SEQUENCE LISTING

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<120> ANTI-SIGLEC-8 ANTIBODIES AND METHODS OF USE THEREOF

<130> 701712000140

<150> US 61/913,891
<151> 2013-12-09

<160> 124

<170> FastSEQ for Windows Version 4.0

<210> 1
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<400> 1
Gln Val Gln Leu Lys Glu Ser Gly Pro Gly Leu Val Ala Pro Ser Gln
1 5 10 15
Ser Leu Ser Ile Thr Cys Thr Val Ser Gly Phe Ser Leu Thr Ile Tyr
20 25 30
Gly Ala His Trp Val Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp Leu
35 40 45
Gly Val Ile Trp Ala Gly Gly Ser Thr Asn Tyr Asn Ser Ala Leu Met
50 55 60
Ser Arg Leu Ser Ile Ser Lys Asp Asn Ser Lys Ser Gln Val Phe Leu
65 70 75 80
Lys Ile Asn Ser Leu Gln Thr Asp Asp Thr Ala Leu Tyr Tyr Cys Ala
85 90 95
Arg Asp Gly Ser Ser Pro Tyr Tyr Tyr Ser Met Glu Tyr Trp Gly Gln
100 105 110
Gly Thr Ser Val Thr Val Ser Ser
115 120

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

<220>
<223> Synthetic Construct

<400> 2
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
1 5 10 15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Ser Leu Thr Ile Tyr
20 25 30
Gly Ala His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45
Ser Val Ile Trp Ala Gly Gly Ser Thr Asn Tyr Asn Ser Ala Leu Met
50 55 60
Ser Arg Phe Thr Ile Ser Lys Asp Asn Ser Lys Asn Thr Val Tyr Leu
65 70 75 80
Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys Ala
85 90 95
Arg Asp Gly Ser Ser Pro Tyr Tyr Tyr Ser Met Glu Tyr Trp Gly Gln

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            100                 105                 110
Gly Thr Thr Val Thr Val Ser Ser
        115                 120


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

<220>
<223> Synthetic Construct

<400> 3
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
 1               5                  10                  15
Ser Leu Arg Leu Ser Cys Ala Val Ser Gly Phe Ser Leu Thr Ile Tyr
            20                  25                  30
Gly Ala His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Leu
        35                  40                  45
Gly Val Ile Trp Ala Gly Gly Ser Thr Asn Tyr Asn Ser Ala Leu Met
    50                  55                  60
Ser Arg Leu Ser Ile Ser Lys Asp Asn Ser Lys Asn Thr Val Tyr Leu
65                  70                  75                  80
Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys Ala
                85                  90                  95
Arg Asp Gly Ser Ser Pro Tyr Tyr Tyr Ser Met Glu Tyr Trp Gly Gln
            100                 105                 110
Gly Thr Thr Val Thr Val Ser Ser
        115                 120


<210> 4
<211> 120
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 4
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
 1               5                  10                  15
Ser Leu Arg Leu Ser Cys Ala Val Ser Gly Phe Ser Leu Thr Ile Tyr
            20                  25                  30
Gly Ala His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35                  40                  45
Ser Val Ile Trp Ala Gly Gly Ser Thr Asn Tyr Asn Ser Ala Leu Met
    50                  55                  60
Ser Arg Phe Thr Ile Ser Lys Asp Asn Ser Lys Asn Thr Val Tyr Leu
65                  70                  75                  80
Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys Ala
                85                  90                  95
Arg Asp Gly Ser Ser Pro Tyr Tyr Tyr Ser Met Glu Tyr Trp Gly Gln
            100                 105                 110
Gly Thr Thr Val Thr Val Ser Ser
        115                 120


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

<220>
<223> Synthetic Construct

<400> 5
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
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 1               5                  10                  15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Ser Leu Thr Ile Tyr
            20                  25                  30
Gly Ala His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Leu
        35                  40                  45
Ser Val Ile Trp Ala Gly Gly Ser Thr Asn Tyr Asn Ser Ala Leu Met
    50                  55                  60
Ser Arg Phe Thr Ile Ser Lys Asp Asn Ser Lys Asn Thr Val Tyr Leu
65                  70                  75                  80
Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys Ala
                85                  90                  95
Arg Asp Gly Ser Ser Pro Tyr Tyr Tyr Ser Met Glu Tyr Trp Gly Gln
            100                 105                 110
Gly Thr Thr Val Thr Val Ser Ser
        115                 120


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

<220>
<223> Synthetic Construct

<400> 6
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
 1               5                  10                  15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Ser Leu Thr Ile Tyr
            20                  25                  30
Gly Ala His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35                  40                  45
Gly Val Ile Trp Ala Gly Gly Ser Thr Asn Tyr Asn Ser Ala Leu Met
    50                  55                  60
Ser Arg Phe Thr Ile Ser Lys Asp Asn Ser Lys Asn Thr Val Tyr Leu
65                  70                  75                  80
Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys Ala
                85                  90                  95
Arg Asp Gly Ser Ser Pro Tyr Tyr Tyr Ser Met Glu Tyr Trp Gly Gln
            100                 105                 110
Gly Thr Thr Val Thr Val Ser Ser
        115                 120


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

<220>
<223> Synthetic Construct

<400> 7
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
 1               5                  10                  15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Ser Leu Thr Ile Tyr
            20                  25                  30
Gly Ala His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35                  40                  45
Ser Val Ile Trp Ala Gly Gly Ser Thr Asn Tyr Asn Ser Ala Leu Met
    50                  55                  60
Ser Arg Leu Thr Ile Ser Lys Asp Asn Ser Lys Asn Thr Val Tyr Leu
65                  70                  75                  80
Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys Ala
                85                  90                  95
Arg Asp Gly Ser Ser Pro Tyr Tyr Tyr Ser Met Glu Tyr Trp Gly Gln
            100                 105                 110
Gly Thr Thr Val Thr Val Ser Ser
        115                 120
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<210> 8
<211> 120
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 8
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
 1   5   10   15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Ser Leu Thr Ile Tyr
            20   25   30
Gly Ala His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35   40   45
Ser Val Ile Trp Ala Gly Gly Ser Thr Asn Tyr Asn Ser Ala Leu Met
    50   55   60
Ser Arg Phe Ser Ile Ser Lys Asp Asn Ser Lys Asn Thr Val Tyr Leu
65   70   75   80
Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys Ala
                85   90   95
Arg Asp Gly Ser Ser Pro Tyr Tyr Tyr Ser Met Glu Tyr Trp Gly Gln
            100   105   110
Gly Thr Thr Val Thr Val Ser Ser
        115   120

<210> 9
<211> 120
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 9
Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Glu
 1   5   10   15
Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Gly Ser Ile Ser Ile Tyr
            20   25   30
Gly Ala His Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp Ile
        35   40   45
Gly Val Ile Trp Ala Gly Gly Ser Thr Asn Tyr Asn Ser Ala Leu Met
    50   55   60
Ser Arg Val Thr Ile Ser Val Asp Thr Ser Lys Asn Gln Phe Ser Leu
65   70   75   80
Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr Cys Ala
                85   90   95
Arg Asp Gly Ser Ser Pro Tyr Tyr Tyr Ser Met Glu Tyr Trp Gly Gln
            100   105   110
Gly Thr Leu Val Thr Val Ser Ser
        115   120

<210> 10
<211> 120
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 10
Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Glu
 1   5   10   15
Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Phe Ser Leu Thr Ile Tyr
            20   25   30

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Gly Ala His Trp Val Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp Leu
        35                  40                  45
Gly Val Ile Trp Ala Gly Gly Ser Thr Asn Tyr Asn Ser Ala Leu Met
    50                  55                  60
Ser Arg Leu Ser Ile Ser Lys Asp Asn Ser Lys Asn Gln Val Ser Leu
65                  70                  75                  80
Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr Cys Ala
                85                  90                  95
Arg Asp Gly Ser Ser Pro Tyr Tyr Tyr Ser Met Glu Tyr Trp Gly Gln
            100                 105                 110
Gly Thr Leu Val Thr Val Ser Ser
        115                 120


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

<220>
<223> Synthetic Construct

<400> 11
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
 1               5                  10                  15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Ser Leu Thr Ile Tyr
            20                  25                  30
Gly Ala His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35                  40                  45
Gly Val Ile Trp Ala Gly Gly Ser Thr Asn Tyr Asn Ser Ala Leu Met
    50                  55                  60
Ser Arg Phe Thr Ile Ser Lys Asp Asn Ser Lys Asn Thr Val Tyr Leu
65                  70                  75                  80
Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys Ala
                85                  90                  95
Arg Asp Gly Ser Ser Pro Tyr Tyr Tyr Gly Met Glu Tyr Trp Gly Gln
            100                 105                 110
Gly Thr Thr Val Thr Val Ser Ser
        115                 120


<210> 12
<211> 120
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 12
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
 1               5                  10                  15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Ser Leu Thr Ile Tyr
            20                  25                  30
Gly Ala His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35                  40                  45
Gly Val Ile Trp Ala Gly Gly Ser Thr Asn Tyr Asn Ser Ala Leu Met
    50                  55                  60
Ser Arg Phe Thr Ile Ser Lys Asp Asn Ser Lys Asn Thr Val Tyr Leu
65                  70                  75                  80
Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys Ala
                85                  90                  95
Arg Asp Gly Ser Ser Pro Tyr Tyr Tyr Ser Met Asp Tyr Trp Gly Gln
            100                 105                 110
Gly Thr Thr Val Thr Val Ser Ser
        115                 120


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

<220>
<223> Synthetic Construct

<400> 13
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
 1   5   10   15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Ser Leu Thr Ile Tyr
            20   25   30
Gly Ala His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35   40   45
Gly Val Ile Trp Ala Gly Gly Ser Thr Asn Tyr Asn Ser Ala Leu Met
    50   55   60
Ser Arg Phe Thr Ile Ser Lys Asp Asn Ser Lys Asn Thr Val Tyr Leu
65   70   75   80
Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys Ala
                85   90   95
Arg Asp Gly Ser Ser Pro Tyr Tyr Tyr Ser Met Glu Val Trp Gly Gln
            100   105   110
Gly Thr Thr Val Thr Val Ser Ser
        115   120

<210> 14
<211> 120
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 14
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
 1   5   10   15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Ser Leu Thr Ile Tyr
            20   25   30
Gly Ala His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35   40   45
Gly Val Ile Trp Ala Gly Gly Ser Thr Asn Tyr Asn Ser Ala Leu Met
    50   55   60
Ser Arg Phe Thr Ile Ser Lys Asp Asn Ser Lys Asn Thr Val Tyr Leu
65   70   75   80
Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys Ala
                85   90   95
Arg Asp Gly Ser Ser Pro Tyr Tyr Tyr Gly Met Asp Val Trp Gly Gln
            100   105   110
Gly Thr Thr Val Thr Val Ser Ser
        115   120

