SEQUENCE LISTING

<110> THE UNITED STATES OF AMERICA, AS REPRESENTED BY THE SECRETARY, DEPARTMENT OF HEALTH AND HUMAN SERVICES

<120> ANTI-MUTATED KRAS T CELL RECEPTORS

<130> 722261

<150> US 62/171,321
<151> 2015-06-05

<150> US 62/084,654
<151> 2014-11-26

<160> 209

<170> PatentIn version 3.5

<210> 1
<211> 189
<212> PRT
<213> Homo sapiens

<400> 1

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Met Thr Glu Tyr Lys Leu Val Val Val Gly Ala Asp Gly Val Gly Lys
1               5                   10                  15


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


Asp Pro Thr Ile Glu Asp Ser Tyr Arg Lys Gln Val Val Ile Asp Gly
        35                  40                  45


Glu Thr Cys Leu Leu Asp Ile Leu Asp Thr Ala Gly Gln Glu Glu Tyr
    50                  55                  60


Ser Ala Met Arg Asp Gln Tyr Met Arg Thr Gly Glu Gly Phe Leu Cys
65                  70                  75                  80


Val Phe Ala Ile Asn Asn Thr Lys Ser Phe Glu Asp Ile His His Tyr
                85                  90                  95
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Arg Glu Gln Ile Lys Arg Val Lys Asp Ser Glu Asp Val Pro Met Val
            100                 105                 110


Leu Val Gly Asn Lys Cys Asp Leu Pro Ser Arg Thr Val Asp Thr Lys
        115                 120                 125


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


Ser Ala Lys Thr Arg Gln Arg Val Glu Asp Ala Phe Tyr Thr Leu Val
145                 150                 155                 160


Arg Glu Ile Arg Gln Tyr Arg Leu Lys Lys Ile Ser Lys Glu Glu Lys
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Thr Pro Gly Cys Val Lys Ile Lys Lys Cys Ile Ile Met
            180                 185


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<400>  2

Val Val Val Gly Ala Asp Gly Val Gly Lys
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<210>  3
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<400>  3

Thr Ile Tyr Ser Asn Pro Phe
1               5


<210>  4
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<213>  Mus musculus
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<400> 4

Ser Phe Thr Asp Asn Lys Arg
1 5

<210> 5
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<400> 5

Cys Ala Leu Arg Gly Asn Ala Gly Ala Lys Leu Thr Phe
1 5 10

<210> 6
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Leu Gly His Asp Thr
1 5

<210> 7
<211> 6
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<400> 7

Tyr Asn Asn Lys Gln Leu
1 5

<210> 8
<211> 15
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<213> Mus musculus

<400> 8

Cys Ala Ser Ser Ser Arg Asp Trp Ser Ala Glu Thr Leu Tyr Phe
1 5 10 15

<210> 9
<211> 135
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<213> Mus musculus

<400> 9

Met Arg Pro Val Thr Cys Ser Val Leu Val Leu Leu Leu Met Leu Arg
1   5   10   15

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

Thr Leu Thr Glu Gly Leu Pro Val Met Leu Asn Cys Thr Tyr Gln Thr
        35   40   45

Ile Tyr Ser Asn Pro Phe Leu Phe Trp Tyr Val Gln His Leu Asn Glu
    50   55   60

Ser Pro Arg Leu Leu Leu Lys Ser Phe Thr Asp Asn Lys Arg Thr Glu
65   70   75   80

His Gln Gly Phe His Ala Thr Leu His Lys Ser Ser Ser Ser Phe His
                85   90   95

Leu Gln Lys Ser Ser Ala Gln Leu Ser Asp Ser Ala Leu Tyr Tyr Cys
            100   105   110

Ala Leu Arg Gly Asn Ala Gly Ala Lys Leu Thr Phe Gly Gly Gly Thr
        115   120   125

Arg Leu Thr Val Arg Pro Asp
    130   135

<210> 10
<211> 134
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<213> Mus musculus

<400> 10

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Met Gly Cys Arg Leu Leu Ser Cys Val Ala Phe Cys Leu Leu Gly Ile
1               5                   10                  15


Gly Pro Leu Glu Thr Ala Val Phe Gln Thr Pro Asn Tyr His Val Thr
            20                  25                  30


Gln Val Gly Asn Glu Val Ser Phe Asn Cys Lys Gln Thr Leu Gly His
        35                  40                  45


Asp Thr Met Tyr Trp Tyr Lys Gln Asp Ser Lys Lys Leu Leu Lys Ile
    50                  55                  60


Met Phe Ser Tyr Asn Asn Lys Gln Leu Ile Val Asn Glu Thr Val Pro
65                  70                  75                  80


Arg Arg Phe Ser Pro Gln Ser Ser Asp Lys Ala His Leu Asn Leu Arg
                85                  90                  95


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


Ser Ser Arg Asp Trp Ser Ala Glu Thr Leu Tyr Phe Gly Ser Gly Thr
        115                 120                 125


Arg Leu Thr Val Leu Glu
    130


<210>  11
<211>  271
<212>  PRT
<213>  Mus musculus

<400>  11

Met Arg Pro Val Thr Cys Ser Val Leu Val Leu Leu Leu Met Leu Arg
1               5                   10                  15


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

```
Thr Leu Thr Glu Gly Leu Pro Val Met Leu Asn Cys Thr Tyr Gln Thr
        35                  40                  45

Ile Tyr Ser Asn Pro Phe Leu Phe Trp Tyr Val Gln His Leu Asn Glu
    50                  55                  60

Ser Pro Arg Leu Leu Leu Lys Ser Phe Thr Asp Asn Lys Arg Thr Glu
65                  70                  75                  80

His Gln Gly Phe His Ala Thr Leu His Lys Ser Ser Ser Ser Phe His
                85                  90                  95

Leu Gln Lys Ser Ser Ala Gln Leu Ser Asp Ser Ala Leu Tyr Tyr Cys
            100                 105                 110

Ala Leu Arg Gly Asn Ala Gly Ala Lys Leu Thr Phe Gly Gly Gly Thr
        115                 120                 125

Arg Leu Thr Val Arg Pro Asp Ile Gln Asn Pro Glu Pro Ala Val Tyr
    130                 135                 140

Gln Leu Lys Asp Pro Arg Ser Gln Asp Ser Thr Leu Cys Leu Phe Thr
145                 150                 155                 160

Asp Phe Asp Ser Gln Ile Asn Val Pro Lys Thr Met Glu Ser Gly Thr
                165                 170                 175

Phe Ile Thr Asp Lys Thr Val Leu Asp Met Lys Ala Met Asp Ser Lys
            180                 185                 190

Ser Asn Gly Ala Ile Ala Trp Ser Asn Gln Thr Ser Phe Thr Cys Gln
        195                 200                 205

Asp Ile Phe Lys Glu Thr Asn Ala Thr Tyr Pro Ser Ser Asp Val Pro
    210                 215                 220
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```
Cys Asp Ala Thr Leu Thr Glu Lys Ser Phe Glu Thr Asp Met Asn Leu
225                 230                 235                 240


Asn Phe Gln Asn Leu Ser Val Met Gly Leu Arg Ile Leu Leu Leu Lys
                245                 250                 255


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


<210>  12
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<212>  PRT
<213>  Mus musculus

<400>  12

Met Gly Cys Arg Leu Leu Ser Cys Val Ala Phe Cys Leu Leu Gly Ile
1               5                   10                  15


Gly Pro Leu Glu Thr Ala Val Phe Gln Thr Pro Asn Tyr His Val Thr
            20                  25                  30


Gln Val Gly Asn Glu Val Ser Phe Asn Cys Lys Gln Thr Leu Gly His
        35                  40                  45


Asp Thr Met Tyr Trp Tyr Lys Gln Asp Ser Lys Lys Leu Leu Lys Ile
    50                  55                  60


Met Phe Ser Tyr Asn Asn Lys Gln Leu Ile Val Asn Glu Thr Val Pro
65                  70                  75                  80


Arg Arg Phe Ser Pro Gln Ser Ser Asp Lys Ala His Leu Asn Leu Arg
                85                  90                  95


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


Ser Ser Arg Asp Trp Ser Ala Glu Thr Leu Tyr Phe Gly Ser Gly Thr
        115                 120                 125
```

```
Arg Leu Thr Val Leu Glu Asp Leu Arg Asn Val Thr Pro Pro Lys Val
    130                 135                 140

Ser Leu Phe Glu Pro Ser Lys Ala Glu Ile Ala Asn Lys Gln Lys Ala
145                 150                 155                 160

Thr Leu Val Cys Leu Ala Arg Gly Phe Phe Pro Asp His Val Glu Leu
                165                 170                 175

Ser Trp Trp Val Asn Gly Lys Glu Val His Ser Gly Val Ser Thr Asp
            180                 185                 190

Pro Gln Ala Tyr Lys Glu Ser Asn Tyr Ser Tyr Cys Leu Ser Ser Arg
        195                 200                 205

Leu Arg Val Ser Ala Thr Phe Trp His Asn Pro Arg Asn His Phe Arg
    210                 215                 220

Cys Gln Val Gln Phe His Gly Leu Ser Glu Glu Asp Lys Trp Pro Glu
225                 230                 235                 240

Gly Ser Pro Lys Pro Val Thr Gln Asn Ile Ser Ala Glu Ala Trp Gly
                245                 250                 255

Arg Ala Asp Cys Gly Ile Thr Ser Ala Ser Tyr His Gln Gly Val Leu
            260                 265                 270

Ser Ala Thr Ile Leu Tyr Glu Ile Leu Leu Gly Lys Ala Thr Leu Tyr
        275                 280                 285

Ala Val Leu Val Ser Gly Leu Val Leu Met Ala Met Val Lys Lys Lys
    290                 295                 300

Asn Ser
305
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<210> 13

<211> 136
<212> PRT
<213> Mus musculus

<400> 13

Ile Gln Asn Pro Glu Pro Ala Val Tyr Gln Leu Lys Asp Pro Arg Ser
1 5 10 15

Gln Asp Ser Thr Leu Cys Leu Phe Thr Asp Phe Asp Ser Gln Ile Asn
20 25 30

Val Pro Lys Thr Met Glu Ser Gly Thr Phe Ile Thr Asp Lys Thr Val
35 40 45

Leu Asp Met Lys Ala Met Asp Ser Lys Ser Asn Gly Ala Ile Ala Trp
50 55 60

Ser Asn Gln Thr Ser Phe Thr Cys Gln Asp Ile Phe Lys Glu Thr Asn
65 70 75 80

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

Lys Ser Phe Glu Thr Asp Met Asn Leu Asn Phe Gln Asn Leu Ser Val
100 105 110

Met Gly Leu Arg Ile Leu Leu Leu Lys Val Ala Gly Phe Asn Leu Leu
115 120 125

Met Thr Leu Arg Leu Trp Ser Ser
130 135

<210> 14
<211> 172
<212> PRT
<213> Mus musculus

<400> 14

Asp Leu Arg Asn Val Thr Pro Pro Lys Val Ser Leu Phe Glu Pro Ser

```
1               5                   10                  15

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

Arg Gly Phe Phe Pro Asp His Val Glu Leu Ser Trp Trp Val Asn Gly
        35                  40                  45

Lys Glu Val His Ser Gly Val Ser Thr Asp Pro Gln Ala Tyr Lys Glu
    50                  55                  60

Ser Asn Tyr Ser Tyr Cys Leu Ser Ser Arg Leu Arg Val Ser Ala Thr
65                  70                  75                  80

Phe Trp His Asn Pro Arg Asn His Phe Arg Cys Gln Val Gln Phe His
                85                  90                  95

Gly Leu Ser Glu Glu Asp Lys Trp Pro Glu Gly Ser Pro Lys Pro Val
            100                 105                 110

Thr Gln Asn Ile Ser Ala Glu Ala Trp Gly Arg Ala Asp Cys Gly Ile
        115                 120                 125

Thr Ser Ala Ser Tyr His Gln Gly Val Leu Ser Ala Thr Ile Leu Tyr
    130                 135                 140

Glu Ile Leu Leu Gly Lys Ala Thr Leu Tyr Ala Val Leu Val Ser Gly
145                 150                 155                 160

Leu Val Leu Met Ala Met Val Lys Lys Lys Asn Ser
                165                 170
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<210> 15
<211> 403
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 15
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gatggagact ccgtgaccca gacagaaggc ctggtcactc tcacagaagg gttgcctgtg 120

atgctgaact gcacctatca gactatttac tcaaatcctt tccttttctg gtatgtgcaa 180

catctcaatg aatcccctcg gctactcctg aagagcttca cagacaacaa gaggaccgag 240

caccaagggt tccacgccac tctccataag agcagcagct ccttccatct gcagaagtcc 300

tcagcgcagc tgtcagactc tgccctgtac tactgtgctc tgaggggaa tgcaggtgcc 360

aagctcacat tcggaggggg aacaaggtta acggtcagac ccg 403

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<211> 400
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 16
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acggctgttt tccagactcc aaactatcat gtcacacagg tgggaaatga agtgtctttc 120

aattgtaagc aaactctggg ccacgatact atgtattggt acaagcaaga ctctaagaaa 180

ttgctgaaga ttatgtttag ctacaataat aagcaactca ttgtaaacga aacagttcca 240

aggcgcttct cacctcagtc ttcagataaa gctcatttga atcttcgaat caagtctgta 300

gagccggagg actctgctgt gtatctctgt gccagcagct cccgggactg gagtgcagaa 360

acgctgtatt ttggctcagg aaccagactg actgttctcg 400

<210> 17
<211> 816
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 17

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gatggagact ccgtgaccca gacagaaggc ctggtcactc tcacagaagg gttgcctgtg 120

atgctgaact gcacctatca gactatttac tcaaatcctt tccttttctg gtatgtgcaa 180

catctcaatg aatcccctcg gctactcctg aagagcttca cagacaacaa gaggaccgag 240

caccaagggt tccacgccac tctccataag agcagcagct ccttccatct gcagaagtcc 300

tcagcgcagc tgtcagactc tgccctgtac tactgtgctc tgaggggggaa tgcaggtgcc 360

aagctcacat tcggaggggg aacaaggtta acggtcagac ccgacatcca gaacccagaa 420

cctgctgtgt accagttaaa agatcctcgg tctcaggaca gcaccctctg cctgttcacc 480

gactttgact cccaaatcaa tgtgccgaaa accatggaat ctggaacgtt catcactgac 540

aaaactgtgc tggacatgaa agctatggat tccaagagca atggggccat tgcctggagc 600

aaccagacaa gcttcacctg ccaagatatc ttcaaagaga ccaacgccac ctaccccagt 660

tcagacgttc cctgtgatgc cacgttgact gagaaaagct ttgaaacaga tatgaaccta 720

aactttcaaa acctgtcagt tatgggactc cgaatcctcc tgctgaaagt agccggattt 780

aacctgctca tgacgctgag gctgtggtcc agttga 816

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<211> 921
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 18
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acggctgttt tccagactcc aaactatcat gtcacacagg tgggaaatga agtgtctttc 120

aattgtaagc aaactctggg ccacgatact atgtattggt acaagcaaga ctctaagaaa 180

ttgctgaaga ttatgtttag ctacaataat aagcaactca ttgtaaacga aacagttcca 240

aggcgcttct cacctcagtc ttcagataaa gctcatttga atcttcgaat caagtctgta 300

gagccggagg actctgctgt gtatctctgt gccagcagct cccgggactg gagtgcagaa 360

acgctgtatt ttggctcagg aaccagactg actgttctcg aggatctgag aaatgtgact 420

ccacccaagg tctccttgtt tgagccatca aaagcagaga ttgcaaacaa acaaaaggct 480

accctcgtgt gcttggccag gggcttcttc cctgaccacg tggagctgag ctggtgggtg 540

aatggcaagg aggtccacag tggggtcagc acggaccctc aggcctacaa ggagagcaat 600

tatagctact gcctgagcag ccgcctgagg gtctctgcta ccttctggca caatcctcga 660

aaccacttcc gctgccaagt gcagttccat gggctttcag aggaggacaa gtggccagag 720

ggctcaccca aacctgtcac acagaacatc agtgcagagg cctggggccg agcagactgt 780

ggaatcactt cagcatccta tcatcagggg gttctgtctg caaccatcct ctatgagatc 840

ctactgggga aggccaccct atatgctgtg ctggtcagtg gcctggtgct gatggccatg 900

gtcaagaaaa aaaattcctg a 921

<210> 19
<211> 413
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 19
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ccctctgcct gttcaccgac tttgactccc aaatcaatgt gccgaaaacc atggaatctg 120

gaacgttcat cactgacaaa actgtgctgg acatgaaagc tatggattcc aagagcaatg 180

gggccattgc ctggagcaac cagacaagct tcacctgcca agatatcttc aaagagacca 240

acgccaccta ccccagttca gacgttccct gtgatgccac gttgactgag aaaagctttg 300

aaacagatat gaacctaaac tttcaaaacc tgtcagttat gggactccga atcctcctgc 360

tgaaagtagc cggatttaac ctgctcatga cgctgaggct gtggtccagt tga 413

<210> 20
<211> 521
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 20
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ttgcaaacaa acaaaaggct accctcgtgt gcttggccag gggcttcttc cctgaccacg 120

tggagctgag ctggtgggtg aatggcaagg aggtccacag tggggtcagc acggaccctc 180

aggcctacaa ggagagcaat tatagctact gcctgagcag ccgcctgagg gtctctgcta 240

ccttctggca caatcctcga aaccacttcc gctgccaagt gcagttccat gggctttcag 300

aggaggacaa gtggccagag ggctcaccca aacctgtcac acagaacatc agtgcagagg 360

cctggggccg agcagactgt ggaatcactt cagcatccta tcatcagggg gttctgtctg 420

caaccatcct ctatgagatc ctactgggga aggccaccct atatgctgtg ctggtcagtg 480

gcctagtgct gatggccatg gtcaagaaaa aaaattcctg a   521

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<211> 1815
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 21
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gatggagact ccgtgaccca gacagaaggc ctggtcactc tcacagaagg gttgcctgtg 120

atgctgaact gcacctatca gactatttac tcaaatcctt tccttttctg gtatgtgcaa 180

catctcaatg aatcccctcg gctactcctg aagagcttca cagacaacaa gaggaccgag 240

caccaagggt tccacgccac tctccataag agcagcagct ccttccatct gcagaagtcc 300

tcagcgcagc tgtcagactc tgccctgtac tactgtgctc tgaggggggaa tgcaggtgcc 360

aagctcacat tcggaggggg aacaaggtta acggtcagac ccgacatcca gaacccagaa 420

cctgctgtgt accagttaaa agatcctcgg tctcaggaca gcaccctctg cctgttcacc 480

gactttgact cccaaatcaa tgtgccgaaa accatggaat ctggaacgtt catcactgac 540

aaaactgtgc tggacatgaa agctatggat tccaagagca atggggccat tgcctggagc 600

aaccagacaa gcttcacctg ccaagatatc ttcaaagaga ccaacgccac ctaccccagt 660

tcagacgttc cctgtgatgc cacgttgact gagaaaagct ttgaaacaga tatgaaccta 720

aactttcaaa acctgtcagt tatgggactc cgaatcctcc tgctgaaagt agccggattt 780

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gaggactctg ctgtgtatct ctgtgccagc agctcccggg actggagtgc agaaacgctg 1260

tattttggct caggaaccag actgactgtt ctcgaggatc tgagaaatgt gactccaccc 1320

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tactgcctga gcagccgcct gagggtctct gctaccttct ggcacaatcc tcgaaaccac 1560

