly Gln Ala Phe Arg Gly
        35                  40                  45

Leu Ile Gly Gly Thr Asn Lys Arg Ala Pro Gly Thr Pro Ala Arg Phe
    50                  55                  60

Ser Gly Ser Leu Leu Gly Gly Lys Ala Ala Leu Thr Leu Ser Gly Ala
65                  70                  75                  80

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

Leu Trp Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu Ser Ser Ala
            100                 105                 110

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

Thr Ser Gly Gly Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe
    130                 135                 140

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

Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu
                165                 170                 175

Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Gln Thr Tyr
            180                 185                 190

Ile Cys Asn Val Asn His Lys Pro Ser Asn Thr Lys Val Asp Lys Lys
        195                 200                 205

Val Glu Pro Lys Ser Cys
    210
```

<210> 87
<211> 232

<212> PRT
<213> Artificial Sequence

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

<400> 87
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 Thr Tyr
20 25 30

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

Ser Arg Ile Arg Ser Lys Tyr Asn Asn Tyr Ala Thr Tyr Tyr Ala Asp
50 55 60

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

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

Tyr Cys Val Arg His Gly Asn Phe Gly Asn Ser Tyr Val Ser Trp Phe
100 105 110

Ala Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Ala Ser Val
115 120 125

Ala Ala Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu Gln Leu Lys
130 135 140

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

Glu Ala Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln Ser Gly Asn

```
                165                 170                 175

Ser Gln Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr Tyr Ser
            180                 185                 190

Leu Ser Ser Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu Lys His Lys
        195                 200                 205

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

Lys Ser Phe Asn Arg Gly Glu Cys
225                 230
```

<210> 88
<211> 105
<212> PRT
<213> Artificial Sequence

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

<400> 88

```
Val Ala Ala Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu Gln Leu
1               5                   10                  15

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

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

Asn Ser Gln Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr Tyr
    50                  55                  60

Ser Leu Ser Ser Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu Lys His
65                  70                  75                  80
```

Lys Val Tyr Ala Cys Glu Val Thr His Gln Gly Leu Ser Ser Pro Val
85 90 95

Thr Lys Ser Phe Asn Arg Gly Glu Cys
100 105

<210> 89
<211> 689
<212> PRT
<213> Artificial Sequence

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

<400> 89
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Lys Pro Gly Gly
1 5 10 15

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

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

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

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

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

Tyr Cys Thr Thr Pro Trp Glu Trp Ser Trp Tyr Asp Tyr Trp Gly Gln
100 105 110

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

```
Phe Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala
    130                 135                 140

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

Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val
                165                 170                 175

Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro
            180                 185                 190

Ser Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys
        195                 200                 205

Pro Ser Asn Thr Lys Val Asp Lys Lys Val Glu Pro Lys Ser Cys Asp
    210                 215                 220

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Val Gln Leu Leu Glu
225                 230                 235                 240

Ser Gly Gly Gly Leu Val Gln Pro Gly Gly Ser Leu Arg Leu Ser Cys
                245                 250                 255

Ala Ala Ser Gly Phe Thr Phe Ser Thr Tyr Ala Met Asn Trp Val Arg
            260                 265                 270

Gln Ala Pro Gly Lys Gly Leu Glu Trp Val Ser Arg Ile Arg Ser Lys
        275                 280                 285

Tyr Asn Asn Tyr Ala Thr Tyr Tyr Ala Asp Ser Val Lys Gly Arg Phe
    290                 295                 300

Thr Ile Ser Arg Asp Asp Ser Lys Asn Thr Leu Tyr Leu Gln Met Asn
305                 310                 315                 320

Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys Val Arg His Gly
```

```
                325                 330                 335

Asn Phe Gly Asn Ser Tyr Val Ser Trp Phe Ala Tyr Trp Gly Gln Gly
            340                 345                 350

Thr Leu Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe
        355                 360                 365

Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu
    370                 375                 380

Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp
385                 390                 395                 400

Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu
                405                 410                 415

Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser
            420                 425                 430

Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro
        435                 440                 445

Ser Asn Thr Lys Val Asp Lys Lys Val Glu Pro Lys Ser Cys Asp Lys
    450                 455                 460

Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Ala Ala Gly Gly Pro
465                 470                 475                 480

Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser
                485                 490                 495

Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp
            500                 505                 510

Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn
        515                 520                 525
```

```
Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val
    530                 535                 540

Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu
545                 550                 555                 560

Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Gly Ala Pro Ile Glu Lys
                565                 570                 575

Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr
            580                 585                 590

Leu Pro Pro Cys Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu Trp
        595                 600                 605

Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu
    610                 615                 620

Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu
625                 630                 635                 640

Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys
                645                 650                 655

Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu
            660                 665                 670

Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly
        675                 680                 685

Lys
```

<210> 90
<211> 450
<212> PRT
<213> Artificial Sequence

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

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

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

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

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

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

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

Tyr Cys Thr Thr Pro Trp Glu Trp Ser Trp Tyr Asp Tyr Trp Gly Gln
100 105 110

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

Phe Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala
130 135 140

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

Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val
165 170 175

```
Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro
            180                 185                 190

Ser Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys
        195                 200                 205

Pro Ser Asn Thr Lys Val Asp Lys Lys Val Glu Pro Lys Ser Cys Asp
    210                 215                 220

Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Ala Ala Gly Gly
225                 230                 235                 240

Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile
                245                 250                 255

Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu
            260                 265                 270

Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His
        275                 280                 285

Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg
    290                 295                 300

Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys
305                 310                 315                 320

Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Gly Ala Pro Ile Glu
                325                 330                 335

Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Cys
            340                 345                 350

Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu
        355                 360                 365

Ser Cys Ala Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp
    370                 375                 380
```

Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val
385 390 395 400

Leu Asp Ser Asp Gly Ser Phe Phe Leu Val Ser Lys Leu Thr Val Asp
405 410 415

Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His
420 425 430

Glu Ala Leu His Asn Arg Phe Thr Gln Lys Ser Leu Ser Leu Ser Pro
435 440 445

Gly Lys
450

<210> 91
<211> 689
<212> PRT
<213> Artificial Sequence

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

<400> 91
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 Thr Tyr
20 25 30

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

Ser Arg Ile Arg Ser Lys Tyr Asn Asn Tyr Ala Thr Tyr Tyr Ala Asp
50 55 60

Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asp Ser Lys Asn Thr

```
65                  70                  75                  80

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

Tyr Cys Val Arg His Gly Asn Phe Gly Asn Ser Tyr Val Ser Trp Phe
            100                 105                 110

Ala Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Ala Ser Thr
        115                 120                 125

Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser
    130                 135                 140

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

Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His
                165                 170                 175

Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser
            180                 185                 190

Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys
        195                 200                 205

Asn Val Asn His Lys Pro Ser Asn Thr Lys Val Asp Lys Lys Val Glu
    210                 215                 220

Pro Lys Ser Cys Asp Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu
225                 230                 235                 240

Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Lys Pro Gly Gly Ser
                245                 250                 255

Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Asn Ala Trp
            260                 265                 270
```

```
Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val Gly
        275                 280                 285

Arg Ile Lys Ser Lys Thr Asp Gly Gly Thr Thr Asp Tyr Ala Ala Pro
    290                 295                 300

Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asp Ser Lys Asn Thr Leu
305                 310                 315                 320

Tyr Leu Gln Met Asn Ser Leu Lys Thr Glu Asp Thr Ala Val Tyr Tyr
                325                 330                 335

Cys Thr Thr Pro Trp Glu Trp Ser Trp Tyr Asp Tyr Trp Gly Gln Gly
            340                 345                 350

Thr Leu Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe
        355                 360                 365

Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu
    370                 375                 380

Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp
385                 390                 395                 400

Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu
                405                 410                 415

Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser
            420                 425                 430

Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro
        435                 440                 445

Ser Asn Thr Lys Val Asp Lys Lys Val Glu Pro Lys Ser Cys Asp Lys
    450                 455                 460

Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Ala Ala Gly Gly Pro
```

```
465                 470                 475                 480

Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser
                485                 490                 495

Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp
            500                 505                 510

Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn
        515                 520                 525

Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val
    530                 535                 540

Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu
545                 550                 555                 560

Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Gly Ala Pro Ile Glu Lys
                565                 570                 575

Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr
            580                 585                 590

Leu Pro Pro Cys Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu Trp
        595                 600                 605

Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu
    610                 615                 620

Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu
625                 630                 635                 640

Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys
                645                 650                 655

Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu
            660                 665                 670
```

Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly
675 680 685

Lys

<210> 92
<211> 455
<212> PRT
<213> Artificial Sequence

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

<400> 92
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 Thr Tyr
20 25 30

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

Ser Arg Ile Arg Ser Lys Tyr Asn Asn Tyr Ala Thr Tyr Tyr Ala Asp
50 55 60

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

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

Tyr Cys Val Arg His Gly Asn Phe Gly Asn Ser Tyr Val Ser Trp Phe
100 105 110

Ala Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Ala Ser Thr
115 120 125

```
Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser
    130                 135                 140

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

Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His
                165                 170                 175

Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser
            180                 185                 190

Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys
        195                 200                 205

Asn Val Asn His Lys Pro Ser Asn Thr Lys Val Asp Lys Lys Val Glu
    210                 215                 220

Pro Lys Ser Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro
225                 230                 235                 240

Glu Ala Ala Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys
                245                 250                 255

Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val
            260                 265                 270

Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp
        275                 280                 285

Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr
    290                 295                 300

Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp
305                 310                 315                 320
```

```
Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu
                325                 330                 335

Gly Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg
            340                 345                 350

Glu Pro Gln Val Tyr Thr Leu Pro Pro Cys Arg Asp Glu Leu Thr Lys
        355                 360                 365

Asn Gln Val Ser Leu Trp Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp
    370                 375                 380

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

Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser
                405                 410                 415

Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser
            420                 425                 430

Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser
        435                 440                 445

Leu Ser Leu Ser Pro Gly Lys
    450                 455


<210> 93
<211> 227
<212> PRT
<213> Artificial Sequence

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

<400> 93
Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly
1               5                   10                  15
```

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

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

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

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

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

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

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

Cys Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser
    130                 135                 140

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

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

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

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

His Glu Ala Leu His Asn Arg Phe Thr Gln Lys Ser Leu Ser Leu Ser
```

210 215 220

Pro Gly Lys
225

<210> 94
<211> 690
<212> PRT
<213> Artificial Sequence

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

<400> 94
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 Ser Tyr
20 25 30

Tyr Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45

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

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

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

```
Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu Gly Cys
    130                 135                 140

Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser
145                 150                 155                 160

Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu Gln Ser
                165                 170                 175

Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser
            180                 185                 190

Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn
        195                 200                 205

Thr Lys Val Asp Lys Lys Val Glu Pro Lys Ser Cys Asp Gly Gly Gly
    210                 215                 220

Gly Ser Gly Gly Gly Gly Ser Glu Val Gln Leu Leu Glu Ser Gly Gly
225                 230                 235                 240

Gly Leu Val Gln Pro Gly Gly Ser Leu Arg Leu Ser Cys Ala Ala Ser
                245                 250                 255

Gly Phe Thr Phe Ser Thr Tyr Ala Met Asn Trp Val Arg Gln Ala Pro
            260                 265                 270

Gly Lys Gly Leu Glu Trp Val Ser Arg Ile Arg Ser Lys Tyr Asn Asn
        275                 280                 285

Tyr Ala Thr Tyr Tyr Ala Asp Ser Val Lys Gly Arg Phe Thr Ile Ser
    290                 295                 300

Arg Asp Asp Ser Lys Asn Thr Leu Tyr Leu Gln Met Asn Ser Leu Arg
305                 310                 315                 320

Ala Glu Asp Thr Ala Val Tyr Tyr Cys Val Arg His Gly Asn Phe Gly
                325                 330                 335
```

```
Asn Ser Tyr Val Ser Trp Phe Ala Tyr Trp Gly Gln Gly Thr Leu Val
            340                 345                 350

Thr Val Ser Ser Ala Ser Val Ala Ala Pro Ser Val Phe Ile Phe Pro
        355                 360                 365

Pro Ser Asp Glu Gln Leu Lys Ser Gly Thr Ala Ser Val Val Cys Leu
    370                 375                 380

Leu Asn Asn Phe Tyr Pro Arg Glu Ala Lys Val Gln Trp Lys Val Asp
385                 390                 395                 400

Asn Ala Leu Gln Ser Gly Asn Ser Gln Glu Ser Val Thr Glu Gln Asp
                405                 410                 415

Ser Lys Asp Ser Thr Tyr Ser Leu Ser Ser Thr Leu Thr Leu Ser Lys
            420                 425                 430

Ala Asp Tyr Glu Lys His Lys Val Tyr Ala Cys Glu Val Thr His Gln
        435                 440                 445

Gly Leu Ser Ser Pro Val Thr Lys Ser Phe Asn Arg Gly Glu Cys Asp
    450                 455                 460

Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Ala Ala Gly Gly
465                 470                 475                 480

Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile
                485                 490                 495

Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu
            500                 505                 510

Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His
        515                 520                 525
```

```
Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg
    530                 535                 540

Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys
545                 550                 555                 560

Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Gly Ala Pro Ile Glu
                565                 570                 575

Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr
            580                 585                 590

Thr Leu Pro Pro Cys Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu
        595                 600                 605

Trp Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp
    610                 615                 620

Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val
625                 630                 635                 640

Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp
                645                 650                 655

Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His
            660                 665                 670

Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro
        675                 680                 685

Gly Lys
    690


<210> 95
<211> 447
<212> PRT
<213> Artificial Sequence

<220>
```

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

<400> 95
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 Ser Tyr
20 25 30

Tyr Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45

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

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

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

Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu Gly Cys
130 135 140

Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser
145 150 155 160

Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu Gln Ser
165 170 175

Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser

```
            180                 185                 190

Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn
        195                 200                 205

Thr Lys Val Asp Lys Lys Val Glu Pro Lys Ser Cys Asp Lys Thr His
    210                 215                 220

Thr Cys Pro Pro Cys Pro Ala Pro Glu Ala Ala Gly Gly Pro Ser Val
225                 230                 235                 240

Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr
                245                 250                 255

Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu
            260                 265                 270

Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys
        275                 280                 285

Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser
    290                 295                 300

Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys
305                 310                 315                 320

Cys Lys Val Ser Asn Lys Ala Leu Gly Ala Pro Ile Glu Lys Thr Ile
                325                 330                 335

Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Cys Thr Leu Pro
            340                 345                 350

Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu Ser Cys Ala
        355                 360                 365

Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn
    370                 375                 380
```

```
Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser
385                 390                 395                 400


Asp Gly Ser Phe Phe Leu Val Ser Lys Leu Thr Val Asp Lys Ser Arg
                405                 410                 415


Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu
            420                 425                 430


His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys
        435                 440                 445


<210> 96
<211> 219
<212> PRT
<213> Artificial Sequence

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

<400> 96
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 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 Thr 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
```

```
Ser Ile Met Asn Arg Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
            100                 105                 110


Arg Thr Val Ala Ala Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu
        115                 120                 125


Gln Leu Lys Ser Gly Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe
    130                 135                 140


Tyr Pro Arg Glu Ala Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln
145                 150                 155                 160


Ser Gly Asn Ser Gln Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser
                165                 170                 175


Thr Tyr Ser Leu Ser Ser Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu
            180                 185                 190


Lys His Lys Val Tyr Ala Cys Glu Val Thr His Gln Gly Leu Ser Ser
        195                 200                 205


Pro Val Thr Lys Ser Phe Asn Arg Gly Glu Cys
    210                 215


<210> 97
<211> 648
<212> DNA
<213> Artificial Sequence

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


<220>
<221> modified_base
<222> (603)..(603)
<223> a, c, t, g, unknown or other
```

<400> 97
gaaatcgtgt taacgcagtc tccaggcacc ctgtctttgt ctccagggga aagagccacc 60

ctctcttgca gggccagtca gagtgttagc agcagctact tagcctggta ccagcagaaa 120

cctggccagg ctcccaggct cctcatctat ggagcatcca gcagggccac tggcatccca 180

gacaggttca gtggcagtgg atccgggaca gacttcactc tcaccatcag cagactggag 240

cctgaagatt ttgcagtgta ttactgtcag cagtatacca acgaacatta ttatacgttc 300

ggccagggga ccaaagtgga aatcaaacgt acggtggctg caccatctgt cttcatcttc 360

ccgccatctg atgagcagtt gaaatctgga actgcctctg ttgtgtgcct gctgaataac 420

ttctatccca gagaggccaa agtacagtgg aaggtggata acgccctcca atcgggtaac 480

tcccaggaga gtgtcacaga gcaggacagc aaggacagca cctacagcct cagcagcacc 540

ctgacgctga gcaaagcaga ctacgagaaa cacaaagtct acgcctgcga agtcacccat 600

canggcctga gctcgcccgt cacaaagagc ttcaacaggg gagagtgt 648

<210> 98
<211> 459
<212> PRT
<213> Artificial Sequence

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

<400> 98
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 Thr Tyr
20 25 30

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

Ser Arg Ile Arg Ser Lys Tyr Asn Asn Tyr Ala Thr Tyr Tyr Ala Asp
50 55 60

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

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

Tyr Cys Val Arg His Gly Asn Phe Gly Asn Ser Tyr Val Ser Trp Phe
            100                 105                 110

Ala Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Ala Ser Val
        115                 120                 125

Ala Ala Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu Gln Leu Lys
    130                 135                 140

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

Glu Ala Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln Ser Gly Asn
                165                 170                 175

Ser Gln Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr Tyr Ser
            180                 185                 190

Leu Ser Ser Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu Lys His Lys
        195                 200                 205

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

Lys Ser Phe Asn Arg Gly Glu Cys Asp Lys Thr His Thr Cys Pro Pro
225                 230                 235                 240

Cys Pro Ala Pro Glu Ala Ala Gly Gly Pro Ser Val Phe Leu Phe Pro
                245                 250                 255

Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr
```

```
            260                 265                 270

Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn
        275                 280                 285

Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg
    290                 295                 300

Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val
305                 310                 315                 320

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

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

Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Cys Arg Asp
        355                 360                 365

Glu Leu Thr Lys Asn Gln Val Ser Leu Trp Cys Leu Val Lys Gly Phe
    370                 375                 380

Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu
385                 390                 395                 400

Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe
                405                 410                 415

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

Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr
        435                 440                 445

Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys
    450                 455
```

<210> 99
<211> 689
<212> PRT
<213> Artificial Sequence

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

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

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

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

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

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

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

Tyr Cys Thr Thr Pro Trp Glu Trp Ser Trp Tyr Asp Tyr Trp Gly Gln
100 105 110

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

Phe Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala
130 135 140

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

```
Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val
                165                 170                 175

Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro
            180                 185                 190

Ser Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys
        195                 200                 205

Pro Ser Asn Thr Lys Val Asp Lys Lys Val Glu Pro Lys Ser Cys Asp
    210                 215                 220

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Val Gln Leu Leu Glu
225                 230                 235                 240

Ser Gly Gly Gly Leu Val Gln Pro Gly Gly Ser Leu Arg Leu Ser Cys
                245                 250                 255

Ala Ala Ser Gly Phe Thr Phe Ser Thr Tyr Ala Met Asn Trp Val Arg
            260                 265                 270

Gln Ala Pro Gly Lys Gly Leu Glu Trp Val Ser Arg Ile Arg Ser Lys
        275                 280                 285

Tyr Asn Asn Tyr Ala Thr Tyr Tyr Ala Asp Ser Val Lys Gly Arg Phe
    290                 295                 300

Thr Ile Ser Arg Asp Asp Ser Lys Asn Thr Leu Tyr Leu Gln Met Asn
305                 310                 315                 320

Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys Val Arg His Gly
                325                 330                 335

Asn Phe Gly Ala Ser Tyr Val Ser Trp Phe Ala Tyr Trp Gly Gln Gly
            340                 345                 350
```

```
Thr Leu Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe
        355                 360                 365

Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu
    370                 375                 380

Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp
385                 390                 395                 400

Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu
                405                 410                 415

Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser
            420                 425                 430

Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro
        435                 440                 445

Ser Asn Thr Lys Val Asp Lys Lys Val Glu Pro Lys Ser Cys Asp Lys
    450                 455                 460

Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Ala Ala Gly Gly Pro
465                 470                 475                 480

Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser
                485                 490                 495

Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp
            500                 505                 510

Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn
        515                 520                 525

Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val
    530                 535                 540

Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu
545                 550                 555                 560
```

```
Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Gly Ala Pro Ile Glu Lys
                565                 570                 575

Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr
            580                 585                 590

Leu Pro Pro Cys Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu Trp
        595                 600                 605

Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu
    610                 615                 620

Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu
625                 630                 635                 640

Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys
                645                 650                 655

Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu
            660                 665                 670

Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly
        675                 680                 685

Lys
```

<210> 100
<211> 689
<212> PRT
<213> Artificial Sequence

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

<400> 100

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

```
1               5                   10                  15

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

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

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

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

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

Tyr Cys Thr Thr Pro Trp Glu Trp Ser Trp Tyr Asp Tyr Trp Gly Gln
            100                 105                 110

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

Phe Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala
    130                 135                 140

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

Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val
                165                 170                 175

Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro
            180                 185                 190

Ser Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys
        195                 200                 205
```

```
Pro Ser Asn Thr Lys Val Asp Lys Lys Val Glu Pro Lys Ser Cys Asp
    210                 215                 220

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Val Gln Leu Leu Glu
225                 230                 235                 240

Ser Gly Gly Gly Leu Val Gln Pro Gly Gly Ser Leu Arg Leu Ser Cys
                245                 250                 255

Ala Ala Ser Gly Phe Thr Phe Ser Thr Tyr Ala Met Asn Trp Val Arg
            260                 265                 270

Gln Ala Pro Gly Lys Gly Leu Glu Trp Val Ser Arg Ile Arg Ser Lys
        275                 280                 285

Tyr Asn Asn Tyr Ala Thr Tyr Tyr Ala Asp Ser Val Lys Gly Arg Phe
    290                 295                 300

Thr Ile Ser Arg Asp Asp Ser Lys Asn Thr Leu Tyr Leu Gln Met Asn
305                 310                 315                 320

Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys Val Arg His Gly
                325                 330                 335

Asn Phe Gly Asn Ala Tyr Val Ser Trp Phe Ala Tyr Trp Gly Gln Gly
            340                 345                 350

Thr Leu Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe
        355                 360                 365

Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu
    370                 375                 380

Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp
385                 390                 395                 400

Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu
```

```
                405                 410                 415

Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser
            420                 425                 430

Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro
        435                 440                 445

Ser Asn Thr Lys Val Asp Lys Lys Val Glu Pro Lys Ser Cys Asp Lys
    450                 455                 460

Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Ala Ala Gly Gly Pro
465                 470                 475                 480

Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser
                485                 490                 495

Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp
            500                 505                 510

Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn
        515                 520                 525

Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val
    530                 535                 540

Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu
545                 550                 555                 560

Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Gly Ala Pro Ile Glu Lys
                565                 570                 575

Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr
            580                 585                 590

Leu Pro Pro Cys Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu Trp
        595                 600                 605
```

```
Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu
    610                 615                 620

Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu
625                 630                 635                 640

Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys
                645                 650                 655

Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu
            660                 665                 670

Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly
        675                 680                 685

Lys
```

<210> 101
<211> 441
<212> PRT
<213> Artificial Sequence

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

<400> 101

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

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

Asn Tyr Ala Asn Trp Val Gln Glu Lys Pro Gly Gln Ala Phe Arg Gly
        35                  40                  45

Leu Ile Gly Gly Thr Asn Lys Arg Ala Pro Gly Thr Pro Ala Arg Phe
    50                  55                  60
```

```
Ser Gly Ser Leu Leu Gly Gly Lys Ala Ala Leu Thr Leu Ser Gly Ala
65                  70                  75                  80

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

Leu Trp Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu Ser Ser Ala
            100                 105                 110

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

Thr Ser Gly Gly Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe
    130                 135                 140

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

Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu
                165                 170                 175

Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Gln Thr Tyr
            180                 185                 190

Ile Cys Asn Val Asn His Lys Pro Ser Asn Thr Lys Val Asp Lys Lys
        195                 200                 205

Val Glu Pro Lys Ser Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro
    210                 215                 220

Ala Pro Glu Ala Ala Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys
225                 230                 235                 240

Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val
                245                 250                 255
```

```
Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr
            260                 265                 270

Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu
        275                 280                 285

Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His
    290                 295                 300

Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys
305                 310                 315                 320

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

Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Asp Glu Leu
            340                 345                 350

Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro
        355                 360                 365

Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn
    370                 375                 380

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

Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val
                405                 410                 415

Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln
            420                 425                 430

Lys Ser Leu Ser Leu Ser Pro Gly Lys
        435                 440
```

<210> 102
<211> 227

<212> PRT
<213> Artificial Sequence

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

<400> 102
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Lys Pro Gly Gly
1 5 10 15

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

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

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

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

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

Tyr Cys Thr Thr Pro Trp Glu Trp Ser Trp Tyr Asp Tyr Trp Gly Gln
100 105 110

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

Phe Ile Phe Pro Pro Ser Asp Glu Gln Leu Lys Ser Gly Thr Ala Ser
130 135 140

Val Val Cys Leu Leu Asn Asn Phe Tyr Pro Arg Glu Ala Lys Val Gln
145 150 155 160

Trp Lys Val Asp Asn Ala Leu Gln Ser Gly Asn Ser Gln Glu Ser Val

```
                165                 170                 175

Thr Glu Gln Asp Ser Lys Asp Ser Thr Tyr Ser Leu Ser Ser Thr Leu
            180                 185                 190

Thr Leu Ser Lys Ala Asp Tyr Glu Lys His Lys Val Tyr Ala Cys Glu
        195                 200                 205

Val Thr His Gln Gly Leu Ser Ser Pro Val Thr Lys Ser Phe Asn Arg
    210                 215                 220

Gly Glu Cys
225


<210> 103
<211> 231
<212> PRT
<213> Artificial Sequence

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

<400> 103
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 Thr Tyr
            20                  25                  30

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

Ser Arg Ile Arg Ser Lys Tyr Asn Asn Tyr Ala Thr Tyr Tyr Ala Asp
    50                  55                  60

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

```
Leu Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr
                85                  90                  95

Tyr Cys Val Arg His Gly Asn Phe Gly Asn Ser Tyr Val Ser Trp Phe
            100                 105                 110

Ala Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Ala Ser Pro
        115                 120                 125

Lys Ala Ala Pro Ser Val Thr Leu Phe Pro Pro Ser Ser Glu Glu Leu
    130                 135                 140

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

Gly Ala Val Thr Val Ala Trp Lys Ala Asp Ser Ser Pro Val Lys Ala
                165                 170                 175

Gly Val Glu Thr Thr Thr Pro Ser Lys Gln Ser Asn Asn Lys Tyr Ala
            180                 185                 190

Ala Ser Ser Tyr Leu Ser Leu Thr Pro Glu Gln Trp Lys Ser His Arg
        195                 200                 205

Ser Tyr Ser Cys Gln Val Thr His Glu Gly Ser Thr Val Glu Lys Thr
    210                 215                 220

Val Ala Pro Thr Glu Cys Ser
225                 230
```

<210> 104
<211> 118
<212> PRT
<213> Artificial Sequence

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

<400> 104
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 Ser Tyr
20 25 30

Tyr Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45

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

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

Leu Val Thr Val Ser Ser
115

<210> 105
<211> 118
<212> PRT
<213> Artificial Sequence

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

<400> 105
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 Ser Ser Tyr
20 25 30

Ala 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 Ala 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 Gly Gly Ser Gly Gly Ser Met Asp Ala Trp Gly Gln Gly Thr
100 105 110

Thr Val Thr Val Ser Ser
115

<210> 106
<211> 120
<212> PRT
<213> Artificial Sequence

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

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

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

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

Gly Arg Ile Lys Ser Lys Thr Asp Gly Gly Thr Thr Asp Tyr Ala Ala

```
    50                  55                  60

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

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

Tyr Cys Thr Thr Gly Gly Ser Gly Gly Ser Phe Asp Tyr Trp Gly Gln
            100                 105                 110

Gly Thr Leu Val Thr Val Ser Ser
        115                 120


<210> 107
<211> 118
<212> PRT
<213> Artificial Sequence

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

<400> 107
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 Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35                  40                  45

Ser Ala 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 Tyr Tyr Cys
                85                  90                  95


Ala Lys Gly Gly Ser Gly Gly Ser Phe Asp Tyr Trp Gly Gln Gly Thr
            100                 105                 110


Leu Val Thr Val Ser Ser
        115


<210> 108
<211> 117
<212> PRT
<213> Artificial Sequence

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

<400> 108
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 Pro Pro Gly Lys Gly Leu Glu Trp Ile
        35                  40                  45


Gly Tyr Ile Tyr Tyr 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


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

Val Thr Val Ser Ser
        115

<210> 109
<211> 118
<212> PRT
<213> Artificial Sequence

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

<400> 109
Glu Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Glu
1   5   10   15

Ser Leu Lys Ile Ser Cys Lys Gly Ser Gly Tyr Ser Phe Thr Ser Tyr
            20   25   30

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

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

Gln Gly Gln Val Thr Ile Ser Ala Asp Lys Ser Ile Ser Thr Ala Tyr
65   70   75   80

Leu Gln Trp Ser Ser Leu Lys Ala Ser Asp Thr Ala Met Tyr Tyr Cys
                85   90   95

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

Leu Val Thr Val Ser Ser
        115

<210> 110
<211> 109

<212> PRT
<213> Artificial Sequence

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

<400> 110
Gln Thr Val Val Thr Gln Glu Pro Ser Leu Thr Val Ser Pro Gly Gly
1 5 10 15

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

Asn Tyr Ala Asn Trp Val Gln Glu Lys Pro Gly Gln Ala Phe Arg Gly
35 40 45

Leu Ile Gly Gly Thr Asn Lys Arg Ala Pro Gly Thr Pro Ala Arg Phe
50 55 60

Ser Gly Ser Leu Leu Gly Gly Lys Ala Ala Leu Thr Leu Ser Gly Ala
65 70 75 80

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

Leu Trp Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu
100 105

<210> 111
<211> 107
<212> PRT
<213> Artificial Sequence

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

<400> 111
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 Ser Ile Ser Ser Tyr
            20                  25                  30

Leu Asn 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 Ser Tyr Ser Thr Pro Leu
                85                  90                  95

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


<210> 112
<211> 109
<212> PRT
<213> Artificial Sequence

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

<400> 112
Gln Ala Val Val Thr Gln Glu Pro Ser Leu Thr Val Ser Pro Gly Gly
1               5                   10                  15

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

Asn Tyr Ala Asn Trp Val Gln Glu Lys Pro Gly Gln Ala Phe Arg Gly
        35                  40                  45

Leu Ile Gly Gly Thr Asn Lys Arg Ala Pro Gly Thr Pro Ala Arg Phe
```

```
    50                  55                  60

Ser Gly Ser Leu Leu Gly Gly Lys Ala Ala Leu Thr Leu Ser Gly Ala
65                  70                  75                  80

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

Leu Trp Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu
            100                 105

<210> 113
<211> 109
<212> PRT
<213> Artificial Sequence

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

<400> 113
Gln Thr Val Val Thr Gln Glu Pro Ser Leu Thr Val Ser Pro Gly Gly
1               5                   10                  15

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

Asn Tyr Ala Asn Trp Val Gln Gln Lys Pro Gly Gln Ala Pro Arg Gly
        35                  40                  45

Leu Ile Gly Gly Thr Asn Ala Arg Ala Pro Gly Thr Pro Ala Arg Phe
    50                  55                  60

Ser Gly Ser Leu Leu Gly Gly Lys Ala Ala Leu Thr Leu Ser Gly Val
65                  70                  75                  80

Gln Pro Glu Asp Glu Ala Glu Tyr Tyr Cys Ala Leu Trp Tyr Ser Asn
                85                  90                  95
```

Leu Trp Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu
100 105

<210> 114
<211> 109
<212> PRT
<213> Artificial Sequence

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

<400> 114
Gln Thr Val Val Thr Gln Glu Pro Ser Leu Thr Val Ser Pro Gly Gly
1 5 10 15

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

Asn Tyr Ala Asn Trp Val Gln Gln Lys Pro Gly Gln Ala Pro Arg Gly
35 40 45

Leu Ile Gly Gly Thr Asn Lys Arg Ala Pro Gly Thr Pro Ala Arg Phe
50 55 60

Ser Gly Ser Leu Leu Gly Gly Lys Ala Ala Leu Thr Leu Ser Gly Val
65 70 75 80

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

Leu Trp Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu
100 105

<210> 115
<211> 122
<212> PRT
<213> Artificial Sequence

<220>
<221> source

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

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

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

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

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

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

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

Tyr Cys Thr Thr Pro Trp Glu Trp Ser Trp Tyr Asp Tyr Trp Gly Gln
100 105 110

Gly Thr Leu Val Thr Val Ser Ser Ala Ser
115 120

<210> 116
<211> 122
<212> PRT
<213> Artificial Sequence

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

<400> 116
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Lys Pro Gly Gly
1 5 10 15

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

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

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

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

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

Tyr Cys Thr Thr Pro Trp Glu Trp Ser Trp Tyr Asp Tyr Trp Gly Gln
100 105 110

Gly Thr Leu Val Thr Val Ser Ser Ala Ser
115 120

<210> 117
<211> 122
<212> PRT
<213> Artificial Sequence

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

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

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

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

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

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

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

Tyr Cys Thr Thr Pro Trp Glu Trp Ser Trp Tyr Asp Tyr Trp Gly Gln
100 105 110

Gly Thr Leu Val Thr Val Ser Ser Ala Ser
115 120

<210> 118
<211> 122
<212> PRT
<213> Artificial Sequence

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

<400> 118
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Lys Pro Gly Gly
1 5 10 15

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

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

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

Pro Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asp Ser Lys Asn Thr

65 70 75 80

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

Tyr Cys Thr Thr Pro Tyr Glu Trp Ser Trp Tyr Asp Tyr Trp Gly Gln
100 105 110

Gly Thr Leu Val Thr Val Ser Ser Ala Ser
115 120

<210> 119
<211> 122
<212> PRT
<213> Artificial Sequence

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

<400> 119
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Lys Pro Gly Gly
1 5 10 15

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

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

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

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

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

Tyr Cys Thr Thr Pro Trp Glu Tyr Ser Trp Tyr Asp Tyr Trp Gly Gln
100 105 110

Gly Thr Leu Val Thr Val Ser Ser Ala Ser
115 120

<210> 120
<211> 122
<212> PRT
<213> Artificial Sequence

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

<400> 120
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 Ser Tyr
20 25 30

Tyr Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45

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

Gln Gly Arg Val Thr Met Thr Arg Asp Thr Ser Thr Ser Thr 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 Asn Tyr Thr Ile Val Val Ser Pro Phe Asp Tyr Trp Gly Gln
100 105 110

Gly Thr Leu Val Thr Val Ser Ser Ala Ser
115 120

<210> 121
<211> 122
<212> PRT
<213> Artificial Sequence

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

<400> 121
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 Ser Tyr
20 25 30

Tyr Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45

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

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

Gly Thr Leu Val Thr Val Ser Ser Ala Ser
115 120

<210> 122
<211> 119
<212> PRT
<213> Artificial Sequence

<220>

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

<400> 122
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 Ser Tyr
20 25 30

Tyr Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45

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

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

Val Thr Val Ser Ser Ala Ser
115

<210> 123
<211> 114
<212> PRT
<213> Artificial Sequence

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

<400> 123
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 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 Thr 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 Gln Ile Pro Asn Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
            100                 105                 110

Arg Thr
```