<210> 15
<211> 106
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 15
Gln Ile Ile Leu Thr Gln Ser Pro Ala Ile Met Ser Ala Ser Pro Gly
 1   5   10   15
Glu Lys Val Ser Ile Thr Cys Ser Ala Thr Ser Ser Val Ser Tyr Met
            20   25   30
His Trp Phe Gln Gln Lys Pro Gly Thr Ser Pro Lys Leu Trp Ile Tyr
        35   40   45
Ser Thr Ser Asn Leu Ala Ser Gly Val Pro Val Arg Phe Ser Gly Ser

```
    50                  55                  60
Gly Ser Gly Thr Ser Tyr Ser Leu Thr Ile Ser Arg Met Glu Ala Glu
65                  70                  75                  80
Asp Ala Ala Thr Tyr Tyr Cys Gln Gln Arg Ser Ser Tyr Pro Phe Thr
                85                  90                  95
Phe Gly Ser Gly Thr Lys Leu Glu Ile Lys
            100                 105


<210> 16
<211> 106
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 16
Glu Ile Val Leu Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly
 1               5                  10                  15
Glu Arg Ala Thr Leu Ser Cys Ser Ala Thr Ser Ser Val Ser Tyr Met
            20                  25                  30
His Trp Phe Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile Tyr
        35                  40                  45
Ser Thr Ser Asn Leu Ala Ser Gly Ile Pro Ala Arg Phe Ser Gly Ser
    50                  55                  60
Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Glu Pro Glu
65                  70                  75                  80
Asp Phe Ala Val Tyr Tyr Cys Gln Gln Arg Ser Ser Tyr Pro Phe Thr
                85                  90                  95
Phe Gly Pro Gly Thr Lys Leu Asp Ile Lys
            100                 105


<210> 17
<211> 106
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 17
Glu Ile Ile Leu Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly
 1               5                  10                  15
Glu Arg Ala Thr Leu Ser Cys Ser Ala Thr Ser Ser Val Ser Tyr Met
            20                  25                  30
His Trp Phe Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Trp Ile Tyr
        35                  40                  45
Ser Thr Ser Asn Leu Ala Ser Gly Val Pro Ala Arg Phe Ser Gly Ser
    50                  55                  60
Gly Ser Gly Thr Asp Tyr Thr Leu Thr Ile Ser Ser Leu Glu Pro Glu
65                  70                  75                  80
Asp Phe Ala Val Tyr Tyr Cys Gln Gln Arg Ser Ser Tyr Pro Phe Thr
                85                  90                  95
Phe Gly Pro Gly Thr Lys Leu Asp Ile Lys
            100                 105


<210> 18
<211> 106
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 18
Glu Ile Ile Leu Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly
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 1               5                  10                  15
Glu Arg Ala Thr Leu Ser Cys Ser Ala Thr Ser Ser Val Ser Tyr Met
            20                  25                  30
His Trp Phe Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile Tyr
        35                  40                  45
Ser Thr Ser Asn Leu Ala Ser Gly Ile Pro Ala Arg Phe Ser Gly Ser
    50                  55                  60
Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Glu Pro Glu
65                  70                  75                  80
Asp Phe Ala Val Tyr Tyr Cys Gln Gln Arg Ser Ser Tyr Pro Phe Thr
                85                  90                  95
Phe Gly Pro Gly Thr Lys Leu Asp Ile Lys
            100                 105


<210> 19
<211> 106
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 19
Glu Ile Val Leu Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly
 1               5                  10                  15
Glu Arg Ala Thr Leu Ser Cys Ser Ala Thr Ser Ser Val Ser Tyr Met
            20                  25                  30
His Trp Phe Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Trp Ile Tyr
        35                  40                  45
Ser Thr Ser Asn Leu Ala Ser Gly Ile Pro Ala Arg Phe Ser Gly Ser
    50                  55                  60
Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Glu Pro Glu
65                  70                  75                  80
Asp Phe Ala Val Tyr Tyr Cys Gln Gln Arg Ser Ser Tyr Pro Phe Thr
                85                  90                  95
Phe Gly Pro Gly Thr Lys Leu Asp Ile Lys
            100                 105


<210> 20
<211> 106
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 20
Glu Ile Val Leu Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly
 1               5                  10                  15
Glu Arg Ala Thr Leu Ser Cys Ser Ala Thr Ser Ser Val Ser Tyr Met
            20                  25                  30
His Trp Phe Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile Tyr
        35                  40                  45
Ser Thr Ser Asn Leu Ala Ser Gly Val Pro Ala Arg Phe Ser Gly Ser
    50                  55                  60
Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Glu Pro Glu
65                  70                  75                  80
Asp Phe Ala Val Tyr Tyr Cys Gln Gln Arg Ser Ser Tyr Pro Phe Thr
                85                  90                  95
Phe Gly Pro Gly Thr Lys Leu Asp Ile Lys
            100                 105


<210> 21
<211> 106
<212> PRT
<213> Artificial Sequence
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<220>
<223> Synthetic Construct

<400> 21
Glu Ile Val Leu Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly
 1   5   10   15
Glu Arg Ala Thr Leu Ser Cys Ser Ala Thr Ser Ser Val Ser Tyr Met
            20   25   30
His Trp Phe Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile Tyr
        35   40   45
Ser Thr Ser Asn Leu Ala Ser Gly Ile Pro Ala Arg Phe Ser Gly Ser
    50   55   60
Gly Ser Gly Thr Asp Tyr Thr Leu Thr Ile Ser Ser Leu Glu Pro Glu
65   70   75   80
Asp Phe Ala Val Tyr Tyr Cys Gln Gln Arg Ser Ser Tyr Pro Phe Thr
                85   90   95
Phe Gly Pro Gly Thr Lys Leu Asp Ile Lys
            100   105

<210> 22
<211> 106
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 22
Glu Ile Val Leu Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly
 1   5   10   15
Glu Arg Ala Thr Leu Ser Cys Ser Ala Thr Ser Ser Val Ser Tyr Met
            20   25   30
His Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile Tyr
        35   40   45
Ser Thr Ser Asn Leu Ala Ser Gly Ile Pro Ala Arg Phe Ser Gly Ser
    50   55   60
Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Glu Pro Glu
65   70   75   80
Asp Phe Ala Val Tyr Tyr Cys Gln Gln Arg Ser Ser Tyr Pro Phe Thr
                85   90   95
Phe Gly Pro Gly Thr Lys Leu Asp Ile Lys
            100   105

<210> 23
<211> 106
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 23
Glu Ile Val Leu Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly
 1   5   10   15
Glu Arg Ala Thr Leu Ser Cys Ser Ala Thr Ser Ser Val Ser Tyr Met
            20   25   30
His Trp Phe Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile Tyr
        35   40   45
Ser Thr Ser Asn Leu Ala Ser Gly Ile Pro Ala Arg Phe Ser Gly Ser
    50   55   60
Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Glu Pro Glu
65   70   75   80
Asp Phe Ala Val Tyr Tyr Cys Gln Gln Arg Ser Ser Tyr Pro Tyr Thr
                85   90   95
Phe Gly Pro Gly Thr Lys Leu Asp Ile Lys
            100   105

<210> 24
<211> 106
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 24
Glu Ile Val Leu Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly
 1   5   10   15
Glu Arg Ala Thr Leu Ser Cys Ser Ala Thr Ser Ser Val Ser Tyr Met
            20   25   30
His Trp Phe Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile Tyr
        35   40   45
Ser Thr Ser Asn Leu Ala Ser Gly Ile Pro Ala Arg Phe Ser Gly Ser
    50   55   60
Gly Ser Gly Thr Asp Tyr Thr Leu Thr Ile Ser Ser Leu Glu Pro Glu
65   70   75   80
Asp Phe Ala Val Tyr Tyr Cys Gln Gln Arg Ser Ser Tyr Pro Tyr Thr
                85   90   95
Phe Gly Pro Gly Thr Lys Leu Asp Ile Lys
            100   105

<210> 25
<211> 30
<212> PRT
<213> Homo sapiens

<400> 25
Gln Val Gln Leu Lys Glu Ser Gly Pro Gly Leu Val Ala Pro Ser Gln
 1   5   10   15
Ser Leu Ser Ile Thr Cys Thr Val Ser Gly Phe Ser Leu Thr
            20   25   30

<210> 26
<211> 30
<212> PRT
<213> Homo sapiens

<400> 26
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
 1   5   10   15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Ser Leu Thr
            20   25   30

<210> 27
<211> 30
<212> PRT
<213> Homo sapiens

<400> 27
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
 1   5   10   15
Ser Leu Arg Leu Ser Cys Ala Val Ser Gly Phe Ser Leu Thr
            20   25   30

<210> 28
<211> 30
<212> PRT
<213> Homo sapiens

<400> 28

Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Glu
 1   5   10   15
Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Gly Ser Ile Ser
            20   25   30

<210> 29
<211> 30
<212> PRT
<213> Homo sapiens

<400> 29
Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Glu
 1   5   10   15
Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Phe Ser Leu Thr
            20   25   30

<210> 30
<211> 14
<212> PRT
<213> Homo sapiens

<400> 30
Trp Val Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp Leu Gly
 1   5   10

<210> 31
<211> 14
<212> PRT
<213> Homo sapiens

<400> 31
Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val Ser
 1   5   10

<210> 32
<211> 14
<212> PRT
<213> Homo sapiens

<400> 32
Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Leu Gly
 1   5   10

<210> 33
<211> 14
<212> PRT
<213> Homo sapiens

<400> 33
Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Leu Ser
 1   5   10

<210> 34
<211> 14
<212> PRT
<213> Homo sapiens

<400> 34
Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val Gly
 1   5   10

<210> 35

<211> 14
<212> PRT
<213> Homo sapiens

<400> 35
Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp Ile Gly
 1   5   10

<210> 36
<211> 14
<212> PRT
<213> Homo sapiens

<400> 36
Trp Val Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp Leu Gly
 1   5   10

<210> 37
<211> 32
<212> PRT
<213> Homo sapiens

<400> 37
Arg Leu Ser Ile Ser Lys Asp Asn Ser Lys Ser Gln Val Phe Leu Lys
 1   5   10   15
Ile Asn Ser Leu Gln Thr Asp Asp Thr Ala Leu Tyr Tyr Cys Ala Arg
            20   25   30

<210> 38
<211> 32
<212> PRT
<213> Homo sapiens

<400> 38
Arg Phe Thr Ile Ser Lys Asp Asn Ser Lys Asn Thr Val Tyr Leu Gln
 1   5   10   15
Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys Ala Arg
            20   25   30

<210> 39
<211> 32
<212> PRT
<213> Homo sapiens

<400> 39
Arg Leu Ser Ile Ser Lys Asp Asn Ser Lys Asn Thr Val Tyr Leu Gln
 1   5   10   15
Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys Ala Arg
            20   25   30

<210> 40
<211> 32
<212> PRT
<213> Homo sapiens

<400> 40
Arg Leu Thr Ile Ser Lys Asp Asn Ser Lys Asn Thr Val Tyr Leu Gln
 1   5   10   15
Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys Ala Arg
            20   25   30

<210> 41
<211> 32

<212> PRT
<213> Homo sapiens

<400> 41
Arg Phe Ser Ile Ser Lys Asp Asn Ser Lys Asn Thr Val Tyr Leu Gln
 1   5   10   15
Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys Ala Arg
            20   25   30

<210> 42
<211> 32
<212> PRT
<213> Homo sapiens

<400> 42
Arg Val Thr Ile Ser Val Asp Thr Ser Lys Asn Gln Phe Ser Leu Lys
 1   5   10   15
Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr Cys Ala Arg
            20   25   30

<210> 43
<211> 32
<212> PRT
<213> Homo sapiens

<400> 43
Arg Leu Ser Ile Ser Lys Asp Asn Ser Lys Asn Gln Val Ser Leu Lys
 1   5   10   15
Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr Cys Ala Arg
            20   25   30

<210> 44
<211> 11
<212> PRT
<213> Homo sapiens

<400> 44
Trp Gly Gln Gly Thr Ser Val Thr Val Ser Ser
 1   5   10

<210> 45
<211> 11
<212> PRT
<213> Homo sapiens

<400> 45
Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser
 1   5   10

<210> 46
<211> 11
<212> PRT
<213> Homo sapiens

<400> 46
Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
 1   5   10

<210> 47
<211> 23
<212> PRT
<213> Homo sapiens

<400> 47
Gln Ile Ile Leu Thr Gln Ser Pro Ala Ile Met Ser Ala Ser Pro Gly
 1   5   10   15
Glu Lys Val Ser Ile Thr Cys
            20

<210> 48
<211> 23
<212> PRT
<213> Homo sapiens

<400> 48
Glu Ile Val Leu Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly
 1   5   10   15
Glu Arg Ala Thr Leu Ser Cys
            20

<210> 49
<211> 23
<212> PRT
<213> Homo sapiens

<400> 49
Glu Ile Ile Leu Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly
 1   5   10   15
Glu Arg Ala Thr Leu Ser Cys
            20

<210> 50
<211> 15
<212> PRT
<213> Homo sapiens

<400> 50
Trp Phe Gln Gln Lys Pro Gly Thr Ser Pro Lys Leu Trp Ile Tyr
 1   5   10   15

<210> 51
<211> 15
<212> PRT
<213> Homo sapiens

<400> 51
Trp Phe Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile Tyr
 1   5   10   15

<210> 52
<211> 15
<212> PRT
<213> Homo sapiens

<400> 52
Trp Phe Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Trp Ile Tyr
 1   5   10   15

<210> 53
<211> 15
<212> PRT
<213> Homo sapiens

<400> 53
Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile Tyr
 1   5   10   15

<210> 54
<211> 32
<212> PRT
<213> Homo sapiens

<400> 54
Gly Val Pro Val Arg Phe Ser Gly Ser Gly Ser Gly Thr Ser Tyr Ser
 1   5   10   15
Leu Thr Ile Ser Arg Met Glu Ala Glu Asp Ala Ala Thr Tyr Tyr Cys
            20   25   30

<210> 55
<211> 32
<212> PRT
<213> Homo sapiens

<400> 55
Gly Ile Pro Ala Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr
 1   5   10   15
Leu Thr Ile Ser Ser Leu Glu Pro Glu Asp Phe Ala Val Tyr Tyr Cys
            20   25   30

<210> 56
<211> 32
<212> PRT
<213> Homo sapiens

<400> 56
Gly Val Pro Ala Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Tyr Thr
 1   5   10   15
Leu Thr Ile Ser Ser Leu Glu Pro Glu Asp Phe Ala Val Tyr Tyr Cys
            20   25   30

<210> 57
<211> 32
<212> PRT
<213> Homo sapiens

<400> 57
Gly Val Pro Ala Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr
 1   5   10   15
Leu Thr Ile Ser Ser Leu Glu Pro Glu Asp Phe Ala Val Tyr Tyr Cys
            20   25   30

<210> 58
<211> 32
<212> PRT
<213> Homo sapiens

<400> 58
Gly Ile Pro Ala Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Tyr Thr
 1   5   10   15
Leu Thr Ile Ser Ser Leu Glu Pro Glu Asp Phe Ala Val Tyr Tyr Cys
            20   25   30

<210> 59
<211> 10
<212> PRT
<213> Homo sapiens

<400> 59
Phe Gly Ser Gly Thr Lys Leu Glu Ile Lys

1 5 10

<210> 60
<211> 10
<212> PRT
<213> Homo sapiens

<400> 60
Phe Gly Pro Gly Thr Lys Leu Asp Ile Lys
1 5 10

<210> 61
<211> 5
<212> PRT
<213> Homo sapiens

<400> 61
Ile Tyr Gly Ala His
1 5

<210> 62
<211> 16
<212> PRT
<213> Homo sapiens

<400> 62
Val Ile Trp Ala Gly Gly Ser Thr Asn Tyr Asn Ser Ala Leu Met Ser
1 5 10 15

<210> 63
<211> 12
<212> PRT
<213> Homo sapiens

<400> 63
Asp Gly Ser Ser Pro Tyr Tyr Tyr Ser Met Glu Tyr
1 5 10

<210> 64
<211> 10
<212> PRT
<213> Homo sapiens

<400> 64
Ser Ala Thr Ser Ser Val Ser Tyr Met His
1 5 10

<210> 65
<211> 7
<212> PRT
<213> Homo sapiens

<400> 65
Ser Thr Ser Asn Leu Ala Ser
1 5

<210> 66
<211> 9
<212> PRT
<213> Homo sapiens

<400> 66

Gln Gln Arg Ser Ser Tyr Pro Phe Thr
 1   5

<210> 67
<211> 12
<212> PRT
<213> Homo sapiens

<400> 67
Asp Gly Ser Ser Pro Tyr Tyr Tyr Gly Met Glu Tyr
 1   5   10

<210> 68
<211> 12
<212> PRT
<213> Homo sapiens

<400> 68
Asp Gly Ser Ser Pro Tyr Tyr Tyr Ser Met Asp Tyr
 1   5   10

<210> 69
<211> 12
<212> PRT
<213> Homo sapiens

<400> 69
Asp Gly Ser Ser Pro Tyr Tyr Tyr Ser Met Glu Val
 1   5   10

<210> 70
<211> 12
<212> PRT
<213> Homo sapiens

<400> 70
Asp Gly Ser Ser Pro Tyr Tyr Tyr Gly Met Asp Val
 1   5   10

<210> 71
<211> 9
<212> PRT
<213> Homo sapiens

<400> 71
Gln Gln Arg Ser Ser Tyr Pro Tyr Thr
 1   5

<210> 72
<211> 474
<212> PRT
<213> Homo sapiens

<400> 72
Gly Tyr Leu Leu Gln Val Gln Glu Leu Val Thr Val Gln Glu Gly Leu
 1   5   10   15
Cys Val His Val Pro Cys Ser Phe Ser Tyr Pro Gln Asp Gly Trp Thr
            20   25   30
Asp Ser Asp Pro Val His Gly Tyr Trp Phe Arg Ala Gly Asp Arg Pro
        35   40   45
Tyr Gln Asp Ala Pro Val Ala Thr Asn Asn Pro Asp Arg Glu Val Gln
    50   55   60
Ala Glu Thr Gln Gly Arg Phe Gln Leu Leu Gly Asp Ile Trp Ser Asn

65 70 75 80
Asp Cys Ser Leu Ser Ile Arg Asp Ala Arg Lys Arg Asp Lys Gly Ser
85 90 95
Tyr Phe Phe Arg Leu Glu Arg Gly Ser Met Lys Trp Ser Tyr Lys Ser
100 105 110
Gln Leu Asn Tyr Lys Thr Lys Gln Leu Ser Val Phe Val Thr Ala Leu
115 120 125
Thr His Arg Pro Asp Ile Leu Ile Leu Gly Thr Leu Glu Ser Gly His
130 135 140
Ser Arg Asn Leu Thr Cys Ser Val Pro Trp Ala Cys Lys Gln Gly Thr
145 150 155 160
Pro Pro Met Ile Ser Trp Ile Gly Ala Ser Val Ser Ser Pro Gly Pro
165 170 175
Thr Thr Ala Arg Ser Ser Val Leu Thr Leu Thr Pro Lys Pro Gln Asp
180 185 190
His Gly Thr Ser Leu Thr Cys Gln Val Thr Leu Pro Gly Thr Gly Val
195 200 205
Thr Thr Thr Ser Thr Val Arg Leu Asp Val Ser Tyr Pro Pro Trp Asn
210 215 220
Leu Thr Met Thr Val Phe Gln Gly Asp Ala Thr Ala Ser Thr Ala Leu
225 230 235 240
Gly Asn Gly Ser Ser Leu Ser Val Leu Glu Gly Gln Ser Leu Arg Leu
245 250 255
Val Cys Ala Val Asn Ser Asn Pro Pro Ala Arg Leu Ser Trp Thr Arg
260 265 270
Gly Ser Leu Thr Leu Cys Pro Ser Arg Ser Ser Asn Pro Gly Leu Leu
275 280 285
Glu Leu Pro Arg Val His Val Arg Asp Glu Gly Glu Phe Thr Cys Arg
290 295 300
Ala Gln Asn Ala Gln Gly Ser Gln His Ile Ser Leu Ser Leu Ser Leu
305 310 315 320
Gln Asn Glu Gly Thr Gly Thr Ser Arg Pro Val Ser Gln Val Thr Leu
325 330 335
Ala Ala Val Gly Gly Ala Gly Ala Thr Ala Leu Ala Phe Leu Ser Phe
340 345 350
Cys Ile Ile Phe Ile Ile Val Arg Ser Cys Arg Lys Lys Ser Ala Arg
355 360 365
Pro Ala Ala Gly Val Gly Asp Thr Gly Met Glu Asp Ala Lys Ala Ile
370 375 380
Arg Gly Ser Ala Ser Gln Gly Pro Leu Thr Glu Ser Trp Lys Asp Gly
385 390 395 400
Asn Pro Leu Lys Lys Pro Pro Pro Ala Val Ala Pro Ser Ser Gly Glu
405 410 415
Glu Gly Glu Leu His Tyr Ala Thr Leu Ser Phe His Lys Val Lys Pro
420 425 430
Gln Asp Pro Gln Gly Gln Glu Ala Thr Asp Ser Glu Tyr Ser Glu Ile
435 440 445
Lys Ile His Lys Arg Glu Thr Ala Glu Thr Gln Ala Cys Leu Arg Asn
450 455 460
His Asn Pro Ser Ser Lys Glu Val Arg Gly
465 470

<210> 73
<211> 474
<212> PRT
<213> Homo sapiens

<400> 73
Gly Tyr Leu Leu Gln Val Gln Glu Leu Val Thr Val Gln Glu Gly Leu
1 5 10 15
Cys Val His Val Pro Cys Ser Phe Ser Tyr Pro Gln Asp Gly Trp Thr
20 25 30
Asp Ser Asp Pro Val His Gly Tyr Trp Phe Arg Ala Gly Asp Arg Pro
35 40 45
Tyr Gln Asp Ala Pro Val Ala Thr Asn Asn Pro Asp Arg Glu Val Gln
50 55 60
Ala Glu Thr Gln Gly Arg Phe Gln Leu Leu Gly Asp Ile Trp Ser Asn
65 70 75 80