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cccaaacctg tcacacagaa catcagtgca gaggcctggg gccgagcaga ctgtggaatc 1680

acttcagcat cctatcatca gggggttctg tctgcaacca tcctctatga gatcctactg 1740

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aaaaaaaatt cctga 1815

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<220>
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<400> 22
actatttact caaatccttt c 21

<210> 23
<211> 21
<212> DNA
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<220>
<223> Synthetic

<400> 23
agcttcacag acaacaagag g 21

<210> 24
<211> 33
<212> DNA
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<220>
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<400> 24
gctctgaggg ggaatgcagg tgccaagctc aca 33

<210> 25
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<212> DNA
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<400> 25
ctgggccacg atact 15

<210> 26
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<213> Artificial Sequence

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<400> 26
tacaataata agcaactc 18

<210> 27
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<212> DNA
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<400> 27
gccagcagct cccgggactg gagtgcagaa acgctgtat 39

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

<220>
<223> Synthetic

<400> 28

Arg Ala Lys Arg Ser Gly Ser Gly Ala Thr Asn Phe Ser Leu Leu Lys
1 5 10 15

Gln Ala Gly Asp Val Glu Glu Asn Pro Gly Pro
20 25

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

<400> 29

Met Thr Glu Tyr Lys Leu Val Val Val Gly Ala Gly Gly Val Gly Lys
1 5 10 15

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

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Asp Pro Thr Ile Glu Asp Ser Tyr Arg Lys Gln Val Val Ile Asp Gly
        35                  40                  45

Glu Thr Cys Leu Leu Asp Ile Leu Asp Thr Ala Gly Gln Glu Glu Tyr
    50                  55                  60

Ser Ala Met Arg Asp Gln Tyr Met Arg Thr Gly Glu Gly Phe Leu Cys
65                  70                  75                  80

Val Phe Ala Ile Asn Asn Thr Lys Ser Phe Glu Asp Ile His His Tyr
                85                  90                  95

Arg Glu Gln Ile Lys Arg Val Lys Asp Ser Glu Asp Val Pro Met Val
            100                 105                 110

Leu Val Gly Asn Lys Cys Asp Leu Pro Ser Arg Thr Val Asp Thr Lys
        115                 120                 125

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

Ser Ala Lys Thr Arg Gln Arg Val Glu Asp Ala Phe Tyr Thr Leu Val
145                 150                 155                 160

Arg Glu Ile Arg Gln Tyr Arg Leu Lys Lys Ile Ser Lys Glu Glu Lys
                165                 170                 175

Thr Pro Gly Cys Val Lys Ile Lys Lys Cys Ile Ile Met
            180                 185
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<210> 30
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<400> 30

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Val Val Val Gly Ala Gly Gly Val Gly Lys
1               5                   10
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<210> 31
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Val Val Gly Ala Gly Gly Val Gly Lys
1   5

<210> 32
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<213> Homo sapiens

<400> 32

Met Thr Glu Tyr Lys Leu Val Val Val Gly Ala Val Gly Val Gly Lys
1   5   10   15

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

Asp Pro Thr Ile Glu Asp Ser Tyr Arg Lys Gln Val Val Ile Asp Gly
        35   40   45

Glu Thr Cys Leu Leu Asp Ile Leu Asp Thr Ala Gly Gln Glu Glu Tyr
    50   55   60

Ser Ala Met Arg Asp Gln Tyr Met Arg Thr Gly Glu Gly Phe Leu Cys
65   70   75   80

Val Phe Ala Ile Asn Asn Thr Lys Ser Phe Glu Asp Ile His His Tyr
                85   90   95

Arg Glu Gln Ile Lys Arg Val Lys Asp Ser Glu Asp Val Pro Met Val
            100   105   110

Leu Val Gly Asn Lys Cys Asp Leu Pro Ser Arg Thr Val Asp Thr Lys
        115   120   125

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


Ser Ala Lys Thr Arg Gln Arg Val Glu Asp Ala Phe Tyr Thr Leu Val
145                 150                 155                 160


Arg Glu Ile Arg Gln Tyr Arg Leu Lys Lys Ile Ser Lys Glu Glu Lys
                165                 170                 175


Thr Pro Gly Cys Val Lys Ile Lys Lys Cys Ile Ile Met
            180                 185
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<210> 33
<211> 10
<212> PRT
<213> Homo sapiens

<400> 33

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Val Val Val Gly Ala Val Gly Val Gly Lys
1               5                   10
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<210> 34
<211> 9
<212> PRT
<213> Homo sapiens

<400> 34

```
Val Val Gly Ala Asp Gly Val Gly Lys
1               5
```

<210> 35
<211> 9
<212> PRT
<213> Homo sapiens

<400> 35

```
Val Val Gly Ala Val Gly Val Gly Lys
1               5
```

<210> 36
<211> 9
<212> PRT
<213> Homo sapiens

<400> 36

Val Val Gly Ala Cys Gly Val Gly Lys
1 5

<210> 37
<211> 10
<212> PRT
<213> Homo sapiens

<400> 37

Val Val Val Gly Ala Cys Gly Val Gly Lys
1 5 10

<210> 38
<211> 9
<212> PRT
<213> Homo sapiens

<400> 38

Val Val Gly Ala Arg Gly Val Gly Lys
1 5

<210> 39
<211> 10
<212> PRT
<213> Homo sapiens

<400> 39

Val Val Val Gly Ala Arg Gly Val Gly Lys
1 5 10

<210> 40
<211> 16
<212> PRT
<213> Mus musculus

<400> 40

Cys Ala Met Arg Glu Asp Thr Gly Ala Asn Thr Gly Lys Leu Thr Phe
1 5 10 15

<210> 41
<211> 15
<212> PRT
<213> Mus musculus

<400> 41

Cys Ala Ser Ser Gln Asp Ser Leu Gly Arg Ala Glu Gln Phe Phe
1 5 10 15

<210> 42
<211> 15
<212> PRT
<213> Mus musculus

<400> 42

Cys Ala Ser Ser Ser Asp Trp Gly Gly Ala Glu Thr Leu Tyr Phe
1 5 10 15

<210> 43
<211> 16
<212> PRT
<213> Mus musculus

<400> 43

Cys Ala Ser Ser Ser Gly Leu Gly Ser Ser Ala Glu Thr Leu Tyr Phe
1 5 10 15

<210> 44
<211> 81
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 44
cgggccaagc ggtccggatc cggagccacc aacttcagcc tgctgaagca ggccggcgac 60

gtggaggaga accccggccc c 81

<210> 45
<211> 604
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 45

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Met Arg Pro Val Thr Cys Ser Val Leu Val Leu Leu Leu Met Leu Arg
1               5                   10                  15


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


Thr Leu Thr Glu Gly Leu Pro Val Met Leu Asn Cys Thr Tyr Gln Thr
        35                  40                  45


Ile Tyr Ser Asn Pro Phe Leu Phe Trp Tyr Val Gln His Leu Asn Glu
    50                  55                  60


Ser Pro Arg Leu Leu Leu Lys Ser Phe Thr Asp Asn Lys Arg Thr Glu
65                  70                  75                  80


His Gln Gly Phe His Ala Thr Leu His Lys Ser Ser Ser Ser Phe His
                85                  90                  95


Leu Gln Lys Ser Ser Ala Gln Leu Ser Asp Ser Ala Leu Tyr Tyr Cys
            100                 105                 110


Ala Leu Arg Gly Asn Ala Gly Ala Lys Leu Thr Phe Gly Gly Gly Thr
        115                 120                 125


Arg Leu Thr Val Arg Pro Asp Ile Gln Asn Pro Glu Pro Ala Val Tyr
    130                 135                 140


Gln Leu Lys Asp Pro Arg Ser Gln Asp Ser Thr Leu Cys Leu Phe Thr
145                 150                 155                 160
```

```
Asp Phe Asp Ser Gln Ile Asn Val Pro Lys Thr Met Glu Ser Gly Thr
                165                 170                 175

Phe Ile Thr Asp Lys Thr Val Leu Asp Met Lys Ala Met Asp Ser Lys
            180                 185                 190

Ser Asn Gly Ala Ile Ala Trp Ser Asn Gln Thr Ser Phe Thr Cys Gln
        195                 200                 205

Asp Ile Phe Lys Glu Thr Asn Ala Thr Tyr Pro Ser Ser Asp Val Pro
    210                 215                 220

Cys Asp Ala Thr Leu Thr Glu Lys Ser Phe Glu Thr Asp Met Asn Leu
225                 230                 235                 240

Asn Phe Gln Asn Leu Ser Val Met Gly Leu Arg Ile Leu Leu Leu Lys
                245                 250                 255

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

Ala Lys Arg Ser Gly Ser Gly Ala Thr Asn Phe Ser Leu Leu Lys Gln
        275                 280                 285

Ala Gly Asp Val Glu Glu Asn Pro Gly Pro Met Gly Cys Arg Leu Leu
    290                 295                 300

Ser Cys Val Ala Phe Cys Leu Leu Gly Ile Gly Pro Leu Glu Thr Ala
305                 310                 315                 320

Val Phe Gln Thr Pro Asn Tyr His Val Thr Gln Val Gly Asn Glu Val
                325                 330                 335

Ser Phe Asn Cys Lys Gln Thr Leu Gly His Asp Thr Met Tyr Trp Tyr
            340                 345                 350
```

```
Lys Gln Asp Ser Lys Lys Leu Leu Lys Ile Met Phe Ser Tyr Asn Asn
        355                 360                 365

Lys Gln Leu Ile Val Asn Glu Thr Val Pro Arg Arg Phe Ser Pro Gln
    370                 375                 380

Ser Ser Asp Lys Ala His Leu Asn Leu Arg Ile Lys Ser Val Glu Pro
385                 390                 395                 400

Glu Asp Ser Ala Val Tyr Leu Cys Ala Ser Ser Ser Arg Asp Trp Ser
                405                 410                 415

Ala Glu Thr Leu Tyr Phe Gly Ser Gly Thr Arg Leu Thr Val Leu Glu
            420                 425                 430

Asp Leu Arg Asn Val Thr Pro Pro Lys Val Ser Leu Phe Glu Pro Ser
        435                 440                 445

Lys Ala Glu Ile Ala Asn Lys Gln Lys Ala Thr Leu Val Cys Leu Ala
    450                 455                 460

Arg Gly Phe Phe Pro Asp His Val Glu Leu Ser Trp Trp Val Asn Gly
465                 470                 475                 480

Lys Glu Val His Ser Gly Val Ser Thr Asp Pro Gln Ala Tyr Lys Glu
                485                 490                 495

Ser Asn Tyr Ser Tyr Cys Leu Ser Ser Arg Leu Arg Val Ser Ala Thr
            500                 505                 510

Phe Trp His Asn Pro Arg Asn His Phe Arg Cys Gln Val Gln Phe His
        515                 520                 525

Gly Leu Ser Glu Glu Asp Lys Trp Pro Glu Gly Ser Pro Lys Pro Val
    530                 535                 540

Thr Gln Asn Ile Ser Ala Glu Ala Trp Gly Arg Ala Asp Cys Gly Ile
545                 550                 555                 560
```

```
Thr Ser Ala Ser Tyr His Gln Gly Val Leu Ser Ala Thr Ile Leu Tyr
                565                 570                 575


Glu Ile Leu Leu Gly Lys Ala Thr Leu Tyr Ala Val Leu Val Ser Gly
            580                 585                 590


Leu Val Leu Met Ala Met Val Lys Lys Lys Asn Ser
        595                 600


<210>  46
<211>  13
<212>  PRT
<213>  Artificial Sequence

<220>
<223>  Synthetic


<220>
<221>  MISC_FEATURE
<222>  (2)..(2)
<223>  Xaa is Arg, Asn, Asp, Cys, Glu, Gln, Gly, His, Ile, Leu, Lys,
       Met, Phe, Pro, Ser, Thr, Trp, Tyr, or Val.

<400>  46

Cys Xaa Leu Arg Gly Asn Ala Gly Ala Lys Leu Thr Phe
1               5                   10


