

1
SEQUENCE LISTING

<110> CHUGAI SEIYAKU KABUSHIKI KAISHA
 <120> ANTI-C5 ANTIBODIES AND METHODS OF USE
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 <150> JP 2014-257647
 <151> 2014-12-19
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Gln Ser Leu Glu Glu Ser Gly Gly Asp Leu Val Lys Pro Gly Ala Ser
 1 5 10 15

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

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

Gly Cys Ile Tyr Thr Gly Ser Gly Ala Thr Tyr Tyr Ala Ser Trp Ala
 50 55 60

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

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

Ser Asp Gly Gly Tyr Val Thr Pro Thr His Ala Met Tyr Leu Trp Gly
 100 105 110

Pro Gly Thr Leu Val Thr Val Ser Ser
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Gln Ser Leu Glu Glu Ser Gly Gly Gly Leu Val Lys Pro Gly Ala Ser
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Gly Pro Gly Thr Leu Val Thr Val Ser Ser
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Gln Ser Val Glu Glu Ser Gly Gly Arg Leu Val Thr Pro Gly Thr Pro
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Leu Thr Leu Thr Cys Thr Ala Ser Gly Phe Ser Leu Ser Ser Tyr Tyr
20 25 30

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

Met Ile Tyr Gly Ser Gly Ala Thr Tyr Tyr Ala Ser Trp Ala Lys Gly
50 55 60

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

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

Ile Tyr Ser Gly Asp Asn Asn Asp Asn Phe Trp Gly Pro Gly Thr Leu
100 105 110

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

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

Met Ile Tyr Gly Ser Gly Ala Thr Tyr Tyr Ala Ser Trp Ala Lys Gly
 50 55 60

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

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

Ile Tyr Ser Gly Asp Asn Asn Asp Asn Phe Trp Gly Pro Gly Thr Leu
 100 105 110

Val Thr Val Ser Ser
 115

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

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

Ile Ile Ser Phe Gly Gly Asp Ala Tyr Tyr Ala Ser Trp Ala Lys Gly
 50 55 60

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

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

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

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

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

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

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

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

Cys Ile Tyr Thr Gly Ser Asp Thr Thr Tyr Tyr Ala Thr Trp Ala Lys
 50 55 60

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

Ala Ser Pro Thr Thr Glu Asp Thr Ala Thr Tyr Phe Cys Ala Arg Gly
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90

6

95

Ser Gly Leu Trp Gly Pro Gly Thr Leu Val Thr Val Ser Ser
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Gln Ser Val Glu Glu Ser Gly Gly Arg Leu Val Thr Pro Gly Thr Pro
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Leu Thr Leu Thr Cys Thr Val Ser Gly Phe Ser Leu Ser Thr Tyr Ala
 20 25 30

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

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

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

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

Gly Ser Val Tyr Asn Leu Phe Asn Leu Trp Gly Pro Gly Thr Leu Val
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Thr Val Ser Ser
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Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Ser His Ser Ser
 20 25 30

Tyr Tyr Val Ala Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp
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              35              40              7              45
Val Gly Ala Ile Tyr Thr Gly Ser Gly Ala Thr Tyr Lys Ala Ser Trp
  50      55      60
Ala Lys Gly Arg Phe Thr Ile Ser Lys Asp Thr Ser Lys Asn Gln Val
  65      70      75      80
Val Leu Thr Met Thr Asn Met Asp Pro Val Asp Thr Ala Thr Tyr Tyr
      85      90      95
Cys Ala Ser Asp Gly Gly Tyr Asp Tyr Pro Thr His Ala Met His Tyr
      100      105      110
Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
      115      120

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

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

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

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

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

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

Tyr Gly Asn Ala Phe Gly Gly Gly Thr Glu Val Val Val Lys
100 105 110

<400> 12

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

Gly Thr Val Thr Ile Lys Cys Gln Ala Ser Gln Asn Ile Tyr Ser Asn
 20 25 30

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

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

Ser Gly Ser Gly Thr Glu Tyr Thr Leu Thr Ile Ser Asp Leu Glu Cys
 65 70 75 80

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

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

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

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

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

Gln Cys Asp Asp Ala Ala Thr Tyr Tyr Cys Gln Gly Thr Tyr Tyr Ser
 85 90 95

Ser Gly Trp Tyr Phe Ala Phe Gly Gly Gly Thr Glu Val Val Val Lys
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Ala Tyr Asp Met Thr Gln Thr Pro Ala Ser Val Glu Val Ala Val Gly
 1 5 10 15

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

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

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

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

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

Val Asp Asn Thr Phe Gly Gly Gly Thr Lys Val Val Val Glu
 100 105 110

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

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

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

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

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

10

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

Val Asp Asn Thr Phe Gly Gly Gly Thr Thr Val Val Val Glu
100 105 110

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

Gly Thr Val Thr Ile Lys Cys Gln Ala Ser Glu Ser Ile Tyr Ser Ala
20 25 30

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

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

ser Gly Ser Gly Thr Glu Tyr Thr Leu Thr Ile Ser Asp Leu Glu Cys
65 70 75 80

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

Val His Asn Ser Phe Gly Gly Gly Thr Thr Val Val Val Glu
100 105 110

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

Gly Thr Val Thr Ile Lys Cys Gln Ala Ser Glu Asn Ile Tyr Ser Ala
20 25 30

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

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

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

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

Val Asp Asn Thr Phe Gly Gly Gly Thr Lys Val Val Val Glu
 100 105 110

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<400> 18

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

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

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

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

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

Ala Asp Ala Ala Thr Tyr Tyr Cys Gln Cys Thr Ala Tyr Gly Ser Ser
 85 90 95

Asp Val Gly Gly Thr Phe Gly Gly Gly Thr Thr Val Val Val Glu
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<400> 19

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

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

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

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

Ala Cys Ile Tyr Thr Gly Ser Ser Ala Asn Thr Ala Tyr Ala Asn Trp
50 55 60

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

Leu Gln Met Thr Gly Leu Thr Ala Ala Asp Thr Ala Thr Tyr Phe Cys
85 90 95

Ala Arg His Asp Asp Tyr Phe Phe Asp Leu Trp Gly Pro Gly Thr Leu
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Val Thr Val Ser Ser
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Gln Ser Val Glu Glu Ser Gly Gly Arg Leu Val Thr Pro Gly Thr Pro
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Leu Thr Leu Thr Cys Thr Val Ser Gly Ile Asp Leu Ser Ser Tyr Thr
20 25 30

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

Tyr Ile His Ser Phe Gly Ser Thr Tyr Tyr Ala Ser Trp Ala Lys Gly
50 55 60

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

Ser Pro Thr Thr Glu Asp Thr Ala Thr Tyr Phe Cys Ala Arg Asp Val
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85 90 14 95
 Gly Gly Ser Ser Gly Trp Asp Leu Trp Gly Gln Gly Thr Leu Val Thr
 100 105 110

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

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

Gly Cys Ile Gly Thr Ile Ser Asp Ser Thr Tyr Tyr Ala Ser Trp Ala
 50 55 60

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

Gln Met Thr Ser Leu Thr Ala Ala Asp Thr Ala Thr Tyr Phe Cys Ala
 85 90 95

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

Thr Val Ser Ser
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Gln Glu Gln Leu Glu Glu Ser Gly Gly Asp Leu Val Lys Pro Glu Gly
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Ser Leu Thr Leu Thr Cys Thr Ala Ser Gly Phe Ser Phe Ser Ser Gly
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20 25 15 30
 Asn Trp Ile Cys Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp
 35 40 45
 Ile Ala Cys Ile Tyr Gly Gly Ser Val Gly Gly Thr Asp Tyr Ala Ser
 50 55 60
 Trp Ala Lys Gly Arg Phe Thr Val Ser Lys Thr Ser Ser Thr Thr Val
 65 70 75 80
 Thr Leu Gln Met Thr Ser Leu Thr Ala Ala Asp Thr Ala Thr Tyr Phe
 85 90 95
 Cys Ala Arg Met Glu Asp Gly Tyr Gly Tyr Gly Tyr Asp Thr Tyr Phe
 100 105 110
 Lys Leu Trp Gly Pro Gly Thr Leu Val Thr Val Ser Ser
 115 120 125
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 Asp Val Val Met Thr Gln Thr Pro Ala Ser Val Ser Glu Ser Val Gly
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 Gly Thr Val Thr Ile Asn Cys Gln Ala Ser Gln Ser Ile Gly Asn Asn
 20 25 30
 Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro Lys Leu Leu Ile
 35 40 45
 Tyr Asp Ala Ser Asn Leu Ala Ser Gly Val Pro Ser Arg Phe Lys Gly
 50 55 60
 Ser Arg Ser Gly Thr Glu Pro Thr Leu Thr Asn Thr Leu Thr Ile Ser
 65 70 75 80
 Gly Val Gln Cys Ala Asp Val Ala Thr Tyr Tyr Cys Gln Ser Gly Trp
 85 90 95
 Tyr Gly Asn Ser Tyr Val Ala Ala Phe Gly Gly Gly Thr Glu Val Val
 100 105 110
 Val Lys

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Asp Val Val Met Thr Gln Thr Pro Ser Ser Val Ser Ala Ala Val Gly
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Gly Thr Val Thr Ile Lys Cys Gln Ala Ser Glu Asn Ile Tyr Ser Asn
 20 25 30

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

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

Ser Gly Tyr Gly Thr Gln Phe Thr Leu Thr Ile Ser Gly Val Gln Cys
 65 70 75 80

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

Ser Ser Phe Gly Asn Val Phe Gly Gly Gly Thr Glu Val Val Val Lys
 100 105 110

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

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

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

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

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

Ala Asp Ala Ala Thr Tyr Tyr Cys Leu Gly Gly Tyr Tyr Gly Phe Ser
 85 90 95

Tyr Gly Asn Ala Phe Gly Gly Gly Thr Glu Val Val Val Lys
 100 105 110

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

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

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

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

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

Ala Asp Ala Ala Thr Tyr Tyr Cys Gln Gly Tyr Tyr Asp Ser Ser Thr
 85 90 95

Ser Ser Tyr Val Phe Gly Gly Gly Thr Glu Val Val Val Lys
 100 105 110

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

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Ile Phe Ser Asn Tyr
 20 25 30