```
Asp Cys Ser Leu Ser Ile Arg Asp Ala Arg Lys Arg Asp Lys Gly Ser
                85                  90                  95
Tyr Phe Phe Arg Leu Glu Arg Gly Ser Met Lys Trp Ser Tyr Lys Ser
            100                 105                 110
Gln Leu Asn Tyr Lys Thr Lys Gln Leu Ser Val Phe Val Thr Ala Leu
        115                 120                 125
Thr His Arg Pro Asp Ile Leu Ile Leu Gly Thr Leu Glu Ser Gly His
    130                 135                 140
Pro Arg Asn Leu Thr Cys Ser Val Pro Trp Ala Cys Lys Gln Gly Thr
145                 150                 155                 160
Pro Pro Met Ile Ser Trp Ile Gly Ala Ser Val Ser Ser Pro Gly Pro
                165                 170                 175
Thr Thr Ala Arg Ser Ser Val Leu Thr Leu Thr Pro Lys Pro Gln Asp
            180                 185                 190
His Gly Thr Ser Leu Thr Cys Gln Val Thr Leu Pro Gly Thr Gly Val
        195                 200                 205
Thr Thr Thr Ser Thr Val Arg Leu Asp Val Ser Tyr Pro Pro Trp Asn
    210                 215                 220
Leu Thr Met Thr Val Phe Gln Gly Asp Ala Thr Ala Ser Thr Ala Leu
225                 230                 235                 240
Gly Asn Gly Ser Ser Leu Ser Val Leu Glu Gly Gln Ser Leu Arg Leu
                245                 250                 255
Val Cys Ala Val Asn Ser Asn Pro Pro Ala Arg Leu Ser Trp Thr Arg
            260                 265                 270
Gly Ser Leu Thr Leu Cys Pro Ser Arg Ser Ser Asn Pro Gly Leu Leu
        275                 280                 285
Glu Leu Pro Arg Val His Val Arg Asp Glu Gly Glu Phe Thr Cys Arg
    290                 295                 300
Ala Gln Asn Ala Gln Gly Ser Gln His Ile Ser Leu Ser Leu Ser Leu
305                 310                 315                 320
Gln Asn Glu Gly Thr Gly Thr Ser Arg Pro Val Ser Gln Val Thr Leu
                325                 330                 335
Ala Ala Val Gly Gly Ala Gly Ala Thr Ala Leu Ala Phe Leu Ser Phe
            340                 345                 350
Cys Ile Ile Phe Ile Ile Val Arg Ser Cys Arg Lys Lys Ser Ala Arg
        355                 360                 365
Pro Ala Ala Gly Val Gly Asp Thr Gly Met Glu Asp Ala Lys Ala Ile
    370                 375                 380
Arg Gly Ser Ala Ser Gln Gly Pro Leu Thr Glu Ser Trp Lys Asp Gly
385                 390                 395                 400
Asn Pro Leu Lys Lys Pro Pro Pro Ala Val Ala Pro Ser Ser Gly Glu
                405                 410                 415
Glu Gly Glu Leu His Tyr Ala Thr Leu Ser Phe His Lys Val Lys Pro
            420                 425                 430
Gln Asp Pro Gln Gly Gln Glu Ala Thr Asp Ser Glu Tyr Ser Glu Ile
        435                 440                 445
Lys Ile His Lys Arg Glu Thr Ala Glu Thr Gln Ala Cys Leu Arg Asn
    450                 455                 460
His Asn Pro Ser Ser Lys Glu Val Arg Gly
465                 470
```

<210> 74
<211> 573
<212> PRT
<213> Homo sapiens

<400> 74