<210>  47
<211>  13
<212>  PRT
<213>  Artificial Sequence

<220>
<223>  Synthetic


<220>
<221>  MISC_FEATURE
<222>  (3)..(3)
<223>  Xaa is Ala, Arg, Asn, Asp, Cys, Glu, Gln, Gly, His, Ile, Lys,
       Met, Phe, Pro, Ser, Thr, Trp, Tyr, or Val.
```

<400> 47

Cys Ala Xaa Arg Gly Asn Ala Gly Ala Lys Leu Thr Phe
1 5 10

<210> 48
<211> 13
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<220>
<221> MISC_FEATURE
<222> (4)..(4)
<223> Xaa is Ala, Asn, Asp, Cys, Glu, Gln, Gly, His, Ile, Leu, Lys, Met, Phe, Pro, Ser, Thr, Trp, Tyr, or Val.

<400> 48

Cys Ala Leu Xaa Gly Asn Ala Gly Ala Lys Leu Thr Phe
1 5 10

<210> 49
<211> 13
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<220>
<221> MISC_FEATURE
<222> (5)..(5)
<223> Xaa is Ala, Arg, Asn, Asp, Cys, Glu, Gln, His, Ile, Leu, Lys, Met, Phe, Pro, Ser, Thr, Trp, Tyr, or Val.

<400> 49

Cys Ala Leu Arg Xaa Asn Ala Gly Ala Lys Leu Thr Phe
1 5 10

<210> 50
<211> 13

<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<220>
<221> MISC_FEATURE
<222> (6)..(6)
<223> Xaa is Ala, Arg, Asp, Cys, Glu, Gln, Gly, His, Ile, Leu, Lys,
       Met, Phe, Pro, Ser, Thr, Trp, Tyr, or Val.

<400> 50

Cys Ala Leu Arg Gly Xaa Ala Gly Ala Lys Leu Thr Phe
1   5   10

<210> 51
<211> 13
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<220>
<221> MISC_FEATURE
<222> (7)..(7)
<223> Xaa is Arg, Asn, Asp, Cys, Glu, Gln, Gly, His, Ile, Leu, Lys,
       Met, Phe, Pro, Ser, Thr, Trp, Tyr, or Val.

<400> 51

Cys Ala Leu Arg Gly Asn Xaa Gly Ala Lys Leu Thr Phe
1   5   10

<210> 52
<211> 13
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<220>

<221> MISC_FEATURE
<222> (8)..(8)
<223> Xaa is Ala, Arg, Asn, Asp, Cys, Glu, Gln, His, Ile, Leu, Lys, Met, Phe, Pro, Ser, Thr, Trp, Tyr, or Val.

<400> 52

Cys Ala Leu Arg Gly Asn Ala Xaa Ala Lys Leu Thr Phe
1 5 10

<210> 53
<211> 13
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<220>
<221> MISC_FEATURE
<222> (9)..(9)
<223> Xaa is Arg, Asn, Asp, Cys, Glu, Gln, Gly, His, Ile, Leu, Lys, Met, Phe, Pro, Ser, Thr, Trp, Tyr, or Val.

<400> 53

Cys Ala Leu Arg Gly Asn Ala Gly Xaa Lys Leu Thr Phe
1 5 10

<210> 54
<211> 13
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<220>
<221> MISC_FEATURE
<222> (10)..(10)
<223> Xaa is Ala, Arg, Asn, Asp, Cys, Glu, Gln, Gly, His, Ile, Leu, Met, Phe, Pro, Ser, Thr, Trp, Tyr, or Val.

<400> 54

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

1 5 10

<210> 55
<211> 13
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<220>
<221> MISC_FEATURE
<222> (11)..(11)
<223> Xaa is Ala, Arg, Asn, Asp, Cys, Glu, Gln, Gly, His, Ile, Lys, Met, Phe, Pro, Ser, Thr, Trp, Tyr, or Val.

<400> 55

Cys Ala Leu Arg Gly Asn Ala Gly Ala Lys Xaa Thr Phe
1 5 10

<210> 56
<211> 13
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<220>
<221> MISC_FEATURE
<222> (12)..(12)
<223> Xaa is Ala, Arg, Asn, Asp, Cys, Glu, Gln, Gly, His, Ile, Leu, Lys, Met, Phe, Pro, Ser, Trp, Tyr, or Val.

<400> 56

Cys Ala Leu Arg Gly Asn Ala Gly Ala Lys Leu Xaa Phe
1 5 10

<210> 57
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<220>
<221> MISC_FEATURE
<222> (2)..(2)
<223> Xaa is Arg, Asn, Asp, Cys, Glu, Gln, Gly, His, Ile, Leu, Lys,
       Met, Phe, Pro, Ser, Thr, Trp, Tyr, or Val.

<400> 57

Cys Xaa Ser Ser Ser Arg Asp Trp Ser Ala Glu Thr Leu Tyr Phe
1   5   10   15

<210> 58
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<220>
<221> MISC_FEATURE
<222> (3)..(3)
<223> Xaa is Ala, Arg, Asn, Asp, Cys, Glu, Gln, Gly, His, Ile, Leu,
       Lys, Met, Phe, Pro, Thr, Trp, Tyr, or Val.

<400> 58

Cys Ala Xaa Ser Ser Arg Asp Trp Ser Ala Glu Thr Leu Tyr Phe
1   5   10   15

<210> 59
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<220>
<221> MISC_FEATURE
<222> (4)..(4)
<223> Xaa is Ala, Arg, Asn, Asp, Cys, Glu, Gln, Gly, His, Ile, Leu,

Lys, Met, Phe, Pro, Thr, Trp, Tyr, or Val.

<400> 59

Cys Ala Ser Xaa Ser Arg Asp Trp Ser Ala Glu Thr Leu Tyr Phe
1 5 10 15

<210> 60
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<220>
<221> MISC_FEATURE
<222> (5)..(5)
<223> Xaa is Ala, Arg, Asn, Asp, Cys, Glu, Gln, Gly, His, Ile, Leu, Lys, Met, Phe, Pro, Thr, Trp, Tyr, or Val.

<400> 60

Cys Ala Ser Ser Xaa Arg Asp Trp Ser Ala Glu Thr Leu Tyr Phe
1 5 10 15

<210> 61
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<220>
<221> MISC_FEATURE
<222> (6)..(6)
<223> Xaa is Ala, Asn, Asp, Cys, Glu, Gln, Gly, His, Ile, Leu, Lys, Met, Phe, Pro, Ser, Thr, Trp, Tyr, or Val,

<400> 61

Cys Ala Ser Ser Ser Xaa Asp Trp Ser Ala Glu Thr Leu Tyr Phe
1 5 10 15

<210> 62
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<220>
<221> MISC_FEATURE
<222> (7)..(7)
<223> Xaa is Ala, Arg, Asn, Cys, Glu, Gln, Gly, His, Ile, Leu, Lys, Met, Phe, Pro, Ser, Thr, Trp, Tyr, or Val.

<400> 62

Cys Ala Ser Ser Ser Arg Xaa Trp Ser Ala Glu Thr Leu Tyr Phe
1 5 10 15

<210> 63
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<220>
<221> MISC_FEATURE
<222> (8)..(8)
<223> Xaa is Ala, Arg, Asn, Asp, Cys, Glu, Gln, Gly, His, Ile, Leu, Lys, Met, Phe, Pro, Ser, Thr, Tyr, or Val.

<400> 63

Cys Ala Ser Ser Ser Arg Asp Xaa Ser Ala Glu Thr Leu Tyr Phe
1 5 10 15

<210> 64
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<220>
<221> MISC_FEATURE
<222> (9)..(9)
<223> Xaa is Ala, Arg, Asn, Asp, Cys, Glu, Gln, Gly, His, Ile, Leu,
Lys, Met, Phe, Pro, Thr, Trp, Tyr, or Val.

<400> 64

Cys Ala Ser Ser Ser Arg Asp Trp Xaa Ala Glu Thr Leu Tyr Phe
1 5 10 15

<210> 65
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<220>
<221> MISC_FEATURE
<222> (10)..(10)
<223> Xaa is Arg, Asn, Asp, Cys, Glu, Gln, Gly, His, Ile, Leu, Lys,
Met, Phe, Pro, Ser, Thr, Trp, Tyr, or Val.

<400> 65

Cys Ala Ser Ser Ser Arg Asp Trp Ser Xaa Glu Thr Leu Tyr Phe
1 5 10 15

<210> 66
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<220>
<221> MISC_FEATURE
<222> (11)..(11)
<223> Xaa is Ala, Arg, Asn, Asp, Cys, Gln, Gly, His, Ile, Leu, Lys,
Met, Phe, Pro, Ser, Thr, Trp, Tyr, or Val.

<400> 66

Cys Ala Ser Ser Ser Arg Asp Trp Ser Ala Xaa Thr Leu Tyr Phe
1 5 10 15

<210> 67
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<220>
<221> MISC_FEATURE
<222> (12)..(12)
<223> Xaa is Ala, Arg, Asn, Asp, Cys, Glu, Gln, Gly, His, Ile, Leu, Lys, Met, Phe, Pro, Ser, Trp, Tyr, or Val.

<400> 67

Cys Ala Ser Ser Ser Arg Asp Trp Ser Ala Glu Xaa Leu Tyr Phe
1 5 10 15

<210> 68
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<220>
<221> MISC_FEATURE
<222> (13)..(13)
<223> Xaa is Ala, Arg, Asn, Asp, Cys, Glu, Gln, Gly, His, Ile, Lys, Met, Phe, Pro, Ser, Thr, Trp, Tyr, or Val.

<400> 68

Cys Ala Ser Ser Ser Arg Asp Trp Ser Ala Glu Thr Xaa Tyr Phe
1 5 10 15

<210> 69
<211> 15
<212> PRT

<213> Artificial Sequence

<220>
<223> Synthetic

<220>
<221> MISC_FEATURE
<222> (14)..(14)
<223> Xaa is Ala, Arg, Asn, Asp, Cys, Glu, Gln, Gly, His, Ile, Leu, Lys, Met, Phe, Pro, Ser, Thr, Trp, or Val.

<400> 69

Cys Ala Ser Ser Ser Arg Asp Trp Ser Ala Glu Thr Leu Xaa Phe
1 5 10 15

<210> 70
<211> 135
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<220>
<221> MISC_FEATURE
<222> (113)..(113)
<223> Xaa is Arg, Asn, Asp, Cys, Glu, Gln, Gly, His, Ile, Leu, Lys, Met, Phe, Pro, Ser, Thr, Trp, Tyr, or Val.

<400> 70

Met Arg Pro Val Thr Cys Ser Val Leu Val Leu Leu Leu Met Leu Arg
1 5 10 15

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

Thr Leu Thr Glu Gly Leu Pro Val Met Leu Asn Cys Thr Tyr Gln Thr
35 40 45

Ile Tyr Ser Asn Pro Phe Leu Phe Trp Tyr Val Gln His Leu Asn Glu
50 55 60

```
Ser Pro Arg Leu Leu Leu Lys Ser Phe Thr Asp Asn Lys Arg Thr Glu
65                  70                  75                  80


His Gln Gly Phe His Ala Thr Leu His Lys Ser Ser Ser Ser Phe His
                85                  90                  95


Leu Gln Lys Ser Ser Ala Gln Leu Ser Asp Ser Ala Leu Tyr Tyr Cys
            100                 105                 110


Xaa Leu Arg Gly Asn Ala Gly Ala Lys Leu Thr Phe Gly Gly Gly Thr
        115                 120                 125


Arg Leu Thr Val Arg Pro Asp
    130                 135


<210>  71
<211>  135
<212>  PRT
<213>  Artificial Sequence

<220>
<223>  Synthetic


<220>
<221>  MISC_FEATURE
<222>  (114)..(114)
<223>  Xaa is Ala, Arg, Asn, Asp, Cys, Glu, Gln, Gly, His, Ile, Lys,
       Met, Phe, Pro, Ser, Thr, Trp, Tyr, or val.

<400>  71

Met Arg Pro Val Thr Cys Ser Val Leu Val Leu Leu Leu Met Leu Arg
1               5                   10                  15


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


Thr Leu Thr Glu Gly Leu Pro Val Met Leu Asn Cys Thr Tyr Gln Thr
        35                  40                  45
```

```
Ile Tyr Ser Asn Pro Phe Leu Phe Trp Tyr Val Gln His Leu Asn Glu
    50                  55                  60

Ser Pro Arg Leu Leu Leu Lys Ser Phe Thr Asp Asn Lys Arg Thr Glu
65                  70                  75                  80

His Gln Gly Phe His Ala Thr Leu His Lys Ser Ser Ser Ser Phe His
                85                  90                  95

Leu Gln Lys Ser Ser Ala Gln Leu Ser Asp Ser Ala Leu Tyr Tyr Cys
            100                 105                 110

Ala Xaa Arg Gly Asn Ala Gly Ala Lys Leu Thr Phe Gly Gly Gly Thr
        115                 120                 125

Arg Leu Thr Val Arg Pro Asp
    130                 135
```

<210> 72
<211> 135
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<220>
<221> MISC_FEATURE
<222> (115)..(115)
<223> Xaa is Ala, Asn, Asp, Cys, Glu, Gln, Gly, His, Ile, Leu, Lys, Met, Phe, Pro, Ser, Thr, Trp, Tyr, or Val.

<400> 72

```
Met Arg Pro Val Thr Cys Ser Val Leu Val Leu Leu Leu Met Leu Arg
1               5                   10                  15

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

Thr Leu Thr Glu Gly Leu Pro Val Met Leu Asn Cys Thr Tyr Gln Thr
```

```
        35                  40                  45

Ile Tyr Ser Asn Pro Phe Leu Phe Trp Tyr Val Gln His Leu Asn Glu
    50                  55                  60

Ser Pro Arg Leu Leu Leu Lys Ser Phe Thr Asp Asn Lys Arg Thr Glu
65                  70                  75                  80

His Gln Gly Phe His Ala Thr Leu His Lys Ser Ser Ser Ser Phe His
                85                  90                  95

Leu Gln Lys Ser Ser Ala Gln Leu Ser Asp Ser Ala Leu Tyr Tyr Cys
            100                 105                 110

Ala Leu Xaa Gly Asn Ala Gly Ala Lys Leu Thr Phe Gly Gly Gly Thr
        115                 120                 125

Arg Leu Thr Val Arg Pro Asp
    130                 135


<210>  73
<211>  135
<212>  PRT
<213>  Artificial Sequence

<220>
<223>  Synthetic


<220>
<221>  MISC_FEATURE
<222>  (116)..(116)
<223>  Xaa is Ala, Arg, Asn, Asp, Cys, Glu, Gln, His, Ile, Leu, Lys,
       Met, Phe, Pro, Ser, Thr, Trp, Tyr, or Val.

<400>  73

Met Arg Pro Val Thr Cys Ser Val Leu Val Leu Leu Leu Met Leu Arg
1               5                   10                  15

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

```
Thr Leu Thr Glu Gly Leu Pro Val Met Leu Asn Cys Thr Tyr Gln Thr
        35                  40                  45

Ile Tyr Ser Asn Pro Phe Leu Phe Trp Tyr Val Gln His Leu Asn Glu
    50                  55                  60

Ser Pro Arg Leu Leu Leu Lys Ser Phe Thr Asp Asn Lys Arg Thr Glu
65                  70                  75                  80

His Gln Gly Phe His Ala Thr Leu His Lys Ser Ser Ser Ser Phe His
                85                  90                  95

Leu Gln Lys Ser Ser Ala Gln Leu Ser Asp Ser Ala Leu Tyr Tyr Cys
            100                 105                 110

Ala Leu Arg Xaa Asn Ala Gly Ala Lys Leu Thr Phe Gly Gly Gly Thr
        115                 120                 125

Arg Leu Thr Val Arg Pro Asp
    130                 135
```

<210> 74
<211> 135
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<220>
<221> MISC_FEATURE
<222> (117)..(117)
<223> Xaa is Ala, Arg, Asp, Cys, Glu, Gln, Gly, His, Ile, Leu, Lys, Met, Phe, Pro, Ser, Thr, Trp, Tyr, or Val.

<400> 74

```
Met Arg Pro Val Thr Cys Ser Val Leu Val Leu Leu Leu Met Leu Arg
1               5                   10                  15
```

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

Thr Leu Thr Glu Gly Leu Pro Val Met Leu Asn Cys Thr Tyr Gln Thr
        35                  40                  45

Ile Tyr Ser Asn Pro Phe Leu Phe Trp Tyr Val Gln His Leu Asn Glu
    50                  55                  60

Ser Pro Arg Leu Leu Leu Lys Ser Phe Thr Asp Asn Lys Arg Thr Glu
65                  70                  75                  80

His Gln Gly Phe His Ala Thr Leu His Lys Ser Ser Ser Ser Phe His
                85                  90                  95

Leu Gln Lys Ser Ser Ala Gln Leu Ser Asp Ser Ala Leu Tyr Tyr Cys
            100                 105                 110

Ala Leu Arg Gly Xaa Ala Gly Ala Lys Leu Thr Phe Gly Gly Gly Thr
        115                 120                 125

Arg Leu Thr Val Arg Pro Asp
    130                 135


<210>  75
<211>  135
<212>  PRT
<213>  Artificial Sequence

<220>
<223>  Synthetic


<220>
<221>  MISC_FEATURE
<222>  (118)..(118)
<223>  Xaa is Arg, Asn, Asp, Cys, Glu, Gln, Gly, His, Ile, Leu, Lys,
       Met, Phe, Pro, Ser, Thr, Trp, Tyr, or Val.

<400>  75
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```
Met Arg Pro Val Thr Cys Ser Val Leu Val Leu Leu Leu Met Leu Arg
1               5                   10                  15


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


Thr Leu Thr Glu Gly Leu Pro Val Met Leu Asn Cys Thr Tyr Gln Thr
        35                  40                  45


Ile Tyr Ser Asn Pro Phe Leu Phe Trp Tyr Val Gln His Leu Asn Glu
    50                  55                  60


Ser Pro Arg Leu Leu Leu Lys Ser Phe Thr Asp Asn Lys Arg Thr Glu
65                  70                  75                  80


His Gln Gly Phe His Ala Thr Leu His Lys Ser Ser Ser Ser Phe His
                85                  90                  95


Leu Gln Lys Ser Ser Ala Gln Leu Ser Asp Ser Ala Leu Tyr Tyr Cys
            100                 105                 110


Ala Leu Arg Gly Asn Xaa Gly Ala Lys Leu Thr Phe Gly Gly Gly Thr
        115                 120                 125


Arg Leu Thr Val Arg Pro Asp
    130                 135


<210>  76
<211>  135
<212>  PRT
<213>  Artificial Sequence

<220>
<223>  Synthetic


<220>
<221>  MISC_FEATURE
<222>  (119)..(119)
<223>  Xaa is Ala, Arg, Asn, Asp, Cys, Glu, Gln, His, Ile, Leu, Lys,
       Met, Phe, Pro, Ser, Thr, Trp, Tyr, or Val.
```

<400> 76

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Met Arg Pro Val Thr Cys Ser Val Leu Val Leu Leu Leu Met Leu Arg
1               5                   10                  15


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


Thr Leu Thr Glu Gly Leu Pro Val Met Leu Asn Cys Thr Tyr Gln Thr
        35                  40                  45


Ile Tyr Ser Asn Pro Phe Leu Phe Trp Tyr Val Gln His Leu Asn Glu
    50                  55                  60


Ser Pro Arg Leu Leu Leu Lys Ser Phe Thr Asp Asn Lys Arg Thr Glu
65                  70                  75                  80


His Gln Gly Phe His Ala Thr Leu His Lys Ser Ser Ser Ser Phe His
                85                  90                  95


Leu Gln Lys Ser Ser Ala Gln Leu Ser Asp Ser Ala Leu Tyr Tyr Cys
            100                 105                 110


Ala Leu Arg Gly Asn Ala Xaa Ala Lys Leu Thr Phe Gly Gly Gly Thr
        115                 120                 125


Arg Leu Thr Val Arg Pro Asp
    130                 135
```

<210> 77
<211> 135
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<220>
<221> MISC_FEATURE

<222> (120)..(120)
<223> Xaa is Arg, Asn, Asp, Cys, Glu, Gln, Gly, His, Ile, Leu, Lys, Met, Phe, Pro, Ser, Thr, Trp, Tyr, or Val.

<400> 77

Met Arg Pro Val Thr Cys Ser Val Leu Val Leu Leu Leu Met Leu Arg
1 5 10 15

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

Thr Leu Thr Glu Gly Leu Pro Val Met Leu Asn Cys Thr Tyr Gln Thr
35 40 45

Ile Tyr Ser Asn Pro Phe Leu Phe Trp Tyr Val Gln His Leu Asn Glu
50 55 60

Ser Pro Arg Leu Leu Leu Lys Ser Phe Thr Asp Asn Lys Arg Thr Glu
65 70 75 80

His Gln Gly Phe His Ala Thr Leu His Lys Ser Ser Ser Ser Phe His
85 90 95

Leu Gln Lys Ser Ser Ala Gln Leu Ser Asp Ser Ala Leu Tyr Tyr Cys
100 105 110

Ala Leu Arg Gly Asn Ala Gly Xaa Lys Leu Thr Phe Gly Gly Gly Thr
115 120 125

Arg Leu Thr Val Arg Pro Asp
130 135

<210> 78
<211> 135
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<220>
<221> MISC_FEATURE
<222> (121)..(121)
<223> Xaa is Ala, Arg, Asn, Asp, Cys, Glu, Gln, Gly, His, Ile, Leu,
       Met, Phe, Pro, Ser, Thr, Trp, Tyr, or val.

<400> 78

Met Arg Pro Val Thr Cys Ser Val Leu Val Leu Leu Leu Met Leu Arg
1   5   10   15

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

Thr Leu Thr Glu Gly Leu Pro Val Met Leu Asn Cys Thr Tyr Gln Thr
        35   40   45

Ile Tyr Ser Asn Pro Phe Leu Phe Trp Tyr Val Gln His Leu Asn Glu
    50   55   60

Ser Pro Arg Leu Leu Leu Lys Ser Phe Thr Asp Asn Lys Arg Thr Glu
65   70   75   80

His Gln Gly Phe His Ala Thr Leu His Lys Ser Ser Ser Ser Phe His
                85   90   95

Leu Gln Lys Ser Ser Ala Gln Leu Ser Asp Ser Ala Leu Tyr Tyr Cys
            100   105   110

Ala Leu Arg Gly Asn Ala Gly Ala Xaa Leu Thr Phe Gly Gly Gly Thr
        115   120   125

Arg Leu Thr Val Arg Pro Asp
    130   135

<210> 79
<211> 135
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<220>
<221> MISC_FEATURE
<222> (122)..(122)
<223> Xaa is Ala, Arg, Asn, Asp, Cys, Glu, Gln, Gly, His, Ile, Lys,
       Met, Phe, Pro, Ser, Thr, Trp, Tyr, or Val.

