SEQUENCE LISTING

<110> PFIZER INC.
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Smith, Julianne C

<120> Chimeric Antigen Receptors Targeting Epidermal Growth Factor Receptor Variant III

<130> ALGN-006/02WO 333466-2071

<140> PCT/IB2017/050108
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<150> US 62/431,758
<151> 2016-12-08

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<151> 2016-01-21

<160> 277

<170> PatentIn version 3.5

<210> 1
<211> 115
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<220>
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<400> 1

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

Ser Val Lys Ile Ser Cys Lys Thr Ser Gly Tyr Thr Phe Thr Asp Tyr
20 25 30

Thr Leu His Trp Val Lys Gln Ser His Val Lys Ser Leu Glu Trp Ile
35 40 45

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

Lys Gly Lys Ala Thr Leu Thr Val Asp Lys Ser Ser Ser Thr Ala Tyr
65 70 75 80

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

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

Val Ser Ser
115

<210> 2
<211> 112
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 2

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

Gln Pro Ala Ser Ile Ser Cys Lys Ser Ser Gln Ser Leu Leu Tyr Ser
20 25 30

Asn Gly Lys Thr Tyr Leu Asn Trp Leu Leu Gln Arg Pro Gly Gln Ser
35 40 45

Pro Lys Arg Leu Ile Tyr Leu Val Ser Lys Leu Asp Ser Gly Val Pro
50 55 60

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

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

Thr His Phe Pro Leu Thr Phe Gly Ala Gly Thr Lys Leu Glu Leu Lys
100 105 110

<210> 3
<211> 115

<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<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 Asp Tyr
            20                  25                  30


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


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


Lys 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 Ala Met Asp Ser Trp Gly Gln Gly Thr Leu Val Thr
            100                 105                 110


Val Ser Ser
        115
```

<210> 4
<211> 112
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 4

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

Gln Pro Ala Ser Ile Ser Cys Lys Ser Ser Gln Ser Leu Leu Tyr Ser
20 25 30

Asn Gly Lys Thr Tyr Leu Asn Trp Phe Gln Gln Arg Pro Gly Gln Ser
35 40 45

Pro Arg Arg Leu Ile Tyr Leu Val Ser Lys Leu Asp 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 Val Gln Asp
85 90 95

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

<210> 5
<211> 115
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<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 Asp Tyr
20 25 30

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

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

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

Val Ser Ser
        115
```

<210> 6
<211> 112
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 6

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

Gln Pro Ala Ser Ile Ser Cys Lys Ser Ser Gln Ser Leu Leu Tyr Ser
            20                  25                  30

Asn Gly Lys Thr Tyr Leu Asn Trp Phe Gln Gln Arg Pro Gly Gln Ser
        35                  40                  45

Pro Arg Arg Leu Ile Tyr Gln Val Ser Lys Leu Asp 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 Gly Gln Asp
                85                  90                  95

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

<210> 7
<211> 115
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<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 Asp Tyr
20 25 30

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

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

Lys 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 Ala Glu Gly Ser Trp Gly Gln Gly Thr Leu Val Thr
100 105 110

Val Ser Ser
115

<210> 8
<211> 112
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 8

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

Gln Pro Ala Ser Ile Ser Cys Lys Ser Ser Gln Ser Leu Leu Tyr Ser
20 25 30

```
Asn Asp Lys Thr Tyr Thr Asn Trp Phe Gln Gln Arg Pro Gly Gln Ser
        35                  40                  45

Pro Arg Arg Leu Ile Tyr Glu Val Ser Lys Leu Asp Val 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 Gly Gln Asp
                85                  90                  95

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

<210> 9
<211> 121
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 9

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

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

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

Trp Phe Ala His Ile Phe Ser Thr Asp Glu Lys Ser Leu Lys Leu Ser
    50                  55                  60

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

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

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

Gln Gly Thr Leu Val Thr Val Ser Ser
115 120

<210> 10
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 10

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

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

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

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

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

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

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

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

<220>

<223> Synthetic Construct

<400> 11

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


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


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


Trp Leu Ala His Ile Phe Ser Thr Asp Glu Lys Ser Ile Arg Arg Ser
    50                  55                  60


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


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


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


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

<210> 12
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 12

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


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

```
Phe Ala Trp Tyr Gln Gln Arg Pro Gly Gln Ala Pro Arg Leu Leu Leu
        35                  40                  45

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

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

Glu Asp Phe Ala Ile Tyr Phe Cys Gln Gln Tyr Lys Asp Trp Pro Phe
                85                  90                  95

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

<210> 13
<211> 121
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 13

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

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

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

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

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

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

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

Pro Gly Phe Leu Val Thr Val Ser Ser
115 120

<210> 14
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 14

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

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

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

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

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

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

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

<210> 15
<211> 121
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 15

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

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

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

Trp Phe Ala His Ile Phe Ser Thr Asp Glu Lys Ser Phe Arg Thr Ser
50 55 60

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

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

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

Gln Gly Ile Leu Val Thr Val Ser Ser
115 120

<210> 16
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 16

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

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

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

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

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

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

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

<210> 17
<211> 122
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 17

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

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

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

Trp Phe Ala His Ile Phe Ser Ser Asp Glu Lys Ser Ile Arg Arg Ser
    50                  55                  60

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

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

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

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


<210>  18
<211>  107
<212>  PRT
<213>  Artificial Sequence

<220>
<223>  Synthetic Construct

<400>  18

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


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


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


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


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


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


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


<210>  19
<211>  121
<212>  PRT
<213>  Artificial Sequence

<220>
<223>  Synthetic Construct

<400>  19
```

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

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

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

Trp Phe Ala His Ile Phe Ser Ser Asp Glu Lys Ser Ile Arg Arg Ser
    50                  55                  60

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

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

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

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

<210> 20
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 20

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

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

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

```
Ser Gly Ala Ser Thr Arg Ala Thr Gly Val Pro Thr Arg Phe Ser Gly
    50                  55                  60

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

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

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

<210> 21
<211> 121
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 21

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

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

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

Trp Leu Ala His Ile Phe Ser Thr Asp Glu Lys Ser Ile Arg Arg Ser
    50                  55                  60

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

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

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

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


<210>  22
<211>  107
<212>  PRT
<213>  Artificial Sequence

<220>
<223>  Synthetic Construct

<400>  22

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


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


Phe Ala Trp Tyr Gln Gln Arg Pro Gly Gln Ser Pro Arg Leu Leu Leu
        35                  40                  45


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


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


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


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


<210>  23
<211>  121
<212>  PRT
<213>  Artificial Sequence

<220>
<223>  Synthetic Construct

<400>  23

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

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

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

Trp Leu Ala His Ile Phe Ser Thr Asp Glu Lys Ser Ile Arg Arg Ser
50 55 60

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

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

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

Gln Gly Thr Leu Val Thr Val Ser Ser
115 120

<210> 24
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 24

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

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

Phe Ala Trp Tyr Gln Gln Arg Pro Gly Gln Ser Pro Arg Leu Leu Leu
35 40 45

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

```
Ser Gly Ser Gly Thr Glu Asn Ile Leu Thr Ile Ser Ser Leu Gln Ser
65                  70                  75                  80


Glu Asp Phe Ala Ile Tyr Phe Cys Gln Gln Tyr Lys Asp Trp Pro Phe
                85                  90                  95


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


<210>  25
<211>  121
<212>  PRT
<213>  Artificial Sequence

<220>
<223>  Synthetic Construct

<400>  25

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


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


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


Trp Phe Ala His Ile Phe Ser Thr Asp Glu Lys Ser Leu Arg Leu Ser
    50                  55                  60


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


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


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


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

<210> 26
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 26

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

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

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

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

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

Glu His Ser Gly Leu Tyr Tyr Cys Gln Gln Tyr Asn Asp Trp Pro Phe
85 90 95

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

<210> 27
<211> 121
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 27

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

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

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

Trp Leu Ala His Ile Phe Ser Thr Asp Glu Lys Ser Ile Arg Arg Ser
    50                  55                  60

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

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

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

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

<210> 28
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 28

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

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

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

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

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

Glu Asp Phe Ala Ile Tyr Phe Cys Gln Gln Tyr Lys Asp Trp Pro Phe
85 90 95

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

<210> 29
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 29

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

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

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

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

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

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

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

<210> 30
<211> 121
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 30

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

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

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

Trp Leu Gly His Ile Phe Ser Ser Asp Glu Lys Ser Tyr Arg Leu Ser
50 55 60

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

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

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

Gln Gly Thr Leu Val Thr Val Ser Ser
115 120

<210> 31
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 31

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

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

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

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

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

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

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

<210> 32
<211> 121
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 32

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

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

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

Trp Leu Gly His Ile Phe Ser Ser Asp Glu Lys Ser Tyr Arg Leu Phe
50 55 60

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

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

Cys Ala Arg Asp Ser Ser Asp Tyr Glu Gly Tyr Phe Asp Tyr Trp Gly
100 105 110

Gln Gly Thr Leu Val Thr Val Ser Ser
115 120

<210> 33
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 33

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

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

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

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

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

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

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

<210> 34
<211> 121
<212> PRT
<213> Artificial Sequence

<220>

<223> Synthetic Construct

<220>
<221> misc_feature
<222> (83)..(83)
<223> Xaa can be any naturally occurring amino acid

<400> 34

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

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

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

Trp Leu Gly His Ile Phe Ser Ser Asp Glu Lys Ser Tyr Arg Leu Ser
50 55 60

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

Val Phe Xaa Met Thr Asn Met Asp Pro Gly Asp Pro Ala Thr Tyr Tyr
85 90 95

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

Gln Gly Thr Leu Val Thr Val Ser Ser
115 120

<210> 35
<211> 121
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 35

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

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

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

Trp Phe Ala His Ile Phe Ser Thr Asp Glu Lys Ser Tyr Ser Pro Ser
50 55 60

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

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

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

Gln Gly Thr Leu Val Thr Val Ser Ser
115 120

<210> 36
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 36

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

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

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

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

```
Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Val Ser Ser Leu Gln Ser
65                  70                  75                  80


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


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


<210>  37
<211>  118
<212>  PRT
<213>  Artificial Sequence

<220>
<223>  Synthetic Construct

<400>  37

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 Glu Ala Ser Gly Phe Thr Phe Ser Asp 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 Val Val
    50                  55                  60


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


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


Tyr Cys Thr Thr Val Pro Gly Ser Tyr Gly Tyr Trp Gly Gln Gly Thr
            100                 105                 110


Leu Val Thr Val Ser Ser
        115
```

<210> 38
<211> 112
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 38

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 Asn
20 25 30

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

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

Asp Arg Phe Ser Gly Gly 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

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

<210> 39
<211> 120
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 39

Glu Val Asn Leu Val Glu Ser Gly Gly Gly Leu Val Lys Pro Gly Gly
1 5 10 15

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

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

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

Tyr Cys Thr Thr Ile Pro Gly Asn Asp Ala Phe Asp Met Trp Gly Gln
            100                 105                 110

Gly Thr Met Val Thr Val Ser Ser
        115                 120
```

<210> 40
<211> 112
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 40

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

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

Asn Gly Lys Asn Tyr Leu Asp Trp Phe Leu His 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 Ile Asp Phe Ile Leu Lys Ile
65                  70                  75                  80


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


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


<210>  41
<211>  119
<212>  PRT
<213>  Artificial Sequence

<220>
<223>  Synthetic Construct

<400>  41

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


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


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


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


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


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


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


Thr Leu Val Thr Val Ser Ser
        115
```

<210> 42
<211> 112
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 42

Asp Ile Val Leu 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 Arg
20 25 30

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

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

Asp Arg Phe Ser Gly Ser Asp 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 Arg Leu Glu Ile Lys
100 105 110

<210> 43
<211> 120
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 43

Glu Val Asn Leu Val Glu Ser Gly Gly Gly Leu Val Lys Pro Gly Gly
1 5 10 15

Ser Leu Arg Leu Ser Cys Glu Ala Ser Gly Phe Thr Phe Ser Tyr 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 Ile Thr Asp Gly Gly Val Ile Asp Tyr Ala Ala
50 55 60

Pro Val Arg Asn Arg Cys Thr Ile Ser Arg Asp Asp Ser Arg Asn Thr
65 70 75 80

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

Tyr Cys Thr Thr Ile Pro Gly Asn Asp Asp Phe Asp Met Trp Gly Gln
100 105 110

Gly Arg Met Val Thr Val Ser Ser
115 120

<210> 44
<211> 120
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 44

Glu Val Asn Leu Val Glu Ser Gly Gly Gly Leu Val Lys Pro Gly Gly
1 5 10 15

Ser Leu Arg Leu Ser Cys Glu Ala Ser Gly Phe Thr Phe Ser Tyr 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 Ile Asn Asp Gly Gly Ala Thr Asp Tyr Ala Ser
50 55 60

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

```
Leu Tyr Leu Glu Met His Ser Leu Lys Thr Glu Asp Thr Ala Val Tyr
                85                  90                  95


Tyr Cys Thr Thr Ile Pro Gly Asn Asp Ala Phe Asp Met Trp Gly Gln
            100                 105                 110


Gly Thr Leu Val Thr Val Ser Ser
        115                 120


<210>  45
<211>  112
<212>  PRT
<213>  Artificial Sequence

<220>
<223>  Synthetic Construct

<400>  45

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


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


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


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


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


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


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


<210>  46
<211>  119
```

<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 46

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

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

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

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

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

Ser Leu Val Thr Val Ser Ser
115

<210> 47
<211> 112
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 47

Asp Ile Val Leu 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 Tyr Ser
20 25 30

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

Pro His Leu Leu Ile Tyr Leu Gly Ser Tyr 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 Ile Thr Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys
100 105 110

<210> 48
<211> 126
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 48

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 Asp Thr Phe Ser Ser Asn
20 25 30

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

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

Gln Gly Arg Val Thr Ile Thr Ala Asp Glu 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 His Thr Tyr His Glu Tyr Ala Gly Gly Tyr Tyr Gly Gly Ala
            100                 105                 110

Met Asp Pro Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
        115                 120                 125
```

<210> 49
<211> 112
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 49

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

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

Ser Asn Tyr Val Tyr Trp Tyr Gln Gln Leu Pro Gly Thr Ala Pro Lys
        35                  40                  45

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

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

Leu Arg Ser Glu Asp Glu Ala Asp Tyr Tyr Cys Ala Ala Trp Asp Asp
                85                  90                  95

Asn Leu Ser Gly Trp Val Phe Gly Thr Gly Thr Lys Leu Thr Val Leu
            100                 105                 110
```

<210> 50
<211> 123
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 50

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 Asn Tyr
20 25 30

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

Ser Asp Ile Ser Gly Gly Gly Gly Arg 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 Ala Gly Leu Leu Tyr Gly Gly Gly Val Tyr Pro Met Asp Ile
100 105 110

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

<210> 51
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 51

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

<210> 52
<211> 491
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 52

```
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1               5                   10                  15

His Ala Ala Arg Pro Asp Val Val Met Thr Gln Ser Pro Leu Ser Leu
            20                  25                  30

Pro Val Thr Leu Gly Gln Pro Ala Ser Ile Ser Cys Lys Ser Ser Gln
        35                  40                  45

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

Arg Pro Gly Gln Ser Pro Arg Arg Leu Ile Tyr Gln Val Ser Lys Leu
65                  70                  75                  80

Asp Ser Gly Val Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp
                85                  90                  95
```

```
Phe Thr Leu Lys Ile Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr
            100                 105                 110

Tyr Cys Gly Gln Asp Thr His Phe Pro Leu Thr Phe Gly Gly Gly Thr
        115                 120                 125

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

Gly Gly Gly Ser Gly Gly Gly Gly Ser Gln Val Gln Leu Val Gln Ser
145                 150                 155                 160

Gly Ala Glu Val Lys Lys Pro Gly Ala Ser Val Lys Val Ser Cys Lys
                165                 170                 175

Ala Ser Gly Tyr Thr Phe Thr Asp Tyr Thr Leu His Trp Val Arg Gln
            180                 185                 190

Ala Pro Gly Gln Gly Leu Glu Trp Met Gly Gly Ile Trp Pro Ile Thr
        195                 200                 205

Gly Gly Thr Thr Tyr Asn Gln Lys Phe Lys Gly Arg Val Thr Met Thr
    210                 215                 220

Arg Asp Thr Ser Thr Ser Thr Val Tyr Met Glu Leu Ser Ser Leu Arg
225                 230                 235                 240

Ser Glu Asp Thr Ala Val Tyr Tyr Cys Ala Arg Gly Glu Ala Gln Gly
                245                 250                 255

Ser Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Thr Thr Thr Pro
            260                 265                 270

Ala Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu
        275                 280                 285

Ser Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His
    290                 295                 300
```

```
Thr Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu
305                 310                 315                 320

Ala Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr
                325                 330                 335

Cys Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe
            340                 345                 350

Met Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg
        355                 360                 365

Phe Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser
    370                 375                 380

Arg Ser Ala Asp Ala Pro Ala Tyr Gln Gln Gly Gln Asn Gln Leu Tyr
385                 390                 395                 400

Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys
                405                 410                 415

Arg Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn
            420                 425                 430

Pro Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu
        435                 440                 445

Ala Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly
    450                 455                 460

His Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr
465                 470                 475                 480

Asp Ala Leu His Met Gln Ala Leu Pro Pro Arg
                485                 490
```

<210> 53
<211> 492
<212> PRT
<213> Artificial Sequence

<220>

<223> Synthetic Construct

<400> 53

```
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1               5                  10                  15

His Ala Ala Arg Pro Gln Val Thr Leu Lys Glu Ser Gly Pro Val Leu
            20                  25                  30

Leu Lys Pro Thr Glu Thr Leu Thr Leu Thr Cys Thr Val Ser Gly Phe
        35                  40                  45

Ser Leu Ser Asn Pro Arg Met Gly Val Ser Trp Ile Arg Gln Pro Pro
    50                  55                  60

Gly Lys Ala Leu Glu Trp Phe Ala His Ile Phe Ser Thr Asp Glu Lys
65                  70                  75                  80

Ser Leu Lys Leu Ser Leu Arg Ser Arg Leu Thr Leu Ser Lys Asp Thr
                85                  90                  95

Ser Lys Ser Gln Val Val Leu Thr Met Thr Asn Met Ala Pro Val Asp
            100                 105                 110

Ser Ala Thr Tyr Tyr Cys Ala Arg Asp Ser Ser Asn Tyr Glu Gly Tyr
        115                 120                 125

Phe Asp Phe Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly
    130                 135                 140

Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly
145                 150                 155                 160

Gly Ser Glu Val Val Leu Thr Gln Ser Pro Ala Thr Leu Ser Val Ser
                165                 170                 175

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

Ser Asn Leu Ala Trp Tyr Gln Gln Lys Ser Gly Gln Ala Pro Arg Leu
        195                 200                 205
```

```
Leu Ile Tyr Gly Ser Thr Ile Arg Ala Thr Gly Val Pro Ala Arg Phe
    210                 215                 220

Ser Gly Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu
225                 230                 235                 240

Gln Ser Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ser Asp Trp
                245                 250                 255

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

Pro Ala Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro
        275                 280                 285

Leu Ser Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala Val
    290                 295                 300

His Thr Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro
305                 310                 315                 320

Leu Ala Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr Leu
                325                 330                 335

Tyr Cys Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro
            340                 345                 350

Phe Met Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys
        355                 360                 365

Arg Phe Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg Val Lys Phe
    370                 375                 380

Ser Arg Ser Ala Asp Ala Pro Ala Tyr Gln Gln Gly Gln Asn Gln Leu
385                 390                 395                 400

Tyr Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp
                405                 410                 415
```

```
Lys Arg Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys
            420                 425                 430

Asn Pro Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala
        435                 440                 445

Glu Ala Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys
    450                 455                 460

Gly His Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr
465                 470                 475                 480

Tyr Asp Ala Leu His Met Gln Ala Leu Pro Pro Arg
                485                 490
```

<210> 54
<211> 492
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 54

```
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1               5                   10                  15

His Ala Ala Arg Pro Gln Val Thr Leu Lys Glu Ser Gly Pro Val Leu
            20                  25                  30

Val Lys Pro Thr Glu Thr Leu Thr Leu Thr Cys Thr Val Ser Gly Phe
        35                  40                  45

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

Gly Lys Ala Leu Glu Trp Leu Ala His Ile Phe Ser Thr Asp Glu Lys
65                  70                  75                  80

Ser Ile Arg Arg Ser Leu Arg Ser Arg Leu Thr Leu Ser Lys Asp Thr
                85                  90                  95
```

```
Ser Lys Ser Gln Val Val Leu Thr Met Thr Asn Met Asp Pro Val Asp
            100                 105                 110

Thr Ala Thr Tyr Phe Cys Ala Arg Asp Ser Ser Asn Tyr Glu Gly Tyr
        115                 120                 125

Phe Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly
    130                 135                 140

Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly
145                 150                 155                 160

Gly Ser Glu Val Val Met Thr Gln Ser Pro Ala Thr Leu Ser Val Ser
                165                 170                 175

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

Ser Asn Phe Ala Trp Tyr Gln Gln Arg Pro Gly Gln Ala Pro Arg Leu
        195                 200                 205

Leu Leu Tyr Gly Ala Thr Thr Arg Ala Thr Gly Leu Pro Gly Arg Phe
    210                 215                 220

Ser Gly Ser Gly Ser Gly Thr Glu Asn Ile Leu Thr Ile Ser Ser Leu
225                 230                 235                 240

Gln Ser Glu Asp Phe Ala Ile Tyr Phe Cys Gln Gln Tyr Lys Asp Trp
                245                 250                 255

Pro Phe Thr Phe Gly Pro Gly Ser Lys Val Asp Ile Lys Thr Thr Thr
            260                 265                 270

Pro Ala Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro
        275                 280                 285

Leu Ser Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala Val
    290                 295                 300

His Thr Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro
305                 310                 315                 320
```

```
Leu Ala Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr Leu
                325                 330                 335

Tyr Cys Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro
            340                 345                 350

Phe Met Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys
        355                 360                 365

Arg Phe Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg Val Lys Phe
    370                 375                 380

Ser Arg Ser Ala Asp Ala Pro Ala Tyr Gln Gln Gly Gln Asn Gln Leu
385                 390                 395                 400

Tyr Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp
                405                 410                 415

Lys Arg Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys
            420                 425                 430

Asn Pro Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala
        435                 440                 445

Glu Ala Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys
    450                 455                 460