```
Gly Tyr Leu Leu Gln Val Gln Glu Leu Val Thr Val Gln Glu Gly Leu
 1               5                  10                  15
Cys Val His Val Pro Cys Ser Phe Ser Tyr Pro Gln Asp Gly Trp Thr
            20                  25                  30
Asp Ser Asp Pro Val His Gly Tyr Trp Phe Arg Ala Gly Asp Arg Pro
        35                  40                  45
Tyr Gln Asp Ala Pro Val Ala Thr Asn Asn Pro Asp Arg Glu Val Gln
    50                  55                  60
Ala Glu Thr Gln Gly Arg Phe Gln Leu Leu Gly Asp Ile Trp Ser Asn
65                  70                  75                  80
Asp Cys Ser Leu Ser Ile Arg Asp Ala Arg Lys Arg Asp Lys Gly Ser
```

```
                85                  90                  95
Tyr Phe Phe Arg Leu Glu Arg Gly Ser Met Lys Trp Ser Tyr Lys Ser
            100                 105                 110
Gln Leu Asn Tyr Lys Thr Lys Gln Leu Ser Val Phe Val Thr Ala Leu
        115                 120                 125
Thr His Arg Pro Asp Ile Leu Ile Leu Gly Thr Leu Glu Ser Gly His
    130                 135                 140
Ser Arg Asn Leu Thr Cys Ser Val Pro Trp Ala Cys Lys Gln Gly Thr
145                 150                 155                 160
Pro Pro Met Ile Ser Trp Ile Gly Ala Ser Val Ser Ser Pro Gly Pro
                165                 170                 175
Thr Thr Ala Arg Ser Ser Val Leu Thr Leu Thr Pro Lys Pro Gln Asp
            180                 185                 190
His Gly Thr Ser Leu Thr Cys Gln Val Thr Leu Pro Gly Thr Gly Val
        195                 200                 205
Thr Thr Thr Ser Thr Val Arg Leu Asp Val Ser Tyr Pro Pro Trp Asn
    210                 215                 220
Leu Thr Met Thr Val Phe Gln Gly Asp Ala Thr Ala Ser Thr Ala Leu
225                 230                 235                 240
Gly Asn Gly Ser Ser Leu Ser Val Leu Glu Gly Gln Ser Leu Arg Leu
                245                 250                 255
Val Cys Ala Val Asn Ser Asn Pro Pro Ala Arg Leu Ser Trp Thr Arg
            260                 265                 270
Gly Ser Leu Thr Leu Cys Pro Ser Arg Ser Ser Asn Pro Gly Leu Leu
        275                 280                 285
Glu Leu Pro Arg Val His Val Arg Asp Glu Gly Glu Phe Thr Cys Arg
    290                 295                 300
Ala Gln Asn Ala Gln Gly Ser Gln His Ile Ser Leu Ser Leu Ser Leu
305                 310                 315                 320
Gln Asn Glu Gly Thr Gly Thr Ser Arg Pro Val Ser Gln Val Thr Leu
                325                 330                 335
Ala Ala Val Gly Gly Ile Glu Gly Arg Ser Asp Lys Thr His Thr Cys
            340                 345                 350
Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu
        355                 360                 365
Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu
    370                 375                 380
Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys
385                 390                 395                 400
Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys
                405                 410                 415
Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu
            420                 425                 430
Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys
        435                 440                 445
Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys
    450                 455                 460
Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser
465                 470                 475                 480
Arg Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys
                485                 490                 495
Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln
            500                 505                 510
Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly
        515                 520                 525
Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln
    530                 535                 540
Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn
545                 550                 555                 560
His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys
                565                 570
```

<210> 75
<211> 449
<212> PRT
<213> Artificial Sequence

<220>

<223> Synthetic Construct

<400> 75
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
 1   5   10   15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Ser Leu Thr Ile Tyr
            20   25   30
Gly Ala His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35   40   45
Gly Val Ile Trp Ala Gly Gly Ser Thr Asn Tyr Asn Ser Ala Leu Met
    50   55   60
Ser Arg Phe Thr Ile Ser Lys Asp Asn Ser Lys Asn Thr Val Tyr Leu
65   70   75   80
Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys Ala
                85   90   95
Arg Asp Gly Ser Ser Pro Tyr Tyr Tyr Ser Met Glu Tyr Trp Gly Gln
            100   105   110
Gly Thr Thr Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val
        115   120   125
Phe Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala
    130   135   140
Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser
145   150   155   160
Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val
                165   170   175
Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro
            180   185   190
Ser Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys
        195   200   205
Pro Ser Asn Thr Lys Val Asp Lys Arg Val Glu Pro Lys Ser Cys Asp
    210   215   220
Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly
225   230   235   240
Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile
                245   250   255
Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu
            260   265   270
Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His
        275   280   285
Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg
    290   295   300
Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys
305   310   315   320
Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu
                325   330   335
Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr
            340   345   350
Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser Leu
        355   360   365
Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp
    370   375   380
Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val
385   390   395   400
Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp
                405   410   415
Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His
            420   425   430
Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro
        435   440   445
Gly

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

<220>

<223> Synthetic Construct

<400> 76
Glu Ile Val Leu Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly
 1   5   10   15
Glu Arg Ala Thr Leu Ser Cys Ser Ala Thr Ser Ser Val Ser Tyr Met
            20   25   30
His Trp Phe Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile Tyr
        35   40   45
Ser Thr Ser Asn Leu Ala Ser Gly Ile Pro Ala Arg Phe Ser Gly Ser
    50   55   60
Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Glu Pro Glu
65   70   75   80
Asp Phe Ala Val Tyr Tyr Cys Gln Gln Arg Ser Ser Tyr Pro Phe Thr
                85   90   95
Phe Gly Pro Gly Thr Lys Leu Asp Ile Lys Arg Thr Val Ala Ala Pro
            100   105   110
Ser Val Phe Ile Phe Pro Pro Ser Asp Glu Gln Leu Lys Ser Gly Thr
        115   120   125
Ala Ser Val Val Cys Leu Leu Asn Asn Phe Tyr Pro Arg Glu Ala Lys
    130   135   140
Val Gln Trp Lys Val Asp Asn Ala Leu Gln Ser Gly Asn Ser Gln Glu
145   150   155   160
Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr Tyr Ser Leu Ser Ser
                165   170   175
Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu Lys His Lys Val Tyr Ala
            180   185   190
Cys Glu Val Thr His Gln Gly Leu Ser Ser Pro Val Thr Lys Ser Phe
        195   200   205
Asn Arg Gly Glu Cys
    210

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

<220>
<223> Synthetic Construct

<400> 77
Glu Ile Val Leu Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly
 1   5   10   15
Glu Arg Ala Thr Leu Ser Cys Ser Ala Thr Ser Ser Val Ser Tyr Met
            20   25   30
His Trp Phe Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile Tyr
        35   40   45
Ser Thr Ser Asn Leu Ala Ser Gly Ile Pro Ala Arg Phe Ser Gly Ser
    50   55   60
Gly Ser Gly Thr Asp Tyr Thr Leu Thr Ile Ser Ser Leu Glu Pro Glu
65   70   75   80
Asp Phe Ala Val Tyr Tyr Cys Gln Gln Arg Ser Ser Tyr Pro Phe Thr
                85   90   95
Phe Gly Pro Gly Thr Lys Leu Asp Ile Lys Arg Thr Val Ala Ala Pro
            100   105   110
Ser Val Phe Ile Phe Pro Pro Ser Asp Glu Gln Leu Lys Ser Gly Thr
        115   120   125
Ala Ser Val Val Cys Leu Leu Asn Asn Phe Tyr Pro Arg Glu Ala Lys
    130   135   140
Val Gln Trp Lys Val Asp Asn Ala Leu Gln Ser Gly Asn Ser Gln Glu
145   150   155   160
Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr Tyr Ser Leu Ser Ser
                165   170   175
Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu Lys His Lys Val Tyr Ala
            180   185   190
Cys Glu Val Thr His Gln Gly Leu Ser Ser Pro Val Thr Lys Ser Phe
        195   200   205
Asn Arg Gly Glu Cys

210

<210> 78
<211> 329
<212> PRT
<213> Homo sapiens

<400> 78
Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Ser Ser Lys
 1   5   10   15
Ser Thr Ser Gly Gly Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr
            20   25   30
Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser
        35   40   45
Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser
    50   55   60
Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Gln Thr
65   70   75   80
Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn Thr Lys Val Asp Lys
                85   90   95
Arg Val Glu Pro Lys Ser Cys Asp Lys Thr His Thr Cys Pro Pro Cys
            100   105   110
Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro
        115   120   125
Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
    130   135   140
Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp
145   150   155   160
Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
                165   170   175
Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
            180   185   190
His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
        195   200   205
Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
    210   215   220
Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu
225   230   235   240
Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
                245   250   255
Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
            260   265   270
Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
        275   280   285
Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn
    290   295   300
Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
305   310   315   320
Gln Lys Ser Leu Ser Leu Ser Pro Gly
                325

<210> 79
<211> 326
<212> PRT
<213> Homo sapiens

<400> 79
Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Cys Ser Arg
 1   5   10   15
Ser Thr Ser Glu Ser Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr
            20   25   30
Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser
        35   40   45
Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser
    50   55   60
Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Lys Thr
65   70   75   80