<400> 79

Met Arg Pro Val Thr Cys Ser Val Leu Val Leu Leu Leu Met Leu Arg
1   5   10   15

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

Thr Leu Thr Glu Gly Leu Pro Val Met Leu Asn Cys Thr Tyr Gln Thr
        35   40   45

Ile Tyr Ser Asn Pro Phe Leu Phe Trp Tyr Val Gln His Leu Asn Glu
    50   55   60

Ser Pro Arg Leu Leu Leu Lys Ser Phe Thr Asp Asn Lys Arg Thr Glu
65   70   75   80

His Gln Gly Phe His Ala Thr Leu His Lys Ser Ser Ser Ser Phe His
                85   90   95

Leu Gln Lys Ser Ser Ala Gln Leu Ser Asp Ser Ala Leu Tyr Tyr Cys
            100   105   110

Ala Leu Arg Gly Asn Ala Gly Ala Lys Xaa Thr Phe Gly Gly Gly Thr
        115   120   125

Arg Leu Thr Val Arg Pro Asp
    130   135

<210> 80
<211> 135

<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<220>
<221> MISC_FEATURE
<222> (123)..(123)
<223> Xaa is Ala, Arg, Asn, Asp, Cys, Glu, Gln, Gly, His, Ile, Leu, Lys, Met, Phe, Pro, Ser, Trp, Tyr, or Val.

<400> 80

Met Arg Pro Val Thr Cys Ser Val Leu Val Leu Leu Leu Met Leu Arg
1 5 10 15

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

Thr Leu Thr Glu Gly Leu Pro Val Met Leu Asn Cys Thr Tyr Gln Thr
35 40 45

Ile Tyr Ser Asn Pro Phe Leu Phe Trp Tyr Val Gln His Leu Asn Glu
50 55 60

Ser Pro Arg Leu Leu Leu Lys Ser Phe Thr Asp Asn Lys Arg Thr Glu
65 70 75 80

His Gln Gly Phe His Ala Thr Leu His Lys Ser Ser Ser Ser Phe His
85 90 95

Leu Gln Lys Ser Ser Ala Gln Leu Ser Asp Ser Ala Leu Tyr Tyr Cys
100 105 110

Ala Leu Arg Gly Asn Ala Gly Ala Lys Leu Xaa Phe Gly Gly Gly Thr
115 120 125

Arg Leu Thr Val Arg Pro Asp
130 135

<210> 81
<211> 134
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<220>
<221> MISC_FEATURE
<222> (111)..(111)
<223> Xaa is Arg, Asn, Asp, Cys, Glu, Gln, Gly, His, Ile, Leu, Lys, Met, Phe, Pro, Ser, Thr, Trp, Tyr, or Val.

<400> 81

Met Gly Cys Arg Leu Leu Ser Cys Val Ala Phe Cys Leu Leu Gly Ile
1 5 10 15

Gly Pro Leu Glu Thr Ala Val Phe Gln Thr Pro Asn Tyr His Val Thr
20 25 30

Gln Val Gly Asn Glu Val Ser Phe Asn Cys Lys Gln Thr Leu Gly His
35 40 45

Asp Thr Met Tyr Trp Tyr Lys Gln Asp Ser Lys Lys Leu Leu Lys Ile
50 55 60

Met Phe Ser Tyr Asn Asn Lys Gln Leu Ile Val Asn Glu Thr Val Pro
65 70 75 80

Arg Arg Phe Ser Pro Gln Ser Ser Asp Lys Ala His Leu Asn Leu Arg
85 90 95

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

Ser Ser Arg Asp Trp Ser Ala Glu Thr Leu Tyr Phe Gly Ser Gly Thr
115 120 125

Arg Leu Thr Val Leu Glu
    130

<210> 82
<211> 134
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<220>
<221> MISC_FEATURE
<222> (112)..(112)
<223> Xaa is Ala, Arg, Asn, Asp, Cys, Glu, Gln, Gly, His, Ile, Leu,
       Lys, Met, Phe, Pro, Thr, Trp, Tyr, or Val.

<400> 82

Met Gly Cys Arg Leu Leu Ser Cys Val Ala Phe Cys Leu Leu Gly Ile
1   5   10   15

Gly Pro Leu Glu Thr Ala Val Phe Gln Thr Pro Asn Tyr His Val Thr
            20   25   30

Gln Val Gly Asn Glu Val Ser Phe Asn Cys Lys Gln Thr Leu Gly His
        35   40   45

Asp Thr Met Tyr Trp Tyr Lys Gln Asp Ser Lys Lys Leu Leu Lys Ile
    50   55   60

Met Phe Ser Tyr Asn Asn Lys Gln Leu Ile Val Asn Glu Thr Val Pro
65   70   75   80

Arg Arg Phe Ser Pro Gln Ser Ser Asp Lys Ala His Leu Asn Leu Arg
                85   90   95

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

Ser Ser Arg Asp Trp Ser Ala Glu Thr Leu Tyr Phe Gly Ser Gly Thr

115 120 125

Arg Leu Thr Val Leu Glu
130

<210> 83
<211> 134
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<220>
<221> MISC_FEATURE
<222> (113)..(113)
<223> X is Ala, Arg, Asn, Asp, Cys, Glu, Gln, Gly, His, Ile, Leu, Lys, Met, Phe, Pro, Thr, Trp, Tyr, or Val.

<400> 83

Met Gly Cys Arg Leu Leu Ser Cys Val Ala Phe Cys Leu Leu Gly Ile
1 5 10 15

Gly Pro Leu Glu Thr Ala Val Phe Gln Thr Pro Asn Tyr His Val Thr
20 25 30

Gln Val Gly Asn Glu Val Ser Phe Asn Cys Lys Gln Thr Leu Gly His
35 40 45

Asp Thr Met Tyr Trp Tyr Lys Gln Asp Ser Lys Lys Leu Leu Lys Ile
50 55 60

Met Phe Ser Tyr Asn Asn Lys Gln Leu Ile Val Asn Glu Thr Val Pro
65 70 75 80

Arg Arg Phe Ser Pro Gln Ser Ser Asp Lys Ala His Leu Asn Leu Arg
85 90 95

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

Xaa Ser Arg Asp Trp Ser Ala Glu Thr Leu Tyr Phe Gly Ser Gly Thr
        115   120   125

Arg Leu Thr Val Leu Glu
    130

<210> 84
<211> 134
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<220>
<221> MISC_FEATURE
<222> (114)..(114)
<223> Xaa is Ala, Arg, Asn, Asp, Cys, Glu, Gln, Gly, His, Ile, Leu,
       Lys, Met, Phe, Pro, Thr, Trp, Tyr, or Val.

<400> 84

Met Gly Cys Arg Leu Leu Ser Cys Val Ala Phe Cys Leu Leu Gly Ile
1   5   10   15

Gly Pro Leu Glu Thr Ala Val Phe Gln Thr Pro Asn Tyr His Val Thr
            20   25   30

Gln Val Gly Asn Glu Val Ser Phe Asn Cys Lys Gln Thr Leu Gly His
        35   40   45

Asp Thr Met Tyr Trp Tyr Lys Gln Asp Ser Lys Lys Leu Leu Lys Ile
    50   55   60

Met Phe Ser Tyr Asn Asn Lys Gln Leu Ile Val Asn Glu Thr Val Pro
65   70   75   80

Arg Arg Phe Ser Pro Gln Ser Ser Asp Lys Ala His Leu Asn Leu Arg
                85   90   95

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

Ser Xaa Arg Asp Trp Ser Ala Glu Thr Leu Tyr Phe Gly Ser Gly Thr
115 120 125

Arg Leu Thr Val Leu Glu
130

<210> 85
<211> 134
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<220>
<221> MISC_FEATURE
<222> (115)..(115)
<223> Xaa is Ala, Asn, Asp, Cys, Glu, Gln, Gly, His, Ile, Leu, Lys, Met, Phe, Pro, Ser, Thr, Trp, Tyr, or Val.

<400> 85

Met Gly Cys Arg Leu Leu Ser Cys Val Ala Phe Cys Leu Leu Gly Ile
1 5 10 15

Gly Pro Leu Glu Thr Ala Val Phe Gln Thr Pro Asn Tyr His Val Thr
20 25 30

Gln Val Gly Asn Glu Val Ser Phe Asn Cys Lys Gln Thr Leu Gly His
35 40 45

Asp Thr Met Tyr Trp Tyr Lys Gln Asp Ser Lys Lys Leu Leu Lys Ile
50 55 60

Met Phe Ser Tyr Asn Asn Lys Gln Leu Ile Val Asn Glu Thr Val Pro
65 70 75 80

Arg Arg Phe Ser Pro Gln Ser Ser Asp Lys Ala His Leu Asn Leu Arg
85 90 95

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

Ser Ser Xaa Asp Trp Ser Ala Glu Thr Leu Tyr Phe Gly Ser Gly Thr
115 120 125

Arg Leu Thr Val Leu Glu
130

<210> 86
<211> 134
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<220>
<221> MISC_FEATURE
<222> (116)..(116)
<223> Xaa is Ala, Arg, Asn, Cys, Glu, Gln, Gly, His, Ile, Leu, Lys, Met, Phe, Pro, Ser, Thr, Trp, Tyr, or Val.

<400> 86

Met Gly Cys Arg Leu Leu Ser Cys Val Ala Phe Cys Leu Leu Gly Ile
1 5 10 15

Gly Pro Leu Glu Thr Ala Val Phe Gln Thr Pro Asn Tyr His Val Thr
20 25 30

Gln Val Gly Asn Glu Val Ser Phe Asn Cys Lys Gln Thr Leu Gly His
35 40 45

Asp Thr Met Tyr Trp Tyr Lys Gln Asp Ser Lys Lys Leu Leu Lys Ile
50 55 60

Met Phe Ser Tyr Asn Asn Lys Gln Leu Ile Val Asn Glu Thr Val Pro

65 70 75 80

Arg Arg Phe Ser Pro Gln Ser Ser Asp Lys Ala His Leu Asn Leu Arg
85 90 95

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

Ser Ser Arg Xaa Trp Ser Ala Glu Thr Leu Tyr Phe Gly Ser Gly Thr
115 120 125

Arg Leu Thr Val Leu Glu
130

<210> 87
<211> 134
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<220>
<221> MISC_FEATURE
<222> (117)..(117)
<223> Xaa is Ala, Arg, Asn, Asp, Cys, Glu, Gln, Gly, His, Ile, Leu, Lys, Met, Phe, Pro, Ser, Thr, Tyr, or Val.

<400> 87

Met Gly Cys Arg Leu Leu Ser Cys Val Ala Phe Cys Leu Leu Gly Ile
1 5 10 15

Gly Pro Leu Glu Thr Ala Val Phe Gln Thr Pro Asn Tyr His Val Thr
20 25 30

Gln Val Gly Asn Glu Val Ser Phe Asn Cys Lys Gln Thr Leu Gly His
35 40 45

Asp Thr Met Tyr Trp Tyr Lys Gln Asp Ser Lys Lys Leu Leu Lys Ile
50 55 60

```
Met Phe Ser Tyr Asn Asn Lys Gln Leu Ile Val Asn Glu Thr Val Pro
65                  70                  75                  80


Arg Arg Phe Ser Pro Gln Ser Ser Asp Lys Ala His Leu Asn Leu Arg
                85                  90                  95


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


Ser Ser Arg Asp Xaa Ser Ala Glu Thr Leu Tyr Phe Gly Ser Gly Thr
        115                 120                 125


Arg Leu Thr Val Leu Glu
    130


<210>  88
<211>  134
<212>  PRT
<213>  Artificial Sequence

<220>
<223>  Synthetic


<220>
<221>  MISC_FEATURE
<222>  (118)..(118)
<223>  Xaa is Ala, Arg, Asn, Asp, Cys, Glu, Gln, Gly, His, Ile, Leu,
       Lys, Met, Phe, Pro, Thr, Trp, Tyr, or Val.

<400>  88

Met Gly Cys Arg Leu Leu Ser Cys Val Ala Phe Cys Leu Leu Gly Ile
1               5                   10                  15


Gly Pro Leu Glu Thr Ala Val Phe Gln Thr Pro Asn Tyr His Val Thr
            20                  25                  30


Gln Val Gly Asn Glu Val Ser Phe Asn Cys Lys Gln Thr Leu Gly His
        35                  40                  45
```

```
Asp Thr Met Tyr Trp Tyr Lys Gln Asp Ser Lys Lys Leu Leu Lys Ile
    50                  55                  60

Met Phe Ser Tyr Asn Asn Lys Gln Leu Ile Val Asn Glu Thr Val Pro
65                  70                  75                  80

Arg Arg Phe Ser Pro Gln Ser Ser Asp Lys Ala His Leu Asn Leu Arg
                85                  90                  95

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

Ser Ser Arg Asp Trp Xaa Ala Glu Thr Leu Tyr Phe Gly Ser Gly Thr
        115                 120                 125

Arg Leu Thr Val Leu Glu
    130
```

<210> 89
<211> 134
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<220>
<221> MISC_FEATURE
<222> (119)..(119)
<223> Xaa is Arg, Asn, Asp, Cys, Glu, Gln, Gly, His, Ile, Leu, Lys, Met, Phe, Pro, Ser, Thr, Trp, Tyr, or Val.

<400> 89

```
Met Gly Cys Arg Leu Leu Ser Cys Val Ala Phe Cys Leu Leu Gly Ile
1               5                   10                  15

Gly Pro Leu Glu Thr Ala Val Phe Gln Thr Pro Asn Tyr His Val Thr
            20                  25                  30
```

```
Gln Val Gly Asn Glu Val Ser Phe Asn Cys Lys Gln Thr Leu Gly His
        35                  40                  45


Asp Thr Met Tyr Trp Tyr Lys Gln Asp Ser Lys Lys Leu Leu Lys Ile
    50                  55                  60


Met Phe Ser Tyr Asn Asn Lys Gln Leu Ile Val Asn Glu Thr Val Pro
65                  70                  75                  80


Arg Arg Phe Ser Pro Gln Ser Ser Asp Lys Ala His Leu Asn Leu Arg
                85                  90                  95


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


Ser Ser Arg Asp Trp Ser Xaa Glu Thr Leu Tyr Phe Gly Ser Gly Thr
        115                 120                 125


Arg Leu Thr Val Leu Glu
    130


<210>  90
<211>  134
<212>  PRT
<213>  Artificial Sequence

<220>
<223>  Synthetic


<220>
<221>  MISC_FEATURE
<222>  (120)..(120)
<223>  Xaa is Ala, Arg, Asn, Asp, Cys, Gln, Gly, His, Ile, Leu, Lys,
       Met, Phe, Pro, Ser, Thr, Trp, Tyr, or Val.

<400>  90

Met Gly Cys Arg Leu Leu Ser Cys Val Ala Phe Cys Leu Leu Gly Ile
1               5                   10                  15


Gly Pro Leu Glu Thr Ala Val Phe Gln Thr Pro Asn Tyr His Val Thr
```

```
            20                  25                  30

Gln Val Gly Asn Glu Val Ser Phe Asn Cys Lys Gln Thr Leu Gly His
        35                  40                  45

Asp Thr Met Tyr Trp Tyr Lys Gln Asp Ser Lys Lys Leu Leu Lys Ile
    50                  55                  60

Met Phe Ser Tyr Asn Asn Lys Gln Leu Ile Val Asn Glu Thr Val Pro
65                  70                  75                  80

Arg Arg Phe Ser Pro Gln Ser Ser Asp Lys Ala His Leu Asn Leu Arg
                85                  90                  95

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

Ser Ser Arg Asp Trp Ser Ala Xaa Thr Leu Tyr Phe Gly Ser Gly Thr
        115                 120                 125

Arg Leu Thr Val Leu Glu
    130


<210>  91
<211>  134
<212>  PRT
<213>  Artificial Sequence

<220>
<223>  Synthetic


<220>
<221>  MISC_FEATURE
<222>  (121)..(121)
<223>  Xaa is Ala, Arg, Asn, Asp, Cys, Glu, Gln, Gly, His, Ile, Leu,
       Lys, Met, Phe, Pro, Ser, Trp, Tyr, or Val.

<400>  91

Met Gly Cys Arg Leu Leu Ser Cys Val Ala Phe Cys Leu Leu Gly Ile
1               5                   10                  15
```

```
Gly Pro Leu Glu Thr Ala Val Phe Gln Thr Pro Asn Tyr His Val Thr
            20                  25                  30

Gln Val Gly Asn Glu Val Ser Phe Asn Cys Lys Gln Thr Leu Gly His
        35                  40                  45

Asp Thr Met Tyr Trp Tyr Lys Gln Asp Ser Lys Lys Leu Leu Lys Ile
    50                  55                  60

Met Phe Ser Tyr Asn Asn Lys Gln Leu Ile Val Asn Glu Thr Val Pro
65                  70                  75                  80

Arg Arg Phe Ser Pro Gln Ser Ser Asp Lys Ala His Leu Asn Leu Arg
                85                  90                  95

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

Ser Ser Arg Asp Trp Ser Ala Glu Xaa Leu Tyr Phe Gly Ser Gly Thr
        115                 120                 125

Arg Leu Thr Val Leu Glu
    130
```

<210> 92
<211> 134
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<220>
<221> MISC_FEATURE
<222> (122)..(122)
<223> Xaa is Ala, Arg, Asn, Asp, Cys, Glu, Gln, Gly, His, Ile, Lys, Met, Phe, Pro, Ser, Thr, Trp, Tyr, or Val.