Gly His Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr
465                 470                 475                 480

Tyr Asp Ala Leu His Met Gln Ala Leu Pro Pro Arg
                485                 490
```

<210> 55
<211> 492
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 55

```
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1               5                  10                  15

His Ala Ala Arg Pro Gln Val Thr Leu Lys Glu Ser Gly Pro Val Leu
            20                  25                  30

Val Lys Pro Thr Glu Thr Leu Thr Leu Thr Cys Thr Val Ser Gly Phe
        35                  40                  45

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

Gly Lys Ala Leu Glu Trp Leu Gly His Ile Phe Ser Thr Asp Glu Lys
65                  70                  75                  80

Ser Tyr Ser Thr Ser Leu Arg Gly Arg Ile Thr Ile Ser Lys Asp Thr
                85                  90                  95

Ser Arg Gly Leu Val Val Leu Thr Leu Thr Asn Met Asp Pro Val Asp
            100                 105                 110

Thr Ala Thr Tyr Tyr Cys Ala Arg Asp Ser Ser Asn Tyr Glu Gly Tyr
        115                 120                 125

Phe Asp Phe Trp Gly Pro Gly Phe Leu Val Thr Val Ser Ser Gly Gly
    130                 135                 140

Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly
145                 150                 155                 160

Gly Ser Glu Ile Val Met Thr Gln Ser Pro Ala Thr Leu Ser Val Ser
                165                 170                 175

Pro Gly Glu Arg Ala Thr Leu Ser Cys Arg Val Ser Gln Ser Ile Gly
            180                 185                 190

Ala Asn Leu Ala Trp Tyr Gln Gln Lys Phe Gly Gln Ala Pro Arg Leu
        195                 200                 205
```

```
Leu Ile Tyr Gly Ala Ser Thr Arg Ala Thr Gly Ile Pro Val Arg Phe
    210                 215                 220

Ser Gly Gly Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu
225                 230                 235                 240

Gln Ser Glu Asp Phe Ala Ile Tyr Ser Cys Gln Gln Tyr Ile Tyr Trp
                245                 250                 255

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

Pro Ala Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro
        275                 280                 285

Leu Ser Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala Val
    290                 295                 300

His Thr Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro
305                 310                 315                 320

Leu Ala Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr Leu
                325                 330                 335

Tyr Cys Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro
            340                 345                 350

Phe Met Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys
        355                 360                 365

Arg Phe Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg Val Lys Phe
    370                 375                 380

Ser Arg Ser Ala Asp Ala Pro Ala Tyr Gln Gln Gly Gln Asn Gln Leu
385                 390                 395                 400

Tyr Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp
                405                 410                 415

Lys Arg Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys
            420                 425                 430
```

```
Asn Pro Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala
        435                 440                 445

Glu Ala Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys
    450                 455                 460

Gly His Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr
465                 470                 475                 480

Tyr Asp Ala Leu His Met Gln Ala Leu Pro Pro Arg
                485                 490
```

<210> 56
<211> 492
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 56

```
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1               5                   10                  15

His Ala Ala Arg Pro Gln Val Thr Leu Lys Glu Ser Gly Pro Val Leu
            20                  25                  30

Val Lys Pro Thr Glu Thr Leu Thr Leu Thr Cys Thr Val Ser Gly Phe
        35                  40                  45

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

Gly Lys Ala Leu Glu Trp Phe Ala His Ile Phe Ser Thr Asp Glu Lys
65                  70                  75                  80

Ser Phe Arg Thr Ser Leu Arg Ser Arg Leu Thr Leu Ser Lys Asp Thr
                85                  90                  95

Ser Lys Ser Gln Val Val Leu Thr Met Thr Asn Met Asp Pro Val Asp
            100                 105                 110
```

```
Thr Ala Thr Tyr Tyr Cys Ala Arg Asp Ser Ser Asn Tyr Glu Gly Tyr
        115                 120                 125

Phe Asp Tyr Trp Gly Gln Gly Ile Leu Val Thr Val Ser Ser Gly Gly
    130                 135                 140

Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly
145                 150                 155                 160

Gly Ser Glu Ile Val Met Thr Gln Ser Pro Ala Thr Leu Ser Val Ser
                165                 170                 175

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

Asn Asn Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu
        195                 200                 205

Leu Ile Tyr Gly Ala Ser Thr Arg Ala Thr Gly Val Pro Ala Arg Phe
    210                 215                 220

Ser Gly Ser Asp Ser Gly Thr Glu Phe Ser Leu Thr Ile Ser Ser Leu
225                 230                 235                 240

Gln Ser Glu Asp Phe Ala Val Tyr Phe Cys Gln Gln Tyr Lys Asp Trp
                245                 250                 255

Pro Phe Thr Phe Gly Pro Gly Thr Lys Val Glu Ile Lys Thr Thr Thr
            260                 265                 270

Pro Ala Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro
        275                 280                 285

Leu Ser Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala Val
    290                 295                 300

His Thr Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro
305                 310                 315                 320
```

```
Leu Ala Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr Leu
                325                 330                 335

Tyr Cys Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro
            340                 345                 350

Phe Met Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys
        355                 360                 365

Arg Phe Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg Val Lys Phe
    370                 375                 380

Ser Arg Ser Ala Asp Ala Pro Ala Tyr Gln Gln Gly Gln Asn Gln Leu
385                 390                 395                 400

Tyr Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp
                405                 410                 415

Lys Arg Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys
            420                 425                 430

Asn Pro Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala
        435                 440                 445

Glu Ala Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys
    450                 455                 460

Gly His Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr
465                 470                 475                 480

Tyr Asp Ala Leu His Met Gln Ala Leu Pro Pro Arg
                485                 490
```

<210> 57
<211> 496
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 57

```
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1               5                  10                  15

His Ala Ala Arg Pro Glu Val Asn Leu Val Glu Ser Gly Gly Gly Leu
            20                  25                  30

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

Thr Phe Ser Tyr Ala Trp Met Ser Trp Val Arg Gln Ala Pro Gly Lys
    50                  55                  60

Gly Leu Glu Trp Val Gly Arg Ile Lys Ser Ile Ala Asp Gly Gly Ala
65                  70                  75                  80

Thr Asp Tyr Ala Ala Pro Val Arg Asn Arg Phe Thr Ile Ser Arg Asp
                85                  90                  95

Asp Ser Arg Asn Thr Leu Tyr Leu Glu Met His Ser Leu Lys Thr Glu
            100                 105                 110

Asp Thr Ala Val Tyr Tyr Cys Thr Thr Ile Pro Gly Asn Asp Ala Phe
        115                 120                 125

Asp Met Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly
    130                 135                 140

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly
145                 150                 155                 160

Ser Asp Ile Val Leu Thr Gln Ser Pro Leu Ser Leu Ser Val Thr Pro
                165                 170                 175

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

Ser Asn Gly Lys Asn Tyr Leu Asp Trp Phe Leu His Lys Pro Gly Gln
        195                 200                 205

Ser Pro Gln Leu Leu Ile Tyr Leu Gly Ser Asn Arg Ala Ser Gly Val
    210                 215                 220
```

```
Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Ile Asp Phe Ile Leu Lys
225                 230                 235                 240

Ile Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln
                245                 250                 255

Ala Gln Gln Thr Pro Ile Thr Phe Gly Gln Gly Thr Arg Leu Glu Ile
            260                 265                 270

Lys Thr Thr Thr Pro Ala Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile
        275                 280                 285

Ala Ser Gln Pro Leu Ser Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala
    290                 295                 300

Gly Gly Ala Val His Thr Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr
305                 310                 315                 320

Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly Val Leu Leu Leu Ser Leu
                325                 330                 335

Val Ile Thr Leu Tyr Cys Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile
            340                 345                 350

Phe Lys Gln Pro Phe Met Arg Pro Val Gln Thr Thr Gln Glu Glu Asp
        355                 360                 365

Gly Cys Ser Cys Arg Phe Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu
    370                 375                 380

Arg Val Lys Phe Ser Arg Ser Ala Asp Ala Pro Ala Tyr Gln Gln Gly
385                 390                 395                 400

Gln Asn Gln Leu Tyr Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr
                405                 410                 415

Asp Val Leu Asp Lys Arg Arg Gly Arg Asp Pro Glu Met Gly Gly Lys
            420                 425                 430
```

```
Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys
        435                 440                 445

Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg
    450                 455                 460

Arg Arg Gly Lys Gly His Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala
465                 470                 475                 480

Thr Lys Asp Thr Tyr Asp Ala Leu His Met Gln Ala Leu Pro Pro Arg
                485                 490                 495
```

<210> 58
<211> 496
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 58

```
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1               5                   10                  15

His Ala Ala Arg Pro Glu Val Asn Leu Val Glu Ser Gly Gly Gly Leu
            20                  25                  30

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

Thr Phe Ser Tyr Ala Trp Met Ser Trp Val Arg Gln Ala Pro Gly Lys
    50                  55                  60

Gly Leu Glu Trp Val Gly Arg Ile Lys Ser Ile Thr Asp Gly Gly Val
65                  70                  75                  80

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

Asp Ser Arg Asn Thr Leu Tyr Leu Glu Met His Ser Leu Lys Thr Glu
            100                 105                 110
```

```
Asp Thr Ala Val Tyr Tyr Cys Thr Thr Ile Pro Gly Asn Asp Asp Phe
        115                 120                 125

Asp Met Trp Gly Gln Gly Arg Met Val Thr Val Ser Ser Gly Gly Gly
    130                 135                 140

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly
145                 150                 155                 160

Ser Asp Ile Val Leu Thr Gln Ser Pro Leu Ser Leu Ser Val Thr Pro
                165                 170                 175

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

Ser Asn Gly Lys Asn Tyr Leu Asp Trp Phe Leu His Lys Pro Gly Gln
        195                 200                 205

Ser Pro Gln Leu Leu Ile Tyr Leu Gly Ser Asn Arg Ala Ser Gly Val
    210                 215                 220

Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Ile Asp Phe Ile Leu Lys
225                 230                 235                 240

Ile Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln
                245                 250                 255

Ala Gln Gln Thr Pro Ile Thr Phe Gly Gln Gly Thr Arg Leu Glu Ile
            260                 265                 270

Lys Thr Thr Thr Pro Ala Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile
        275                 280                 285

Ala Ser Gln Pro Leu Ser Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala
    290                 295                 300

Gly Gly Ala Val His Thr Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr
305                 310                 315                 320

Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly Val Leu Leu Leu Ser Leu
                325                 330                 335
```

```
Val Ile Thr Leu Tyr Cys Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile
            340                 345                 350

Phe Lys Gln Pro Phe Met Arg Pro Val Gln Thr Thr Gln Glu Glu Asp
        355                 360                 365

Gly Cys Ser Cys Arg Phe Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu
    370                 375                 380

Arg Val Lys Phe Ser Arg Ser Ala Asp Ala Pro Ala Tyr Gln Gln Gly
385                 390                 395                 400

Gln Asn Gln Leu Tyr Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr
                405                 410                 415

Asp Val Leu Asp Lys Arg Arg Gly Arg Asp Pro Glu Met Gly Gly Lys
            420                 425                 430

Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys
        435                 440                 445

Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg
    450                 455                 460

Arg Arg Gly Lys Gly His Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala
465                 470                 475                 480

Thr Lys Asp Thr Tyr Asp Ala Leu His Met Gln Ala Leu Pro Pro Arg
                485                 490                 495
```

<210> 59
<211> 495
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 59

```
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1               5                   10                  15
```

```
His Ala Ala Arg Pro Glu Val Gln Leu Val Glu Ser Trp Gly Val Leu
            20                  25                  30

Val Lys Pro Gly Gly Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe
        35                  40                  45

Ile Phe Asn Asn Ala Trp Met Ser Trp Val Arg Gln Ala Pro Gly Lys
    50                  55                  60

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

Thr Asp Tyr Ala Ala Pro Val Lys Asp Arg Phe Thr Ile Ser Arg Asp
                85                  90                  95

Asp Ser Lys Asp Thr Leu Tyr Leu Gln Met Asn Gly Leu Lys Thr Glu
            100                 105                 110

Asp Thr Ala Val Tyr Phe Cys Thr Thr Ala Pro Gly Gly Pro Phe Asp
        115                 120                 125

Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly Gly
    130                 135                 140

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
145                 150                 155                 160

Asp Ile Val Leu Thr Gln Ser Pro Leu Ser Leu Pro Val Thr Pro Gly
                165                 170                 175

Glu Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Leu His Arg
            180                 185                 190

Asp Gly Phe Asn Tyr Leu Asp Trp Phe Leu Gln Lys Pro Gly Gln Ser
        195                 200                 205

Pro Gln Leu Leu Ile Tyr Leu Ala Ser Ser Arg Ala Ser Gly Val Pro
    210                 215                 220
```

```
Asp Arg Phe Ser Gly Ser Asp Ser Gly Thr Asp Phe Thr Leu Lys Ile
225                 230                 235                 240

Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln Ala
                245                 250                 255

Leu Gln Thr Pro Ile Thr Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys
            260                 265                 270

Thr Thr Thr Pro Ala Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala
        275                 280                 285

Ser Gln Pro Leu Ser Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly
    290                 295                 300

Gly Ala Val His Thr Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile
305                 310                 315                 320

Trp Ala Pro Leu Ala Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val
                325                 330                 335

Ile Thr Leu Tyr Cys Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe
            340                 345                 350

Lys Gln Pro Phe Met Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly
        355                 360                 365

Cys Ser Cys Arg Phe Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg
    370                 375                 380

Val Lys Phe Ser Arg Ser Ala Asp Ala Pro Ala Tyr Gln Gln Gly Gln
385                 390                 395                 400

Asn Gln Leu Tyr Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp
                405                 410                 415

Val Leu Asp Lys Arg Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro
            420                 425                 430

Arg Arg Lys Asn Pro Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp
        435                 440                 445
```

```
Lys Met Ala Glu Ala Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg
    450                 455                 460

Arg Gly Lys Gly His Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr
465                 470                 475                 480

Lys Asp Thr Tyr Asp Ala Leu His Met Gln Ala Leu Pro Pro Arg
                485                 490                 495
```

<210> 60
<211> 494
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 60

```
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1               5                   10                  15

His Ala Ala Arg Pro Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu
            20                  25                  30

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

Thr Phe Ser Asp Ala Trp Met Ser Trp Val Arg Gln Ala Pro Gly Lys
    50                  55                  60

Gly Leu Glu Trp Val Gly Arg Ile Lys Ser Lys Thr Asp Gly Gly Thr
65                  70                  75                  80

Thr Asp Tyr Val Val Pro Leu Asn Gly Arg Phe Ile Ile Ser Arg Asp
                85                  90                  95

Asp Ser Arg Asn Thr Leu Tyr Leu Gln Leu Asn Asn Leu Lys Thr Glu
            100                 105                 110

Asp Thr Ala Val Tyr Tyr Cys Thr Thr Val Pro Gly Ser Tyr Gly Tyr
        115                 120                 125
```

```
Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly Gly Ser
    130                 135                 140

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp
145                 150                 155                 160

Ile Val Met Thr Gln Ser Pro Leu Ser Leu Pro Val Thr Pro Gly Glu
                165                 170                 175

Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Leu His Asn Lys
            180                 185                 190

Arg Asn Asn Tyr Leu Asp Trp Phe Leu Gln Lys Pro Gly Gln Ser Pro
        195                 200                 205

Gln Leu Leu Ile Tyr Leu Ala Ser Asn Arg Ala Ser Gly Val Pro Asp
    210                 215                 220

Arg Phe Ser Gly Gly Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile Ser
225                 230                 235                 240

Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln Ala Gln
                245                 250                 255

Gln Thr Pro Ile Thr Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Thr
            260                 265                 270

Thr Thr Pro Ala Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser
        275                 280                 285

Gln Pro Leu Ser Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly
    290                 295                 300

Ala Val His Thr Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp
305                 310                 315                 320

Ala Pro Leu Ala Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile
                325                 330                 335
```

```
Thr Leu Tyr Cys Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys
            340                 345                 350

Gln Pro Phe Met Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys
        355                 360                 365

Ser Cys Arg Phe Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg Val
    370                 375                 380

Lys Phe Ser Arg Ser Ala Asp Ala Pro Ala Tyr Gln Gln Gly Gln Asn
385                 390                 395                 400

Gln Leu Tyr Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val
                405                 410                 415

Leu Asp Lys Arg Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg
            420                 425                 430

Arg Lys Asn Pro Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys
        435                 440                 445

Met Ala Glu Ala Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg
    450                 455                 460

Gly Lys Gly His Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys
465                 470                 475                 480

Asp Thr Tyr Asp Ala Leu His Met Gln Ala Leu Pro Pro Arg
                485                 490
```

<210> 61
<211> 502
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 61

```
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1               5                   10                  15
```

```
His Ala Ala Arg Pro Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val
            20                  25                  30

Lys Lys Pro Gly Ser Ser Val Lys Val Ser Cys Lys Ala Ser Gly Asp
        35                  40                  45

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

Gly Leu Glu Trp Met Gly Val Ile Ile Pro Ile Phe Gly Thr Ala Asp
65                  70                  75                  80

Tyr Ala Gln Lys Phe Gln Gly Arg Val Thr Ile Thr Ala Asp Glu Ser
                85                  90                  95

Thr Ser Thr Ala Tyr Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr
            100                 105                 110

Ala Val Tyr Tyr Cys Ala Arg His Thr Tyr His Glu Tyr Ala Gly Gly
        115                 120                 125

Tyr Tyr Gly Gly Ala Met Asp Pro Trp Gly Gln Gly Thr Leu Val Thr
    130                 135                 140

Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly
145                 150                 155                 160

Gly Ser Gly Gly Gly Gly Ser Glu Leu Gln Ser Val Leu Thr Gln Pro
                165                 170                 175

Pro Ser Ala Ser Gly Thr Pro Gly Gln Arg Val Thr Ile Ser Cys Ser
            180                 185                 190

Gly Ser Ser Ser Asn Ile Gly Ser Asn Tyr Val Tyr Trp Tyr Gln Gln
        195                 200                 205

Leu Pro Gly Thr Ala Pro Lys Ile Leu Ile Tyr Arg Asn Asn Gln Arg
    210                 215                 220

Pro Ser Gly Val Pro Asp Arg Phe Ser Gly Ser Lys Ser Gly Thr Ser
225                 230                 235                 240
```

```
Ala Ser Leu Ala Ile Ser Gly Leu Arg Ser Glu Asp Glu Ala Asp Tyr
                245                 250                 255

Tyr Cys Ala Ala Trp Asp Asp Asn Leu Ser Gly Trp Val Phe Gly Thr
            260                 265                 270

Gly Thr Lys Leu Thr Val Leu Thr Thr Thr Pro Ala Pro Arg Pro Pro
        275                 280                 285

Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser Leu Arg Pro Glu
    290                 295                 300

Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr Arg Gly Leu Asp
305                 310                 315                 320

Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly
                325                 330                 335

Val Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr Cys Lys Arg Gly Arg
            340                 345                 350

Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met Arg Pro Val Gln
        355                 360                 365

Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu Glu Glu
    370                 375                 380

Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg Ser Ala Asp Ala
385                 390                 395                 400

Pro Ala Tyr Gln Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn Leu
                405                 410                 415

Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg Asp
            420                 425                 430

Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu
        435                 440                 445
```

```
Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile
    450                 455                 460

Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His Asp Gly Leu Tyr
465                 470                 475                 480

Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu His Met
                485                 490                 495

Gln Ala Leu Pro Pro Arg
            500
```

<210> 62
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 62

```
Thr Asp Tyr Thr Leu His
1               5
```

<210> 63
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 63