```
Tyr Thr Cys Asn Val Asp His Lys Pro Ser Asn Thr Lys Val Asp Lys
                85                  90                  95
Arg Val Glu Ser Lys Tyr Gly Pro Pro Cys Pro Pro Cys Pro Ala Pro
            100                 105                 110
Glu Phe Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys
        115                 120                 125
Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val
    130                 135                 140
Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp
145                 150                 155                 160
Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe
                165                 170                 175
Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp
            180                 185                 190
Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu
        195                 200                 205
Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg
    210                 215                 220
Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys
225                 230                 235                 240
Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp
                245                 250                 255
Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys
            260                 265                 270
Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser
        275                 280                 285
Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser
    290                 295                 300
Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser
305                 310                 315                 320
Leu Ser Leu Ser Leu Gly
                325
```

<210> 80
<211> 107
<212> PRT
<213> Homo sapiens

<400> 80

```
Arg Thr Val Ala Ala Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu
 1               5                  10                  15
Gln Leu Lys Ser Gly Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe
            20                  25                  30
Tyr Pro Arg Glu Ala Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln
        35                  40                  45
Ser Gly Asn Ser Gln Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser
    50                  55                  60
Thr Tyr Ser Leu Ser Ser Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu
65                  70                  75                  80
Lys His Lys Val Tyr Ala Cys Glu Val Thr His Gln Gly Leu Ser Ser
                85                  90                  95
Pro Val Thr Lys Ser Phe Asn Arg Gly Glu Cys
            100                 105
```

<210> 81
<211> 444
<212> PRT
<213> Mus musculus

<400> 81

```
Gln Val Gln Leu Lys Arg Ala Ser Gly Pro Gly Leu Val Ala Pro Ser
 1               5                  10                  15
Gln Ser Leu Ser Ile Thr Cys Thr Val Ser Gly Phe Ser Leu Thr Ile
            20                  25                  30
Tyr Gly Ala His Trp Val Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp
        35                  40                  45
Leu Gly Val Ile Trp Ala Gly Gly Ser Thr Asn Tyr Asn Ser Ala Leu
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    50                  55                  60
Met Ser Arg Leu Ser Ile Ser Lys Asp Asn Ser Lys Ser Gln Val Phe
65                  70                  75                  80
Leu Lys Ile Asn Ser Leu Gln Thr Asp Asp Thr Ala Leu Tyr Tyr Cys
                85                  90                  95
Ala Arg Asp Gly Ser Ser Pro Tyr Tyr Tyr Ser Met Glu Tyr Trp Gly
            100                 105                 110
Gln Gly Thr Ser Val Thr Val Ser Ser Ala Lys Thr Thr Pro Pro Ser
        115                 120                 125
Val Tyr Pro Leu Ala Pro Gly Ser Ala Ala Gln Thr Asn Ser Met Val
    130                 135                 140
Thr Leu Gly Cys Leu Val Lys Gly Tyr Phe Pro Glu Pro Val Thr Val
145                 150                 155                 160
Thr Trp Asn Ser Gly Ser Leu Ser Ser Gly Val His Thr Phe Pro Ala
                165                 170                 175
Val Leu Glu Ser Asp Leu Tyr Thr Leu Ser Ser Ser Val Thr Val Pro
            180                 185                 190
Ser Ser Pro Arg Pro Ser Glu Thr Val Thr Cys Asn Val Ala His Pro
        195                 200                 205
Ala Ser Ser Thr Lys Val Asp Lys Lys Ile Val Pro Arg Asp Cys Gly
    210                 215                 220
Cys Lys Pro Cys Ile Cys Thr Val Pro Glu Val Ser Ser Val Phe Ile
225                 230                 235                 240
Phe Pro Pro Lys Pro Lys Asp Val Leu Thr Ile Thr Leu Thr Pro Lys
                245                 250                 255
Val Thr Cys Val Val Val Asp Ile Ser Lys Asp Asp Pro Glu Val Gln
            260                 265                 270
Phe Ser Trp Phe Val Asp Asp Val Glu Val His Thr Ala Gln Thr Gln
        275                 280                 285
Pro Arg Glu Glu Gln Phe Asn Ser Thr Phe Arg Ser Val Ser Glu Leu
    290                 295                 300
Pro Ile Met His Gln Asp Trp Leu Asn Gly Lys Glu Phe Lys Cys Arg
305                 310                 315                 320
Val Asn Ser Ala Ala Phe Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys
                325                 330                 335
Thr Lys Gly Arg Pro Lys Ala Pro Gln Val Tyr Thr Ile Pro Pro Pro
            340                 345                 350
Lys Glu Gln Met Ala Lys Asp Lys Val Ser Leu Thr Cys Met Ile Thr
        355                 360                 365
Asp Phe Phe Pro Glu Asp Ile Thr Val Glu Trp Gln Trp Asn Gly Gln
    370                 375                 380
Pro Ala Glu Asn Tyr Lys Asn Thr Gln Pro Ile Met Asn Thr Asn Gly
385                 390                 395                 400
Ser Tyr Phe Val Tyr Ser Lys Leu Asn Val Gln Lys Ser Asn Trp Glu
                405                 410                 415
Ala Gly Asn Thr Phe Thr Cys Ser Val Leu His Glu Gly Leu His Asn
            420                 425                 430
His His Thr Glu Lys Ser Leu Ser His Ser Pro Gly
        435                 440


<210> 82
<211> 212
<212> PRT
<213> Mus musculus

<400> 82
Glu Ile Ile Leu Thr Gln Ser Pro Ala Ile Met Ser Ala Ser Pro Gly
 1               5                  10                  15
Glu Lys Val Ser Ile Thr Cys Ser Ala Thr Ser Ser Val Ser Tyr Met
            20                  25                  30
His Trp Phe Gln Gln Lys Pro Gly Thr Ser Pro Lys Leu Trp Ile Tyr
        35                  40                  45
Ser Thr Ser Asn Leu Ala Ser Gly Val Pro Val Arg Phe Ser Gly Ser
    50                  55                  60
Gly Ser Gly Thr Ser Tyr Ser Leu Thr Ile Ser Arg Met Glu Ala Glu
65                  70                  75                  80
Asp Ala Ala Thr Tyr Tyr Cys Gln Gln Arg Ser Ser Tyr Pro Phe Thr
                85                  90                  95
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Phe Gly Ser Gly Thr Lys Leu Glu Ile Lys Ala Asp Ala Ala Pro Thr
100 105 110
Val Ser Ile Phe Pro Pro Ser Ser Glu Gln Leu Thr Ser Gly Gly Ala
115 120 125
Ser Val Val Cys Phe Leu Asn Asn Phe Tyr Pro Lys Asp Ile Asn Val
130 135 140
Lys Trp Lys Ile Asp Gly Ser Glu Arg Gln Asn Gly Val Leu Asn Ser
145 150 155 160
Trp Thr Asp Gln Asp Ser Lys Asp Ser Thr Tyr Ser Met Ser Ser Thr
165 170 175
Leu Thr Leu Thr Lys Asp Glu Tyr Glu Arg His Asn Ser Tyr Thr Cys
180 185 190
Glu Ala Thr His Lys Thr Ser Thr Ser Pro Ile Val Lys Ser Phe Asn
195 200 205
Arg Asn Glu Cys
210

<210> 83
<211> 212
<212> PRT
<213> Mus musculus

<400> 83
Gln Ile Ile Leu Thr Gln Ser Pro Ala Ile Met Ser Ala Ser Pro Gly
1 5 10 15
Glu Lys Val Ser Ile Thr Cys Ser Ala Thr Ser Ser Val Ser Tyr Met
20 25 30
His Trp Phe Gln Gln Lys Pro Gly Thr Ser Pro Lys Leu Trp Ile Tyr
35 40 45
Ser Thr Ser Asn Leu Ala Ser Gly Val Pro Val Arg Phe Ser Gly Ser
50 55 60
Gly Ser Gly Thr Ser Tyr Ser Leu Thr Ile Ser Arg Met Glu Ala Glu
65 70 75 80
Asp Ala Ala Thr Tyr Tyr Cys Gln Gln Arg Ser Ser Tyr Pro Phe Thr
85 90 95
Phe Gly Ser Gly Thr Lys Leu Glu Ile Lys Ala Asp Ala Ala Pro Thr
100 105 110
Val Ser Ile Phe Pro Pro Ser Ser Glu Gln Leu Thr Ser Gly Gly Ala
115 120 125
Ser Val Val Cys Phe Leu Asn Asn Phe Tyr Pro Lys Asp Ile Asn Val
130 135 140
Lys Trp Lys Ile Asp Gly Ser Glu Arg Gln Asn Gly Val Leu Asn Ser
145 150 155 160
Trp Thr Asp Gln Asp Ser Lys Asp Ser Thr Tyr Ser Met Ser Ser Thr
165 170 175
Leu Thr Leu Thr Lys Asp Glu Tyr Glu Arg His Asn Ser Tyr Thr Cys
180 185 190
Glu Ala Thr His Lys Thr Ser Thr Ser Pro Ile Val Lys Ser Phe Asn
195 200 205
Arg Asn Glu Cys
210

<210> 84
<211> 450
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 84
Gln Val Gln Leu Lys Arg Ala Ser Gly Pro Gly Leu Val Ala Pro Ser
1 5 10 15
Gln Ser Leu Ser Ile Thr Cys Thr Val Ser Gly Phe Ser Leu Thr Ile
20 25 30
Tyr Gly Ala His Trp Val Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp
35 40 45

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Leu Gly Val Ile Trp Ala Gly Gly Ser Thr Asn Tyr Asn Ser Ala Leu
    50                  55                  60
Met Ser Arg Leu Ser Ile Ser Lys Asp Asn Ser Lys Ser Gln Val Phe
65                  70                  75                  80
Leu Lys Ile Asn Ser Leu Gln Thr Asp Asp Thr Ala Leu Tyr Tyr Cys
                85                  90                  95
Ala Arg Asp Gly Ser Ser Pro Tyr Tyr Tyr Ser Met Glu Tyr Trp Gly
            100                 105                 110
Gln Gly Thr Ser Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser
        115                 120                 125
Val Phe Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala
    130                 135                 140
Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val
145                 150                 155                 160
Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala
                165                 170                 175
Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val
            180                 185                 190
Pro Ser Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His
        195                 200                 205
Lys Pro Ser Asn Thr Lys Val Asp Lys Arg Val Glu Pro Lys Ser Cys
    210                 215                 220
Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly
225                 230                 235                 240
Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met
                245                 250                 255
Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His
            260                 265                 270
Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val
        275                 280                 285
His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr
    290                 295                 300
Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly
305                 310                 315                 320
Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile
                325                 330                 335
Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val
            340                 345                 350
Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser
        355                 360                 365
Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu
    370                 375                 380
Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro
385                 390                 395                 400
Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val
                405                 410                 415
Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met
            420                 425                 430
His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser
        435                 440                 445
Pro Gly
    450


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

<220>
<223> Synthetic Construct

<400> 85
Glu Ile Ile Leu Thr Gln Ser Pro Ala Ile Met Ser Ala Ser Pro Gly
 1                  5                  10                  15
Glu Lys Val Ser Ile Thr Cys Ser Ala Thr Ser Ser Val Ser Tyr Met
            20                  25                  30
His Trp Phe Gln Gln Lys Pro Gly Thr Ser Pro Lys Leu Trp Ile Tyr
        35                  40                  45
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Ser Thr Ser Asn Leu Ala Ser Gly Val Pro Val Arg Phe Ser Gly Ser
    50                  55                  60
Gly Ser Gly Thr Ser Tyr Ser Leu Thr Ile Ser Arg Met Glu Ala Glu
65                  70                  75                  80
Asp Ala Ala Thr Tyr Tyr Cys Gln Gln Arg Ser Ser Tyr Pro Phe Thr
                85                  90                  95
Phe Gly Ser Gly Thr Lys Leu Glu Ile Lys Arg Thr Val Ala Ala Pro
            100                 105                 110
Ser Val Phe Ile Phe Pro Pro Ser Asp Glu Gln Leu Lys Ser Gly Thr
        115                 120                 125
Ala Ser Val Val Cys Leu Leu Asn Asn Phe Tyr Pro Arg Glu Ala Lys
    130                 135                 140
Val Gln Trp Lys Val Asp Asn Ala Leu Gln Ser Gly Asn Ser Gln Glu
145                 150                 155                 160
Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr Tyr Ser Leu Ser Ser
                165                 170                 175
Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu Lys His Lys Val Tyr Ala
            180                 185                 190
Cys Glu Val Thr His Gln Gly Leu Ser Ser Pro Val Thr Lys Ser Phe
        195                 200                 205
Asn Arg Gly Glu Cys
    210