<400> 92

```
Met Gly Cys Arg Leu Leu Ser Cys Val Ala Phe Cys Leu Leu Gly Ile
1               5                   10                  15


Gly Pro Leu Glu Thr Ala Val Phe Gln Thr Pro Asn Tyr His Val Thr
            20                  25                  30


Gln Val Gly Asn Glu Val Ser Phe Asn Cys Lys Gln Thr Leu Gly His
        35                  40                  45


Asp Thr Met Tyr Trp Tyr Lys Gln Asp Ser Lys Lys Leu Leu Lys Ile
    50                  55                  60


Met Phe Ser Tyr Asn Asn Lys Gln Leu Ile Val Asn Glu Thr Val Pro
65                  70                  75                  80


Arg Arg Phe Ser Pro Gln Ser Ser Asp Lys Ala His Leu Asn Leu Arg
                85                  90                  95


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


Ser Ser Arg Asp Trp Ser Ala Glu Thr Xaa Tyr Phe Gly Ser Gly Thr
        115                 120                 125


Arg Leu Thr Val Leu Glu
    130


<210>  93
<211>  134
<212>  PRT
<213>  Artificial Sequence

<220>
<223>  'Synthetic


<220>
<221>  MISC_FEATURE
<222>  (123)..(123)
<223>  Xaa is Ala, Arg, Asn, Asp, Cys, Glu, Gln, Gly, His, Ile, Leu,
```

Lys, Met, Phe, Pro, Ser, Thr, Trp, or Val.

<400> 93

```
Met Gly Cys Arg Leu Leu Ser Cys Val Ala Phe Cys Leu Leu Gly Ile
1               5                  10                  15


Gly Pro Leu Glu Thr Ala Val Phe Gln Thr Pro Asn Tyr His Val Thr
            20                  25                  30


Gln Val Gly Asn Glu Val Ser Phe Asn Cys Lys Gln Thr Leu Gly His
        35                  40                  45


Asp Thr Met Tyr Trp Tyr Lys Gln Asp Ser Lys Lys Leu Leu Lys Ile
    50                  55                  60


Met Phe Ser Tyr Asn Asn Lys Gln Leu Ile Val Asn Glu Thr Val Pro
65                  70                  75                  80


Arg Arg Phe Ser Pro Gln Ser Ser Asp Lys Ala His Leu Asn Leu Arg
                85                  90                  95


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


Ser Ser Arg Asp Trp Ser Ala Glu Thr Leu Xaa Phe Gly Ser Gly Thr
        115                 120                 125


Arg Leu Thr Val Leu Glu
    130
```

<210> 94
<211> 271
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<220>

<221> MISC_FEATURE
<222> (113)..(113)
<223> Xaa is Arg, Asn, Asp, Cys, Glu, Gln, Gly, His, Ile, Leu, Lys, Met, Phe, Pro, Ser, Thr, Trp, Tyr, or Val.

<400> 94

```
Met Arg Pro Val Thr Cys Ser Val Leu Val Leu Leu Leu Met Leu Arg
1               5                  10                  15


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


Thr Leu Thr Glu Gly Leu Pro Val Met Leu Asn Cys Thr Tyr Gln Thr
        35                  40                  45


Ile Tyr Ser Asn Pro Phe Leu Phe Trp Tyr Val Gln His Leu Asn Glu
    50                  55                  60


Ser Pro Arg Leu Leu Leu Lys Ser Phe Thr Asp Asn Lys Arg Thr Glu
65                  70                  75                  80


His Gln Gly Phe His Ala Thr Leu His Lys Ser Ser Ser Ser Phe His
                85                  90                  95


Leu Gln Lys Ser Ser Ala Gln Leu Ser Asp Ser Ala Leu Tyr Tyr Cys
            100                 105                 110


Xaa Leu Arg Gly Asn Ala Gly Ala Lys Leu Thr Phe Gly Gly Gly Thr
        115                 120                 125


Arg Leu Thr Val Arg Pro Asp Ile Gln Asn Pro Glu Pro Ala Val Tyr
    130                 135                 140


Gln Leu Lys Asp Pro Arg Ser Gln Asp Ser Thr Leu Cys Leu Phe Thr
145                 150                 155                 160


Asp Phe Asp Ser Gln Ile Asn Val Pro Lys Thr Met Glu Ser Gly Thr
                165                 170                 175
```

```
Phe Ile Thr Asp Lys Thr Val Leu Asp Met Lys Ala Met Asp Ser Lys
            180                 185                 190


Ser Asn Gly Ala Ile Ala Trp Ser Asn Gln Thr Ser Phe Thr Cys Gln
        195                 200                 205


Asp Ile Phe Lys Glu Thr Asn Ala Thr Tyr Pro Ser Ser Asp Val Pro
    210                 215                 220


Cys Asp Ala Thr Leu Thr Glu Lys Ser Phe Glu Thr Asp Met Asn Leu
225                 230                 235                 240


Asn Phe Gln Asn Leu Ser Val Met Gly Leu Arg Ile Leu Leu Leu Lys
                245                 250                 255


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


<210>  95
<211>  271
<212>  PRT
<213>  Artificial Sequence

<220>
<223>  Synthetic


<220>
<221>  MISC_FEATURE
<222>  (114)..(114)
<223>  Xaa is Ala, Arg, Asn, Asp, Cys, Glu, Gln, Gly, His, Ile, Lys,
       Met, Phe, Pro, Ser, Thr, Trp, Tyr, or Val.

<400>  95

Met Arg Pro Val Thr Cys Ser Val Leu Val Leu Leu Leu Met Leu Arg
1               5                   10                  15


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

```
Thr Leu Thr Glu Gly Leu Pro Val Met Leu Asn Cys Thr Tyr Gln Thr
        35                  40                  45

Ile Tyr Ser Asn Pro Phe Leu Phe Trp Tyr Val Gln His Leu Asn Glu
    50                  55                  60

Ser Pro Arg Leu Leu Leu Lys Ser Phe Thr Asp Asn Lys Arg Thr Glu
65                  70                  75                  80

His Gln Gly Phe His Ala Thr Leu His Lys Ser Ser Ser Ser Phe His
                85                  90                  95

Leu Gln Lys Ser Ser Ala Gln Leu Ser Asp Ser Ala Leu Tyr Tyr Cys
            100                 105                 110

Ala Xaa Arg Gly Asn Ala Gly Ala Lys Leu Thr Phe Gly Gly Gly Thr
        115                 120                 125

Arg Leu Thr Val Arg Pro Asp Ile Gln Asn Pro Glu Pro Ala Val Tyr
    130                 135                 140

Gln Leu Lys Asp Pro Arg Ser Gln Asp Ser Thr Leu Cys Leu Phe Thr
145                 150                 155                 160

Asp Phe Asp Ser Gln Ile Asn Val Pro Lys Thr Met Glu Ser Gly Thr
                165                 170                 175

Phe Ile Thr Asp Lys Thr Val Leu Asp Met Lys Ala Met Asp Ser Lys
            180                 185                 190

Ser Asn Gly Ala Ile Ala Trp Ser Asn Gln Thr Ser Phe Thr Cys Gln
        195                 200                 205

Asp Ile Phe Lys Glu Thr Asn Ala Thr Tyr Pro Ser Ser Asp Val Pro
    210                 215                 220

Cys Asp Ala Thr Leu Thr Glu Lys Ser Phe Glu Thr Asp Met Asn Leu
225                 230                 235                 240
```

```
Asn Phe Gln Asn Leu Ser Val Met Gly Leu Arg Ile Leu Leu Leu Lys
                245                 250                 255


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


<210>  96
<211>  271
<212>  PRT
<213>  Artificial Sequence

<220>
<223>  Synthetic


<220>
<221>  MISC_FEATURE
<222>  (115)..(115)
<223>  Xaa is Ala, Asn, Asp, Cys, Glu, Gln, Gly, His, Ile, Leu, Lys,
       Met, Phe, Pro, Ser, Thr, Trp, Tyr, or Val.

<400>  96

Met Arg Pro Val Thr Cys Ser Val Leu Val Leu Leu Leu Met Leu Arg
1               5                   10                  15


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


Thr Leu Thr Glu Gly Leu Pro Val Met Leu Asn Cys Thr Tyr Gln Thr
        35                  40                  45


Ile Tyr Ser Asn Pro Phe Leu Phe Trp Tyr Val Gln His Leu Asn Glu
    50                  55                  60


Ser Pro Arg Leu Leu Leu Lys Ser Phe Thr Asp Asn Lys Arg Thr Glu
65                  70                  75                  80


His Gln Gly Phe His Ala Thr Leu His Lys Ser Ser Ser Ser Phe His
                85                  90                  95
```

```
Leu Gln Lys Ser Ser Ala Gln Leu Ser Asp Ser Ala Leu Tyr Tyr Cys
            100                 105                 110

Ala Leu Xaa Gly Asn Ala Gly Ala Lys Leu Thr Phe Gly Gly Gly Thr
        115                 120                 125

Arg Leu Thr Val Arg Pro Asp Ile Gln Asn Pro Glu Pro Ala Val Tyr
    130                 135                 140

Gln Leu Lys Asp Pro Arg Ser Gln Asp Ser Thr Leu Cys Leu Phe Thr
145                 150                 155                 160

Asp Phe Asp Ser Gln Ile Asn Val Pro Lys Thr Met Glu Ser Gly Thr
                165                 170                 175

Phe Ile Thr Asp Lys Thr Val Leu Asp Met Lys Ala Met Asp Ser Lys
            180                 185                 190

Ser Asn Gly Ala Ile Ala Trp Ser Asn Gln Thr Ser Phe Thr Cys Gln
        195                 200                 205

Asp Ile Phe Lys Glu Thr Asn Ala Thr Tyr Pro Ser Ser Asp Val Pro
    210                 215                 220

Cys Asp Ala Thr Leu Thr Glu Lys Ser Phe Glu Thr Asp Met Asn Leu
225                 230                 235                 240

Asn Phe Gln Asn Leu Ser Val Met Gly Leu Arg Ile Leu Leu Leu Lys
                245                 250                 255

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

<210> 97
<211> 271
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<220>
<221> MISC_FEATURE
<222> (116)..(116)
<223> Xaa is Ala, Arg, Asn, Asp, Cys, Glu, Gln, His, Ile, Leu, Lys,
       Met, Phe, Pro, Ser, Thr, Trp, Tyr, or Val.

<400> 97

Met Arg Pro Val Thr Cys Ser Val Leu Val Leu Leu Leu Met Leu Arg
1   5   10   15

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

Thr Leu Thr Glu Gly Leu Pro Val Met Leu Asn Cys Thr Tyr Gln Thr
        35   40   45

Ile Tyr Ser Asn Pro Phe Leu Phe Trp Tyr Val Gln His Leu Asn Glu
    50   55   60

Ser Pro Arg Leu Leu Leu Lys Ser Phe Thr Asp Asn Lys Arg Thr Glu
65   70   75   80

His Gln Gly Phe His Ala Thr Leu His Lys Ser Ser Ser Ser Phe His
                85   90   95

Leu Gln Lys Ser Ser Ala Gln Leu Ser Asp Ser Ala Leu Tyr Tyr Cys
            100   105   110

Ala Leu Arg Xaa Asn Ala Gly Ala Lys Leu Thr Phe Gly Gly Gly Thr
        115   120   125

Arg Leu Thr Val Arg Pro Asp Ile Gln Asn Pro Glu Pro Ala Val Tyr
    130   135   140

Gln Leu Lys Asp Pro Arg Ser Gln Asp Ser Thr Leu Cys Leu Phe Thr
145   150   155   160

```
Asp Phe Asp Ser Gln Ile Asn Val Pro Lys Thr Met Glu Ser Gly Thr
                165                 170                 175


Phe Ile Thr Asp Lys Thr Val Leu Asp Met Lys Ala Met Asp Ser Lys
            180                 185                 190


Ser Asn Gly Ala Ile Ala Trp Ser Asn Gln Thr Ser Phe Thr Cys Gln
        195                 200                 205


Asp Ile Phe Lys Glu Thr Asn Ala Thr Tyr Pro Ser Ser Asp Val Pro
    210                 215                 220


Cys Asp Ala Thr Leu Thr Glu Lys Ser Phe Glu Thr Asp Met Asn Leu
225                 230                 235                 240


Asn Phe Gln Asn Leu Ser Val Met Gly Leu Arg Ile Leu Leu Leu Lys
                245                 250                 255


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

<210> 98
<211> 271
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<220>
<221> MISC_FEATURE
<222> (117)..(117)
<223> Xaa is Ala, Arg, Asp, Cys, Glu, Gln, Gly, His, Ile, Leu, Lys, Met, Phe, Pro, Ser, Thr, Trp, Tyr, or Val.

<400> 98

```
Met Arg Pro Val Thr Cys Ser Val Leu Val Leu Leu Leu Met Leu Arg
1               5                   10                  15
```

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

Thr Leu Thr Glu Gly Leu Pro Val Met Leu Asn Cys Thr Tyr Gln Thr
        35                  40                  45

Ile Tyr Ser Asn Pro Phe Leu Phe Trp Tyr Val Gln His Leu Asn Glu
    50                  55                  60

Ser Pro Arg Leu Leu Leu Lys Ser Phe Thr Asp Asn Lys Arg Thr Glu
65                  70                  75                  80

His Gln Gly Phe His Ala Thr Leu His Lys Ser Ser Ser Ser Phe His
                85                  90                  95

Leu Gln Lys Ser Ser Ala Gln Leu Ser Asp Ser Ala Leu Tyr Tyr Cys
            100                 105                 110

Ala Leu Arg Gly Xaa Ala Gly Ala Lys Leu Thr Phe Gly Gly Gly Thr
        115                 120                 125

Arg Leu Thr Val Arg Pro Asp Ile Gln Asn Pro Glu Pro Ala Val Tyr
    130                 135                 140

Gln Leu Lys Asp Pro Arg Ser Gln Asp Ser Thr Leu Cys Leu Phe Thr
145                 150                 155                 160

Asp Phe Asp Ser Gln Ile Asn Val Pro Lys Thr Met Glu Ser Gly Thr
                165                 170                 175

Phe Ile Thr Asp Lys Thr Val Leu Asp Met Lys Ala Met Asp Ser Lys
            180                 185                 190

Ser Asn Gly Ala Ile Ala Trp Ser Asn Gln Thr Ser Phe Thr Cys Gln
        195                 200                 205

Asp Ile Phe Lys Glu Thr Asn Ala Thr Tyr Pro Ser Ser Asp Val Pro
```

```
    210                 215                 220

Cys Asp Ala Thr Leu Thr Glu Lys Ser Phe Glu Thr Asp Met Asn Leu
225                 230                 235                 240

Asn Phe Gln Asn Leu Ser Val Met Gly Leu Arg Ile Leu Leu Leu Lys
                245                 250                 255

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

<210> 99
<211> 271
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<220>
<221> MISC_FEATURE
<222> (118)..(118)
<223> Xaa is Arg, Asn, Asp, Cys, Glu, Gln, Gly, His, Ile, Leu, Lys, Met, Phe, Pro, Ser, Thr, Trp, Tyr, or Val.

<400> 99

```
Met Arg Pro Val Thr Cys Ser Val Leu Val Leu Leu Leu Met Leu Arg
1               5                   10                  15

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

Thr Leu Thr Glu Gly Leu Pro Val Met Leu Asn Cys Thr Tyr Gln Thr
        35                  40                  45

Ile Tyr Ser Asn Pro Phe Leu Phe Trp Tyr Val Gln His Leu Asn Glu
    50                  55                  60

Ser Pro Arg Leu Leu Leu Lys Ser Phe Thr Asp Asn Lys Arg Thr Glu
65                  70                  75                  80
```

```
His Gln Gly Phe His Ala Thr Leu His Lys Ser Ser Ser Ser Phe His
                85                  90                  95

Leu Gln Lys Ser Ser Ala Gln Leu Ser Asp Ser Ala Leu Tyr Tyr Cys
            100                 105                 110

Ala Leu Arg Gly Asn Xaa Gly Ala Lys Leu Thr Phe Gly Gly Gly Thr
        115                 120                 125

Arg Leu Thr Val Arg Pro Asp Ile Gln Asn Pro Glu Pro Ala Val Tyr
    130                 135                 140

Gln Leu Lys Asp Pro Arg Ser Gln Asp Ser Thr Leu Cys Leu Phe Thr
145                 150                 155                 160

Asp Phe Asp Ser Gln Ile Asn Val Pro Lys Thr Met Glu Ser Gly Thr
                165                 170                 175

Phe Ile Thr Asp Lys Thr Val Leu Asp Met Lys Ala Met Asp Ser Lys
            180                 185                 190

Ser Asn Gly Ala Ile Ala Trp Ser Asn Gln Thr Ser Phe Thr Cys Gln
        195                 200                 205

Asp Ile Phe Lys Glu Thr Asn Ala Thr Tyr Pro Ser Ser Asp Val Pro
    210                 215                 220

Cys Asp Ala Thr Leu Thr Glu Lys Ser Phe Glu Thr Asp Met Asn Leu
225                 230                 235                 240

Asn Phe Gln Asn Leu Ser Val Met Gly Leu Arg Ile Leu Leu Leu Lys
                245                 250                 255

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

<210> 100
<211> 271
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<220>
<221> MISC_FEATURE
<222> (119)..(119)
<223> Xaa is Ala, Arg, Asn, Asp, Cys, Glu, Gln, His, Ile, Leu, Lys,
       Met, Phe, Pro, Ser, Thr, Trp, Tyr, or Val.