<210> 124
<211> 118
<212> PRT
<213> Artificial Sequence

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

<400> 124

```
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 Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
```

```
        35                  40                  45

Ser Ala 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 Tyr Tyr Cys
                85                  90                  95

Ala Lys Tyr Ala Tyr Ala Leu Asp Tyr Trp Gly Gln Gly Thr Leu Val
            100                 105                 110

Thr Val Ser Ser Ala Ser
        115


<210> 125
<211> 109
<212> PRT
<213> Artificial Sequence

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

<400> 125
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 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 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 His Gly Ser Ser Ser
                85                  90                  95


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


<210> 126
<211> 122
<212> PRT
<213> Artificial Sequence

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

<400> 126
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 Ser Tyr
            20                  25                  30


Tyr Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
        35                  40                  45


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


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

Gly Thr Leu Val Thr Val Ser Ser Ala Ser
        115   120

<210> 127
<211> 115
<212> PRT
<213> Artificial Sequence

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

<400> 127
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 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 Thr 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 Gln Thr Pro Pro Ile Thr Phe Gly Gln Gly Thr Lys Val Glu Ile
            100   105   110

Lys Arg Thr
        115

<210> 128
<211> 119

<212> PRT
<213> Artificial Sequence

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

<400> 128
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 Ser Tyr
20 25 30

Tyr Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45

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

Gln Gly Arg Val Thr Met Thr Arg Asp Thr Ser Thr Ser Thr 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 Gly Asp Tyr Asn Ala Phe Asp Tyr Trp Gly His Gly Thr Leu
100 105 110

Val Thr Val Ser Ser Ala Ser
115

<210> 129
<211> 113
<212> PRT
<213> Artificial Sequence

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

<400> 129
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 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 Thr 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

Trp His Ser Pro Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys Arg
100 105 110

Thr

<210> 130
<211> 119
<212> PRT
<213> Artificial Sequence

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

<400> 130
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 Ser Tyr

20 25 30

Tyr Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45

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

Gln Gly Arg Val Thr Met Thr Arg Asp Thr Ser Thr Ser Thr 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 Gly Ala Thr Tyr Thr Met Asp Tyr Trp Gly Gln Gly Thr Leu
100 105 110

Val Thr Val Ser Ser Ala Ser
115

<210> 131
<211> 114
<212> PRT
<213> Artificial Sequence

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

<400> 131
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 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 Thr 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 Gln Thr Pro Ile Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
            100                 105                 110

Arg Thr
```

<210> 132
<211> 112
<212> PRT
<213> Artificial Sequence

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

<400> 132

```
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 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 Thr 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

Ser Ile Met Ser Arg Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
100 105 110

<210> 133
<211> 112
<212> PRT
<213> Artificial Sequence

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

<400> 133
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 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 Thr 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

Ser Ile Met Gln Arg Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
100 105 110

<210> 134
<211> 112

<212> PRT
<213> Artificial Sequence

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

<400> 134
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 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 Thr 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

Ser Ile Met Asn Arg Ala Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
100 105 110

<210> 135
<211> 112
<212> PRT
<213> Artificial Sequence

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

<400> 135
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 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 Thr 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

Ser Ile Met Asn Arg Asn Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
            100                 105                 110


<210> 136
<211> 448
<212> PRT
<213> Artificial Sequence

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

<400> 136
Gln Val Gln Leu Gln Gln Ser Gly Ala Glu Leu Val Lys Pro Gly Ala
1               5                   10                  15

Ser Val Lys Ile Ser Cys Lys Ala Ser Gly Tyr Ser Phe Thr Gly Tyr
            20                  25                  30

Phe Met Asn Trp Val Lys Gln Ser His Gly Lys Ser Leu Glu Trp Ile
        35                  40                  45

Gly Arg Ile His Pro Tyr Asp Gly Asp Thr Phe Tyr Asn Gln Asn Phe
```

```
    50                  55                  60

Lys Asp Lys Ala Thr Leu Thr Val Asp Lys Ser Ser Asn Thr Ala His
65                  70                  75                  80

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

Thr Arg Tyr Asp Gly Ser Arg Ala Met Asp Tyr Trp Gly Gln Gly Thr
            100                 105                 110

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

Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu Gly
    130                 135                 140

Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn
145                 150                 155                 160

Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu Gln
                165                 170                 175

Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser
            180                 185                 190

Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro Ser
        195                 200                 205

Asn Thr Lys Val Asp Lys Lys Val Glu Pro Lys Ser Cys Asp Lys Thr
    210                 215                 220

His Thr Cys Pro Pro Cys Pro Ala Pro Glu Ala Ala Gly Gly Pro Ser
225                 230                 235                 240

Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg
                245                 250                 255
```

```
Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro
            260                 265                 270

Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala
        275                 280                 285

Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val
    290                 295                 300

Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr
305                 310                 315                 320

Lys Cys Lys Val Ser Asn Lys Ala Leu Gly Ala Pro Ile Glu Lys Thr
                325                 330                 335

Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Cys Thr Leu
            340                 345                 350

Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu Ser Cys
        355                 360                 365

Ala Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser
    370                 375                 380

Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp
385                 390                 395                 400

Ser Asp Gly Ser Phe Phe Leu Val Ser Lys Leu Thr Val Asp Lys Ser
                405                 410                 415

Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala
            420                 425                 430

Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys
        435                 440                 445

<210> 137
```

<211> 691
<212> PRT
<213> Artificial Sequence

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

<400> 137
Gln Val Gln Leu Gln Gln Ser Gly Ala Glu Leu Val Lys Pro Gly Ala
1 5 10 15

Ser Val Lys Ile Ser Cys Lys Ala Ser Gly Tyr Ser Phe Thr Gly Tyr
20 25 30

Phe Met Asn Trp Val Lys Gln Ser His Gly Lys Ser Leu Glu Trp Ile
35 40 45

Gly Arg Ile His Pro Tyr Asp Gly Asp Thr Phe Tyr Asn Gln Asn Phe
50 55 60

Lys Asp Lys Ala Thr Leu Thr Val Asp Lys Ser Ser Asn Thr Ala His
65 70 75 80

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

Thr Arg Tyr Asp Gly Ser Arg Ala Met Asp Tyr Trp Gly Gln Gly Thr
100 105 110

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

Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu Gly
130 135 140

Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn
145 150 155 160

```
Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu Gln
                165                 170                 175

Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser
            180                 185                 190

Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro Ser
        195                 200                 205

Asn Thr Lys Val Asp Lys Lys Val Glu Pro Lys Ser Cys Asp Gly Gly
    210                 215                 220

Gly Gly Ser Gly Gly Gly Gly Ser Glu Val Gln Leu Val Glu Ser Gly
225                 230                 235                 240

Gly Gly Leu Val Gln Pro Lys Gly Ser Leu Lys Leu Ser Cys Ala Ala
                245                 250                 255

Ser Gly Phe Thr Phe Asn Thr Tyr Ala Met Asn Trp Val Arg Gln Ala
            260                 265                 270

Pro Gly Lys Gly Leu Glu Trp Val Ala Arg Ile Arg Ser Lys Tyr Asn
        275                 280                 285

Asn Tyr Ala Thr Tyr Tyr Ala Asp Ser Val Lys Asp Arg Phe Thr Ile
    290                 295                 300

Ser Arg Asp Asp Ser Gln Ser Ile Leu Tyr Leu Gln Met Asn Asn Leu
305                 310                 315                 320

Lys Thr Glu Asp Thr Ala Met Tyr Tyr Cys Val Arg His Gly Asn Phe
                325                 330                 335

Gly Asn Ser Tyr Val Ser Trp Phe Ala Tyr Trp Gly Gln Gly Thr Leu
            340                 345                 350

Val Thr Val Ser Ala Ala Ser Val Ala Ala Pro Ser Val Phe Ile Phe
        355                 360                 365
```

```
Pro Pro Ser Asp Glu Gln Leu Lys Ser Gly Thr Ala Ser Val Val Cys
    370                 375                 380

Leu Leu Asn Asn Phe Tyr Pro Arg Glu Ala Lys Val Gln Trp Lys Val
385                 390                 395                 400

Asp Asn Ala Leu Gln Ser Gly Asn Ser Gln Glu Ser Val Thr Glu Gln
                405                 410                 415

Asp Ser Lys Asp Ser Thr Tyr Ser Leu Ser Ser Thr Leu Thr Leu Ser
            420                 425                 430

Lys Ala Asp Tyr Glu Lys His Lys Val Tyr Ala Cys Glu Val Thr His
        435                 440                 445

Gln Gly Leu Ser Ser Pro Val Thr Lys Ser Phe Asn Arg Gly Glu Cys
    450                 455                 460

Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Ala Ala Gly
465                 470                 475                 480

Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met
                485                 490                 495

Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His
            500                 505                 510

Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val
        515                 520                 525

His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr
    530                 535                 540

Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly
545                 550                 555                 560
```

```
Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Gly Ala Pro Ile
                565                 570                 575

Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val
            580                 585                 590

Tyr Thr Leu Pro Pro Cys Arg Asp Glu Leu Thr Lys Asn Gln Val Ser
        595                 600                 605

Leu Trp Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu
    610                 615                 620

Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro
625                 630                 635                 640

Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val
                645                 650                 655

Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met
            660                 665                 670

His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser
        675                 680                 685

Pro Gly Lys
    690


<210> 138
<211> 218
<212> PRT
<213> Artificial Sequence

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

<400> 138
Asp Ile Glu Leu Thr Gln Ser Pro Ala Ser Leu Ala Val Ser Leu Gly
1               5                   10                  15
```

```
Gln Arg Ala Ile Ile Ser Cys Lys Ala Ser Gln Ser Val Ser Phe Ala
            20                  25                  30

Gly Thr Ser Leu Met His Trp Tyr His Gln Lys Pro Gly Gln Gln Pro
        35                  40                  45

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

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

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

Glu Tyr Pro Tyr Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys Arg
            100                 105                 110

Thr Val Ala Ala Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu Gln
        115                 120                 125

Leu Lys Ser Gly Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe Tyr
    130                 135                 140

Pro Arg Glu Ala Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln Ser
145                 150                 155                 160

Gly Asn Ser Gln Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr
                165                 170                 175

Tyr Ser Leu Ser Ser Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu Lys
            180                 185                 190

His Lys Val Tyr Ala Cys Glu Val Thr His Gln Gly Leu Ser Ser Pro
        195                 200                 205

Val Thr Lys Ser Phe Asn Arg Gly Glu Cys
```

210 215

<210> 139
<211> 257
<212> PRT
<213> Homo sapiens

<400> 139
Met Ala Gln Arg Met Thr Thr Gln Leu Leu Leu Leu Leu Val Trp Val
1 5 10 15

Ala Val Val Gly Glu Ala Gln Thr Arg Ile Ala Trp Ala Arg Thr Glu
20 25 30

Leu Leu Asn Val Cys Met Asn Ala Lys His His Lys Glu Lys Pro Gly
35 40 45

Pro Glu Asp Lys Leu His Glu Gln Cys Arg Pro Trp Arg Lys Asn Ala
50 55 60

Cys Cys Ser Thr Asn Thr Ser Gln Glu Ala His Lys Asp Val Ser Tyr
65 70 75 80

Leu Tyr Arg Phe Asn Trp Asn His Cys Gly Glu Met Ala Pro Ala Cys
85 90 95

Lys Arg His Phe Ile Gln Asp Thr Cys Leu Tyr Glu Cys Ser Pro Asn
100 105 110

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

Val Leu Asn Val Pro Leu Cys Lys Glu Asp Cys Glu Gln Trp Trp Glu
130 135 140

Asp Cys Arg Thr Ser Tyr Thr Cys Lys Ser Asn Trp His Lys Gly Trp
145 150 155 160

Asn Trp Thr Ser Gly Phe Asn Lys Cys Ala Val Gly Ala Ala Cys Gln

```
                165                 170                 175

Pro Phe His Phe Tyr Phe Pro Thr Pro Thr Val Leu Cys Asn Glu Ile
            180                 185                 190

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

Cys Ile Gln Met Trp Phe Asp Pro Ala Gln Gly Asn Pro Asn Glu Glu
    210                 215                 220

Val Ala Arg Phe Tyr Ala Ala Ala Met Ser Gly Ala Gly Pro Trp Ala
225                 230                 235                 240

Ala Trp Pro Phe Leu Leu Ser Leu Ala Leu Met Leu Leu Trp Leu Leu
                245                 250                 255

Ser
```

<210> 140
<211> 468
<212> PRT
<213> Artificial Sequence

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

<400> 140

```
Arg Ile Ala Trp Ala Arg Thr Glu Leu Leu Asn Val Cys Met Asn Ala
1               5                   10                  15

Lys His His Lys Glu Lys Pro Gly Pro Glu Asp Lys Leu His Glu Gln
            20                  25                  30

Cys Arg Pro Trp Arg Lys Asn Ala Cys Cys Ser Thr Asn Thr Ser Gln
        35                  40                  45
```

```
Glu Ala His Lys Asp Val Ser Tyr Leu Tyr Arg Phe Asn Trp Asn His
    50                  55                  60

Cys Gly Glu Met Ala Pro Ala Cys Lys Arg His Phe Ile Gln Asp Thr
65                  70                  75                  80

Cys Leu Tyr Glu Cys Ser Pro Asn Leu Gly Pro Trp Ile Gln Gln Val
                85                  90                  95

Asp Gln Ser Trp Arg Lys Glu Arg Val Leu Asn Val Pro Leu Cys Lys
            100                 105                 110

Glu Asp Cys Glu Gln Trp Trp Glu Asp Cys Arg Thr Ser Tyr Thr Cys
        115                 120                 125

Lys Ser Asn Trp His Lys Gly Trp Asn Trp Thr Ser Gly Phe Asn Lys
    130                 135                 140

Cys Ala Val Gly Ala Ala Cys Gln Pro Phe His Phe Tyr Phe Pro Thr
145                 150                 155                 160

Pro Thr Val Leu Cys Asn Glu Ile Trp Thr His Ser Tyr Lys Val Ser
                165                 170                 175

Asn Tyr Ser Arg Gly Ser Gly Arg Cys Ile Gln Met Trp Phe Asp Pro
            180                 185                 190

Ala Gln Gly Asn Pro Asn Glu Glu Val Ala Arg Phe Tyr Ala Ala Ala
        195                 200                 205

Met Val Asp Glu Gln Leu Tyr Phe Gln Gly Gly Ser Pro Lys Ser Ala
    210                 215                 220

Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly
225                 230                 235                 240

Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met
                245                 250                 255
```

```
Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His
            260                 265                 270

Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val
        275                 280                 285

His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr
    290                 295                 300

Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly
305                 310                 315                 320

Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile
                325                 330                 335

Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val
            340                 345                 350

Tyr Thr Leu Pro Pro Cys Arg Asp Glu Leu Thr Lys Asn Gln Val Ser
        355                 360                 365

Leu Trp Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu
    370                 375                 380

Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro
385                 390                 395                 400

Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val
                405                 410                 415

Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met
            420                 425                 430

His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser
        435                 440                 445
```

Pro Gly Lys Ser Gly Gly Leu Asn Asp Ile Phe Glu Ala Gln Lys Ile
    450   455   460

Glu Trp His Glu
465

<210> 141
<211> 227
<212> PRT
<213> Artificial Sequence

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

<400> 141
Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly
1   5   10   15

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

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

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

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

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

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

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

```
Cys Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser
    130                 135                 140

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

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

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

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

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

Pro Gly Lys
225
```

<210> 142
<211> 255
<212> PRT
<213> Mus musculus

<400> 142

```
Met Ala His Leu Met Thr Val Gln Leu Leu Leu Leu Val Met Trp Met
1               5                   10                  15

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

Asn Val Cys Met Asp Ala Lys His His Lys Glu Lys Pro Gly Pro Glu
        35                  40                  45

Asp Asn Leu His Asp Gln Cys Ser Pro Trp Lys Thr Asn Ser Cys Cys
    50                  55                  60
```

```
Ser Thr Asn Thr Ser Gln Glu Ala His Lys Asp Ile Ser Tyr Leu Tyr
65                  70                  75                  80

Arg Phe Asn Trp Asn His Cys Gly Thr Met Thr Ser Glu Cys Lys Arg
                85                  90                  95

His Phe Ile Gln Asp Thr Cys Leu Tyr Glu Cys Ser Pro Asn Leu Gly
            100                 105                 110

Pro Trp Ile Gln Gln Val Asp Gln Ser Trp Arg Lys Glu Arg Ile Leu
        115                 120                 125

Asp Val Pro Leu Cys Lys Glu Asp Cys Gln Gln Trp Trp Glu Asp Cys
    130                 135                 140

Gln Ser Ser Phe Thr Cys Lys Ser Asn Trp His Lys Gly Trp Asn Trp
145                 150                 155                 160

Ser Ser Gly His Asn Glu Cys Pro Val Gly Ala Ser Cys His Pro Phe
                165                 170                 175

Thr Phe Tyr Phe Pro Thr Ser Ala Ala Leu Cys Glu Glu Ile Trp Ser
            180                 185                 190

His Ser Tyr Lys Leu Ser Asn Tyr Ser Arg Gly Ser Gly Arg Cys Ile
        195                 200                 205

Gln Met Trp Phe Asp Pro Ala Gln Gly Asn Pro Asn Glu Glu Val Ala
    210                 215                 220

Arg Phe Tyr Ala Glu Ala Met Ser Gly Ala Gly Leu His Gly Thr Trp
225                 230                 235                 240

Pro Leu Leu Cys Ser Leu Ser Leu Val Leu Leu Trp Val Ile Ser
                245                 250                 255
```

<210> 143

<211> 466
<212> PRT
<213> Artificial Sequence

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

<400> 143
Thr Arg Ala Arg Thr Glu Leu Leu Asn Val Cys Met Asp Ala Lys His
1 5 10 15

His Lys Glu Lys Pro Gly Pro Glu Asp Asn Leu His Asp Gln Cys Ser
20 25 30

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

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

Thr Met Thr Ser Glu Cys Lys Arg His Phe Ile Gln Asp Thr Cys Leu
65 70 75 80

Tyr Glu Cys Ser Pro Asn Leu Gly Pro Trp Ile Gln Gln Val Asp Gln
85 90 95

Ser Trp Arg Lys Glu Arg Ile Leu Asp Val Pro Leu Cys Lys Glu Asp
100 105 110

Cys Gln Gln Trp Trp Glu Asp Cys Gln Ser Ser Phe Thr Cys Lys Ser
115 120 125

Asn Trp His Lys Gly Trp Asn Trp Ser Ser Gly His Asn Glu Cys Pro
130 135 140

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

```
Ala Leu Cys Glu Glu Ile Trp Ser His Ser Tyr Lys Leu Ser Asn Tyr
                165                 170                 175

Ser Arg Gly Ser Gly Arg Cys Ile Gln Met Trp Phe Asp Pro Ala Gln
            180                 185                 190

Gly Asn Pro Asn Glu Glu Val Ala Arg Phe Tyr Ala Glu Ala Met Val
        195                 200                 205

Asp Glu Gln Leu Tyr Phe Gln Gly Gly Ser Pro Lys Ser Ala Asp Lys
    210                 215                 220

Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro
225                 230                 235                 240

Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser
                245                 250                 255

Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp
            260                 265                 270

Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn
        275                 280                 285

Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val
    290                 295                 300

Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu
305                 310                 315                 320

Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys
                325                 330                 335

Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr
            340                 345                 350

Leu Pro Pro Cys Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu Trp
        355                 360                 365
```

```
Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu
    370                 375                 380

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

Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys
                405                 410                 415

Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu
            420                 425                 430

Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly
        435                 440                 445

Lys Ser Gly Gly Leu Asn Asp Ile Phe Glu Ala Gln Lys Ile Glu Trp
    450                 455                 460

His Glu
465
```

<210> 144
<211> 257
<212> PRT
<213> Macaca fascicularis

<400> 144

```
Met Ala Gln Arg Met Thr Thr Gln Leu Leu Leu Leu Leu Val Trp Val
1               5                   10                  15

Ala Val Val Gly Glu Ala Gln Thr Arg Thr Ala Arg Ala Arg Thr Glu
            20                  25                  30

Leu Leu Asn Val Cys Met Asn Ala Lys His His Lys Glu Lys Pro Gly
        35                  40                  45

Pro Glu Asp Lys Leu His Glu Gln Cys Arg Pro Trp Lys Lys Asn Ala
    50                  55                  60
```

```
Cys Cys Ser Thr Asn Thr Ser Gln Glu Ala His Lys Asp Val Ser Tyr
65                  70                  75                  80

Leu Tyr Arg Phe Asn Trp Asn His Cys Gly Glu Met Ala Pro Ala Cys
                85                  90                  95

Lys Arg His Phe Ile Gln Asp Thr Cys Leu Tyr Glu Cys Ser Pro Asn
            100                 105                 110

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

Val Leu Asn Val Pro Leu Cys Lys Glu Asp Cys Glu Arg Trp Trp Glu
    130                 135                 140

Asp Cys Arg Thr Ser Tyr Thr Cys Lys Ser Asn Trp His Lys Gly Trp
145                 150                 155                 160

Asn Trp Thr Ser Gly Phe Asn Lys Cys Pro Val Gly Ala Ala Cys Gln
                165                 170                 175

Pro Phe His Phe Tyr Phe Pro Thr Pro Thr Val Leu Cys Asn Glu Ile
            180                 185                 190

Trp Thr Tyr Ser Tyr Lys Val Ser Asn Tyr Ser Arg Gly Ser Gly Arg
        195                 200                 205

Cys Ile Gln Met Trp Phe Asp Pro Ala Gln Gly Asn Pro Asn Glu Glu
    210                 215                 220

Val Ala Arg Phe Tyr Ala Ala Ala Met Ser Gly Ala Gly Pro Trp Ala
225                 230                 235                 240

Ala Trp Pro Leu Leu Leu Ser Leu Ala Leu Thr Leu Leu Trp Leu Leu
                245                 250                 255
```

Ser

<210> 145
<211> 468
<212> PRT
<213> Artificial Sequence

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

<400> 145
Arg Thr Ala Arg Ala Arg Thr Glu Leu Leu Asn Val Cys Met Asn Ala
1 5 10 15

Lys His His Lys Glu Lys Pro Gly Pro Glu Asp Lys Leu His Glu Gln
20 25 30

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

Glu Ala His Lys Asp Val Ser Tyr Leu Tyr Arg Phe Asn Trp Asn His
50 55 60

Cys Gly Glu Met Ala Pro Ala Cys Lys Arg His Phe Ile Gln Asp Thr
65 70 75 80

Cys Leu Tyr Glu Cys Ser Pro Asn Leu Gly Pro Trp Ile Gln Gln Val
85 90 95

Asp Gln Ser Trp Arg Lys Glu Arg Val Leu Asn Val Pro Leu Cys Lys
100 105 110

Glu Asp Cys Glu Gln Trp Trp Glu Asp Cys Arg Thr Ser Tyr Thr Cys
115 120 125

Lys Ser Asn Trp His Lys Gly Trp Asn Trp Thr Ser Gly Phe Asn Lys
130 135 140

```
Cys Pro Val Gly Ala Ala Cys Gln Pro Phe His Phe Tyr Phe Pro Thr
145                 150                 155                 160

Pro Thr Val Leu Cys Asn Glu Ile Trp Thr Tyr Ser Tyr Lys Val Ser
                165                 170                 175

Asn Tyr Ser Arg Gly Ser Gly Arg Cys Ile Gln Met Trp Phe Asp Pro
            180                 185                 190

Ala Gln Gly Asn Pro Asn Glu Glu Val Ala Arg Phe Tyr Ala Ala Ala
        195                 200                 205

Met Val Asp Glu Gln Leu Tyr Phe Gln Gly Gly Ser Pro Lys Ser Ala
    210                 215                 220

Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly
225                 230                 235                 240

Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met
                245                 250                 255

Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His
            260                 265                 270

Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val
        275                 280                 285

His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr
    290                 295                 300

Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly
305                 310                 315                 320

Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile
                325                 330                 335

Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val
```

340 345 350

Tyr Thr Leu Pro Pro Cys Arg Asp Glu Leu Thr Lys Asn Gln Val Ser
355 360 365

Leu Trp Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu
370 375 380

Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro
385 390 395 400

Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val
405 410 415

Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met
420 425 430

His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser
435 440 445

Pro Gly Lys Ser Gly Gly Leu Asn Asp Ile Phe Glu Ala Gln Lys Ile
450 455 460

Glu Trp His Glu
465

<210> 146
<211> 255
<212> PRT
<213> Homo sapiens

<400> 146
Met Val Trp Lys Trp Met Pro Leu Leu Leu Leu Leu Val Cys Val Ala
1 5 10 15

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

Asp Ala Lys His His Lys Thr Lys Pro Gly Pro Glu Asp Lys Leu His

```
        35                  40                  45

Asp Gln Cys Ser Pro Trp Lys Lys Asn Ala Cys Cys Thr Ala Ser Thr
    50                  55                  60

Ser Gln Glu Leu His Lys Asp Thr Ser Arg Leu Tyr Asn Phe Asn Trp
65                  70                  75                  80

Asp His Cys Gly Lys Met Glu Pro Ala Cys Lys Arg His Phe Ile Gln
                85                  90                  95

Asp Thr Cys Leu Tyr Glu Cys Ser Pro Asn Leu Gly Pro Trp Ile Gln
            100                 105                 110

Gln Val Asn Gln Ser Trp Arg Lys Glu Arg Phe Leu Asp Val Pro Leu
        115                 120                 125

Cys Lys Glu Asp Cys Gln Arg Trp Trp Glu Asp Cys His Thr Ser His
    130                 135                 140

Thr Cys Lys Ser Asn Trp His Arg Gly Trp Asp Trp Thr Ser Gly Val
145                 150                 155                 160

Asn Lys Cys Pro Ala Gly Ala Leu Cys Arg Thr Phe Glu Ser Tyr Phe
                165                 170                 175

Pro Thr Pro Ala Ala Leu Cys Glu Gly Leu Trp Ser His Ser Tyr Lys
            180                 185                 190

Val Ser Asn Tyr Ser Arg Gly Ser Gly Arg Cys Ile Gln Met Trp Phe
        195                 200                 205

Asp Ser Ala Gln Gly Asn Pro Asn Glu Glu Val Ala Arg Phe Tyr Ala
    210                 215                 220

Ala Ala Met His Val Asn Ala Gly Glu Met Leu His Gly Thr Gly Gly
225                 230                 235                 240
```

```
Leu Leu Leu Ser Leu Ala Leu Met Leu Gln Leu Trp Leu Leu Gly
                245                 250                 255


<210> 147
<211> 472
<212> PRT
<213> Artificial Sequence

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

<400> 147
Thr Met Cys Ser Ala Gln Asp Arg Thr Asp Leu Leu Asn Val Cys Met
1               5                   10                  15


Asp Ala Lys His His Lys Thr Lys Pro Gly Pro Glu Asp Lys Leu His
            20                  25                  30


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


Ser Gln Glu Leu His Lys Asp Thr Ser Arg Leu Tyr Asn Phe Asn Trp
    50                  55                  60


Asp His Cys Gly Lys Met Glu Pro Ala Cys Lys Arg His Phe Ile Gln
65                  70                  75                  80


Asp Thr Cys Leu Tyr Glu Cys Ser Pro Asn Leu Gly Pro Trp Ile Gln
                85                  90                  95


Gln Val Asn Gln Ser Trp Arg Lys Glu Arg Phe Leu Asp Val Pro Leu
            100                 105                 110


Cys Lys Glu Asp Cys Gln Arg Trp Trp Glu Asp Cys His Thr Ser His
        115                 120                 125


Thr Cys Lys Ser Asn Trp His Arg Gly Trp Asp Trp Thr Ser Gly Val
    130                 135                 140
```

```
Asn Lys Cys Pro Ala Gly Ala Leu Cys Arg Thr Phe Glu Ser Tyr Phe
145                 150                 155                 160

Pro Thr Pro Ala Ala Leu Cys Glu Gly Leu Trp Ser His Ser Tyr Lys
                165                 170                 175

Val Ser Asn Tyr Ser Arg Gly Ser Gly Arg Cys Ile Gln Met Trp Phe
            180                 185                 190

Asp Ser Ala Gln Gly Asn Pro Asn Glu Glu Val Ala Arg Phe Tyr Ala
        195                 200                 205

Ala Ala Met His Val Val Asp Glu Gln Leu Tyr Phe Gln Gly Gly Ser
    210                 215                 220

Pro Lys Ser Ala Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro
225                 230                 235                 240

Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys
                245                 250                 255

Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val
            260                 265                 270

Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp
        275                 280                 285

Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr
    290                 295                 300

Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp
305                 310                 315                 320

Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu
                325                 330                 335
```

```
Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg
            340                 345                 350

Glu Pro Gln Val Tyr Thr Leu Pro Pro Cys Arg Asp Glu Leu Thr Lys
        355                 360                 365

Asn Gln Val Ser Leu Trp Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp
    370                 375                 380

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

Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser
                405                 410                 415

Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser
            420                 425                 430

Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser
        435                 440                 445

Leu Ser Leu Ser Pro Gly Lys Ser Gly Gly Leu Asn Asp Ile Phe Glu
    450                 455                 460

Ala Gln Lys Ile Glu Trp His Glu
465                 470


<210> 148
<211> 243
<212> PRT
<213> Homo sapiens

<400> 148
Met Ala Trp Gln Met Met Gln Leu Leu Leu Leu Ala Leu Val Thr Ala
1               5                   10                  15

Ala Gly Ser Ala Gln Pro Arg Ser Ala Arg Ala Arg Thr Asp Leu Leu
            20                  25                  30
```

```
Asn Val Cys Met Asn Ala Lys His His Lys Thr Gln Pro Ser Pro Glu
        35                  40                  45

Asp Glu Leu Tyr Gly Gln Cys Ser Pro Trp Lys Lys Asn Ala Cys Cys
    50                  55                  60

Thr Ala Ser Thr Ser Gln Glu Leu His Lys Asp Thr Ser Arg Leu Tyr
65                  70                  75                  80

Asn Phe Asn Trp Asp His Cys Gly Lys Met Glu Pro Thr Cys Lys Arg
                85                  90                  95

His Phe Ile Gln Asp Ser Cys Leu Tyr Glu Cys Ser Pro Asn Leu Gly
            100                 105                 110

Pro Trp Ile Arg Gln Val Asn Gln Ser Trp Arg Lys Glu Arg Ile Leu
        115                 120                 125

Asn Val Pro Leu Cys Lys Glu Asp Cys Glu Arg Trp Trp Glu Asp Cys
    130                 135                 140

Arg Thr Ser Tyr Thr Cys Lys Ser Asn Trp His Lys Gly Trp Asn Trp
145                 150                 155                 160

Thr Ser Gly Ile Asn Glu Cys Pro Ala Gly Ala Leu Cys Ser Thr Phe
                165                 170                 175

Glu Ser Tyr Phe Pro Thr Pro Ala Ala Leu Cys Glu Gly Leu Trp Ser
            180                 185                 190

His Ser Phe Lys Val Ser Asn Tyr Ser Arg Gly Ser Gly Arg Cys Ile
        195                 200                 205

Gln Met Trp Phe Asp Ser Ala Gln Gly Asn Pro Asn Glu Glu Val Ala
    210                 215                 220

Lys Phe Tyr Ala Ala Ala Met Asn Ala Gly Ala Pro Ser Arg Gly Ile
225                 230                 235                 240
```

Ile Asp Ser

<210> 149
<211> 479
<212> PRT
<213> Artificial Sequence

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

<400> 149
Ser Ala Arg Ala Arg Thr Asp Leu Leu Asn Val Cys Met Asn Ala Lys
1 5 10 15

His His Lys Thr Gln Pro Ser Pro Glu Asp Glu Leu Tyr Gly Gln Cys
20 25 30

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

Leu His Lys Asp Thr Ser Arg Leu Tyr Asn Phe Asn Trp Asp His Cys
50 55 60

Gly Lys Met Glu Pro Thr Cys Lys Arg His Phe Ile Gln Asp Ser Cys
65 70 75 80

Leu Tyr Glu Cys Ser Pro Asn Leu Gly Pro Trp Ile Arg Gln Val Asn
85 90 95

Gln Ser Trp Arg Lys Glu Arg Ile Leu Asn Val Pro Leu Cys Lys Glu
100 105 110

Asp Cys Glu Arg Trp Trp Glu Asp Cys Arg Thr Ser Tyr Thr Cys Lys
115 120 125

Ser Asn Trp His Lys Gly Trp Asn Trp Thr Ser Gly Ile Asn Glu Cys

```
    130                 135                 140

Pro Ala Gly Ala Leu Cys Ser Thr Phe Glu Ser Tyr Phe Pro Thr Pro
145                 150                 155                 160

Ala Ala Leu Cys Glu Gly Leu Trp Ser His Ser Phe Lys Val Ser Asn
                165                 170                 175

Tyr Ser Arg Gly Ser Gly Arg Cys Ile Gln Met Trp Phe Asp Ser Ala
            180                 185                 190

Gln Gly Asn Pro Asn Glu Glu Val Ala Lys Phe Tyr Ala Ala Ala Met
        195                 200                 205

Asn Ala Gly Ala Pro Ser Arg Gly Ile Ile Asp Ser Val Asp Glu Gln
    210                 215                 220

Leu Tyr Phe Gln Gly Gly Ser Pro Lys Ser Ala Asp Lys Thr His Thr
225                 230                 235                 240

Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe
                245                 250                 255

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

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

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

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

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