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

<220>
<223> Synthetic Construct

<400> 86
Gln Ile Ile Leu Thr Gln Ser Pro Ala Ile Met Ser Ala Ser Pro Gly
 1                  5                  10                  15
Glu Lys Val Ser Ile Thr Cys Ser Ala Thr Ser Ser Val Ser Tyr Met
            20                  25                  30
His Trp Phe Gln Gln Lys Pro Gly Thr Ser Pro Lys Leu Trp Ile Tyr
        35                  40                  45
Ser Thr Ser Asn Leu Ala Ser Gly Val Pro Val Arg Phe Ser Gly Ser
    50                  55                  60
Gly Ser Gly Thr Ser Tyr Ser Leu Thr Ile Ser Arg Met Glu Ala Glu
65                  70                  75                  80
Asp Ala Ala Thr Tyr Tyr Cys Gln Gln Arg Ser Ser Tyr Pro Phe Thr
                85                  90                  95
Phe Gly Ser Gly Thr Lys Leu Glu Ile Lys Arg Thr Val Ala Ala Pro
            100                 105                 110
Ser Val Phe Ile Phe Pro Pro Ser Asp Glu Gln Leu Lys Ser Gly Thr
        115                 120                 125
Ala Ser Val Val Cys Leu Leu Asn Asn Phe Tyr Pro Arg Glu Ala Lys
    130                 135                 140
Val Gln Trp Lys Val Asp Asn Ala Leu Gln Ser Gly Asn Ser Gln Glu
145                 150                 155                 160
Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr Tyr Ser Leu Ser Ser
                165                 170                 175
Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu Lys His Lys Val Tyr Ala
            180                 185                 190
Cys Glu Val Thr His Gln Gly Leu Ser Ser Pro Val Thr Lys Ser Phe
        195                 200                 205
Asn Arg Gly Glu Cys
    210


<210> 87
<211> 446
<212> PRT
<213> Artificial Sequence

<220>
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<223> Synthetic Construct

<400> 87
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
 1   5   10   15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Ser Leu Thr Ile Tyr
            20   25   30
Gly Ala His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35   40   45
Gly Val Ile Trp Ala Gly Gly Ser Thr Asn Tyr Asn Ser Ala Leu Met
    50   55   60
Ser Arg Phe Thr Ile Ser Lys Asp Asn Ser Lys Asn Thr Val Tyr Leu
65   70   75   80
Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys Ala
                85   90   95
Arg Asp Gly Ser Ser Pro Tyr Tyr Tyr Ser Met Glu Tyr Trp Gly Gln
            100   105   110
Gly Thr Thr Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val
        115   120   125
Phe Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser Thr Ala Ala
    130   135   140
Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser
145   150   155   160
Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val
                165   170   175
Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro
            180   185   190
Ser Ser Ser Leu Gly Thr Lys Thr Tyr Thr Cys Asn Val Asp His Lys
        195   200   205
Pro Ser Asn Thr Lys Val Asp Lys Arg Val Glu Ser Lys Tyr Gly Pro
    210   215   220
Pro Cys Pro Pro Cys Pro Ala Pro Glu Phe Leu Gly Gly Pro Ser Val
225   230   235   240
Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr
                245   250   255
Pro Glu Val Thr Cys Val Val Val Asp Val Ser Gln Glu Asp Pro Glu
            260   265   270
Val Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys
        275   280   285
Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser
    290   295   300
Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys
305   310   315   320
Cys Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile
                325   330   335
Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro
            340   345   350
Pro Ser Gln Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu
        355   360   365
Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn
    370   375   380
Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser
385   390   395   400
Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg
                405   410   415
Trp Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu
            420   425   430
His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Leu Gly
        435   440   445

<210> 88
<211> 5
<212> PRT
<213> Mus musculus

<400> 88
Ser Tyr Ala Met Ser
 1   5

<210> 89
<211> 5
<212> PRT
<213> Mus musculus

<400> 89
Asp Tyr Tyr Met Tyr
 1   5

<210> 90
<211> 5
<212> PRT
<213> Mus musculus

<400> 90
Ser Ser Trp Met Asn
 1   5

<210> 91
<211> 17
<212> PRT
<213> Mus musculus

<400> 91
Ile Ile Ser Ser Gly Gly Ser Tyr Thr Tyr Tyr Ser Asp Ser Val Lys
 1   5   10   15
Gly

<210> 92
<211> 17
<212> PRT
<213> Mus musculus

<400> 92
Arg Ile Ala Pro Glu Asp Gly Asp Thr Glu Tyr Ala Pro Lys Phe Gln
 1   5   10   15
Gly

<210> 93
<211> 17
<212> PRT
<213> Mus musculus

<400> 93
Gln Ile Tyr Pro Gly Asp Asp Tyr Thr Asn Tyr Asn Gly Lys Phe Lys
 1   5   10   15
Gly

<210> 94
<211> 11
<212> PRT
<213> Mus musculus

<400> 94
His Glu Thr Ala Gln Ala Ala Trp Phe Ala Tyr
 1   5   10

<210> 95

<211> 12
<212> PRT
<213> Mus musculus

<400> 95
Glu Gly Asn Tyr Tyr Gly Ser Ser Ile Leu Asp Tyr
 1   5   10

<210> 96
<211> 9
<212> PRT
<213> Mus musculus

<400> 96
Leu Gly Pro Tyr Gly Pro Phe Ala Asp
 1   5

<210> 97
<211> 10
<212> PRT
<213> Mus musculus

<400> 97
Ser Ala Ser Ser Ser Val Ser Tyr Met His
 1   5   10

<210> 98
<211> 11
<212> PRT
<213> Mus musculus

<400> 98
Arg Ala Ser Gln Asp Ile Thr Asn Tyr Leu Asn
 1   5   10

<210> 99
<211> 10
<212> PRT
<213> Mus musculus

<400> 99
Ser Ala Ser Ser Ser Val Ser Tyr Met Tyr
 1   5   10

<210> 100
<211> 7
<212> PRT
<213> Mus musculus

<400> 100
Asp Thr Ser Lys Leu Ala Tyr
 1   5

<210> 101
<211> 7
<212> PRT
<213> Mus musculus

<400> 101
Phe Thr Ser Arg Leu His Ser
 1   5

<210> 102
<211> 7
<212> PRT
<213> Mus musculus

<400> 102
Asp Thr Ser Ser Leu Ala Ser
 1   5

<210> 103
<211> 9
<212> PRT
<213> Mus musculus

<400> 103
Gln Gln Trp Ser Ser Asn Pro Pro Thr
 1   5

<210> 104
<211> 9
<212> PRT
<213> Mus musculus

<400> 104
Gln Gln Gly Asn Thr Leu Pro Trp Thr
 1   5

<210> 105
<211> 9
<212> PRT
<213> Mus musculus

<400> 105
Gln Gln Trp Asn Ser Asp Pro Tyr Thr
 1   5

<210> 106
<211> 120
<212> PRT
<213> Mus musculus

<400> 106
Glu Val Gln Val Val Glu Ser Gly Gly Asp Leu Val Lys Ser Gly Gly
 1   5   10   15
Ser Leu Lys Leu Ser Cys Ala Ala Ser Gly Phe Pro Phe Ser Ser Tyr
            20   25   30
Ala Met Ser Trp Val Arg Gln Thr Pro Asp Lys Arg Leu Glu Trp Val
        35   40   45
Ala Ile Ile Ser Ser Gly Gly Ser Tyr Thr Tyr Tyr Ser Asp Ser Val
    50   55   60
Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Thr Leu Tyr
65   70   75   80
Leu Gln Met Ser Ser Leu Lys Ser Glu Asp Thr Ala Met Tyr Tyr Cys
                85   90   95
Ala Arg His Glu Thr Ala Gln Ala Ala Trp Phe Ala Tyr Trp Gly Gln
            100   105   110
Gly Thr Leu Val Thr Val Ser Ala
        115   120

<210> 107
<211> 121
<212> PRT
<213> Mus musculus

<400> 107
Glu Val Gln Leu Gln Gln Ser Gly Ala Glu Leu Val Arg Pro Gly Ala
 1   5   10   15
Ser Val Lys Leu Ser Cys Thr Ala Ser Gly Phe Asn Ile Lys Asp Tyr
            20   25   30
Tyr Met Tyr Trp Val Lys Gln Arg Pro Glu Gln Gly Leu Glu Trp Ile
        35   40   45
Gly Arg Ile Ala Pro Glu Asp Gly Asp Thr Glu Tyr Ala Pro Lys Phe
    50   55   60
Gln Gly Lys Ala Thr Val Thr Ala Asp Thr Ser Ser Asn Thr Ala Tyr
65   70   75   80
Leu His Leu Ser Ser Leu Thr Ser Glu Asp Thr Ala Val Tyr Tyr Cys
                85   90   95
Thr Thr Glu Gly Asn Tyr Tyr Gly Ser Ser Ile Leu Asp Tyr Trp Gly
            100   105   110
Gln Gly Thr Thr Leu Thr Val Ser Ser
        115   120

<210> 108
<211> 118
<212> PRT
<213> Mus musculus

<400> 108
Gln Val Gln Leu Gln Gln Ser Gly Ala Glu Leu Val Lys Pro Gly Ala
 1   5   10   15
Ser Val Lys Ile Ser Cys Lys Ala Ser Gly Tyr Ala Phe Arg Ser Ser
            20   25   30
Trp Met Asn Trp Val Lys Gln Arg Pro Gly Lys Gly Leu Glu Trp Ile
        35   40   45
Gly Gln Ile Tyr Pro Gly Asp Asp Tyr Thr Asn Tyr Asn Gly Lys Phe
    50   55   60
Lys Gly Lys Val Thr Leu Thr Ala Asp Arg Ser Ser Ser Thr Ala Tyr
65   70   75   80
Met Gln Leu Ser Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr Phe Cys
                85   90   95
Ala Arg Leu Gly Pro Tyr Gly Pro Phe Ala Asp Trp Gly Gln Gly Thr
            100   105   110
Leu Val Thr Val Ser Ala
        115

<210> 109
<211> 106
<212> PRT
<213> Mus musculus

<400> 109
Gln Ile Val Leu Thr Gln Ser Pro Ala Ile Met Ser Ala Ser Pro Gly
 1   5   10   15
Glu Lys Val Thr Met Thr Cys Ser Ala Ser Ser Ser Val Ser Tyr Met
            20   25   30
His Trp Tyr Gln Gln Lys Ser Gly Thr Ser Pro Lys Arg Trp Ile Tyr
        35   40   45
Asp Thr Ser Lys Leu Ala Tyr Gly Val Pro Ala Arg Phe Ser Gly Ser
    50   55   60
Gly Ser Gly Thr Ser Tyr Ser Leu Thr Ile Ser Ser Met Glu Ala Glu
65   70   75   80
Asp Ala Ala Thr Tyr Tyr Cys Gln Gln Trp Ser Ser Asn Pro Pro Thr
                85   90   95
Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys
            100   105