```
Gly Tyr Thr Phe Thr Asp
1               5
```

<210> 64
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 64

Gly Tyr Thr Phe Thr Asp Tyr Thr Leu His
1 5 10

<210> 65
<211> 17
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 65

Gly Ile Asp Pro Ile Asn Gly Gly Thr Thr Tyr Asn Gln Lys Phe Lys
1 5 10 15

Gly

<210> 66
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 66

Gly Ile Asp Pro Ile Asn Gly Gly Thr Thr Tyr
1 5 10

<210> 67
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 67

Gly Glu Ala Met Asp Ser
1 5

<210> 68
<211> 17
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 68

Gly Ile Asn Pro Ile Asn Gly Gly Thr Thr Tyr Asn Gln Lys Phe Lys
1 5 10 15

Gly

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

<220>
<223> Synthetic Construct

<400> 69

Gly Ile Asn Pro Ile Asn Gly Gly Thr Thr Tyr
1 5 10

<210> 70
<211> 17
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 70

Gly Ile Trp Pro Ile Thr Gly Gly Thr Thr Tyr Asn Gln Lys Phe Lys
1 5 10 15

Gly

<210> 71
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 71

Gly Ile Trp Pro Ile Thr Gly Gly Thr Thr Tyr
1 5 10

<210> 72
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 72

Gly Glu Ala Glu Gly Ser
1 5

<210> 73
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 73

Gly Glu Ala Gln Gly Ser
1 5

<210> 74
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 74

Ser Asn Pro Arg Met Gly Val Ser
1 5

<210> 75
<211> 8
<212> PRT
<213> Artificial Sequence

<220>

<223> Synthetic Construct

<400> 75

Gly Phe Ser Leu Ser Asn Pro Arg
1 5

<210> 76
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 76

Gly Phe Ser Leu Ser Asn Pro Arg Met Gly Val Ser
1 5 10

<210> 77
<211> 16
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

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

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His Ile Phe Ser Thr Asp Glu Lys Ser Leu
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Asp Ser Ser Asn Tyr Glu Gly Tyr Phe Asp Phe
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<400> 80

Ser Asn Ala Arg Met Gly Val Ser
1 5

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Gly Phe Ser Leu Ser Asn Ala Arg
1 5

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Gly Phe Ser Leu Ser Asn Ala Arg Met Gly Val Ser
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His Ile Phe Ser Thr Asp Glu Lys Ser Ile Arg Arg Ser Leu Arg Ser
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His Ile Phe Ser Thr Asp Glu Lys Ser Ile
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Asp Ser Ser Asn Tyr Glu Gly Tyr Phe Asp Tyr
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His Ile Phe Ser Thr Asp Glu Lys Ser Tyr Ser Thr Ser Leu Arg Gly
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His Ile Phe Ser Thr Asp Glu Lys Ser Tyr
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Asn Asn Ala Arg Met Gly Val Ser
1 5

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Gly Phe Ser Leu Asn Asn Ala Arg
1 5

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Gly Phe Ser Leu Asn Asn Ala Arg Met Gly Val Ser
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His Ile Phe Ser Thr Asp Glu Lys Ser Phe Arg Thr Ser Leu Arg Ser
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His Ile Phe Ser Thr Asp Glu Lys Ser Phe
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Ser Asn Val Arg Met Gly Val Ser
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Gly Phe Ser Leu Ser Asn Val Arg
1 5

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Gly Phe Ser Leu Ser Asn Val Arg Met Gly Val Ser
1 5 10

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His Ile Phe Ser Ser Asp Glu Lys Ser Ile Arg Arg Ser Leu Arg Ser
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His Ile Phe Ser Ser Asp Glu Lys Ser Ile
1 5 10

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His Ile Phe Ser Thr Asp Glu Lys Ser Leu Arg Leu Ser Leu Arg Ser
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Ser Asn Ala Lys Met Gly Val Ser
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Gly Phe Ser Leu Ser Asn Ala Lys
1 5

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

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His Ile Phe Ser Ser Asp Glu Lys Ser Tyr
1 5 10

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<400> 104

Asp Ser Ser Asn Tyr Gly Gly Tyr Phe Asp Tyr
1 5 10

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

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<400> 106

His Ile Phe Ser Thr Asp Glu Lys Ser Tyr Ser Pro Ser Leu Arg Gly
1 5 10 15

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<400> 107

Asp Ser Ser Asp Tyr Glu Gly Tyr Phe Asp Tyr
1 5 10

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<400> 108

Asp Ser Ser Asn Tyr Glu Glu Tyr Phe Asp Tyr
1 5 10

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<400> 109

Ser Asp Ala Trp Met Ser
1 5

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<400> 110

Gly Phe Thr Phe Ser Asp
1 5

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<400> 111

Gly Phe Thr Phe Ser Asp Ala Trp Met Ser
1 5 10

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<400> 112

Arg Ile Lys Ser Lys Thr Asp Gly Gly Thr Thr Asp Tyr Val Val Pro
1 5 10 15

Leu Asn Gly

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<400> 113

Arg Ile Lys Ser Lys Thr Asp Gly Gly Thr Thr Asp Tyr
1 5 10

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<400> 114

Val Pro Gly Ser Tyr Gly Tyr
1 5

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<400> 115

Ser Tyr Ala Trp Met Ser
1 5

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<400> 116

Gly Phe Thr Phe Ser Tyr
1 5

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<400> 117

Gly Phe Thr Phe Ser Tyr Ala Trp Met Ser
1 5 10

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<400> 118

Arg Ile Lys Ser Ile Ala Asp Gly Gly Ala Thr Asp Tyr Ala Ala Pro
1 5 10 15

Val Arg Asn

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<400> 119

Arg Ile Lys Ser Ile Ala Asp Gly Gly Ala Thr Asp Tyr
1 5 10

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<400> 120

Ile Pro Gly Asn Asp Ala Phe Asp Met
1 5

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Asn Asn Ala Trp Met Ser
1 5

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<400> 122

Gly Phe Ile Phe Asn Asn
1 5

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<400> 123

Gly Phe Ile Phe Asn Asn Ala Trp Met Ser
1 5 10

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<400> 124

Arg Ile Lys Ser Lys Ser Asp Gly Gly Thr Thr Asp Tyr Ala Ala Pro
1 5 10 15

Val Lys Asp

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<400> 125

Arg Ile Lys Ser Lys Ser Asp Gly Gly Thr Thr Asp Tyr
1 5 10

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<400> 126

Ala Pro Gly Gly Pro Phe Asp Tyr
1 5

<210> 127
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<400> 127

Arg Ile Lys Ser Ile Thr Asp Gly Gly Val Ile Asp Tyr Ala Ala Pro
1 5 10 15

Val Arg Asn

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<400>  128

Arg Ile Lys Ser Ile Thr Asp Gly Gly Val Ile Asp Tyr
1               5                   10


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<211>  9
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<220>
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<400>  129

Ile Pro Gly Asn Asp Asp Phe Asp Met
1               5


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<211>  19
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<220>
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<400>  130

Arg Ile Lys Ser Ile Asn Asp Gly Gly Ala Thr Asp Tyr Ala Ser Pro
1               5                   10                  15


Val Arg Asn



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<400>  131

Arg Ile Lys Ser Ile Asn Asp Gly Gly Ala Thr Asp Tyr
1               5                   10

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<400> 132

Thr Asn Ala Trp Met Ser
1 5

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<400> 133

Gly Phe Thr Phe Thr Asn
1 5

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<400> 134

Gly Phe Thr Phe Thr Asn Ala Trp Met Ser
1 5 10

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<400> 135

Arg Ile Lys Ser Lys Ile Asp Gly Gly Thr Thr Asp Tyr Ala Ala Pro
1 5 10 15

Val Lys Gly

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<400> 136

Arg Ile Lys Ser Lys Ile Asp Gly Gly Thr Thr Asp Tyr
1 5 10

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<400> 137

Ser Ser Asn Ala Ile Ser
1 5

<210> 138
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<400> 138

Gly Asp Thr Phe Ser Ser
1 5

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<400>  139

Gly Asp Thr Phe Ser Ser Asn Ala Ile Ser
1               5                   10


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<400>  140

Val Ile Ile Pro Ile Phe Gly Thr Ala Asp Tyr Ala Gln Lys Phe Gln
1               5                   10                  15

Gly


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<400>  141

Val Ile Ile Pro Ile Phe Gly Thr Ala Asp Tyr
1               5                   10


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<400>  142

His Thr Tyr His Glu Tyr Ala Gly Gly Tyr Tyr Gly Gly Ala Met Asp
1               5                   10                  15

Pro

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<400> 143

Ser Asn Tyr Ala Met Ser
1 5

<210> 144
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<400> 144

Gly Phe Thr Phe Ser Asn
1 5

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<400> 145

Gly Phe Thr Phe Ser Asn Tyr Ala Met Ser
1 5 10

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<400> 146

Asp Ile Ser Gly Gly Gly Gly Arg Thr Tyr Tyr Ala Asp Ser Val Lys
1 5 10 15

Gly

<210> 147
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<400> 147

Asp Ile Ser Gly Gly Gly Gly Arg Thr Tyr Tyr
1 5 10

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<400> 148

Ala Gly Leu Leu Tyr Gly Gly Gly Val Tyr Pro Met Asp Ile
1 5 10

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<400> 149

Lys Ser Ser Gln Ser Leu Leu Tyr Ser Asn Gly Lys Thr Tyr Leu Asn
1 5 10 15

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<400> 150

Leu Val Ser Lys Leu Asp Ser
1 5

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<400> 151

Val Gln Asp Thr His Phe Pro Leu Thr
1 5

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<400> 152

Gln Val Ser Lys Leu Asp Ser
1 5

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<400> 153

Gly Gln Asp Thr His Phe Pro Leu Thr
1 5

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<400> 154

Lys Ser Ser Gln Ser Leu Leu Tyr Ser Asn Asp Lys Thr Tyr Thr Asn
1 5 10 15

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Glu Val Ser Lys Leu Asp Val
1 5

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<400> 156

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

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<400> 157

Gly Ser Thr Ile Arg Ala Thr
1 5

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<400> 158

Gln Gln Tyr Ser Asp Trp Pro Phe Thr
1 5

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<400> 159

Arg Ala Ser Gln Ser Val Ser Ser Asn Phe Ala
1 5 10

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<400> 160

Gly Ala Thr Thr Arg Ala Thr
1 5

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<400> 161

Gln Gln Tyr Lys Asp Trp Pro Phe Thr
1 5

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<400> 162

Arg Val Ser Gln Ser Ile Gly Ala Asn Leu Ala
1 5 10

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<400> 163

Gly Ala Ser Thr Arg Ala Thr
1 5

<210> 164
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<400> 164

Gln Gln Tyr Ile Tyr Trp Pro Phe Thr
1 5

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<400> 165

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

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<220>
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<400> 166

Arg Ala Ser Gln Ser Val Gly Ser Asp Leu Ala
1 5 10

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<220>
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<400> 167

Gln Gln Tyr Asn Asp Trp Pro Phe Thr
1 5

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<400> 168

Arg Ala Ser Gln Asn Ile Gly Ser Asp Leu Ala
1 5 10

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<400> 169

Arg Ala Ser Gln Ser Val Thr Ser Asn Phe Ala
1 5 10

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<400> 170

Arg Ala Ser Gln Gly Val Ser Ser Asn Phe Ala
1 5 10

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<400> 171

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

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<400> 172

Gly Thr Ser Thr Arg Ala Thr
1 5

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<400> 173

Arg Ala Ser Gln Ser Val Ser Thr Asn Phe Ala
1 5 10

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<400> 174

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

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<400> 175

Gly Ser Ser Thr Arg Ala Thr
1 5

<210> 176
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<400> 176

Arg Ala Ser Gln Ser Val Ile Asn Asn Leu Ala
1 5 10

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<400> 177

Gln Asp Tyr Asn Asn Trp Pro Phe Thr
1 5

<210> 178
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<400> 178

Arg Ala Ser Gln Ser Val Gly Ser Asn Leu Ala
1 5 10

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<400> 179

Gly Ala Ser Thr Arg Ala Ser Gly
1 5

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<400> 180

Gln Glu Tyr Asn Asn Trp Pro Phe Thr
1 5

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<400> 181

Arg Ala Asn Gln Ile Val Ser Ser Asn Leu Ala
1 5 10

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<400> 182

Arg Ser Ser Gln Ser Leu Leu His Asn Lys Arg Asn Asn Tyr Leu Asp
1 5 10 15

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<220>
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<400> 183

Leu Ala Ser Asn Arg Ala Ser
1 5

<210> 184
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<400> 184

Met Gln Ala Gln Gln Thr Pro Ile Thr
1 5

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<220>
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<400> 185

Arg Ser Ser Gln Ser Leu Leu Tyr Ser Asn Gly Lys Asn Tyr Leu Asp
1 5 10 15

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<220>
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<400> 186

Leu Gly Ser Asn Arg Ala Ser
1 5

<210> 187
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<220>
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<400> 187

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

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<400> 188

Leu Ala Ser Ser Arg Ala Ser
1 5

<210> 189
<211> 9
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<400> 189

Met Gln Ala Leu Gln Thr Pro Ile Thr
1 5

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<400> 190

Arg Ser Thr Gln Ser Leu Leu Tyr Ser Asn Gly Lys Asn Tyr Leu Asp
1 5 10 15

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<400> 191

Leu Gly Ser Ile Arg Ala Ser
1 5

<210> 192
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<400> 192

Arg Ser Ser Gln Ser Leu Leu Tyr Ser Asp Arg Arg Asn Tyr Leu Asp
1 5 10 15

<210> 193
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<400> 193

Leu Gly Ser Tyr Arg Ala Ser
1 5

<210> 194
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<400> 194

Met Gln Ala Leu Gln Ile Pro Ile Thr
1 5

<210> 195
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<400> 195

Ser Gly Ser Ser Ser Asn Ile Gly Ser Asn Tyr Val Tyr
1 5 10

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<400>  196

Arg Asn Asn Gln Arg Pro Ser
1               5


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<220>
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<400>  197

Ala Ala Trp Asp Asp Asn Leu Ser Gly Trp Val
1               5                   10


<210>  198
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<213>  Artificial Sequence

<220>
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<400>  198

Arg Ala Ser Gln Ser Ile Ser Ser Tyr Leu Asn
1               5                   10


<210>  199
<211>  7
<212>  PRT
<213>  Artificial Sequence

<220>
<223>  Synthetic Construct

<400>  199

Ala Ala Ser Ser Leu Gln Ser
1               5


<210>  200
<211>  9

<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 200

Gln Gln Ser Tyr Ser Thr Pro Leu Thr
1 5

<210> 201
<211> 943
<212> PRT
<213> Homo sapien

<400> 201

Met Arg Pro Ser Gly Thr Ala Gly Ala Ala Leu Leu Ala Leu Leu Ala
1 5 10 15

Ala Leu Cys Pro Ala Ser Arg Ala Leu Glu Glu Lys Lys Gly Asn Tyr
20 25 30

Val Val Thr Asp His Gly Ser Cys Val Arg Ala Cys Gly Ala Asp Ser
35 40 45

Tyr Glu Met Glu Glu Asp Gly Val Arg Lys Cys Lys Lys Cys Glu Gly
50 55 60

Pro Cys Arg Lys Val Cys Asn Gly Ile Gly Ile Gly Glu Phe Lys Asp
65 70 75 80

Ser Leu Ser Ile Asn Ala Thr Asn Ile Lys His Phe Lys Asn Cys Thr
85 90 95

Ser Ile Ser Gly Asp Leu His Ile Leu Pro Val Ala Phe Arg Gly Asp
100 105 110

Ser Phe Thr His Thr Pro Pro Leu Asp Pro Gln Glu Leu Asp Ile Leu
115 120 125

Lys Thr Val Lys Glu Ile Thr Gly Phe Leu Leu Ile Gln Ala Trp Pro
130 135 140

```
Glu Asn Arg Thr Asp Leu His Ala Phe Glu Asn Leu Glu Ile Ile Arg
145                 150                 155                 160

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

Asn Ile Thr Ser Leu Gly Leu Arg Ser Leu Lys Glu Ile Ser Asp Gly
            180                 185                 190

Asp Val Ile Ile Ser Gly Asn Lys Asn Leu Cys Tyr Ala Asn Thr Ile
        195                 200                 205

Asn Trp Lys Lys Leu Phe Gly Thr Ser Gly Gln Lys Thr Lys Ile Ile
    210                 215                 220

Ser Asn Arg Gly Glu Asn Ser Cys Lys Ala Thr Gly Gln Val Cys His
225                 230                 235                 240

Ala Leu Cys Ser Pro Glu Gly Cys Trp Gly Pro Glu Pro Arg Asp Cys
                245                 250                 255

Val Ser Cys Arg Asn Val Ser Arg Gly Arg Glu Cys Val Asp Lys Cys
            260                 265                 270

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

Ile Gln Cys His Pro Glu Cys Leu Pro Gln Ala Met Asn Ile Thr Cys
    290                 295                 300

Thr Gly Arg Gly Pro Asp Asn Cys Ile Gln Cys Ala His Tyr Ile Asp
305                 310                 315                 320

Gly Pro His Cys Val Lys Thr Cys Pro Ala Gly Val Met Gly Glu Asn
                325                 330                 335

Asn Thr Leu Val Trp Lys Tyr Ala Asp Ala Gly His Val Cys His Leu
            340                 345                 350

Cys His Pro Asn Cys Thr Tyr Gly Cys Thr Gly Pro Gly Leu Glu Gly
```

```
        355                 360                 365

Cys Pro Thr Asn Gly Pro Lys Ile Pro Ser Ile Ala Thr Gly Met Val
    370                 375                 380

Gly Ala Leu Leu Leu Leu Leu Val Val Ala Leu Gly Ile Gly Leu Phe
385                 390                 395                 400

Met Arg Arg Arg His Ile Val Arg Lys Arg Thr Leu Arg Arg Leu Leu
                405                 410                 415

Gln Glu Arg Glu Leu Val Glu Pro Leu Thr Pro Ser Gly Glu Ala Pro
            420                 425                 430

Asn Gln Ala Leu Leu Arg Ile Leu Lys Glu Thr Glu Phe Lys Lys Ile
        435                 440                 445

Lys Val Leu Gly Ser Gly Ala Phe Gly Thr Val Tyr Lys Gly Leu Trp
    450                 455                 460

Ile Pro Glu Gly Glu Lys Val Lys Ile Pro Val Ala Ile Lys Glu Leu
465                 470                 475                 480

Arg Glu Ala Thr Ser Pro Lys Ala Asn Lys Glu Ile Leu Asp Glu Ala
                485                 490                 495

Tyr Val Met Ala Ser Val Asp Asn Pro His Val Cys Arg Leu Leu Gly
            500                 505                 510

Ile Cys Leu Thr Ser Thr Val Gln Leu Ile Thr Gln Leu Met Pro Phe
        515                 520                 525

Gly Cys Leu Leu Asp Tyr Val Arg Glu His Lys Asp Asn Ile Gly Ser
    530                 535                 540

Gln Tyr Leu Leu Asn Trp Cys Val Gln Ile Ala Lys Gly Met Asn Tyr
545                 550                 555                 560

Leu Glu Asp Arg Arg Leu Val His Arg Asp Leu Ala Ala Arg Asn Val
                565                 570                 575
```

```
Leu Val Lys Thr Pro Gln His Val Lys Ile Thr Asp Phe Gly Leu Ala
            580                 585                 590

Lys Leu Leu Gly Ala Glu Glu Lys Glu Tyr His Ala Glu Gly Gly Lys
        595                 600                 605

Val Pro Ile Lys Trp Met Ala Leu Glu Ser Ile Leu His Arg Ile Tyr
    610                 615                 620

Thr His Gln Ser Asp Val Trp Ser Tyr Gly Val Thr Val Trp Glu Leu
625                 630                 635                 640

Met Thr Phe Gly Ser Lys Pro Tyr Asp Gly Ile Pro Ala Ser Glu Ile
                645                 650                 655

Ser Ser Ile Leu Glu Lys Gly Glu Arg Leu Pro Gln Pro Pro Ile Cys
            660                 665                 670

Thr Ile Asp Val Tyr Met Ile Met Val Lys Cys Trp Met Ile Asp Ala
        675                 680                 685

Asp Ser Arg Pro Lys Phe Arg Glu Leu Ile Ile Glu Phe Ser Lys Met
    690                 695                 700

Ala Arg Asp Pro Gln Arg Tyr Leu Val Ile Gln Gly Asp Glu Arg Met
705                 710                 715                 720

His Leu Pro Ser Pro Thr Asp Ser Asn Phe Tyr Arg Ala Leu Met Asp
                725                 730                 735

Glu Glu Asp Met Asp Asp Val Val Asp Ala Asp Glu Tyr Leu Ile Pro
            740                 745                 750

Gln Gln Gly Phe Phe Ser Ser Pro Ser Thr Ser Arg Thr Pro Leu Leu
        755                 760                 765

Ser Ser Leu Ser Ala Thr Ser Asn Asn Ser Thr Val Ala Cys Ile Asp
    770                 775                 780

Arg Asn Gly Leu Gln Ser Cys Pro Ile Lys Glu Asp Ser Phe Leu Gln
```

785 790 795 800

Arg Tyr Ser Ser Asp Pro Thr Gly Ala Leu Thr Glu Asp Ser Ile Asp
805 810 815

Asp Thr Phe Leu Pro Val Pro Glu Tyr Ile Asn Gln Ser Val Pro Lys
820 825 830

Arg Pro Ala Gly Ser Val Gln Asn Pro Val Tyr His Asn Gln Pro Leu
835 840 845

Asn Pro Ala Pro Ser Arg Asp Pro His Tyr Gln Asp Pro His Ser Thr
850 855 860

Ala Val Gly Asn Pro Glu Tyr Leu Asn Thr Val Gln Pro Thr Cys Val
865 870 875 880

Asn Ser Thr Phe Asp Ser Pro Ala His Trp Ala Gln Lys Gly Ser His
885 890 895

Gln Ile Ser Leu Asp Asn Pro Asp Tyr Gln Gln Asp Phe Phe Pro Lys
900 905 910

Glu Ala Lys Pro Asn Gly Ile Phe Lys Gly Ser Thr Ala Glu Asn Ala
915 920 925

Glu Tyr Leu Arg Val Ala Pro Gln Ser Ser Glu Phe Ile Gly Ala
930 935 940

<210> 202
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 202

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly
1 5 10 15

Gly Gly Gly Ser

20

<210> 203
<211> 42
<212> PRT
<213> Homo sapien

<400> 203

Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met
1 5 10 15

Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe
20 25 30

Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu
35 40

<210> 204
<211> 42
<212> PRT
<213> Homo sapien

<400> 204

Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met
1 5 10 15

Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe
20 25 30

Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu
35 40

<210> 205
<211> 112
<212> PRT
<213> Homo sapien

<400> 205

Arg Val Lys Phe Ser Arg Ser Ala Asp Ala Pro Ala Tyr Gln Gln Gly
1 5 10 15

Gln Asn Gln Leu Tyr Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr
20 25 30

```
Asp Val Leu Asp Lys Arg Arg Gly Arg Asp Pro Glu Met Gly Gly Lys
        35                  40                  45

Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys
    50                  55                  60

Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg
65                  70                  75                  80

Arg Arg Gly Lys Gly His Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala
                85                  90                  95

Thr Lys Asp Thr Tyr Asp Ala Leu His Met Gln Ala Leu Pro Pro Arg
            100                 105                 110
```

<210> 206
<211> 21
<212> PRT
<213> Homo sapien

<400> 206

```
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1               5                   10                  15

His Ala Ala Arg Pro
            20
```

<210> 207
<211> 16
<212> PRT
<213> Homo sapien

<400> 207

```
Gly Leu Ala Val Ser Thr Ile Ser Ser Phe Phe Pro Pro Gly Tyr Gln
1               5                   10                  15
```

<210> 208
<211> 45
<212> PRT
<213> Homo sapien

<400> 208

```
Thr Thr Thr Pro Ala Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala
1               5                   10                  15

Ser Gln Pro Leu Ser Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly
            20                  25                  30

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

<210> 209
<211> 231
<212> PRT
<213> Homo sapien

<400> 209

```
Glu Pro Lys Ser Pro Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala
1               5                   10                  15

Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys
            20                  25                  30

Asp Thr Leu Met Ile Ala Arg Thr Pro Glu Val Thr Cys Val Val Val
        35                  40                  45

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

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

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

Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu
            100                 105                 110

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

Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys
    130                 135                 140
```

```
Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp
145                 150                 155                 160


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


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


Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser
        195                 200                 205


Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser
    210                 215                 220


Leu Ser Leu Ser Pro Gly Lys
225                 230


<210>  210
<211>  24
<212>  PRT
<213>  Homo sapien

<400>  210

Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly Val Leu Leu Leu
1               5                   10                  15


Ser Leu Val Ile Thr Leu Tyr Cys
            20


<210>  211
<211>  52
<212>  PRT
<213>  Homo sapien

<400>  211

Phe Phe Ile Pro Leu Leu Val Val Ile Leu Phe Ala Val Asp Thr Gly
1               5                   10                  15


Leu Phe Ile Ser Thr Gln Gln Gln Val Thr Phe Leu Leu Lys Ile Lys
            20                  25                  30
```