```
Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser
            340                 345                 350

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

Cys Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu Trp Cys Leu Val
    370                 375                 380

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

Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp
                405                 410                 415

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

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

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

Gly Leu Asn Asp Ile Phe Glu Ala Gln Lys Ile Glu Trp His Glu
465                 470                 475
```

<210> 150
<211> 207
<212> PRT
<213> Homo sapiens

<400> 150

```
Met Gln Ser Gly Thr His Trp Arg Val Leu Gly Leu Cys Leu Leu Ser
1               5                   10                  15

Val Gly Val Trp Gly Gln Asp Gly Asn Glu Glu Met Gly Gly Ile Thr
            20                  25                  30
```

```
Gln Thr Pro Tyr Lys Val Ser Ile Ser Gly Thr Thr Val Ile Leu Thr
        35                  40                  45

Cys Pro Gln Tyr Pro Gly Ser Glu Ile Leu Trp Gln His Asn Asp Lys
    50                  55                  60

Asn Ile Gly Gly Asp Glu Asp Asp Lys Asn Ile Gly Ser Asp Glu Asp
65                  70                  75                  80

His Leu Ser Leu Lys Glu Phe Ser Glu Leu Glu Gln Ser Gly Tyr Tyr
                85                  90                  95

Val Cys Tyr Pro Arg Gly Ser Lys Pro Glu Asp Ala Asn Phe Tyr Leu
            100                 105                 110

Tyr Leu Arg Ala Arg Val Cys Glu Asn Cys Met Glu Met Asp Val Met
        115                 120                 125

Ser Val Ala Thr Ile Val Ile Val Asp Ile Cys Ile Thr Gly Gly Leu
    130                 135                 140

Leu Leu Leu Val Tyr Tyr Trp Ser Lys Asn Arg Lys Ala Lys Ala Lys
145                 150                 155                 160

Pro Val Thr Arg Gly Ala Gly Ala Gly Gly Arg Gln Arg Gly Gln Asn
                165                 170                 175

Lys Glu Arg Pro Pro Pro Val Pro Asn Pro Asp Tyr Glu Pro Ile Arg
            180                 185                 190