<400> 100

Met Arg Pro Val Thr Cys Ser Val Leu Val Leu Leu Leu Met Leu Arg
1   5   10   15

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

Thr Leu Thr Glu Gly Leu Pro Val Met Leu Asn Cys Thr Tyr Gln Thr
        35   40   45

Ile Tyr Ser Asn Pro Phe Leu Phe Trp Tyr Val Gln His Leu Asn Glu
    50   55   60

Ser Pro Arg Leu Leu Leu Lys Ser Phe Thr Asp Asn Lys Arg Thr Glu
65   70   75   80

His Gln Gly Phe His Ala Thr Leu His Lys Ser Ser Ser Ser Phe His
                85   90   95

Leu Gln Lys Ser Ser Ala Gln Leu Ser Asp Ser Ala Leu Tyr Tyr Cys
            100   105   110

Ala Leu Arg Gly Asn Ala Xaa Ala Lys Leu Thr Phe Gly Gly Gly Thr
        115   120   125

Arg Leu Thr Val Arg Pro Asp Ile Gln Asn Pro Glu Pro Ala Val Tyr

```
    130                 135                 140

Gln Leu Lys Asp Pro Arg Ser Gln Asp Ser Thr Leu Cys Leu Phe Thr
145                 150                 155                 160

Asp Phe Asp Ser Gln Ile Asn Val Pro Lys Thr Met Glu Ser Gly Thr
                165                 170                 175

Phe Ile Thr Asp Lys Thr Val Leu Asp Met Lys Ala Met Asp Ser Lys
            180                 185                 190

Ser Asn Gly Ala Ile Ala Trp Ser Asn Gln Thr Ser Phe Thr Cys Gln
        195                 200                 205

Asp Ile Phe Lys Glu Thr Asn Ala Thr Tyr Pro Ser Ser Asp Val Pro
    210                 215                 220

Cys Asp Ala Thr Leu Thr Glu Lys Ser Phe Glu Thr Asp Met Asn Leu
225                 230                 235                 240

Asn Phe Gln Asn Leu Ser Val Met Gly Leu Arg Ile Leu Leu Leu Lys
                245                 250                 255

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


<210>  101
<211>  271
<212>  PRT
<213>  Artificial Sequence

<220>
<223>  Synthetic


<220>
<221>  MISC_FEATURE
<222>  (120)..(120)
<223>  Xaa is Arg, Asn, Asp, Cys, Glu, Gln, Gly, His, Ile, Leu, Lys,
       Met, Phe, Pro, Ser, Thr, Trp, Tyr, or Val.
```

<400> 101

```
Met Arg Pro Val Thr Cys Ser Val Leu Val Leu Leu Leu Met Leu Arg
1               5                   10                  15

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

Thr Leu Thr Glu Gly Leu Pro Val Met Leu Asn Cys Thr Tyr Gln Thr
        35                  40                  45

Ile Tyr Ser Asn Pro Phe Leu Phe Trp Tyr Val Gln His Leu Asn Glu
    50                  55                  60

Ser Pro Arg Leu Leu Leu Lys Ser Phe Thr Asp Asn Lys Arg Thr Glu
65                  70                  75                  80

His Gln Gly Phe His Ala Thr Leu His Lys Ser Ser Ser Ser Phe His
                85                  90                  95

Leu Gln Lys Ser Ser Ala Gln Leu Ser Asp Ser Ala Leu Tyr Tyr Cys
            100                 105                 110

Ala Leu Arg Gly Asn Ala Gly Xaa Lys Leu Thr Phe Gly Gly Gly Thr
        115                 120                 125

Arg Leu Thr Val Arg Pro Asp Ile Gln Asn Pro Glu Pro Ala Val Tyr
    130                 135                 140

Gln Leu Lys Asp Pro Arg Ser Gln Asp Ser Thr Leu Cys Leu Phe Thr
145                 150                 155                 160

Asp Phe Asp Ser Gln Ile Asn Val Pro Lys Thr Met Glu Ser Gly Thr
                165                 170                 175

Phe Ile Thr Asp Lys Thr Val Leu Asp Met Lys Ala Met Asp Ser Lys
            180                 185                 190
```

```
Ser Asn Gly Ala Ile Ala Trp Ser Asn Gln Thr Ser Phe Thr Cys Gln
        195                 200                 205


Asp Ile Phe Lys Glu Thr Asn Ala Thr Tyr Pro Ser Ser Asp Val Pro
    210                 215                 220


Cys Asp Ala Thr Leu Thr Glu Lys Ser Phe Glu Thr Asp Met Asn Leu
225                 230                 235                 240


Asn Phe Gln Asn Leu Ser Val Met Gly Leu Arg Ile Leu Leu Leu Lys
                245                 250                 255


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


<210>  102
<211>  271
<212>  PRT
<213>  Artificial Sequence

<220>
<223>  Synthetic


<220>
<221>  MISC_FEATURE
<222>  (121)..(121)
<223>  Xaa is Ala, Arg, Asn, Asp, Cys, Glu, Gln, Gly, His, Ile, Leu,
       Met, Phe, Pro, Ser, Thr, Trp, Tyr, or Val.

<400>  102

Met Arg Pro Val Thr Cys Ser Val Leu Val Leu Leu Leu Met Leu Arg
1               5                   10                  15


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


Thr Leu Thr Glu Gly Leu Pro Val Met Leu Asn Cys Thr Tyr Gln Thr
        35                  40                  45


Ile Tyr Ser Asn Pro Phe Leu Phe Trp Tyr Val Gln His Leu Asn Glu
```

```
    50                  55                  60

Ser Pro Arg Leu Leu Leu Lys Ser Phe Thr Asp Asn Lys Arg Thr Glu
65                  70                  75                  80

His Gln Gly Phe His Ala Thr Leu His Lys Ser Ser Ser Ser Phe His
                85                  90                  95

Leu Gln Lys Ser Ser Ala Gln Leu Ser Asp Ser Ala Leu Tyr Tyr Cys
            100                 105                 110

Ala Leu Arg Gly Asn Ala Gly Ala Xaa Leu Thr Phe Gly Gly Gly Thr
        115                 120                 125

Arg Leu Thr Val Arg Pro Asp Ile Gln Asn Pro Glu Pro Ala Val Tyr
    130                 135                 140

Gln Leu Lys Asp Pro Arg Ser Gln Asp Ser Thr Leu Cys Leu Phe Thr
145                 150                 155                 160

Asp Phe Asp Ser Gln Ile Asn Val Pro Lys Thr Met Glu Ser Gly Thr
                165                 170                 175

Phe Ile Thr Asp Lys Thr Val Leu Asp Met Lys Ala Met Asp Ser Lys
            180                 185                 190

Ser Asn Gly Ala Ile Ala Trp Ser Asn Gln Thr Ser Phe Thr Cys Gln
        195                 200                 205

Asp Ile Phe Lys Glu Thr Asn Ala Thr Tyr Pro Ser Ser Asp Val Pro
    210                 215                 220

Cys Asp Ala Thr Leu Thr Glu Lys Ser Phe Glu Thr Asp Met Asn Leu
225                 230                 235                 240

Asn Phe Gln Asn Leu Ser Val Met Gly Leu Arg Ile Leu Leu Leu Lys
                245                 250                 255
```

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


<210>  103
<211>  271
<212>  PRT
<213>  Artificial Sequence

<220>
<223>  Synthetic


<220>
<221>  MISC_FEATURE
<222>  (122)..(122)
<223>  Xaa is Ala, Arg, Asn, Asp, Cys, Glu, Gln, Gly, His, Ile, Lys,
       Met, Phe, Pro, Ser, Thr, Trp, Tyr, or Val.

<400>  103

Met Arg Pro Val Thr Cys Ser Val Leu Val Leu Leu Leu Met Leu Arg
1               5                   10                  15


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


Thr Leu Thr Glu Gly Leu Pro Val Met Leu Asn Cys Thr Tyr Gln Thr
        35                  40                  45


Ile Tyr Ser Asn Pro Phe Leu Phe Trp Tyr Val Gln His Leu Asn Glu
    50                  55                  60


Ser Pro Arg Leu Leu Leu Lys Ser Phe Thr Asp Asn Lys Arg Thr Glu
65                  70                  75                  80


His Gln Gly Phe His Ala Thr Leu His Lys Ser Ser Ser Ser Phe His
                85                  90                  95


Leu Gln Lys Ser Ser Ala Gln Leu Ser Asp Ser Ala Leu Tyr Tyr Cys
            100                 105                 110
```

```
Ala Leu Arg Gly Asn Ala Gly Ala Lys Xaa Thr Phe Gly Gly Gly Thr
        115                 120                 125

Arg Leu Thr Val Arg Pro Asp Ile Gln Asn Pro Glu Pro Ala Val Tyr
    130                 135                 140

Gln Leu Lys Asp Pro Arg Ser Gln Asp Ser Thr Leu Cys Leu Phe Thr
145                 150                 155                 160

Asp Phe Asp Ser Gln Ile Asn Val Pro Lys Thr Met Glu Ser Gly Thr
                165                 170                 175

Phe Ile Thr Asp Lys Thr Val Leu Asp Met Lys Ala Met Asp Ser Lys
            180                 185                 190

Ser Asn Gly Ala Ile Ala Trp Ser Asn Gln Thr Ser Phe Thr Cys Gln
        195                 200                 205

Asp Ile Phe Lys Glu Thr Asn Ala Thr Tyr Pro Ser Ser Asp Val Pro
    210                 215                 220

Cys Asp Ala Thr Leu Thr Glu Lys Ser Phe Glu Thr Asp Met Asn Leu
225                 230                 235                 240

Asn Phe Gln Asn Leu Ser Val Met Gly Leu Arg Ile Leu Leu Leu Lys
                245                 250                 255

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

<210> 104
<211> 271
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<220>

<221> MISC_FEATURE
<222> (123)..(123)
<223> Xaa is Ala, Arg, Asn, Asp, Cys, Glu, Gln, Gly, His, Ile, Leu, Lys, Met, Phe, Pro, Ser, Trp, Tyr, or Val.

<400> 104

```
Met Arg Pro Val Thr Cys Ser Val Leu Val Leu Leu Leu Met Leu Arg
1               5                   10                  15


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


Thr Leu Thr Glu Gly Leu Pro Val Met Leu Asn Cys Thr Tyr Gln Thr
        35                  40                  45


Ile Tyr Ser Asn Pro Phe Leu Phe Trp Tyr Val Gln His Leu Asn Glu
    50                  55                  60


Ser Pro Arg Leu Leu Leu Lys Ser Phe Thr Asp Asn Lys Arg Thr Glu
65                  70                  75                  80


His Gln Gly Phe His Ala Thr Leu His Lys Ser Ser Ser Ser Phe His
                85                  90                  95


Leu Gln Lys Ser Ser Ala Gln Leu Ser Asp Ser Ala Leu Tyr Tyr Cys
            100                 105                 110


Ala Leu Arg Gly Asn Ala Gly Ala Lys Leu Xaa Phe Gly Gly Gly Thr
        115                 120                 125


Arg Leu Thr Val Arg Pro Asp Ile Gln Asn Pro Glu Pro Ala Val Tyr
    130                 135                 140


Gln Leu Lys Asp Pro Arg Ser Gln Asp Ser Thr Leu Cys Leu Phe Thr
145                 150                 155                 160


Asp Phe Asp Ser Gln Ile Asn Val Pro Lys Thr Met Glu Ser Gly Thr
                165                 170                 175
```

```
Phe Ile Thr Asp Lys Thr Val Leu Asp Met Lys Ala Met Asp Ser Lys
            180                 185                 190


Ser Asn Gly Ala Ile Ala Trp Ser Asn Gln Thr Ser Phe Thr Cys Gln
        195                 200                 205


Asp Ile Phe Lys Glu Thr Asn Ala Thr Tyr Pro Ser Ser Asp Val Pro
    210                 215                 220


Cys Asp Ala Thr Leu Thr Glu Lys Ser Phe Glu Thr Asp Met Asn Leu
225                 230                 235                 240


Asn Phe Gln Asn Leu Ser Val Met Gly Leu Arg Ile Leu Leu Leu Lys
                245                 250                 255


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


<210>  105
<211>  306
<212>  PRT
<213>  Artificial Sequence

<220>
<223>  Synthetic


<220>
<221>  MISC_FEATURE
<222>  (111)..(111)
<223>  Xaa is Arg, Asn, Asp, Cys, Glu, Gln, Gly, His, Ile, Leu, Lys,
       Met, Phe, Pro, Ser, Thr, Trp, Tyr, or Val.

<400>  105

Met Gly Cys Arg Leu Leu Ser Cys Val Ala Phe Cys Leu Leu Gly Ile
1               5                   10                  15


Gly Pro Leu Glu Thr Ala Val Phe Gln Thr Pro Asn Tyr His Val Thr
            20                  25                  30
```

```
Gln Val Gly Asn Glu Val Ser Phe Asn Cys Lys Gln Thr Leu Gly His
        35                  40                  45

Asp Thr Met Tyr Trp Tyr Lys Gln Asp Ser Lys Lys Leu Leu Lys Ile
    50                  55                  60

Met Phe Ser Tyr Asn Asn Lys Gln Leu Ile Val Asn Glu Thr Val Pro
65                  70                  75                  80

Arg Arg Phe Ser Pro Gln Ser Ser Asp Lys Ala His Leu Asn Leu Arg
                85                  90                  95

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

Ser Ser Arg Asp Trp Ser Ala Glu Thr Leu Tyr Phe Gly Ser Gly Thr
        115                 120                 125

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

Ser Leu Phe Glu Pro Ser Lys Ala Glu Ile Ala Asn Lys Gln Lys Ala
145                 150                 155                 160

Thr Leu Val Cys Leu Ala Arg Gly Phe Phe Pro Asp His Val Glu Leu
                165                 170                 175

Ser Trp Trp Val Asn Gly Lys Glu Val His Ser Gly Val Ser Thr Asp
            180                 185                 190

Pro Gln Ala Tyr Lys Glu Ser Asn Tyr Ser Tyr Cys Leu Ser Ser Arg
        195                 200                 205

Leu Arg Val Ser Ala Thr Phe Trp His Asn Pro Arg Asn His Phe Arg
    210                 215                 220

Cys Gln Val Gln Phe His Gly Leu Ser Glu Glu Asp Lys Trp Pro Glu
225                 230                 235                 240
```

```
Gly Ser Pro Lys Pro Val Thr Gln Asn Ile Ser Ala Glu Ala Trp Gly
                245                 250                 255


Arg Ala Asp Cys Gly Ile Thr Ser Ala Ser Tyr His Gln Gly Val Leu
            260                 265                 270


Ser Ala Thr Ile Leu Tyr Glu Ile Leu Leu Gly Lys Ala Thr Leu Tyr
        275                 280                 285


Ala Val Leu Val Ser Gly Leu Val Leu Met Ala Met Val Lys Lys Lys
    290                 295                 300


Asn Ser
305


<210>  106
<211>  306
<212>  PRT
<213>  Artificial Sequence

<220>
<223>  Synthetic


<220>
<221>  MISC_FEATURE
<222>  (112)..(112)
<223>  Xaa is Ala, Arg, Asn, Asp, Cys, Glu, Gln, Gly, His, Ile, Leu,
       Lys, Met, Phe, Pro, Thr, Trp, Tyr, or Val.

<400>  106

Met Gly Cys Arg Leu Leu Ser Cys Val Ala Phe Cys Leu Leu Gly Ile
1               5                   10                  15


Gly Pro Leu Glu Thr Ala Val Phe Gln Thr Pro Asn Tyr His Val Thr
            20                  25                  30


Gln Val Gly Asn Glu Val Ser Phe Asn Cys Lys Gln Thr Leu Gly His
        35                  40                  45
```

```
Asp Thr Met Tyr Trp Tyr Lys Gln Asp Ser Lys Lys Leu Leu Lys Ile
    50                  55                  60

Met Phe Ser Tyr Asn Asn Lys Gln Leu Ile Val Asn Glu Thr Val Pro
65                  70                  75                  80

Arg Arg Phe Ser Pro Gln Ser Ser Asp Lys Ala His Leu Asn Leu Arg
                85                  90                  95

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

Ser Ser Arg Asp Trp Ser Ala Glu Thr Leu Tyr Phe Gly Ser Gly Thr
        115                 120                 125

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

Ser Leu Phe Glu Pro Ser Lys Ala Glu Ile Ala Asn Lys Gln Lys Ala
145                 150                 155                 160

Thr Leu Val Cys Leu Ala Arg Gly Phe Phe Pro Asp His Val Glu Leu
                165                 170                 175

Ser Trp Trp Val Asn Gly Lys Glu Val His Ser Gly Val Ser Thr Asp
            180                 185                 190

Pro Gln Ala Tyr Lys Glu Ser Asn Tyr Ser Tyr Cys Leu Ser Ser Arg
        195                 200                 205

Leu Arg Val Ser Ala Thr Phe Trp His Asn Pro Arg Asn His Phe Arg
    210                 215                 220

Cys Gln Val Gln Phe His Gly Leu Ser Glu Glu Asp Lys Trp Pro Glu
225                 230                 235                 240

Gly Ser Pro Lys Pro Val Thr Gln Asn Ile Ser Ala Glu Ala Trp Gly
```

245 250 255

Arg Ala Asp Cys Gly Ile Thr Ser Ala Ser Tyr His Gln Gly Val Leu
260 265 270

Ser Ala Thr Ile Leu Tyr Glu Ile Leu Leu Gly Lys Ala Thr Leu Tyr
275 280 285

Ala Val Leu Val Ser Gly Leu Val Leu Met Ala Met Val Lys Lys Lys
290 295 300

Asn Ser
305

<210> 107
<211> 306
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<220>
<221> MISC_FEATURE
<222> (113)..(113)
<223> Xaa is Ala, Arg, Asn, Asp, Cys, Glu, Gln, Gly, His, Ile, Leu, Lys, Met, Phe, Pro, Thr, Trp, Tyr, or Val.