Arg Thr Arg Lys Gly Phe Arg Leu Leu Asn Pro His Pro Lys Pro Asn
35 40 45

Pro Lys Asn Asn
50

<210> 212
<211> 215
<212> PRT
<213> Homo sapien

<400> 212

Met Asp Thr Glu Ser Asn Arg Arg Ala Asn Leu Ala Leu Pro Gln Glu
1 5 10 15

Pro Ser Ser Val Pro Ala Phe Glu Val Leu Glu Ile Ser Pro Gln Glu
20 25 30

Val Ser Ser Gly Arg Leu Leu Lys Ser Ala Ser Ser Pro Pro Leu His
35 40 45

Thr Trp Leu Thr Val Leu Lys Lys Glu Gln Glu Phe Leu Gly Val Thr
50 55 60

Gln Ile Leu Thr Ala Met Ile Cys Leu Cys Phe Gly Thr Val Val Cys
65 70 75 80

Ser Val Leu Asp Ile Ser His Ile Glu Gly Asp Ile Phe Ser Ser Phe
85 90 95

Lys Ala Gly Tyr Pro Phe Trp Gly Ala Ile Phe Phe Ser Ile Ser Gly
100 105 110

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

Gly Ser Leu Gly Ala Asn Thr Ala Ser Ser Ile Ala Gly Gly Thr Gly
130 135 140

Ile Thr Ile Leu Ile Ile Asn Leu Lys Lys Ser Leu Ala Tyr Ile His

145 150 155 160

Ile His Ser Cys Gln Lys Phe Phe Glu Thr Lys Cys Phe Met Ala Ser
165 170 175

Phe Ser Thr Glu Ile Val Val Met Met Leu Phe Leu Thr Ile Leu Gly
180 185 190

Leu Gly Ser Ala Val Ser Leu Thr Ile Cys Gly Ala Gly Glu Glu Leu
195 200 205

Lys Gly Asn Lys Val Pro Glu
210 215

<210> 213
<211> 41
<212> PRT
<213> Homo sapien

<400> 213

Arg Ser Lys Arg Ser Arg Gly Gly His Ser Asp Tyr Met Asn Met Thr
1 5 10 15

Pro Arg Arg Pro Gly Pro Thr Arg Lys His Tyr Gln Pro Tyr Ala Pro
20 25 30

Pro Arg Asp Phe Ala Ala Tyr Arg Ser
35 40

<210> 214
<211> 18
<212> PRT
<213> Homo sapien

<400> 214

Met Ile Pro Ala Val Val Leu Leu Leu Leu Leu Leu Val Glu Gln Ala
1 5 10 15

Ala Ala

<210> 215

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

<220>
<223> Synthetic Construct

<400> 215

Leu Gly Glu Pro Gln Leu Cys Tyr Ile Leu Asp Ala Ile Leu Phe Leu
1 5 10 15

Tyr Gly Ile Val Leu Thr Leu Leu Tyr Cys Arg Leu Lys Ile Gln Val
20 25 30

Arg Lys Ala Ala Ile Thr Ser Tyr Glu Lys Ser
35 40

<210> 216
<211> 22
<212> PRT
<213> Homo sapien

<400> 216

Gly Ser Gly Ala Thr Asn Phe Ser Leu Leu Lys Gln Ala Gly Asp Val
1 5 10 15

Glu Glu Asn Pro Gly Pro
20

<210> 217
<211> 21
<212> PRT
<213> Homo sapien

<400> 217

Gly Ser Gly Glu Gly Arg Gly Ser Leu Leu Thr Cys Gly Asp Val Glu
1 5 10 15

Glu Asn Pro Gly Pro
20

<210> 218
<211> 530
<212> PRT

<213> Homo sapien

<400> 218

```
Leu Thr Pro Gln Gln Val Val Ala Ile Ala Ser Asn Gly Gly Gly Lys
1               5                  10                  15


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


His Gly Leu Thr Pro Gln Gln Val Val Ala Ile Ala Ser Asn Asn Gly
        35                  40                  45


Gly Lys Gln Ala Leu Glu Thr Val Gln Arg Leu Leu Pro Val Leu Cys
    50                  55                  60


Gln Ala His Gly Leu Thr Pro Gln Gln Val Val Ala Ile Ala Ser Asn
65                  70                  75                  80


Gly Gly Gly Lys Gln Ala Leu Glu Thr Val Gln Arg Leu Leu Pro Val
                85                  90                  95


Leu Cys Gln Ala His Gly Leu Thr Pro Glu Gln Val Val Ala Ile Ala
            100                 105                 110


Ser His Asp Gly Gly Lys Gln Ala Leu Glu Thr Val Gln Arg Leu Leu
        115                 120                 125


Pro Val Leu Cys Gln Ala His Gly Leu Thr Pro Glu Gln Val Val Ala
    130                 135                 140


Ile Ala Ser His Asp Gly Gly Lys Gln Ala Leu Glu Thr Val Gln Arg
145                 150                 155                 160


Leu Leu Pro Val Leu Cys Gln Ala His Gly Leu Thr Pro Glu Gln Val
                165                 170                 175


Val Ala Ile Ala Ser His Asp Gly Gly Lys Gln Ala Leu Glu Thr Val
            180                 185                 190


Gln Arg Leu Leu Pro Val Leu Cys Gln Ala His Gly Leu Thr Pro Glu
        195                 200                 205
```

```
Gln Val Val Ala Ile Ala Ser Asn Ile Gly Gly Lys Gln Ala Leu Glu
    210                 215                 220

Thr Val Gln Ala Leu Leu Pro Val Leu Cys Gln Ala His Gly Leu Thr
225                 230                 235                 240

Pro Glu Gln Val Val Ala Ile Ala Ser His Asp Gly Gly Lys Gln Ala
                245                 250                 255

Leu Glu Thr Val Gln Arg Leu Leu Pro Val Leu Cys Gln Ala His Gly
            260                 265                 270

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

Gln Ala Leu Glu Thr Val Gln Ala Leu Leu Pro Val Leu Cys Gln Ala
    290                 295                 300

His Gly Leu Thr Pro Gln Gln Val Val Ala Ile Ala Ser Asn Asn Gly
305                 310                 315                 320

Gly Lys Gln Ala Leu Glu Thr Val Gln Arg Leu Leu Pro Val Leu Cys
                325                 330                 335

Gln Ala His Gly Leu Thr Pro Glu Gln Val Val Ala Ile Ala Ser Asn
            340                 345                 350

Ile Gly Gly Lys Gln Ala Leu Glu Thr Val Gln Ala Leu Leu Pro Val
        355                 360                 365

Leu Cys Gln Ala His Gly Leu Thr Pro Gln Gln Val Val Ala Ile Ala
    370                 375                 380

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

Pro Val Leu Cys Gln Ala His Gly Leu Thr Pro Glu Gln Val Val Ala
                405                 410                 415
```

```
Ile Ala Ser Asn Ile Gly Gly Lys Gln Ala Leu Glu Thr Val Gln Ala
            420                 425                 430

Leu Leu Pro Val Leu Cys Gln Ala His Gly Leu Thr Pro Gln Gln Val
        435                 440                 445

Val Ala Ile Ala Ser Asn Gly Gly Gly Lys Gln Ala Leu Glu Thr Val
    450                 455                 460

Gln Arg Leu Leu Pro Val Leu Cys Gln Ala His Gly Leu Thr Pro Glu
465                 470                 475                 480

Gln Val Val Ala Ile Ala Ser His Asp Gly Gly Lys Gln Ala Leu Glu
                485                 490                 495

Thr Val Gln Arg Leu Leu Pro Val Leu Cys Gln Ala His Gly Leu Thr
            500                 505                 510

Pro Gln Gln Val Val Ala Ile Ala Ser Asn Gly Gly Gly Arg Pro Ala
        515                 520                 525

Leu Glu
    530


<210>  219
<211>  530
<212>  PRT
<213>  Artificial Sequence

<220>
<223>  Synthetic Construct

<400>  219

Leu Thr Pro Glu Gln Val Val Ala Ile Ala Ser His Asp Gly Gly Lys
1               5                   10                  15

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

His Gly Leu Thr Pro Gln Gln Val Val Ala Ile Ala Ser Asn Gly Gly
        35                  40                  45
```

```
Gly Lys Gln Ala Leu Glu Thr Val Gln Arg Leu Leu Pro Val Leu Cys
    50                  55                  60

Gln Ala His Gly Leu Thr Pro Glu Gln Val Val Ala Ile Ala Ser His
65                  70                  75                  80

Asp Gly Gly Lys Gln Ala Leu Glu Thr Val Gln Arg Leu Leu Pro Val
                85                  90                  95

Leu Cys Gln Ala His Gly Leu Thr Pro Glu Gln Val Val Ala Ile Ala
            100                 105                 110

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

Pro Val Leu Cys Gln Ala His Gly Leu Thr Pro Gln Gln Val Val Ala
    130                 135                 140

Ile Ala Ser Asn Asn Gly Gly Lys Gln Ala Leu Glu Thr Val Gln Arg
145                 150                 155                 160

Leu Leu Pro Val Leu Cys Gln Ala His Gly Leu Thr Pro Glu Gln Val
                165                 170                 175

Val Ala Ile Ala Ser His Asp Gly Gly Lys Gln Ala Leu Glu Thr Val
            180                 185                 190

Gln Arg Leu Leu Pro Val Leu Cys Gln Ala His Gly Leu Thr Pro Gln
        195                 200                 205

Gln Val Val Ala Ile Ala Ser Asn Gly Gly Gly Lys Gln Ala Leu Glu
    210                 215                 220

Thr Val Gln Arg Leu Leu Pro Val Leu Cys Gln Ala His Gly Leu Thr
225                 230                 235                 240

Pro Gln Gln Val Val Ala Ile Ala Ser Asn Asn Gly Gly Lys Gln Ala
                245                 250                 255

Leu Glu Thr Val Gln Arg Leu Leu Pro Val Leu Cys Gln Ala His Gly
            260                 265                 270
```

```
Leu Thr Pro Gln Gln Val Val Ala Ile Ala Ser Asn Asn Gly Gly Lys
        275                 280                 285

Gln Ala Leu Glu Thr Val Gln Arg Leu Leu Pro Val Leu Cys Gln Ala
    290                 295                 300

His Gly Leu Thr Pro Gln Gln Val Val Ala Ile Ala Ser Asn Gly Gly
305                 310                 315                 320

Gly Lys Gln Ala Leu Glu Thr Val Gln Arg Leu Leu Pro Val Leu Cys
                325                 330                 335

Gln Ala His Gly Leu Thr Pro Glu Gln Val Val Ala Ile Ala Ser Asn
            340                 345                 350

Ile Gly Gly Lys Gln Ala Leu Glu Thr Val Gln Ala Leu Leu Pro Val
        355                 360                 365

Leu Cys Gln Ala His Gly Leu Thr Pro Glu Gln Val Val Ala Ile Ala
    370                 375                 380

Ser His Asp Gly Gly Lys Gln Ala Leu Glu Thr Val Gln Arg Leu Leu
385                 390                 395                 400

Pro Val Leu Cys Gln Ala His Gly Leu Thr Pro Glu Gln Val Val Ala
                405                 410                 415

Ile Ala Ser Asn Ile Gly Gly Lys Gln Ala Leu Glu Thr Val Gln Ala
            420                 425                 430

Leu Leu Pro Val Leu Cys Gln Ala His Gly Leu Thr Pro Glu Gln Val
        435                 440                 445

Val Ala Ile Ala Ser His Asp Gly Gly Lys Gln Ala Leu Glu Thr Val
    450                 455                 460

Gln Arg Leu Leu Pro Val Leu Cys Gln Ala His Gly Leu Thr Pro Gln
465                 470                 475                 480
```

Gln Val Val Ala Ile Ala Ser Asn Asn Gly Gly Lys Gln Ala Leu Glu
485 490 495

Thr Val Gln Arg Leu Leu Pro Val Leu Cys Gln Ala His Gly Leu Thr
500 505 510

Pro Gln Gln Val Val Ala Ile Ala Ser Asn Gly Gly Gly Arg Pro Ala
515 520 525

Leu Glu
530

<210> 220
<211> 530
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 220

Leu Thr Pro Gln Gln Val Val Ala Ile Ala Ser Asn Asn Gly Gly Lys
1 5 10 15

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

His Gly Leu Thr Pro Gln Gln Val Val Ala Ile Ala Ser Asn Gly Gly
35 40 45

Gly Lys Gln Ala Leu Glu Thr Val Gln Arg Leu Leu Pro Val Leu Cys
50 55 60

Gln Ala His Gly Leu Thr Pro Gln Gln Val Val Ala Ile Ala Ser Asn
65 70 75 80

Asn Gly Gly Lys Gln Ala Leu Glu Thr Val Gln Arg Leu Leu Pro Val
85 90 95

Leu Cys Gln Ala His Gly Leu Thr Pro Gln Gln Val Val Ala Ile Ala
100 105 110

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

Pro Val Leu Cys Gln Ala His Gly Leu Thr Pro Gln Gln Val Val Ala
    130                 135                 140

Ile Ala Ser Asn Gly Gly Gly Lys Gln Ala Leu Glu Thr Val Gln Arg
145                 150                 155                 160

Leu Leu Pro Val Leu Cys Gln Ala His Gly Leu Thr Pro Gln Gln Val
                165                 170                 175

Val Ala Ile Ala Ser Asn Gly Gly Gly Lys Gln Ala Leu Glu Thr Val
            180                 185                 190

Gln Arg Leu Leu Pro Val Leu Cys Gln Ala His Gly Leu Thr Pro Gln
        195                 200                 205

Gln Val Val Ala Ile Ala Ser Asn Asn Gly Gly Lys Gln Ala Leu Glu
    210                 215                 220

Thr Val Gln Arg Leu Leu Pro Val Leu Cys Gln Ala His Gly Leu Thr
225                 230                 235                 240

Pro Glu Gln Val Val Ala Ile Ala Ser Asn Ile Gly Gly Lys Gln Ala
                245                 250                 255

Leu Glu Thr Val Gln Ala Leu Leu Pro Val Leu Cys Gln Ala His Gly
            260                 265                 270

Leu Thr Pro Gln Gln Val Val Ala Ile Ala Ser Asn Asn Gly Gly Lys
        275                 280                 285

Gln Ala Leu Glu Thr Val Gln Arg Leu Leu Pro Val Leu Cys Gln Ala
    290                 295                 300

His Gly Leu Thr Pro Glu Gln Val Val Ala Ile Ala Ser His Asp Gly
305                 310                 315                 320

Gly Lys Gln Ala Leu Glu Thr Val Gln Arg Leu Leu Pro Val Leu Cys
                325                 330                 335
```

```
Gln Ala His Gly Leu Thr Pro Glu Gln Val Val Ala Ile Ala Ser His
            340                 345                 350

Asp Gly Gly Lys Gln Ala Leu Glu Thr Val Gln Arg Leu Leu Pro Val
        355                 360                 365

Leu Cys Gln Ala His Gly Leu Thr Pro Glu Gln Val Val Ala Ile Ala
    370                 375                 380

Ser Asn Ile Gly Gly Lys Gln Ala Leu Glu Thr Val Gln Ala Leu Leu
385                 390                 395                 400

Pro Val Leu Cys Gln Ala His Gly Leu Thr Pro Gln Gln Val Val Ala
                405                 410                 415

Ile Ala Ser Asn Gly Gly Gly Lys Gln Ala Leu Glu Thr Val Gln Arg
            420                 425                 430

Leu Leu Pro Val Leu Cys Gln Ala His Gly Leu Thr Pro Glu Gln Val
        435                 440                 445

Val Ala Ile Ala Ser His Asp Gly Gly Lys Gln Ala Leu Glu Thr Val
    450                 455                 460

Gln Arg Leu Leu Pro Val Leu Cys Gln Ala His Gly Leu Thr Pro Glu
465                 470                 475                 480

Gln Val Val Ala Ile Ala Ser Asn Ile Gly Gly Lys Gln Ala Leu Glu
                485                 490                 495

Thr Val Gln Ala Leu Leu Pro Val Leu Cys Gln Ala His Gly Leu Thr
            500                 505                 510

Pro Gln Gln Val Val Ala Ile Ala Ser Asn Gly Gly Gly Arg Pro Ala
        515                 520                 525

Leu Glu
    530
```

<210> 221
<211> 539
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 221

Asn Pro Gln Arg Ser Thr Val Trp Tyr Leu Thr Pro Gln Gln Val Val
1 5 10 15

Ala Ile Ala Ser Asn Asn Gly Gly Lys Gln Ala Leu Glu Thr Val Gln
20 25 30

Arg Leu Leu Pro Val Leu Cys Gln Ala His Gly Leu Thr Pro Gln Gln
35 40 45

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

Val Gln Arg Leu Leu Pro Val Leu Cys Gln Ala His Gly Leu Thr Pro
65 70 75 80

Gln Gln Val Val Ala Ile Ala Ser Asn Asn Gly Gly Lys Gln Ala Leu
85 90 95

Glu Thr Val Gln Arg Leu Leu Pro Val Leu Cys Gln Ala His Gly Leu
100 105 110

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

Ala Leu Glu Thr Val Gln Arg Leu Leu Pro Val Leu Cys Gln Ala His
130 135 140

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

Lys Gln Ala Leu Glu Thr Val Gln Arg Leu Leu Pro Val Leu Cys Gln
165 170 175

```
Ala His Gly Leu Thr Pro Glu Gln Val Val Ala Ile Ala Ser His Asp
            180                 185                 190

Gly Gly Lys Gln Ala Leu Glu Thr Val Gln Arg Leu Leu Pro Val Leu
        195                 200                 205

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

Asn Gly Gly Gly Lys Gln Ala Leu Glu Thr Val Gln Arg Leu Leu Pro
225                 230                 235                 240

Val Leu Cys Gln Ala His Gly Leu Thr Pro Gln Gln Val Val Ala Ile
                245                 250                 255

Ala Ser Asn Gly Gly Gly Lys Gln Ala Leu Glu Thr Val Gln Arg Leu
            260                 265                 270

Leu Pro Val Leu Cys Gln Ala His Gly Leu Thr Pro Gln Gln Val Val
        275                 280                 285

Ala Ile Ala Ser Asn Gly Gly Gly Lys Gln Ala Leu Glu Thr Val Gln
    290                 295                 300

Arg Leu Leu Pro Val Leu Cys Gln Ala His Gly Leu Thr Pro Gln Gln
305                 310                 315                 320

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

Val Gln Arg Leu Leu Pro Val Leu Cys Gln Ala His Gly Leu Thr Pro
            340                 345                 350

Gln Gln Val Val Ala Ile Ala Ser Asn Asn Gly Gly Lys Gln Ala Leu
        355                 360                 365

Glu Thr Val Gln Arg Leu Leu Pro Val Leu Cys Gln Ala His Gly Leu
    370                 375                 380

Thr Pro Gln Gln Val Val Ala Ile Ala Ser Asn Asn Gly Gly Lys Gln
385                 390                 395                 400
```

```
Ala Leu Glu Thr Val Gln Arg Leu Leu Pro Val Leu Cys Gln Ala His
                405                 410                 415

Gly Leu Thr Pro Gln Gln Val Val Ala Ile Ala Ser Asn Asn Gly Gly
            420                 425                 430

Lys Gln Ala Leu Glu Thr Val Gln Arg Leu Leu Pro Val Leu Cys Gln
        435                 440                 445

Ala His Gly Leu Thr Pro Gln Gln Val Val Ala Ile Ala Ser Asn Gly
    450                 455                 460

Gly Gly Lys Gln Ala Leu Glu Thr Val Gln Arg Leu Leu Pro Val Leu
465                 470                 475                 480

Cys Gln Ala His Gly Leu Thr Pro Gln Gln Val Val Ala Ile Ala Ser
                485                 490                 495

Asn Asn Gly Gly Lys Gln Ala Leu Glu Thr Val Gln Arg Leu Leu Pro
            500                 505                 510

Val Leu Cys Gln Ala His Gly Leu Thr Pro Gln Gln Val Val Ala Ile
        515                 520                 525

Ala Ser Asn Gly Gly Gly Arg Pro Ala Leu Glu
    530                 535


<210>  222
<211>  530
<212>  PRT
<213>  Artificial Sequence

<220>
<223>  Synthetic Construct

<400>  222

Leu Thr Pro Glu Gln Val Val Ala Ile Ala Ser His Asp Gly Gly Lys
1               5                   10                  15

Gln Ala Leu Glu Thr Val Gln Arg Leu Leu Pro Val Leu Cys Gln Ala
            20                  25                  30
```

```
His Gly Leu Thr Pro Glu Gln Val Val Ala Ile Ala Ser His Asp Gly
        35                  40                  45

Gly Lys Gln Ala Leu Glu Thr Val Gln Arg Leu Leu Pro Val Leu Cys
    50                  55                  60

Gln Ala His Gly Leu Thr Pro Glu Gln Val Val Ala Ile Ala Ser His
65                  70                  75                  80

Asp Gly Gly Lys Gln Ala Leu Glu Thr Val Gln Arg Leu Leu Pro Val
                85                  90                  95

Leu Cys Gln Ala His Gly Leu Thr Pro Glu Gln Val Val Ala Ile Ala
            100                 105                 110

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

Pro Val Leu Cys Gln Ala His Gly Leu Thr Pro Glu Gln Val Val Ala
    130                 135                 140

Ile Ala Ser His Asp Gly Gly Lys Gln Ala Leu Glu Thr Val Gln Arg
145                 150                 155                 160

Leu Leu Pro Val Leu Cys Gln Ala His Gly Leu Thr Pro Glu Gln Val
                165                 170                 175

Val Ala Ile Ala Ser His Asp Gly Gly Lys Gln Ala Leu Glu Thr Val
            180                 185                 190

Gln Arg Leu Leu Pro Val Leu Cys Gln Ala His Gly Leu Thr Pro Glu
        195                 200                 205

Gln Val Val Ala Ile Ala Ser His Asp Gly Gly Lys Gln Ala Leu Glu
    210                 215                 220

Thr Val Gln Arg Leu Leu Pro Val Leu Cys Gln Ala His Gly Leu Thr
225                 230                 235                 240
```

```
Pro Gln Gln Val Val Ala Ile Ala Ser Asn Asn Gly Gly Lys Gln Ala
                245                 250                 255

Leu Glu Thr Val Gln Arg Leu Leu Pro Val Leu Cys Gln Ala His Gly
            260                 265                 270