Lys Gly Gln Arg Asp Leu Tyr Ser Gly Leu Asn Gln Arg Arg Ile
        195                 200                 205
```

<210> 151
<211> 360
<212> DNA
<213> Artificial Sequence

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

<400> 151
caggtgcaat tggttcaatc tggtgctgaa gtaaaaaaac cgggcgcttc cgttaaagtg 60

agctgcaaag catccggata caccttcact tcctattaca tgcactgggt tcgtcaagcc 120

ccgggccagg gtctggaatg gatgggcatc attaacccaa gcggtggctc tacctcctac 180

gcgcagaaat tccagggtcg cgtcacgatg acccgtgaca ctagcacctc taccgtttat 240

atggagctgt ccagcctgcg ttctgaagat actgcagtgt actactgtgc acgcaactac 300

tacgctggtg ttactccgtt cgactattgg ggtcaaggca ccctcgtaac ggtttcttct 360

<210> 152
<211> 360
<212> DNA
<213> Artificial Sequence

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

<400> 152
caggtgcaat tggttcaatc tggtgctgaa gtaaaaaaac cgggcgcttc cgttaaagtg 60

agctgcaaag catccggata caccttcact tcctattaca tgcactgggt tcgtcaagcc 120

ccgggccagg gtctggaatg gatgggcatc attaacccaa gcggtggctc tacctcctac 180

gcgcagaaat tccagggtcg cgtcacgatg acccgtgaca ctagcacctc taccgtttat 240

atggagctgt ccagcctgcg ttctgaagat actgcagtgt actactgtgc acgcaactac 300

tacatcggtg ttgttacttt cgactattgg ggtcaaggca ccctcgtaac ggtttcttct 360

<210> 153
<211> 363
<212> DNA
<213> Artificial Sequence

<220>
<221> source

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

<400> 153
caggtgcaat tggttcaatc tggtgctgaa gtaaaaaaac cgggcgcttc cgttaaagtg 60

agctgcaaag catccggata caccttcact tcctattaca tgcactgggt tcgtcaagcc 120

ccgggccagg gtctggaatg gatgggcatc attaacccaa gcggtggctc tacctcctac 180

gcgcagaaat tccagggtcg cgtcacgatg acccgtgaca ctagcacctc taccgtttat 240

atggagctgt ccagcctgcg ttctgaagat actgcagtgt actactgtgc acgcaactac 300

tacactggtg gttcttctgc tttcgactat tggggtcaag gcaccctcgt aacggtttct 360

tct 363

<210> 154
<211> 360
<212> DNA
<213> Artificial Sequence

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

<220>
<221> modified_base
<222> (47)..(47)
<223> a, c, t, g, unknown or other

<400> 154
caggtgcaat tggttcaatc tggtgctgaa gtaaaaaaac cgggcgnttc cgttaaagtg 60

agctgcaaag catccggata caccttcact tcctattaca tgcactgggt tcgtcaagcc 120

ccgggccagg gtctggaatg gatgggcatc attaacccaa gcggtggctc tacctcctac 180

gcgcagaaat tccagggtcg cgtcacgatg acccgtgaca ctagcacctc taccgtttat 240

atggagctgt ccagcctgcg ttctgaagat actgcagtgt actactgtgc acgcggtgaa 300

tggcgtcgtt acacttcttt cgactattgg ggtcaaggca ccctcgtaac ggtttcttct 360

<210> 155

<211> 360
<212> DNA
<213> Artificial Sequence

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

<400> 155
caggtgcaat tggttcaatc tggtgctgaa gtaaaaaaac cgggcgcttc cgttaaagtg 60

agctgcaaag catccggata caccttcact tcctattaca tgcactgggt tcgtcaagcc 120

ccgggccagg gtctggaatg gatgggcatc attaacccaa gcggtggctc tacctcctac 180

gcgcagaaat tccagggtcg cgtcacgatg acccgtgaca ctagcacctc taccgtttat 240

atggagctgt ccagcctgcg ttctgaagat actgcagtgt actactgtgc acgcggtggt 300

tggatccgtt gggaacattt cgactattgg ggtcaaggca ccctcgtaac ggtttcttct 360

<210> 156
<211> 360
<212> DNA
<213> Artificial Sequence

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

<400> 156
caggtgcaat tggttcaatc tggtgctgaa gtaaaaaaac cgggcgcttc cgttaaagtg 60

agctgcaaag catccggata caccttcact tcctattaca tgcactgggt tcgtcaagcc 120

ccgggccagg gtctggaatg gatgggcatc attaacccaa gcggtggctc tacctcctac 180

gcgcagaaat tccagggtcg cgtcacgatg acccgtgaca ctagcacctc taccgtttat 240

atggagctgt ccagcctgcg ttctgaagat actgcagtgt actactgtgc acgcaactac 300

tacctgttct ctacttcttt cgactattgg ggtcaaggca ccctcgtaac ggtttcttct 360

<210> 157
<211> 360
<212> DNA

<213> Artificial Sequence

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

<400> 157
caggtgcaat tggttcaatc tggtgctgag gtaaaaaaac cgggcgcttc cgttaaagtg 60

agctgcaaag catccggata caccttcact tcctattaca tgcactgggt tcgtcaagcc 120

ccgggccagg gtctggaatg gatgggcatc attaacccaa gcggtggctc tacctcctac 180

gcgcagaaat tccagggtcg cgtcacgatg acccgtgaca ctagcacctc taccgtttat 240

atggagctgt ccagcctgcg ttctgaagat actgcagtgt actactgtgc acgcaactac 300

tacatcggta tcgttccgtt cgactattgg ggtcaaggca ccctcgtaac ggtttcttct 360

<210> 158
<211> 360
<212> DNA
<213> Artificial Sequence

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

<400> 158
gaggtgcaat tggttgaatc tggtggtggt ctggtaaaac cgggcggttc cctgcgtctg 60

agctgcgcgg cttccggatt caccttctcc aacgcgtgga tgagctgggt tcgccaggcc 120

ccgggcaaag gcctcgagtg ggttggtcgt atcaagtcta aaactgacgg tggcaccacg 180

gattacgcgg ctccagttaa aggtcgtttt accatttccc gcgacgatag caaaaacact 240

ctgtatctgc agatgaactc tctgaaaact gaagacaccg cagtctacta ctgtactacc 300

ccgtgggaat ggtcttggta cgattattgg ggccagggca cgctggttac ggtgtcttcc 360

<210> 159
<211> 360
<212> DNA
<213> Artificial Sequence

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

<220>
<221> modified_base
<222> (53)..(53)
<223> a, c, t, g, unknown or other

<400> 159
gaggtgcaat tggttgaatc tggtggtggt ctggtaaaac cgggcggttc ccngcgtctg 60

agctgcgcgg cttccggatt caccttctcc aacgcgtgga tgagctgggt tcgccaggcc 120

ccgggcaaag gcctcgagtg ggttggtcgt atcaagtcta aaactgacgg tggcaccacg 180

gattacgcgg ctccagttaa aggtcgtttt accatttccc gcgacgatag caaaaacact 240

ctgtatctgc agatgaactc tctgaaaacc gaagacaccg cagtctacta ctgtactacc 300

ccgtgggaat ggtcttactt cgattattgg ggccagggca cgctggttac ggtgtcttcc 360

<210> 160
<211> 360
<212> DNA
<213> Artificial Sequence

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

<400> 160
caggtgcaat tggttcaatc tggtgctgaa gtaaaaaaac cgggcgcttc cgttaaagtg 60

agctgcaaag catccggata caccttcact tcctattaca tgcactgggt tcgtcaagcc 120

ccgggccagg gtctggaatg gatgggcatc attaacccaa gcggtggctc tacctcctac 180

gcgcagaaat tccagggtcg cgtcacgatg acccgtgaca ctagcacctc taccgtttat 240

atggagctgt ccagcctgcg ttctgaagat actgcagtgt actactgtgc acgcaactac 300

tacgttggtg tttctccgtt cgactattgg ggtcaaggca ccctcgtaac ggtttcttct 360

<210> 161

<211> 360
<212> DNA
<213> Artificial Sequence

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

<220>
<221> modified_base
<222> (47)..(47)
<223> a, c, t, g, unknown or other

<220>
<221> modified_base
<222> (177)..(177)
<223> a, c, t, g, unknown or other

<400> 161
caggtgcaat tggttcaatc tggtgctgaa gtaaaaaaac cgggcgnttc cgttaaagtg 60

agctgcaaag catccggata caccttcact tcctattaca tgcactgggt tcgtcaagcc 120

ccgggccagg gtctggaatg gatgggcatc attaacccaa gcggtggctc tacctcntac 180

gcgcagaaat tccagggtcg cgtcacgatg acccgtgaca ctagcacctc taccgtttat 240

atggagctgt ccagcctgcg ttctgaagat actgcagtgt actactgtgc acgcaacttc 300

actgttctgc gtgttccgtt cgactattgg ggtcaaggca ccctcgtaac ggtttcttct 360

<210> 162
<211> 360
<212> DNA
<213> Artificial Sequence

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

<400> 162
gaggtgcaat tggttgaatc tggtggtggt ctggtaaaac cgggcggttc cctgcgtctg 60

agctgcgcgg cttccggatt caccttctcc aacgcgtgga tgagctgggt tcgccaggcc 120

ccgggcaaag gcctcgagtg ggttggtcgt atcaagtcta aaactgacgg tggcaccacg 180

gattacgcgg ctccagttaa aggtcgtttt accatttccc gcgacgatag caaaaacact 240

ctgtatctgc agatgaactc tctgaaaact gaagacaccg cagtctacta ctgtactacc 300

ccgtgggaat gggcttggtt cgattattgg ggccagggca cgctggttac ggtgtcttcc 360

<210> 163
<211> 360
<212> DNA
<213> Artificial Sequence

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

<400> 163
gaggtgcaat tggttgaatc tggtggtggt ctggtaaaac cgggcggttc cctgcgtctg 60

agctgcgcgg cttccggatt caccttctcc aacgcgtgga tgagctgggt tcgccaggcc 120

ccgggcaaag gcctcgagtg ggttggtcgt atcaagtcta aaactgacgg tggcaccacg 180

gattacgcgg ctccagttaa aggtcgtttt accatttccc gcgacgatag caaaaacact 240

ctgtatctgc agatgaactc tctgaaaacc gaagacaccg cagtctacta ctgtactacc 300

ccttgggaat gggcttactt cgattattgg ggccagggca cgctggttac ggtgtcttcc 360

<210> 164
<211> 360
<212> DNA
<213> Artificial Sequence

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

<400> 164
caggtgcaat tggttcaatc tggtgctgaa gtaaaaaaac cgggcgcttc cgttaaagtg 60

agctgcaaag catccggata caccttcact tcctattaca tgcactgggt tcgtcaagcc 120

ccgggccagg gtctggaatg gatgggcatc attaacccaa gcggtggctc tacctcctac 180

gcgcagaaat tccagggtcg cgtcacgatg acccgtgaca ctagcacctc taccgtttat 240

atggagctgt ccagcctgcg ttctgaagat actgcagtgt actactgtgc acgcactggt 300

tggtctcgtt ggggttacat ggactattgg ggccaaggca ccctcgtaac ggtttcttct 360

<210> 165
<211> 360
<212> DNA
<213> Artificial Sequence

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

<400> 165
caggtgcaat tggttcaatc tggtgctgaa gtaaaaaaac cgggcgcttc cgttaaagtg 60

agctgcaaag catccggata caccttcact tcctattaca tgcactgggt tcgtcaagcc 120

ccgggccagg gtctggaatg gatgggcatc attaacccaa gcggtggctc tacctcctac 180

gcgcagaaat tccagggtcg cgtcacgatg acccgtgaca ctagcacctc taccgtttat 240

atggagctgt ccagcctgcg ttctgaagat actgcagtgt actactgtgc acgcggtgaa 300

tggatccgtt actaccattt cgactattgg ggtcaaggca ccctcgtaac ggtttcttct 360

<210> 166
<211> 360
<212> DNA
<213> Artificial Sequence

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

<400> 166
caggtgcaat tggttcaatc tggtgctgaa gtaaaaaaac cgggcgcttc cgttaaagtg 60

agctgcaaag catccggata caccttcact tcctattaca tgcactgggt tcgtcaagcc 120

ccgggccagg gtctggaatg gatgggcatc attaacccaa gcggtggctc tacctcctac 180

gcgcagaaat tccagggtcg cgtcacgatg acccgtgaca ctagcacctc taccgtttat 240

atggagctgt ccagcctgcg ttctgaagat actgcagtgt actactgtgc acgcgttggt 300

tggtaccgtt ggggttacat ggactattgg ggtcaaggca ccctcgtaac ggtttcttct 360

<210> 167
<211> 363
<212> DNA
<213> Artificial Sequence

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

<400> 167
caggtgcaat tggtgcagtc tggggctgag gtgaagaagc ctgggtcctc ggtgaaggtc 60

tcctgcaagg cctccggagg cacattcagc agctacgcta taagctgggt gcgacaggcc 120

cctggacaag ggctcgagtg gatgggaggg atcatcccta tctttggtac agcaaactac 180

gcacagaagt tccagggcag ggtaaccatt actgcagaca aatccacgag cacagcctac 240

atggagctga gcagcctgag atctgaggac accgccgtgt attactgtgc gagagctgtt 300

ttctaccgtg cttggtactc tttcgactac tggggccaag ggaccaccgt gaccgtctcc 360

tca 363

<210> 168
<211> 321
<212> DNA
<213> Artificial Sequence

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

<400> 168
gacatccaga tgacccagtc tccttccacc ctgtctgcat ctgtaggaga ccgtgtcacc 60

atcacttgcc gtgccagtca gagtattagt agctggttgg cctggtatca gcagaaacca 120

gggaaagccc ctaagctcct gatctatgat gcctccagtt tggaaagtgg ggtcccatca 180

cgtttcagcg gcagtggatc cgggacagaa ttcactctca ccatcagcag cttgcagcct 240

gatgattttg caacttatta ctgccaacag tataccagcc caccaccaac gtttggccag 300

ggcaccaaag tcgagatcaa g 321

<210> 169
<211> 357
<212> DNA
<213> Artificial Sequence

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

<400> 169
caggtgcaat tggttcaatc tggtgctgaa gtaaaaaaac cgggcgcttc cgttaaagtg 60

agctgcaaag catccggata caccttcact tcctattaca tgcactgggt tcgtcaagcc 120

ccgggccagg gtctggaatg gatgggcatc attaacccaa gcggtggctc tacctcctac 180

gcgcagaaat tccagggtcg cgtcacgatg acccatgaca ctagcacctc taccgtttat 240

atggagctgt ccagcctgcg ttctgaagat actgcagtgt actactgtgc acgctctttc 300

ttcactggtt tccatctgga ctattggggt caaggcaccc tcgtaacggt ttcttct 357

<210> 170
<211> 327
<212> DNA
<213> Artificial Sequence

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

<400> 170
gaaatcgtgt taacgcagtc tccaggcacc ctgtctttgt ctccagggga aagagccacc 60

ctctcttgca gggccagtca gagtgttagc agcagctact tagcctggta ccagcagaaa 120

cctggccagg ctcccaggct cctcatctat ggagcatcca gcagggccac tggcatccca 180

gacaggttca gtggcagtgg atccgggaca gacttcactc tcaccatcag cagactggag 240

cctgaagatt ttgcagtgta ttactgtcag cagtatacca acgaacatta ttatacgttc 300

ggccagggga ccaaagtgga aatcaaa 327

<210> 171
<211> 351
<212> DNA
<213> Artificial Sequence

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

<400> 171
caggtgcaat tggttcaatc tggtgctgaa gtaaaaaaac cgggcgcttc cgttaaagtg 60

agctgcaaag catccggata caccttcact tcctattaca tgcactgggt tcgtcaagcc 120

ccgggccagg gtctggaatg gatgggcatc attaacccaa gcggtggccc tacctcctac 180

gcgcagaaat tccagggtcg cgtcacgatg acccgtgaca ctagcacctc taccgtttat 240

atggagctgt ccagcctgcg ttctgaagat actgcagtgt actactgtgc acgcggtgac 300

ttcgcttggc tggactattg gggtcaaggc accctcgtaa cggtttcttc t 351

<210> 172
<211> 336
<212> DNA
<213> Artificial Sequence

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

<400> 172
gatattgtta tgactcaatc tccactgtct ctgccggtga ctccaggcga accggcgagc 60

atttcttgcc gttccagcca gtctctgctg cactccaacg gctacaacta tctcgattgg 120

tacctgcaaa aaccgggtca gagccctcag ctgctgatct acctgggctc taaccgcgct 180

tccggtgtac cggaccgttt cagcggctct ggatccggca ccgatttcac gttgaaaatc 240

agccgtgttg aagcagaaga cgtgggcgtt tattactgta tgcaggcaag cattatgaac 300

cggacttttg gtcaaggcac caaggtcgaa attaaa 336

<210> 173
<211> 336
<212> DNA
<213> Artificial Sequence

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

<400> 173
gatattgtta tgactcaatc tccactgtct ctgccggtga ctccaggcga accggcgagc 60

atttcttgcc gttccagcca gtctctgctg cactccaacg gctacaacta tctcgattgg 120

tacctgcaaa aaccgggtca gagccctcag ctgctgatct acctgggctc taaccgcgct 180

tccggtgtac cggaccgttt cagcggctct ggatccggca ccgatttcac gttgaaaatc 240

agccgtgttg aagcagaaga cgtgggcgtt tattactgta tgcaggcaag cattatgagc 300

cggacttttg gtcaaggcac caaggtcgaa attaaa 336

<210> 174
<211> 336
<212> DNA
<213> Artificial Sequence

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

<400> 174
gatattgtta tgactcaatc tccactgtct ctgccggtga ctccaggcga accggcgagc 60

atttcttgcc gttccagcca gtctctgctg cactccaacg gctacaacta tctcgattgg 120

tacctgcaaa aaccgggtca gagccctcag ctgctgatct acctgggctc taaccgcgct 180

tccggtgtac cggaccgttt cagcggctct ggatccggca ccgatttcac gttgaaaatc 240

agccgtgttg aagcagaaga cgtgggcgtt tattactgta tgcaggcaag cattatgcag 300

cggacttttg gtcaaggcac caaggtcgaa attaaa 336

<210> 175
<211> 336

<212> DNA
<213> Artificial Sequence

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

<400> 175
gatattgtta tgactcaatc tccactgtct ctgccggtga ctccaggcga accggcgagc 60

atttcttgcc gttccagcca gtctctgctg cactccaacg gctacaacta tctcgattgg 120

tacctgcaaa aaccgggtca gagccctcag ctgctgatct acctgggctc taaccgcgct 180

tccggtgtac cggaccgttt cagcggctct ggatccggca ccgatttcac gttgaaaatc 240

agccgtgttg aagcagaaga cgtgggcgtt tattactgta tgcaggcaag cattatgaac 300

cgggcttttg gtcaaggcac caaggtcgaa attaaa 336

<210> 176
<211> 336
<212> DNA
<213> Artificial Sequence

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

<400> 176
gatattgtta tgactcaatc tccactgtct ctgccggtga ctccaggcga accggcgagc 60

atttcttgcc gttccagcca gtctctgctg cactccaacg gctacaacta tctcgattgg 120

tacctgcaaa aaccgggtca gagccctcag ctgctgatct acctgggctc taaccgcgct 180

tccggtgtac cggaccgttt cagcggctct ggatccggca ccgatttcac gttgaaaatc 240

agccgtgttg aagcagaaga cgtgggcgtt tattactgta tgcaggcaag cattatgaac 300

cggaattttg gtcaaggcac caaggtcgaa attaaa 336

<210> 177
<211> 348
<212> DNA
<213> Artificial Sequence

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

<400> 177
caggtgcaat tggttcaatc tggtgctgaa gtaaaaaaac cgggcgcttc cgttaaagtg 60

agctgcaaag catccggata caccttcact tcctattaca tgcactgggt tcgtcaagcc 120

ccgggccagg gtctggaatg gatgggcatc attaacccaa gcggtggctc tacctcctac 180

gcgcagaaat tccagggtcg cgtcacgatg acccgtgaca ctagcacctc taccgtttat 240

atggagctgt ccagcctgcg ttctgaagat actgcagtgt actactgtgc acgctcttac 300

atcgacatgg actattgggg tcaaggcacc ctcgtaacgg tttcttct 348

<210> 178
<211> 321
<212> DNA
<213> Artificial Sequence

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

<400> 178
gaaatcgtgt taacgcagtc tccaggcacc ctgtctttgt ctccagggga aagagccacc 60

ctctcttgca gggccagtca gagtgttagc agcagctact tagcctggta ccagcagaaa 120

cctggccagg ctcccaggct cctcatctat ggagcatcca gcagggccac tggcatccca 180

gacaggttca gtggcagtgg atccgggaca gacttcactc tcaccatcag cagactggag 240

cctgaagatt ttgcagtgta ttactgtcag caggataact ggagcccaac gttcggccag 300

gggaccaaag tggaaatcaa a 321

<210> 179
<211> 348
<212> DNA
<213> Artificial Sequence

<220>

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

<400> 179
caggtgcaat tggttcaatc tggtgctgaa gtaaaaaaac cgggcgcttc cgttaaagtg 60

agctgcaaag catccggata caccttcact tcctattaca tgcactgggt tcgtcaagcc 120

ccgggccagg gtctggaatg gatgggcatc attaacccaa gcggtggctc tacctcctac 180

gcgcagaaat tccagggtcg cgtcacgatg acccgtgaca ctagcacctc taccgtttat 240

atggagctgt ccagcctgcg ttctgaagat actgcagtgt actactgtgc acgctcttac 300

gttgacatgg actattgggg tcaaggcacc ctcgtaacgg tttcttct 348

<210> 180
<211> 321
<212> DNA
<213> Artificial Sequence

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

<400> 180
gaaatcgtgt taacgcagtc tccaggcacc ctgtctttgt ctccagggga aagagccacc 60

ctctcttgca gggccagtca gagtgttagc agcagctacc tagcctggta ccagcagaaa 120

cctggccagg ctcccaggct cctcatctat ggagcatcca gcagggccac tggcatccca 180

gacaggttca gtggcagtgg atccgggaca gacttcactc tcaccatcag cagactggag 240

cctgaagatt ttgcagtgta ttactgtcag caggatattt ggagcccaac gttcggccag 300

gggaccaaag tggaaatcaa a 321

<210> 181
<211> 363
<212> DNA
<213> Artificial Sequence

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

polynucleotide"

<400> 181
gaggtgcaat tgttggagtc tgggggaggc ttggtacagc ctgggggtc cctgagactc 60

tcctgtgcag cctccggatt cacctttagc agttatgcca tgagctgggt ccgccaggct 120

ccagggaagg ggctggagtg ggtctcagct attagtggta gtggtggtag cacatactac 180

gcagactccg tgaagggccg gttcaccatc tccagagaca attccaagaa cacgctgtat 240

ctgcagatga acagcctgag agccgaggac acggccgtat attactgtgc gaaagactct 300

tcttacgttg aatggtacgc tttcgactac tggggccaag gaaccctggt caccgtctcg 360

agt 363

<210> 182
<211> 324
<212> DNA
<213> Artificial Sequence

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

<400> 182
gaaatcgtgt taacgcagtc tccaggcacc ctgtctttgt ctccagggga aagagccacc 60

ctctcttgca gggccagtca gagtgttagc agcagctact tagcctggta ccagcagaaa 120

cctggccagg ctcccaggct cctcatctat ggagcatcca gcagggccac tggcatccca 180

gacaggttca gtggcagtgg atccgggaca gactccactc tcaccatcag cagactggag 240

cctgaagatt ttgcagtgta ttactgtcag cagccaacca gcagcccaat tacgttcggc 300

caggggacca aagtggaaat caaa 324

<210> 183
<211> 684
<212> DNA
<213> Artificial Sequence

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

polynucleotide"

<400> 183
gaggtgcagc tgctggaatc tggcggcgga ctggtgcagc ctggcggatc tctgagactg 60

agctgtgccg ccagcggctt caccttcagc acctacgcca tgaactgggt gcgccaggcc 120

cctggcaaag gcctggaatg ggtgtcccgg atcagaagca agtacaacaa ctacgccacc 180

tactacgccg acagcgtgaa gggccggttc accatcagcc gggacgacag caagaacacc 240

ctgtacctgc agatgaacag cctgcgggcc gaggacaccg ccgtgtacta ttgtgtgcgg 300

cacggcaact tcggcaacag ctatgtgtct tggtttgcct actggggcca gggcaccctc 360

gtgaccgtgt caagcgctag taccaagggc cccagcgtgt tcccccctggc acccagcagc 420

aagagcacat ctggcggaac agccgctctg ggctgtctgg tgaaagacta cttccccgag 480

cccgtgaccg tgtcttggaa ctctggcgcc ctgaccagcg gcgtgcacac ctttccagcc 540

gtgctgcaga gcagcggcct gtactccctg tcctccgtgg tcaccgtgcc ctctagctcc 600

ctgggaacac agacatatat ctgtaatgtc aatcacaagc cttccaacac caaagtcgat 660

aagaaagtcg agcccaagag ctgc 684

<210> 184
<211> 696
<212> DNA
<213> Artificial Sequence

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

<400> 184
gaggtgcagc tgctggaatc tggcggcgga ctggtgcagc ctggcggatc tctgagactg 60

agctgtgccg ccagcggctt caccttcagc acctacgcca tgaactgggt gcgccaggcc 120

cctggcaaag gcctggaatg ggtgtcccgg atcagaagca agtacaacaa ctacgccacc 180

tactacgccg acagcgtgaa gggccggttc accatcagcc gggacgacag caagaacacc 240

ctgtacctgc agatgaacag cctgcgggcc gaggacaccg ccgtgtacta ttgtgtgcgg 300

cacggcaact tcggcaacag ctatgtgtct tggtttgcct actggggcca gggcaccctc 360

gtgaccgtgt caagcgctag tgtggccgct ccctccgtgt ttatctttcc cccatccgat 420

gaacagctga aaagcggcac cgcctccgtc gtgtgtctgc tgaacaattt ttaccctagg 480

gaagctaaag tgcagtggaa agtggataac gcactgcagt ccggcaactc ccaggaatct 540

gtgacagaac aggactccaa ggacagcacc tactccctgt cctccaccct gacactgtct 600

aaggctgatt atgagaaaca caaagtctac gcctgcgaag tcacccatca gggcctgagc 660

tcgcccgtca caaagagctt caacagggga gagtgt 696

<210> 185
<211> 36
<212> DNA
<213> Artificial Sequence

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

<400> 185
gcaggcaagc attatgcagc ggacttttgg tcaagg 36

<210> 186
<211> 35
<212> DNA
<213> Artificial Sequence

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

<400> 186
caggcaagca ttatgagccg gacttttggt caagg 35

<210> 187
<211> 37
<212> DNA
<213> Artificial Sequence

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

primer"

<400> 187
cattatgaac cgggcttttg gtcaaggcac caaggtc 37

<210> 188
<211> 37
<212> DNA
<213> Artificial Sequence

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

<400> 188
cattatgaac cggaattttg gtcaaggcac caaggtc 37

<210> 189
<211> 2067
<212> DNA
<213> Artificial Sequence

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

<400> 189
gaggtgcaat tggttgaatc tggtggtggt ctggtaaaac cgggcggttc cctgcgtctg 60

agctgcgcgg cttccggatt caccttctcc aacgcgtgga tgagctgggt tcgccaggcc 120

ccgggcaaag gcctcgagtg ggttggtcgt atcaagtcta aaactgacgg tggcaccacg 180

gattacgcgg ctccagttaa aggtcgtttt accatttccc gcgacgatag caaaaacact 240

ctgtatctgc agatgaactc tctgaaaact gaagacaccg cagtctacta ctgtactacc 300

ccgtgggaat ggtcttggta cgattattgg ggccagggca cgctggttac ggtgtcttcc 360

gctagcacaa agggccctag cgtgttccct ctggccccca gcagcaagag cacaagcggc 420

ggaacagccg ccctgggctg cctcgtgaag gactacttcc ccgagcccgt gacagtgtct 480

tggaacagcg gagccctgac aagcggcgtg cacactttcc ctgccgtgct gcagagcagc 540

ggcctgtact ccctgagcag cgtggtcacc gtgcctagca gcagcctggg cacccagacc 600

tacatctgca acgtgaacca caagcccagc aacaccaaag tggacaagaa ggtggagccc 660

aagagctgtg atggcggagg agggtccgga ggcggaggat ccgaggtgca gctgctggaa 720

tctggcggcg gactggtgca gcctggcgga tctctgagac tgagctgtgc cgccagcggc 780

ttcaccttca gcacctacgc catgaactgg gtgcgccagg cccctggcaa aggcctggaa 840

tgggtgtccc ggatcagaag caagtacaac aactacgcca cctactacgc cgacagcgtg 900

aagggccggt tcaccatcag ccgggacgac agcaagaaca ccctgtacct gcagatgaac 960

agcctgcggg ccgaggacac cgccgtgtac tattgtgtgc ggcacggcaa cttcggcaac 1020

agctatgtgt cttggtttgc ctactggggc cagggcaccc tcgtgaccgt gtcaagcgct 1080

agtaccaagg gccccagcgt gttccccctg gcacccagca gcaagagcac atctggcgga 1140

acagccgctc tgggctgtct ggtgaaagac tacttccccg agcccgtgac cgtgtcttgg 1200

aactctggcg ccctgaccag cggcgtgcac acctttccag ccgtgctgca gagcagcggc 1260

ctgtactccc tgtcctccgt ggtcaccgtg ccctctagct ccctgggaac acagacatat 1320

atctgtaatg tcaatcacaa gccttccaac accaaagtcg ataagaaagt cgagcccaag 1380

agctgcgaca aaactcacac atgcccaccg tgcccagcac ctgaagctgc agggggaccg 1440

tcagtcttcc tcttcccccc aaaacccaag gacaccctca tgatctcccg gacccctgag 1500

gtcacatgcg tggtggtgga cgtgagccac gaagaccctg aggtcaagtt caactggtac 1560

gtggacggcg tggaggtgca taatgccaag acaaagccgc gggaggagca gtacaacagc 1620

acgtaccgtg tggtcagcgt cctcaccgtc ctgcaccagg actggctgaa tggcaaggag 1680

tacaagtgca aggtctccaa caaagccctc ggcgccccca tcgagaaaac catctccaaa 1740

gccaaagggc agccccgaga accacaggtg tacaccctgc ccccatgccg ggatgagctg 1800

accaagaacc aggtcagcct gtggtgcctg gtcaaaggct tctatcccag cgacatcgcc 1860

gtggagtggg agagcaatgg gcagccggag aacaactaca agaccacgcc tcccgtgctg 1920

gactccgacg gctccttctt cctctacagc aagctcaccg tggacaagag caggtggcag 1980

caggggaacg tcttctcatg ctccgtgatg catgaggctc tgcacaacca ctacacgcag 2040

aagagcctct ccctgtctcc gggtaaa 2067

<210> 190
<211> 1350
<212> DNA
<213> Artificial Sequence

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

<400> 190
gaggtgcaat tggttgaatc tggtggtggt ctggtaaaac cgggcggttc cctgcgtctg 60

agctgcgcgg cttccggatt caccttctcc aacgcgtgga tgagctgggt tcgccaggcc 120

ccgggcaaag gcctcgagtg ggttggtcgt atcaagtcta aaactgacgg tggcaccacg 180

gattacgcgg ctccagttaa aggtcgtttt accatttccc gcgacgatag caaaaacact 240

ctgtatctgc agatgaactc tctgaaaact gaagacaccg cagtctacta ctgtactacc 300

ccgtgggaat ggtcttggta cgattattgg ggccagggca cgctggttac ggtgtcttcc 360

gctagcacca agggcccctc cgtgttcccc ctggccccca gcagcaagag caccagcggc 420

ggcacagccg ctctgggctg cctggtcaag gactacttcc ccgagcccgt gaccgtgtcc 480

tggaacagcg gagccctgac ctccggcgtg cacaccttcc ccgccgtgct gcagagttct 540

ggcctgtata gcctgagcag cgtggtcacc gtgccttcta gcagcctggg cacccagacc 600

tacatctgca acgtgaacca caagcccagc aacaccaagg tggacaagaa ggtggagccc 660

aagagctgcg acaaaactca cacatgccca ccgtgcccag cacctgaagc tgcaggggga 720

ccgtcagtct tcctcttccc cccaaaaccc aaggacaccc tcatgatctc ccggacccct 780

gaggtcacat gcgtggtggt ggacgtgagc cacgaagacc ctgaggtcaa gttcaactgg 840

tacgtggacg gcgtggaggt gcataatgcc aagacaaagc cgcgggagga gcagtacaac 900

agcacgtacc gtgtggtcag cgtcctcacc gtcctgcacc aggactggct gaatggcaag 960

gagtacaagt gcaaggtctc caacaaagcc ctcggcgccc ccatcgagaa aaccatctcc 1020

aaagccaaag ggcagccccg agaaccacag gtgtgcaccc tgcccccatc ccgggatgag 1080

ctgaccaaga accaggtcag cctctcgtgc gcagtcaaag gcttctatcc cagcgacatc 1140

gccgtggagt gggagagcaa tgggcagccg gagaacaact acaagaccac gcctcccgtg 1200

ctggactccg acggctcctt cttcctcgtg agcaagctca ccgtggacaa gagcaggtgg 1260

cagcagggga acgtcttctc atgctccgtg atgcatgagg ctctgcacaa ccgcttcacg 1320

cagaagagcc tctccctgtc tccgggtaaa 1350

<210> 191
<211> 645
<212> DNA
<213> Artificial Sequence

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

<400> 191
caggccgtcg tgacccagga acccagcctg acagtgtctc ctggcggcac cgtgaccctg 60

acatgtggca gttctacagg cgccgtgacc accagcaact acgccaactg ggtgcaggaa 120

aagcccggcc aggccttcag aggactgatc ggcggcacca acaagagagc ccctggcacc 180

cctgccagat tcagcggatc tctgctggga ggaaaggccg ccctgacact gtctggcgcc 240

cagccagaag atgaggccga gtactactgc gccctgtggt acagcaacct gtgggtgttc 300

ggcggaggca ccaagctgac agtcctaggt caacccaagg ctgcccccag cgtgaccctg 360

ttcccccca gcagcgagga actgcaggcc aacaaggcca ccctggtctg cctgatcagc 420

gacttctacc caggcgccgt gaccgtggcc tggaaggccg acagcagccc cgtgaaggcc 480

ggcgtggaga ccaccacccc cagcaagcag agcaacaaca agtacgccgc cagcagctac 540

ctgagcctga cccccgagca gtggaagagc cacaggtcct acagctgcca ggtgacccac 600

gagggcagca ccgtggagaa aaccgtggcc cccaccgagt gcagc 645

<210> 192
<211> 2067
<212> DNA
<213> Artificial Sequence

<220>

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

<400> 192
gaggtgcagc tgctggaatc tggcggcgga ctggtgcagc ctggcggatc tctgagactg 60

agctgtgccg ccagcggctt caccttcagc acctacgcca tgaactgggt gcgccaggcc 120

cctggcaaag gcctggaatg ggtgtcccgg atcagaagca agtacaacaa ctacgccacc 180

tactacgccg acagcgtgaa gggccggttc accatcagcc gggacgacag caagaacacc 240

ctgtacctgc agatgaacag cctgcgggcc gaggacaccg ccgtgtacta ttgtgtgcgg 300

cacggcaact tcggcaacag ctatgtgtct tggtttgcct actggggcca gggcaccctc 360

gtgaccgtgt catctgctag cacaaagggc cctagcgtgt tccctctggc ccccagcagc 420

aagagcacaa gcggcggaac agccgccctg ggctgcctcg tgaaggacta cttccccgag 480

cccgtgacag tgtcttggaa cagcggagcc ctgacaagcg gcgtgcacac cttccctgcc 540

gtgctgcaga gcagcggcct gtactccctg agcagcgtgg tcaccgtgcc tagcagcagc 600

ctgggcaccc agacctacat ctgcaacgtg aaccacaagc ccagcaacac caaagtggac 660

aagaaggtgg agcccaagag ctgtgatggc ggaggagggt ccggaggcgg aggatccgag 720

gtgcaattgg ttgaatctgg tggtggtctg gtaaaaccgg gcggttccct gcgtctgagc 780

tgcgcggctt ccggattcac cttctccaac gcgtggatga gctgggttcg ccaggccccg 840

ggcaaaggcc tcgagtgggt tggtcgtatc aagtctaaaa ctgacggtgg caccacggat 900

tacgcggctc cagttaaagg tcgttttacc atttcccgcg acgatagcaa aaacactctg 960

tatctgcaga tgaactctct gaaaactgaa gacaccgcag tctactactg tactaccccg 1020

tgggaatggt cttggtacga ttattggggc cagggcacgc tggttacggt gtctagcgct 1080

agtaccaagg gccccagcgt gttccccctg gcacccagca gcaagagcac atctggcgga 1140

acagccgctc tgggctgtct ggtgaaagac tacttccccg agcccgtgac cgtgtcttgg 1200

aactctggcg ccctgaccag cggcgtgcac acctttccag ccgtgctgca gagcagcggc 1260

ctgtactccc tgtcctccgt ggtcaccgtg ccctctagct ccctgggaac acagacatat 1320

atctgtaatg tcaatcacaa gccttccaac accaaagtcg ataagaaagt cgagcccaag 1380

agctgcgaca aaactcacac atgcccaccg tgcccagcac ctgaagctgc agggggaccg 1440

tcagtcttcc tcttcccccc aaaacccaag gacaccctca tgatctcccg gacccctgag 1500

gtcacatgcg tggtggtgga cgtgagccac gaagaccctg aggtcaagtt caactggtac 1560

gtggacggcg tggaggtgca taatgccaag acaaagccgc gggaggagca gtacaacagc 1620

acgtaccgtg tggtcagcgt cctcaccgtc ctgcaccagg actggctgaa tggcaaggag 1680

tacaagtgca aggtctccaa caaagccctc ggcgccccca tcgagaaaac catctccaaa 1740

gccaaagggc agccccgaga accacaggtg tacaccctgc ccccatgccg ggatgagctg 1800

accaagaacc aggtcagcct gtggtgcctg gtcaaaggct tctatcccag cgacatcgcc 1860

gtggagtggg agagcaatgg gcagccggag aacaactaca agaccacgcc tcccgtgctg 1920

gactccgacg gctccttctt cctctacagc aagctcaccg tggacaagag caggtggcag 1980

caggggaacg tcttctcatg ctccgtgatg catgaggctc tgcacaacca ctacacgcag 2040

aagagcctct ccctgtctcc gggtaaa 2067

<210> 193
<211> 1365
<212> DNA
<213> Artificial Sequence

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

<400> 193
gaggtgcagc tgctggaatc tggcggcgga ctggtgcagc ctggcggatc tctgagactg 60

agctgtgccg ccagcggctt caccttcagc acctacgcca tgaactgggt gcgccaggcc 120

cctggcaaag gcctggaatg ggtgtcccgg atcagaagca agtacaacaa ctacgccacc 180

tactacgccg acagcgtgaa gggccggttc accatcagcc gggacgacag caagaacacc 240

ctgtacctgc agatgaacag cctgcgggcc gaggacaccg ccgtgtacta ttgtgtgcgg 300

cacggcaact tcggcaacag ctatgtgtct tggtttgcct actggggcca gggcaccctc 360

gtgaccgtgt catctgctag caccaagggc ccatcggtct tccccctggc accctcctcc 420

aagagcacct ctgggggcac agcggccctg ggctgcctgg tcaaggacta cttccccgaa 480

ccggtgacgg tgtcgtggaa ctcaggcgcc ctgaccagcg gcgtgcacac cttcccggct 540

gtcctacagt cctcaggact ctactccctc agcagcgtgg tgaccgtgcc ctccagcagc 600

ttgggcaccc agacctacat ctgcaacgtg aatcacaagc ccagcaacac caaggtggac 660

aagaaagttg agcccaaatc ttgtgacaaa actcacacat gcccaccgtg cccagcacct 720

gaagctgcag ggggaccgtc agtcttcctc ttcccccaa aacccaagga caccctcatg 780

atctcccgga cccctgaggt cacatgcgtg gtggtggacg tgagccacga agaccctgag 840

gtcaagttca actggtacgt ggacggcgtg gaggtgcata atgccaagac aaagccgcgg 900

gaggagcagt acaacagcac gtaccgtgtg gtcagcgtcc tcaccgtcct gcaccaggac 960

tggctgaatg gcaaggagta caagtgcaag gtctccaaca aagccctcgg cgcccccatc 1020

gagaaaacca tctccaaagc caaagggcag ccccgagaac cacaggtgta caccctgccc 1080

ccatgccggg atgagctgac caagaaccag gtcagcctgt ggtgcctggt caaaggcttc 1140

tatcccagcg acatcgccgt ggagtgggag agcaatgggc agccggagaa caactacaag 1200

accacgcctc ccgtgctgga ctccgacggc tccttcttcc tctacagcaa gctcaccgtg 1260

gacaagagca ggtggcagca ggggaacgtc ttctcatgct ccgtgatgca tgaggctctg 1320

cacaaccact acacgcagaa gagcctctcc ctgtctccgg gtaaa 1365

<210> 194
<211> 681
<212> DNA
<213> Artificial Sequence

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

<400> 194
gacaaaactc acacatgccc accgtgccca gcacctgaac tcctgggggg accgtcagtc 60

ttcctcttcc ccccaaaacc caaggacacc ctcatgatct cccggacccc tgaggtcaca 120

tgcgtggtgg tggacgtgag ccacgaagac cctgaggtca agttcaactg gtacgtggac 180

ggcgtggagg tgcataatgc caagacaaag ccgcgggagg agcagtacaa cagcacgtac 240

cgtgtggtca gcgtcctcac cgtcctgcac caggactggc tgaatggcaa ggagtacaag 300

tgcaaggtct ccaacaaagc cctcccagcc cccatcgaga aaaccatctc caaagccaaa 360

gggcagcccc gagaaccaca ggtgtgcacc ctgcccccat cccgggatga gctgaccaag 420

aaccaggtca gcctctcgtg cgcagtcaaa ggcttctatc ccagcgacat cgccgtggag 480

tgggagagca atgggcagcc ggagaacaac tacaagacca cgcctcccgt gctggactcc 540

gacggctcct tcttcctcgt gagcaagctc accgtggaca agagcaggtg gcagcagggg 600

aacgtcttct catgctccgt gatgcatgag gctctgcaca accgcttcac gcagaagagc 660

ctctccctgt ctccgggtaa a 681

<210> 195
<211> 2070
<212> DNA
<213> Artificial Sequence

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

<400> 195
caggtgcaat tggttcaatc tggtgctgaa gtaaaaaaac cgggcgcttc cgttaaagtg 60

agctgcaaag catccggata caccttcact tcctattaca tgcactgggt tcgtcaagcc 120

ccgggccagg gtctggaatg gatgggcatc attaacccaa gcggtggccc tacctcctac 180

gcgcagaaat tccagggtcg cgtcacgatg acccgtgaca ctagcacctc taccgtttat 240

atggagctgt ccagcctgcg ttctgaagat actgcagtgt actactgtgc acgcggtgac 300

ttcgcttggc tggactattg gggtcaaggc accctcgtaa cggtttcttc tgctagcaca 360

aagggcccca gcgtgttccc tctggccct agcagcaaga gcacatctgg cggaacagcc 420

gccctgggct gcctcgtgaa ggactacttt cccgagcctg tgaccgtgtc ctggaactct 480

ggcgccctga caagcggcgt gcacaccttt ccagccgtgc tgcagagcag cggcctgtac 540

tctctgagca gcgtggtcac cgtgcctagc agcagcctgg gcacccagac ctacatctgc 600

aacgtgaacc acaagcccag caacaccaaa gtggacaaga aggtggagcc caagagctgt 660

gatggcggag gagggtccgg aggcggagga tccgaggtgc agctgctgga atctggcggc 720

ggactggtgc agcctggcgg atctctgaga ctgagctgtg ccgccagcgg cttcaccttc 780

agcacctacg ccatgaactg ggtgcgccag gcccctggca aaggcctgga atgggtgtcc 840

cggatcagaa gcaagtacaa caactacgcc acctactacg ccgacagcgt gaagggccgg 900

ttcaccatca gccgggacga cagcaagaac accctgtacc tgcagatgaa cagcctgcgg 960

gccgaggaca ccgccgtgta ctattgtgtg cggcacggca acttcggcaa cagctatgtg 1020

tcttggtttg cctactgggg ccagggcacc ctcgtgaccg tgtcaagcgc tagtgtggcc 1080

gctccctccg tgtttatctt tcccccatcc gatgaacagc tgaaaagcgg caccgcctcc 1140

gtcgtgtgtc tgctgaacaa tttttaccct agggaagcta aagtgcagtg gaaagtggat 1200

aacgcactgc agtccggcaa ctcccaggaa tctgtgacag aacaggactc caaggacagc 1260

acctactccc tgtcctccac cctgacactg tctaaggctg attatgagaa acacaaagtc 1320

tacgcctgcg aagtcaccca tcagggcctg agctcgcccg tcacaaagag cttcaacagg 1380

ggagagtgtg acaagaccca cacctgtccc ccttgtcctg cccctgaagc tgctggcggc 1440

ccttctgtgt tcctgttccc cccaaagccc aaggacaccc tgatgatcag ccggaccccc 1500

gaagtgacct gcgtggtggt ggatgtgtcc cacgaggacc ctgaagtgaa gttcaattgg 1560

tacgtggacg gcgtggaagt gcacaacgcc aagacaaagc cgcgggagga gcagtacaac 1620

agcacgtacc gtgtggtcag cgtcctcacc gtcctgcacc aggactggct gaatggcaag 1680

gagtacaagt gcaaggtctc caacaaagcc ctcggcgccc ccatcgagaa aaccatctcc 1740

aaagccaaag ggcagccccg agaaccacag gtgtacaccc tgccccccatg ccgggatgag 1800

ctgaccaaga accaggtcag cctgtggtgc ctggtcaaag gcttctatcc cagcgacatc 1860

gccgtggagt gggagagcaa tgggcagccg gagaacaact acaagaccac gcctcccgtg 1920

ctggactccg acggctcctt cttcctctac agcaagctca ccgtggacaa gagcaggtgg 1980

cagcagggga acgtcttctc atgctccgtg atgcatgagg ctctgcacaa ccactacacg 2040

cagaagagcc tctccctgtc tccgggtaaa 2070

<210> 196
<211> 1341
<212> DNA
<213> Artificial Sequence

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

<400> 196
caggtgcaat tggttcaatc tggtgctgaa gtaaaaaaac cgggcgcttc cgttaaagtg 60

agctgcaaag catccggata caccttcact tcctattaca tgcactgggt tcgtcaagcc 120

ccgggccagg gtctggaatg gatgggcatc attaacccaa gcggtggccc tacctcctac 180

gcgcagaaat tccagggtcg cgtcacgatg acccgtgaca ctagcacctc taccgtttat 240

atggagctgt ccagcctgcg ttctgaagat actgcagtgt actactgtgc acgcggtgac 300

ttcgcttggc tggactattg gggtcaaggc accctcgtaa cggtttcttc tgctagcacc 360

aagggcccct ccgtgttccc cctggccccc agcagcaaga gcaccagcgg cggcacagcc 420

gctctgggct gcctggtcaa ggactacttc cccgagcccg tgaccgtgtc ctggaacagc 480

ggagccctga cctccggcgt gcacaccttc cccgccgtgc tgcagagttc tggcctgtat 540

agcctgagca gcgtggtcac cgtgccttct agcagcctgg gcacccagac ctacatctgc 600

aacgtgaacc acaagcccag caacaccaag gtggacaaga aggtggagcc caagagctgc 660

gacaaaactc acacatgccc accgtgccca gcacctgaag ctgcaggggg accgtcagtc 720

ttcctcttcc ccccaaaacc caaggacacc ctcatgatct cccggacccc tgaggtcaca 780

tgcgtggtgg tggacgtgag ccacgaagac cctgaggtca agttcaactg gtacgtggac 840

ggcgtggagg tgcataatgc caagacaaag ccgcgggagg agcagtacaa cagcacgtac 900

cgtgtggtca gcgtcctcac cgtcctgcac caggactggc tgaatggcaa ggagtacaag 960

tgcaaggtct ccaacaaagc cctcggcgcc cccatcgaga aaaccatctc caaagccaaa 1020

gggcagcccc gagaaccaca ggtgtgcacc ctgccccccat cccgggatga gctgaccaag 1080

aaccaggtca gcctctcgtg cgcagtcaaa ggcttctatc ccagcgacat cgccgtggag 1140

tgggagagca atgggcagcc ggagaacaac tacaagacca cgcctcccgt gctggactcc 1200

gacggctcct tcttcctcgt gagcaagctc accgtggaca agagcaggtg gcagcagggg 1260

aacgtcttct catgctccgt gatgcatgag gctctgcaca accactacac gcagaagagc 1320

ctctccctgt ctccgggtaa a 1341

<210> 197
<211> 657
<212> DNA
<213> Artificial Sequence

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

<400> 197
gatattgtta tgactcaatc tccactgtct ctgccggtga ctccaggcga accggcgagc 60

atttcttgcc gttccagcca gtctctgctg cactccaacg gctacaacta tctcgattgg 120

tacctgcaaa aaccgggtca gagccctcag ctgctgatct acctgggctc taaccgcgct 180

tccggtgtac cggaccgttt cagcggctct ggatccggca ccgatttcac gttgaaaatc 240

agccgtgttg aagcagaaga cgtgggcgtt tattactgta tgcaggcaag cattatgaac 300

cggacttttg gtcaaggcac caaggtcgaa attaaacgta cggtggctgc accatctgtc 360

ttcatcttcc cgccatctga tgagcagttg aaatctggaa ctgcctctgt tgtgtgcctg 420

ctgaataact tctatcccag agaggccaaa gtacagtgga aggtggataa cgccctccaa 480

tcgggtaact cccaggagag tgtcacagag caggacagca aggacagcac ctacagcctc 540

agcagcaccc tgacgctgag caaagcagac tacgagaaac acaaagtcta cgcctgcgaa 600

gtcacccatc agggcctgag ctcgcccgtc acaaagagct tcaacagggg agagtgt 657

<210> 198
<211> 642
<212> DNA
<213> Artificial Sequence

<220>

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

<400> 198
caggccgtcg tgacccagga acccagcctg acagtgtctc ctggcggcac cgtgaccctg 60

acatgtggca gttctacagg cgccgtgacc accagcaact acgccaactg ggtgcaggaa 120

aagcccggcc aggccttcag aggactgatc ggcggcacca acaagagagc ccctggcacc 180

cctgccagat tcagcggatc tctgctggga ggaaaggccg ccctgacact gtctggcgcc 240

cagccagaag atgaggccga gtactactgc gccctgtggt acagcaacct gtgggtgttc 300

ggcggaggca ccaagctgac agtgctgagc agcgcttcca ccaaaggccc ttccgtgttt 360

cctctggctc ctagctccaa gtccacctct ggaggcaccg ctgctctcgg atgcctcgtg 420

aaggattatt ttcctgagcc tgtgacagtg tcctggaata gcggagcact gacctctgga 480

gtgcatactt tccccgctgt gctgcagtcc tctggactgt acagcctgag cagcgtggtg 540

acagtgccca gcagcagcct gggcacccag acctacatct gcaacgtgaa ccacaagccc 600

agcaacacca aggtggacaa gaaggtggaa cccaagtctt gt 642

<210> 199
<211> 1377
<212> DNA
<213> Artificial Sequence

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

<400> 199
gaggtgcagc tgctggaatc tggcggcgga ctggtgcagc ctggcggatc tctgagactg 60

agctgtgccg ccagcggctt caccttcagc acctacgcca tgaactgggt gcgccaggcc 120

cctggcaaag gcctggaatg ggtgtcccgg atcagaagca agtacaacaa ctacgccacc 180

tactacgccg acagcgtgaa gggccggttc accatcagcc gggacgacag caagaacacc 240

ctgtacctgc agatgaacag cctgcgggcc gaggacaccg ccgtgtacta ttgtgtgcgg 300

cacggcaact tcggcaacag ctatgtgtct tggtttgcct actggggcca gggcaccctc 360

gtgaccgtgt catctgctag cgtggccgct ccctccgtgt ttatctttcc cccatccgat 420

gaacagctga aaagcggcac cgcctccgtc gtgtgtctgc tgaacaattt ttaccctagg 480

gaagctaaag tgcagtggaa agtggataac gcactgcagt ccggcaactc ccaggaatct 540

gtgacagaac aggactccaa ggacagcacc tactccctgt cctccaccct gacactgtct 600

aaggctgatt atgagaaaca caaagtctac gcctgcgaag tcacccatca gggcctgagc 660

tcgcccgtca caaagagctt caacagggga gagtgtgaca agacccacac ctgtcccct 720

tgtcctgccc ctgaagctgc tggcggccct tctgtgttcc tgttcccccc aaagcccaag 780

gacaccctga tgatcagccg gacccccgaa gtgacctgcg tggtggtgga tgtgtcccac 840

gaggaccctg aagtgaagtt caattggtac gtggacggcg tggaagtgca caacgccaag 900

acaaagccgc gggaggagca gtacaacagc acgtaccgtg tggtcagcgt cctcaccgtc 960

ctgcaccagg actggctgaa tggcaaggag tacaagtgca aggtctccaa caaagccctc 1020

ggcgccccca tcgagaaaac catctccaaa gccaaagggc agccccgaga accacaggtg 1080

tacaccctgc ccccatgccg ggatgagctg accaagaacc aggtcagcct gtggtgcctg 1140

gtcaaaggct tctatcccag cgacatcgcc gtggagtggg agagcaatgg gcagccggag 1200

aacaactaca agaccacgcc tcccgtgctg gactccgacg gctccttctt cctctacagc 1260

aagctcaccg tggacaagag caggtggcag caggggaacg tcttctcatg ctccgtgatg 1320

catgaggctc tgcacaacca ctacacgcag aagagcctct ccctgtctcc gggtaaa 1377

<210> 200
<211> 2067
<212> DNA
<213> Artificial Sequence

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

<400> 200
gaggtgcaat tggttgaatc tggtggtggt ctggtaaaac cgggcggttc cctgcgtctg 60

agctgcgcgg cttccggatt caccttctcc aacgcgtgga tgagctgggt tcgccaggcc 120

ccgggcaaag gcctcgagtg ggttggtcgt atcaagtcta aaactgacgg tggcaccacg 180

gattacgcgg ctccagttaa aggtcgtttt accatttccc gcgacgatag caaaaacact 240

ctgtatctgc agatgaactc tctgaaaact gaagacaccg cagtctacta ctgtactacc 300

ccgtgggaat ggtcttggta cgattattgg ggccagggca cgctggttac ggtgtcttcc 360

gctagcacaa agggccctag cgtgttccct ctggccccca gcagcaagag cacaagcggc 420

ggaacagccg ccctgggctg cctcgtgaag gactacttcc ccgagcccgt gacagtgtct 480

tggaacagcg gagccctgac aagcggcgtg cacactttcc ctgccgtgct gcagagcagc 540

ggcctgtact ccctgagcag cgtggtcacc gtgcctagca gcagcctggg cacccagacc 600

tacatctgca acgtgaacca caagcccagc aacaccaaag tggacaagaa ggtggagccc 660

aagagctgtg atggcggagg agggtccgga ggcggaggat ccgaggtgca gctgctggaa 720

tctggcggcg gactggtgca gcctggcgga tctctgagac tgagctgtgc cgccagcggc 780

ttcaccttca gcacctacgc catgaactgg gtgcgccagg cccctggcaa aggcctggaa 840

tgggtgtccc ggatcagaag caagtacaac aactacgcca cctactacgc cgacagcgtg 900

aagggccggt tcaccatcag ccgggacgac agcaagaaca ccctgtacct gcagatgaac 960

agcctgcggg ccgaggacac cgccgtgtac tattgtgtgc ggcacggcaa cttcggcgcc 1020

agctatgtgt cttggtttgc ctactggggc cagggcaccc tcgtgaccgt gtcaagcgct 1080

agtaccaagg gccccagcgt gttccccctg gcacccagca gcaagagcac atctggcgga 1140

acagccgctc tgggctgtct ggtgaaagac tacttccccg agcccgtgac cgtgtcttgg 1200

aactctggcg ccctgaccag cggcgtgcac acctttccag ccgtgctgca gagcagcggc 1260

ctgtactccc tgtcctccgt ggtcaccgtg ccctctagct ccctgggaac acagacatat 1320

atctgtaatg tcaatcacaa gccttccaac accaaagtcg ataagaaagt cgagcccaag 1380

agctgcgaca aaactcacac atgcccaccg tgcccagcac ctgaagctgc agggggaccg 1440

tcagtcttcc tcttcccccc aaaacccaag gacaccctca tgatctcccg gacccctgag 1500

gtcacatgcg tggtggtgga cgtgagccac gaagaccctg aggtcaagtt caactggtac 1560

gtggacggcg tggaggtgca taatgccaag acaaagccgc gggaggagca gtacaacagc 1620

acgtaccgtg tggtcagcgt cctcaccgtc ctgcaccagg actggctgaa tggcaaggag 1680

tacaagtgca aggtctccaa caaagccctc ggcgccccca tcgagaaaac catctccaaa 1740

gccaaagggc agccccgaga accacaggtg tacaccctgc ccccatgccg ggatgagctg 1800

accaagaacc aggtcagcct gtggtgcctg gtcaaaggct tctatcccag cgacatcgcc 1860

gtggagtggg agagcaatgg gcagccggag aacaactaca agaccacgcc tcccgtgctg 1920

gactccgacg gctccttctt cctctacagc aagctcaccg tggacaagag caggtggcag 1980

caggggaacg tcttctcatg ctccgtgatg catgaggctc tgcacaacca ctacacgcag 2040

aagagcctct ccctgtctcc gggtaaa 2067

<210> 201
<211> 2067
<212> DNA
<213> Artificial Sequence

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

<400> 201
gaggtgcaat tggttgaatc tggtggtggt ctggtaaaac cgggcggttc cctgcgtctg 60

agctgcgcgg cttccggatt caccttctcc aacgcgtgga tgagctgggt tcgccaggcc 120

ccgggcaaag gcctcgagtg ggttggtcgt atcaagtcta aaactgacgg tggcaccacg 180

gattacgcgg ctccagttaa aggtcgtttt accatttccc gcgacgatag caaaaacact 240

ctgtatctgc agatgaactc tctgaaaact gaagacaccg cagtctacta ctgtactacc 300

ccgtgggaat ggtcttggta cgattattgg ggccagggca cgctggttac ggtgtcttcc 360

gctagcacaa agggccctag cgtgttccct ctggccccca gcagcaagag cacaagcggc 420

ggaacagccg ccctgggctg cctcgtgaag gactacttcc ccgagcccgt gacagtgtct 480

tggaacagcg gagccctgac aagcggcgtg cacactttcc ctgccgtgct gcagagcagc 540

ggcctgtact ccctgagcag cgtggtcacc gtgcctagca gcagcctggg cacccagacc 600

tacatctgca acgtgaacca caagcccagc aacaccaaag tggacaagaa ggtggagccc 660

aagagctgtg atggcggagg agggtccgga ggcggaggat ccgaggtgca gctgctggaa 720

tctggcggcg gactggtgca gcctggcgga tctctgagac tgagctgtgc cgccagcggc 780

ttcaccttca gcacctacgc catgaactgg gtgcgccagg cccctggcaa aggcctggaa 840

tgggtgtccc ggatcagaag caagtacaac aactacgcca cctactacgc cgacagcgtg 900

aagggccggt tcaccatcag ccgggacgac agcaagaaca ccctgtacct gcagatgaac 960

agcctgcggg ccgaggacac cgccgtgtac tattgtgtgc ggcacggcaa cttcggcaac 1020

gcctatgtgt cttggtttgc ctactggggc cagggcaccc tcgtgaccgt gtcaagcgct 1080

agtaccaagg gccccagcgt gttccccctg gcacccagca gcaagagcac atctggcgga 1140

acagccgctc tgggctgtct ggtgaaagac tacttccccg agcccgtgac cgtgtcttgg 1200

aactctggcg ccctgaccag cggcgtgcac acctttccag ccgtgctgca gagcagcggc 1260

ctgtactccc tgtcctccgt ggtcaccgtg ccctctagct ccctgggaac acagacatat 1320

atctgtaatg tcaatcacaa gccttccaac accaaagtcg ataagaaagt cgagcccaag 1380

agctgcgaca aaactcacac atgcccaccg tgcccagcac ctgaagctgc agggggaccg 1440

tcagtcttcc tcttcccccc aaaacccaag gacaccctca tgatctcccg gacccctgag 1500

gtcacatgcg tggtggtgga cgtgagccac gaagaccctg aggtcaagtt caactggtac 1560

gtggacggcg tggaggtgca taatgccaag acaaagccgc gggaggagca gtacaacagc 1620

acgtaccgtg tggtcagcgt cctcaccgtc ctgcaccagg actggctgaa tggcaaggag 1680

tacaagtgca aggtctccaa caaagccctc ggcgccccca tcgagaaaac catctccaaa 1740

gccaaagggc agccccgaga accacaggtg tacaccctgc ccccatgccg ggatgagctg 1800

accaagaacc aggtcagcct gtggtgcctg gtcaaaggct tctatcccag cgacatcgcc 1860

gtggagtggg agagcaatgg gcagccggag aacaactaca agaccacgcc tcccgtgctg 1920

gactccgacg gctccttctt cctctacagc aagctcaccg tggacaagag caggtggcag 1980

caggggaacg tcttctcatg ctccgtgatg catgaggctc tgcacaacca ctacacgcag 2040

aagagcctct ccctgtctcc gggtaaa 2067

<210> 202
<211> 1323
<212> DNA
<213> Artificial Sequence

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

<400> 202
caggccgtcg tgacccagga acccagcctg acagtgtctc ctggcggcac cgtgaccctg 60

acatgtggca gttctacagg cgccgtgacc accagcaact acgccaactg ggtgcaggaa 120

aagcccggcc aggccttcag aggactgatc ggcggcacca acaagagagc ccctggcacc 180

cctgccagat tcagcggatc tctgctggga ggaaaggccg ccctgacact gtctggcgcc 240

cagccagaag atgaggccga gtactactgc gccctgtggt acagcaacct gtgggtgttc 300

ggcggaggca ccaagctgac agtgctgagc agcgctagca ccaagggccc atcggtcttc 360

cccctggcac cctcctccaa gagcacctct gggggcacag cggccctggg ctgcctggtc 420

aaggactact tccccgaacc ggtgacggtg tcgtggaact caggcgccct gaccagcggc 480

gtgcacacct tcccggctgt cctacagtcc tcaggactct actccctcag cagcgtggtg 540

accgtgccct ccagcagctt gggcacccag acctacatct gcaacgtgaa tcacaagccc 600

agcaacacca aggtggacaa gaaagttgag cccaaatctt gtgacaaaac tcacacatgc 660

ccaccgtgcc cagcacctga agctgcaggg ggaccgtcag tcttcctctt cccccaaaa 720

cccaaggaca ccctcatgat ctcccggacc cctgaggtca catgcgtggt ggtggacgtg 780

agccacgaag accctgaggt caagttcaac tggtacgtgg acggcgtgga ggtgcataat 840

gccaagacaa agccgcggga ggagcagtac aacagcacgt accgtgtggt cagcgtcctc 900

accgtcctgc accaggactg gctgaatggc aaggagtaca agtgcaaggt ctccaacaaa 960

gccctcggcg cccccatcga gaaaaccatc tccaaagcca aagggcagcc ccgagaacca 1020

caggtgtaca ccctgccccc atcccgggat gagctgacca agaaccaggt cagcctgacc 1080

tgcctggtca aaggcttcta tcccagcgac atcgccgtgg agtgggagag caatgggcag 1140

ccggagaaca actacaagac cacgcctccc gtgctggact ccgacggctc cttcttcctc 1200

tacagcaagc tcaccgtgga caagagcagg tggcagcagg ggaacgtctt ctcatgctcc 1260

gtgatgcatg aggctctgca caaccactac acgcagaaga gcctctccct gtctccgggt 1320

aaa 1323

<210> 203
<211> 681
<212> DNA
<213> Artificial Sequence

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

<400> 203
gaggtgcaat tggttgaatc tggtggtggt ctggtaaaac cgggcggttc cctgcgtctg 60

agctgcgcgg cttccggatt caccttctcc aacgcgtgga tgagctgggt tcgccaggcc 120

ccgggcaaag gcctcgagtg ggttggtcgt atcaagtcta aaactgacgg tggcaccacg 180

gattacgcgg ctccagttaa aggtcgtttt accatttccc gcgacgatag caaaaacact 240

ctgtatctgc agatgaactc tctgaaaact gaagacaccg cagtctacta ctgtactacc 300

ccgtgggaat ggtcttggta cgattattgg ggccagggca cgctggttac ggtgtcttcc 360

gctagcgtgg ccgctccctc cgtgttcatc ttcccacctt ccgacgagca gctgaagtcc 420

ggcaccgctt ctgtcgtgtg cctgctgaac aacttctacc cccgcgaggc caaggtgcag 480

tggaaggtgg acaacgccct gcagtccggc aacagccagg aatccgtgac cgagcaggac 540

tccaaggaca gcacctactc cctgtcctcc accctgaccc tgtccaaggc cgactacgag 600

aagcacaagg tgtacgcctg cgaagtgacc caccagggcc tgtctagccc cgtgaccaag 660

tctttcaacc ggggcgagtg c 681

<210> 204
<211> 693
<212> DNA
<213> Artificial Sequence

<220>

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

<400> 204
gaagtgcagc tgctggaatc cggcggagga ctggtgcagc ctggcggatc tctgagactg 60

tcttgtgccg cctccggctt caccttctcc acctacgcca tgaactgggt gcgacaggct 120

cctggcaagg gcctggaatg ggtgtcccgg atcagatcca agtacaacaa ctacgccacc 180

tactacgccg actccgtgaa gggccggttc accatctctc gggacgactc caagaacacc 240

ctgtacctgc agatgaactc cctgcgggcc gaggacaccg ccgtgtacta ttgtgtgcgg 300

cacggcaact tcggcaactc ctatgtgtct tggtttgcct actggggcca gggcaccctc 360

gtgaccgtgt catctgctag ccccaaggct gcccccagcg tgaccctgtt tccccccagc 420

agcgaggaac tgcaggccaa caaggccacc ctggtctgcc tgatcagcga cttctaccca 480

ggcgccgtga ccgtggcctg gaaggccgac agcagccccg tgaaggccgg cgtggagacc 540

accaccccca gcaagcagag caacaacaag tacgccgcca gcagctacct gagcctgacc 600

cccgagcagt ggaagagcca caggtcctac agctgccagg tgacccacga gggcagcacc 660

gtggagaaaa ccgtggcccc caccgagtgc agc 693

<210> 205
<211> 327
<212> DNA
<213> Artificial Sequence

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

<400> 205
cagaccgtcg tgacccagga acccagcctg acagtgtctc ctggcggcac cgtgaccctg 60

acatgtggca gttctacagg cgccgtgacc accagcaact acgccaactg ggtgcagcag 120

aagccaggcc aggctcccag aggactgatc ggcggcacca acgccagagc ccctggcacc 180

cctgccagat tcagcggatc tctgctggga ggaaaggccg ccctgacact gtctggcgtg 240

cagcctgaag atgaggccga gtactactgc gccctgtggt acagcaacct gtgggtgttc 300

ggcggaggca ccaagctgac agtccta 327

<210> 206
<211> 327
<212> DNA
<213> Artificial Sequence

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

<400> 206
cagaccgtcg tgacccagga acccagcctg acagtgtctc ctggcggcac cgtgaccctg 60

acatgtggca gttctacagg cgccgtgacc accagcaact acgccaactg ggtgcagcag 120

aagccaggcc aggctcccag aggactgatc ggcggcacca acaagagagc ccctggcacc 180

cctgccagat tcagcggatc tctgctggga ggaaaggccg ccctgacact gtctggcgtg 240

cagcctgaag atgaggccga gtactactgc gccctgtggt acgccaacct gtgggtgttc 300

ggcggaggca ccaagctgac agtccta 327

<210> 207
<211> 366
<212> DNA
<213> Artificial Sequence

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

<400> 207
gaggtgcaat tggtggaaag cggaggcggc ctcgtgaagc ctggcggatc tctgagactg 60

agctgtgccg ccagcggctt caccttcagc aacgcctgga tgcactgggt gcgccaggcc 120

cctggaaaag gactcgagtg ggtgggacgg atcaagagca agaccgatgg cggcaccacc 180

gactatgccg cccctgtgaa gggccggttc accatcagca gggacgacag caagaacacc 240

ctgtacctgc agatgaacag cctgaaaacc gaggacaccg ccgtgtacta ctgcaccacc 300

ccctgggagt ggtcttggta cgactattgg ggccagggca ccctcgtgac cgtgtcctct 360

gctagc 366

<210> 208
<211> 366
<212> DNA
<213> Artificial Sequence

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

<400> 208
gaggtgcaat tggtggaaag cggaggcggc ctcgtgaagc ctggcggatc tctgagactg 60

agctgtgccg ccagcggctt caccttcagc aacgcctgga tgagctgggt gcgccaggcc 120

cctggaaaag gactcgagtg ggtgtcccgg atcaagagca agaccgatgg cggcaccacc 180

gactatgccg cccctgtgaa gggccggttc accatcagca gggacgacag caagaacacc 240

ctgtacctgc agatgaacag cctgaaaacc gaggacaccg ccgtgtacta ctgcaccacc 300

ccctgggagt ggtcttggta cgactattgg ggccagggca ccctcgtgac cgtgtcctct 360

gctagc 366

<210> 209
<211> 366
<212> DNA
<213> Artificial Sequence

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

<400> 209
gaggtgcaat tggtggaaag cggaggcggc ctcgtgaagc ctggcggatc tctgagactg 60

agctgtgccg ccagcggctt caccttcagc aacgcctgga tgagctgggt gcgccaggcc 120

cctggaaaag gactcgagtg ggtgggatct atcaagagca agaccgacgg cggcaccacc 180

gactatgccg cccctgtgaa gggccggttc accatcagca gggacgacag caagaacacc 240

ctgtacctgc agatgaacag cctgaaaacc gaggacaccg ccgtgtacta ctgcaccacc 300

ccctgggagt ggtcttggta cgactattgg ggccagggca ccctcgtgac cgtgtcctct 360

gctagc 366

<210> 210
<211> 366
<212> DNA
<213> Artificial Sequence

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

<400> 210
gaggtgcaat tggtggaaag cggaggcggc ctcgtgaagc ctggcggatc tctgagactg 60

agctgtgccg ccagcggctt caccttcagc aacgcctgga tgagctgggt gcgccaggcc 120

cctggaaaag gactcgagtg ggtgggacgg atcaagagca agaccgatgg cggcaccacc 180

gactatgccg cccctgtgaa gggccggttc accatcagca gggacgacag caagaacacc 240

ctgtacctgc agatgaacag cctgaaaacc gaggacaccg ccgtgtacta ctgcaccacc 300

ccctacgagt ggtcttggta cgactactgg ggccagggca ccctcgtgac cgtgtcatct 360

gctagc 366

<210> 211
<211> 366
<212> DNA
<213> Artificial Sequence

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

<400> 211
gaggtgcaat tggtggaaag cggaggcggc ctcgtgaagc ctggcggatc tctgagactg 60

agctgtgccg ccagcggctt caccttcagc aacgcctgga tgagctgggt gcgccaggcc 120

cctggaaaag gactcgagtg ggtgggacgg atcaagagca agaccgatgg cggcaccacc 180

gactatgccg cccctgtgaa gggccggttc accatcagca gggacgacag caagaacacc 240

ctgtacctgc agatgaacag cctgaaaacc gaggacaccg ccgtgtacta ctgcaccacc 300

ccctgggagt actcttggta cgactactgg ggccagggca ccctcgtgac cgtgtcatct 360

gctagc 366

<210> 212
<211> 366
<212> DNA
<213> Artificial Sequence

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

<400> 212
caggtgcaat tggttcaatc tggtgctgaa gtaaaaaaac cgggcgcttc cgttaaagtg 60

agctgcaaag catccggata caccttcact tcctattaca tgcactgggt tcgtcaagcc 120

ccgggccagg gtctggaatg gatgggcatc attaacccaa gcggtggctc tacctcctac 180

gcgcagaaat tccagggtcg cgtcacgatg acccgtgaca ctagcacctc taccgtttat 240

atggagctgt ccagcctgcg ttctgaagat actgcagtgt actactgtgc acgcaactac 300

actatcgttg tttctccgtt cgactattgg ggtcaaggca ccctcgtaac ggtttcttct 360

gctagc 366

<210> 213
<211> 366
<212> DNA
<213> Artificial Sequence

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

<400> 213
caggtgcaat tggttcaatc tggtgctgaa gtaaaaaaac cgggcgcttc cgttaaagtg 60

agctgcaaag catccggata caccttcact tcctattaca tgcactgggt tcgtcaagcc 120

ccgggccagg gtctggaatg gatgggcatc attaacccaa gcggtggctc tacctcctac 180

gcgcagaaat tccagggtcg cgtcacgatg acccgtgaca ctagcacctc taccgtttat 240

atggagctgt ccagcctgcg ttctgaagat actgcagtgt actactgtgc acgcaactac 300

ttcatcggtt ctgttgctat ggactattgg ggtcaaggca ccctcgtaac ggtttcttct 360

gctagc 366

<210> 214
<211> 357
<212> DNA
<213> Artificial Sequence

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

<400> 214
caggtgcaat tggttcaatc tggtgctgaa gtaaaaaaac cgggcgcttc cgttaaagtg 60

agctgcaaag catccggata caccttcact tcctattaca tgcactgggt tcgtcaagcc 120

ccgggccagg gtctggaatg gatgggcatc attaacccaa gcggtggctc tacctcctac 180

gcgcagaaat tccagggtcg cgtcacgatg acccgtgaca ctagcacctc taccgtttat 240

atggagctgt ccagcctgcg ttctgaagat actgcagtgt actactgtgc acgcggtctg 300

acttactcta tggactattg gggtcaaggc accctcgtaa cggtttcttc tgctagc 357

<210> 215
<211> 342
<212> DNA
<213> Artificial Sequence

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

<400> 215
gatattgtta tgactcaatc tccactgtct ctgccggtga ctccaggcga accggcgagc 60

atttcttgcc gttccagcca gtctctgctg cactccaacg gctacaacta tctcgattgg 120

tacctgcaaa aaccgggtca gagccctcag ctgctgatct acctgggctc taaccgcgct 180

tccggtgtac cggaccgttt cagcggctct ggatccggca ccgatttcac gttgaaaatc 240

agccgtgttg aagcagaaga cgtgggcgtt tattactgta tgcaggcact gcagattcca 300

aacacttttg gtcaaggcac caaggtcgaa attaaacgta cg 342

<210> 216
<211> 354
<212> DNA
<213> Artificial Sequence

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

<400> 216
gaggtgcaat tgttggagtc tgggggaggc ttggtacagc ctgggggtc cctgagactc 60

tcctgtgcag cctccggatt cacctttagc agttatgcca tgagctgggt ccgccaggct 120

ccagggaagg ggctggagtg ggtctcagct attagtggta gtggtggtag cacatactac 180

gcagactccg tgaagggccg gttcaccatc tccagagaca attccaagaa cacgctgtat 240

ctgcagatga acagcctgag agccgaggac acggccgtat attactgtgc gaaatacgct 300

tacgctctgg actactgggg ccaaggaacc ctggtcaccg tctcgagtgc tagc 354

<210> 217
<211> 327
<212> DNA
<213> Artificial Sequence

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

<400> 217
gaaatcgtgt taacgcagtc tccaggcacc ctgtctttgt ctccagggga aagagccacc 60

ctctcttgca gggccagtca gagtgttagc agcagctact tagcctggta ccagcagaaa 120

cctggccagg ctcccaggct cctcatctat ggagcatcca gcagggccac tggcatccca 180

gacaggttca gtggcagtgg atccgggaca gacttcactc tcaccatcag cagactggag 240

cctgaagatt ttgcagtgta ttactgtcag cagcatggca gcagcagcac gttcggccag 300

gggaccaaag tggaaatcaa acgtacg 327

<210> 218
<211> 366
<212> DNA
<213> Artificial Sequence

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

<400> 218
caggtgcaat tggttcaatc tggtgctgaa gtaaaaaaac cgggcgcttc cgttaaagtg 60

agctgcaaag catccggata caccttcact tcctattaca tgcactgggt tcgtcaagcc 120

ccgggccagg gtctggaatg gatgggcatc attaacccaa gcggtggctc tacctcctac 180

gcgcagaaat tccagggtcg cgtcacgatg acccgtgaca ctagcacctc taccgtttat 240

atggagctgt ccagcctgcg ttctgaagat actgcagtgt actactgtgc acgcggtgac 300

ttctctgctg gtcgtctgat ggactattgg ggtcaaggca ccctcgtaac ggtttcttct 360

gctagc 366

<210> 219
<211> 345
<212> DNA
<213> Artificial Sequence

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

<400> 219
gatattgtta tgactcaatc tccactgtct ctgccggtga ctccaggcga accggcgagc 60

atttcttgcc gttccagcca gtctctgctg cactccaacg gctacaacta tctcgattgg 120

tacctgcaaa aaccgggtca gagccctcag ctgctgatct acctgggctc taaccgcgct 180

tccggtgtac cggaccgttt cagcggctct ggatccggca ccgatttcac gttgaaaatc 240

agccgtgttg aagcagaaga cgtgggcgtt tattactgta tgcaggcact gcagacccca 300

ccaattacct ttggtcaagg caccaaggtc gaaattaaac gtacg 345

<210> 220
<211> 357
<212> DNA
<213> Artificial Sequence

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

<400> 220
caggtgcaat tggttcaatc tggtgctgaa gtaaaaaaac cgggcgcttc cgttaaagtg 60

agctgcaaag catccggata caccttcact tcctattaca tgcactgggt tcgtcaagcc 120

ccgggccagg gtctggaatg gatgggcatc attaacccaa gcggtggctc tacctcctac 180

gcgcagaaat tccagggtcg cgtcacgatg acccgtgaca ctagcacctc taccgtttat 240

atggagctgt ccagcctgcg ttctgaagat actgcagtgt actactgtgc acgcggtgac 300

tacaacgctt tcgactattg gggtcacggc accctcgtaa cggtttcttc tgctagc 357

<210> 221
<211> 339
<212> DNA
<213> Artificial Sequence

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

<400> 221
gatattgtta tgactcaatc tccactgtct ctgccggtga ctccaggcga accggcgagc 60

atttcttgcc gttccagcca gtctctgctg cactccaacg gctacaacta tctcgattgg 120

tacctgcaaa aaccgggtca gagccctcag ctgctgatct acctgggctc taaccgcgct 180

tccggtgtac cggaccgttt cagcggctct ggatccggca ccgatttcac gttgaaaatc 240

agccgtgttg aagcagaaga cgtgggcgtt tattactgta tgcaggcatg gcatagccca 300

actttggtc aaggcaccaa ggtcgaaatt aaacgtacg 339

<210> 222
<211> 357
<212> DNA
<213> Artificial Sequence

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

<400> 222
caggtgcaat tggttcaatc tggtgctgaa gtaaaaaaac cgggcgcttc cgttaaagtg 60

agctgcaaag catccggata caccttcact tcctattaca tgcactgggt tcgtcaagcc 120

ccgggccagg gtctggaatg gatgggcatc attaacccaa gcggtggctc tacctcctac 180

gcgcagaaat tccagggtcg cgtcacgatg acccgtgaca ctagcacctc taccgtttat 240

atggagctgt ccagcctgcg ttctgaagat actgcagtgt actactgtgc acgcggtgct 300

acttacacta tggactattg gggtcaaggc accctcgtaa cggtttcttc tgctagc 357

<210> 223
<211> 342
<212> DNA
<213> Artificial Sequence

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

<400> 223
gatattgtta tgactcaatc tccactgtct ctgccggtga ctccaggcga accggcgagc 60

atttcttgcc gttccagcca gtctctgctg cactccaacg gctacaacta tctcgattgg 120

tacctgcaaa aaccgggtca gagccctcag ctgctgatct acctgggctc taaccgcgct 180

tccggtgtac cggaccgttt cagcggctct ggatccggca ccgatttcac gttgaaaatc 240

agccgtgttg aagcagaaga cgtgggcgtt tattactgta tgcaggcact gcagacccca 300

attacttttg gtcaaggcac caaggtcgaa attaaacgta cg 342

<210> 224
<211> 1344
<212> DNA
<213> Artificial Sequence

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

<400> 224
caggtgcagc tgcagcagtc tggcgccgag ctcgtgaaac ctggcgcctc cgtgaagatc 60

agctgcaagg ccagcggcta cagcttcacc ggctacttca tgaactgggt caagcagagc 120

cacggcaaga gcctggaatg gatcggcaga atccacccct acgacggcga caccttctac 180

aaccagaact tcaaggacaa ggccaccctg accgtggaca agagcagcaa caccgcccac 240

atggaactgc tgagcctgac cagcgaggac ttcgccgtgt actactgcac cagatacgac 300

ggcagccggg ccatggatta ttggggccag ggcaccaccg tgacagtgtc cagcgctagc 360

accaagggcc cctccgtgtt ccccctggcc cccagcagca agagcaccag cggcggcaca 420

gccgctctgg gctgcctggt caaggactac ttccccgagc ccgtgaccgt gtcctggaac 480

agcggagccc tgacctccgg cgtgcacacc ttccccgccg tgctgcagag ttctggcctg 540

tatagcctga gcagcgtggt caccgtgcct tctagcagcc tgggcaccca gacctacatc 600

tgcaacgtga accacaagcc cagcaacacc aaggtggaca agaaggtgga gcccaagagc 660

tgcgacaaaa ctcacacatg cccaccgtgc ccagcacctg aagctgcagg gggaccgtca 720

gtcttcctct tccccccaaa acccaaggac accctcatga tctcccggac ccctgaggtc 780

acatgcgtgg tggtggacgt gagccacgaa gaccctgagg tcaagttcaa ctggtacgtg 840

gacggcgtgg aggtgcataa tgccaagaca aagccgcggg aggagcagta caacagcacg 900

taccgtgtgg tcagcgtcct caccgtcctg caccaggact ggctgaatgg caaggagtac 960

aagtgcaagg tctccaacaa agccctcggc gcccccatcg agaaaaccat ctccaaagcc 1020

aaagggcagc cccgagaacc acaggtgtgc accctgcccc catcccggga tgagctgacc 1080

aagaaccagg tcagcctctc gtgcgcagtc aaaggcttct atcccagcga catcgccgtg 1140

gagtgggaga gcaatgggca gccggagaac aactacaaga ccacgcctcc cgtgctggac 1200

tccgacggct ccttcttcct cgtgagcaag ctcaccgtgg acaagagcag gtggcagcag 1260

gggaacgtct tctcatgctc cgtgatgcat gaggctctgc acaaccacta cacgcagaag 1320

agcctctccc tgtctccggg taaa 1344

<210> 225
<211> 2073
<212> DNA
<213> Artificial Sequence

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

<400> 225
caggtgcagc tgcagcagtc tggcgccgag ctcgtgaaac ctggcgcctc cgtgaagatc 60

agctgcaagg ccagcggcta cagcttcacc ggctacttca tgaactgggt caagcagagc 120

cacggcaaga gcctggaatg gatcggcaga atccacccct acgacggcga caccttctac 180

aaccagaact tcaaggacaa ggccaccctg accgtggaca agagcagcaa caccgcccac 240

atggaactgc tgagcctgac cagcgaggac ttcgccgtgt actactgcac cagatacgac 300

ggcagccggg ccatggatta ttggggccag ggcaccaccg tgacagtgtc cagcgctagc 360

acaaagggcc ccagcgtgtt ccctctggcc cctagcagca agagcacatc tggcggaaca 420

gccgccctgg gctgcctcgt gaaggactac tttcccgagc ctgtgaccgt gtcctggaac 480

tctggcgccc tgacaagcgg cgtgcacacc tttccagccg tgctgcagag cagcggcctg 540

tactctctga gcagcgtggt caccgtgcct agcagcagcc tgggcaccca gacctacatc 600

tgcaacgtga accacaagcc cagcaacacc aaagtggaca agaaggtgga gcccaagagc 660

tgtgatggcg gaggagggtc cggaggcgga ggatccgaag tgcagctggt ggaaagcggc 720

ggaggcctgg tgcagcctaa gggctctctg aagctgagct gtgccgccag cggcttcacc 780

ttcaacacct acgccatgaa ctgggtgcgc caggcccctg gcaaaggcct ggaatgggtg 840

gcccggatca gaagcaagta caacaattac gccacctact acgccgacag cgtgaaggac 900

cggttcacca tcagccggga cgacagccag agcatcctgt acctgcagat gaacaacctg 960

aaaaccgagg acaccgccat gtactactgc gtgcggcacg gcaacttcgg caacagctat 1020

gtgtcttggt ttgcctactg gggccagggc accctcgtga cagtgtctgc tgctagcgtg 1080

gccgctccct ccgtgtttat ctttccccca tccgatgaac agctgaaaag cggcaccgcc 1140

tccgtcgtgt gtctgctgaa caatttttac cctagggaag ctaaagtgca gtggaaagtg 1200

gataacgcac tgcagtccgg caactcccag gaatctgtga cagaacagga ctccaaggac 1260

agcacctact ccctgtcctc caccctgaca ctgtctaagg ctgattatga gaaacacaaa 1320

gtctacgcct gcgaagtcac ccatcagggc ctgagctcgc ccgtcacaaa gagcttcaac 1380

aggggagagt gtgacaagac ccacacctgt ccccccttgtc ctgcccctga agctgctggc 1440

ggcccttctg tgttcctgtt ccccccaaag cccaaggaca ccctgatgat cagccggacc 1500

cccgaagtga cctgcgtggt ggtggatgtg tcccacgagg accctgaagt gaagttcaat 1560

tggtacgtgg acggcgtgga agtgcacaac gccaagacaa agccgcggga ggagcagtac 1620

aacagcacgt accgtgtggt cagcgtcctc accgtcctgc accaggactg gctgaatggc 1680

aaggagtaca agtgcaaggt ctccaacaaa gccctcggcg cccccatcga gaaaaccatc 1740

tccaaagcca aagggcagcc ccgagaacca caggtgtaca ccctgccccc atgccgggat 1800

gagctgacca agaaccaggt cagcctgtgg tgcctggtca aaggcttcta tcccagcgac 1860

atcgccgtgg agtgggagag caatgggcag ccggagaaca actacaagac cacgcctccc 1920

gtgctggact ccgacggctc cttcttcctc tacagcaagc tcaccgtgga caagagcagg 1980

tggcagcagg ggaacgtctt ctcatgctcc gtgatgcatg aggctctgca caaccactac 2040

acgcagaaga gcctctccct gtctccgggt aaa 2073

<210> 226
<211> 654
<212> DNA
<213> Artificial Sequence

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

polynucleotide"

<400> 226
gacatcgagc tgacccagag ccctgcctct ctggccgtgt ctctgggaca gagagccatc 60

atcagctgca aggccagcca gagcgtgtcc tttgccggca cctctctgat gcactggtat 120

caccagaagc ccggccagca gcccaagctg ctgatctaca gagccagcaa cctggaagcc 180

ggcgtgccca caagattttc cggcagcggc agcaagaccg acttcaccct gaacatccac 240

cccgtggaag aagaggacgc cgccacctac tactgccagc agagcagaga gtaccctac 300

accttcggcg gaggcaccaa gctggaaatc aagcgtacgg tggctgcacc atctgtcttc 360

atcttcccgc catctgatga gcagttgaaa tctggaactg cctctgttgt gtgcctgctg 420

aataacttct atcccagaga ggccaaagta cagtggaagg tggataacgc cctccaatcg 480

ggtaactccc aggagagtgt cacagagcag gacagcaagg acagcaccta cagcctcagc 540

agcaccctga cgctgagcaa agcagactac gagaaacaca aagtctacgc ctgcgaagtc 600

acccatcagg gcctgagctc gcccgtcaca aagagcttca acaggggaga gtgt 654

<210> 227
<211> 209
<212> PRT
<213> Homo sapiens

<400> 227
Arg Ile Ala Trp Ala Arg Thr Glu Leu Leu Asn Val Cys Met Asn Ala
1 5 10 15

Lys His His Lys Glu Lys Pro Gly Pro Glu Asp Lys Leu His Glu Gln
20 25 30

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

Glu Ala His Lys Asp Val Ser Tyr Leu Tyr Arg Phe Asn Trp Asn His
50 55 60

Cys Gly Glu Met Ala Pro Ala Cys Lys Arg His Phe Ile Gln Asp Thr
65 70 75 80