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

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

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

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

Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys
 355 360 365

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

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

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

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

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

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

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

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

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

Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys Arg Thr Val Ala Ala
 2376661_1

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

2376661_1

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

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

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

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

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

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

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

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

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<211> 325
<212> PRT
<213> Artificial sequence

<220>
<223> An artificially synthesized sequence

<400> 33

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 Arg Gly Gly Pro Lys 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
 325

<210> 34
 <211> 325
 <212> PRT
 <213> Artificial sequence

<220>
 <223> An artificially synthesized sequence

<400> 34

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 Arg Gly Gly Pro Lys Val Phe Leu Phe Pro Pro Lys Pro Lys
 115 120 125

Asp Thr Leu Tyr 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
 2376661_1

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
 Lys 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 Pro
 325

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

<220>
 <223> An artificially synthesized sequence

<400> 36

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
 2376661_1

<400> 38

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> 39

<211> 1676

<212> PRT

<213> Homo sapiens

<400> 39

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

2376661_1

His Thr Asp Lys Pro Val Tyr Thr Pro Asp Gln Ser Val Lys Val Arg
 130 135 140
 Val Tyr Ser Leu Asn Asp Asp Leu Lys Pro Ala Lys Arg Glu Thr Val
 145 150 155 160
 Leu Thr Phe Ile Asp Pro Glu Gly Ser Glu Val Asp Met Val Glu Glu
 165 170 175
 Ile Asp His Ile Gly Ile Ile Ser Phe Pro Asp Phe Lys Ile Pro Ser
 180 185 190
 Asn Pro Arg Tyr Gly Met Trp Thr Ile Lys Ala Lys Tyr Lys Glu Asp
 195 200 205
 Phe Ser Thr Thr Gly Thr Ala Tyr Phe Glu Val Lys Glu Tyr Val Leu
 210 215 220
 Pro His Phe Ser Val Ser Ile Glu Pro Glu Tyr Asn Phe Ile Gly Tyr
 225 230 235 240
 Lys Asn Phe Lys Asn Phe Glu Ile Thr Ile Lys Ala Arg Tyr Phe Tyr
 245 250 255
 Asn Lys Val Val Thr Glu Ala Asp Val Tyr Ile Thr Phe Gly Ile Arg
 260 265 270
 Glu Asp Leu Lys Asp Asp Gln Lys Glu Met Met Gln Thr Ala Met Gln
 275 280 285
 Asn Thr Met Leu Ile Asn Gly Ile Ala Gln Val Thr Phe Asp Ser Glu
 290 295 300
 Thr Ala Val Lys Glu Leu Ser Tyr Tyr Ser Leu Glu Asp Leu Asn Asn
 305 310 315 320
 Lys Tyr Leu Tyr Ile Ala Val Thr Val Ile Glu Ser Thr Gly Gly Phe
 325 330 335
 Ser Glu Glu Ala Glu Ile Pro Gly Ile Lys Tyr Val Leu Ser Pro Tyr
 340 345 350
 Lys Leu Asn Leu Val Ala Thr Pro Leu Phe Leu Lys Pro Gly Ile Pro
 355 360 365
 Tyr Pro Ile Lys Val Gln Val Lys Asp Ser Leu Asp Gln Leu Val Gly
 370 375 380
 Gly Val Pro Val Thr Leu Asn Ala Gln Thr Ile Asp Val Asn Gln Glu
 385 390 395 400

Thr Ser Asp Leu Asp Pro Ser Lys Ser Val Thr Arg Val Asp Asp Gly
 405 410 415
 Val Ala Ser Phe Val Leu Asn Leu Pro Ser Gly Val Thr Val Leu Glu
 420 425 430
 Phe Asn Val Lys Thr Asp Ala Pro Asp Leu Pro Glu Glu Asn Gln Ala
 435 440 445
 Arg Glu Gly Tyr Arg Ala Ile Ala Tyr Ser Ser Leu Ser Gln Ser Tyr
 450 455 460
 Leu Tyr Ile Asp Trp Thr Asp Asn His Lys Ala Leu Leu Val Gly Glu
 465 470 475 480
 His Leu Asn Ile Ile Val Thr Pro Lys Ser Pro Tyr Ile Asp Lys Ile
 485 490 495
 Thr His Tyr Asn Tyr Leu Ile Leu Ser Lys Gly Lys Ile Ile His Phe
 500 505 510
 Gly Thr Arg Glu Lys Phe Ser Asp Ala Ser Tyr Gln Ser Ile Asn Ile
 515 520 525
 Pro Val Thr Gln Asn Met Val Pro Ser Ser Arg Leu Leu Val Tyr Tyr
 530 535 540
 Ile Val Thr Gly Glu Gln Thr Ala Glu Leu Val Ser Asp Ser Val Trp
 545 550 555 560
 Leu Asn Ile Glu Glu Lys Cys Gly Asn Gln Leu Gln Val His Leu Ser
 565 570 575
 Pro Asp Ala Asp Ala Tyr Ser Pro Gly Gln Thr Val Ser Leu Asn Met
 580 585 590
 Ala Thr Gly Met Asp Ser Trp Val Ala Leu Ala Ala Val Asp Ser Ala
 595 600 605
 Val Tyr Gly Val Gln Arg Gly Ala Lys Lys Pro Leu Glu Arg Val Phe
 610 615 620
 Gln Phe Leu Glu Lys Ser Asp Leu Gly Cys Gly Ala Gly Gly Gly Leu
 625 630 635 640
 Asn Asn Ala Asn Val Phe His Leu Ala Gly Leu Thr Phe Leu Thr Asn
 645 650 655
 Ala Asn Ala Asp Asp Ser Gln Glu Asn Asp Glu Pro Cys Lys Glu Ile
 660 665 670

Leu Arg Pro Arg Arg Thr Leu Gln Lys Lys Ile Glu Glu Ile Ala Ala
 675 680 685
 Lys Tyr Lys His Ser Val Val Lys Lys Cys Cys Tyr Asp Gly Ala Cys
 690 695 700
 Val Asn Asn Asp Glu Thr Cys Glu Gln Arg Ala Ala Arg Ile Ser Leu
 705 710 715 720
 Gly Pro Arg Cys Ile Lys Ala Phe Thr Glu Cys Cys Val Val Ala Ser
 725 730 735
 Gln Leu Arg Ala Asn Ile Ser His Lys Asp Met Gln Leu Gly Arg Leu
 740 745 750
 His Met Lys Thr Leu Leu Pro Val Ser Lys Pro Glu Ile Arg Ser Tyr
 755 760 765
 Phe Pro Glu Ser Trp Leu Trp Glu Val His Leu Val Pro Arg Arg Lys
 770 775 780
 Gln Leu Gln Phe Ala Leu Pro Asp Ser Leu Thr Thr Trp Glu Ile Gln
 785 790 795 800
 Gly Val Gly Ile Ser Asn Thr Gly Ile Cys Val Ala Asp Thr Val Lys
 805 810 815
 Ala Lys Val Phe Lys Asp Val Phe Leu Glu Met Asn Ile Pro Tyr Ser
 820 825 830
 Val Val Arg Gly Glu Gln Ile Gln Leu Lys Gly Thr Val Tyr Asn Tyr
 835 840 845
 Arg Thr Ser Gly Met Gln Phe Cys Val Lys Met Ser Ala Val Glu Gly
 850 855 860
 Ile Cys Thr Ser Glu Ser Pro Val Ile Asp His Gln Gly Thr Lys Ser
 865 870 875 880
 Ser Lys Cys Val Arg Gln Lys Val Glu Gly Ser Ser Ser His Leu Val
 885 890 895
 Thr Phe Thr Val Leu Pro Leu Glu Ile Gly Leu His Asn Ile Asn Phe
 900 905 910
 Ser Leu Glu Thr Trp Phe Gly Lys Glu Ile Leu Val Lys Thr Leu Arg
 915 920 925
 Val Val Pro Glu Gly Val Lys Arg Glu Ser Tyr Ser Gly Val Thr Leu
 930 935 940

Asp Pro Arg Gly Ile Tyr Gly Thr Ile Ser Arg Arg Lys Glu Phe Pro
 945 950 955 960
 Tyr Arg Ile Pro Leu Asp Leu Val Pro Lys Thr Glu Ile Lys Arg Ile
 965 970 975
 Leu Ser Val Lys Gly Leu Leu Val Gly Glu Ile Leu Ser Ala Val Leu
 980 985 990
 Ser Gln Glu Gly Ile Asn Ile Leu Thr His Leu Pro Lys Gly Ser Ala
 995 1000 1005
 Glu Ala Glu Leu Met Ser Val Val Pro Val Phe Tyr Val Phe His
 1010 1015 1020
 Tyr Leu Glu Thr Gly Asn His Trp Asn Ile Phe His Ser Asp Pro
 1025 1030 1035
 Leu Ile Glu Lys Gln Lys Leu Lys Lys Lys Leu Lys Glu Gly Met
 1040 1045 1050
 Leu Ser Ile Met Ser Tyr Arg Asn Ala Asp Tyr Ser Tyr Ser Val
 1055 1060 1065
 Trp Lys Gly Gly Ser Ala Ser Thr Trp Leu Thr Ala Phe Ala Leu
 1070 1075 1080
 Arg Val Leu Gly Gln Val Asn Lys Tyr Val Glu Gln Asn Gln Asn
 1085 1090 1095
 Ser Ile Cys Asn Ser Leu Leu Trp Leu Val Glu Asn Tyr Gln Leu
 1100 1105 1110
 Asp Asn Gly Ser Phe Lys Glu Asn Ser Gln Tyr Gln Pro Ile Lys
 1115 1120 1125
 Leu Gln Gly Thr Leu Pro Val Glu Ala Arg Glu Asn Ser Leu Tyr
 1130 1135 1140
 Leu Thr Ala Phe Thr Val Ile Gly Ile Arg Lys Ala Phe Asp Ile
 1145 1150 1155
 Cys Pro Leu Val Lys Ile Asp Thr Ala Leu Ile Lys Ala Asp Asn
 1160 1165 1170
 Phe Leu Leu Glu Asn Thr Leu Pro Ala Gln Ser Thr Phe Thr Leu
 1175 1180 1185
 Ala Ile Ser Ala Tyr Ala Leu Ser Leu Gly Asp Lys Thr His Pro
 1190 1195 1200