<210> 110
<211> 107
<212> PRT
<213> Mus musculus

<400> 110
Asp Ile Gln Met Thr Gln Thr Thr Ser Ser Leu Ser Ala Ser Leu Gly
 1   5   10   15
Asp Arg Val Thr Ile Ser Cys Arg Ala Ser Gln Asp Ile Thr Asn Tyr
            20   25   30
Leu Asn Trp Tyr Gln Gln Lys Pro Asp Gly Thr Val Lys Leu Leu Ile
        35   40   45
Tyr Phe Thr Ser Arg Leu His Ser Gly Val Pro Ser Arg Phe Ser Gly
    50   55   60
Ser Gly Ser Gly Thr Asp Tyr Ser Leu Thr Ile Ser Asn Leu Glu Gln
65   70   75   80
Glu Asp Ile Ala Thr Tyr Phe Cys Gln Gln Gly Asn Thr Leu Pro Trp
                85   90   95
Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys
            100   105

<210> 111
<211> 106
<212> PRT
<213> Mus musculus

<400> 111
Gln Ile Val Leu Thr Gln Ser Pro Ala Ile Val Ser Ala Ser Pro Gly
 1   5   10   15
Glu Lys Val Thr Met Thr Cys Ser Ala Ser Ser Ser Val Ser Tyr Met
            20   25   30
Tyr Trp Tyr Gln Gln Arg Pro Gly Ser Ser Pro Arg Leu Leu Ile Tyr
        35   40   45
Asp Thr Ser Ser Leu Ala Ser Gly Val Pro Val Arg Phe Ser Gly Ser
    50   55   60
Gly Ser Gly Thr Ser Tyr Ser Leu Thr Ile Ser Arg Ile Glu Ser Glu
65   70   75   80
Asp Ala Ala Asn Tyr Tyr Cys Gln Gln Trp Asn Ser Asp Pro Tyr Thr
                85   90   95
Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys
            100   105

<210> 112
<211> 141
<212> PRT
<213> Homo sapiens

<400> 112
Met Glu Gly Asp Arg Gln Tyr Gly Asp Gly Tyr Leu Leu Gln Val Gln
 1   5   10   15
Glu Leu Val Thr Val Gln Glu Gly Leu Cys Val His Val Pro Cys Ser
            20   25   30
Phe Ser Tyr Pro Gln Asp Gly Trp Thr Asp Ser Asp Pro Val His Gly
        35   40   45
Tyr Trp Phe Arg Ala Gly Asp Arg Pro Tyr Gln Asp Ala Pro Val Ala
    50   55   60
Thr Asn Asn Pro Asp Arg Glu Val Gln Ala Glu Thr Gln Gly Arg Phe
65   70   75   80
Gln Leu Leu Gly Asp Ile Trp Ser Asn Asp Cys Ser Leu Ser Ile Arg
                85   90   95
Asp Ala Arg Lys Arg Asp Lys Gly Ser Tyr Phe Phe Arg Leu Glu Arg
            100   105   110
Gly Ser Met Lys Trp Ser Tyr Lys Ser Gln Leu Asn Tyr Lys Thr Lys
        115   120   125
Gln Leu Ser Val Phe Val Thr Ala Leu Thr His Arg Pro
    130   135   140

<210> 113
<211> 87
<212> PRT

<213> Homo sapiens

<400> 113
Asp Ile Leu Ile Leu Gly Thr Leu Glu Ser Gly His Ser Arg Asn Leu
 1   5   10   15
Thr Cys Ser Val Pro Trp Ala Cys Lys Gln Gly Thr Pro Pro Met Ile
            20   25   30
Ser Trp Ile Gly Ala Ser Val Ser Ser Pro Gly Pro Thr Thr Ala Arg
        35   40   45
Ser Ser Val Leu Thr Leu Thr Pro Lys Pro Gln Asp His Gly Thr Ser
    50   55   60
Leu Thr Cys Gln Val Thr Leu Pro Gly Thr Gly Val Thr Thr Thr Ser
65   70   75   80
Thr Val Arg Leu Asp Val Ser
                85

<210> 114
<211> 122
<212> PRT
<213> Homo sapiens

<400> 114
Tyr Pro Pro Trp Asn Leu Thr Met Thr Val Phe Gln Gly Asp Ala Thr
 1   5   10   15
Ala Ser Thr Ala Leu Gly Asn Gly Ser Ser Leu Ser Val Leu Glu Gly
            20   25   30
Gln Ser Leu Arg Leu Val Cys Ala Val Asn Ser Asn Pro Pro Ala Arg
        35   40   45
Leu Ser Trp Thr Arg Gly Ser Leu Thr Leu Cys Pro Ser Arg Ser Ser
    50   55   60
Asn Pro Gly Leu Leu Glu Leu Pro Arg Val His Val Arg Asp Glu Gly
65   70   75   80
Glu Phe Thr Cys Arg Ala Gln Asn Ala Gln Gly Ser Gln His Ile Ser
                85   90   95
Leu Ser Leu Ser Leu Gln Asn Glu Gly Thr Gly Thr Ser Arg Pro Val
            100   105   110
Ser Gln Val Thr Leu Ala Ala Val Gly Gly
        115   120

<210> 115
<211> 373
<212> PRT
<213> Homo sapiens

<400> 115
Met Glu Gly Asp Arg Gln Tyr Gly Asp Gly Tyr Leu Leu Gln Val Gln
 1   5   10   15
Glu Leu Val Thr Val Gln Glu Gly Leu Cys Val His Val Pro Cys Ser
            20   25   30
Phe Ser Tyr Pro Gln Asp Gly Trp Thr Asp Ser Asp Pro Val His Gly
        35   40   45
Tyr Trp Phe Arg Ala Gly Asp Arg Pro Tyr Gln Asp Ala Pro Val Ala
    50   55   60
Thr Asn Asn Pro Asp Arg Glu Val Gln Ala Glu Thr Gln Gly Arg Phe
65   70   75   80
Gln Leu Leu Gly Asp Ile Trp Ser Asn Asp Cys Ser Leu Ser Ile Arg
                85   90   95
Asp Ala Arg Lys Arg Asp Lys Gly Ser Tyr Phe Phe Arg Leu Glu Arg
            100   105   110
Gly Ser Met Lys Trp Ser Tyr Lys Ser Gln Leu Asn Tyr Lys Thr Lys
        115   120   125
Gln Leu Ser Val Phe Val Thr Ala Leu Thr His Arg Pro Ile Glu Gly
    130   135   140
Arg Ser Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu
145   150   155   160
Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr
                165   170   175

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Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val
            180                 185                 190
Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val
        195                 200                 205
Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser
    210                 215                 220
Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu
225                 230                 235                 240
Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala
                245                 250                 255
Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro
            260                 265                 270
Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln
        275                 280                 285
Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala
    290                 295                 300
Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr
305                 310                 315                 320
Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu
                325                 330                 335
Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser
            340                 345                 350
Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser
        355                 360                 365
Leu Ser Pro Gly Lys
    370


<210> 116
<211> 460
<212> PRT
<213> Homo sapiens

<400> 116
Met Glu Gly Asp Arg Gln Tyr Gly Asp Gly Tyr Leu Leu Gln Val Gln
 1                5                  10                  15
Glu Leu Val Thr Val Gln Glu Gly Leu Cys Val His Val Pro Cys Ser
            20                  25                  30
Phe Ser Tyr Pro Gln Asp Gly Trp Thr Asp Ser Asp Pro Val His Gly
        35                  40                  45
Tyr Trp Phe Arg Ala Gly Asp Arg Pro Tyr Gln Asp Ala Pro Val Ala
    50                  55                  60
Thr Asn Asn Pro Asp Arg Glu Val Gln Ala Glu Thr Gln Gly Arg Phe
65                  70                  75                  80
Gln Leu Leu Gly Asp Ile Trp Ser Asn Asp Cys Ser Leu Ser Ile Arg
                85                  90                  95
Asp Ala Arg Lys Arg Asp Lys Gly Ser Tyr Phe Phe Arg Leu Glu Arg
            100                 105                 110
Gly Ser Met Lys Trp Ser Tyr Lys Ser Gln Leu Asn Tyr Lys Thr Lys
        115                 120                 125
Gln Leu Ser Val Phe Val Thr Ala Leu Thr His Arg Pro Asp Ile Leu
    130                 135                 140
Ile Leu Gly Thr Leu Glu Ser Gly His Ser Arg Asn Leu Thr Cys Ser
145                 150                 155                 160
Val Pro Trp Ala Cys Lys Gln Gly Thr Pro Pro Met Ile Ser Trp Ile
                165                 170                 175
Gly Ala Ser Val Ser Ser Pro Gly Pro Thr Thr Ala Arg Ser Ser Val
            180                 185                 190
Leu Thr Leu Thr Pro Lys Pro Gln Asp His Gly Thr Ser Leu Thr Cys
        195                 200                 205
Gln Val Thr Leu Pro Gly Thr Gly Val Thr Thr Thr Ser Thr Val Arg
    210                 215                 220
Leu Asp Val Ser Ile Glu Gly Arg Ser Asp Lys Thr His Thr Cys Pro
225                 230                 235                 240
Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe
                245                 250                 255
Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val
            260                 265                 270
Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe
```

```
        275                 280                 285
Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro
    290                 295                 300
Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr
305                 310                 315                 320
Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val
                325                 330                 335
Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala
            340                 345                 350
Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg
        355                 360                 365
Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly
    370                 375                 380
Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro
385                 390                 395                 400
Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser
                405                 410                 415
Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln
            420                 425                 430
Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His
        435                 440                 445
Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys
    450                 455                 460


<210> 117
<211> 582
<212> PRT
<213> Homo sapiens

<400> 117
Met Glu Gly Asp Arg Gln Tyr Gly Asp Gly Tyr Leu Leu Gln Val Gln
 1               5                  10                  15
Glu Leu Val Thr Val Gln Glu Gly Leu Cys Val His Val Pro Cys Ser
            20                  25                  30
Phe Ser Tyr Pro Gln Asp Gly Trp Thr Asp Ser Asp Pro Val His Gly
        35                  40                  45
Tyr Trp Phe Arg Ala Gly Asp Arg Pro Tyr Gln Asp Ala Pro Val Ala
    50                  55                  60
Thr Asn Asn Pro Asp Arg Glu Val Gln Ala Glu Thr Gln Gly Arg Phe
65                  70                  75                  80
Gln Leu Leu Gly Asp Ile Trp Ser Asn Asp Cys Ser Leu Ser Ile Arg
                85                  90                  95
Asp Ala Arg Lys Arg Asp Lys Gly Ser Tyr Phe Phe Arg Leu Glu Arg
            100                 105                 110
Gly Ser Met Lys Trp Ser Tyr Lys Ser Gln Leu Asn Tyr Lys Thr Lys
        115                 120                 125
Gln Leu Ser Val Phe Val Thr Ala Leu Thr His Arg Pro Asp Ile Leu
    130                 135                 140
Ile Leu Gly Thr Leu Glu Ser Gly His Ser Arg Asn Leu Thr Cys Ser
145                 150                 155                 160
Val Pro Trp Ala Cys Lys Gln Gly Thr Pro Pro Met Ile Ser Trp Ile
                165                 170                 175
Gly Ala Ser Val Ser Ser Pro Gly Pro Thr Thr Ala Arg Ser Ser Val
            180                 185                 190
Leu Thr Leu Thr Pro Lys Pro Gln Asp His Gly Thr Ser Leu Thr Cys
        195                 200                 205
Gln Val Thr Leu Pro Gly Thr Gly Val Thr Thr Thr Ser Thr Val Arg
    210                 215                 220
Leu Asp Val Ser Tyr Pro Pro Trp Asn Leu Thr Met Thr Val Phe Gln
225                 230                 235                 240
Gly Asp Ala Thr Ala Ser Thr Ala Leu Gly Asn Gly Ser Ser Leu Ser
                245                 250                 255
Val Leu Glu Gly Gln Ser Leu Arg Leu Val Cys Ala Val Asn Ser Asn
            260                 265                 270
Pro Pro Ala Arg Leu Ser Trp Thr Arg Gly Ser Leu Thr Leu Cys Pro
        275                 280                 285
Ser Arg Ser Ser Asn Pro Gly Leu Leu Glu Leu Pro Arg Val His Val
    290                 295                 300
```