```
Cys Leu Tyr Glu Cys Ser Pro Asn Leu Gly Pro Trp Ile Gln Gln Val
                85                  90                  95

Asp Gln Ser Trp Arg Lys Glu Arg Val Leu Asn Val Pro Leu Cys Lys
            100                 105                 110

Glu Asp Cys Glu Gln Trp Trp Glu Asp Cys Arg Thr Ser Tyr Thr Cys
        115                 120                 125

Lys Ser Asn Trp His Lys Gly Trp Asn Trp Thr Ser Gly Phe Asn Lys
    130                 135                 140

Cys Ala Val Gly Ala Ala Cys Gln Pro Phe His Phe Tyr Phe Pro Thr
145                 150                 155                 160

Pro Thr Val Leu Cys Asn Glu Ile Trp Thr His Ser Tyr Lys Val Ser
                165                 170                 175

Asn Tyr Ser Arg Gly Ser Gly Arg Cys Ile Gln Met Trp Phe Asp Pro
            180                 185                 190

Ala Gln Gly Asn Pro Asn Glu Glu Val Ala Arg Phe Tyr Ala Ala Ala
        195                 200                 205

Met
```

<210> 228
<211> 214
<212> PRT
<213> Homo sapiens

<400> 228

```
Thr Met Cys Ser Ala Gln Asp Arg Thr Asp Leu Leu Asn Val Cys Met
1               5                   10                  15

Asp Ala Lys His His Lys Thr Lys Pro Gly Pro Glu Asp Lys Leu His
            20                  25                  30
```

```
Asp Gln Cys Ser Pro Trp Lys Lys Asn Ala Cys Cys Thr Ala Ser Thr
        35                  40                  45

Ser Gln Glu Leu His Lys Asp Thr Ser Arg Leu Tyr Asn Phe Asn Trp
    50                  55                  60

Asp His Cys Gly Lys Met Glu Pro Ala Cys Lys Arg His Phe Ile Gln
65                  70                  75                  80

Asp Thr Cys Leu Tyr Glu Cys Ser Pro Asn Leu Gly Pro Trp Ile Gln
                85                  90                  95

Gln Val Asn Gln Ser Trp Arg Lys Glu Arg Phe Leu Asp Val Pro Leu
            100                 105                 110

Cys Lys Glu Asp Cys Gln Arg Trp Trp Glu Asp Cys His Thr Ser His
        115                 120                 125

Thr Cys Lys Ser Asn Trp His Arg Gly Trp Asp Trp Thr Ser Gly Val
    130                 135                 140

Asn Lys Cys Pro Ala Gly Ala Leu Cys Arg Thr Phe Glu Ser Tyr Phe
145                 150                 155                 160

Pro Thr Pro Ala Ala Leu Cys Glu Gly Leu Trp Ser His Ser Tyr Lys
                165                 170                 175

Val Ser Asn Tyr Ser Arg Gly Ser Gly Arg Cys Ile Gln Met Trp Phe
            180                 185                 190

Asp Ser Ala Gln Gly Asn Pro Asn Glu Glu Val Ala Arg Phe Tyr Ala
        195                 200                 205

Ala Ala Met His Val Asn
    210
```

<210> 229
<211> 220
<212> PRT
<213> Homo sapiens

<400> 229
Ser Ala Arg Ala Arg Thr Asp Leu Leu Asn Val Cys Met Asn Ala Lys
1 5 10 15

His His Lys Thr Gln Pro Ser Pro Glu Asp Glu Leu Tyr Gly Gln Cys
20 25 30

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

Leu His Lys Asp Thr Ser Arg Leu Tyr Asn Phe Asn Trp Asp His Cys
50 55 60

Gly Lys Met Glu Pro Thr Cys Lys Arg His Phe Ile Gln Asp Ser Cys
65 70 75 80

Leu Tyr Glu Cys Ser Pro Asn Leu Gly Pro Trp Ile Arg Gln Val Asn
85 90 95

Gln Ser Trp Arg Lys Glu Arg Ile Leu Asn Val Pro Leu Cys Lys Glu
100 105 110

Asp Cys Glu Arg Trp Trp Glu Asp Cys Arg Thr Ser Tyr Thr Cys Lys
115 120 125

Ser Asn Trp His Lys Gly Trp Asn Trp Thr Ser Gly Ile Asn Glu Cys
130 135 140

Pro Ala Gly Ala Leu Cys Ser Thr Phe Glu Ser Tyr Phe Pro Thr Pro
145 150 155 160

Ala Ala Leu Cys Glu Gly Leu Trp Ser His Ser Phe Lys Val Ser Asn
165 170 175

```
Tyr Ser Arg Gly Ser Gly Arg Cys Ile Gln Met Trp Phe Asp Ser Ala
            180                 185                 190


Gln Gly Asn Pro Asn Glu Glu Val Ala Lys Phe Tyr Ala Ala Ala Met
        195                 200                 205


Asn Ala Gly Ala Pro Ser Arg Gly Ile Ile Asp Ser
    210                 215                 220


<210> 230
<211> 208
<212> PRT
<213> Mus musculus

<400> 230
Thr Arg Ala Arg Thr Glu Leu Leu Asn Val Cys Met Asp Ala Lys His
1               5                   10                  15


His Lys Glu Lys Pro Gly Pro Glu Asp Asn Leu His Asp Gln Cys Ser
            20                  25                  30


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


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


Thr Met Thr Ser Glu Cys Lys Arg His Phe Ile Gln Asp Thr Cys Leu
65                  70                  75                  80


Tyr Glu Cys Ser Pro Asn Leu Gly Pro Trp Ile Gln Gln Val Asp Gln
                85                  90                  95


Ser Trp Arg Lys Glu Arg Ile Leu Asp Val Pro Leu Cys Lys Glu Asp
            100                 105                 110


Cys Gln Gln Trp Trp Glu Asp Cys Gln Ser Ser Phe Thr Cys Lys Ser
        115                 120                 125
```

```
Asn Trp His Lys Gly Trp Asn Trp Ser Ser Gly His Asn Glu Cys Pro
    130                 135                 140

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

Ala Leu Cys Glu Glu Ile Trp Ser His Ser Tyr Lys Leu Ser Asn Tyr
                165                 170                 175

Ser Arg Gly Ser Gly Arg Cys Ile Gln Met Trp Phe Asp Pro Ala Gln
            180                 185                 190

Gly Asn Pro Asn Glu Glu Val Ala Arg Phe Tyr Ala Glu Ala Met Ser
        195                 200                 205


<210> 231
<211> 213
<212> PRT
<213> Macaca fascicularis

<400> 231
Glu Ala Gln Thr Arg Thr Ala Arg Ala Arg Thr Glu Leu Leu Asn Val
1               5                   10                  15

Cys Met Asn Ala Lys His His Lys Glu Lys Pro Gly Pro Glu Asp Lys
            20                  25                  30

Leu His Glu Gln Cys Arg Pro Trp Lys Lys Asn Ala Cys Cys Ser Thr
        35                  40                  45

Asn Thr Ser Gln Glu Ala His Lys Asp Val Ser Tyr Leu Tyr Arg Phe
    50                  55                  60

Asn Trp Asn His Cys Gly Glu Met Ala Pro Ala Cys Lys Arg His Phe
65                  70                  75                  80

Ile Gln Asp Thr Cys Leu Tyr Glu Cys Ser Pro Asn Leu Gly Pro Trp
                85                  90                  95
```

```
Ile Gln Gln Val Asp Gln Ser Trp Arg Lys Glu Arg Val Leu Asn Val
            100                 105                 110


Pro Leu Cys Lys Glu Asp Cys Glu Arg Trp Trp Glu Asp Cys Arg Thr
        115                 120                 125


Ser Tyr Cys Lys Ser Asn Trp His Lys Gly Trp Asn Trp Thr Ser Gly
    130                 135                 140


Phe Asn Lys Cys Pro Val Gly Ala Ala Cys Gln Pro Phe His Phe Tyr
145                 150                 155                 160


Phe Pro Thr Pro Thr Val Leu Cys Asn Glu Ile Trp Thr Tyr Ser Tyr
                165                 170                 175


Lys Val Ser Asn Tyr Ser Arg Gly Ser Gly Arg Cys Ile Gln Met Trp
            180                 185                 190


Phe Asp Pro Ala Gln Gly Asn Pro Asn Glu Glu Val Ala Arg Phe Tyr
        195                 200                 205


Ala Ala Ala Met Ser
    210


<210> 232
<211> 9
<212> PRT
<213> Artificial Sequence

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

<400> 232
Pro Trp Glu Tyr Ser Trp Tyr Asp Tyr
1               5


<210> 233
<211> 11
<212> PRT
```

<213> Artificial Sequence

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

<400> 233
Asn Tyr Thr Ile Val Val Ser Pro Phe Asp Tyr
1 5 10

<210> 234
<211> 11
<212> PRT
<213> Artificial Sequence

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

<400> 234
Asn Tyr Phe Ile Gly Ser Val Ala Met Asp Tyr
1 5 10

<210> 235
<211> 8
<212> PRT
<213> Artificial Sequence

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

<400> 235
Gly Leu Thr Tyr Ser Met Asp Tyr
1 5

<210> 236
<211> 9
<212> PRT
<213> Artificial Sequence

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

peptide"

<400> 236
Met Gln Ala Leu Gln Ile Pro Asn Thr
1 5

<210> 237
<211> 7
<212> PRT
<213> Artificial Sequence

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

<400> 237
Tyr Ala Tyr Ala Leu Asp Tyr
1 5

<210> 238
<211> 8
<212> PRT
<213> Artificial Sequence

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

<400> 238
Gln Gln His Gly Ser Ser Ser Thr
1 5

<210> 239
<211> 11
<212> PRT
<213> Artificial Sequence

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

<400> 239
Gly Asp Phe Ser Ala Gly Arg Leu Met Asp Tyr
1 5 10

<210> 240
<211> 10
<212> PRT
<213> Artificial Sequence

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

<400> 240
Met Gln Ala Leu Gln Thr Pro Pro Ile Thr
1 5 10

<210> 241
<211> 8
<212> PRT
<213> Artificial Sequence

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

<400> 241
Gly Asp Tyr Asn Ala Phe Asp Tyr
1 5

<210> 242
<211> 8
<212> PRT
<213> Artificial Sequence

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

<400> 242
Met Gln Ala Trp His Ser Pro Thr
1 5

<210> 243
<211> 8
<212> PRT

<213> Artificial Sequence

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

<400> 243
Gly Ala Thr Tyr Thr Met Asp Tyr
1 5

<210> 244
<211> 9
<212> PRT
<213> Artificial Sequence

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

<400> 244
Met Gln Ala Leu Gln Thr Pro Ile Thr
1 5

<210> 245
<211> 227
<212> PRT
<213> Artificial Sequence

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

<400> 245
Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly
1 5 10 15

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

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

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

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

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

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

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

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

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

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

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

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

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

Pro Gly Lys
225
```