Gln Phe Arg Ser Ile Val Ser Ala Leu Lys Arg Glu Ala Leu Val
 1205 1210 1215
 Lys Gly Asn Pro Pro Ile Tyr Arg Phe Trp Lys Asp Asn Leu Gln
 1220 1225 1230
 His Lys Asp Ser Ser Val Pro Asn Thr Gly Thr Ala Arg Met Val
 1235 1240 1245
 Glu Thr Thr Ala Tyr Ala Leu Leu Thr Ser Leu Asn Leu Lys Asp
 1250 1255 1260
 Ile Asn Tyr Val Asn Pro Val Ile Lys Trp Leu Ser Glu Glu Gln
 1265 1270 1275
 Arg Tyr Gly Gly Gly Phe Tyr Ser Thr Gln Asp Thr Ile Asn Ala
 1280 1285 1290
 Ile Glu Gly Leu Thr Glu Tyr Ser Leu Leu Val Lys Gln Leu Arg
 1295 1300 1305
 Leu Ser Met Asp Ile Asp Val Ser Tyr Lys His Lys Gly Ala Leu
 1310 1315 1320
 His Asn Tyr Lys Met Thr Asp Lys Asn Phe Leu Gly Arg Pro Val
 1325 1330 1335
 Glu Val Leu Leu Asn Asp Asp Leu Ile Val Ser Thr Gly Phe Gly
 1340 1345 1350
 Ser Gly Leu Ala Thr Val His Val Thr Thr Val Val His Lys Thr
 1355 1360 1365
 Ser Thr Ser Glu Glu Val Cys Ser Phe Tyr Leu Lys Ile Asp Thr
 1370 1375 1380
 Gln Asp Ile Glu Ala Ser His Tyr Arg Gly Tyr Gly Asn Ser Asp
 1385 1390 1395
 Tyr Lys Arg Ile Val Ala Cys Ala Ser Tyr Lys Pro Ser Arg Glu
 1400 1405 1410
 Glu Ser Ser Ser Gly Ser Ser His Ala Val Met Asp Ile Ser Leu
 1415 1420 1425
 Pro Thr Gly Ile Ser Ala Asn Glu Glu Asp Leu Lys Ala Leu Val
 1430 1435 1440
 Glu Gly Val Asp Gln Leu Phe Thr Asp Tyr Gln Ile Lys Asp Gly
 1445 1450 1455

His Val Ile Leu Gln Leu Asn Ser Ile Pro Ser Ser Asp Phe Leu
 1460 1465 1470
 Cys Val Arg Phe Arg Ile Phe Glu Leu Phe Glu Val Gly Phe Leu
 1475 1480 1485
 Ser Pro Ala Thr Phe Thr Val Tyr Glu Tyr His Arg Pro Asp Lys
 1490 1495 1500
 Gln Cys Thr Met Phe Tyr Ser Thr Ser Asn Ile Lys Ile Gln Lys
 1505 1510 1515
 Val Cys Glu Gly Ala Ala Cys Lys Cys Val Glu Ala Asp Cys Gly
 1520 1525 1530
 Gln Met Gln Glu Glu Leu Asp Leu Thr Ile Ser Ala Glu Thr Arg
 1535 1540 1545
 Lys Gln Thr Ala Cys Lys Pro Glu Ile Ala Tyr Ala Tyr Lys Val
 1550 1555 1560
 Ser Ile Thr Ser Ile Thr Val Glu Asn Val Phe Val Lys Tyr Lys
 1565 1570 1575
 Ala Thr Leu Leu Asp Ile Tyr Lys Thr Gly Glu Ala Val Ala Glu
 1580 1585 1590
 Lys Asp Ser Glu Ile Thr Phe Ile Lys Lys Val Thr Cys Thr Asn
 1595 1600 1605
 Ala Glu Leu Val Lys Gly Arg Gln Tyr Leu Ile Met Gly Lys Glu
 1610 1615 1620
 Ala Leu Gln Ile Lys Tyr Asn Phe Ser Phe Arg Tyr Ile Tyr Pro
 1625 1630 1635
 Leu Asp Ser Leu Thr Trp Ile Glu Tyr Trp Pro Arg Asp Thr Thr
 1640 1645 1650
 Cys Ser Ser Cys Gln Ala Phe Leu Ala Asn Leu Asp Glu Phe Ala
 1655 1660 1665
 Glu Asp Ile Phe Leu Asn Gly Cys
 1670 1675

<210> 40
 <211> 673
 <212> PRT
 <213> Homo sapiens

<400> 40

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

Glu Asp Leu Lys Asp Asp Gln Lys Glu Met Met Gln Thr Ala Met Gln
 275 280 285
 Asn Thr Met Leu Ile Asn Gly Ile Ala Gln Val Thr Phe Asp Ser Glu
 290 295 300
 Thr Ala Val Lys Glu Leu Ser Tyr Tyr Ser Leu Glu Asp Leu Asn Asn
 305 310 315 320
 Lys Tyr Leu Tyr Ile Ala Val Thr Val Ile Glu Ser Thr Gly Gly Phe
 325 330 335
 Ser Glu Glu Ala Glu Ile Pro Gly Ile Lys Tyr Val Leu Ser Pro Tyr
 340 345 350
 Lys Leu Asn Leu Val Ala Thr Pro Leu Phe Leu Lys Pro Gly Ile Pro
 355 360 365
 Tyr Pro Ile Lys Val Gln Val Lys Asp Ser Leu Asp Gln Leu Val Gly
 370 375 380
 Gly Val Pro Val Thr Leu Asn Ala Gln Thr Ile Asp Val Asn Gln Glu
 385 390 395 400
 Thr Ser Asp Leu Asp Pro Ser Lys Ser Val Thr Arg Val Asp Asp Gly
 405 410 415
 Val Ala Ser Phe Val Leu Asn Leu Pro Ser Gly Val Thr Val Leu Glu
 420 425 430
 Phe Asn Val Lys Thr Asp Ala Pro Asp Leu Pro Glu Glu Asn Gln Ala
 435 440 445
 Arg Glu Gly Tyr Arg Ala Ile Ala Tyr Ser Ser Leu Ser Gln Ser Tyr
 450 455 460
 Leu Tyr Ile Asp Trp Thr Asp Asn His Lys Ala Leu Leu Val Gly Glu
 465 470 475 480
 His Leu Asn Ile Ile Val Thr Pro Lys Ser Pro Tyr Ile Asp Lys Ile
 485 490 495
 Thr His Tyr Asn Tyr Leu Ile Leu Ser Lys Gly Lys Ile Ile His Phe
 500 505 510
 Gly Thr Arg Glu Lys Phe Ser Asp Ala Ser Tyr Gln Ser Ile Asn Ile
 515 520 525
 Pro Val Thr Gln Asn Met Val Pro Ser Ser Arg Leu Leu Val Tyr Tyr
 530 535 540