```
Arg Asp Glu Gly Glu Phe Thr Cys Arg Ala Gln Asn Ala Gln Gly Ser
305                 310                 315                 320
Gln His Ile Ser Leu Ser Leu Ser Leu Gln Asn Glu Gly Thr Gly Thr
                325                 330                 335
Ser Arg Pro Val Ser Gln Val Thr Leu Ala Ala Val Gly Gly Ile Glu
            340                 345                 350
Gly Arg Ser Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu
        355                 360                 365
Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp
    370                 375                 380
Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp
385                 390                 395                 400
Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly
                405                 410                 415
Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn
            420                 425                 430
Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp
        435                 440                 445
Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro
    450                 455                 460
Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu
465                 470                 475                 480
Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn
                485                 490                 495
Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile
            500                 505                 510
Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr
        515                 520                 525
Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys
    530                 535                 540
Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys
545                 550                 555                 560
Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu
                565                 570                 575
Ser Leu Ser Pro Gly Lys
            580
```

<210> 118
<211> 582
<212> PRT
<213> Papio spp.

<400> 118

```
Met Glu Gly Asp Arg Lys Tyr Gly Asp Gly Tyr Leu Leu Gln Val Gln
 1                5                  10                  15
Glu Leu Val Thr Val Gln Glu Gly Leu Cys Val His Val Pro Cys Ser
            20                  25                  30
Phe Ser Tyr Pro Lys Asp Asp Trp Thr Tyr Ser Asp Pro Val His Gly
        35                  40                  45
Tyr Trp Phe Arg Ala Gly Asp Arg Pro Tyr Gln Glu Ala Pro Val Ala
    50                  55                  60
Thr Asn Asn Pro Asp Thr Glu Val Gln Ala Glu Thr Gln Gly Arg Phe
65                  70                  75                  80
Gln Leu Leu Gly Asp Arg Trp Ser Asn Asp Cys Ser Leu Ser Ile Asn
                85                  90                  95
Asp Ala Arg Lys Gly Asp Glu Gly Ser Tyr Phe Phe Arg Leu Glu Arg
            100                 105                 110
Gly Arg Met Lys Trp Ser Tyr Lys Ser Gln Leu Asn Tyr Lys Ala Lys
        115                 120                 125
Gln Leu Ser Val Phe Val Thr Ala Leu Thr Gln Arg Pro Asp Ile Leu
    130                 135                 140
Ile Gln Gly Thr Leu Glu Ser Gly His Pro Arg Asn Leu Thr Cys Ser
145                 150                 155                 160
Val Pro Trp Ala Cys Glu Gln Arg Met Pro Pro Met Ile Ser Trp Ile
                165                 170                 175
Gly Thr Ser Val Ser Ser Leu Gly Pro Ile Thr Ala Arg Phe Ser Val
            180                 185                 190
Leu Thr Leu Ile Pro Lys Pro Gln Asp His Gly Thr Ser Leu Thr Cys
```

```
        195                 200                 205
Gln Val Thr Leu Pro Gly Thr Gly Val Thr Thr Thr Arg Thr Val Gln
    210                 215                 220
Leu Asp Val Ser Tyr Pro Pro Trp Asn Leu Thr Val Thr Val Phe Gln
225                 230                 235                 240
Gly Asp Asp Thr Ala Ser Thr Ala Leu Gly Asn Gly Ser Ser Leu Ser
                245                 250                 255
Val Leu Glu Gly Gln Ser Leu Arg Leu Val Cys Ala Val Asp Ser Asn
            260                 265                 270
Pro Pro Ala Arg Leu Ser Trp Thr Arg Gly Ser Leu Thr Leu Cys Pro
        275                 280                 285
Ser Gln Pro Trp Asn Pro Gly Leu Leu Glu Leu Leu Arg Val His Val
    290                 295                 300
Lys Asp Glu Gly Glu Phe Thr Cys Gln Ala Glu Asn Pro Arg Gly Ser
305                 310                 315                 320
Gln His Ile Ser Leu Ser Leu Ser Leu Gln Asn Glu Gly Thr Gly Thr
                325                 330                 335
Ala Arg Pro Val Ser Glu Val Thr Leu Ala Ala Val Gly Gly Ile Glu
            340                 345                 350
Gly Arg Ser Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu
        355                 360                 365
Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp
    370                 375                 380
Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp
385                 390                 395                 400
Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly
                405                 410                 415
Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn
            420                 425                 430
Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp
        435                 440                 445
Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro
    450                 455                 460
Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu
465                 470                 475                 480
Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn
                485                 490                 495
Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile
            500                 505                 510
Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr
        515                 520                 525
Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys
    530                 535                 540
Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys
545                 550                 555                 560
Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu
                565                 570                 575
Ser Leu Ser Pro Gly Lys
            580
```

<210> 119
<211> 350
<212> PRT
<213> Papio spp.

```
<400> 119
Met Glu Gly Asp Arg Lys Tyr Gly Asp Gly Tyr Leu Leu Gln Val Gln
 1               5                  10                  15
Glu Leu Val Thr Val Gln Glu Gly Leu Cys Val His Val Pro Cys Ser
            20                  25                  30
Phe Ser Tyr Pro Lys Asp Asp Trp Thr Tyr Ser Asp Pro Val His Gly
        35                  40                  45
Tyr Trp Phe Arg Ala Gly Asp Arg Pro Tyr Gln Glu Ala Pro Val Ala
    50                  55                  60
Thr Asn Asn Pro Asp Thr Glu Val Gln Ala Glu Thr Gln Gly Arg Phe
65                  70                  75                  80
Gln Leu Leu Gly Asp Arg Trp Ser Asn Asp Cys Ser Leu Ser Ile Asn
                85                  90                  95
```

Asp Ala Arg Lys Gly Asp Glu Gly Ser Tyr Phe Phe Arg Leu Glu Arg
100 105 110
Gly Arg Met Lys Trp Ser Tyr Lys Ser Gln Leu Asn Tyr Lys Ala Lys
115 120 125
Gln Leu Ser Val Phe Val Thr Ala Leu Thr Gln Arg Pro Asp Ile Leu
130 135 140
Ile Gln Gly Thr Leu Glu Ser Gly His Pro Arg Asn Leu Thr Cys Ser
145 150 155 160
Val Pro Trp Ala Cys Glu Gln Arg Met Pro Pro Met Ile Ser Trp Ile
165 170 175
Gly Thr Ser Val Ser Ser Leu Gly Pro Ile Thr Ala Arg Phe Ser Val
180 185 190
Leu Thr Leu Ile Pro Lys Pro Gln Asp His Gly Thr Ser Leu Thr Cys
195 200 205
Gln Val Thr Leu Pro Gly Thr Gly Val Thr Thr Thr Arg Thr Val Gln
210 215 220
Leu Asp Val Ser Tyr Pro Pro Trp Asn Leu Thr Val Thr Val Phe Gln
225 230 235 240
Gly Asp Asp Thr Ala Ser Thr Ala Leu Gly Asn Gly Ser Ser Leu Ser
245 250 255
Val Leu Glu Gly Gln Ser Leu Arg Leu Val Cys Ala Val Asp Ser Asn
260 265 270
Pro Pro Ala Arg Leu Ser Trp Thr Arg Gly Ser Leu Thr Leu Cys Pro
275 280 285
Ser Gln Pro Trp Asn Pro Gly Leu Leu Glu Leu Leu Arg Val His Val
290 295 300
Lys Asp Glu Gly Glu Phe Thr Cys Gln Ala Glu Asn Pro Arg Gly Ser
305 310 315 320
Gln His Ile Ser Leu Ser Leu Ser Leu Gln Asn Glu Gly Thr Gly Thr
325 330 335
Ala Arg Pro Val Ser Glu Val Thr Leu Ala Ala Val Gly Gly
340 345 350

<210> 120
<211> 120
<212> PRT
<213> Homo sapiens

<400> 120
Glu Val Lys Val Glu 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 Ser Leu Thr Ile Thr
20 25 30
Tyr Met Asn Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45
Ser Val Ile Gly Ser Ala Gly Ser Thr Tyr Tyr Ala Asp Ser Val Lys
50 55 60
Gly Arg Phe Thr Ile Ser Lys Asp Asn Ser Glu Gly Met Val Tyr Leu
65 70 75 80
Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys Ala
85 90 95
Arg Glu Glu Ile Asp Asn Tyr Tyr Tyr Gly Met Asp Val Trp Gly Gln
100 105 110
Gly Thr Thr Val Thr Val Ser Ser
115 120

<210> 121
<211> 97
<212> PRT
<213> Homo sapiens

<400> 121
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
1 5 10 15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Val Ser Ser Asn
20 25 30
Tyr Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val

```
        35                  40                  45
Ser Val Ile Tyr Ser Gly Gly Ser Thr Tyr Ala Asp Ser Val Lys
    50                  55                  60
Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr Leu
65                  70                  75                  80
Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys Ala
                85                  90                  95
Arg
```

<210> 122
<211> 97
<212> PRT
<213> Homo sapiens

<400> 122

```
Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Glu
 1               5                  10                  15
Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Gly Ser Ile Ser Ser Tyr
            20                  25                  30
Tyr Trp Ser Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp Ile
        35                  40                  45
Gly Tyr Ile Tyr Tyr Ser Gly Ser Thr Asn Tyr Asn Pro Ser Leu Lys
    50                  55                  60
Ser Arg Val Thr Ile Ser Val Asp Thr Ser Lys Asn Gln Phe Ser Leu
65                  70                  75                  80
Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr Cys Ala
                85                  90                  95
Arg
```

<210> 123
<211> 107
<212> PRT
<213> Homo sapiens

<400> 123

```
Glu Ile Val Leu Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly
 1               5                  10                  15
Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Ile Ser Ser Tyr
            20                  25                  30
Leu Ala Trp Phe Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile
        35                  40                  45
Tyr Asp Ala Ser Asn Arg Ala Thr Gly Ile Pro Ala Arg Phe Ser Gly
    50                  55                  60
Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Glu Pro
65                  70                  75                  80
Glu Asp Phe Ala Val Tyr Tyr Cys Gln His Arg Ser Asn Trp Leu Ile
                85                  90                  95
Ala Phe Gly Pro Gly Thr Lys Leu Asp Ile Lys
            100                 105
```

<210> 124
<211> 95
<212> PRT
<213> Homo sapiens

<400> 124

```
Glu Ile Val Leu Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly
 1               5                  10                  15
Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Ser Tyr
            20                  25                  30
Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile
        35                  40                  45
Tyr Asp Ala Ser Asn Arg Ala Thr Gly Ile Pro Ala Arg Phe Ser Gly
    50                  55                  60
```

```
Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Glu Pro
65                  70                  75                  80
Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Arg Ser Asn Trp Pro
                85                  90                  95
```