<210> 246
<211> 2076

<212> DNA
<213> Artificial Sequence

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

<400> 246
caggtgcaat tggttcaatc tggtgctgaa gtaaaaaaac cgggcgcttc cgttaaagtg 60

agctgcaaag catccggata caccttcact tcctattaca tgcactgggt tcgtcaagcc 120

ccgggccagg gtctggaatg gatgggcatc attaacccaa gcggtggctc tacctcctac 180

gcgcagaaat tccagggtcg cgtcacgatg acccatgaca ctagcacctc taccgtttat 240

atggagctgt ccagcctgcg ttctgaagat actgcagtgt actactgtgc acgctctttc 300

ttcactggtt tccatctgga ctattggggt caaggcaccc tcgtaacggt ttcttctgct 360

agcacaaagg gccccagcgt gttccctctg gcccctagca gcaagagcac atctggcgga 420

acagccgccc tgggctgcct cgtgaaggac tactttcccg agcctgtgac cgtgtcctgg 480

aactctggcg ccctgacaag cggcgtgcac acctttccag ccgtgctgca gagcagcggc 540

ctgtactctc tgagcagcgt ggtcaccgtg cctagcagca gcctgggcac ccagacctac 600

atctgcaacg tgaaccacaa gcccagcaac accaaagtgg acaagaaggt ggagcccaag 660

agctgtgatg gcggaggagg gtccggaggc ggaggatccg aggtgcagct gctggaatct 720

ggcggcggac tggtgcagcc tggcggatct ctgagactga gctgtgccgc cagcggcttc 780

accttcagca cctacgccat gaactgggtg cgccaggccc ctggcaaagg cctggaatgg 840

gtgtcccgga tcagaagcaa gtacaacaac tacgccacct actacgccga cagcgtgaag 900

ggccggttca ccatcagccg ggacgacagc aagaacaccc tgtacctgca gatgaacagc 960

ctgcgggccg aggacaccgc cgtgtactat tgtgtgcggc acggcaactt cggcaacagc 1020

tatgtgtctt ggtttgccta ctggggccag ggcaccctcg tgaccgtgtc aagcgctagt 1080

gtggccgctc cctccgtgtt tatctttccc ccatccgatg aacagctgaa aagcggcacc 1140

gcctccgtcg tgtgtctgct gaacaatttt taccctaggg aagctaaagt gcagtggaaa 1200

gtggataacg cactgcagtc cggcaactcc caggaatctg tgacagaaca ggactccaag 1260

gacagcacct actccctgtc ctccaccctg acactgtcta aggctgatta tgagaaacac 1320

aaagtctacg cctgcgaagt cacccatcag ggcctgagct cgcccgtcac aaagagcttc 1380

aacaggggag agtgtgacaa gacccacacc tgtccccctt gtcctgcccc tgaagctgct 1440

ggcggccctt ctgtgttcct gttcccccca aagcccaagg acaccctgat gatcagccgg 1500

acccccgaag tgacctgcgt ggtggtggat gtgtcccacg aggaccctga agtgaagttc 1560

aattggtacg tggacggcgt ggaagtgcac aacgccaaga caaagccgcg ggaggagcag 1620

tacaacagca cgtaccgtgt ggtcagcgtc ctcaccgtcc tgcaccagga ctggctgaat 1680

ggcaaggagt acaagtgcaa ggtctccaac aaagccctcg gcgcccccat cgagaaaacc 1740

atctccaaag ccaaagggca gccccgagaa ccacaggtgt acaccctgcc cccatgccgg 1800

gatgagctga ccaagaacca ggtcagcctg tggtgcctgg tcaaaggctt ctatcccagc 1860

gacatcgccg tggagtggga gagcaatggg cagccggaga acaactacaa gaccacgcct 1920

cccgtgctgg actccgacgg ctccttcttc ctctacagca agctcaccgt ggacaagagc 1980

aggtggcagc aggggaacgt cttctcatgc tccgtgatgc atgaggctct gcacaaccac 2040

tacacgcaga agagcctctc cctgtctccg ggtaaa 2076

<210> 247
<211> 1347
<212> DNA
<213> Artificial Sequence

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

<400> 247
caggtgcaat tggttcaatc tggtgctgaa gtaaaaaaac cgggcgcttc cgttaaagtg 60

agctgcaaag catccggata caccttcact tcctattaca tgcactgggt tcgtcaagcc 120

ccgggccagg gtctggaatg gatgggcatc attaacccaa gcggtggctc tacctcctac 180

gcgcagaaat tccagggtcg cgtcacgatg acccatgaca ctagcacctc taccgtttat 240

atggagctgt ccagcctgcg ttctgaagat actgcagtgt actactgtgc acgctctttc 300

ttcactggtt tccatctgga ctattggggt caaggcaccc tcgtaacggt ttcttctgct 360

agcaccaagg gcccctccgt gttccccctg gcccccagca gcaagagcac cagcggcggc 420

acagccgctc tgggctgcct ggtcaaggac tacttccccg agcccgtgac cgtgtcctgg 480

aacagcggag ccctgacctc cggcgtgcac accttccccg ccgtgctgca gagttctggc 540

ctgtatagcc tgagcagcgt ggtcaccgtg ccttctagca gcctgggcac ccagacctac 600

atctgcaacg tgaaccacaa gcccagcaac accaaggtgg acaagaaggt ggagcccaag 660

agctgcgaca aaactcacac atgcccaccg tgcccagcac ctgaagctgc agggggaccg 720

tcagtcttcc tcttcccccc aaaacccaag gacaccctca tgatctcccg gacccctgag 780

gtcacatgcg tggtggtgga cgtgagccac gaagaccctg aggtcaagtt caactggtac 840

gtggacggcg tggaggtgca taatgccaag acaaagccgc gggaggagca gtacaacagc 900

acgtaccgtg tggtcagcgt cctcaccgtc ctgcaccagg actggctgaa tggcaaggag 960

tacaagtgca aggtctccaa caaagccctc ggcgccccca tcgagaaaac catctccaaa 1020

gccaaagggc agccccgaga accacaggtg tgcaccctgc ccccatcccg ggatgagctg 1080

accaagaacc aggtcagcct ctcgtgcgca gtcaaaggct tctatcccag cgacatcgcc 1140

gtggagtggg agagcaatgg gcagccggag aacaactaca agaccacgcc tcccgtgctg 1200

gactccgacg gctccttctt cctcgtgagc aagctcaccg tggacaagag caggtggcag 1260

caggggaacg tcttctcatg ctccgtgatg catgaggctc tgcacaacca ctacacgcag 1320

aagagcctct ccctgtctcc gggtaaa 1347

<210> 248
<211> 120
<212> PRT
<213> Artificial Sequence

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

<400> 248
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Lys Pro Gly Gly

1 5 10 15

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

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

Gly Arg Ile Lys Ser Lys Thr Glu Gly Gly Thr Thr Asp Tyr Ala Ala
50 55 60

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

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

Tyr Cys Thr Thr Pro Trp Glu Trp Ser Trp Tyr Asp Tyr Trp Gly Gln
100 105 110

Gly Thr Leu Val Thr Val Ser Ser
115 120

<210> 249
<211> 120
<212> PRT
<213> Artificial Sequence

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

<400> 249
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Lys Pro Gly Gly
1 5 10 15

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

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


Gly Arg Ile Lys Ser Lys Thr Gln Gly Gly Thr Thr Asp Tyr Ala Ala
    50                  55                  60


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


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


Tyr Cys Thr Thr Pro Trp Glu Trp Ser Trp Tyr Asp Tyr Trp Gly Gln
            100                 105                 110


Gly Thr Leu Val Thr Val Ser Ser
        115                 120


<210> 250
<211> 125
<212> PRT
<213> Artificial Sequence

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

<400> 250
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 Thr Tyr
            20                  25                  30


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


Ser Arg Ile Arg Ser Lys Tyr Asn Asn Tyr Ala Thr Tyr Tyr Ala Asp
    50                  55                  60
```

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

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

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

Ala Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
115 120 125

<210> 251
<211> 125
<212> PRT
<213> Artificial Sequence

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

<400> 251
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 Thr Tyr
20 25 30

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

Ser Arg Ile Arg Ser Lys Tyr Asn Asn Tyr Ala Thr Tyr Tyr Ala Asp
50 55 60

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

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

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


Ala Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
        115                 120                 125


<210> 252
<211> 689
<212> PRT
<213> Artificial Sequence

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

<400> 252
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Lys Pro Gly Gly
1               5                   10                  15


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


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


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


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


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


Tyr Cys Thr Thr Pro Trp Glu Trp Ser Trp Tyr Asp Tyr Trp Gly Gln
            100                 105                 110


Gly Thr Leu Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val
```

```
        115                 120                 125

Phe Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala
    130                 135                 140

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

Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val
                165                 170                 175

Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro
            180                 185                 190

Ser Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys
        195                 200                 205

Pro Ser Asn Thr Lys Val Asp Lys Lys Val Glu Pro Lys Ser Cys Asp
    210                 215                 220

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Val Gln Leu Leu Glu
225                 230                 235                 240

Ser Gly Gly Gly Leu Val Gln Pro Gly Gly Ser Leu Arg Leu Ser Cys
                245                 250                 255

Ala Ala Ser Gly Phe Thr Phe Ser Thr Tyr Ala Met Asn Trp Val Arg
            260                 265                 270

Gln Ala Pro Gly Lys Gly Leu Glu Trp Val Ser Arg Ile Arg Ser Lys
        275                 280                 285

Tyr Asn Asn Tyr Ala Thr Tyr Tyr Ala Asp Ser Val Lys Gly Arg Phe
    290                 295                 300

Thr Ile Ser Arg Asp Asp Ser Lys Asn Thr Leu Tyr Leu Gln Met Asn
305                 310                 315                 320
```

```
Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys Val Arg His Gly
                325                 330                 335

Asn Phe Gly Ala Ser Tyr Val Ser Trp Phe Ala Tyr Trp Gly Gln Gly
            340                 345                 350

Thr Leu Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe
        355                 360                 365

Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu
    370                 375                 380

Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp
385                 390                 395                 400

Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu
                405                 410                 415

Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser
            420                 425                 430

Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro
        435                 440                 445

Ser Asn Thr Lys Val Asp Lys Lys Val Glu Pro Lys Ser Cys Asp Lys
    450                 455                 460

Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Ala Ala Gly Gly Pro
465                 470                 475                 480

Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser
                485                 490                 495

Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp
            500                 505                 510

Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn
```

```
        515                 520                 525

Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val
    530                 535                 540

Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu
545                 550                 555                 560

Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Gly Ala Pro Ile Glu Lys
                565                 570                 575

Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr
            580                 585                 590

Leu Pro Pro Cys Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu Trp
        595                 600                 605

Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu
    610                 615                 620

Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu
625                 630                 635                 640

Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys
                645                 650                 655

Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu
            660                 665                 670

Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly
        675                 680                 685

Lys
```

<210> 253
<211> 450
<212> PRT

<213> Artificial Sequence

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

<400> 253

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


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


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


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


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


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


Tyr Cys Thr Thr Pro Trp Glu Trp Ser Trp Tyr Asp Tyr Trp Gly Gln
            100                 105                 110


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


Phe Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala
    130                 135                 140


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


Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val
                165                 170                 175
```

```
Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro
            180                 185                 190

Ser Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys
        195                 200                 205

Pro Ser Asn Thr Lys Val Asp Lys Lys Val Glu Pro Lys Ser Cys Asp
    210                 215                 220

Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Ala Ala Gly Gly
225                 230                 235                 240

Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile
                245                 250                 255

Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu
            260                 265                 270

Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His
        275                 280                 285

Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg
    290                 295                 300

Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys
305                 310                 315                 320

Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Gly Ala Pro Ile Glu
                325                 330                 335

Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Cys
            340                 345                 350

Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu
        355                 360                 365
```

```
Ser Cys Ala Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp
    370                 375                 380

Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val
385                 390                 395                 400

Leu Asp Ser Asp Gly Ser Phe Phe Leu Val Ser Lys Leu Thr Val Asp
                405                 410                 415

Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His
            420                 425                 430

Glu Ala Leu His Asn Arg Phe Thr Gln Lys Ser Leu Ser Leu Ser Pro
        435                 440                 445

Gly Lys
    450
```

<210> 254
<211> 215
<212> PRT
<213> Artificial Sequence

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

<400> 254

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

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

Asn Tyr Ala Asn Trp Val Gln Glu Lys Pro Gly Gln Ala Phe Arg Gly
        35                  40                  45

Leu Ile Gly Gly Thr Asn Lys Arg Ala Pro Gly Thr Pro Ala Arg Phe
    50                  55                  60
```

```
Ser Gly Ser Leu Leu Gly Gly Lys Ala Ala Leu Thr Leu Ser Gly Ala
65                  70                  75                  80

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

Leu Trp Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu Gly Gln Pro
            100                 105                 110

Lys Ala Ala Pro Ser Val Thr Leu Phe Pro Pro Ser Ser Glu Glu Leu
        115                 120                 125

Gln Ala Asn Lys Ala Thr Leu Val Cys Leu Ile Ser Asp Phe Tyr Pro
    130                 135                 140

Gly Ala Val Thr Val Ala Trp Lys Ala Asp Ser Ser Pro Val Lys Ala
145                 150                 155                 160

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

Ala Ser Ser Tyr Leu Ser Leu Thr Pro Glu Gln Trp Lys Ser His Arg
            180                 185                 190

Ser Tyr Ser Cys Gln Val Thr His Glu Gly Ser Thr Val Glu Lys Thr
        195                 200                 205

Val Ala Pro Thr Glu Cys Ser
    210                 215


<210> 255
<211> 689
<212> PRT
<213> Artificial Sequence

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

<400> 255
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Lys Pro Gly Gly
1   5   10   15

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

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

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

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

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

Tyr Cys Thr Thr Pro Trp Glu Trp Ser Trp Tyr Asp Tyr Trp Gly Gln
            100   105   110

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

Phe Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala
    130   135   140

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

Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val
                165   170   175

Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro
            180   185   190

```
Ser Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys
        195                 200                 205

Pro Ser Asn Thr Lys Val Asp Lys Lys Val Glu Pro Lys Ser Cys Asp
    210                 215                 220

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Val Gln Leu Leu Glu
225                 230                 235                 240

Ser Gly Gly Gly Leu Val Gln Pro Gly Gly Ser Leu Arg Leu Ser Cys
                245                 250                 255

Ala Ala Ser Gly Phe Thr Phe Ser Thr Tyr Ala Met Asn Trp Val Arg
            260                 265                 270

Gln Ala Pro Gly Lys Gly Leu Glu Trp Val Ser Arg Ile Arg Ser Lys
        275                 280                 285

Tyr Asn Asn Tyr Ala Thr Tyr Tyr Ala Asp Ser Val Lys Gly Arg Phe
    290                 295                 300

Thr Ile Ser Arg Asp Asp Ser Lys Asn Thr Leu Tyr Leu Gln Met Asn
305                 310                 315                 320

Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys Val Arg His Gly
                325                 330                 335

Asn Phe Gly Asn Ala Tyr Val Ser Trp Phe Ala Tyr Trp Gly Gln Gly
            340                 345                 350

Thr Leu Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe
        355                 360                 365

Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu
    370                 375                 380

Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp
385                 390                 395                 400
```

```
Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu
                405                 410                 415

Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser
            420                 425                 430

Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro
        435                 440                 445

Ser Asn Thr Lys Val Asp Lys Lys Val Glu Pro Lys Ser Cys Asp Lys
    450                 455                 460

Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Ala Ala Gly Gly Pro
465                 470                 475                 480

Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser
                485                 490                 495

Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp
            500                 505                 510

Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn
        515                 520                 525

Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val
    530                 535                 540

Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu
545                 550                 555                 560

Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Gly Ala Pro Ile Glu Lys
                565                 570                 575

Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr
            580                 585                 590
```

```
Leu Pro Pro Cys Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu Trp
        595                 600                 605


Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu
    610                 615                 620


Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu
625                 630                 635                 640


Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys
                645                 650                 655


Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu
            660                 665                 670


Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly
        675                 680                 685


Lys
```

<210> 256
<211> 690
<212> PRT
<213> Artificial Sequence

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

<400> 256

```
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 Ser Tyr
            20                  25                  30


Tyr Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
        35                  40                  45
```

```
Gly Ile Ile Asn Pro Ser Gly Gly Pro Thr Ser Tyr Ala Gln Lys Phe
    50                  55                  60

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

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

Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu Gly Cys
    130                 135                 140

Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser
145                 150                 155                 160

Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu Gln Ser
                165                 170                 175

Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser
            180                 185                 190

Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn
        195                 200                 205

Thr Lys Val Asp Lys Lys Val Glu Pro Lys Ser Cys Asp Gly Gly Gly
    210                 215                 220

Gly Ser Gly Gly Gly Gly Ser Glu Val Gln Leu Leu Glu Ser Gly Gly
225                 230                 235                 240

Gly Leu Val Gln Pro Gly Gly Ser Leu Arg Leu Ser Cys Ala Ala Ser
```

```
                245                 250                 255

Gly Phe Thr Phe Ser Thr Tyr Ala Met Asn Trp Val Arg Gln Ala Pro
            260                 265                 270

Gly Lys Gly Leu Glu Trp Val Ser Arg Ile Arg Ser Lys Tyr Asn Asn
        275                 280                 285

Tyr Ala Thr Tyr Tyr Ala Asp Ser Val Lys Gly Arg Phe Thr Ile Ser
    290                 295                 300

Arg Asp Asp Ser Lys Asn Thr Leu Tyr Leu Gln Met Asn Ser Leu Arg
305                 310                 315                 320

Ala Glu Asp Thr Ala Val Tyr Tyr Cys Val Arg His Gly Asn Phe Gly
                325                 330                 335

Ala Ser Tyr Val Ser Trp Phe Ala Tyr Trp Gly Gln Gly Thr Leu Val
            340                 345                 350

Thr Val Ser Ser Ala Ser Val Ala Ala Pro Ser Val Phe Ile Phe Pro
        355                 360                 365

Pro Ser Asp Glu Gln Leu Lys Ser Gly Thr Ala Ser Val Val Cys Leu
    370                 375                 380

Leu Asn Asn Phe Tyr Pro Arg Glu Ala Lys Val Gln Trp Lys Val Asp
385                 390                 395                 400

Asn Ala Leu Gln Ser Gly Asn Ser Gln Glu Ser Val Thr Glu Gln Asp
                405                 410                 415

Ser Lys Asp Ser Thr Tyr Ser Leu Ser Ser Thr Leu Thr Leu Ser Lys
            420                 425                 430

Ala Asp Tyr Glu Lys His Lys Val Tyr Ala Cys Glu Val Thr His Gln
        435                 440                 445
```

```
Gly Leu Ser Ser Pro Val Thr Lys Ser Phe Asn Arg Gly Glu Cys Asp
    450                 455                 460

Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Ala Ala Gly Gly
465                 470                 475                 480

Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile
                485                 490                 495

Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu
            500                 505                 510

Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His
        515                 520                 525

Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg
    530                 535                 540

Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys
545                 550                 555                 560

Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Gly Ala Pro Ile Glu
                565                 570                 575

Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr
            580                 585                 590

Thr Leu Pro Pro Cys Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu
        595                 600                 605

Trp Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp
    610                 615                 620

Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val
625                 630                 635                 640

Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp
```

645 650 655

Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His
660 665 670

Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro
675 680 685

Gly Lys
690

<210> 257
<211> 447
<212> PRT
<213> Artificial Sequence

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

<400> 257
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 Ser Tyr
20 25 30

Tyr Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45

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

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

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

Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu Gly Cys
    130                 135                 140

Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser
145                 150                 155                 160

Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu Gln Ser
                165                 170                 175

Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser
            180                 185                 190

Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn
        195                 200                 205

Thr Lys Val Asp Lys Lys Val Glu Pro Lys Ser Cys Asp Lys Thr His
    210                 215                 220

Thr Cys Pro Pro Cys Pro Ala Pro Glu Ala Ala Gly Gly Pro Ser Val
225                 230                 235                 240

Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr
                245                 250                 255

Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu
            260                 265                 270

Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys
        275                 280                 285

Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser
    290                 295                 300
```

```
Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys
305                 310                 315                 320


Cys Lys Val Ser Asn Lys Ala Leu Gly Ala Pro Ile Glu Lys Thr Ile
                325                 330                 335


Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Cys Thr Leu Pro
            340                 345                 350


Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu Ser Cys Ala
        355                 360                 365


Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn
    370                 375                 380


Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser
385                 390                 395                 400


Asp Gly Ser Phe Phe Leu Val Ser Lys Leu Thr Val Asp Lys Ser Arg
                405                 410                 415


Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu
            420                 425                 430


His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys
        435                 440                 445


<210> 258
<211> 219
<212> PRT
<213> Artificial Sequence

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

<400> 258
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 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 Thr 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

Ser Ile Met Gln Arg Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
            100                 105                 110

Arg Thr Val Ala Ala Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu
        115                 120                 125

Gln Leu Lys Ser Gly Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe
    130                 135                 140

Tyr Pro Arg Glu Ala Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln
145                 150                 155                 160

Ser Gly Asn Ser Gln Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser
                165                 170                 175

Thr Tyr Ser Leu Ser Ser Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu
            180                 185                 190

Lys His Lys Val Tyr Ala Cys Glu Val Thr His Gln Gly Leu Ser Ser
        195                 200                 205
```

Pro Val Thr Lys Ser Phe Asn Arg Gly Glu Cys
210 215

<210> 259
<211> 214
<212> PRT
<213> Artificial Sequence

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

<400> 259
Gln Ala Val Val Thr Gln Glu Pro Ser Leu Thr Val Ser Pro Gly Gly
1 5 10 15

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

Asn Tyr Ala Asn Trp Val Gln Glu Lys Pro Gly Gln Ala Phe Arg Gly
35 40 45

Leu Ile Gly Gly Thr Asn Lys Arg Ala Pro Gly Thr Pro Ala Arg Phe
50 55 60

Ser Gly Ser Leu Leu Gly Gly Lys Ala Ala Leu Thr Leu Ser Gly Ala
65 70 75 80

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

Leu Trp Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu Ser Ser Ala
100 105 110

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

Thr Ser Gly Gly Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe
130 135 140

```
Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly
145                 150                 155                 160


Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu
                165                 170                 175


Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Gln Thr Tyr
            180                 185                 190


Ile Cys Asn Val Asn His Lys Pro Ser Asn Thr Lys Val Asp Lys Lys
        195                 200                 205


Val Glu Pro Lys Ser Cys
    210


<210> 260
<211> 690
<212> PRT
<213> Artificial Sequence

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

<400> 260
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 Ser Tyr
            20                  25                  30


Tyr Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
        35                  40                  45


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


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

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

Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu Gly Cys
    130                 135                 140

Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser
145                 150                 155                 160

Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu Gln Ser
                165                 170                 175

Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser
            180                 185                 190

Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn
        195                 200                 205

Thr Lys Val Asp Lys Lys Val Glu Pro Lys Ser Cys Asp Gly Gly Gly
    210                 215                 220

Gly Ser Gly Gly Gly Gly Ser Glu Val Gln Leu Leu Glu Ser Gly Gly
225                 230                 235                 240

Gly Leu Val Gln Pro Gly Gly Ser Leu Arg Leu Ser Cys Ala Ala Ser
                245                 250                 255

Gly Phe Thr Phe Ser Thr Tyr Ala Met Asn Trp Val Arg Gln Ala Pro
            260                 265                 270
```

```
Gly Lys Gly Leu Glu Trp Val Ser Arg Ile Arg Ser Lys Tyr Asn Asn
        275                 280                 285

Tyr Ala Thr Tyr Tyr Ala Asp Ser Val Lys Gly Arg Phe Thr Ile Ser
    290                 295                 300

Arg Asp Asp Ser Lys Asn Thr Leu Tyr Leu Gln Met Asn Ser Leu Arg
305                 310                 315                 320

Ala Glu Asp Thr Ala Val Tyr Tyr Cys Val Arg His Gly Asn Phe Gly
                325                 330                 335

Asn Ala Tyr Val Ser Trp Phe Ala Tyr Trp Gly Gln Gly Thr Leu Val
            340                 345                 350

Thr Val Ser Ser Ala Ser Val Ala Ala Pro Ser Val Phe Ile Phe Pro
        355                 360                 365

Pro Ser Asp Glu Gln Leu Lys Ser Gly Thr Ala Ser Val Val Cys Leu
    370                 375                 380

Leu Asn Asn Phe Tyr Pro Arg Glu Ala Lys Val Gln Trp Lys Val Asp
385                 390                 395                 400

Asn Ala Leu Gln Ser Gly Asn Ser Gln Glu Ser Val Thr Glu Gln Asp
                405                 410                 415

Ser Lys Asp Ser Thr Tyr Ser Leu Ser Ser Thr Leu Thr Leu Ser Lys
            420                 425                 430

Ala Asp Tyr Glu Lys His Lys Val Tyr Ala Cys Glu Val Thr His Gln
        435                 440                 445

Gly Leu Ser Ser Pro Val Thr Lys Ser Phe Asn Arg Gly Glu Cys Asp
    450                 455                 460

Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Ala Ala Gly Gly
```

```
465                 470                 475                 480

Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile
                485                 490                 495

Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu
            500                 505                 510

Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His
        515                 520                 525

Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg
    530                 535                 540

Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys
545                 550                 555                 560

Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Gly Ala Pro Ile Glu
                565                 570                 575

Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr
            580                 585                 590

Thr Leu Pro Pro Cys Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu
        595                 600                 605

Trp Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp
    610                 615                 620

Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val
625                 630                 635                 640

Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp
                645                 650                 655

Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His
            660                 665                 670
```

Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro
675 680 685

Gly Lys
690

<210> 261
<211> 360
<212> DNA
<213> Artificial Sequence

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

<400> 261
gaggtgcaat tggttgaatc tggtggtggt ctggtaaaac cgggcggttc cctgcgtctg 60

agctgcgcgg cttccggatt caccttctcc aacgcgtgga tgagctgggt tcgccaggcc 120

ccgggcaaag gcctcgagtg ggttggtcgt atcaagtcta aaactgaggg tggcaccacg 180

gattacgcgg ctccagttaa aggtcgtttt accatttccc gcgacgatag caaaaacact 240

ctgtatctgc agatgaactc tctgaaaact gaagacaccg cagtctacta ctgtactacc 300

ccgtgggaat ggtcttggta cgattattgg ggccagggca cgctggttac ggtgtcttcc 360

<210> 262
<211> 360
<212> DNA
<213> Artificial Sequence

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

<400> 262
gaggtgcaat tggttgaatc tggtggtggt ctggtaaaac cgggcggttc cctgcgtctg 60

agctgcgcgg cttccggatt caccttctcc aacgcgtgga tgagctgggt tcgccaggcc 120

ccgggcaaag gcctcgagtg ggttggtcgt atcaagtcta aaactcaggg tggcaccacg 180

gattacgcgg ctccagttaa aggtcgtttt accatttccc gcgacgatag caaaaacact 240

ctgtatctgc agatgaactc tctgaaaact gaagacaccg cagtctacta ctgtactacc 300

ccgtgggaat ggtcttggta cgattattgg ggccagggca cgctggttac ggtgtcttcc 360

<210> 263
<211> 375
<212> DNA
<213> Artificial Sequence

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

<400> 263
gaggtgcagc tgctggaatc tggcggcgga ctggtgcagc ctggcggatc tctgagactg 60

agctgtgccg ccagcggctt caccttcagc acctacgcca tgaactgggt gcgccaggcc 120

cctggcaaag gcctggaatg ggtgtcccgg atcagaagca agtacaacaa ctacgccacc 180

tactacgccg acagcgtgaa gggccggttc accatcagcc gggacgacag caagaacacc 240

ctgtacctgc agatgaacag cctgcgggcc gaggacaccg ccgtgtacta ttgtgtgcgg 300

cacggcaact tcggcgccag ctatgtgtct tggtttgcct actggggcca gggcaccctc 360

gtgaccgtgt caagc 375

<210> 264
<211> 375
<212> DNA
<213> Artificial Sequence

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

<400> 264
gaggtgcagc tgctggaatc tggcggcgga ctggtgcagc ctggcggatc tctgagactg 60

agctgtgccg ccagcggctt caccttcagc acctacgcca tgaactgggt gcgccaggcc 120

cctggcaaag gcctggaatg ggtgtcccgg atcagaagca agtacaacaa ctacgccacc 180

tactacgccg acagcgtgaa gggccggttc accatcagcc gggacgacag caagaacacc 240

ctgtacctgc agatgaacag cctgcgggcc gaggacaccg ccgtgtacta ttgtgtgcgg 300

cacggcaact tcggcaacgc ctatgtgtct tggtttgcct actggggcca gggcaccctc 360

gtgaccgtgt caagc 375

<210> 265
<211> 2067
<212> DNA
<213> Artificial Sequence

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

<400> 265
gaggtgcaat tggttgaatc tggtggtggt ctggtaaaac cgggcggttc cctgcgtctg 60

agctgcgcgg cttccggatt caccttctcc aacgcgtgga tgagctgggt tcgccaggcc 120

ccgggcaaag gcctcgagtg ggttggtcgt atcaagtcta aaactgacgg tggcaccacg 180

gattacgcgg ctccagttaa aggtcgtttt accatttccc gcgacgatag caaaaacact 240

ctgtatctgc agatgaactc tctgaaaact gaagacaccg cagtctacta ctgtactacc 300

ccgtgggaat ggtcttggta cgattattgg ggccagggca cgctggttac ggtgtcttcc 360

gctagcacaa agggccctag cgtgttccct ctggccccca gcagcaagag cacaagcggc 420

ggaacagccg ccctgggctg cctcgtgaag gactacttcc ccgagcccgt gacagtgtct 480

tggaacagcg gagccctgac aagcggcgtg cacactttcc ctgccgtgct gcagagcagc 540

ggcctgtact ccctgagcag cgtggtcacc gtgcctagca gcagcctggg cacccagacc 600

tacatctgca acgtgaacca caagcccagc aacaccaaag tggacaagaa ggtggagccc 660

aagagctgtg atggcggagg agggtccgga ggcggaggat ccgaggtgca gctgctggaa 720

tctggcggcg gactggtgca gcctggcgga tctctgagac tgagctgtgc cgccagcggc 780

ttcaccttca gcacctacgc catgaactgg gtgcgccagg cccctggcaa aggcctggaa 840

tgggtgtccc ggatcagaag caagtacaac aactacgcca cctactacgc cgacagcgtg 900

aagggccggt tcaccatcag ccgggacgac agcaagaaca ccctgtacct gcagatgaac 960

agcctgcggg ccgaggacac cgccgtgtac tattgtgtgc ggcacggcaa cttcggcgcc 1020

agctatgtgt cttggtttgc ctactggggc cagggcaccc tcgtgaccgt gtcaagcgct 1080

agtaccaagg gccccagcgt gttccccctg gcacccagca gcaagagcac atctggcgga 1140

acagccgctc tgggctgtct ggtgaaagac tacttccccg agcccgtgac cgtgtcttgg 1200

aactctggcg ccctgaccag cggcgtgcac acctttccag ccgtgctgca gagcagcggc 1260

ctgtactccc tgtcctccgt ggtcaccgtg ccctctagct ccctgggaac acagacatat 1320

atctgtaatg tcaatcacaa gccttccaac accaaagtcg ataagaaagt cgagcccaag 1380

agctgcgaca aaactcacac atgcccaccg tgcccagcac ctgaagctgc agggggaccg 1440

tcagtcttcc tcttcccccc aaaacccaag gacaccctca tgatctcccg gacccctgag 1500

gtcacatgcg tggtggtgga cgtgagccac gaagaccctg aggtcaagtt caactggtac 1560

gtggacggcg tggaggtgca taatgccaag acaaagccgc gggaggagca gtacaacagc 1620

acgtaccgtg tggtcagcgt cctcaccgtc ctgcaccagg actggctgaa tggcaaggag 1680

tacaagtgca aggtctccaa caaagccctc ggcgccccca tcgagaaaac catctccaaa 1740

gccaaagggc agccccgaga accacaggtg tacaccctgc ccccatgccg ggatgagctg 1800

accaagaacc aggtcagcct gtggtgcctg gtcaaaggct tctatcccag cgacatcgcc 1860

gtggagtggg agagcaatgg gcagccggag aacaactaca agaccacgcc tcccgtgctg 1920

gactccgacg gctccttctt cctctacagc aagctcaccg tggacaagag caggtggcag 1980

caggggaacg tcttctcatg ctccgtgatg catgaggctc tgcacaacca ctacacgcag 2040

aagagcctct ccctgtctcc gggtaaa 2067

<210> 266
<211> 1350
<212> DNA
<213> Artificial Sequence

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

<400> 266
gaggtgcaat tggttgaatc tggtggtggt ctggtaaaac cgggcggttc cctgcgtctg 60

agctgcgcgg cttccggatt caccttctcc aacgcgtgga tgagctgggt tcgccaggcc 120

ccgggcaaag gcctcgagtg ggttggtcgt atcaagtcta aaactgacgg tggcaccacg 180

gattacgcgg ctccagttaa aggtcgtttt accatttccc gcgacgatag caaaaacact 240

ctgtatctgc agatgaactc tctgaaaact gaagacaccg cagtctacta ctgtactacc 300

ccgtgggaat ggtcttggta cgattattgg ggccagggca cgctggttac ggtgtcttcc 360

gctagcacca agggcccctc cgtgttcccc ctggccccca gcagcaagag caccagcggc 420

ggcacagccg ctctgggctg cctggtcaag gactacttcc ccgagcccgt gaccgtgtcc 480

tggaacagcg gagccctgac ctccggcgtg cacaccttcc ccgccgtgct gcagagttct 540

ggcctgtata gcctgagcag cgtggtcacc gtgccttcta gcagcctggg cacccagacc 600

tacatctgca acgtgaacca caagcccagc aacaccaagg tggacaagaa ggtggagccc 660

aagagctgcg acaaaactca cacatgccca ccgtgcccag cacctgaagc tgcaggggga 720

ccgtcagtct tcctcttccc cccaaaaccc aaggacaccc tcatgatctc ccggaccccct 780

gaggtcacat gcgtggtggt ggacgtgagc cacgaagacc ctgaggtcaa gttcaactgg 840

tacgtggacg gcgtggaggt gcataatgcc aagacaaagc cgcgggagga gcagtacaac 900

agcacgtacc gtgtggtcag cgtcctcacc gtcctgcacc aggactggct gaatggcaag 960

gagtacaagt gcaaggtctc caacaaagcc ctcggcgccc ccatcgagaa aaccatctcc 1020

aaagccaaag ggcagccccg agaaccacag gtgtgcaccc tgccccatc ccgggatgag 1080

ctgaccaaga accaggtcag cctctcgtgc gcagtcaaag gcttctatcc cagcgacatc 1140

gccgtggagt gggagagcaa tgggcagccg gagaacaact acaagaccac gcctcccgtg 1200

ctggactccg acggctcctt cttcctcgtg agcaagctca ccgtggacaa gagcaggtgg 1260

cagcagggga acgtcttctc atgctccgtg atgcatgagg ctctgcacaa ccgcttcacg 1320

cagaagagcc tctccctgtc tccgggtaaa 1350

<210> 267

<211> 645
<212> DNA
<213> Artificial Sequence

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

<400> 267
caggccgtcg tgacccagga acccagcctg acagtgtctc ctggcggcac cgtgaccctg 60

acatgtggca gttctacagg cgccgtgacc accagcaact acgccaactg ggtgcaggaa 120

aagcccggcc aggccttcag aggactgatc ggcggcacca acaagagagc ccctggcacc 180

cctgccagat tcagcggatc tctgctggga ggaaaggccg ccctgacact gtctggcgcc 240

cagccagaag atgaggccga gtactactgc gccctgtggt acagcaacct gtgggtgttc 300

ggcggaggca ccaagctgac agtcctaggt caacccaagg ctgcccccag cgtgaccctg 360

ttcccccca gcagcgagga actgcaggcc aacaaggcca ccctggtctg cctgatcagc 420

gacttctacc caggcgccgt gaccgtggcc tggaaggccg acagcagccc cgtgaaggcc 480

ggcgtggaga ccaccacccc cagcaagcag agcaacaaca agtacgccgc cagcagctac 540

ctgagcctga cccccgagca gtggaagagc cacaggtcct acagctgcca ggtgacccac 600

gagggcagca ccgtggagaa aaccgtggcc cccaccgagt gcagc 645

<210> 268
<211> 2067
<212> DNA
<213> Artificial Sequence

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

<400> 268
gaggtgcaat tggttgaatc tggtggtggt ctggtaaaac cgggcggttc cctgcgtctg 60

agctgcgcgg cttccggatt caccttctcc aacgcgtgga tgagctgggt tcgccaggcc 120

ccgggcaaag gcctcgagtg ggttggtcgt atcaagtcta aaactgacgg tggcaccacg 180

gattacgcgg ctccagttaa aggtcgtttt accatttccc gcgacgatag caaaaacact 240

ctgtatctgc agatgaactc tctgaaaact gaagacaccg cagtctacta ctgtactacc 300

ccgtgggaat ggtcttggta cgattattgg ggccagggca cgctggttac ggtgtcttcc 360

gctagcacaa agggccctag cgtgttccct ctggccccca gcagcaagag cacaagcggc 420

ggaacagccg ccctgggctg cctcgtgaag gactacttcc ccgagcccgt gacagtgtct 480

tggaacagcg gagccctgac aagcggcgtg cacactttcc ctgccgtgct gcagagcagc 540

ggcctgtact ccctgagcag cgtggtcacc gtgcctagca gcagcctggg cacccagacc 600

tacatctgca acgtgaacca caagcccagc aacaccaaag tggacaagaa ggtggagccc 660

aagagctgtg atggcggagg agggtccgga ggcggaggat ccgaggtgca gctgctggaa 720

tctggcggcg gactggtgca gcctggcgga tctctgagac tgagctgtgc cgccagcggc 780

ttcaccttca gcacctacgc catgaactgg gtgcgccagg cccctggcaa aggcctggaa 840

tgggtgtccc ggatcagaag caagtacaac aactacgcca cctactacgc cgacagcgtg 900

aagggccggt tcaccatcag ccgggacgac agcaagaaca ccctgtacct gcagatgaac 960

agcctgcggg ccgaggacac cgccgtgtac tattgtgtgc ggcacggcaa cttcggcaac 1020

gcctatgtgt cttggtttgc ctactggggc cagggcaccc tcgtgaccgt gtcaagcgct 1080

agtaccaagg gccccagcgt gttccccctg gcacccagca gcaagagcac atctggcgga 1140

acagccgctc tgggctgtct ggtgaaagac tacttccccg agcccgtgac cgtgtcttgg 1200

aactctggcg ccctgaccag cggcgtgcac acctttccag ccgtgctgca gagcagcggc 1260

ctgtactccc tgtcctccgt ggtcaccgtg ccctctagct ccctgggaac acagacatat 1320

atctgtaatg tcaatcacaa gccttccaac accaaagtcg ataagaaagt cgagcccaag 1380

agctgcgaca aaactcacac atgcccaccg tgcccagcac ctgaagctgc agggggaccg 1440

tcagtcttcc tcttcccccc aaaacccaag gacaccctca tgatctcccg gacccctgag 1500

gtcacatgcg tggtggtgga cgtgagccac gaagaccctg aggtcaagtt caactggtac 1560

gtggacggcg tggaggtgca taatgccaag acaaagccgc gggaggagca gtacaacagc 1620

acgtaccgtg tggtcagcgt cctcaccgtc ctgcaccagg actggctgaa tggcaaggag 1680

tacaagtgca aggtctccaa caaagccctc ggcgccccca tcgagaaaac catctccaaa 1740

gccaaagggc agccccgaga accacaggtg tacaccctgc ccccatgccg ggatgagctg 1800

accaagaacc aggtcagcct gtggtgcctg gtcaaaggct tctatcccag cgacatcgcc 1860

gtggagtggg agagcaatgg gcagccggag aacaactaca agaccacgcc tcccgtgctg 1920

gactccgacg gctccttctt cctctacagc aagctcaccg tggacaagag caggtggcag 1980

caggggaacg tcttctcatg ctccgtgatg catgaggctc tgcacaacca ctacacgcag 2040

aagagcctct ccctgtctcc gggtaaa 2067

<210> 269
<211> 2070
<212> DNA
<213> Artificial Sequence

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

<400> 269
caggtgcaat tggttcaatc tggtgctgaa gtaaaaaaac cgggcgcttc cgttaaagtg 60

agctgcaaag catccggata caccttcact tcctattaca tgcactgggt tcgtcaagcc 120

ccgggccagg gtctggaatg gatgggcatc attaacccaa gcggtggccc tacctcctac 180

gcgcagaaat tccagggtcg cgtcacgatg acccgtgaca ctagcacctc taccgtttat 240

atggagctgt ccagcctgcg ttctgaagat actgcagtgt actactgtgc acgcggtgac 300

ttcgcttggc tggactattg gggtcaaggc accctcgtaa cggtttcttc tgctagcaca 360

aagggcccca gcgtgttccc tctggccct agcagcaaga gcacatctgg cggaacagcc 420

gccctgggct gcctcgtgaa ggactacttt cccgagcctg tgaccgtgtc ctggaactct 480

ggcgccctga caagcggcgt gcacaccttt ccagccgtgc tgcagagcag cggcctgtac 540

tctctgagca gcgtggtcac cgtgcctagc agcagcctgg gcacccagac ctacatctgc 600

aacgtgaacc acaagcccag caacaccaaa gtggacaaga aggtggagcc caagagctgt 660

gatggcggag gagggtccgg aggcggagga tccgaggtgc agctgctgga atctggcggc 720

ggactggtgc agcctggcgg atctctgaga ctgagctgtg ccgccagcgg cttcaccttc 780

agcacctacg ccatgaactg ggtgcgccag gcccctggca aaggcctgga atgggtgtcc 840

cggatcagaa gcaagtacaa caactacgcc acctactacg ccgacagcgt gaagggccgg 900

ttcaccatca gccgggacga cagcaagaac accctgtacc tgcagatgaa cagcctgcgg 960

gccgaggaca ccgccgtgta ctattgtgtg cggcacggca acttcggcgc cagctatgtg 1020

tcttggtttg cctactgggg ccagggcacc ctcgtgaccg tgtcaagcgc tagtgtggcc 1080

gctccctccg tgtttatctt tcccccatcc gatgaacagc tgaaaagcgg caccgcctcc 1140

gtcgtgtgtc tgctgaacaa tttttaccct agggaagcta aagtgcagtg gaaagtggat 1200

aacgcactgc agtccggcaa ctcccaggaa tctgtgacag aacaggactc caaggacagc 1260

acctactccc tgtcctccac cctgacactg tctaaggctg attatgagaa acacaaagtc 1320

tacgcctgcg aagtcaccca tcagggcctg agctcgcccg tcacaaagag cttcaacagg 1380

ggagagtgtg acaagaccca cacctgtccc ccttgtcctg cccctgaagc tgctggcggc 1440

ccttctgtgt tcctgttccc cccaaagccc aaggacaccc tgatgatcag ccggaccccc 1500

gaagtgacct gcgtggtggt ggatgtgtcc cacgaggacc ctgaagtgaa gttcaattgg 1560

tacgtggacg gcgtggaagt gcacaacgcc aagacaaagc cgcgggagga gcagtacaac 1620

agcacgtacc gtgtggtcag cgtcctcacc gtcctgcacc aggactggct gaatggcaag 1680

gagtacaagt gcaaggtctc caacaaagcc ctcggcgccc ccatcgagaa aaccatctcc 1740

aaagccaaag ggcagccccg agaaccacag gtgtacaccc tgccccatg ccgggatgag 1800

ctgaccaaga accaggtcag cctgtggtgc ctggtcaaag gcttctatcc cagcgacatc 1860

gccgtggagt gggagagcaa tgggcagccg gagaacaact acaagaccac gcctcccgtg 1920

ctggactccg acggctcctt cttcctctac agcaagctca ccgtggacaa gagcaggtgg 1980

cagcagggga acgtcttctc atgctccgtg atgcatgagg ctctgcacaa ccactacacg 2040

cagaagagcc tctccctgtc tccgggtaaa 2070

<210> 270
<211> 1341
<212> DNA

<213> Artificial Sequence

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

<400> 270
caggtgcaat tggttcaatc tggtgctgaa gtaaaaaaac cgggcgcttc cgttaaagtg 60

agctgcaaag catccggata caccttcact tcctattaca tgcactgggt tcgtcaagcc 120

ccgggccagg gtctggaatg gatgggcatc attaacccaa gcggtggccc tacctcctac 180

gcgcagaaat tccagggtcg cgtcacgatg acccgtgaca ctagcacctc taccgtttat 240

atggagctgt ccagcctgcg ttctgaagat actgcagtgt actactgtgc acgcggtgac 300

ttcgcttggc tggactattg gggtcaaggc accctcgtaa cggtttcttc tgctagcacc 360

aagggcccct ccgtgttccc cctggccccc agcagcaaga gcaccagcgg cggcacagcc 420

gctctgggct gcctggtcaa ggactacttc cccgagcccg tgaccgtgtc ctggaacagc 480

ggagccctga cctccggcgt gcacaccttc cccgccgtgc tgcagagttc tggcctgtat 540

agcctgagca gcgtggtcac cgtgccttct agcagcctgg gcacccagac ctacatctgc 600

aacgtgaacc acaagcccag caacaccaag gtggacaaga aggtggagcc caagagctgc 660

gacaaaactc acacatgccc accgtgccca gcacctgaag ctgcaggggg accgtcagtc 720

ttcctcttcc ccccaaaacc caaggacacc ctcatgatct cccggacccc tgaggtcaca 780

tgcgtggtgg tggacgtgag ccacgaagac cctgaggtca agttcaactg gtacgtggac 840

ggcgtggagg tgcataatgc caagacaaag ccgcgggagg agcagtacaa cagcacgtac 900

cgtgtggtca gcgtcctcac cgtcctgcac caggactggc tgaatggcaa ggagtacaag 960

tgcaaggtct ccaacaaagc cctcggcgcc cccatcgaga aaaccatctc caaagccaaa 1020

gggcagcccc gagaaccaca ggtgtgcacc ctgcccccat cccgggatga gctgaccaag 1080

aaccaggtca gcctctcgtg cgcagtcaaa ggcttctatc ccagcgacat cgccgtggag 1140

tgggagagca atgggcagcc ggagaacaac tacaagacca cgcctcccgt gctggactcc 1200

gacggctcct tcttcctcgt gagcaagctc accgtggaca agagcaggtg gcagcagggg 1260

aacgtcttct catgctccgt gatgcatgag gctctgcaca accactacac gcagaagagc 1320

ctctccctgt ctccgggtaa a 1341

<210> 271
<211> 657
<212> DNA
<213> Artificial Sequence

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

<400> 271
gatattgtta tgactcaatc tccactgtct ctgccggtga ctccaggcga accggcgagc 60

atttcttgcc gttccagcca gtctctgctg cactccaacg gctacaacta tctcgattgg 120

tacctgcaaa aaccgggtca gagccctcag ctgctgatct acctgggctc taaccgcgct 180

tccggtgtac cggaccgttt cagcggctct ggatccggca ccgatttcac gttgaaaatc 240

agccgtgttg aagcagaaga cgtgggcgtt tattactgta tgcaggcaag cattatgcag 300

cggacttttg gtcaaggcac caaggtcgaa attaaacgta cggtggctgc accatctgtc 360

ttcatcttcc cgccatctga tgagcagttg aaatctggaa ctgcctctgt tgtgtgcctg 420

ctgaataact tctatcccag agaggccaaa gtacagtgga aggtggataa cgccctccaa 480

tcgggtaact cccaggagag tgtcacagag caggacagca aggacagcac ctacagcctc 540

agcagcaccc tgacgctgag caaagcagac tacgagaaac acaaagtcta cgcctgcgaa 600

gtcacccatc agggcctgag ctcgcccgtc acaaagagct tcaacagggg agagtgt 657

<210> 272
<211> 642
<212> DNA
<213> Artificial Sequence

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

<400> 272

caggccgtcg tgacccagga acccagcctg acagtgtctc ctggcggcac cgtgaccctg 60

acatgtggca gttctacagg cgccgtgacc accagcaact acgccaactg ggtgcaggaa 120

aagcccggcc aggccttcag aggactgatc ggcggcacca acaagagagc ccctggcacc 180

cctgccagat tcagcggatc tctgctggga ggaaaggccg ccctgacact gtctggcgcc 240

cagccagaag atgaggccga gtactactgc gccctgtggt acagcaacct gtgggtgttc 300

ggcggaggca ccaagctgac agtgctgagc agcgcttcca ccaaaggccc ttccgtgttt 360

cctctggctc ctagctccaa gtccacctct ggaggcaccg ctgctctcgg atgcctcgtg 420

aaggattatt ttcctgagcc tgtgacagtg tcctggaata gcggagcact gacctctgga 480

gtgcatactt tccccgctgt gctgcagtcc tctggactgt acagcctgag cagcgtggtg 540

acagtgccca gcagcagcct gggcacccag acctacatct gcaacgtgaa ccacaagccc 600

agcaacacca aggtggacaa gaaggtggaa cccaagtctt gt 642

<210> 273
<211> 2070
<212> DNA
<213> Artificial Sequence

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

<400> 273
caggtgcaat tggttcaatc tggtgctgaa gtaaaaaaac cgggcgcttc cgttaaagtg 60

agctgcaaag catccggata caccttcact tcctattaca tgcactgggt tcgtcaagcc 120

ccgggccagg gtctggaatg gatgggcatc attaacccaa gcggtggccc tacctcctac 180

gcgcagaaat tccagggtcg cgtcacgatg acccgtgaca ctagcacctc taccgtttat 240

atggagctgt ccagcctgcg ttctgaagat actgcagtgt actactgtgc acgcggtgac 300

ttcgcttggc tggactattg gggtcaaggc accctcgtaa cggtttcttc tgctagcaca 360

aagggcccca gcgtgttccc tctggccct agcagcaaga gcacatctgg cggaacagcc 420

gccctgggct gcctcgtgaa ggactacttt cccgagcctg tgaccgtgtc ctggaactct 480

ggcgccctga caagcggcgt gcacaccttt ccagccgtgc tgcagagcag cggcctgtac 540

tctctgagca gcgtggtcac cgtgcctagc agcagcctgg gcacccagac ctacatctgc 600

aacgtgaacc acaagcccag caacaccaaa gtggacaaga aggtggagcc caagagctgt 660

gatggcggag gagggtccgg aggcggagga tccgaggtgc agctgctgga atctggcggc 720

ggactggtgc agcctggcgg atctctgaga ctgagctgtg ccgccagcgg cttcaccttc 780

agcacctacg ccatgaactg ggtgcgccag gcccctggca aaggcctgga atgggtgtcc 840

cggatcagaa gcaagtacaa caactacgcc acctactacg ccgacagcgt gaagggccgg 900

ttcaccatca gccgggacga cagcaagaac accctgtacc tgcagatgaa cagcctgcgg 960

gccgaggaca ccgccgtgta ctattgtgtg cggcacggca acttcggcaa cgcctatgtg 1020

tcttggtttg cctactgggg ccagggcacc ctcgtgaccg tgtcaagcgc tagtgtggcc 1080

gctccctccg tgtttatctt tcccccatcc gatgaacagc tgaaaagcgg caccgcctcc 1140

gtcgtgtgtc tgctgaacaa tttttaccct agggaagcta aagtgcagtg gaaagtggat 1200

aacgcactgc agtccggcaa ctcccaggaa tctgtgacag aacaggactc caaggacagc 1260

acctactccc tgtcctccac cctgacactg tctaaggctg attatgagaa acacaaagtc 1320

tacgcctgcg aagtcaccca tcagggcctg agctcgcccg tcacaaagag cttcaacagg 1380

ggagagtgtg acaagaccca cacctgtccc ccttgtcctg cccctgaagc tgctggcggc 1440

ccttctgtgt tcctgttccc cccaaagccc aaggacaccc tgatgatcag ccggaccccc 1500

gaagtgacct gcgtggtggt ggatgtgtcc cacgaggacc ctgaagtgaa gttcaattgg 1560

tacgtggacg gcgtggaagt gcacaacgcc aagacaaagc cgcgggagga gcagtacaac 1620

agcacgtacc gtgtggtcag cgtcctcacc gtcctgcacc aggactggct gaatggcaag 1680

gagtacaagt gcaaggtctc caacaaagcc ctcggcgccc ccatcgagaa aaccatctcc 1740

aaagccaaag ggcagccccg agaaccacag gtgtacaccc tgcccccatg ccgggatgag 1800

ctgaccaaga accaggtcag cctgtggtgc ctggtcaaag gcttctatcc cagcgacatc 1860

gccgtggagt gggagagcaa tgggcagccg gagaacaact acaagaccac gcctcccgtg 1920

ctggactccg acggctcctt cttcctctac agcaagctca ccgtggacaa gagcaggtgg 1980

cagcagggga acgtcttctc atgctccgtg atgcatgagg ctctgcacaa ccactacacg 2040

cagaagagcc tctccctgtc tccgggtaaa 2070

<210> 274
<211> 120
<212> PRT
<213> Artificial Sequence

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

<400> 274
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Lys Pro Gly Gly
1 5 10 15

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

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

Gly Arg Ile Lys Ser Lys Thr Glu Gly Gly Thr Thr Asp Tyr Ala Ala
50 55 60

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

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

Tyr Cys Thr Thr Pro Tyr Glu Trp Ser Trp Tyr Asp Tyr Trp Gly Gln
100 105 110

Gly Thr Leu Val Thr Val Ser Ser
115 120

<210> 275
<211> 19

<212> PRT
<213> Artificial Sequence

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

<400> 275
Arg Ile Lys Ser Lys Thr Glu Gly Gly Thr Thr Asp Tyr Ala Ala Pro
1 5 10 15

Val Lys Gly

<210> 276
<211> 689
<212> PRT
<213> Artificial Sequence

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

<400> 276
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Lys Pro Gly Gly
1 5 10 15

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

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

Gly Arg Ile Lys Ser Lys Thr Glu Gly Gly Thr Thr Asp Tyr Ala Ala
50 55 60

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

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

```
Tyr Cys Thr Thr Pro Tyr Glu Trp Ser Trp Tyr Asp Tyr Trp Gly Gln
            100                 105                 110

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

Phe Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala
    130                 135                 140

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

Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val
                165                 170                 175

Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro
            180                 185                 190

Ser Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys
        195                 200                 205

Pro Ser Asn Thr Lys Val Asp Lys Lys Val Glu Pro Lys Ser Cys Asp
    210                 215                 220

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Val Gln Leu Leu Glu
225                 230                 235                 240

Ser Gly Gly Gly Leu Val Gln Pro Gly Gly Ser Leu Arg Leu Ser Cys
                245                 250                 255

Ala Ala Ser Gly Phe Thr Phe Ser Thr Tyr Ala Met Asn Trp Val Arg
            260                 265                 270

Gln Ala Pro Gly Lys Gly Leu Glu Trp Val Ser Arg Ile Arg Ser Lys
        275                 280                 285
```

```
Tyr Asn Asn Tyr Ala Thr Tyr Tyr Ala Asp Ser Val Lys Gly Arg Phe
    290                 295                 300

Thr Ile Ser Arg Asp Asp Ser Lys Asn Thr Leu Tyr Leu Gln Met Asn
305                 310                 315                 320

Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys Val Arg His Gly
                325                 330                 335

Asn Phe Gly Asn Ser Tyr Val Ser Trp Phe Ala Tyr Trp Gly Gln Gly
            340                 345                 350

Thr Leu Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe
        355                 360                 365

Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu
    370                 375                 380

Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp
385                 390                 395                 400

Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu
                405                 410                 415

Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser
            420                 425                 430

Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro
        435                 440                 445

Ser Asn Thr Lys Val Asp Lys Lys Val Glu Pro Lys Ser Cys Asp Lys
    450                 455                 460

Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Ala Ala Gly Gly Pro
465                 470                 475                 480

Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser
                485                 490                 495
```

```
Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp
            500                 505                 510

Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn
        515                 520                 525

Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val
    530                 535                 540

Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu
545                 550                 555                 560

Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Gly Ala Pro Ile Glu Lys
                565                 570                 575

Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr
            580                 585                 590

Leu Pro Pro Cys Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu Trp
        595                 600                 605

Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu
    610                 615                 620

Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu
625                 630                 635                 640

Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys
                645                 650                 655

Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu
            660                 665                 670

Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly
        675                 680                 685
```

Lys

<210> 277
<211> 450
<212> PRT
<213> Artificial Sequence

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

<400> 277
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Lys Pro Gly Gly
1 5 10 15

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

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

Gly Arg Ile Lys Ser Lys Thr Glu Gly Gly Thr Thr Asp Tyr Ala Ala
50 55 60

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

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

Tyr Cys Thr Thr Pro Tyr Glu Trp Ser Trp Tyr Asp Tyr Trp Gly Gln
100 105 110

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

Phe Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala
130 135 140

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

Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val
                165                 170                 175

Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro
            180                 185                 190

Ser Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys
        195                 200                 205

Pro Ser Asn Thr Lys Val Asp Lys Lys Val Glu Pro Lys Ser Cys Asp
    210                 215                 220

Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Ala Ala Gly Gly
225                 230                 235                 240

Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile
                245                 250                 255

Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu
            260                 265                 270

Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His
        275                 280                 285

Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg
    290                 295                 300

Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys
305                 310                 315                 320

Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Gly Ala Pro Ile Glu
                325                 330                 335

Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Cys
```

```
            340                 345                 350

Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu
        355                 360                 365

Ser Cys Ala Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp
    370                 375                 380

Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val
385                 390                 395                 400

Leu Asp Ser Asp Gly Ser Phe Phe Leu Val Ser Lys Leu Thr Val Asp
                405                 410                 415

Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His
            420                 425                 430

Glu Ala Leu His Asn Arg Phe Thr Gln Lys Ser Leu Ser Leu Ser Pro
        435                 440                 445

Gly Lys
    450


<210> 278
<211> 119
<212> PRT
<213> Artificial Sequence

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

<400> 278
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 Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35                  40                  45

Ser Ala 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 Tyr Tyr Cys
                85                  90                  95

Ala Arg Gly Asp Tyr Arg Tyr Arg Tyr Phe Asp Tyr Trp Gly Gln Gly
            100                 105                 110

Thr Leu Val Thr Val Ser Ser
        115


<210> 279
<211> 109
<212> PRT
<213> Artificial Sequence

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

<400> 279
Ser Ser Glu Leu Thr Gln Asp Pro Ala Val Ser Val Ala Leu Gly Gln
1               5                   10                  15

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

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

Gly Lys Asn Asn Arg Pro Ser Gly Ile Pro Asp Arg Phe Ser Gly Ser
    50                  55                  60
```

Ser Ser Gly Asn Thr Ala Ser Leu Thr Ile Thr Gly Ala Gln Ala Glu
65 70 75 80

Asp Glu Ala Asp Tyr Tyr Cys Asn Ser Arg Glu Ser Pro Pro Thr Gly
85 90 95

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

<210> 280
<211> 674
<212> PRT
<213> Artificial Sequence

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

<400> 280
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 Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45

Ser Ala 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 Tyr Tyr Cys
85 90 95

Ala Arg Gly Asp Tyr Arg Tyr Arg Tyr Phe Asp Tyr Trp Gly Gln Gly
100 105 110

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

Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu
    130                 135                 140

Gly Cys Leu Val Glu Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp
145                 150                 155                 160

Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu
                165                 170                 175

Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser
            180                 185                 190

Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro
        195                 200                 205

Ser Asn Thr Lys Val Asp Glu Lys Val Glu Pro Lys Ser Cys Asp Gly
    210                 215                 220

Gly Gly Gly Ser Gly Gly Gly Gly Ser Gln Ala Val Val Thr Gln Glu
225                 230                 235                 240

Pro Ser Leu Thr Val Ser Pro Gly Gly Thr Val Thr Leu Thr Cys Gly
                245                 250                 255

Ser Ser Thr Gly Ala Val Thr Thr Ser Asn Tyr Ala Asn Trp Val Gln
            260                 265                 270

Glu Lys Pro Gly Gln Ala Phe Arg Gly Leu Ile Gly Gly Thr Asn Lys
        275                 280                 285

Arg Ala Pro Gly Thr Pro Ala Arg Phe Ser Gly Ser Leu Leu Gly Gly
    290                 295                 300
```

```
Lys Ala Ala Leu Thr Leu Ser Gly Ala Gln Pro Glu Asp Glu Ala Glu
305                 310                 315                 320

Tyr Tyr Cys Ala Leu Trp Tyr Ser Asn Leu Trp Val Phe Gly Gly Gly
                325                 330                 335

Thr Lys Leu Thr Val Leu Ser Ser Ala Ser Thr Lys Gly Pro Ser Val
            340                 345                 350

Phe Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala
        355                 360                 365

Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser
    370                 375                 380

Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val
385                 390                 395                 400

Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro
                405                 410                 415

Ser Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys
            420                 425                 430

Pro Ser Asn Thr Lys Val Asp Lys Lys Val Glu Pro Lys Ser Cys Asp
        435                 440                 445

Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Ala Ala Gly Gly
    450                 455                 460

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

Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu
                485                 490                 495

Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His
            500                 505                 510
```

```
Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg
        515                 520                 525

Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys
    530                 535                 540

Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Gly Ala Pro Ile Glu
545                 550                 555                 560

Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr
                565                 570                 575

Thr Leu Pro Pro Cys Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu
            580                 585                 590

Trp Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp
        595                 600                 605

Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val
    610                 615                 620

Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp
625                 630                 635                 640

Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His
                645                 650                 655

Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro
            660                 665                 670

Gly Lys
```

<210> 281
<211> 449
<212> PRT
<213> Artificial Sequence

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

<400> 281

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

Ser Ala 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 Tyr Tyr Cys
                85                  90                  95

Ala Arg Gly Asp Tyr Arg Tyr Arg Tyr Phe Asp Tyr Trp Gly Gln Gly
            100                 105                 110

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

Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu
    130                 135                 140

Gly Cys Leu Val Glu Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp
145                 150                 155                 160

Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu
                165                 170                 175
```

```
Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser
            180                 185                 190

Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro
        195                 200                 205

Ser Asn Thr Lys Val Asp Glu Lys Val Glu Pro Lys Ser Cys Asp Lys
    210                 215                 220

Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Ala Ala Gly Gly Pro
225                 230                 235                 240

Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser
                245                 250                 255

Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp
            260                 265                 270

Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn
        275                 280                 285

Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val
    290                 295                 300

Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu
305                 310                 315                 320

Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Gly Ala Pro Ile Glu Lys
                325                 330                 335

Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Cys Thr
            340                 345                 350

Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu Ser
        355                 360                 365

Cys Ala Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu
```

370 375 380

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

Asp Ser Asp Gly Ser Phe Phe Leu Val Ser Lys Leu Thr Val Asp Lys
405 410 415

Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu
420 425 430

Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly
435 440 445

Lys

<210> 282
<211> 215
<212> PRT
<213> Artificial Sequence

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

<400> 282
Ser Ser Glu Leu Thr Gln Asp Pro Ala Val Ser Val Ala Leu Gly Gln
1 5 10 15

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

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

Gly Lys Asn Asn Arg Pro Ser Gly Ile Pro Asp Arg Phe Ser Gly Ser
50 55 60

```
Ser Ser Gly Asn Thr Ala Ser Leu Thr Ile Thr Gly Ala Gln Ala Glu
65                  70                  75                  80

Asp Glu Ala Asp Tyr Tyr Cys Asn Ser Arg Glu Ser Pro Pro Thr Gly
                85                  90                  95

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

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

Gln Ala Asn Lys Ala Thr Leu Val Cys Leu Ile Ser Asp Phe Tyr Pro
    130                 135                 140

Gly Ala Val Thr Val Ala Trp Lys Ala Asp Ser Ser Pro Val Lys Ala
145                 150                 155                 160

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

Ala Ser Ser Tyr Leu Ser Leu Thr Pro Glu Gln Trp Lys Ser His Arg
            180                 185                 190

Ser Tyr Ser Cys Gln Val Thr His Glu Gly Ser Thr Val Glu Lys Thr
        195                 200                 205

Val Ala Pro Thr Glu Cys Ser
    210                 215


<210> 283
<211> 118
<212> PRT
<213> Artificial Sequence

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

<400> 283
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 Ser Tyr
            20   25   30

Tyr Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
        35   40   45

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

Gln Gly Arg Val Thr Met Thr Arg Asp Thr Ser Thr Ser Thr 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 Gly Asp Trp Ser Tyr Tyr Met Asp Tyr Trp Gly Gln Gly Thr
            100   105   110

Leu Val Thr Val Ser Ser
        115

<210> 284
<211> 111
<212> PRT
<213> Artificial Sequence

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

<400> 284
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 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 Thr 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

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


<210> 285
<211> 673
<212> PRT
<213> Artificial Sequence

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

<400> 285
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 Ser Tyr
            20                  25                  30

Tyr Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
        35                  40                  45

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

Gln Gly Arg Val Thr Met Thr Arg Asp Thr Ser Thr Ser Thr 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 Gly Asp Trp Ser Tyr Tyr Met Asp Tyr Trp Gly Gln Gly Thr
            100                 105                 110

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

Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu Gly
    130                 135                 140

Cys Leu Val Glu Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn
145                 150                 155                 160

Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu Gln
                165                 170                 175

Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser
            180                 185                 190

Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro Ser
        195                 200                 205

Asn Thr Lys Val Asp Glu Lys Val Glu Pro Lys Ser Cys Asp Gly Gly
    210                 215                 220

Gly Gly Ser Gly Gly Gly Gly Ser Gln Ala Val Val Thr Gln Glu Pro
225                 230                 235                 240

Ser Leu Thr Val Ser Pro Gly Gly Thr Val Thr Leu Thr Cys Gly Ser
                245                 250                 255

Ser Thr Gly Ala Val Thr Thr Ser Asn Tyr Ala Asn Trp Val Gln Glu
            260                 265                 270
```

```
Lys Pro Gly Gln Ala Phe Arg Gly Leu Ile Gly Gly Thr Asn Lys Arg
        275                 280                 285

Ala Pro Gly Thr Pro Ala Arg Phe Ser Gly Ser Leu Leu Gly Gly Lys
    290                 295                 300

Ala Ala Leu Thr Leu Ser Gly Ala Gln Pro Glu Asp Glu Ala Glu Tyr
305                 310                 315                 320

Tyr Cys Ala Leu Trp Tyr Ser Asn Leu Trp Val Phe Gly Gly Gly Thr
                325                 330                 335

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

Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu
        355                 360                 365

Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp
    370                 375                 380

Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu
385                 390                 395                 400

Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser
                405                 410                 415

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

Ser Asn Thr Lys Val Asp Lys Lys Val Glu Pro Lys Ser Cys Asp Lys
        435                 440                 445

Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Ala Ala Gly Gly Pro
    450                 455                 460

Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser
```

```
465                 470                 475                 480

Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp
                485                 490                 495

Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn
            500                 505                 510

Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val
        515                 520                 525

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

Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Gly Ala Pro Ile Glu Lys
545                 550                 555                 560

Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr
                565                 570                 575

Leu Pro Pro Cys Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu Trp
            580                 585                 590

Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu
        595                 600                 605

Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu
    610                 615                 620

Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys
625                 630                 635                 640

Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu
                645                 650                 655

Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly
            660                 665                 670
```

Lys

<210> 286
<211> 448
<212> PRT
<213> Artificial Sequence

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

<400> 286
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 Ser Tyr
20 25 30

Tyr Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45

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

Gln Gly Arg Val Thr Met Thr Arg Asp Thr Ser Thr Ser Thr 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 Gly Asp Trp Ser Tyr Tyr Met Asp Tyr Trp Gly Gln Gly Thr
100 105 110

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

Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu Gly
130 135 140

```
Cys Leu Val Glu Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn
145                 150                 155                 160

Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu Gln
                165                 170                 175

Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser
            180                 185                 190

Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro Ser
        195                 200                 205

Asn Thr Lys Val Asp Glu Lys Val Glu Pro Lys Ser Cys Asp Lys Thr
    210                 215                 220

His Thr Cys Pro Pro Cys Pro Ala Pro Glu Ala Ala Gly Gly Pro Ser
225                 230                 235                 240

Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg
                245                 250                 255

Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro
            260                 265                 270

Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala
        275                 280                 285

Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val
    290                 295                 300

Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr
305                 310                 315                 320

Lys Cys Lys Val Ser Asn Lys Ala Leu Gly Ala Pro Ile Glu Lys Thr
                325                 330                 335
```

```
Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Cys Thr Leu
            340                 345                 350

Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu Ser Cys
        355                 360                 365

Ala Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser
    370                 375                 380

Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp
385                 390                 395                 400