Ile Val Thr Gly Glu Gln Thr Ala Glu Leu Val Ser Asp Ser Val Trp
545 550 555 560

Leu Asn Ile Glu Glu Lys Cys Gly Asn Gln Leu Gln Val His Leu Ser
565 570 575

Pro Asp Ala Asp Ala Tyr Ser Pro Gly Gln Thr Val Ser Leu Asn Met
580 585 590

Ala Thr Gly Met Asp Ser Trp Val Ala Leu Ala Ala Val Asp Ser Ala
595 600 605

Val Tyr Gly Val Gln Arg Gly Ala Lys Lys Pro Leu Glu Arg Val Phe
610 615 620

Gln Phe Leu Glu Lys Ser Asp Leu Gly Cys Gly Ala Gly Gly Gly Leu
625 630 635 640

Asn Asn Ala Asn Val Phe His Leu Ala Gly Leu Thr Phe Leu Thr Asn
645 650 655

Ala Asn Ala Asp Asp Ser Gln Glu Asn Asp Glu Pro Cys Lys Glu Ile
660 665 670

Leu

<210> 41
<211> 105
<212> PRT
<213> Homo sapiens

<400> 41

Glu Gln Thr Tyr Val Ile Ser Ala Pro Lys Ile Phe Arg Val Gly Ala
1 5 10 15

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

Ala Thr Ile Ser Ile Lys Ser Tyr Pro Asp Lys Lys Phe Ser Tyr Ser
35 40 45

Ser Gly His Val His Leu Ser Ser Glu Asn Lys Phe Gln Asn Ser Ala
50 55 60

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

Ser Tyr Val Tyr Leu Glu Val Val Ser Lys His Phe Ser Lys Ser Lys
85 90 95

Arg Met Pro Ile Thr Tyr Asp Asn Gly
100 105

<210> 42
<211> 101
<212> PRT
<213> Homo sapiens

<400> 42

Phe Leu Phe Ile His Thr Asp Lys Pro Val Tyr Thr Pro Asp Gln Ser
1 5 10 15

Val Lys Val Arg Val Tyr Ser Leu Asn Asp Asp Leu Lys Pro Ala Lys
20 25 30

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

Met Val Glu Glu Ile Asp His Ile Gly Ile Ile Ser Phe Pro Asp Phe
50 55 60

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

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

Glu Tyr Val Leu Pro
100

<210> 43
<211> 225
<212> PRT
<213> Homo sapiens

<400> 43

Met Gly Leu Leu Gly Ile Leu Cys Phe Leu Ile Phe Leu Gly Lys Thr
1 5 10 15

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

Val Gly Ala Ser Glu Asn Ile Val Ile Gln Val Tyr Gly Tyr Thr Glu
35 40 45

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

Ser Tyr Ser Ser Gly His Val His Leu Ser Ser Glu Asn Lys Phe Gln
65 70 75 80

Asn Ser Ala Ile Leu Thr Ile Gln Pro Lys Gln Leu Pro Gly Gly Gln
85 90 95

Asn Pro Val Ser Tyr Val Tyr Leu Glu Val Val Ser Lys His Phe Ser
100 105 110

Lys Ser Lys Arg Met Pro Ile Thr Tyr Asp Asn Gly Phe Leu Phe Ile
115 120 125

His Thr Asp Lys Pro Val Tyr Thr Pro Asp Gln Ser Val Lys Val Arg
130 135 140

Val Tyr Ser Leu Asn Asp Asp Leu Lys Pro Ala Lys Arg Glu Thr Val
145 150 155 160

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

Ile Asp His Ile Gly Ile Ile Ser Phe Pro Asp Phe Lys Ile Pro Ser
180 185 190

Asn Pro Arg Tyr Gly Met Trp Thr Ile Lys Ala Lys Tyr Lys Glu Asp
195 200 205

Phe Ser Thr Thr Gly Thr Ala Tyr Phe Glu Val Lys Glu Tyr Val Leu
210 215 220

Pro
225

<210> 44
<211> 1676
<212> PRT
<213> Macaca fascicularis

<400> 44

Met Gly Leu Leu Gly Ile Leu Cys Phe Leu Ile Phe Leu Gly Lys Thr
1 5 10 15

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

Val Gly Ala Ser Glu Asn Ile Val Ile Gln Val Tyr Gly Tyr Thr Glu
35 40 45

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

Ser Tyr Ser Ser Gly His Val His Leu Ser Ser Glu Asn Lys Phe Gln
65 70 75 80

Asn Ser Ala Val Leu Thr Ile Gln Pro Lys Gln Leu Pro Gly Gly Gln
85 90 95

Asn Gln Val Ser Tyr Val Tyr Leu Glu Val Val Ser Lys His Phe Ser
 100 105 110
 Lys Ser Lys Lys Ile Pro Ile Thr Tyr Asp Asn Gly Phe Leu Phe Ile
 115 120 125
 His Thr Asp Lys Pro Val Tyr Thr Pro Asp Gln Ser Val Lys Val Arg
 130 135 140
 Val Tyr Ser Leu Asn Asp Asp Leu Lys Pro Ala Lys Arg Glu Thr Val
 145 150 155 160
 Leu Thr Phe Ile Asp Pro Glu Gly Ser Glu Ile Asp Met Val Glu Glu
 165 170 175
 Ile Asp His Ile Gly Ile Ile Ser Phe Pro Asp Phe Lys Ile Pro Ser
 180 185 190
 Asn Pro Arg Tyr Gly Met Trp Thr Ile Gln Ala Lys Tyr Lys Glu Asp
 195 200 205
 Phe Ser Thr Thr Gly Thr Ala Phe Phe Glu Val Lys Glu Tyr Val Leu
 210 215 220
 Pro His Phe Ser Val Ser Val Glu Pro Glu Ser Asn Phe Ile Gly Tyr
 225 230 235 240
 Lys Asn Phe Lys Asn Phe Glu Ile Thr Ile Lys Ala Arg Tyr Phe Tyr
 245 250 255
 Asn Lys Val Val Thr Glu Ala Asp Val Tyr Ile Thr Phe Gly Ile Arg
 260 265 270
 Glu Asp Leu Lys Asp Asp Gln Lys Glu Met Met Gln Thr Ala Met Gln
 275 280 285
 Asn Thr Met Leu Ile Asn Gly Ile Ala Glu Val Thr Phe Asp Ser Glu
 290 295 300
 Thr Ala Val Lys Glu Leu Ser Tyr Tyr Ser Leu Glu Asp Leu Asn Asn
 305 310 315 320
 Lys Tyr Leu Tyr Ile Ala Val Thr Val Ile Glu Ser Thr Gly Gly Phe
 325 330 335
 Ser Glu Glu Ala Glu Ile Pro Gly Ile Lys Tyr Val Leu Ser Pro Tyr
 340 345 350
 Lys Leu Asn Leu Val Ala Thr Pro Leu Phe Leu Lys Pro Gly Ile Pro
 355 360 365

Tyr Ser Ile Lys Val Gln Val Lys Asp Ala Leu Asp Gln Leu Val Gly
 370 375 380
 Gly Val Pro Val Thr Leu Asn Ala Gln Thr Ile Asp Val Asn Gln Glu
 385 390 395 400
 Thr Ser Asp Leu Glu Pro Arg Lys Ser Val Thr Arg Val Asp Asp Gly
 405 410 415
 Val Ala Ser Phe Val Val Asn Leu Pro Ser Gly Val Thr Val Leu Glu
 420 425 430
 Phe Asn Val Lys Thr Asp Ala Pro Asp Leu Pro Asp Glu Asn Gln Ala
 435 440 445
 Arg Glu Gly Tyr Arg Ala Ile Ala Tyr Ser Ser Leu Ser Gln Ser Tyr
 450 455 460
 Leu Tyr Ile Asp Trp Thr Asp Asn His Lys Ala Leu Leu Val Gly Glu
 465 470 475 480
 Tyr Leu Asn Ile Ile Val Thr Pro Lys Ser Pro Tyr Ile Asp Lys Ile
 485 490 495
 Thr His Tyr Asn Tyr Leu Ile Leu Ser Lys Gly Lys Ile Ile His Phe
 500 505 510
 Gly Thr Arg Glu Lys Leu Ser Asp Ala Ser Tyr Gln Ser Ile Asn Ile
 515 520 525
 Pro Val Thr Gln Asn Met Val Pro Ser Ser Arg Leu Leu Val Tyr Tyr
 530 535 540
 Ile Val Thr Gly Glu Gln Thr Ala Glu Leu Val Ser Asp Ser Val Trp
 545 550 555 560
 Leu Asn Ile Glu Glu Lys Cys Gly Asn Gln Leu Gln Val His Leu Ser
 565 570 575
 Pro Asp Ala Asp Thr Tyr Ser Pro Gly Gln Thr Val Ser Leu Asn Met
 580 585 590
 Val Thr Gly Met Asp Ser Trp Val Ala Leu Thr Ala Val Asp Ser Ala
 595 600 605
 Val Tyr Gly Val Gln Arg Arg Ala Lys Lys Pro Leu Glu Arg Val Phe
 610 615 620
 Gln Phe Leu Glu Lys Ser Asp Leu Gly Cys Gly Ala Gly Gly Gly Leu
 625 630 635 640

Asn Asn Ala Asn Val Phe His Leu Ala Gly Leu Thr Phe Leu Thr Asn
 645 650 655
 Ala Asn Ala Asp Asp Ser Gln Glu Asn Asp Glu Pro Cys Lys Glu Ile
 660 665 670
 Ile Arg Pro Arg Arg Met Leu Gln Glu Lys Ile Glu Glu Ile Ala Ala
 675 680 685
 Lys Tyr Lys His Leu Val Val Lys Lys Cys Cys Tyr Asp Gly Val Arg
 690 695 700
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 705 710 715 720
 Gly Pro Arg Cys Val Lys Ala Phe Thr Glu Cys Cys Val Val Ala Ser
 725 730 735
 Gln Leu Arg Ala Asn Asn Ser His Lys Asp Leu Gln Leu Gly Arg Leu
 740 745 750
 His Met Lys Thr Leu Leu Pro Val Ser Lys Pro Glu Ile Arg Ser Tyr
 755 760 765
 Phe Pro Glu Ser Trp Leu Trp Glu Val His Leu Val Pro Arg Arg Lys
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 Gln Leu Gln Phe Ala Leu Pro Asp Ser Val Thr Thr Trp Glu Ile Gln
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 Ala Lys Val Phe Lys Asp Val Phe Leu Glu Met Asn Ile Pro Tyr Ser
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 Val Val Arg Gly Glu Gln Val Gln Leu Lys Gly Thr Val Tyr Asn Tyr
 835 840 845
 Arg Thr Ser Gly Met Gln Phe Cys Val Lys Met Ser Ala Val Glu Gly
 850 855 860
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 865 870 875 880
 Ser Lys Cys Val Arg Gln Lys Val Glu Gly Ser Ser Asn His Leu Val
 885 890 895
 Thr Phe Thr Val Leu Pro Leu Glu Ile Gly Leu Gln Asn Ile Asn Phe
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Ser Leu Glu Thr Ser Phe Gly Lys Glu Ile Leu Val Lys Ser Leu Arg
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Val Val Pro Glu Gly Val Lys Arg Glu Ser Tyr Ser Gly Ile Thr Leu
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Asp Pro Arg Gly Ile Tyr Gly Thr Ile Ser Arg Arg Lys Glu Phe Pro
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Tyr Arg Ile Pro Leu Asp Leu Val Pro Lys Thr Glu Ile Lys Arg Ile
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Leu Ser Val Lys Gly Leu Leu Val Gly Glu Ile Leu Ser Ala Val Leu
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Ser Arg Glu Gly Ile Asn Ile Leu Thr His Leu Pro Lys Gly Ser Ala
 995 1000 1005