<400> 107

Met Gly Cys Arg Leu Leu Ser Cys Val Ala Phe Cys Leu Leu Gly Ile
1 5 10 15

Gly Pro Leu Glu Thr Ala Val Phe Gln Thr Pro Asn Tyr His Val Thr
20 25 30

Gln Val Gly Asn Glu Val Ser Phe Asn Cys Lys Gln Thr Leu Gly His
35 40 45

Asp Thr Met Tyr Trp Tyr Lys Gln Asp Ser Lys Lys Leu Leu Lys Ile
50 55 60

```
Met Phe Ser Tyr Asn Asn Lys Gln Leu Ile Val Asn Glu Thr Val Pro
65                  70                  75                  80

Arg Arg Phe Ser Pro Gln Ser Ser Asp Lys Ala His Leu Asn Leu Arg
                85                  90                  95

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

Xaa Ser Arg Asp Trp Ser Ala Glu Thr Leu Tyr Phe Gly Ser Gly Thr
        115                 120                 125

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

Ser Leu Phe Glu Pro Ser Lys Ala Glu Ile Ala Asn Lys Gln Lys Ala
145                 150                 155                 160

Thr Leu Val Cys Leu Ala Arg Gly Phe Phe Pro Asp His Val Glu Leu
                165                 170                 175

Ser Trp Trp Val Asn Gly Lys Glu Val His Ser Gly Val Ser Thr Asp
            180                 185                 190

Pro Gln Ala Tyr Lys Glu Ser Asn Tyr Ser Tyr Cys Leu Ser Ser Arg
        195                 200                 205

Leu Arg Val Ser Ala Thr Phe Trp His Asn Pro Arg Asn His Phe Arg
    210                 215                 220

Cys Gln Val Gln Phe His Gly Leu Ser Glu Glu Asp Lys Trp Pro Glu
225                 230                 235                 240

Gly Ser Pro Lys Pro Val Thr Gln Asn Ile Ser Ala Glu Ala Trp Gly
                245                 250                 255
```

Arg Ala Asp Cys Gly Ile Thr Ser Ala Ser Tyr His Gln Gly Val Leu
            260   265   270

Ser Ala Thr Ile Leu Tyr Glu Ile Leu Leu Gly Lys Ala Thr Leu Tyr
        275   280   285

Ala Val Leu Val Ser Gly Leu Val Leu Met Ala Met Val Lys Lys Lys
    290   295   300

Asn Ser
305

<210> 108
<211> 306
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<220>
<221> MISC_FEATURE
<222> (114)..(114)
<223> Xaa is Ala, Arg, Asn, Asp, Cys, Glu, Gln, Gly, His, Ile, Leu,
       Lys, Met, Phe, Pro, Thr, Trp, Tyr, or Val.

<400> 108

Met Gly Cys Arg Leu Leu Ser Cys Val Ala Phe Cys Leu Leu Gly Ile
1   5   10   15

Gly Pro Leu Glu Thr Ala Val Phe Gln Thr Pro Asn Tyr His Val Thr
            20   25   30

Gln Val Gly Asn Glu Val Ser Phe Asn Cys Lys Gln Thr Leu Gly His
        35   40   45

Asp Thr Met Tyr Trp Tyr Lys Gln Asp Ser Lys Lys Leu Leu Lys Ile
    50   55   60

Met Phe Ser Tyr Asn Asn Lys Gln Leu Ile Val Asn Glu Thr Val Pro

```
65                  70                  75                  80

Arg Arg Phe Ser Pro Gln Ser Ser Asp Lys Ala His Leu Asn Leu Arg
                85                  90                  95

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

Ser Xaa Arg Asp Trp Ser Ala Glu Thr Leu Tyr Phe Gly Ser Gly Thr
        115                 120                 125

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

Ser Leu Phe Glu Pro Ser Lys Ala Glu Ile Ala Asn Lys Gln Lys Ala
145                 150                 155                 160

Thr Leu Val Cys Leu Ala Arg Gly Phe Phe Pro Asp His Val Glu Leu
                165                 170                 175

Ser Trp Trp Val Asn Gly Lys Glu Val His Ser Gly Val Ser Thr Asp
            180                 185                 190

Pro Gln Ala Tyr Lys Glu Ser Asn Tyr Ser Tyr Cys Leu Ser Ser Arg
        195                 200                 205

Leu Arg Val Ser Ala Thr Phe Trp His Asn Pro Arg Asn His Phe Arg
    210                 215                 220

Cys Gln Val Gln Phe His Gly Leu Ser Glu Glu Asp Lys Trp Pro Glu
225                 230                 235                 240

Gly Ser Pro Lys Pro Val Thr Gln Asn Ile Ser Ala Glu Ala Trp Gly
                245                 250                 255

Arg Ala Asp Cys Gly Ile Thr Ser Ala Ser Tyr His Gln Gly Val Leu
            260                 265                 270
```

Ser Ala Thr Ile Leu Tyr Glu Ile Leu Leu Gly Lys Ala Thr Leu Tyr
        275   280   285

Ala Val Leu Val Ser Gly Leu Val Leu Met Ala Met Val Lys Lys Lys
    290   295   300

Asn Ser
305

<210> 109
<211> 306
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<220>
<221> MISC_FEATURE
<222> (115)..(115)
<223> Xaa is Ala, Asn, Asp, Cys, Glu, Gln, Gly, His, Ile, Leu, Lys,
       Met, Phe, Pro, Ser, Thr, Trp, Tyr, or Val.

<400> 109

Met Gly Cys Arg Leu Leu Ser Cys Val Ala Phe Cys Leu Leu Gly Ile
1   5   10   15

Gly Pro Leu Glu Thr Ala Val Phe Gln Thr Pro Asn Tyr His Val Thr
            20   25   30

Gln Val Gly Asn Glu Val Ser Phe Asn Cys Lys Gln Thr Leu Gly His
        35   40   45

Asp Thr Met Tyr Trp Tyr Lys Gln Asp Ser Lys Lys Leu Leu Lys Ile
    50   55   60

Met Phe Ser Tyr Asn Asn Lys Gln Leu Ile Val Asn Glu Thr Val Pro
65   70   75   80

```
Arg Arg Phe Ser Pro Gln Ser Ser Asp Lys Ala His Leu Asn Leu Arg
                85                  90                  95

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

Ser Ser Xaa Asp Trp Ser Ala Glu Thr Leu Tyr Phe Gly Ser Gly Thr
        115                 120                 125

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

Ser Leu Phe Glu Pro Ser Lys Ala Glu Ile Ala Asn Lys Gln Lys Ala
145                 150                 155                 160

Thr Leu Val Cys Leu Ala Arg Gly Phe Phe Pro Asp His Val Glu Leu
                165                 170                 175

Ser Trp Trp Val Asn Gly Lys Glu Val His Ser Gly Val Ser Thr Asp
            180                 185                 190

Pro Gln Ala Tyr Lys Glu Ser Asn Tyr Ser Tyr Cys Leu Ser Ser Arg
        195                 200                 205

Leu Arg Val Ser Ala Thr Phe Trp His Asn Pro Arg Asn His Phe Arg
    210                 215                 220

Cys Gln Val Gln Phe His Gly Leu Ser Glu Glu Asp Lys Trp Pro Glu
225                 230                 235                 240

Gly Ser Pro Lys Pro Val Thr Gln Asn Ile Ser Ala Glu Ala Trp Gly
                245                 250                 255

Arg Ala Asp Cys Gly Ile Thr Ser Ala Ser Tyr His Gln Gly Val Leu
            260                 265                 270

Ser Ala Thr Ile Leu Tyr Glu Ile Leu Leu Gly Lys Ala Thr Leu Tyr
        275                 280                 285
```

```
Ala Val Leu Val Ser Gly Leu Val Leu Met Ala Met Val Lys Lys Lys
    290                 295                 300


Asn Ser
305
```

<210> 110
<211> 306
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<220>
<221> MISC_FEATURE
<222> (116)..(116)
<223> Xaa is Ala, Arg, Asn, Cys, Glu, Gln, Gly, His, Ile, Leu, Lys,
       Met, Phe, Pro, Ser, Thr, Trp, Tyr, or Val.

<400> 110

```
Met Gly Cys Arg Leu Leu Ser Cys Val Ala Phe Cys Leu Leu Gly Ile
1               5                   10                  15


Gly Pro Leu Glu Thr Ala Val Phe Gln Thr Pro Asn Tyr His Val Thr
            20                  25                  30


Gln Val Gly Asn Glu Val Ser Phe Asn Cys Lys Gln Thr Leu Gly His
        35                  40                  45


Asp Thr Met Tyr Trp Tyr Lys Gln Asp Ser Lys Lys Leu Leu Lys Ile
    50                  55                  60


Met Phe Ser Tyr Asn Asn Lys Gln Leu Ile Val Asn Glu Thr Val Pro
65                  70                  75                  80


Arg Arg Phe Ser Pro Gln Ser Ser Asp Lys Ala His Leu Asn Leu Arg
                85                  90                  95
```

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

Ser Ser Arg Xaa Trp Ser Ala Glu Thr Leu Tyr Phe Gly Ser Gly Thr
        115                 120                 125

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

Ser Leu Phe Glu Pro Ser Lys Ala Glu Ile Ala Asn Lys Gln Lys Ala
145                 150                 155                 160

Thr Leu Val Cys Leu Ala Arg Gly Phe Phe Pro Asp His Val Glu Leu
                165                 170                 175

Ser Trp Trp Val Asn Gly Lys Glu Val His Ser Gly Val Ser Thr Asp
            180                 185                 190

Pro Gln Ala Tyr Lys Glu Ser Asn Tyr Ser Tyr Cys Leu Ser Ser Arg
        195                 200                 205

Leu Arg Val Ser Ala Thr Phe Trp His Asn Pro Arg Asn His Phe Arg
    210                 215                 220

Cys Gln Val Gln Phe His Gly Leu Ser Glu Glu Asp Lys Trp Pro Glu
225                 230                 235                 240

Gly Ser Pro Lys Pro Val Thr Gln Asn Ile Ser Ala Glu Ala Trp Gly
                245                 250                 255

Arg Ala Asp Cys Gly Ile Thr Ser Ala Ser Tyr His Gln Gly Val Leu
            260                 265                 270

Ser Ala Thr Ile Leu Tyr Glu Ile Leu Leu Gly Lys Ala Thr Leu Tyr
        275                 280                 285

Ala Val Leu Val Ser Gly Leu Val Leu Met Ala Met Val Lys Lys Lys
```

290 295 300

Asn Ser
305

<210> 111
<211> 306
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<220>
<221> MISC_FEATURE
<222> (117)..(117)
<223> Xaa is Ala, Arg, Asn, Asp, Cys, Glu, Gln, Gly, His, Ile, Leu, Lys, Met, Phe, Pro, Ser, Thr, Tyr, or Val.

<400> 111

Met Gly Cys Arg Leu Leu Ser Cys Val Ala Phe Cys Leu Leu Gly Ile
1 5 10 15

Gly Pro Leu Glu Thr Ala Val Phe Gln Thr Pro Asn Tyr His Val Thr
20 25 30

Gln Val Gly Asn Glu Val Ser Phe Asn Cys Lys Gln Thr Leu Gly His
35 40 45

Asp Thr Met Tyr Trp Tyr Lys Gln Asp Ser Lys Lys Leu Leu Lys Ile
50 55 60

Met Phe Ser Tyr Asn Asn Lys Gln Leu Ile Val Asn Glu Thr Val Pro
65 70 75 80

Arg Arg Phe Ser Pro Gln Ser Ser Asp Lys Ala His Leu Asn Leu Arg
85 90 95

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

```
Ser Ser Arg Asp Xaa Ser Ala Glu Thr Leu Tyr Phe Gly Ser Gly Thr
        115                 120                 125

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

Ser Leu Phe Glu Pro Ser Lys Ala Glu Ile Ala Asn Lys Gln Lys Ala
145                 150                 155                 160

Thr Leu Val Cys Leu Ala Arg Gly Phe Phe Pro Asp His Val Glu Leu
                165                 170                 175

Ser Trp Trp Val Asn Gly Lys Glu Val His Ser Gly Val Ser Thr Asp
            180                 185                 190

Pro Gln Ala Tyr Lys Glu Ser Asn Tyr Ser Tyr Cys Leu Ser Ser Arg
        195                 200                 205

Leu Arg Val Ser Ala Thr Phe Trp His Asn Pro Arg Asn His Phe Arg
    210                 215                 220

Cys Gln Val Gln Phe His Gly Leu Ser Glu Glu Asp Lys Trp Pro Glu
225                 230                 235                 240

Gly Ser Pro Lys Pro Val Thr Gln Asn Ile Ser Ala Glu Ala Trp Gly
                245                 250                 255

Arg Ala Asp Cys Gly Ile Thr Ser Ala Ser Tyr His Gln Gly Val Leu
            260                 265                 270

Ser Ala Thr Ile Leu Tyr Glu Ile Leu Leu Gly Lys Ala Thr Leu Tyr
        275                 280                 285

Ala Val Leu Val Ser Gly Leu Val Leu Met Ala Met Val Lys Lys Lys
    290                 295                 300
```

Asn Ser
305

<210> 112
<211> 306
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<220>
<221> MISC_FEATURE
<222> (118)..(118)
<223> Xaa is Ala, Arg, Asn, Asp, Cys, Glu, Gln, Gly, His, Ile, Leu,
       Lys, Met, Phe, Pro, Thr, Trp, Tyr, or Val.

<400> 112

Met Gly Cys Arg Leu Leu Ser Cys Val Ala Phe Cys Leu Leu Gly Ile
1   5   10   15

Gly Pro Leu Glu Thr Ala Val Phe Gln Thr Pro Asn Tyr His Val Thr
            20   25   30

Gln Val Gly Asn Glu Val Ser Phe Asn Cys Lys Gln Thr Leu Gly His
        35   40   45

Asp Thr Met Tyr Trp Tyr Lys Gln Asp Ser Lys Lys Leu Leu Lys Ile
    50   55   60

Met Phe Ser Tyr Asn Asn Lys Gln Leu Ile Val Asn Glu Thr Val Pro
65   70   75   80

Arg Arg Phe Ser Pro Gln Ser Ser Asp Lys Ala His Leu Asn Leu Arg
                85   90   95

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

Ser Ser Arg Asp Trp Xaa Ala Glu Thr Leu Tyr Phe Gly Ser Gly Thr

```
        115                 120                 125

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

Ser Leu Phe Glu Pro Ser Lys Ala Glu Ile Ala Asn Lys Gln Lys Ala
145                 150                 155                 160

Thr Leu Val Cys Leu Ala Arg Gly Phe Phe Pro Asp His Val Glu Leu
                165                 170                 175

Ser Trp Trp Val Asn Gly Lys Glu Val His Ser Gly Val Ser Thr Asp
            180                 185                 190

Pro Gln Ala Tyr Lys Glu Ser Asn Tyr Ser Tyr Cys Leu Ser Ser Arg
        195                 200                 205

Leu Arg Val Ser Ala Thr Phe Trp His Asn Pro Arg Asn His Phe Arg
    210                 215                 220

Cys Gln Val Gln Phe His Gly Leu Ser Glu Glu Asp Lys Trp Pro Glu
225                 230                 235                 240

Gly Ser Pro Lys Pro Val Thr Gln Asn Ile Ser Ala Glu Ala Trp Gly
                245                 250                 255

Arg Ala Asp Cys Gly Ile Thr Ser Ala Ser Tyr His Gln Gly Val Leu
            260                 265                 270

Ser Ala Thr Ile Leu Tyr Glu Ile Leu Leu Gly Lys Ala Thr Leu Tyr
        275                 280                 285

Ala Val Leu Val Ser Gly Leu Val Leu Met Ala Met Val Lys Lys Lys
    290                 295                 300

Asn Ser
305
```

<210> 113
<211> 306
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<220>
<221> MISC_FEATURE
<222> (119)..(119)
<223> Xaa is Arg, Asn, Asp, Cys, Glu, Gln, Gly, His, Ile, Leu, Lys, Met, Phe, Pro, Ser, Thr, Trp, Tyr, or Val.

<400> 113

Met Gly Cys Arg Leu Leu Ser Cys Val Ala Phe Cys Leu Leu Gly Ile
1 5 10 15

Gly Pro Leu Glu Thr Ala Val Phe Gln Thr Pro Asn Tyr His Val Thr
20 25 30

Gln Val Gly Asn Glu Val Ser Phe Asn Cys Lys Gln Thr Leu Gly His
35 40 45

Asp Thr Met Tyr Trp Tyr Lys Gln Asp Ser Lys Lys Leu Leu Lys Ile
50 55 60

Met Phe Ser Tyr Asn Asn Lys Gln Leu Ile Val Asn Glu Thr Val Pro
65 70 75 80

Arg Arg Phe Ser Pro Gln Ser Ser Asp Lys Ala His Leu Asn Leu Arg
85 90 95

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

Ser Ser Arg Asp Trp Ser Xaa Glu Thr Leu Tyr Phe Gly Ser Gly Thr
115 120 125

```
Arg Leu Thr Val Leu Glu Asp Leu Arg Asn Val Thr Pro Pro Lys Val
    130                 135                 140

Ser Leu Phe Glu Pro Ser Lys Ala Glu Ile Ala Asn Lys Gln Lys Ala
145                 150                 155                 160

Thr Leu Val Cys Leu Ala Arg Gly Phe Phe Pro Asp His Val Glu Leu
                165                 170                 175

Ser Trp Trp Val Asn Gly Lys Glu Val His Ser Gly Val Ser Thr Asp
            180                 185                 190

Pro Gln Ala Tyr Lys Glu Ser Asn Tyr Ser Tyr Cys Leu Ser Ser Arg
        195                 200                 205

Leu Arg Val Ser Ala Thr Phe Trp His Asn Pro Arg Asn His Phe Arg
    210                 215                 220

Cys Gln Val Gln Phe His Gly Leu Ser Glu Glu Asp Lys Trp Pro Glu
225                 230                 235                 240

Gly Ser Pro Lys Pro Val Thr Gln Asn Ile Ser Ala Glu Ala Trp Gly
                245                 250                 255

Arg Ala Asp Cys Gly Ile Thr Ser Ala Ser Tyr His Gln Gly Val Leu
            260                 265                 270

Ser Ala Thr Ile Leu Tyr Glu Ile Leu Leu Gly Lys Ala Thr Leu Tyr
        275                 280                 285

Ala Val Leu Val Ser Gly Leu Val Leu Met Ala Met Val Lys Lys Lys
    290                 295                 300