Ser Asp Gly Ser Phe Phe Leu Val Ser Lys Leu Thr Val Asp Lys Ser
                405                 410                 415

Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala
            420                 425                 430

Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys
        435                 440                 445
```

<210> 287
<211> 360
<212> DNA
<213> Artificial Sequence

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

<400> 287

```
gaggtgcaat tggtggaaag cggaggcggc ctcgtgaagc ctggcggatc tctgagactg       60

agctgtgccg ccagcggctt caccttcagc aacgcctgga tgagctgggt gcgccaggcc      120

cctggaaaag gactcgagtg ggtgggacgg atcaagagca agaccgaggg cggcaccacc      180

gactatgccg cccctgtgaa gggccggttc accatcagca gggacgacag caagaacacc      240

ctgtacctgc agatgaacag cctgaaaacc gaggacaccg ccgtgtacta ctgcaccacc      300

ccctacgagt ggtcttggta cgactactgg ggccagggca ccctcgtgac cgtgtcatct      360
```

<210> 288
<211> 2067
<212> DNA
<213> Artificial Sequence

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

<400> 288
gaggtgcaat tggtggaaag cggaggcggc ctcgtgaagc ctggcggatc tctgagactg 60

agctgtgccg ccagcggctt caccttcagc aacgcctgga tgagctgggt gcgccaggcc 120

cctggaaaag gactcgagtg ggtgggacgg atcaagagca agaccgaggg cggcaccacc 180

gactatgccg cccctgtgaa gggccggttc accatcagca gggacgacag caagaacacc 240

ctgtacctgc agatgaacag cctgaaaacc gaggacaccg ccgtgtacta ctgcaccacc 300

ccctacgagt ggtcttggta cgactactgg ggccagggca ccctcgtgac cgtgtcatct 360

gctagcacaa agggccctag cgtgttccct ctggccccca gcagcaagag cacaagcggc 420

ggaacagccg ccctgggctg cctcgtgaag gactacttcc ccgagcccgt gacagtgtct 480

tggaacagcg gagccctgac aagcggcgtg cacaccttcc ctgccgtgct gcagagcagc 540

ggcctgtact ccctgagcag cgtggtcacc gtgcctagca gcagcctggg cacccagacc 600

tacatctgca acgtgaacca caagcccagc aacaccaaag tggacaagaa ggtggagccc 660

aagagctgtg atggcggagg agggtccgga ggcggaggat ccgaggtgca gctgctggaa 720

tctggcggcg gactggtgca gcctggcgga tctctgagac tgagctgtgc cgccagcggc 780

ttcaccttca gcacctacgc catgaactgg gtgcgccagg cccctggcaa aggcctggaa 840

tgggtgtccc ggatcagaag caagtacaac aactacgcca cctactacgc cgacagcgtg 900

aagggccggt tcaccatcag ccgggacgac agcaagaaca ccctgtacct gcagatgaac 960

agcctgcggg ccgaggacac cgccgtgtac tattgtgtgc ggcacggcaa cttcggcaac 1020

agctatgtgt cttggtttgc ctactggggc cagggcaccc tcgtgaccgt gtcaagcgct 1080

agtaccaagg gccccagcgt gttccccctg gcacccagca gcaagagcac atctggcgga 1140

acagccgctc tgggctgtct ggtgaaagac tacttccccg agcccgtgac cgtgtcttgg 1200

aactctggcg ccctgaccag cggcgtgcac acctttccag ccgtgctgca gagcagcggc 1260

ctgtactccc tgtcctccgt ggtcaccgtg ccctctagct ccctgggaac acagacatat 1320

atctgtaatg tcaatcacaa gccttccaac accaaagtcg ataagaaagt cgagcccaag 1380

agctgcgaca aaactcacac atgcccaccg tgcccagcac ctgaagctgc agggggaccg 1440

tcagtcttcc tcttcccccc aaaacccaag gacaccctca tgatctcccg gacccctgag 1500

gtcacatgcg tggtggtgga cgtgagccac gaagaccctg aggtcaagtt caactggtac 1560

gtggacggcg tggaggtgca taatgccaag acaaagccgc gggaggagca gtacaacagc 1620

acgtaccgtg tggtcagcgt cctcaccgtc ctgcaccagg actggctgaa tggcaaggag 1680

tacaagtgca aggtctccaa caaagccctc ggcgccccca tcgagaaaac catctccaaa 1740

gccaaagggc agccccgaga accacaggtg tacaccctgc ccccatgccg ggatgagctg 1800

accaagaacc aggtcagcct gtggtgcctg gtcaaaggct tctatcccag cgacatcgcc 1860

gtggagtggg agagcaatgg gcagccggag aacaactaca agaccacgcc tcccgtgctg 1920

gactccgacg gctccttctt cctctacagc aagctcaccg tggacaagag caggtggcag 1980

caggggaacg tcttctcatg ctccgtgatg catgaggctc tgcacaacca ctacacgcag 2040

aagagcctct ccctgtctcc gggtaaa 2067

<210> 289
<211> 1350
<212> DNA
<213> Artificial Sequence

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

<400> 289
gaggtgcaat tggtggaaag cggaggcggc ctcgtgaagc ctggcggatc tctgagactg 60

agctgtgccg ccagcggctt caccttcagc aacgcctgga tgagctgggt gcgccaggcc 120

cctggaaaag gactcgagtg ggtgggacgg atcaagagca agaccgaggg cggcaccacc 180

gactatgccg cccctgtgaa gggccggttc accatcagca gggacgacag caagaacacc 240

ctgtacctgc agatgaacag cctgaaaacc gaggacaccg ccgtgtacta ctgcaccacc 300

ccctacgagt ggtcttggta cgactactgg ggccagggca ccctcgtgac cgtgtcatct 360

gctagcacca agggcccctc cgtgttcccc ctggccccca gcagcaagag caccagcggc 420

ggcacagccg ctctgggctg cctggtcaag gactacttcc ccgagcccgt gaccgtgtcc 480

tggaacagcg gagccctgac ctccggcgtg cacaccttcc ccgccgtgct gcagagttct 540

ggcctgtata gcctgagcag cgtggtcacc gtgccttcta gcagcctggg cacccagacc 600

tacatctgca acgtgaacca caagcccagc aacaccaagg tggacaagaa ggtggagccc 660

aagagctgcg acaaaactca cacatgccca ccgtgcccag cacctgaagc tgcaggggga 720

ccgtcagtct tcctcttccc cccaaaaccc aaggacaccc tcatgatctc ccggaccct 780

gaggtcacat gcgtggtggt ggacgtgagc cacgaagacc ctgaggtcaa gttcaactgg 840

tacgtggacg gcgtggaggt gcataatgcc aagacaaagc cgcgggagga gcagtacaac 900

agcacgtacc gtgtggtcag cgtcctcacc gtcctgcacc aggactggct gaatggcaag 960

gagtacaagt gcaaggtctc caacaaagcc ctcggcgccc ccatcgagaa aaccatctcc 1020

aaagccaaag ggcagccccg agaaccacag gtgtgcaccc tgcccccatc ccgggatgag 1080

ctgaccaaga accaggtcag cctctcgtgc gcagtcaaag gcttctatcc cagcgacatc 1140

gccgtggagt gggagagcaa tgggcagccg gagaacaact acaagaccac gcctcccgtg 1200

ctggactccg acggctcctt cttcctcgtg agcaagctca ccgtggacaa gagcaggtgg 1260

cagcagggga acgtcttctc atgctccgtg atgcatgagg ctctgcacaa ccgcttcacg 1320

cagaagagcc tctccctgtc tccgggtaaa 1350

<210> 290
<211> 357
<212> DNA
<213> Artificial Sequence

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

polynucleotide"

<400> 290
gaggtgcaat tgttggagtc tgggggaggc ttggtacagc ctgggggtc cctgagactc 60

tcctgtgcag cctccggatt cacctttagc agttatgcca tgagctgggt ccgccaggct 120

ccagggaagg ggctggagtg ggtctcagct attagtggta gtggtggtag cacatactac 180

gcagactccg tgaagggccg gttcaccatc tccagagaca attccaagaa cacgctgtat 240

ctgcagatga acagcctgag agccgaggac acggccgtat attactgtgc gcgtggtgac 300

taccgttacc gttacttcga ctactggggc caaggaaccc tggtcaccgt ctcgagt 357

<210> 291
<211> 327
<212> DNA
<213> Artificial Sequence

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

<400> 291
tcttctgaac tgactcaaga tccagctgtt agcgtggctc tgggtcagac tgtacgtatc 60

acctgccaag gcgattctct gcgctcctac tacgcaagct ggtaccagca gaaaccgggt 120

caggccccag ttctggtgat ttacggcaaa aacaaccgtc cgtctgggat cccggaccgt 180

ttctccggca gctcttccgg taacacggcg agcctcacca tcactggcgc tcaagcagaa 240

gacgaggccg actattactg taactctcgg gaaagcccac caaccggcct ggttgtcttc 300

ggtggcggta ccaagctgac cgtccta 327

<210> 292
<211> 2022
<212> DNA
<213> Artificial Sequence

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

<400> 292
gaggtgcaat tgttggagtc tgggggaggc ttggtacagc ctgggggggtc cctgagactc 60

tcctgtgcag cctccggatt cacctttagc agttatgcca tgagctgggt ccgccaggct 120

ccagggaagg ggctggagtg ggtctcagct attagtggta gtggtggtag cacatactac 180

gcagactccg tgaagggccg gttcaccatc tccagagaca attccaagaa cacgctgtat 240

ctgcagatga acagcctgag agccgaggac acggccgtat attactgtgc gcgtggtgac 300

taccgttacc gttacttcga ctactggggc caaggaaccc tggtcaccgt ctcgagtgct 360

agcaccaagg gcccctccgt gtttcctctg gcccccttcca gcaagtccac ctctggcgga 420

actgccgctc tgggctgcct ggtggaagat tacttccccg agcccgtgac cgtgtcctgg 480

aattctggcg ctctgacctc cggcgtgcac acctttccag ctgtgctgca gtcctccggc 540

ctgtactccc tgtcctccgt cgtgacagtg ccctccagct ctctgggcac ccagacctac 600

atctgcaacg tgaaccacaa gccctccaac accaaggtgg acgagaaggt ggaacccaag 660

tcctgcgacg gtggcggagg ttccggaggc ggaggatccc aggctgtcgt gacccaggaa 720

ccctccctga cagtgtctcc tggcggcacc gtgaccctga cctgtggatc ttctaccggc 780

gctgtgacca cctccaacta cgccaattgg gtgcaggaaa agcccggcca ggccttcaga 840

ggactgatcg gcggcaccaa caagagagcc cctggcaccc ctgccagatt ctccggttct 900

ctgctgggcg gcaaggctgc cctgactctg tctggtgctc agcctgagga cgaggccgag 960

tactactgcg ccctgtggta ctccaacctg tgggtgttcg gcggaggcac caagctgacc 1020

gtgctgtcca gcgcttccac caagggaccc agtgtgttcc ccctggcccc cagctccaag 1080

tctacatccg gtggcacagc tgccctggga tgtctcgtga aggactactt tcctgagcct 1140

gtgacagtgt cttggaacag cggagccctg accagcggag tgcacacatt ccctgcagtg 1200

ctgcagagca gcggcctgta tagcctgagc agcgtcgtga ccgtgccttc ctctagcctg 1260

ggaacacaga catatatctg taatgtgaat cataagccca gtaataccaa agtggataag 1320

aaagtggaac ctaagagctg cgataagacc cacacctgtc ccccctgccc tgctcctgaa 1380

gctgctggtg gccctagcgt gttcctgttc cccccaaagc ccaaggacac cctgatgatc 1440

tcccggaccc ccgaagtgac ctgcgtggtg gtggatgtgt cccacgagga ccctgaagtg 1500

aagttcaatt ggtacgtgga cggcgtggaa gtgcacaacg ccaagaccaa gcctagagag 1560

gaacagtaca actccaccta ccgggtggtg tccgtgctga cagtgctgca ccaggactgg 1620

ctgaacggca aagagtacaa gtgcaaggtg tccaacaagg ccctgggcgc tcccatcgaa 1680

aagaccatct ccaaggccaa gggccagccc cgggaacccc aggtgtacac cctgccccca 1740

tgccgggatg agctgaccaa gaaccaggtc agcctgtggt gcctggtcaa aggcttctat 1800

cccagcgaca tcgccgtgga gtgggagagc aatgggcagc cggagaacaa ctacaagacc 1860

acgcctcccg tgctggactc cgacggctcc ttcttcctct acagcaagct caccgtggac 1920

aagagcaggt ggcagcaggg gaacgtcttc tcatgctccg tgatgcatga ggctctgcac 1980

aaccactaca cgcagaagag cctctccctg tctccgggta aa 2022

<210> 293
<211> 1347
<212> DNA
<213> Artificial Sequence

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

<400> 293
gaggtgcaat tgttggagtc tgggggaggc ttggtacagc ctgggggGtc cctgagactc 60

tcctgtgcag cctccggatt cacctttagc agttatgcca tgagctgggt ccgccaggct 120

ccagggaagg ggctggagtg ggtctcagct attagtggta gtggtggtag cacatactac 180

gcagactccg tgaagggccg gttcaccatc tccagagaca attccaagaa cacgctgtat 240

ctgcagatga acagcctgag agccgaggac acggccgtat attactgtgc gcgtggtgac 300

taccgttacc gttacttcga ctactggggc caaggaaccc tggtcaccgt ctcgagtgct 360

agcaccaagg gcccctccgt gttccccctg gccccagca gcaagagcac cagcggcggc 420

acagccgctc tgggctgcct ggtcgaggac tacttccccg agcccgtgac cgtgtcctgg 480

aacagcggag ccctgacctc cggcgtgcac accttccccg ccgtgctgca gagttctggc 540

ctgtatagcc tgagcagcgt ggtcaccgtg ccttctagca gcctgggcac ccagacctac 600

atctgcaacg tgaaccacaa gcccagcaac accaaggtgg acgagaaggt ggagcccaag 660

agctgcgaca aaactcacac atgcccaccg tgcccagcac ctgaagctgc agggggaccg 720

tcagtcttcc tcttcccccc aaaacccaag gacaccctca tgatctcccg gacccctgag 780

gtcacatgcg tggtggtgga cgtgagccac gaagaccctg aggtcaagtt caactggtac 840

gtggacggcg tggaggtgca taatgccaag acaaagccgc gggaggagca gtacaacagc 900

acgtaccgtg tggtcagcgt cctcaccgtc ctgcaccagg actggctgaa tggcaaggag 960

tacaagtgca aggtctccaa caaagccctc ggcgccccca tcgagaaaac catctccaaa 1020

gccaaagggc agccccgaga accacaggtg tgcaccctgc ccccatcccg ggatgagctg 1080

accaagaacc aggtcagcct ctcgtgcgca gtcaaaggct tctatcccag cgacatcgcc 1140

gtggagtggg agagcaatgg gcagccggag aacaactaca agaccacgcc tcccgtgctg 1200

gactccgacg gctccttctt cctcgtgagc aagctcaccg tggacaagag caggtggcag 1260

caggggaacg tcttctcatg ctccgtgatg catgaggctc tgcacaacca ctacacgcag 1320

aagagcctct ccctgtctcc gggtaaa 1347

<210> 294
<211> 645
<212> DNA
<213> Artificial Sequence

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

<400> 294
tcttctgaac tgactcaaga tccagctgtt agcgtggctc tgggtcagac tgtacgtatc 60

acctgccaag gcgattctct gcgctcctac tacgcaagct ggtaccagca gaaaccgggt 120

caggccccag ttctggtgat ttacggcaaa aacaaccgtc cgtctgggat cccggaccgt 180

ttctccggca gctcttccgg taacacggcg agcctcacca tcactggcgc tcaagcagaa 240

gacgaggccg actattactg taactctcgg gaaagcccac caaccggcct ggttgtcttc 300

ggtggcggta ccaagctgac cgtcctaggt caacccaagg ctgcccccag cgtgaccctg 360

ttccccccca gcagcaagaa actgcaggcc aacaaggcca ccctggtctg cctgatcagc 420

gacttctacc caggcgccgt gaccgtggcc tggaaggccg acagcagccc cgtgaaggcc 480

ggcgtggaga ccaccacccc cagcaagcag agcaacaaca agtacgccgc cagcagctac 540

ctgagcctga cccccgagca gtggaagagc cacaggtcct acagctgcca ggtgacccac 600

gagggcagca ccgtggagaa aaccgtggcc cccaccgagt gcagc 645

<210> 295
<211> 354
<212> DNA
<213> Artificial Sequence

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

<400> 295
caggtgcaat tggttcaatc tggtgctgaa gtaaaaaaac cgggcgcttc cgttaaagtg 60

agctgcaaag catccggata caccttcact tcctattaca tgcactgggt tcgtcaagcc 120

ccgggccagg gtctggaatg gatgggcatc attaacccaa gcggtggctc tacctcctac 180

gcgcagaaat tccagggtcg cgtcacgatg acccgtgaca ctagcacctc taccgtttat 240

atggagctgt ccagcctgcg ttctgaagat actgcagtgt actactgtgc acgcggtgac 300

tggtcttact acatggacta ttggggtcaa ggcaccctcg taacggtttc ttct 354

<210> 296
<211> 333
<212> DNA
<213> Artificial Sequence

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

<400> 296
gatattgtta tgactcaatc tccactgtct ctgccggtga ctccaggcga accggcgagc 60

atttcttgcc gttccagcca gtctctgctg cactccaacg gctacaacta tctcgattgg 120

tacctgcaaa aaccgggtca gagccctcag ctgctgatct acctgggctc taaccgcgct 180

tccggtgtac cggaccgttt cagcggctct ggatccggca ccgatttcac gttgaaaatc 240

agccgtgttg aagcagaaga cgtgggcgtt tattactgta tgcaggcacg gcagacccca 300

acttttggtc aaggcaccaa ggtcgaaatt aaa 333

<210> 297
<211> 2019
<212> DNA
<213> Artificial Sequence

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

<400> 297
caggtgcaat tggttcaatc tggtgctgaa gtaaaaaaac cgggcgcttc cgttaaagtg 60

agctgcaaag catccggata caccttcact tcctattaca tgcactgggt tcgtcaagcc 120

ccgggccagg gtctggaatg gatgggcatc attaacccaa gcggtggctc tacctcctac 180

gcgcagaaat tccagggtcg cgtcacgatg acccgtgaca ctagcacctc taccgtttat 240

atggagctgt ccagcctgcg ttctgaagat actgcagtgt actactgtgc acgcggtgac 300

tggtcttact acatggacta ttggggtcaa ggcaccctcg taacggtttc ttctgctagc 360

accaagggcc cctccgtgtt tcctctggcc ccttccagca agtccacctc tggcggaact 420

gccgctctgg gctgcctggt ggaagattac ttccccgagc ccgtgaccgt gtcctggaat 480

tctggcgctc tgacctccgg cgtgcacacc tttccagctg tgctgcagtc ctccggcctg 540

tactccctgt cctccgtcgt gacagtgccc tccagctctc tgggcaccca gacctacatc 600

tgcaacgtga accacaagcc ctccaacacc aaggtggacg agaaggtgga acccaagtcc 660

tgcgacggtg gcggaggttc cggaggcgga ggatcccagg ctgtcgtgac ccaggaaccc 720

tccctgacag tgtctcctgg cggcaccgtg accctgacct gtggatcttc taccggcgct 780

gtgaccacct ccaactacgc caattgggtg caggaaaagc ccggccaggc cttcagagga 840

ctgatcggcg gcaccaacaa gagagcccct ggcacccctg ccagattctc cggttctctg 900

ctgggcggca aggctgccct gactctgtct ggtgctcagc ctgaggacga ggccgagtac 960

tactgcgccc tgtggtactc caacctgtgg gtgttcggcg gaggcaccaa gctgaccgtg 1020

ctgtccagcg cttccaccaa gggacccagt gtgttccccc tggcccccag ctccaagtct 1080

acatccggtg gcacagctgc cctgggatgt ctcgtgaagg actactttcc tgagcctgtg 1140

acagtgtctt ggaacagcgg agccctgacc agcggagtgc acacattccc tgcagtgctg 1200

cagagcagcg gcctgtatag cctgagcagc gtcgtgaccg tgccttcctc tagcctggga 1260

acacagacat atatctgtaa tgtgaatcat aagcccagta ataccaaagt ggataagaaa 1320

gtggaaccta agagctgcga taagacccac acctgtcccc cctgccctgc tcctgaagct 1380

gctggtggcc ctagcgtgtt cctgttcccc ccaaagccca aggacaccct gatgatctcc 1440

cggacccccg aagtgacctg cgtggtggtg gatgtgtccc acgaggaccc tgaagtgaag 1500

ttcaattggt acgtggacgg cgtggaagtg cacaacgcca agaccaagcc tagagaggaa 1560

cagtacaact ccacctaccg ggtggtgtcc gtgctgacag tgctgcacca ggactggctg 1620

aacggcaaag agtacaagtg caaggtgtcc aacaaggccc tgggcgctcc catcgaaaag 1680

accatctcca aggccaaggg ccagccccgg gaaccccagg tgtacaccct gcccccatgc 1740

cgggatgagc tgaccaagaa ccaggtcagc ctgtggtgcc tggtcaaagg cttctatccc 1800

agcgacatcg ccgtggagtg ggagagcaat gggcagccgg agaacaacta caagaccacg 1860

cctcccgtgc tggactccga cggctccttc ttcctctaca gcaagctcac cgtggacaag 1920

agcaggtggc agcaggggaa cgtcttctca tgctccgtga tgcatgaggc tctgcacaac 1980

cactacacgc agaagagcct ctccctgtct ccgggtaaa 2019

<210> 298
<211> 1344
<212> DNA
<213> Artificial Sequence

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

<400> 298
caggtgcaat tggttcaatc tggtgctgaa gtaaaaaaac cgggcgcttc cgttaaagtg 60

agctgcaaag catccggata caccttcact tcctattaca tgcactgggt tcgtcaagcc 120

ccgggccagg gtctggaatg gatgggcatc attaacccaa gcggtggctc tacctcctac 180

gcgcagaaat tccagggtcg cgtcacgatg acccgtgaca ctagcacctc taccgtttat 240

atggagctgt ccagcctgcg ttctgaagat actgcagtgt actactgtgc acgcggtgac 300

tggtcttact acatggacta ttggggtcaa ggcaccctcg taacggtttc ttctgctagc 360

accaagggcc cctccgtgtt ccccctggcc cccagcagca agagcaccag cggcggcaca 420

gccgctctgg gctgcctggt cgaggactac ttccccgagc ccgtgaccgt gtcctggaac 480

agcggagccc tgacctccgg cgtgcacacc ttccccgccg tgctgcagag ttctggcctg 540

tatagcctga gcagcgtggt caccgtgcct tctagcagcc tgggcaccca gacctacatc 600

tgcaacgtga accacaagcc cagcaacacc aaggtggacg agaaggtgga gcccaagagc 660

tgcgacaaaa ctcacacatg cccaccgtgc ccagcacctg aagctgcagg gggaccgtca 720

gtcttcctct tccccccaaa acccaaggac accctcatga tctcccggac ccctgaggtc 780

acatgcgtgg tggtggacgt gagccacgaa gaccctgagg tcaagttcaa ctggtacgtg 840

gacggcgtgg aggtgcataa tgccaagaca aagccgcggg aggagcagta caacagcacg 900

taccgtgtgg tcagcgtcct caccgtcctg caccaggact ggctgaatgg caaggagtac 960

aagtgcaagg tctccaacaa agccctcggc gcccccatcg agaaaaccat ctccaaagcc 1020

aaagggcagc cccgagaacc acaggtgtgc accctgcccc catcccggga tgagctgacc 1080

aagaaccagg tcagcctctc gtgcgcagtc aaaggcttct atcccagcga catcgccgtg 1140

gagtgggaga gcaatgggca gccggagaac aactacaaga ccacgcctcc cgtgctggac 1200

tccgacggct ccttcttcct cgtgagcaag ctcaccgtgg acaagagcag gtggcagcag 1260

gggaacgtct tctcatgctc cgtgatgcat gaggctctgc acaaccacta cacgcagaag 1320

agcctctccc tgtctccggg taaa 1344

<210> 299
<211> 654

<212> DNA
<213> Artificial Sequence

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

<400> 299
gatattgtta tgactcaatc tccactgtct ctgccggtga ctccaggcga accggcgagc 60

atttcttgcc gttccagcca gtctctgctg cactccaacg gctacaacta tctcgattgg 120

tacctgcaaa aaccgggtca gagccctcag ctgctgatct acctgggctc taaccgcgct 180

tccggtgtac cggaccgttt cagcggctct ggatccggca ccgatttcac gttgaaaatc 240

agccgtgttg aagcagaaga cgtgggcgtt tattactgta tgcaggcacg gcagacccca 300

acttttggtc aaggcaccaa ggtcgaaatt aaacgtacgg tggctgcacc atctgtcttc 360

atcttcccgc catctgatcg gaagttgaaa tctggaactg cctctgttgt gtgcctgctg 420

aataacttct atcccagaga ggccaaagta cagtggaagg tggataacgc cctccaatcg 480

ggtaactccc aggagagtgt cacagagcag gacagcaagg acagcaccta cagcctcagc 540

agcaccctga cgctgagcaa agcagactac gagaaacaca aagtctacgc ctgcgaagtc 600

acccatcagg gcctgagctc gcccgtcaca aagagcttca acaggggaga gtgt 654

<210> 300
<211> 50
<212> PRT
<213> Artificial Sequence

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

<220>
<221> misc_feature
<222> (1)..(50)
<223> /note="This sequence may encompass 1-10 'Gly Gly Gly Gly Ser'
repeating units, wherein some positions may be absent"

<220>

<221> source
<223> /note="See specification as filed for detailed description of
substitutions and preferred embodiments"

<400> 300
Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly
1 5 10 15

Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly
20 25 30

Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly
35 40 45

Gly Ser
50

<210> 301
<211> 50
<212> PRT
<213> Artificial Sequence

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

<220>
<221> misc_feature
<222> (1)..(50)
<223> /note="This sequence may encompass 1-10 'Ser Gly Gly Gly Gly'
repeating units, wherein some positions may be absent"

<220>
<221> source
<223> /note="See specification as filed for detailed description of
substitutions and preferred embodiments"

<400> 301
Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
1 5 10 15

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly
20 25 30

Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly
        35   40   45

Gly Gly
    50

<210> 302
<211> 54
<212> PRT
<213> Artificial Sequence

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

<220>
<221> misc_feature
<222> (5)..(54)
<223> /note="This region may encompass 1-10 'Ser Gly Gly Gly Gly'
      repeating units, wherein some positions may be absent"

<220>
<221> source
<223> /note="See specification as filed for detailed description of
      substitutions and preferred embodiments"

<400> 302
Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly
1   5   10   15

Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly
            20   25   30

Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly
        35   40   45

Gly Ser Gly Gly Gly Gly
    50

<210> 303

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

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

<400> 303
Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
1 5 10

<210> 304
<211> 15
<212> PRT
<213> Artificial Sequence

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

<400> 304
Glu Pro Lys Ser Cys Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
1 5 10 15

<210> 305
<211> 16
<212> PRT
<213> Artificial Sequence

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

<400> 305
Glu Pro Lys Ser Cys Asp Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
1 5 10 15

<210> 306
<211> 5
<212> PRT
<213> Artificial Sequence

<220>

<221> source
<223> /note="Description of Artificial Sequence: Synthetic
Penta-His tag"

<400> 306
His His His His His
1 5

<210> 307
<211> 104
<212> PRT
<213> Artificial Sequence

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

<400> 307
Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Ser Ser Lys
1 5 10 15

Ser Thr Ser Gly Gly Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr
20 25 30

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

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

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

Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn Thr Lys Val Asp Lys
85 90 95

Lys Val Glu Pro Lys Ser Cys Asp
100

<210> 308
<211> 692

<212> PRT
<213> Artificial Sequence

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

<400> 308
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 Ser Tyr
20 25 30

Tyr Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45

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

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

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

Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu
130 135 140

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

Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu

```
                165                 170                 175

Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser
            180                 185                 190

Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro
        195                 200                 205

Ser Asn Thr Lys Val Asp Lys Lys Val Glu Pro Lys Ser Cys Asp Gly
    210                 215                 220

Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Val Gln Leu Leu Glu Ser
225                 230                 235                 240

Gly Gly Gly Leu Val Gln Pro Gly Gly Ser Leu Arg Leu Ser Cys Ala
                245                 250                 255

Ala Ser Gly Phe Thr Phe Ser Thr Tyr Ala Met Asn Trp Val Arg Gln
            260                 265                 270

Ala Pro Gly Lys Gly Leu Glu Trp Val Ser Arg Ile Arg Ser Lys Tyr
        275                 280                 285

Asn Asn Tyr Ala Thr Tyr Tyr Ala Asp Ser Val Lys Gly Arg Phe Thr
    290                 295                 300

Ile Ser Arg Asp Asp Ser Lys Asn Thr Leu Tyr Leu Gln Met Asn Ser
305                 310                 315                 320

Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys Val Arg His Gly Asn
                325                 330                 335

Phe Gly Asn Ser Tyr Val Ser Trp Phe Ala Tyr Trp Gly Gln Gly Thr
            340                 345                 350

Leu Val Thr Val Ser Ser Ala Ser Val Ala Ala Pro Ser Val Phe Ile
        355                 360                 365
```

```
Phe Pro Pro Ser Asp Glu Gln Leu Lys Ser Gly Thr Ala Ser Val Val
    370                 375                 380

Cys Leu Leu Asn Asn Phe Tyr Pro Arg Glu Ala Lys Val Gln Trp Lys
385                 390                 395                 400

Val Asp Asn Ala Leu Gln Ser Gly Asn Ser Gln Glu Ser Val Thr Glu
                405                 410                 415

Gln Asp Ser Lys Asp Ser Thr Tyr Ser Leu Ser Ser Thr Leu Thr Leu
            420                 425                 430

Ser Lys Ala Asp Tyr Glu Lys His Lys Val Tyr Ala Cys Glu Val Thr
        435                 440                 445

His Gln Gly Leu Ser Ser Pro Val Thr Lys Ser Phe Asn Arg Gly Glu
    450                 455                 460

Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Ala Ala
465                 470                 475                 480

Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu
                485                 490                 495

Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser
            500                 505                 510

His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu
        515                 520                 525

Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr
    530                 535                 540

Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn
545                 550                 555                 560

Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Gly Ala Pro
```

565 570 575

Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln
580 585 590

Val Tyr Thr Leu Pro Pro Cys Arg Asp Glu Leu Thr Lys Asn Gln Val
595 600 605

Ser Leu Trp Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val
610 615 620

Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro
625 630 635 640

Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr
645 650 655

Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val
660 665 670

Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu
675 680 685

Ser Pro Gly Lys
690

<210> 309
<211> 449
<212> PRT
<213> Artificial Sequence

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

<400> 309
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 Ser Tyr
            20                  25                  30

Tyr Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
        35                  40                  45

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

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

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

Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu
    130                 135                 140

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

Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu
                165                 170                 175

Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser
            180                 185                 190

Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro
        195                 200                 205

Ser Asn Thr Lys Val Asp Lys Lys Val Glu Pro Lys Ser Cys Asp Lys
    210                 215                 220
```

```
Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Ala Ala Gly Gly Pro
225                 230                 235                 240

Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser
                245                 250                 255

Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp
            260                 265                 270

Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn
        275                 280                 285

Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val
    290                 295                 300

Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu
305                 310                 315                 320

Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Gly Ala Pro Ile Glu Lys
                325                 330                 335

Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Cys Thr
            340                 345                 350

Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu Ser
        355                 360                 365

Cys Ala Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu
    370                 375                 380

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

Asp Ser Asp Gly Ser Phe Phe Leu Val Ser Lys Leu Thr Val Asp Lys
                405                 410                 415
```

```
Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu
            420                 425                 430


Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly
        435                 440                 445


Lys



<210> 310
<211> 216
<212> PRT
<213> Artificial Sequence

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


<220>
<221> MOD_RES
<222> (201)..(201)
<223> Any amino acid

<400> 310
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 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 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 Thr Asn Glu His
```

```
                85                  90                  95

Tyr Tyr Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys Arg Thr Val
            100                 105                 110

Ala Ala Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu Gln Leu Lys
        115                 120                 125

Ser Gly Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe Tyr Pro Arg
    130                 135                 140

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

Ser Gln Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr Tyr Ser
                165                 170                 175

Leu Ser Ser Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu Lys His Lys
            180                 185                 190

Val Tyr Ala Cys Glu Val Thr His Xaa Gly Leu Ser Ser Pro Val Thr
        195                 200                 205

Lys Ser Phe Asn Arg Gly Glu Cys
    210                 215


<210> 311
<211> 7
<212> PRT
<213> Artificial Sequence

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

<400> 311
Gly Thr Asn Ala Arg Ala Pro
1               5
```

<210> 312
<211> 9
<212> PRT
<213> Artificial Sequence

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

<400> 312
Ala Leu Trp Tyr Ala Asn Leu Trp Val
1 5

<210> 313
<211> 5
<212> PRT
<213> Artificial Sequence

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

<400> 313
Asn Ala Trp Met His
1 5

<210> 314
<211> 19
<212> PRT
<213> Artificial Sequence

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

<400> 314
Ser Ile Lys Ser Lys Thr Asp Gly Gly Thr Thr Asp Tyr Ala Ala Pro
1 5 10 15

Val Lys Gly

<210> 315

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

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

<400> 315
Pro Tyr Glu Trp Ser Trp Tyr Asp Tyr
1 5

<210> 316
<211> 218
<212> PRT
<213> Artificial Sequence

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

<400> 316
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 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 Thr 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

Arg Gln Thr Pro Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys Arg

```
            100                 105                 110

Thr Val Ala Ala Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Arg Lys
        115                 120                 125

Leu Lys Ser Gly Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe Tyr
    130                 135                 140

Pro Arg Glu Ala Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln Ser
145                 150                 155                 160

Gly Asn Ser Gln Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr
                165                 170                 175

Tyr Ser Leu Ser Ser Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu Lys
            180                 185                 190

His Lys Val Tyr Ala Cys Glu Val Thr His Gln Gly Leu Ser Ser Pro
        195                 200                 205

Val Thr Lys Ser Phe Asn Arg Gly Glu Cys
    210                 215
```