Glu Ala Glu Leu Met Ser Val Val Pro Val Phe Tyr Val Phe His
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Tyr Leu Glu Thr Gly Asn His Trp Asn Ile Phe His Ser Asp Pro
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Leu Ile Glu Lys Arg Asn Leu Glu Lys Lys Leu Lys Glu Gly Met
 1040 1045 1050

Val Ser Ile Met Ser Tyr Arg Asn Ala Asp Tyr Ser Tyr Ser Val
 1055 1060 1065

Trp Lys Gly Gly Ser Ala Ser Thr Trp Leu Thr Ala Phe Ala Leu
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Arg Val Leu Gly Gln Val His Lys Tyr Val Glu Gln Asn Gln Asn
 1085 1090 1095

Ser Ile Cys Asn Ser Leu Leu Trp Leu Val Glu Asn Tyr Gln Leu
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Asp Asn Gly Ser Phe Lys Glu Asn Ser Gln Tyr Gln Pro Ile Lys
 1115 1120 1125

Leu Gln Gly Thr Leu Pro Val Glu Ala Arg Glu Asn Ser Leu Tyr
 1130 1135 1140

Leu Thr Ala Phe Thr Val Ile Gly Ile Arg Lys Ala Phe Asp Ile
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Cys Pro Leu Val Lys Ile Asn Thr Ala Leu Ile Lys Ala Asp Thr
 1160 1165 1170

Phe	Leu	Leu	Glu	Asn	Thr	Leu	Pro	Ala	Gln	Ser	Thr	Phe	Thr	Leu
	1175					1180					1185			
Ala	Ile	Ser	Ala	Tyr	Ala	Leu	Ser	Leu	Gly	Asp	Lys	Thr	His	Pro
	1190					1195					1200			
Gln	Phe	Arg	Ser	Ile	Val	Ser	Ala	Leu	Lys	Arg	Glu	Ala	Leu	Val
	1205					1210					1215			
Lys	Gly	Asn	Pro	Pro	Ile	Tyr	Arg	Phe	Trp	Lys	Asp	Ser	Leu	Gln
	1220					1225					1230			
His	Lys	Asp	Ser	Ser	Val	Pro	Asn	Thr	Gly	Thr	Ala	Arg	Met	Val
	1235					1240					1245			
Glu	Thr	Thr	Ala	Tyr	Ala	Leu	Leu	Thr	Ser	Leu	Asn	Leu	Lys	Asp
	1250					1255					1260			
Ile	Asn	Tyr	Val	Asn	Pro	Ile	Ile	Lys	Trp	Leu	Ser	Glu	Glu	Gln
	1265					1270					1275			
Arg	Tyr	Gly	Gly	Gly	Phe	Tyr	Ser	Thr	Gln	Asp	Thr	Ile	Asn	Ala
	1280					1285					1290			
Ile	Glu	Gly	Leu	Thr	Glu	Tyr	Ser	Leu	Leu	Val	Lys	Gln	Leu	Arg
	1295					1300					1305			
Leu	Asn	Met	Asp	Ile	Asp	Val	Ala	Tyr	Lys	His	Lys	Gly	Pro	Leu
	1310					1315					1320			
His	Asn	Tyr	Lys	Met	Thr	Asp	Lys	Asn	Phe	Leu	Gly	Arg	Pro	Val
	1325					1330					1335			
Glu	Val	Leu	Leu	Asn	Asp	Asp	Leu	Val	Val	Ser	Thr	Gly	Phe	Gly
	1340					1345					1350			
Ser	Gly	Leu	Ala	Thr	Val	His	Val	Thr	Thr	Val	Val	His	Lys	Thr
	1355					1360					1365			
Ser	Thr	Ser	Glu	Glu	Val	Cys	Ser	Phe	Tyr	Leu	Lys	Ile	Asp	Thr
	1370					1375					1380			
Gln	Asp	Ile	Glu	Ala	Ser	His	Tyr	Arg	Gly	Tyr	Gly	Asn	Ser	Asp
	1385					1390					1395			
Tyr	Lys	Arg	Ile	Val	Ala	Cys	Ala	Ser	Tyr	Lys	Pro	Ser	Lys	Glu
	1400					1405					1410			
Glu	Ser	Ser	Ser	Gly	Ser	Ser	His	Ala	Val	Met	Asp	Ile	Ser	Leu
	1415					1420					1425			

Pro Thr Gly Ile Asn Ala Asn Glu Glu Asp Leu Lys Ala Leu Val
 1430 1435 1440
 Glu Gly Val Asp Gln Leu Phe Thr Asp Tyr Gln Ile Lys Asp Gly
 1445 1450 1455
 His Val Ile Leu Gln Leu Asn Ser Ile Pro Ser Ser Asp Phe Leu
 1460 1465 1470
 Cys Val Arg Phe Arg Ile Phe Glu Leu Phe Glu Val Gly Phe Leu
 1475 1480 1485
 Ser Pro Ala Thr Phe Thr Val Tyr Glu Tyr His Arg Pro Asp Lys
 1490 1495 1500
 Gln Cys Thr Met Phe Tyr Ser Thr Ser Asn Ile Lys Ile Gln Lys
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 Val Cys Glu Gly Ala Thr Cys Lys Cys Ile Glu Ala Asp Cys Gly
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 Gln Met Gln Lys Glu Leu Asp Leu Thr Ile Ser Ala Glu Thr Arg
 1535 1540 1545
 Lys Gln Thr Ala Cys Asn Pro Glu Ile Ala Tyr Ala Tyr Lys Val
 1550 1555 1560
 Ile Ile Thr Ser Ile Thr Thr Glu Asn Val Phe Val Lys Tyr Lys
 1565 1570 1575
 Ala Thr Leu Leu Asp Ile Tyr Lys Thr Gly Glu Ala Val Ala Glu
 1580 1585 1590
 Lys Asp Ser Glu Ile Thr Phe Ile Lys Lys Val Thr Cys Thr Asn
 1595 1600 1605
 Ala Glu Leu Val Lys Gly Arg Gln Tyr Leu Ile Met Gly Lys Glu
 1610 1615 1620
 Ala Leu Gln Ile Lys Tyr Asn Phe Thr Phe Arg Tyr Ile Tyr Pro
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 Leu Asp Ser Leu Thr Trp Ile Glu Tyr Trp Pro Arg Asp Thr Thr
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Ser Ser Tyr Tyr Met Cys
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Ser Ser Tyr Tyr Met Asn

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Thr Tyr Ala Met Gly
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Gly Asn Ala Ile Asn
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Thr Tyr Ala Met Gly
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Ser Ser Tyr Tyr Val Ala
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Met Ile Tyr Gly Ser Gly Ala Thr Tyr Tyr Ala Ser Trp Ala Lys Gly
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Ile Ile Ser Phe Gly Gly Asp Ala Tyr Tyr Ala Ser Trp Ala Lys Gly
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Thr Ile Asp Thr Gly Asp Asn Ser Phe Tyr Ala Asn Trp Ala Lys Gly
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Cys Ile Tyr Thr Gly Ser Asp Thr Thr Tyr Tyr Ala Thr Trp Ala Lys
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Gly

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Ala Ile Tyr Thr Gly Ser Gly Ala Thr Tyr Lys Ala Ser Trp Ala Lys
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Gly

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Asp Gly Gly Tyr Val Thr Pro Thr His Ala Met Tyr Leu
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Asp Leu His Ala Gly Ile Thr Asn Leu
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Gln Ile Tyr Ser Gly Asp Asn Asn Asp Asn Phe
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Gln Ile Tyr Ser Gly Asp Asn Asn Asp Asn Phe
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Val Gly Ala Gly Asn Ile Phe Trp Tyr Phe Asp Leu
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Asn Asp Gly Ser Val Tyr Asn Leu Phe Asn Leu
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Asp Gly Gly Tyr Asp Tyr Pro Thr His Ala Met His Tyr
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Gln Ala Ser Gln Asn Ile Gly Ser Asp Leu Ala
1 5 10

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Gln Ala Ser Gln Asn Ile Tyr Ser Asn Leu Ala
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Gln Ser Ser Gln Ser Val Tyr Ser Ser Asp Tyr Leu Ser
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Gln Ala Ser Glu Ser Ile Ser Asn Trp Leu Ala
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Gln Ala Ser Gln Asn Ile Gly Ser Ser Leu Ala
 1 5 10

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Gly Ala Ser Lys Leu Ala Ser
 1 5

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Gly Ala Ser Asn Leu Glu Ser
 1 5

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Glu Ala Ser Lys Leu Ala Ser
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Arg Ala Ser Thr Leu Ala Ser
1 5

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Arg Ala Ser Thr Leu Ala Ser
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Ser Ala Ser Thr Leu Ala Ser
1 5

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Tyr Ala Ser Thr Leu Ala Ser
1 5

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His Thr Ser Asp Leu Ala Ser
 1 5

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Tyr Ala Ser Thr Leu Ala Ser
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Gly Ala Ser Lys Thr His Ser
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Gln Cys Thr Phe Val Gly Ser Ser Tyr Gly Asn Ala
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Leu Gln Gly Tyr Ser Tyr Ser Asn Val Asp Asp Ala
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Gln Gly Thr Tyr Tyr Ser Ser Gly Trp Tyr Phe Ala
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Gln Gln Asp Tyr Ser Ser Ser Asn Val Asp Asn Thr
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Gln Gln Asp Tyr Ser Ser Ser Asn Val Asp Asn Thr
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Gln Gln Tyr Tyr Ser Ser Thr Asn Val His Asn Ser
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Gln Gln Tyr Tyr Asp Ile Asn Ser Val Asp Asn Thr
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1 5 10 57