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

Gln Ala Leu Glu Thr Val Gln Ala Leu Leu Pro Val Leu Cys Gln Ala
    290                 295                 300

His Gly Leu Thr Pro Gln Gln Val Val Ala Ile Ala Ser Asn Asn Gly
305                 310                 315                 320

Gly Lys Gln Ala Leu Glu Thr Val Gln Arg Leu Leu Pro Val Leu Cys
                325                 330                 335

Gln Ala His Gly Leu Thr Pro Gln Gln Val Val Ala Ile Ala Ser Asn
            340                 345                 350

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

Leu Cys Gln Ala His Gly Leu Thr Pro Gln Gln Val Val Ala Ile Ala
    370                 375                 380

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

Pro Val Leu Cys Gln Ala His Gly Leu Thr Pro Glu Gln Val Val Ala
                405                 410                 415

Ile Ala Ser His Asp Gly Gly Lys Gln Ala Leu Glu Thr Val Gln Arg
            420                 425                 430

Leu Leu Pro Val Leu Cys Gln Ala His Gly Leu Thr Pro Gln Gln Val
        435                 440                 445

Val Ala Ile Ala Ser Asn Asn Gly Gly Lys Gln Ala Leu Glu Thr Val
    450                 455                 460
```

Gln Arg Leu Leu Pro Val Leu Cys Gln Ala His Gly Leu Thr Pro Glu
465 470 475 480

Gln Val Val Ala Ile Ala Ser His Asp Gly Gly Lys Gln Ala Leu Glu
485 490 495

Thr Val Gln Arg Leu Leu Pro Val Leu Cys Gln Ala His Gly Leu Thr
500 505 510

Pro Gln Gln Val Val Ala Ile Ala Ser Asn Gly Gly Gly Arg Pro Ala
515 520 525

Leu Glu
530

<210> 223
<211> 530
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 223

Leu Thr Pro Gln Gln Val Val Ala Ile Ala Ser Asn Asn Gly Gly Lys
1 5 10 15

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

His Gly Leu Thr Pro Gln Gln Val Val Ala Ile Ala Ser Asn Asn Gly
35 40 45

Gly Lys Gln Ala Leu Glu Thr Val Gln Arg Leu Leu Pro Val Leu Cys
50 55 60

Gln Ala His Gly Leu Thr Pro Gln Gln Val Val Ala Ile Ala Ser Asn
65 70 75 80

Asn Gly Gly Lys Gln Ala Leu Glu Thr Val Gln Arg Leu Leu Pro Val
85 90 95

```
Leu Cys Gln Ala His Gly Leu Thr Pro Glu Gln Val Val Ala Ile Ala
            100                 105                 110

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

Pro Val Leu Cys Gln Ala His Gly Leu Thr Pro Gln Gln Val Val Ala
    130                 135                 140

Ile Ala Ser Asn Asn Gly Gly Lys Gln Ala Leu Glu Thr Val Gln Arg
145                 150                 155                 160

Leu Leu Pro Val Leu Cys Gln Ala His Gly Leu Thr Pro Glu Gln Val
                165                 170                 175

Val Ala Ile Ala Ser Asn Ile Gly Gly Lys Gln Ala Leu Glu Thr Val
            180                 185                 190

Gln Ala Leu Leu Pro Val Leu Cys Gln Ala His Gly Leu Thr Pro Gln
        195                 200                 205

Gln Val Val Ala Ile Ala Ser Asn Gly Gly Gly Lys Gln Ala Leu Glu
    210                 215                 220

Thr Val Gln Arg Leu Leu Pro Val Leu Cys Gln Ala His Gly Leu Thr
225                 230                 235                 240

Pro Glu Gln Val Val Ala Ile Ala Ser His Asp Gly Gly Lys Gln Ala
                245                 250                 255

Leu Glu Thr Val Gln Arg Leu Leu Pro Val Leu Cys Gln Ala His Gly
            260                 265                 270

Leu Thr Pro Gln Gln Val Val Ala Ile Ala Ser Asn Gly Gly Gly Lys
        275                 280                 285

Gln Ala Leu Glu Thr Val Gln Arg Leu Leu Pro Val Leu Cys Gln Ala
    290                 295                 300
```

```
His Gly Leu Thr Pro Glu Gln Val Val Ala Ile Ala Ser His Asp Gly
305                 310                 315                 320

Gly Lys Gln Ala Leu Glu Thr Val Gln Arg Leu Leu Pro Val Leu Cys
                325                 330                 335

Gln Ala His Gly Leu Thr Pro Gln Gln Val Val Ala Ile Ala Ser Asn
            340                 345                 350

Gly Gly Gly Lys Gln Ala Leu Glu Thr Val Gln Arg Leu Leu Pro Val
        355                 360                 365

Leu Cys Gln Ala His Gly Leu Thr Pro Gln Gln Val Val Ala Ile Ala
    370                 375                 380

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

Pro Val Leu Cys Gln Ala His Gly Leu Thr Pro Glu Gln Val Val Ala
                405                 410                 415

Ile Ala Ser His Asp Gly Gly Lys Gln Ala Leu Glu Thr Val Gln Arg
            420                 425                 430

Leu Leu Pro Val Leu Cys Gln Ala His Gly Leu Thr Pro Gln Gln Val
        435                 440                 445

Val Ala Ile Ala Ser Asn Gly Gly Gly Lys Gln Ala Leu Glu Thr Val
    450                 455                 460

Gln Arg Leu Leu Pro Val Leu Cys Gln Ala His Gly Leu Thr Pro Gln
465                 470                 475                 480

Gln Val Val Ala Ile Ala Ser Asn Gly Gly Gly Lys Gln Ala Leu Glu
                485                 490                 495

Thr Val Gln Arg Leu Leu Pro Val Leu Cys Gln Ala His Gly Leu Thr
            500                 505                 510

Pro Gln Gln Val Val Ala Ile Ala Ser Asn Gly Gly Gly Arg Pro Ala
        515                 520                 525
```

Leu Glu
530

<210> 224
<211> 530
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 224

Leu Thr Pro Gln Gln Val Val Ala Ile Ala Ser Asn Gly Gly Gly Lys
1 5 10 15

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

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

Gly Lys Gln Ala Leu Glu Thr Val Gln Arg Leu Leu Pro Val Leu Cys
50 55 60

Gln Ala His Gly Leu Thr Pro Glu Gln Val Val Ala Ile Ala Ser His
65 70 75 80

Asp Gly Gly Lys Gln Ala Leu Glu Thr Val Gln Arg Leu Leu Pro Val
85 90 95

Leu Cys Gln Ala His Gly Leu Thr Pro Gln Gln Val Val Ala Ile Ala
100 105 110

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

Pro Val Leu Cys Gln Ala His Gly Leu Thr Pro Glu Gln Val Val Ala
130 135 140

Ile Ala Ser His Asp Gly Gly Lys Gln Ala Leu Glu Thr Val Gln Arg
145 150 155 160

```
Leu Leu Pro Val Leu Cys Gln Ala His Gly Leu Thr Pro Glu Gln Val
                165                 170                 175

Val Ala Ile Ala Ser His Asp Gly Gly Lys Gln Ala Leu Glu Thr Val
            180                 185                 190

Gln Arg Leu Leu Pro Val Leu Cys Gln Ala His Gly Leu Thr Pro Gln
        195                 200                 205

Gln Val Val Ala Ile Ala Ser Asn Gly Gly Gly Lys Gln Ala Leu Glu
    210                 215                 220

Thr Val Gln Arg Leu Leu Pro Val Leu Cys Gln Ala His Gly Leu Thr
225                 230                 235                 240

Pro Glu Gln Val Val Ala Ile Ala Ser Asn Ile Gly Gly Lys Gln Ala
                245                 250                 255

Leu Glu Thr Val Gln Ala Leu Leu Pro Val Leu Cys Gln Ala His Gly
            260                 265                 270

Leu Thr Pro Glu Gln Val Val Ala Ile Ala Ser His Asp Gly Gly Lys
        275                 280                 285

Gln Ala Leu Glu Thr Val Gln Arg Leu Leu Pro Val Leu Cys Gln Ala
    290                 295                 300

His Gly Leu Thr Pro Gln Gln Val Val Ala Ile Ala Ser Asn Gly Gly
305                 310                 315                 320

Gly Lys Gln Ala Leu Glu Thr Val Gln Arg Leu Leu Pro Val Leu Cys
                325                 330                 335

Gln Ala His Gly Leu Thr Pro Glu Gln Val Val Ala Ile Ala Ser His
            340                 345                 350

Asp Gly Gly Lys Gln Ala Leu Glu Thr Val Gln Arg Leu Leu Pro Val
        355                 360                 365
```

```
Leu Cys Gln Ala His Gly Leu Thr Pro Glu Gln Val Val Ala Ile Ala
    370                 375                 380

Ser Asn Ile Gly Gly Lys Gln Ala Leu Glu Thr Val Gln Ala Leu Leu
385                 390                 395                 400

Pro Val Leu Cys Gln Ala His Gly Leu Thr Pro Glu Gln Val Val Ala
                405                 410                 415

Ile Ala Ser His Asp Gly Gly Lys Gln Ala Leu Glu Thr Val Gln Arg
            420                 425                 430

Leu Leu Pro Val Leu Cys Gln Ala His Gly Leu Thr Pro Glu Gln Val
        435                 440                 445

Val Ala Ile Ala Ser His Asp Gly Gly Lys Gln Ala Leu Glu Thr Val
    450                 455                 460

Gln Arg Leu Leu Pro Val Leu Cys Gln Ala His Gly Leu Thr Pro Glu
465                 470                 475                 480

Gln Val Val Ala Ile Ala Ser Asn Ile Gly Gly Lys Gln Ala Leu Glu
                485                 490                 495

Thr Val Gln Ala Leu Leu Pro Val Leu Cys Gln Ala His Gly Leu Thr
            500                 505                 510

Pro Gln Gln Val Val Ala Ile Ala Ser Asn Gly Gly Gly Arg Pro Ala
        515                 520                 525

Leu Glu
    530
```

<210>  225
<211>  530
<212>  PRT
<213>  Artificial Sequence

<220>
<223>  Synthetic Construct

<400>  225

```
Leu Thr Pro Gln Gln Val Val Ala Ile Ala Ser Asn Gly Gly Gly Lys
1               5                   10                  15

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

His Gly Leu Thr Pro Gln Gln Val Val Ala Ile Ala Ser Asn Asn Gly
        35                  40                  45

Gly Lys Gln Ala Leu Glu Thr Val Gln Arg Leu Leu Pro Val Leu Cys
    50                  55                  60

Gln Ala His Gly Leu Thr Pro Glu Gln Val Val Ala Ile Ala Ser His
65                  70                  75                  80

Asp Gly Gly Lys Gln Ala Leu Glu Thr Val Gln Arg Leu Leu Pro Val
                85                  90                  95

Leu Cys Gln Ala His Gly Leu Thr Pro Gln Gln Val Val Ala Ile Ala
            100                 105                 110

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

Pro Val Leu Cys Gln Ala His Gly Leu Thr Pro Glu Gln Val Val Ala
    130                 135                 140

Ile Ala Ser His Asp Gly Gly Lys Gln Ala Leu Glu Thr Val Gln Arg
145                 150                 155                 160

Leu Leu Pro Val Leu Cys Gln Ala His Gly Leu Thr Pro Gln Gln Val
                165                 170                 175

Val Ala Ile Ala Ser Asn Gly Gly Gly Lys Gln Ala Leu Glu Thr Val
            180                 185                 190

Gln Arg Leu Leu Pro Val Leu Cys Gln Ala His Gly Leu Thr Pro Gln
        195                 200                 205

Gln Val Val Ala Ile Ala Ser Asn Gly Gly Gly Lys Gln Ala Leu Glu
    210                 215                 220
```

```
Thr Val Gln Arg Leu Leu Pro Val Leu Cys Gln Ala His Gly Leu Thr
225                 230                 235                 240

Pro Glu Gln Val Val Ala Ile Ala Ser Asn Ile Gly Gly Lys Gln Ala
                245                 250                 255

Leu Glu Thr Val Gln Ala Leu Leu Pro Val Leu Cys Gln Ala His Gly
            260                 265                 270

Leu Thr Pro Glu Gln Val Val Ala Ile Ala Ser His Asp Gly Gly Lys
        275                 280                 285

Gln Ala Leu Glu Thr Val Gln Arg Leu Leu Pro Val Leu Cys Gln Ala
    290                 295                 300

His Gly Leu Thr Pro Glu Gln Val Val Ala Ile Ala Ser His Asp Gly
305                 310                 315                 320

Gly Lys Gln Ala Leu Glu Thr Val Gln Arg Leu Leu Pro Val Leu Cys
                325                 330                 335

Gln Ala His Gly Leu Thr Pro Gln Gln Val Val Ala Ile Ala Ser Asn
            340                 345                 350

Gly Gly Gly Lys Gln Ala Leu Glu Thr Val Gln Arg Leu Leu Pro Val
        355                 360                 365

Leu Cys Gln Ala His Gly Leu Thr Pro Gln Gln Val Val Ala Ile Ala
    370                 375                 380

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

Pro Val Leu Cys Gln Ala His Gly Leu Thr Pro Gln Gln Val Val Ala
                405                 410                 415

Ile Ala Ser Asn Gly Gly Gly Lys Gln Ala Leu Glu Thr Val Gln Arg
            420                 425                 430
```

```
Leu Leu Pro Val Leu Cys Gln Ala His Gly Leu Thr Pro Glu Gln Val
        435                 440                 445

Val Ala Ile Ala Ser Asn Ile Gly Gly Lys Gln Ala Leu Glu Thr Val
    450                 455                 460

Gln Ala Leu Leu Pro Val Leu Cys Gln Ala His Gly Leu Thr Pro Glu
465                 470                 475                 480

Gln Val Val Ala Ile Ala Ser His Asp Gly Gly Lys Gln Ala Leu Glu
                485                 490                 495

Thr Val Gln Arg Leu Leu Pro Val Leu Cys Gln Ala His Gly Leu Thr
            500                 505                 510

Pro Gln Gln Val Val Ala Ile Ala Ser Asn Gly Gly Gly Arg Pro Ala
        515                 520                 525

Leu Glu
    530
```

<210> 226
<211> 135
<212> PRT
<213> Homo sapien

<400> 226

```
Cys Pro Tyr Ser Asn Pro Ser Leu Cys Ser Gly Gly Gly Gly Ser Glu
1               5                   10                  15

Leu Pro Thr Gln Gly Thr Phe Ser Asn Val Ser Thr Asn Val Ser Pro
            20                  25                  30

Ala Lys Pro Thr Thr Thr Ala Cys Pro Tyr Ser Asn Pro Ser Leu Cys
        35                  40                  45

Ser Gly Gly Gly Gly Ser Pro Ala Pro Arg Pro Pro Thr Pro Ala Pro
    50                  55                  60

Thr Ile Ala Ser Gln Pro Leu Ser Leu Arg Pro Glu Ala Cys Arg Pro
65                  70                  75                  80
```

Ala Ala Gly Gly Ala Val His Thr Arg Gly Leu Asp Phe Ala Cys Asp
85 90 95

Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly Val Leu Leu Leu
100 105 110

Ser Leu Val Ile Thr Leu Tyr Cys Asn His Arg Asn Arg Arg Arg Val
115 120 125

Cys Lys Cys Pro Arg Pro Trp
130 135

<210> 227
<211> 19
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 227

Cys Gly Ser Gly Ser Gly Leu Glu Glu Lys Lys Gly Asn Tyr Val Val
1 5 10 15

Thr Asp His

<210> 228
<211> 804
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 228
atggctctgc ccgtcaccgc tctgctgctg cccctggctc tgctgctgca cgctgctcgc 60

cctgatgtgg tcatgactca gtctcccctg tctctgcccg tcaccctggg acagcccgcc 120

agcatctcct gcaagagctc ccagagcctg ctgtactcca acggcaagac ctatctgaat 180

tggttccagc agagacccgg ccagagccct cggagactga tctaccaggt gtctaagctg 240

gacagcggcg tgcctgatcg cttctctgga agcggatccg gaaccgactt tacactgaag 300

atcagccggg tggaggcaga ggacgtgggc gtgtactatt gcggccagga tacccacttc 360

ccactgacat ttggcggcgg caccaaggtg gagatcaagg gaggaggagg aagcggagga 420

ggaggaagcg gcggcggcgg ctctggcggc ggcggcagcc aggtgcagct ggtgcagagc 480

ggagcagagg tgaagaagcc tggcgcctcc gtgaaggtgt cttgtaaggc cagcggctac 540

acattcaccg attatacact gcactgggtg cggcaggccc ctggccaggg actggagtgg 600

atgggaggaa tctggcctat caccggagga accacataca accagaagtt taagggcaga 660

gtgacaatga ccagggacac atctaccagc acagtgtata tggagctgtc tagcctgcgc 720

tccgaggata cagccgtgta ctattgcgcc agaggcgagg cacagggatc ttggggacag 780

ggcaccctgg tgacagtgtc ctct 804

<210> 229
<211> 807
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 229
atggctctgc ccgtcaccgc tctgctgctg ccactggccc tgctgctgca cgcagcaagg 60

cctcaggtga ccctgaagga gagcggccct gtgctgctga agccaacaga gaccctgaca 120

ctgacctgca cagtgtctgg cttcagcctg tccaaccccc ggatgggcgt gagctggatc 180

agacagcccc ctggcaaggc cctggagtgg ttcgcccaca tcttttctac cgatgagaag 240

agcctgaagc tgtccctgag atctaggctg accctgagca aggacacatc taagagccag 300

gtggtgctga ccatgacaaa catggcccct gtggactccg ccacatacta ttgcgccaga 360

gacagctcca attacgaggg ctatttcgac ttttggggcc agggcaccct ggtgacagtg 420

tctagcggcg gaggaggatc cggaggagga ggatctggcg gcggcggctc cggcggcggc 480

ggctccgagg tggtgctgac ccagagccct gccacactgt ccgtgtctcc aggcgagaga 540

gccaccctgt cttgtagggc cagccagtcc gtgcgcagca atctggcctg gtaccagcag 600

aagtccggcc aggccccaag actgctgatc tatggctcca ccatcagggc cacaggagtg 660

ccagcacgct tctctggaag cggatccggc acagagttta ccctgacaat ctcctctctg 720

cagtccgagg atttcgccgt gtactattgc cagcagtact ctgactggcc cttcaccttt 780

ggccctggca caaaggtgga tatcaag 807

<210> 230
<211> 807
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 230
atggctctgc ccgtcaccgc tctgctgctg ccactggccc tgctgctgca cgcagcaagg 60

ccacaggtga ccctgaagga gtccggcccc gtgctggtga agcctacaga gaccctgaca 120

ctgacctgca cagtgtccgg cttctctctg agcaacgccc gcatgggcgt gtcttggatc 180

aggcagcccc ctggcaaggc cctggagtgg ctggcccaca tcttttccac cgacgagaag 240

tctatccgga gaagcctgcg ctccaggctg accctgagca aggatacatc caagtctcag 300

gtggtgctga ccatgacaaa catggacccc gtggataccg ccacatactt ctgcgccaga 360

gacagctcca attacgaggg ctattttgat tactggggcc agggcaccct ggtgacagtg 420

tctagcggag gaggaggaag cggaggagga ggatctggcg gcggcggctc tggcggcggc 480

ggcagcgagg tggtcatgac ccagagccca gccacactga gcgtgtcccc tggcgagagg 540

gtgaccctgt cctgtagggc atctcagagc gtgtcctcta acttcgcctg gtatcagcag 600

agaccaggcc aggcaccaag gctgctgctg tacggagcaa ccacaagagc cacaggactg 660

cccggcaggt tttccggatc tggaagcggc accgagaata tcctgacaat cagctccctg 720

cagtctgagg acttcgccat ctatttttgc cagcagtaca aggattggcc attcaccttt 780

ggccccggca gcaaggtgga catcaag 807

<210> 231
<211> 807
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 231
atggctctgc ccgtcaccgc tctgctgctg ccactggccc tgctgctgca cgcagcaaga 60

cctcaggtga ccctgaagga gtccggccct gtgctggtga agccaacaga gaccctgaca 120

ctgacctgca cagtgtctgg cttcagcctg tccaacgcaa ggatgggcgt gagctggatc 180

aggcagcccc ctggcaaggc cctggagtgg ctgggccaca tctttagcac cgacgagaag 240

tcttacagca catccctgag aggcaggatc accatctcta aggatacaag cagaggcctg 300

gtggtgctga ccctgacaaa catggacccc gtggataccg ccacatacta ttgcgccagg 360

gacagctcca attacgaggg ctatttcgat ttttggggcc ctggcttcct ggtgaccgtg 420

tctagcggcg gcggcggctc tggaggagga ggaagcggag gaggaggatc cggcggcggc 480

ggctctgaga tcgtgatgac ccagtcccct gccacactgt ctgtgagccc aggcgagaga 540

gccaccctgt cttgtagggt gtcccagtct atcggcgcca atctggcctg gtaccagcag 600

aagttcggcc aggccccaag gctgctgatc tatggagcat ccaccagagc cacaggaatc 660

cccgtgaggt tctccggagg aggatctgga accgagttta ccctgacaat ctcctctctg 720

cagagcgagg actttgccat ctactcctgc cagcagtaca tctattggcc cttcacattt 780

ggccctggca ccacagtgga tatcaag 807

<210> 232
<211> 807
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 232
atggctctgc ccgtcaccgc tctgctgctg ccactggccc tgctgctgca cgcagcaaga 60

ccacaggtga ccctgaagga gagcggaccc gtgctggtga agcctacaga gaccctgaca 120

ctgacctgca cagtgagcgg cttctccctg aacaatgcaa ggatgggcgt gtcctggatc 180

aggcagcccc ctggcaaggc cctggagtgg ttcgcccaca tctttagcac cgacgagaag 240

tcctttcgca catctctgag aagcaggctg accctgagca aggatacaag caagtcccag 300

gtggtgctga ccatgacaaa catggacccc gtggataccg ccacatacta ttgcgccaga 360

gacagctcca attacgaggg ctatttcgat tactggggcc agggcatcct ggtgaccgtg 420

tctagcggcg gcggcggctc tggaggagga ggaagcggag gaggaggatc cggcggcggc 480

ggctctgaga tcgtgatgac ccagtctccc gccacactgt ctgtgagccc tggcgagaga 540

gccacactga gctgtagggc ctcccagtct gtgagcaaca atctggcctg gtatcagcag 600

aagccaggcc aggcaccaag gctgctgatc tacggagcat ccaccagagc cacaggagtg 660

ccagcaaggt tctccggatc tgacagcggc accgagttta gcctgacaat ctcctctctg 720

cagtccgagg acttcgccgt gtatttttgc cagcagtaca aggattggcc attcaccttt 780

ggccccggca caaaggtgga gatcaag 807

<210> 233
<211> 819
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 233
atggctctgc ccgtcaccgc tctgctgctg ccactggccc tgctgctgca cgcagcaagg 60

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acaatccctg gcaacgacga tttcgatatg tggggccagg gcagaatggt gaccgtgagc 420

tccggcggcg gcggctctgg aggaggagga agcggaggag gaggaagcgg gggcggcggc 480

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cagaatcagc tgtataacga gctgaatctg ggccggagag aggagtatga cgtgctggat 1260

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aagggagaga ggcgccgggg caagggacac gatggcctgt accagggcct gtccacagcc 1440

accaaggaca cctatgatgc cctgcatatg caggcactgc ctccaaggtg a 1491

<210> 245
<211> 1488
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 245
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ctgagctgcg cagcatccgg cttcatcttt aacaatgcct ggatgtcctg ggtgcgccag 180

gcccccggca agggactgga gtggatcggc cggatcaaga gcaagtccga cggaggaacc 240

acagattacg cagcacctgt gaaggaccgc ttcacaatct ctcgggacga tagcaaggat 300

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tctggcgtgc cagacaggtt ctccggctct gacagcggca cagacttcac cctgaagatc 720

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aaccagctgt ataacgagct gaatctgggc cggagagagg agtacgacgt gctggataag 1260

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ggagagaggc gccggggcaa gggacacgat ggcctgtacc agggcctgtc cacagccacc 1440

aaggacacct atgatgccct gcatatgcag gcactgcctc caaggtga 1488

<210> 246
<211> 1485
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 246
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cctgaggtgc agctggtgga gagcggcggc ggcctggtga agcctggcgg atccctgagg 120

ctgtcttgcg aggcaagcgg cttcaccttt agcgacgcat ggatgtcctg ggtgcgccag 180

gcccctggca agggactgga gtgggtggga cggatcaaga gcaagacaga cggcggcacc 240

acagattacg tggtgccact gaacggccgc ttcatcatct cccgcgacga ttctcggaat 300

accctgtatc tgcagctgaa caatctgaag acagaggata ccgccgtgta ctattgcacc 360

acagtgccag gctcctacgg ctattggggc cagggcacac tggtgaccgt gagctccggc 420

ggcggcggct ctggaggagg aggaagcgga ggaggaggaa gcgggggcgg cggctctgac 480

atcgtgatga cacagtctcc actgagcctg ccagtgaccc ctggcgagcc agcctccatc 540

tcttgtcgct ctagccagag cctgctgcac aacaagcgga acaattacct ggattggttt 600

ctgcagaagc ctggccagtc ccctcagctg ctgatctatc tggccagcaa tagagcctcc 660

ggagtgccag acaggttctc tggaggagga agcggaacag acttcaccct gaagatcagc 720

agagtggagg ccgaggacgt gggcgtgtac tattgcatgc aggcccagca gacacctatc 780

accttcggcc agggcacaag actggagatc aagaccacaa ccccagcacc aaggccacct 840

acacctgcac caaccatcgc ctcccagcct ctgtctctga gaccagaggc atgtaggcca 900

gcagcaggag gagcagtgca caccaggggc ctggactttg cctgcgatat ctacatctgg 960

gcacctctgg caggaacatg tggcgtgctg ctgctgagcc tggtcatcac cctgtactgc 1020

aagagaggca ggaagaagct gctgtatatc ttcaagcagc ccttcatgag acccgtgcag 1080

acaacccagg aggaggacgg ctgctcttgt aggttcccag aagaggagga gggaggatgt 1140

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aggggaaggg atccagagat gggaggcaag cctcggagaa agaacccaca ggagggcctg 1320

tacaatgagc tgcagaagga caagatggcc gaggcctatt ctgagatcgg catgaaggga 1380

gagaggcgcc ggggcaaggg acacgatggc ctgtaccagg gcctgagcac agccaccaag 1440

gacacctatg atgccctgca tatgcaggca ctgcctccaa ggtga 1485

<210> 247
<211> 1508
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 247
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ccacaggtgc agctggtgca gtccggagca gaggtgaaga agcctggcag ctccgtgaag 120

gtgagctgca aggcctccgg cgacacattc tctagcaacg caatcagctg ggtgcgccag 180

gcccctggcc agggactgga gtggatgggc gtgatcatcc ctatcttcgg caccgccgac 240

tatgcccaga agtttcaggg ccgggtgaca atcaccgccg atgagtctac aagcaccgcc 300

tacatggagc tgtcctctct gagatccgag gacacagccg tgtactattg tgccaggcac 360

acctatcacg agtacgcagg aggatactat ggaggagcaa tggatccttg gggacagggc 420

acactggtga ccgtgagctc cggcggcggc ggctctggag gaggaggaag cggaggagga 480

ggaagcgggg gcggcggctc tgagctgcag agcgtgctga cccagccacc ttccgcctct 540

ggaacaccag gccagagggt gaccatcagc tgctccggat ctagctccaa catcggctcc 600

aattacgtgt attggtacca gcagctgcca ggcacagccc ccaagatcct gatctaccgc 660

aacaatcagc ggccttctgg cgtgccagat agattctctg gcagcaagtc cggcacctct 720

gccagcctgg caatctccgg cctgaggtct gaggacgagg ccgattacta ttgcgccgcc 780

tgggacgata acctgagcgg ctgggtgttt ggcacaggca ccaagctgac agtgctgacc 840

acaacccctg caccaagacc accaacacca gcacctacca tcgcaagcca gccactgtcc 900

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tttgcctgcg atatctatat ctgggcacca ctggcaggaa catgtggcgt gctgctgctg 1020

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cagcccttta tgcgccctgt gcagacaacc caggaggagg acggctgcag ctgtcggttc 1140

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gagtacgacg tgctggataa gaggagggga agggaccctg agatgggagg caagccacgg 1320

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actctgagat cggcatgaag ggagagaggc gccggggcaa gggacacgat ggcctgtatc 1440

agggcctgag cacagccacc aaggacacct acgatgccct gcatatgcag gcactgcctc 1500

caaggtga 1508

<210> 248
<211> 529
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 248