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

Val Gly Ser Ser Glu Asn Val Val Ile Gln Val His Gly Tyr Thr Glu
 35 40 45

Ala Phe Asp Ala Thr Leu Ser Leu Lys Ser Tyr Pro Asp Lys Lys Val
 50 55 60

Thr Phe Ser Ser Gly Tyr Val Asn Leu Ser ⁵⁸Pro Glu Asn Lys Phe Gln
 65 70 75 80
 Asn Ala Ala Leu Leu Thr Leu Gln Pro Asn Gln Val Pro Arg Glu Glu
 85 90 95
 Ser Pro Val Ser His Val Tyr Leu Glu Val Val Ser Lys His Phe Ser
 100 105 110
 Lys Ser Lys Lys Ile Pro Ile Thr Tyr Asn Asn Gly Ile Leu Phe Ile
 115 120 125
 His Thr Asp Lys Pro Val Tyr Thr Pro Asp Gln Ser Val Lys Ile Arg
 130 135 140
 Val Tyr Ser Leu Gly Asp Asp Leu Lys Pro Ala Lys Arg Glu Thr Val
 145 150 155 160
 Leu Thr Phe Ile Asp Pro Glu Gly Ser Glu Val Asp Ile Val Glu Glu
 165 170 175
 Asn Asp Tyr Thr Gly Ile Ile Ser Phe Pro Asp Phe Lys Ile Pro Ser
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 Asn Pro Lys Tyr Gly Val Trp Thr Ile Lys Ala Asn Tyr Lys Lys Asp
 195 200 205
 Phe Thr Thr Thr Gly Thr Ala Tyr Phe Glu Ile Lys Glu Tyr Val Leu
 210 215 220
 Pro Arg Phe Ser Val Ser Ile Glu Leu Glu Arg Thr Phe Ile Gly Tyr
 225 230 235 240
 Lys Asn Phe Lys Asn Phe Glu Ile Thr Val Lys Ala Arg Tyr Phe Tyr
 245 250 255
 Asn Lys Val Val Pro Asp Ala Glu Val Tyr Ala Phe Phe Gly Leu Arg
 260 265 270
 Glu Asp Ile Lys Asp Glu Glu Lys Gln Met Met His Lys Ala Thr Gln
 275 280 285
 Ala Ala Lys Leu Val Asp Gly Val Ala Gln Ile Ser Phe Asp Ser Glu
 290 295 300
 Thr Ala Val Lys Glu Leu Ser Tyr Asn Ser Leu Glu Asp Leu Asn Asn
 305 310 315 320
 Lys Tyr Leu Tyr Ile Ala Val Thr Val Thr Glu Ser Ser Gly Gly Phe
 325 330 335

Ser Glu Glu Ala Glu Ile Pro Gly Val Lys Tyr Val Leu Ser Pro Tyr
 340 345 59 350

Thr Leu Asn Leu Val Ala Thr Pro Leu Phe Val Lys Pro Gly Ile Pro
 355 360 365

Phe Ser Ile Lys Ala Gln Val Lys Asp Ser Leu Glu Gln Ala Val Gly
 370 375 380

Gly Val Pro Val Thr Leu Met Ala Gln Thr Val Asp Val Asn Gln Glu
 385 390 395 400

Thr Ser Asp Leu Glu Thr Lys Arg Ser Ile Thr His Asp Thr Asp Gly
 405 410 415

Val Ala Val Phe Val Leu Asn Leu Pro Ser Asn Val Thr Val Leu Lys
 420 425 430

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

Ser Lys Glu Tyr Glu Ala Val Ala Tyr Ser Ser Leu Ser Gln Ser Tyr
 450 455 460

Ile Tyr Ile Ala Trp Thr Glu Asn Tyr Lys Pro Met Leu Val Gly Glu
 465 470 475 480

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

Thr His Tyr Asn Tyr Leu Ile Leu Ser Lys Gly Lys Ile Val Gln Tyr
 500 505 510

Gly Thr Arg Glu Lys Leu Phe Ser Ser Thr Tyr Gln Asn Ile Asn Ile
 515 520 525

Pro Val Thr Gln Asn Met Val Pro Ser Ala Arg Leu Leu Val Tyr Tyr
 530 535 540

Ile Val Thr Gly Glu Gln Thr Ala Glu Leu Val Ala Asp Ala Val Trp
 545 550 555 560

Ile Asn Ile Glu Glu Lys Cys Gly Asn Gln Leu Gln Val His Leu Ser
 565 570 575

Pro Asp Glu Tyr Val Tyr Ser Pro Gly Gln Thr Val Ser Leu Asp Met
 580 585 590

Val Thr Glu Ala Asp Ser Trp Val Ala Leu Ser Ala Val Asp Arg Ala
 595 600 605

Val Tyr Lys Val Gln Gly Asn Ala Lys Arg Ala⁶⁰ Met Gln Arg Val Phe
610 615 620
Gln Ala Leu Asp Glu Lys Ser Asp Leu Gly Cys Gly Ala Gly Gly Gly
625 630 635 640
His Asp Asn Ala Asp Val Phe His Leu Ala Gly Leu Thr Phe Leu Thr
645 650 655
Asn Ala Asn Ala Asp Asp Ser His Tyr Arg Asp Asp Ser Cys Lys Glu
660 665 670
Ile Leu Arg Ser Lys Arg Asn Leu His Leu Leu Arg Gln Lys Ile Glu
675 680 685
Glu Gln Ala Ala Lys Tyr Lys His Ser Val Pro Lys Lys Cys Cys Tyr
690 695 700
Asp Gly Ala Arg Val Asn Phe Tyr Glu Thr Cys Glu Glu Arg Val Ala
705 710 715 720
Arg Val Thr Ile Gly Pro Leu Cys Ile Arg Ala Phe Asn Glu Cys Cys
725 730 735
Thr Ile Ala Asn Lys Ile Arg Lys Glu Ser Pro His Lys Pro Val Gln
740 745 750
Leu Gly Arg Ile His Ile Lys Thr Leu Leu Pro Val Met Lys Ala Asp
755 760 765
Ile Arg Ser Tyr Phe Pro Glu Ser Trp Leu Trp Glu Ile His Arg Val
770 775 780
Pro Lys Arg Lys Gln Leu Gln Val Thr Leu Pro Asp Ser Leu Thr Thr
785 790 795 800
Trp Glu Ile Gln Gly Ile Gly Ile Ser Asp Asn Gly Ile Cys Val Ala
805 810 815
Asp Thr Leu Lys Ala Lys Val Phe Lys Glu Val Phe Leu Glu Met Asn
820 825 830
Ile Pro Tyr Ser Val Val Arg Gly Glu Gln Ile Gln Leu Lys Gly Thr
835 840 845
Val Tyr Asn Tyr Met Thr Ser Gly Thr Lys Phe Cys Val Lys Met Ser
850 855 860
Ala Val Glu Gly Ile Cys Thr Ser Gly Ser Ser Ala Ala Ser Leu His
865 870 875 880

Thr Ser Arg Pro Ser Arg Cys Val Phe Gln Arg Ile Glu Gly Ser Ser
 885 890 895

Ser His Leu Val Thr Phe Thr Leu Leu Pro Leu Glu Ile Gly Leu His
 900 905 910

Ser Ile Asn Phe Ser Leu Glu Thr Ser Phe Gly Lys Asp Ile Leu Val
 915 920 925

Lys Thr Leu Arg Val Val Pro Glu Gly Val Lys Arg Glu Ser Tyr Ala
 930 935 940

Gly Val Ile Leu Asp Pro Lys Gly Ile Arg Gly Ile Val Asn Arg Arg
 945 950 955 960

Lys Glu Phe Pro Tyr Arg Ile Pro Leu Asp Leu Val Pro Lys Thr Lys
 965 970 975

Val Glu Arg Ile Leu Ser Val Lys Gly Leu Leu Val Gly Glu Phe Leu
 980 985 990

Ser Thr Val Leu Ser Lys Glu Gly Ile Asn Ile Leu Thr His Leu Pro
 995 1000 1005

Lys Gly Ser Ala Glu Ala Glu Leu Met Ser Ile Ala Pro Val Phe
 1010 1015 1020

Tyr Val Phe His Tyr Leu Glu Ala Gly Asn His Trp Asn Ile Phe
 1025 1030 1035

Tyr Pro Asp Thr Leu Ser Lys Arg Gln Ser Leu Glu Lys Lys Ile
 1040 1045 1050

Lys Gln Gly Val Val Ser Val Met Ser Tyr Arg Asn Ala Asp Tyr
 1055 1060 1065

Ser Tyr Ser Met Trp Lys Gly Ala Ser Ala Ser Thr Trp Leu Thr
 1070 1075 1080

Ala Phe Ala Leu Arg Val Leu Gly Gln Val Ala Lys Tyr Val Lys
 1085 1090 1095

Gln Asp Glu Asn Ser Ile Cys Asn Ser Leu Leu Trp Leu Val Glu
 1100 1105 1110

Lys Cys Gln Leu Glu Asn Gly Ser Phe Lys Glu Asn Ser Gln Tyr
 1115 1120 1125

Leu Pro Ile Lys Leu Gln Gly Thr Leu Pro Ala Glu Ala Gln Glu
 1130 1135 1140

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Lys	Thr	Leu	Tyr	Leu	Thr	Ala	Phe	Ser	Val	Ile	Gly	Ile	Arg	Lys
1145						1150					1155			
Ala	Val	Asp	Ile	Cys	Pro	Thr	Met	Lys	Ile	His	Thr	Ala	Leu	Asp
1160						1165					1170			
Lys	Ala	Asp	Ser	Phe	Leu	Leu	Glu	Asn	Thr	Leu	Pro	Ser	Lys	Ser
1175						1180					1185			
Thr	Phe	Thr	Leu	Ala	Ile	Val	Ala	Tyr	Ala	Leu	Ser	Leu	Gly	Asp
1190						1195					1200			
Arg	Thr	His	Pro	Arg	Phe	Arg	Leu	Ile	Val	Ser	Ala	Leu	Arg	Lys
1205						1210					1215			
Glu	Ala	Phe	Val	Lys	Gly	Asp	Pro	Pro	Ile	Tyr	Arg	Tyr	Trp	Arg
1220						1225					1230			
Asp	Thr	Leu	Lys	Arg	Pro	Asp	Ser	Ser	Val	Pro	Ser	Ser	Gly	Thr
1235						1240					1245			
Ala	Gly	Met	Val	Glu	Thr	Thr	Ala	Tyr	Ala	Leu	Leu	Ala	Ser	Leu
1250						1255					1260			
Lys	Leu	Lys	Asp	Met	Asn	Tyr	Ala	Asn	Pro	Ile	Ile	Lys	Trp	Leu
1265						1270					1275			
Ser	Glu	Glu	Gln	Arg	Tyr	Gly	Gly	Gly	Phe	Tyr	Ser	Thr	Gln	Asp
1280						1285					1290			
Thr	Ile	Asn	Ala	Ile	Glu	Gly	Leu	Thr	Glu	Tyr	Ser	Leu	Leu	Leu
1295						1300					1305			
Lys	Gln	Ile	His	Leu	Asp	Met	Asp	Ile	Asn	Val	Ala	Tyr	Lys	His
1310						1315					1320			
Glu	Gly	Asp	Phe	His	Lys	Tyr	Lys	Val	Thr	Glu	Lys	His	Phe	Leu
1325						1330					1335			
Gly	Arg	Pro	Val	Glu	Val	Ser	Leu	Asn	Asp	Asp	Leu	Val	Val	Ser
1340						1345					1350			
Thr	Gly	Tyr	Ser	Ser	Gly	Leu	Ala	Thr	Val	Tyr	Val	Lys	Thr	Val
1355						1360					1365			
Val	His	Lys	Ile	Ser	Val	Ser	Glu	Glu	Phe	Cys	Ser	Phe	Tyr	Leu
1370						1375					1380			
Lys	Ile	Asp	Thr	Gln	Asp	Ile	Glu	Ala	Ser	Ser	His	Phe	Arg	Leu
1385						1390					1395			

Ser Asp Ser Gly Phe Lys Arg Ile Ile Ala⁶³ Cys Ala Ser Tyr Lys
 1400 1405 1410
 Pro Ser Lys Glu Glu Ser Thr Ser Gly Ser Ser His Ala Val Met
 1415 1420 1425
 Asp Ile Ser Leu Pro Thr Gly Ile Gly Ala Asn Glu Glu Asp Leu
 1430 1435 1440
 Arg Ala Leu Val Glu Gly Val Asp Gln Leu Leu Thr Asp Tyr Gln
 1445 1455
 Ile Lys Asp Gly His Val Ile Leu Gln Leu Asn Ser Ile Pro Ser
 1460 1465 1470
 Arg Asp Phe Leu Cys Val Arg Phe Arg Ile Phe Glu Leu Phe Gln
 1475 1480 1485
 Val Gly Phe Leu Asn Pro Ala Thr Phe Thr Val Tyr Glu Tyr His
 1490 1495 1500
 Arg Pro Asp Lys Gln Cys Thr Met Ile Tyr Ser Ile Ser Asp Thr
 1505 1510 1515
 Arg Leu Gln Lys Val Cys Glu Gly Ala Ala Cys Thr Cys Val Glu
 1520 1525 1530
 Ala Asp Cys Ala Gln Leu Gln Ala Glu Val Asp Leu Ala Ile Ser
 1535 1540 1545
 Ala Asp Ser Arg Lys Glu Lys Ala Cys Lys Pro Glu Thr Ala Tyr
 1550 1555 1560
 Ala Tyr Lys Val Arg Ile Thr Ser Ala Thr Glu Glu Asn Val Phe
 1565 1570 1575
 Val Lys Tyr Thr Ala Thr Leu Leu Val Thr Tyr Lys Thr Gly Glu
 1580 1585 1590
 Ala Ala Asp Glu Asn Ser Glu Val Thr Phe Ile Lys Lys Met Ser
 1595 1600 1605
 Cys Thr Asn Ala Asn Leu Val Lys Gly Lys Gln Tyr Leu Ile Met
 1610 1615 1620
 Gly Lys Glu Val Leu Gln Ile Lys His Asn Phe Ser Phe Lys Tyr
 1625 1630 1635
 Ile Tyr Pro Leu Asp Ser Ser Thr Trp Ile Glu Tyr Trp Pro Thr
 1640 1645 1650

Asp Thr Thr Cys Pro Ser Cys Gln Ala Phe Val Glu Asn Leu Asn
 1655 1660 1665 64

Asn Phe Ala Glu Asp Leu Phe Leu Asn Ser Cys Glu
 1670 1675 1680

<210> 106
 <211> 123
 <212> PRT
 <213> Artificial sequence

<220>
 <223> An artificially synthesized sequence

<400> 106

Gln Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Arg
 1 5 10 15

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

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

Val Gly Ala Ile Phe Thr Gly Ser Gly Ala Glu Tyr Lys Ala Glu Trp
 50 55 60

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

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

Cys Ala Ser Asp Ala Gly Tyr Asp Tyr Pro Thr His Ala Met His Tyr
 100 105 110

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

<210> 107
 <211> 123
 <212> PRT
 <213> Artificial sequence

<220>
 <223> An artificially synthesized sequence

<400> 107

Gln Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Arg
 1 5 10 15

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

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

<210> 108
 <211> 123
 <212> PRT
 <213> Artificial sequence
 <220>
 <223> An artificially synthesized sequence
 <400> 108

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

<210> 109
 <211> 123

<212> PRT
 <213> Artificial sequence
 <220>
 <223> An artificially synthesized sequence
 <400> 109

Gln 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 His Ser Ser
 20 25 30

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

Val Gly Ala Ile Phe Thr Gly Ser Gly Ala Glu Tyr Lys Ala Glu Trp
 50 55 60

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

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

Cys Ala Ser Asp Ala Gly Tyr Asp Tyr Pro Thr His Ala Met His Tyr
 100 105 110

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

<210> 110
 <211> 123
 <212> PRT
 <213> Artificial sequence

<220>
 <223> An artificially synthesized sequence
 <400> 110

Gln 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 His Ser Ser
 20 25 30

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

Val Ser Gly Ile Phe Thr Gly Ser Gly Ala Thr Tyr Lys Ala Glu Trp
 50 55 60

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

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

Cys Ala Ser Asp Ala Gly Tyr Asp Tyr Pro Thr His Ala Met His Tyr
100 105 110

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

<210> 111
<211> 110
<212> PRT
<213> Artificial sequence

<220>
<223> An artificially synthesized sequence

<400> 111

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

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

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

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

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

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

Tyr Gly Asn Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
100 105 110

<210> 112
<211> 110
<212> PRT
<213> Artificial sequence

<220>
<223> An artificially synthesized sequence

<400> 112

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

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

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

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

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

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

Tyr Gly Asn Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
 100 105 110

<210> 113
 <211> 110
 <212> PRT
 <213> Artificial sequence

<220>
 <223> An artificially synthesized sequence

<400> 113

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

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

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

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

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

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

Tyr Gly Asn Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
 100 105 110

<210> 114
 <211> 328
 <212> PRT
 <213> Artificial sequence

<220>
 <223> An artificially synthesized sequence

<400> 114

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

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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 Leu His Glu Ala Leu His Ala His Tyr Thr
 305 310 315 320

Arg Lys Glu Leu Ser Leu Ser Pro
 325

<210> 115
 <211> 325
 <212> PRT
 <213> Artificial sequence

<220>
 <223> An artificially synthesized sequence

<400> 115

Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Cys Ser Arg
 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 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 Arg Arg Gly Pro Lys 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 His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp
 145 150 155 160

Gly Val Glu Val His Asn Ala Lys Thr Lys⁷¹ Pro Arg Glu Glu Gln Tyr
 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 Arg 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
 Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser
 290 295 300
 Cys Ser Val Leu His Glu Ala Leu His Ala His Tyr Thr Arg Lys Glu
 305 310 315 320
 Leu Ser Leu Ser Pro
 325

<210> 116
 <211> 325
 <212> PRT
 <213> Artificial sequence
 <220>
 <223> An artificially synthesized sequence
 <400> 116

Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Cys Ser Arg
 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

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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 Arg Arg Gly Pro Lys 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 His Glu Asp Pro Glu Val Lys 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 Tyr
 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 Arg 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 Gln Gly Asn Val Phe Ser
 290 295 300
 Cys Ser Val Leu His Glu Ala Leu His Ala His Tyr Thr Arg Lys Glu
 305 310 315 320
 Leu Ser Leu Ser Pro
 325