```
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1               5                  10                  15

His Ala Ala Arg Pro Gln Val Thr Leu Lys Glu Ser Gly Pro Val Leu
            20                  25                  30

Val Lys Pro Thr Glu Thr Leu Thr Leu Thr Cys Thr Val Ser Gly Phe
        35                  40                  45

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

Gly Lys Ala Leu Glu Trp Phe Ala His Ile Phe Ser Thr Asp Glu Lys
65                  70                  75                  80

Ser Phe Arg Thr Ser Leu Arg Ser Arg Leu Thr Leu Ser Lys Asp Thr
                85                  90                  95

Ser Lys Ser Gln Val Val Leu Thr Met Thr Asn Met Asp Pro Val Asp
            100                 105                 110

Thr Ala Thr Tyr Tyr Cys Ala Arg Asp Ser Ser Asn Tyr Glu Gly Tyr
        115                 120                 125

Phe Asp Tyr Trp Gly Gln Gly Ile Leu Val Thr Val Ser Ser Gly Gly
    130                 135                 140

Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly
145                 150                 155                 160

Gly Ser Glu Ile Val Met Thr Gln Ser Pro Ala Thr Leu Ser Val Ser
                165                 170                 175

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

Asn Asn Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu
        195                 200                 205

Leu Ile Tyr Gly Ala Ser Thr Arg Ala Thr Gly Val Pro Ala Arg Phe
```

```
    210                 215                 220

Ser Gly Ser Asp Ser Gly Thr Glu Phe Ser Leu Thr Ile Ser Ser Leu
225                 230                 235                 240

Gln Ser Glu Asp Phe Ala Val Tyr Phe Cys Gln Gln Tyr Lys Asp Trp
                245                 250                 255

Pro Phe Thr Phe Gly Pro Gly Thr Lys Val Glu Ile Lys Gly Ser Gly
            260                 265                 270

Gly Gly Gly Ser Cys Pro Tyr Ser Asn Pro Ser Leu Cys Ser Gly Gly
        275                 280                 285

Gly Gly Ser Cys Pro Tyr Ser Asn Pro Ser Leu Cys Ser Gly Gly Gly
    290                 295                 300

Gly Ser Thr Thr Thr Pro Ala Pro Arg Pro Pro Thr Pro Ala Pro Thr
305                 310                 315                 320

Ile Ala Ser Gln Pro Leu Ser Leu Arg Pro Glu Ala Cys Arg Pro Ala
                325                 330                 335

Ala Gly Gly Ala Val His Thr Arg Gly Leu Asp Phe Ala Cys Asp Ile
            340                 345                 350

Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly Val Leu Leu Leu Ser
        355                 360                 365

Leu Val Ile Thr Leu Tyr Cys Lys Arg Gly Arg Lys Lys Leu Leu Tyr
    370                 375                 380

Ile Phe Lys Gln Pro Phe Met Arg Pro Val Gln Thr Thr Gln Glu Glu
385                 390                 395                 400

Asp Gly Cys Ser Cys Arg Phe Pro Glu Glu Glu Glu Gly Gly Cys Glu
                405                 410                 415

Leu Arg Val Lys Phe Ser Arg Ser Ala Asp Ala Pro Ala Tyr Gln Gln
            420                 425                 430
```

```
Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu
        435                 440                 445

Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg Asp Pro Glu Met Gly Gly
    450                 455                 460

Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu Tyr Asn Glu Leu Gln
465                 470                 475                 480

Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile Gly Met Lys Gly Glu
                485                 490                 495

Arg Arg Arg Gly Lys Gly His Asp Gly Leu Tyr Gln Gly Leu Ser Thr
            500                 505                 510

Ala Thr Lys Asp Thr Tyr Asp Ala Leu His Met Gln Ala Leu Pro Pro
        515                 520                 525

Arg
```

<210>  249
<211>  529
<212>  PRT
<213>  Artificial Sequence

<220>
<223>  Synthetic Construct

<400>  249

```
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1               5                   10                  15

His Ala Ala Arg Pro Gln Val Thr Leu Lys Glu Ser Gly Pro Val Leu
            20                  25                  30

Val Lys Pro Thr Glu Thr Leu Thr Leu Thr Cys Thr Val Ser Gly Phe
        35                  40                  45

Ser Leu Ser Asn Ala Arg Met Gly Val Ser Trp Ile Arg Gln Pro Pro
    50                  55                  60
```

```
Gly Lys Ala Leu Glu Trp Leu Ala His Ile Phe Ser Thr Asp Glu Lys
65                  70                  75                  80

Ser Ile Arg Arg Ser Leu Arg Ser Arg Leu Thr Leu Ser Lys Asp Thr
                85                  90                  95

Ser Lys Ser Gln Val Val Leu Thr Met Thr Asn Met Asp Pro Val Asp
            100                 105                 110

Thr Ala Thr Tyr Phe Cys Ala Arg Asp Ser Ser Asn Tyr Glu Gly Tyr
        115                 120                 125

Phe Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly
    130                 135                 140

Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly
145                 150                 155                 160

Gly Ser Glu Val Val Met Thr Gln Ser Pro Ala Thr Leu Ser Val Ser
                165                 170                 175

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

Ser Asn Phe Ala Trp Tyr Gln Gln Arg Pro Gly Gln Ala Pro Arg Leu
        195                 200                 205

Leu Leu Tyr Gly Ala Thr Thr Arg Ala Thr Gly Leu Pro Gly Arg Phe
    210                 215                 220

Ser Gly Ser Gly Ser Gly Thr Glu Asn Ile Leu Thr Ile Ser Ser Leu
225                 230                 235                 240

Gln Ser Glu Asp Phe Ala Ile Tyr Phe Cys Gln Gln Tyr Lys Asp Trp
                245                 250                 255

Pro Phe Thr Phe Gly Pro Gly Ser Lys Val Asp Ile Lys Gly Ser Gly
            260                 265                 270

Gly Gly Gly Ser Cys Pro Tyr Ser Asn Pro Ser Leu Cys Ser Gly Gly
```

```
        275                 280                 285

Gly Gly Ser Cys Pro Tyr Ser Asn Pro Ser Leu Cys Ser Gly Gly Gly
    290                 295                 300

Gly Ser Thr Thr Thr Pro Ala Pro Arg Pro Pro Thr Pro Ala Pro Thr
305                 310                 315                 320

Ile Ala Ser Gln Pro Leu Ser Leu Arg Pro Glu Ala Cys Arg Pro Ala
                325                 330                 335

Ala Gly Gly Ala Val His Thr Arg Gly Leu Asp Phe Ala Cys Asp Ile
            340                 345                 350

Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly Val Leu Leu Leu Ser
        355                 360                 365

Leu Val Ile Thr Leu Tyr Cys Lys Arg Gly Arg Lys Lys Leu Leu Tyr
    370                 375                 380

Ile Phe Lys Gln Pro Phe Met Arg Pro Val Gln Thr Thr Gln Glu Glu
385                 390                 395                 400

Asp Gly Cys Ser Cys Arg Phe Pro Glu Glu Glu Glu Gly Gly Cys Glu
                405                 410                 415

Leu Arg Val Lys Phe Ser Arg Ser Ala Asp Ala Pro Ala Tyr Gln Gln
            420                 425                 430

Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu
        435                 440                 445

Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg Asp Pro Glu Met Gly Gly
    450                 455                 460

Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu Tyr Asn Glu Leu Gln
465                 470                 475                 480

Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile Gly Met Lys Gly Glu
                485                 490                 495
```

Arg Arg Arg Gly Lys Gly His Asp Gly Leu Tyr Gln Gly Leu Ser Thr
500 505 510

Ala Thr Lys Asp Thr Tyr Asp Ala Leu His Met Gln Ala Leu Pro Pro
515 520 525

Arg

<210> 250
<211> 532
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 250

Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Glu Val Gln Leu Val Glu Ser Trp Gly Val Leu
20 25 30

Val Lys Pro Gly Gly Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe
35 40 45

Ile Phe Asn Asn Ala Trp Met Ser Trp Val Arg Gln Ala Pro Gly Lys
50 55 60

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

Thr Asp Tyr Ala Ala Pro Val Lys Asp Arg Phe Thr Ile Ser Arg Asp
85 90 95

Asp Ser Lys Asp Thr Leu Tyr Leu Gln Met Asn Gly Leu Lys Thr Glu
100 105 110

Asp Thr Ala Val Tyr Phe Cys Thr Thr Ala Pro Gly Gly Pro Phe Asp
115 120 125

```
Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly Gly
    130                 135                 140

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
145                 150                 155                 160

Asp Ile Val Leu Thr Gln Ser Pro Leu Ser Leu Pro Val Thr Pro Gly
                165                 170                 175

Glu Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Leu His Arg
            180                 185                 190

Asp Gly Phe Asn Tyr Leu Asp Trp Phe Leu Gln Lys Pro Gly Gln Ser
        195                 200                 205

Pro Gln Leu Leu Ile Tyr Leu Ala Ser Ser Arg Ala Ser Gly Val Pro
    210                 215                 220

Asp Arg Phe Ser Gly Ser Asp Ser Gly Thr Asp Phe Thr Leu Lys Ile
225                 230                 235                 240

Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln Ala
                245                 250                 255

Leu Gln Thr Pro Ile Thr Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys
            260                 265                 270

Gly Ser Gly Gly Gly Gly Ser Cys Pro Tyr Ser Asn Pro Ser Leu Cys
        275                 280                 285

Ser Gly Gly Gly Gly Ser Cys Pro Tyr Ser Asn Pro Ser Leu Cys Ser
    290                 295                 300

Gly Gly Gly Gly Ser Thr Thr Thr Pro Ala Pro Arg Pro Pro Thr Pro
305                 310                 315                 320

Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser Leu Arg Pro Glu Ala Cys
                325                 330                 335

Arg Pro Ala Ala Gly Gly Ala Val His Thr Arg Gly Leu Asp Phe Ala
```

```
            340                 345                 350

Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly Val Leu
        355                 360                 365

Leu Leu Ser Leu Val Ile Thr Leu Tyr Cys Lys Arg Gly Arg Lys Lys
    370                 375                 380

Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met Arg Pro Val Gln Thr Thr
385                 390                 395                 400

Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu Glu Glu Glu Gly
                405                 410                 415

Gly Cys Glu Leu Arg Val Lys Phe Ser Arg Ser Ala Asp Ala Pro Ala
            420                 425                 430

Tyr Gln Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn Leu Gly Arg
        435                 440                 445

Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg Asp Pro Glu
    450                 455                 460

Met Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu Tyr Asn
465                 470                 475                 480

Glu Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile Gly Met
                485                 490                 495

Lys Gly Glu Arg Arg Arg Gly Lys Gly His Asp Gly Leu Tyr Gln Gly
            500                 505                 510

Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu His Met Gln Ala
        515                 520                 525

Leu Pro Pro Arg
    530
```

<210>  251
<211>  531
<212>  PRT

<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 251

```
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1               5                  10                  15


His Ala Ala Arg Pro Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu
            20                  25                  30


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


Thr Phe Ser Asp Ala Trp Met Ser Trp Val Arg Gln Ala Pro Gly Lys
    50                  55                  60


Gly Leu Glu Trp Val Gly Arg Ile Lys Ser Lys Thr Asp Gly Gly Thr
65                  70                  75                  80


Thr Asp Tyr Val Val Pro Leu Asn Gly Arg Phe Ile Ile Ser Arg Asp
                85                  90                  95


Asp Ser Arg Asn Thr Leu Tyr Leu Gln Leu Asn Asn Leu Lys Thr Glu
            100                 105                 110


Asp Thr Ala Val Tyr Tyr Cys Thr Thr Val Pro Gly Ser Tyr Gly Tyr
        115                 120                 125


Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly Gly Ser
    130                 135                 140


Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp
145                 150                 155                 160


Ile Val Met Thr Gln Ser Pro Leu Ser Leu Pro Val Thr Pro Gly Glu
                165                 170                 175


Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Leu His Asn Lys
            180                 185                 190
```

```
Arg Asn Asn Tyr Leu Asp Trp Phe Leu Gln Lys Pro Gly Gln Ser Pro
        195                 200                 205

Gln Leu Leu Ile Tyr Leu Ala Ser Asn Arg Ala Ser Gly Val Pro Asp
    210                 215                 220

Arg Phe Ser Gly Gly Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile Ser
225                 230                 235                 240

Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln Ala Gln
                245                 250                 255

Gln Thr Pro Ile Thr Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Gly
            260                 265                 270

Ser Gly Gly Gly Gly Ser Cys Pro Tyr Ser Asn Pro Ser Leu Cys Ser
        275                 280                 285

Gly Gly Gly Gly Ser Cys Pro Tyr Ser Asn Pro Ser Leu Cys Ser Gly
    290                 295                 300

Gly Gly Gly Ser Thr Thr Thr Pro Ala Pro Arg Pro Pro Thr Pro Ala
305                 310                 315                 320

Pro Thr Ile Ala Ser Gln Pro Leu Ser Leu Arg Pro Glu Ala Cys Arg
                325                 330                 335

Pro Ala Ala Gly Gly Ala Val His Thr Arg Gly Leu Asp Phe Ala Cys
            340                 345                 350

Asp Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly Val Leu Leu
        355                 360                 365

Leu Ser Leu Val Ile Thr Leu Tyr Cys Lys Arg Gly Arg Lys Lys Leu
    370                 375                 380

Leu Tyr Ile Phe Lys Gln Pro Phe Met Arg Pro Val Gln Thr Thr Gln
385                 390                 395                 400

Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu Glu Glu Glu Gly Gly
```

405 410 415

Cys Glu Leu Arg Val Lys Phe Ser Arg Ser Ala Asp Ala Pro Ala Tyr
420 425 430

Gln Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn Leu Gly Arg Arg
435 440 445

Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg Asp Pro Glu Met
450 455 460

Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu Tyr Asn Glu
465 470 475 480

Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile Gly Met Lys
485 490 495

Gly Glu Arg Arg Arg Gly Lys Gly His Asp Gly Leu Tyr Gln Gly Leu
500 505 510

Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu His Met Gln Ala Leu
515 520 525

Pro Pro Arg
530

<210> 252
<211> 1590
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 252
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ccccaggtga cactgaagga gagcggcccc gtgctggtga agcctacaga gacactgacc 120

ctgacctgca cagtgagcgg cttctccctg aacaatgcaa ggatgggcgt gtcctggatc 180

aggcagccac ctggcaaggc cctggagtgg ttcgcccaca tctttagcac cgacgagaag 240

tcctttcgca catctctgag aagcaggctg accctgagca aggatacaag caagtcccag 300

gtggtgctga ccatgacaaa catggaccct gtggataccg ccacatacta ttgtgcccgg 360

gacagctcca attacgaggg ctatttcgat tactggggcc agggcatcct ggtgaccgtg 420

tctagcggcg gcggcggctc tggaggagga ggaagcggag gaggaggatc cggcggcggc 480

ggctctgaga tcgtgatgac ccagtcccca gccacactgt ctgtgagccc aggagagaga 540

gccaccctgt cttgcagggc ctcccagtct gtgagcaaca atctggcctg gtatcagcag 600

aagcctggcc aggccccaag gctgctgatc tacggagcaa gcaccagagc aacaggagtg 660

cctgcaaggt tctccggatc tgacagcggc accgagtttt ctctgacaat ctcctctctg 720

cagagcgagg acttcgccgt gtatttttgt cagcagtaca aggattggcc attcaccttt 780

ggccccggca caaaggtgga gatcaagggc tccggaggag gaggatcctg cccctattcc 840

aacccttctc tgtgcagcgg aggaggagga agctgtccat actccaatcc ctccctgtgc 900

tccggcggcg gaggatccac cacaacccca gcacctagac caccaacccc agcaccaaca 960

atcgcatccc agcctctgtc tctgcggccc gaggcatgca ggccagcagc aggcggcgcc 1020

gtgcacacca ggggcctgga ctttgcctgc gatatctata tctgggcacc actggcagga 1080

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gacggctgct cctgtcggtt ccctgaagag gaggagggag gatgtgagct gcgcgtgaag 1260

ttttcccggt ctgccgatgc cccagcctat cagcagggcc agaaccagct gtacaacgag 1320

ctgaatctgg gccggagaga ggagtacgac gtgctggata agaggagggg aagagatccc 1380

gagatgggag gcaagcctcg gagaaagaac ccacaggagg gcctgtataa tgagctgcag 1440

aaggacaaga tggccgaggc ctactctgag atcggcatga agggagagag gcgccggggc 1500

aagggacacg atggcctgta tcagggcctg tccaccgcca caaaggacac ctacgatgcc 1560

ctgcacatgc aggccctgcc tccaaggtga 1590

<210> 253
<211> 1590
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 253

atggcactgc cagtgaccgc cctgctgctg cctctggccc tgctgctgca cgcagccaga 60

ccccaggtga cactgaagga gtccggcccc gtgctggtga agcctacaga gacactgacc 120

ctgacctgca cagtgagcgg cttctctctg agcaacgcaa ggatgggcgt gtcctggatc 180

aggcagccac ctggcaaggc cctggagtgg ctggcccaca tcttttccac cgacgagaag 240

tctatccgga gaagcctgcg ctcccggctg accctgagca aggatacatc caagtctcag 300

gtggtgctga ccatgacaaa catggaccct gtggataccg ccacatactt ctgtgcccgg 360

gacagctcca attacgaggg ctattttgat tactggggcc agggcaccct ggtgacagtg 420

tctagcggag gaggaggaag cggaggagga ggatcaggcg gcggcggctc tggcggcggc 480

ggcagcgagg tggtcatgac ccagtctcca gccacactga gcgtgtcccc aggagagcgc 540

gtgaccctga gctgccgggc ctctcagagc gtgtcctcta acttcgcctg gtatcagcag 600

cggcccggac aggcaccaag gctgctgctg tacggagcaa ccacaagagc aacaggcctg 660

cctggcaggt tttccggctc tggcagcggc accgagaata tcctgacaat cagctccctg 720

cagagcgagg acttcgccat ctatttttgt cagcagtaca aggattggcc attcaccttt 780

ggccccggct ccaaggtgga catcaaggga tccggaggag gaggatcttg cccctattct 840

aaccctagcc tgtgctccgg aggaggagga tcctgtccat actctaatcc atccctgtgc 900

agcggaggag gaggatctac cacaacccca gcacctagac caccaacccc agcacccaca 960

atcgcctctc agcctctgag cctgcgccca gaggcatgca ggccagcagc aggaggagca 1020

gtgcacacca ggggcctgga cttcgcctgc gatatctata tctgggcacc actggcagga 1080

acctgtggcg tgctgctgct gtccctggtc atcaccctgt attgcaagag aggcaggaag 1140

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gacggctgca gctgtcggtt ccctgaagag gaggagggcg gctgtgagct gagagtgaag 1260

ttttccaggt ctgccgatgc cccagcctat cagcagggcc agaatcagct gtacaacgag 1320

ctgaatctgg gcaggcgcga ggagtacgac gtgctggata agaggagagg acgcgatccc 1380

gagatgggag gcaagcctag gcgcaagaac ccacaggagg gcctgtataa tgagctgcag 1440

aaggacaaga tggccgaggc ctactctgag atcggcatga agggagagcg gagaaggggc 1500

aagggacacg atggcctgta tcagggcctg agcaccgcca caaaggacac ctacgatgcc 1560

ctgcacatgc aggccctgcc tccaaggtga 1590

<210> 254
<211> 1599
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 254
atggccctgc cagtgaccgc cctgctgctg ccactggccc tgctgctgca cgccgccaga 60

cctgaggtgc agctggtgga gagctggggc gtgctggtga agccaggagg ctctctgagg 120

ctgagctgcg cagcatccgg cttcatcttt aacaatgcct ggatgtcctg ggtgagacag 180

gcaccaggca agggcctgga gtggatcggc aggatcaaga gcaagtccga cggaggaacc 240

acagattacg cagcacccgt gaaggaccgc ttcacaatct ctcgggacga tagcaaggat 300

accctgtatc tgcagatgaa cggcctgaag acagaggaca ccgccgtgta cttctgcacc 360

acagccccag gcggcccctt tgattattgg ggccagggca cactggtgac cgtgagctcc 420

ggaggaggag gaagcggcgg aggaggcagc ggcggcggcg gctctggcgg cggcggcagc 480

gacatcgtgc tgacacagag cccactgtcc ctgcctgtga ccccaggaga gcccgcctct 540

atcagctgtc gctctagcca gagcctgctg caccgggacg gcttcaatta cctggattgg 600

tttctgcaga agcctggcca gagcccacag ctgctgatct atctggcctc ctctagagca 660

tccggagtgc ctgacaggtt ctccggatct gacagcggca cagacttcac cctgaagatc 720

tcccgcgtgg aggcagagga tgtgggcgtg tactattgca tgcaggccct gcagacacca 780

atcaccttcg gccagggcac acggctggag atcaagggat ccggaggagg aggatcttgc 840

ccctactcta accctagcct gtgcagcggc ggaggaggat cttgtccata ttctaatcca 900

agcctgtgca gcgggggagg aggaagcacc acaacccctg caccaagacc ccctacacca 960

gcacctacca tcgcatccca gccactgtct ctgcggcccg aggcatgtag gccagcagca 1020

ggaggagcag tgcacaccag gggcctggac tttgcctgcg atatctacat ctgggcacca 1080

ctggcaggaa catgtggcgt gctgctgctg agcctggtca tcaccctgta ctgcaagaga 1140

ggcaggaaga agctgctgta tatcttcaag cagcctttta tgcgcccagt gcagacaacc 1200

caggaggagg acggctgctc ctgtaggttc ccagaagagg aggagggagg atgtgagctg 1260

cgcgtgaagt tttcccggtc tgccgatgca cctgcatacc agcagggaca gaaccagctg 1320

tataacgagc tgaatctggg ccggagagag gagtacgacg tgctggataa gaggagggga 1380

cgcgatcctg agatgggagg caagccccgg agaaagaacc ctcaggaggg cctgtacaat 1440

gagctgcaga aggacaagat ggccgaggcc tattccgaga tcggcatgaa gggagagagg 1500

cgccggggca agggacacga tggcctgtac cagggcctgt ctacagccac caaggacacc 1560

tatgatgccc tgcacatgca ggccctgcca ccaaggtga 1599

<210> 255
<211> 1596
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 255
atggcactgc cagtgacagc cctgctgctg cctctggccc tgctgctgca cgcagccaga 60

ccagaggtgc agctggtgga gtccggagga ggcctggtga agccaggagg ctccctgagg 120

ctgtcttgcg aggccagcgg cttcaccttt agcgacgcct ggatgtcctg ggtgagacag 180

gcaccaggca agggcctgga gtgggtgggc aggatcaaga gcaagacaga cggcggcacc 240

acagattacg tggtgcctct gaacggccgg ttcatcatct cccgcgacga ttctcggaat 300

accctgtatc tgcagctgaa caatctgaag acagaggata ccgccgtgta ctattgcacc 360

acagtgcctg gctcctacgg ctattggggc cagggcacac tggtgaccgt gagctccggc 420

ggcggcggct ctggaggagg aggaagcgga ggaggaggaa gcgggggcgg cggctctgac 480

atcgtgatga cacagtctcc actgagcctg ccagtgaccc caggagagcc tgcctccatc 540

tcttgtcgct ctagccagtc cctgctgcac aacaagcgga acaattacct ggattggttc 600

ctgcagaagc caggccagtc tccccagctg ctgatctatc tggccagcaa tagagcctcc 660

ggagtgccag acaggttctc tggaggagga agcggaacag acttcaccct gaagatcagc 720

cgcgtggagg cagaggacgt gggcgtgtac tattgcatgc aggcccagca gacacccatc 780

acctttggcc agggaacccg gctggagatc aagggctccg gaggaggagg atcctgccct 840

tactccaacc catctctgtg cagcggagga ggaggatctt gtccatattc caatccttcc 900

ctgtgctccg gaggaggagg aagcaccaca acccctgcac caagaccccc tacaccagca 960

cctaccatcg catcccagcc tctgtctctg cggcccgagg catgtaggcc agcagcaggc 1020

ggcgccgtgc acaccagggg cctggacttt gcctgcgata tctacatctg ggcaccactg 1080

gcaggaacat gtggcgtgct gctgctgtct ctggtcatca ccctgtactg caagagaggc 1140

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gaggaggacg gctgcagctg tcggttccct gaagaggagg agggaggatg tgagctgcgc 1260

gtgaagttta gccggtccgc cgatgcacca gcataccagc agggccagaa ccagctgtat 1320

aacgagctga atctgggccg gagagaggag tacgacgtgc tggataagag gaggggacgc 1380

gatcctgaga tgggaggcaa gcctcggaga aagaacccac aggagggcct gtacaatgag 1440

ctgcagaagg acaagatggc cgaggcctat agcgagatcg gcatgaaggg agagaggcgc 1500

cggggcaagg gacacgatgg cctgtaccag ggcctgtcca cagccaccaa ggacacctat 1560

gatgccctgc acatgcaggc cctgccacca aggtga 1596

<210> 256
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 256

Cys Pro Tyr Ser Asn Pro Ser Leu Cys
1 5

<210> 257
<211> 255
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 257

Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Asp Val Val Met Thr Gln Ser Pro Leu Ser Leu
20 25 30

Pro Val Thr Leu Gly Gln Pro Ala Ser Ile Ser Cys Lys Ser Ser Gln

```
        35                  40                  45

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

Arg Pro Gly Gln Ser Pro Arg Arg Leu Ile Tyr Gln Val Ser Lys Leu
65                  70                  75                  80

Asp Ser Gly Val Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp
                85                  90                  95

Phe Thr Leu Lys Ile Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr
            100                 105                 110

Tyr Cys Gly Gln Asp Thr His Phe Pro Leu Thr Phe Gly Gly Gly Thr
        115                 120                 125

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

Gly Gly Gly Ser Gly Gly Gly Gly Ser Gln Val Gln Leu Val Gln Ser
145                 150                 155                 160

Gly Ala Glu Val Lys Lys Pro Gly Ala Ser Val Lys Val Ser Cys Lys
                165                 170                 175

Ala Ser Gly Tyr Thr Phe Thr Asp Tyr Thr Leu His Trp Val Arg Gln
            180                 185                 190

Ala Pro Gly Gln Gly Leu Glu Trp Met Gly Gly Ile Trp Pro Ile Thr
        195                 200                 205

Gly Gly Thr Thr Tyr Asn Gln Lys Phe Lys Gly Arg Val Thr Met Thr
    210                 215                 220

Arg Asp Thr Ser Thr Ser Thr Val Tyr Met Glu Leu Ser Ser Leu Arg
225                 230                 235                 240

Ser Glu Asp Thr Ala Val Tyr Tyr Cys Ala Arg Gly Glu Ala Gln
                245                 250                 255
```

<210> 258
<211> 255
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 258

```
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1               5                  10                  15


His Ala Ala Arg Pro Gln Val Thr Leu Lys Glu Ser Gly Pro Val Leu
            20                  25                  30


Leu Lys Pro Thr Glu Thr Leu Thr Leu Thr Cys Thr Val Ser Gly Phe
        35                  40                  45


Ser Leu Ser Asn Pro Arg Met Gly Val Ser Trp Ile Arg Gln Pro Pro
    50                  55                  60


Gly Lys Ala Leu Glu Trp Phe Ala His Ile Phe Ser Thr Asp Glu Lys
65                  70                  75                  80


Ser Leu Lys Leu Ser Leu Arg Ser Arg Leu Thr Leu Ser Lys Asp Thr
                85                  90                  95


Ser Lys Ser Gln Val Val Leu Thr Met Thr Asn Met Ala Pro Val Asp
            100                 105                 110


Ser Ala Thr Tyr Tyr Cys Ala Arg Asp Ser Ser Asn Tyr Glu Gly Tyr
        115                 120                 125


Phe Asp Phe Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly
    130                 135                 140


Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly
145                 150                 155                 160


Gly Ser Glu Val Val Leu Thr Gln Ser Pro Ala Thr Leu Ser Val Ser
                165                 170                 175
```

```
Pro Gly Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Arg
            180                 185                 190

Ser Asn Leu Ala Trp Tyr Gln Gln Lys Ser Gly Gln Ala Pro Arg Leu
        195                 200                 205

Leu Ile Tyr Gly Ser Thr Ile Arg Ala Thr Gly Val Pro Ala Arg Phe
    210                 215                 220

Ser Gly Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu
225                 230                 235                 240

Gln Ser Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ser Asp
                245                 250                 255
```

<210> 259
<211> 255
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 259

```
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1               5                   10                  15

His Ala Ala Arg Pro Gln Val Thr Leu Lys Glu Ser Gly Pro Val Leu
            20                  25                  30

Val Lys Pro Thr Glu Thr Leu Thr Leu Thr Cys Thr Val Ser Gly Phe
        35                  40                  45

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

Gly Lys Ala Leu Glu Trp Leu Ala His Ile Phe Ser Thr Asp Glu Lys
65                  70                  75                  80

Ser Ile Arg Arg Ser Leu Arg Ser Arg Leu Thr Leu Ser Lys Asp Thr
                85                  90                  95
```

```
Ser Lys Ser Gln Val Val Leu Thr Met Thr Asn Met Asp Pro Val Asp
            100                 105                 110

Thr Ala Thr Tyr Phe Cys Ala Arg Asp Ser Ser Asn Tyr Glu Gly Tyr
        115                 120                 125

Phe Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly
    130                 135                 140

Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly
145                 150                 155                 160

Gly Ser Glu Val Val Met Thr Gln Ser Pro Ala Thr Leu Ser Val Ser
                165                 170                 175

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

Ser Asn Phe Ala Trp Tyr Gln Gln Arg Pro Gly Gln Ala Pro Arg Leu
        195                 200                 205

Leu Leu Tyr Gly Ala Thr Thr Arg Ala Thr Gly Leu Pro Gly Arg Phe
    210                 215                 220

Ser Gly Ser Gly Ser Gly Thr Glu Asn Ile Leu Thr Ile Ser Ser Leu
225                 230                 235                 240

Gln Ser Glu Asp Phe Ala Ile Tyr Phe Cys Gln Gln Tyr Lys Asp
                245                 250                 255
```

<210> 260
<211> 255
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 260

```
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1               5                   10                  15
```

```
His Ala Ala Arg Pro Gln Val Thr Leu Lys Glu Ser Gly Pro Val Leu
            20                  25                  30

Val Lys Pro Thr Glu Thr Leu Thr Leu Thr Cys Thr Val Ser Gly Phe
        35                  40                  45

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

Gly Lys Ala Leu Glu Trp Leu Gly His Ile Phe Ser Thr Asp Glu Lys
65                  70                  75                  80

Ser Tyr Ser Thr Ser Leu Arg Gly Arg Ile Thr Ile Ser Lys Asp Thr
                85                  90                  95

Ser Arg Gly Leu Val Val Leu Thr Leu Thr Asn Met Asp Pro Val Asp
            100                 105                 110

Thr Ala Thr Tyr Tyr Cys Ala Arg Asp Ser Ser Asn Tyr Glu Gly Tyr
        115                 120                 125

Phe Asp Phe Trp Gly Pro Gly Phe Leu Val Thr Val Ser Ser Gly Gly
    130                 135                 140

Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly
145                 150                 155                 160

Gly Ser Glu Ile Val Met Thr Gln Ser Pro Ala Thr Leu Ser Val Ser
                165                 170                 175

Pro Gly Glu Arg Ala Thr Leu Ser Cys Arg Val Ser Gln Ser Ile Gly
            180                 185                 190

Ala Asn Leu Ala Trp Tyr Gln Gln Lys Phe Gly Gln Ala Pro Arg Leu
        195                 200                 205

Leu Ile Tyr Gly Ala Ser Thr Arg Ala Thr Gly Ile Pro Val Arg Phe
    210                 215                 220

Ser Gly Gly Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu
```

225 230 235 240

Gln Ser Glu Asp Phe Ala Ile Tyr Ser Cys Gln Gln Tyr Ile Tyr
245 250 255

<210> 261
<211> 255
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 261

Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Gln Val Thr Leu Lys Glu Ser Gly Pro Val Leu
20 25 30

Val Lys Pro Thr Glu Thr Leu Thr Leu Thr Cys Thr Val Ser Gly Phe
35 40 45

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

Gly Lys Ala Leu Glu Trp Phe Ala His Ile Phe Ser Thr Asp Glu Lys
65 70 75 80

Ser Phe Arg Thr Ser Leu Arg Ser Arg Leu Thr Leu Ser Lys Asp Thr
85 90 95

Ser Lys Ser Gln Val Val Leu Thr Met Thr Asn Met Asp Pro Val Asp
100 105 110

Thr Ala Thr Tyr Tyr Cys Ala Arg Asp Ser Ser Asn Tyr Glu Gly Tyr
115 120 125

Phe Asp Tyr Trp Gly Gln Gly Ile Leu Val Thr Val Ser Ser Gly Gly
130 135 140

Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly

145 150 155 160

Gly Ser Glu Ile Val Met Thr Gln Ser Pro Ala Thr Leu Ser Val Ser
165 170 175

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

Asn Asn Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu
195 200 205

Leu Ile Tyr Gly Ala Ser Thr Arg Ala Thr Gly Val Pro Ala Arg Phe
210 215 220

Ser Gly Ser Asp Ser Gly Thr Glu Phe Ser Leu Thr Ile Ser Ser Leu
225 230 235 240

Gln Ser Glu Asp Phe Ala Val Tyr Phe Cys Gln Gln Tyr Lys Asp
245 250 255

<210> 262
<211> 255
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 262

Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Glu Val Asn Leu Val Glu Ser Gly Gly Gly Leu
20 25 30

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

Thr Phe Ser Tyr Ala Trp Met Ser Trp Val Arg Gln Ala Pro Gly Lys
50 55 60

Gly Leu Glu Trp Val Gly Arg Ile Lys Ser Ile Ala Asp Gly Gly Ala

65 70 75 80

Thr Asp Tyr Ala Ala Pro Val Arg Asn Arg Phe Thr Ile Ser Arg Asp
85 90 95

Asp Ser Arg Asn Thr Leu Tyr Leu Glu Met His Ser Leu Lys Thr Glu
100 105 110

Asp Thr Ala Val Tyr Tyr Cys Thr Thr Ile Pro Gly Asn Asp Ala Phe
115 120 125

Asp Met Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly
130 135 140

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly
145 150 155 160

Ser Asp Ile Val Leu Thr Gln Ser Pro Leu Ser Leu Ser Val Thr Pro
165 170 175

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

Ser Asn Gly Lys Asn Tyr Leu Asp Trp Phe Leu His Lys Pro Gly Gln
195 200 205

Ser Pro Gln Leu Leu Ile Tyr Leu Gly Ser Asn Arg Ala Ser Gly Val
210 215 220

Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Ile Asp Phe Ile Leu Lys
225 230 235 240

Ile Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met
245 250 255

<210> 263
<211> 255
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 263

```
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1               5                  10                  15

His Ala Ala Arg Pro Glu Val Asn Leu Val Glu Ser Gly Gly Gly Leu
            20                  25                  30

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

Thr Phe Ser Tyr Ala Trp Met Ser Trp Val Arg Gln Ala Pro Gly Lys
    50                  55                  60

Gly Leu Glu Trp Val Gly Arg Ile Lys Ser Ile Thr Asp Gly Gly Val
65                  70                  75                  80

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

Asp Ser Arg Asn Thr Leu Tyr Leu Glu Met His Ser Leu Lys Thr Glu
            100                 105                 110

Asp Thr Ala Val Tyr Tyr Cys Thr Thr Ile Pro Gly Asn Asp Asp Phe
        115                 120                 125

Asp Met Trp Gly Gln Gly Arg Met Val Thr Val Ser Ser Gly Gly Gly
    130                 135                 140

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly
145                 150                 155                 160

Ser Asp Ile Val Leu Thr Gln Ser Pro Leu Ser Leu Ser Val Thr Pro
                165                 170                 175

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

Ser Asn Gly Lys Asn Tyr Leu Asp Trp Phe Leu His Lys Pro Gly Gln
        195                 200                 205
```

Ser Pro Gln Leu Leu Ile Tyr Leu Gly Ser Asn Arg Ala Ser Gly Val
210 215 220

Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Ile Asp Phe Ile Leu Lys
225 230 235 240

Ile Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met
245 250 255

<210> 264
<211> 255
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 264

Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Glu Val Gln Leu Val Glu Ser Trp Gly Val Leu
20 25 30

Val Lys Pro Gly Gly Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe
35 40 45

Ile Phe Asn Asn Ala Trp Met Ser Trp Val Arg Gln Ala Pro Gly Lys
50 55 60

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

Thr Asp Tyr Ala Ala Pro Val Lys Asp Arg Phe Thr Ile Ser Arg Asp
85 90 95

Asp Ser Lys Asp Thr Leu Tyr Leu Gln Met Asn Gly Leu Lys Thr Glu
100 105 110

Asp Thr Ala Val Tyr Phe Cys Thr Thr Ala Pro Gly Gly Pro Phe Asp
115 120 125

```
Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly Gly
    130                 135                 140

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
145                 150                 155                 160

Asp Ile Val Leu Thr Gln Ser Pro Leu Ser Leu Pro Val Thr Pro Gly
                165                 170                 175

Glu Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Leu His Arg
            180                 185                 190

Asp Gly Phe Asn Tyr Leu Asp Trp Phe Leu Gln Lys Pro Gly Gln Ser
        195                 200                 205

Pro Gln Leu Leu Ile Tyr Leu Ala Ser Ser Arg Ala Ser Gly Val Pro
    210                 215                 220

Asp Arg Phe Ser Gly Ser Asp Ser Gly Thr Asp Phe Thr Leu Lys Ile
225                 230                 235                 240

Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln
                245                 250                 255
```

<210> 265
<211> 255
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 265

```
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1               5                   10                  15

His Ala Ala Arg Pro Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu
            20                  25                  30

Val Lys Pro Gly Gly Ser Leu Arg Leu Ser Cys Glu Ala Ser Gly Phe
        35                  40                  45
```

```
Thr Phe Ser Asp Ala Trp Met Ser Trp Val Arg Gln Ala Pro Gly Lys
    50                  55                  60