<210> 117
 <211> 6
 <212> PRT
 <213> Artificial sequence

<220>
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 <400> 117

Ser Ser Tyr Tyr Met Ala
 1 5

<210> 118
 <211> 17
 <212> PRT
 <213> Artificial sequence

<220>
 <223> An artificially synthesized sequence
 <400> 118

Ala Ile Phe Thr Gly Ser Gly Ala Glu Tyr Lys Ala Glu Trp Ala Lys
 1 5 10 15

Gly

<210> 119
 <211> 17
 <212> PRT
 <213> Artificial sequence

<220>
 <223> An artificially synthesized sequence
 <400> 119

Ala Ile Phe Thr Gly Ser Gly Ala Glu Tyr Lys Ala Glu Trp Val Lys
 1 5 10 15

Gly

<210> 120
 <211> 17
 <212> PRT
 <213> Artificial sequence

<220>
 <223> An artificially synthesized sequence
 <400> 120

Gly Ile Phe Thr Gly Ser Gly Ala Thr Tyr Lys Ala Glu Trp Ala Lys
 1 5 10 15

Gly

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

<220>
 <223> An artificially synthesized sequence
 <400> 121

Asp Ala Gly Tyr Asp Tyr Pro Thr His Ala Met His Tyr
 1 5 10

<210> 122
 <211> 11
 <212> PRT
 <213> Artificial sequence

<220>
 <223> An artificially synthesized sequence
 <400> 122

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

<210> 123
 <211> 7
 <212> PRT
 <213> Artificial sequence

<220>
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 <400> 123

Gly Ala Ser Glu Thr Glu Ser
 1 5

<210> 124
 <211> 7
 <212> PRT
 <213> Artificial sequence

<220>
 <223> An artificially synthesized sequence
 <400> 124

Gly Ala Ser Thr Thr Gln Ser
 1 5

<210> 125
 <211> 12
 <212> PRT
 <213> Artificial sequence

<220>
 <223> An artificially synthesized sequence
 <400> 125

Gln Asn Thr Lys Val Gly Ser Ser Tyr Gly Asn Thr
 1 5 10 75

<210> 126
 <211> 6
 <212> PRT
 <213> Artificial sequence

<220>
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<220>
 <221> misc_feature
 <222> (5)..(5)
 <223> Xaa is Met or Val

<220>
 <221> misc_feature
 <222> (6)..(6)
 <223> Xaa is Cys or Ala

<400> 126

Ser Ser Tyr Tyr Xaa Xaa
 1 5

<210> 127
 <211> 17
 <212> PRT
 <213> Artificial sequence

<220>
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<220>
 <221> misc_feature
 <222> (1)..(1)
 <223> xaa is Cys, Ala or Gly

<220>
 <221> misc_feature
 <222> (3)..(3)
 <223> xaa is Tyr or Phe

<220>
 <221> misc_feature
 <222> (9)..(9)
 <223> xaa is Thr, Asp or Glu

<220>
 <221> misc_feature
 <222> (11)..(11)
 <223> xaa is Tyr, Lys or Gln

<220>
 <221> misc_feature
 <222> (13)..(13)
 <223> xaa is Ser, Asp or Glu

<220>
 <221> misc_feature
 <222> (15)..(15)
 <223> xaa is Ala or Val

<400> 127

Xaa Ile Xaa Thr Gly Ser Gly Ala Xaa Tyr Xaa Ala Xaa Trp Xaa Lys
 1 5 10 15

Gly

<210> 128

<211> 13

<212> PRT

<213> Artificial sequence

<220>

<223> An artificially synthesized sequence

<220>

<221> misc_feature

<222> (2)..(2)

<223> Xaa is Gly or Ala

<220>

<221> misc_feature

<222> (5)..(5)

<223> Xaa is Val, Gln or Asp

<220>

<221> misc_feature

<222> (6)..(6)

<223> Xaa is Thr or Tyr

<220>

<221> misc_feature

<222> (12)..(12)

<223> Xaa is Tyr or His

<220>

<221> misc_feature

<222> (13)..(13)

<223> Xaa is Leu or Tyr

<400> 128

Asp Xaa Gly Tyr Xaa Xaa Pro Thr His Ala Met Xaa Xaa
 1 5 10

<210> 129

<211> 11

<212> PRT

<213> Artificial sequence

<220>

<223> An artificially synthesized sequence

<220>

<221> misc_feature

<222> (1)..(1)

<223> Xaa is Gln or Arg

<220>

<221> misc_feature

<222> (5)..(5)

<223> Xaa is Asn, Gln or Gly

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<220>
 <221> misc_feature
 <222> (7)..(7)
 <223> Xaa is Gly or Ser

<220>
 <221> misc_feature
 <222> (9)..(9)
 <223> Xaa is Asp, Lys or Ser

<400> 129

Xaa Ala Ser Gln Xaa Ile Xaa Ser Xaa Leu Ala
 1 5 10

<210> 130
 <211> 7
 <212> PRT
 <213> Artificial sequence

<220>
 <223> An artificially synthesized sequence

<220>
 <221> misc_feature
 <222> (4)..(4)
 <223> Xaa is Lys, Glu or Thr

<220>
 <221> misc_feature
 <222> (5)..(5)
 <223> Xaa is Leu or Thr

<220>
 <221> misc_feature
 <222> (6)..(6)
 <223> Xaa is Ala, His, Glu or Gln

<400> 130

Gly Ala Ser Xaa Xaa Xaa Ser
 1 5

<210> 131
 <211> 12
 <212> PRT
 <213> Artificial sequence

<220>
 <223> An artificially synthesized sequence

<220>
 <221> misc_feature
 <222> (2)..(2)
 <223> Xaa is Ser, Cys, Asn or Thr

<220>
 <221> misc_feature
 <222> (4)..(4)
 <223> Xaa is Phe or Lys

<220>
 <221> misc_feature

<222> (12)..(12)
 <223> Xaa is Ala, Thr or His

<400> 131

Gln Xaa Thr Xaa Val Gly Ser Ser Tyr Gly Asn Xaa
 1 5 10

<210> 132
 <211> 30
 <212> PRT
 <213> Artificial sequence

<220>
 <223> An artificially synthesized sequence

<400> 132

Gln 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 Ser His
 20 25 30

<210> 133
 <211> 30
 <212> PRT
 <213> Artificial sequence

<220>
 <223> An artificially synthesized sequence

<400> 133

Gln Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Arg
 1 5 10 15

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

<210> 134
 <211> 30
 <212> PRT
 <213> Artificial sequence

<220>
 <223> An artificially synthesized sequence

<400> 134

Gln 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 His
 20 25 30

<210> 135
 <211> 14
 <212> PRT
 <213> Artificial sequence

<220>

<223> An artificially synthesized sequence

<400> 135

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

<210> 136

<211> 14

<212> PRT

<213> Artificial sequence

<220>

<223> An artificially synthesized sequence

<400> 136

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

<210> 137

<211> 32

<212> PRT

<213> Artificial sequence

<220>

<223> An artificially synthesized sequence

<400> 137

Arg Phe Thr Ile Ser Lys Asp Thr Ser Lys Asn Gln Val Val Leu Thr
 1 5 10 15

Met Thr Asn Met Asp Pro Val Asp Thr Ala Thr Tyr Tyr Cys Ala Ser
 20 25 30

<210> 138

<211> 32

<212> PRT

<213> Artificial sequence

<220>

<223> An artificially synthesized sequence

<400> 138

Arg Val Thr Ile Ser Lys Asp Thr Ser Lys Asn Gln Val Val Leu Thr
 1 5 10 15

Met Thr Asn Met Asp Pro Val Asp Thr Ala Thr Tyr Tyr Cys Ala Ser
 20 25 30

<210> 139

<211> 32

<212> PRT

<213> Artificial sequence

<220>

<223> An artificially synthesized sequence

<400> 139

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

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

<210> 140
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<400> 140

Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
 1 5 10

<210> 141
 <211> 11
 <212> PRT
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<220>
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<400> 141

Trp Gly Arg Gly Thr Leu Val Thr Val Ser Ser
 1 5 10

<210> 142
 <211> 23
 <212> PRT
 <213> Artificial sequence

<220>
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<400> 142

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

Asp Arg Val Thr Ile Thr Cys
 20

<210> 143
 <211> 23
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<400> 143

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

Asp Arg Val Thr Ile Thr Cys
20

<210> 144
<211> 15
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Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile Tyr
1 5 10 15

<210> 145
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<212> PRT
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<220>
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Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile Tyr
1 5 10 15

<210> 146
<211> 32
<212> PRT
<213> Artificial sequence

<220>
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<400> 146

Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr
1 5 10 15

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

<210> 147
<211> 32
<212> PRT
<213> Artificial sequence

<220>
<223> An artificially synthesized sequence
<400> 147

Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr
1 5 10 15

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

<210> 148
 <211> 10
 <212> PRT
 <213> Artificial sequence

<220>
 <223> An artificially synthesized sequence

<400> 148

Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
 1 5 10

<210> 149
 <211> 448
 <212> PRT
 <213> Artificial sequence

<220>
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<400> 149

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

Ser Val Lys Val Ser Cys Lys Ala Ser Gly His Ile Phe Ser Asn Tyr
 20 25 30

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

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

Lys Asp Arg Val Thr Met Thr Arg Asp Thr Ser Thr Ser Thr Val Tyr
 65 70 75 80

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

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

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

Ser Val Phe Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser Thr
 130 135 140

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

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

Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr
 180 185 190
 Val Pro Ser Ser Asn Phe Gly Thr Gln Thr Tyr Thr Cys Asn Val Asp
 195 200 205
 His Lys Pro Ser Asn Thr Lys Val Asp Lys Thr Val Glu Arg Lys Cys
 210 215 220
 Cys Val Glu Cys Pro Pro Cys Pro Ala Pro Pro Val Ala Gly Pro Ser
 225 230 235 240
 Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg
 245 250 255
 Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser Gln Glu Asp Pro
 260 265 270
 Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala
 275 280 285
 Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Tyr Arg Val Val
 290 295 300
 Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr
 305 310 315 320
 Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr
 325 330 335
 Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu
 340 345 350
 Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys
 355 360 365
 Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser
 370 375 380
 Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp
 385 390 395 400
 Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser
 405 410 415
 Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser Val Leu His Glu Ala
 420 425 430
 Leu His Ser His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys
 435 440 445

<210> 150
 <211> 214
 <212> PRT
 <213> Artificial sequence

<220>
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<400> 150

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

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

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

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

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

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

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

Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu Gln Leu Lys Ser Gly
 115 120 125

Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe Tyr Pro Arg Glu Ala
 130 135 140

Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln Ser Gly Asn Ser Gln
 145 150 155 160

Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr Tyr Ser Leu Ser
 165 170 175

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

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

Phe Asn Arg Gly Glu Cys
 210