Gly Leu Glu Trp Val Gly Arg Ile Lys Ser Lys Thr Asp Gly Gly Thr
65                  70                  75                  80

Thr Asp Tyr Val Val Pro Leu Asn Gly Arg Phe Ile Ile Ser Arg Asp
                85                  90                  95

Asp Ser Arg Asn Thr Leu Tyr Leu Gln Leu Asn Asn Leu Lys Thr Glu
            100                 105                 110

Asp Thr Ala Val Tyr Tyr Cys Thr Thr Val Pro Gly Ser Tyr Gly Tyr
        115                 120                 125

Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly Gly Ser
    130                 135                 140

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp
145                 150                 155                 160

Ile Val Met Thr Gln Ser Pro Leu Ser Leu Pro Val Thr Pro Gly Glu
                165                 170                 175

Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Leu His Asn Lys
            180                 185                 190

Arg Asn Asn Tyr Leu Asp Trp Phe Leu Gln Lys Pro Gly Gln Ser Pro
        195                 200                 205

Gln Leu Leu Ile Tyr Leu Ala Ser Asn Arg Ala Ser Gly Val Pro Asp
    210                 215                 220

Arg Phe Ser Gly Gly Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile Ser
225                 230                 235                 240

Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln Ala
                245                 250                 255
```

<210>  266

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

<220>
<223> Synthetic Construct

<400> 266

```
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1               5                  10                  15


His Ala Ala Arg Pro Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val
            20                  25                  30


Lys Lys Pro Gly Ser Ser Val Lys Val Ser Cys Lys Ala Ser Gly Asp
        35                  40                  45


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


Gly Leu Glu Trp Met Gly Val Ile Ile Pro Ile Phe Gly Thr Ala Asp
65                  70                  75                  80


Tyr Ala Gln Lys Phe Gln Gly Arg Val Thr Ile Thr Ala Asp Glu Ser
                85                  90                  95


Thr Ser Thr Ala Tyr Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr
            100                 105                 110


Ala Val Tyr Tyr Cys Ala Arg His Thr Tyr His Glu Tyr Ala Gly Gly
        115                 120                 125


Tyr Tyr Gly Gly Ala Met Asp Pro Trp Gly Gln Gly Thr Leu Val Thr
    130                 135                 140


Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly
145                 150                 155                 160


Gly Ser Gly Gly Gly Gly Ser Glu Leu Gln Ser Val Leu Thr Gln Pro
                165                 170                 175


Pro Ser Ala Ser Gly Thr Pro Gly Gln Arg Val Thr Ile Ser Cys Ser
```

```
            180                 185                 190

Gly Ser Ser Ser Asn Ile Gly Ser Asn Tyr Val Tyr Trp Tyr Gln Gln
        195                 200                 205

Leu Pro Gly Thr Ala Pro Lys Ile Leu Ile Tyr Arg Asn Asn Gln Arg
    210                 215                 220

Pro Ser Gly Val Pro Asp Arg Phe Ser Gly Ser Lys Ser Gly Thr Ser
225                 230                 235                 240

Ala Ser Leu Ala Ile Ser Gly Leu Arg Ser Glu Asp Glu Ala Asp
                245                 250                 255
```

<210> 267
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 267

```
Gly Phe Thr Phe Ser Tyr Ala Trp Met
1               5
```

<210> 268
<211> 255
<212> PRT
<213> Homo sapien

<400> 268

```
Leu Thr Pro Gln Gln Val Val Ala Ile Ala Ser Asn Gly Gly Gly Lys
1               5                   10                  15

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

His Gly Leu Thr Pro Gln Gln Val Val Ala Ile Ala Ser Asn Asn Gly
        35                  40                  45

Gly Lys Gln Ala Leu Glu Thr Val Gln Arg Leu Leu Pro Val Leu Cys
    50                  55                  60
```

```
Gln Ala His Gly Leu Thr Pro Gln Gln Val Val Ala Ile Ala Ser Asn
65                  70                  75                  80

Gly Gly Gly Lys Gln Ala Leu Glu Thr Val Gln Arg Leu Leu Pro Val
                85                  90                  95

Leu Cys Gln Ala His Gly Leu Thr Pro Glu Gln Val Val Ala Ile Ala
            100                 105                 110

Ser His Asp Gly Gly Lys Gln Ala Leu Glu Thr Val Gln Arg Leu Leu
        115                 120                 125

Pro Val Leu Cys Gln Ala His Gly Leu Thr Pro Glu Gln Val Val Ala
    130                 135                 140

Ile Ala Ser His Asp Gly Gly Lys Gln Ala Leu Glu Thr Val Gln Arg
145                 150                 155                 160

Leu Leu Pro Val Leu Cys Gln Ala His Gly Leu Thr Pro Glu Gln Val
                165                 170                 175

Val Ala Ile Ala Ser His Asp Gly Gly Lys Gln Ala Leu Glu Thr Val
            180                 185                 190

Gln Arg Leu Leu Pro Val Leu Cys Gln Ala His Gly Leu Thr Pro Glu
        195                 200                 205

Gln Val Val Ala Ile Ala Ser Asn Ile Gly Gly Lys Gln Ala Leu Glu
    210                 215                 220

Thr Val Gln Ala Leu Leu Pro Val Leu Cys Gln Ala His Gly Leu Thr
225                 230                 235                 240

Pro Glu Gln Val Val Ala Ile Ala Ser His Asp Gly Gly Lys Gln
                245                 250                 255
```

<210> 269
<211> 255
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 269

Leu Thr Pro Glu Gln Val Val Ala Ile Ala Ser His Asp Gly Gly Lys
1 5 10 15

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

His Gly Leu Thr Pro Gln Gln Val Val Ala Ile Ala Ser Asn Gly Gly
35 40 45

Gly Lys Gln Ala Leu Glu Thr Val Gln Arg Leu Leu Pro Val Leu Cys
50 55 60

Gln Ala His Gly Leu Thr Pro Glu Gln Val Val Ala Ile Ala Ser His
65 70 75 80

Asp Gly Gly Lys Gln Ala Leu Glu Thr Val Gln Arg Leu Leu Pro Val
85 90 95

Leu Cys Gln Ala His Gly Leu Thr Pro Glu Gln Val Val Ala Ile Ala
100 105 110

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

Pro Val Leu Cys Gln Ala His Gly Leu Thr Pro Gln Gln Val Val Ala
130 135 140

Ile Ala Ser Asn Asn Gly Gly Lys Gln Ala Leu Glu Thr Val Gln Arg
145 150 155 160

Leu Leu Pro Val Leu Cys Gln Ala His Gly Leu Thr Pro Glu Gln Val
165 170 175

Val Ala Ile Ala Ser His Asp Gly Gly Lys Gln Ala Leu Glu Thr Val
180 185 190

```
Gln Arg Leu Leu Pro Val Leu Cys Gln Ala His Gly Leu Thr Pro Gln
        195                 200                 205

Gln Val Val Ala Ile Ala Ser Asn Gly Gly Gly Lys Gln Ala Leu Glu
    210                 215                 220

Thr Val Gln Arg Leu Leu Pro Val Leu Cys Gln Ala His Gly Leu Thr
225                 230                 235                 240

Pro Gln Gln Val Val Ala Ile Ala Ser Asn Asn Gly Gly Lys Gln
                245                 250                 255
```

<210> 270
<211> 255
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 270

```
Leu Thr Pro Gln Gln Val Val Ala Ile Ala Ser Asn Asn Gly Gly Lys
1               5                   10                  15

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

His Gly Leu Thr Pro Gln Gln Val Val Ala Ile Ala Ser Asn Gly Gly
        35                  40                  45

Gly Lys Gln Ala Leu Glu Thr Val Gln Arg Leu Leu Pro Val Leu Cys
    50                  55                  60

Gln Ala His Gly Leu Thr Pro Gln Gln Val Val Ala Ile Ala Ser Asn
65                  70                  75                  80

Asn Gly Gly Lys Gln Ala Leu Glu Thr Val Gln Arg Leu Leu Pro Val
                85                  90                  95

Leu Cys Gln Ala His Gly Leu Thr Pro Gln Gln Val Val Ala Ile Ala
            100                 105                 110
```

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

Pro Val Leu Cys Gln Ala His Gly Leu Thr Pro Gln Gln Val Val Ala
    130                 135                 140

Ile Ala Ser Asn Gly Gly Gly Lys Gln Ala Leu Glu Thr Val Gln Arg
145                 150                 155                 160

Leu Leu Pro Val Leu Cys Gln Ala His Gly Leu Thr Pro Gln Gln Val
                165                 170                 175

Val Ala Ile Ala Ser Asn Gly Gly Gly Lys Gln Ala Leu Glu Thr Val
            180                 185                 190

Gln Arg Leu Leu Pro Val Leu Cys Gln Ala His Gly Leu Thr Pro Gln
        195                 200                 205

Gln Val Val Ala Ile Ala Ser Asn Asn Gly Gly Lys Gln Ala Leu Glu
    210                 215                 220

Thr Val Gln Arg Leu Leu Pro Val Leu Cys Gln Ala His Gly Leu Thr
225                 230                 235                 240

Pro Glu Gln Val Val Ala Ile Ala Ser Asn Ile Gly Gly Lys Gln
                245                 250                 255


<210>  271
<211>  255
<212>  PRT
<213>  Artificial Sequence

<220>
<223>  Synthetic Construct

<400>  271

Asn Pro Gln Arg Ser Thr Val Trp Tyr Leu Thr Pro Gln Gln Val Val
1               5                   10                  15

Ala Ile Ala Ser Asn Asn Gly Gly Lys Gln Ala Leu Glu Thr Val Gln
            20                  25                  30
```

```
Arg Leu Leu Pro Val Leu Cys Gln Ala His Gly Leu Thr Pro Gln Gln
        35                  40                  45

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

Val Gln Arg Leu Leu Pro Val Leu Cys Gln Ala His Gly Leu Thr Pro
65                  70                  75                  80

Gln Gln Val Val Ala Ile Ala Ser Asn Asn Gly Gly Lys Gln Ala Leu
                85                  90                  95

Glu Thr Val Gln Arg Leu Leu Pro Val Leu Cys Gln Ala His Gly Leu
            100                 105                 110

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

Ala Leu Glu Thr Val Gln Arg Leu Leu Pro Val Leu Cys Gln Ala His
    130                 135                 140

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

Lys Gln Ala Leu Glu Thr Val Gln Arg Leu Leu Pro Val Leu Cys Gln
                165                 170                 175

Ala His Gly Leu Thr Pro Glu Gln Val Val Ala Ile Ala Ser His Asp
            180                 185                 190

Gly Gly Lys Gln Ala Leu Glu Thr Val Gln Arg Leu Leu Pro Val Leu
        195                 200                 205

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

Asn Gly Gly Gly Lys Gln Ala Leu Glu Thr Val Gln Arg Leu Leu Pro
225                 230                 235                 240

Val Leu Cys Gln Ala His Gly Leu Thr Pro Gln Gln Val Val Ala
                245                 250                 255
```

<210> 272
<211> 255
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 272

Leu Thr Pro Glu Gln Val Val Ala Ile Ala Ser His Asp Gly Gly Lys
1 5 10 15

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

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

Gly Lys Gln Ala Leu Glu Thr Val Gln Arg Leu Leu Pro Val Leu Cys
50 55 60

Gln Ala His Gly Leu Thr Pro Glu Gln Val Val Ala Ile Ala Ser His
65 70 75 80

Asp Gly Gly Lys Gln Ala Leu Glu Thr Val Gln Arg Leu Leu Pro Val
85 90 95

Leu Cys Gln Ala His Gly Leu Thr Pro Glu Gln Val Val Ala Ile Ala
100 105 110

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

Pro Val Leu Cys Gln Ala His Gly Leu Thr Pro Glu Gln Val Val Ala
130 135 140

Ile Ala Ser His Asp Gly Gly Lys Gln Ala Leu Glu Thr Val Gln Arg
145 150 155 160

Leu Leu Pro Val Leu Cys Gln Ala His Gly Leu Thr Pro Glu Gln Val
165 170 175

```
Val Ala Ile Ala Ser His Asp Gly Gly Lys Gln Ala Leu Glu Thr Val
            180                 185                 190


Gln Arg Leu Leu Pro Val Leu Cys Gln Ala His Gly Leu Thr Pro Glu
        195                 200                 205


Gln Val Val Ala Ile Ala Ser His Asp Gly Gly Lys Gln Ala Leu Glu
    210                 215                 220


Thr Val Gln Arg Leu Leu Pro Val Leu Cys Gln Ala His Gly Leu Thr
225                 230                 235                 240


Pro Gln Gln Val Val Ala Ile Ala Ser Asn Asn Gly Gly Lys Gln
                245                 250                 255


<210>  273
<211>  255
<212>  PRT
<213>  Artificial Sequence

<220>
<223>  Synthetic Construct

<400>  273

Leu Thr Pro Gln Gln Val Val Ala Ile Ala Ser Asn Asn Gly Gly Lys
1               5                   10                  15


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


His Gly Leu Thr Pro Gln Gln Val Val Ala Ile Ala Ser Asn Asn Gly
        35                  40                  45


Gly Lys Gln Ala Leu Glu Thr Val Gln Arg Leu Leu Pro Val Leu Cys
    50                  55                  60


Gln Ala His Gly Leu Thr Pro Gln Gln Val Val Ala Ile Ala Ser Asn
65                  70                  75                  80


Asn Gly Gly Lys Gln Ala Leu Glu Thr Val Gln Arg Leu Leu Pro Val
                85                  90                  95
```

```
Leu Cys Gln Ala His Gly Leu Thr Pro Glu Gln Val Val Ala Ile Ala
            100                 105                 110

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

Pro Val Leu Cys Gln Ala His Gly Leu Thr Pro Gln Gln Val Val Ala
    130                 135                 140

Ile Ala Ser Asn Asn Gly Gly Lys Gln Ala Leu Glu Thr Val Gln Arg
145                 150                 155                 160

Leu Leu Pro Val Leu Cys Gln Ala His Gly Leu Thr Pro Glu Gln Val
                165                 170                 175

Val Ala Ile Ala Ser Asn Ile Gly Gly Lys Gln Ala Leu Glu Thr Val
            180                 185                 190

Gln Ala Leu Leu Pro Val Leu Cys Gln Ala His Gly Leu Thr Pro Gln
        195                 200                 205

Gln Val Val Ala Ile Ala Ser Asn Gly Gly Gly Lys Gln Ala Leu Glu
    210                 215                 220

Thr Val Gln Arg Leu Leu Pro Val Leu Cys Gln Ala His Gly Leu Thr
225                 230                 235                 240

Pro Glu Gln Val Val Ala Ile Ala Ser His Asp Gly Gly Lys Gln
                245                 250                 255


<210>  274
<211>  255
<212>  PRT
<213>  Artificial Sequence

<220>
<223>  Synthetic Construct

<400>  274

Leu Thr Pro Gln Gln Val Val Ala Ile Ala Ser Asn Gly Gly Gly Lys
1               5                   10                  15
```

```
Gln Ala Leu Glu Thr Val Gln Arg Leu Leu Pro Val Leu Cys Gln Ala
            20                  25                  30

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

Gly Lys Gln Ala Leu Glu Thr Val Gln Arg Leu Leu Pro Val Leu Cys
    50                  55                  60

Gln Ala His Gly Leu Thr Pro Glu Gln Val Val Ala Ile Ala Ser His
65                  70                  75                  80

Asp Gly Gly Lys Gln Ala Leu Glu Thr Val Gln Arg Leu Leu Pro Val
                85                  90                  95

Leu Cys Gln Ala His Gly Leu Thr Pro Gln Gln Val Val Ala Ile Ala
            100                 105                 110

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

Pro Val Leu Cys Gln Ala His Gly Leu Thr Pro Glu Gln Val Val Ala
    130                 135                 140

Ile Ala Ser His Asp Gly Gly Lys Gln Ala Leu Glu Thr Val Gln Arg
145                 150                 155                 160

Leu Leu Pro Val Leu Cys Gln Ala His Gly Leu Thr Pro Glu Gln Val
                165                 170                 175

Val Ala Ile Ala Ser His Asp Gly Gly Lys Gln Ala Leu Glu Thr Val
            180                 185                 190

Gln Arg Leu Leu Pro Val Leu Cys Gln Ala His Gly Leu Thr Pro Gln
        195                 200                 205

Gln Val Val Ala Ile Ala Ser Asn Gly Gly Gly Lys Gln Ala Leu Glu
    210                 215                 220
```

Thr Val Gln Arg Leu Leu Pro Val Leu Cys Gln Ala His Gly Leu Thr
225 230 235 240

Pro Glu Gln Val Val Ala Ile Ala Ser Asn Ile Gly Gly Lys Gln
245 250 255

<210> 275
<211> 255
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 275

Leu Thr Pro Gln Gln Val Val Ala Ile Ala Ser Asn Gly Gly Gly Lys
1 5 10 15

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

His Gly Leu Thr Pro Gln Gln Val Val Ala Ile Ala Ser Asn Asn Gly
35 40 45

Gly Lys Gln Ala Leu Glu Thr Val Gln Arg Leu Leu Pro Val Leu Cys
50 55 60

Gln Ala His Gly Leu Thr Pro Glu Gln Val Val Ala Ile Ala Ser His
65 70 75 80

Asp Gly Gly Lys Gln Ala Leu Glu Thr Val Gln Arg Leu Leu Pro Val
85 90 95

Leu Cys Gln Ala His Gly Leu Thr Pro Gln Gln Val Val Ala Ile Ala
100 105 110

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

Pro Val Leu Cys Gln Ala His Gly Leu Thr Pro Glu Gln Val Val Ala
130 135 140

```
Ile Ala Ser His Asp Gly Gly Lys Gln Ala Leu Glu Thr Val Gln Arg
145                 150                 155                 160


Leu Leu Pro Val Leu Cys Gln Ala His Gly Leu Thr Pro Gln Gln Val
                165                 170                 175


Val Ala Ile Ala Ser Asn Gly Gly Gly Lys Gln Ala Leu Glu Thr Val
            180                 185                 190


Gln Arg Leu Leu Pro Val Leu Cys Gln Ala His Gly Leu Thr Pro Gln
        195                 200                 205


Gln Val Val Ala Ile Ala Ser Asn Gly Gly Gly Lys Gln Ala Leu Glu
    210                 215                 220


Thr Val Gln Arg Leu Leu Pro Val Leu Cys Gln Ala His Gly Leu Thr
225                 230                 235                 240


Pro Glu Gln Val Val Ala Ile Ala Ser Asn Ile Gly Gly Lys Gln
                245                 250                 255


<210>  276
<211>  136
<212>  PRT
<213>  Homo sapien

<400>  276

Cys Pro Tyr Ser Asn Pro Ser Leu Cys Ser Gly Gly Gly Gly Ser Glu
1               5                   10                  15


Leu Pro Thr Gln Gly Thr Phe Ser Asn Val Ser Thr Asn Val Ser Pro
            20                  25                  30


Ala Lys Pro Thr Thr Thr Ala Cys Pro Tyr Ser Asn Pro Ser Leu Cys
        35                  40                  45


Ser Gly Gly Gly Gly Ser Pro Ala Pro Arg Pro Pro Thr Pro Ala Pro
    50                  55                  60


Thr Ile Ala Ser Gln Pro Leu Ser Leu Arg Pro Glu Ala Cys Arg Pro
65                  70                  75                  80
```

Ala Ala Gly Gly Ala Val His Thr Arg Gly Leu Asp Phe Ala Cys Asp
85 90 95

Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly Val Leu Leu Leu
100 105 110

Ser Leu Val Ile Thr Leu Tyr Cys Asn His Arg Asn Arg Arg Arg Val
115 120 125

Cys Lys Cys Pro Arg Pro Val Val
130 135

<210> 277
<211> 1509
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 277
atggctctgc ccgtcaccgc tctgctgctg cctctggccc tgctgctgca cgcagcaagg 60

ccacaggtgc agctggtgca gtccggagca gaggtgaaga agcctggcag ctccgtgaag 120

gtgagctgca aggcctccgg cgacacattc tctagcaacg caatcagctg ggtgcgccag 180

gcccctggcc agggactgga gtggatgggc gtgatcatcc ctatcttcgg caccgccgac 240

tatgcccaga agtttcaggg ccgggtgaca atcaccgccg atgagtctac aagcaccgcc 300

tacatggagc tgtcctctct gagatccgag gacacagccg tgtactattg tgccaggcac 360

acctatcacg agtacgcagg aggatactat ggaggagcaa tggatccttg gggacagggc 420

acactggtga ccgtgagctc cggcggcggc ggctctggag gaggaggaag cggaggagga 480

ggaagcgggg gcggcggctc tgagctgcag agcgtgctga cccagccacc ttccgcctct 540

ggaacaccag gccagagggt gaccatcagc tgctccggat ctagctccaa catcggctcc 600

aattacgtgt attggtacca gcagctgcca ggcacagccc ccaagatcct gatctaccgc 660

aacaatcagc ggccttctgg cgtgccagat agattctctg gcagcaagtc cggcacctct 720

gccagcctgg caatctccgg cctgaggtct gaggacgagg ccgattacta ttgcgccgcc 780

tgggacgata acctgagcgg ctgggtgttt ggcacaggca ccaagctgac agtgctgacc 840

acaacccctg caccaagacc accaacacca gcacctacca tcgcaagcca gccactgtcc 900

ctgagacccg aggcctgtag gcctgcagca ggaggagcag tgcacaccag gggcctggac 960

tttgcctgcg atatctatat ctgggcacca ctggcaggaa catgtggcgt gctgctgctg 1020

agcctggtca tcaccctgta ttgcaagaga ggcaggaaga agctgctgta catcttcaag 1080

cagcccttta tgcgccctgt gcagacaacc caggaggagg acggctgcag ctgtcggttc 1140

ccagaagagg aggagggagg atgtgagctg agggtgaagt tttcccggtc tgccgatgca 1200

ccagcatatc agcagggaca gaatcagctg tacaacgagc tgaatctggg ccggagagag 1260

gagtacgacg tgctggataa gaggagggga agggaccctg agatgggagg caagccacgg 1320

agaaagaacc cccaggaggg cctgtataat gagctgcaga aggacaagat ggccgaggcc 1380

tactctgaga tcggcatgaa gggagagagg cgccggggca agggacacga tggcctgtat 1440

cagggcctga gcacagccac caaggacacc tacgatgccc tgcatatgca ggcactgcct 1500

ccaaggtga 1509