Asn Ser
305
```

<210> 114
<211> 306

<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<220>
<221> MISC_FEATURE
<222> (120)..(120)
<223> Xaa is Ala, Arg, Asn, Asp, Cys, Gln, Gly, His, Ile, Leu, Lys, Met, Phe, Pro, Ser, Thr, Trp, Tyr, or Val.

<400> 114

Met Gly Cys Arg Leu Leu Ser Cys Val Ala Phe Cys Leu Leu Gly Ile
1 5 10 15

Gly Pro Leu Glu Thr Ala Val Phe Gln Thr Pro Asn Tyr His Val Thr
20 25 30

Gln Val Gly Asn Glu Val Ser Phe Asn Cys Lys Gln Thr Leu Gly His
35 40 45

Asp Thr Met Tyr Trp Tyr Lys Gln Asp Ser Lys Lys Leu Leu Lys Ile
50 55 60

Met Phe Ser Tyr Asn Asn Lys Gln Leu Ile Val Asn Glu Thr Val Pro
65 70 75 80

Arg Arg Phe Ser Pro Gln Ser Ser Asp Lys Ala His Leu Asn Leu Arg
85 90 95

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

Ser Ser Arg Asp Trp Ser Ala Xaa Thr Leu Tyr Phe Gly Ser Gly Thr
115 120 125

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

```
Ser Leu Phe Glu Pro Ser Lys Ala Glu Ile Ala Asn Lys Gln Lys Ala
145                 150                 155                 160


Thr Leu Val Cys Leu Ala Arg Gly Phe Phe Pro Asp His Val Glu Leu
                165                 170                 175


Ser Trp Trp Val Asn Gly Lys Glu Val His Ser Gly Val Ser Thr Asp
            180                 185                 190


Pro Gln Ala Tyr Lys Glu Ser Asn Tyr Ser Tyr Cys Leu Ser Ser Arg
        195                 200                 205


Leu Arg Val Ser Ala Thr Phe Trp His Asn Pro Arg Asn His Phe Arg
    210                 215                 220


Cys Gln Val Gln Phe His Gly Leu Ser Glu Glu Asp Lys Trp Pro Glu
225                 230                 235                 240


Gly Ser Pro Lys Pro Val Thr Gln Asn Ile Ser Ala Glu Ala Trp Gly
                245                 250                 255


Arg Ala Asp Cys Gly Ile Thr Ser Ala Ser Tyr His Gln Gly Val Leu
            260                 265                 270


Ser Ala Thr Ile Leu Tyr Glu Ile Leu Leu Gly Lys Ala Thr Leu Tyr
        275                 280                 285


Ala Val Leu Val Ser Gly Leu Val Leu Met Ala Met Val Lys Lys Lys
    290                 295                 300


Asn Ser
305


<210>  115
<211>  306
<212>  PRT
<213>  Artificial Sequence
```

<220>
<223> Synthetic

<220>
<221> MISC_FEATURE
<222> (121)..(121)
<223> Xaa is Ala, Arg, Asn, Asp, Cys, Glu, Gln, Gly, His, Ile, Leu,
       Lys, Met, Phe, Pro, Ser, Trp, Tyr, or Val.

<400> 115

Met Gly Cys Arg Leu Leu Ser Cys Val Ala Phe Cys Leu Leu Gly Ile
1   5   10   15

Gly Pro Leu Glu Thr Ala Val Phe Gln Thr Pro Asn Tyr His Val Thr
            20   25   30

Gln Val Gly Asn Glu Val Ser Phe Asn Cys Lys Gln Thr Leu Gly His
        35   40   45

Asp Thr Met Tyr Trp Tyr Lys Gln Asp Ser Lys Lys Leu Leu Lys Ile
    50   55   60

Met Phe Ser Tyr Asn Asn Lys Gln Leu Ile Val Asn Glu Thr Val Pro
65   70   75   80

Arg Arg Phe Ser Pro Gln Ser Ser Asp Lys Ala His Leu Asn Leu Arg
                85   90   95

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

Ser Ser Arg Asp Trp Ser Ala Glu Xaa Leu Tyr Phe Gly Ser Gly Thr
        115   120   125

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

Ser Leu Phe Glu Pro Ser Lys Ala Glu Ile Ala Asn Lys Gln Lys Ala
145   150   155   160

```
Thr Leu Val Cys Leu Ala Arg Gly Phe Phe Pro Asp His Val Glu Leu
                165                 170                 175

Ser Trp Trp Val Asn Gly Lys Glu Val His Ser Gly Val Ser Thr Asp
            180                 185                 190

Pro Gln Ala Tyr Lys Glu Ser Asn Tyr Ser Tyr Cys Leu Ser Ser Arg
        195                 200                 205

Leu Arg Val Ser Ala Thr Phe Trp His Asn Pro Arg Asn His Phe Arg
    210                 215                 220

Cys Gln Val Gln Phe His Gly Leu Ser Glu Glu Asp Lys Trp Pro Glu
225                 230                 235                 240

Gly Ser Pro Lys Pro Val Thr Gln Asn Ile Ser Ala Glu Ala Trp Gly
                245                 250                 255

Arg Ala Asp Cys Gly Ile Thr Ser Ala Ser Tyr His Gln Gly Val Leu
            260                 265                 270

Ser Ala Thr Ile Leu Tyr Glu Ile Leu Leu Gly Lys Ala Thr Leu Tyr
        275                 280                 285

Ala Val Leu Val Ser Gly Leu Val Leu Met Ala Met Val Lys Lys Lys
    290                 295                 300

Asn Ser
305
```

<210> 116
<211> 306
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<220>
<221> MISC_FEATURE
<222> (122)..(122)
<223> Xaa is Ala, Arg, Asn, Asp, Cys, Glu, Gln, Gly, His, Ile, Lys,
       Met, Phe, Pro, Ser, Thr, Trp, Tyr, or Val.

<400> 116

Met Gly Cys Arg Leu Leu Ser Cys Val Ala Phe Cys Leu Leu Gly Ile
1   5   10   15

Gly Pro Leu Glu Thr Ala Val Phe Gln Thr Pro Asn Tyr His Val Thr
            20   25   30

Gln Val Gly Asn Glu Val Ser Phe Asn Cys Lys Gln Thr Leu Gly His
        35   40   45

Asp Thr Met Tyr Trp Tyr Lys Gln Asp Ser Lys Lys Leu Leu Lys Ile
    50   55   60

Met Phe Ser Tyr Asn Asn Lys Gln Leu Ile Val Asn Glu Thr Val Pro
65   70   75   80

Arg Arg Phe Ser Pro Gln Ser Ser Asp Lys Ala His Leu Asn Leu Arg
                85   90   95

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

Ser Ser Arg Asp Trp Ser Ala Glu Thr Xaa Tyr Phe Gly Ser Gly Thr
        115   120   125

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

Ser Leu Phe Glu Pro Ser Lys Ala Glu Ile Ala Asn Lys Gln Lys Ala
145   150   155   160

Thr Leu Val Cys Leu Ala Arg Gly Phe Phe Pro Asp His Val Glu Leu

```
                165                 170                 175

Ser Trp Trp Val Asn Gly Lys Glu Val His Ser Gly Val Ser Thr Asp
            180                 185                 190

Pro Gln Ala Tyr Lys Glu Ser Asn Tyr Ser Tyr Cys Leu Ser Ser Arg
        195                 200                 205

Leu Arg Val Ser Ala Thr Phe Trp His Asn Pro Arg Asn His Phe Arg
    210                 215                 220

Cys Gln Val Gln Phe His Gly Leu Ser Glu Glu Asp Lys Trp Pro Glu
225                 230                 235                 240

Gly Ser Pro Lys Pro Val Thr Gln Asn Ile Ser Ala Glu Ala Trp Gly
                245                 250                 255

Arg Ala Asp Cys Gly Ile Thr Ser Ala Ser Tyr His Gln Gly Val Leu
            260                 265                 270

Ser Ala Thr Ile Leu Tyr Glu Ile Leu Leu Gly Lys Ala Thr Leu Tyr
        275                 280                 285

Ala Val Leu Val Ser Gly Leu Val Leu Met Ala Met Val Lys Lys Lys
    290                 295                 300

Asn Ser
305


<210>  117
<211>  306
<212>  PRT
<213>  Artificial Sequence

<220>
<223>  Synthetic


<220>
<221>  MISC_FEATURE
```

<222> (123)..(123)
<223> Xaa is Ala, Arg, Asn, Asp, Cys, Glu, Gln, Gly, His, Ile, Leu, Lys, Met, Phe, Pro, Ser, Thr, Trp, or Val.

<400> 117

```
Met Gly Cys Arg Leu Leu Ser Cys Val Ala Phe Cys Leu Leu Gly Ile
1               5                  10                  15


Gly Pro Leu Glu Thr Ala Val Phe Gln Thr Pro Asn Tyr His Val Thr
            20                  25                  30


Gln Val Gly Asn Glu Val Ser Phe Asn Cys Lys Gln Thr Leu Gly His
        35                  40                  45


Asp Thr Met Tyr Trp Tyr Lys Gln Asp Ser Lys Lys Leu Leu Lys Ile
    50                  55                  60


Met Phe Ser Tyr Asn Asn Lys Gln Leu Ile Val Asn Glu Thr Val Pro
65                  70                  75                  80


Arg Arg Phe Ser Pro Gln Ser Ser Asp Lys Ala His Leu Asn Leu Arg
                85                  90                  95


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


Ser Ser Arg Asp Trp Ser Ala Glu Thr Leu Xaa Phe Gly Ser Gly Thr
        115                 120                 125


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


Ser Leu Phe Glu Pro Ser Lys Ala Glu Ile Ala Asn Lys Gln Lys Ala
145                 150                 155                 160


Thr Leu Val Cys Leu Ala Arg Gly Phe Phe Pro Asp His Val Glu Leu
                165                 170                 175
```

```
Ser Trp Trp Val Asn Gly Lys Glu Val His Ser Gly Val Ser Thr Asp
            180                 185                 190


Pro Gln Ala Tyr Lys Glu Ser Asn Tyr Ser Tyr Cys Leu Ser Ser Arg
        195                 200                 205


Leu Arg Val Ser Ala Thr Phe Trp His Asn Pro Arg Asn His Phe Arg
    210                 215                 220


Cys Gln Val Gln Phe His Gly Leu Ser Glu Glu Asp Lys Trp Pro Glu
225                 230                 235                 240


Gly Ser Pro Lys Pro Val Thr Gln Asn Ile Ser Ala Glu Ala Trp Gly
                245                 250                 255


Arg Ala Asp Cys Gly Ile Thr Ser Ala Ser Tyr His Gln Gly Val Leu
            260                 265                 270


Ser Ala Thr Ile Leu Tyr Glu Ile Leu Leu Gly Lys Ala Thr Leu Tyr
        275                 280                 285


Ala Val Leu Val Ser Gly Leu Val Leu Met Ala Met Val Lys Lys Lys
    290                 295                 300


Asn Ser
305


<210>  118
<211>  23
<212>  PRT
<213>  Homo sapiens

<400>  118

Met Thr Glu Tyr Lys Leu Val Val Val Gly Ala Gly Gly Val Gly Lys
1               5                   10                  15


Ser Ala Leu Thr Ile Gln Leu
            20
```

<210> 119
<211> 23
<212> PRT
<213> Homo sapiens

<400> 119

Met Thr Glu Tyr Lys Leu Val Val Val Gly Ala Asp Gly Val Gly Lys
1   5   10   15

Ser Ala Leu Thr Ile Gln Leu
            20

<210> 120
<211> 23
<212> PRT
<213> Homo sapiens

<400> 120

Met Thr Glu Tyr Lys Leu Val Val Val Gly Ala Val Gly Val Gly Lys
1   5   10   15

Ser Ala Leu Thr Ile Gln Leu
            20

<210> 121
<211> 188
<212> PRT
<213> Homo sapiens

<400> 121

Met Thr Glu Tyr Lys Leu Val Val Val Gly Ala Gly Gly Val Gly Lys
1   5   10   15

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

Asp Pro Thr Ile Glu Asp Ser Tyr Arg Lys Gln Val Val Ile Asp Gly
        35   40   45

```
Glu Thr Cys Leu Leu Asp Ile Leu Asp Thr Ala Gly Gln Glu Glu Tyr
    50                  55                  60

Ser Ala Met Arg Asp Gln Tyr Met Arg Thr Gly Glu Gly Phe Leu Cys
65                  70                  75                  80

Val Phe Ala Ile Asn Asn Thr Lys Ser Phe Glu Asp Ile His His Tyr
                85                  90                  95

Arg Glu Gln Ile Lys Arg Val Lys Asp Ser Glu Asp Val Pro Met Val
            100                 105                 110

Leu Val Gly Asn Lys Cys Asp Leu Pro Ser Arg Thr Val Asp Thr Lys
        115                 120                 125

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

Ser Ala Lys Thr Arg Gln Gly Val Asp Asp Ala Phe Tyr Thr Leu Val
145                 150                 155                 160

Arg Glu Ile Arg Lys His Lys Glu Lys Met Ser Lys Asp Gly Lys Lys
                165                 170                 175

Lys Lys Lys Lys Ser Lys Thr Lys Cys Val Ile Met
            180                 185
```

<210> 122
<211> 188
<212> PRT
<213> Homo sapiens

<400> 122

```
Met Thr Glu Tyr Lys Leu Val Val Val Gly Ala Asp Gly Val Gly Lys
1               5                   10                  15

Ser Ala Leu Thr Ile Gln Leu Ile Gln Asn His Phe Val Asp Glu Tyr
            20                  25                  30
```

```
Asp Pro Thr Ile Glu Asp Ser Tyr Arg Lys Gln Val Val Ile Asp Gly
        35                  40                  45

Glu Thr Cys Leu Leu Asp Ile Leu Asp Thr Ala Gly Gln Glu Glu Tyr
    50                  55                  60

Ser Ala Met Arg Asp Gln Tyr Met Arg Thr Gly Glu Gly Phe Leu Cys
65                  70                  75                  80

Val Phe Ala Ile Asn Asn Thr Lys Ser Phe Glu Asp Ile His His Tyr
                85                  90                  95

Arg Glu Gln Ile Lys Arg Val Lys Asp Ser Glu Asp Val Pro Met Val
            100                 105                 110

Leu Val Gly Asn Lys Cys Asp Leu Pro Ser Arg Thr Val Asp Thr Lys
        115                 120                 125

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

Ser Ala Lys Thr Arg Gln Gly Val Asp Asp Ala Phe Tyr Thr Leu Val
145                 150                 155                 160

Arg Glu Ile Arg Lys His Lys Glu Lys Met Ser Lys Asp Gly Lys Lys
                165                 170                 175

Lys Lys Lys Lys Ser Lys Thr Lys Cys Val Ile Met
            180                 185
```

<210> 123
<211> 188
<212> PRT
<213> Homo sapiens

<400> 123

```
Met Thr Glu Tyr Lys Leu Val Val Val Gly Ala Val Gly Val Gly Lys
1               5                   10                  15
```

```
Ser Ala Leu Thr Ile Gln Leu Ile Gln Asn His Phe Val Asp Glu Tyr
            20                  25                  30

Asp Pro Thr Ile Glu Asp Ser Tyr Arg Lys Gln Val Val Ile Asp Gly
        35                  40                  45

Glu Thr Cys Leu Leu Asp Ile Leu Asp Thr Ala Gly Gln Glu Glu Tyr
    50                  55                  60

Ser Ala Met Arg Asp Gln Tyr Met Arg Thr Gly Glu Gly Phe Leu Cys
65                  70                  75                  80

Val Phe Ala Ile Asn Asn Thr Lys Ser Phe Glu Asp Ile His His Tyr
                85                  90                  95

Arg Glu Gln Ile Lys Arg Val Lys Asp Ser Glu Asp Val Pro Met Val
            100                 105                 110

Leu Val Gly Asn Lys Cys Asp Leu Pro Ser Arg Thr Val Asp Thr Lys
        115                 120                 125

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

Ser Ala Lys Thr Arg Gln Gly Val Asp Asp Ala Phe Tyr Thr Leu Val
145                 150                 155                 160

Arg Glu Ile Arg Lys His Lys Glu Lys Met Ser Lys Asp Gly Lys Lys
                165                 170                 175

Lys Lys Lys Lys Ser Lys Thr Lys Cys Val Ile Met
            180                 185
```

<210> 124
<211> 9
<212> PRT
<213> Homo sapiens

<400> 124

Val Val Val Gly Ala Asp Gly Val Gly
1   5

<210> 125
<211> 6
<212> PRT
<213> Murine

<400> 125

Asp Pro Asn Ser Tyr Tyr
1   5

<210> 126
<211> 7
<212> PRT
<213> Murine

<400> 126

Val Phe Ser Ser Thr Glu Ile
1   5

<210> 127
<211> 16
<212> PRT
<213> Murine

<400> 127

Cys Ala Val Ser Gly Gly Thr Asn Ser Ala Gly Asn Lys Leu Thr Phe
1   5   10   15

<210> 128
<211> 5
<212> PRT
<213> Murine

<400> 128

Leu Gly His Asp Thr
1   5

<210> 129
<211> 6
<212> PRT
<213> Murine

<400> 129

Tyr Asn Asn Lys Gln Leu
1   5

<210> 130
<211> 14
<212> PRT
<213> Murine

<400> 130

Cys Ala Ser Ser Arg Asp Trp Gly Pro Ala Glu Gln Phe Phe
1   5   10

<210> 131
<211> 137
<212> PRT
<213> Murine

<400> 131

Met Lys Thr Val Thr Gly Pro Leu Phe Leu Cys Phe Trp Leu Gln Leu
1   5   10   15

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

Ser Val Arg Glu Gly Asp Ser Ala Val Ile Thr Cys Thr Tyr Thr Asp
        35   40   45

Pro Asn Ser Tyr Tyr Phe Phe Trp Tyr Lys Gln Glu Pro Gly Ala Ser
    50   55   60

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

```
Gln Gly Phe Thr Val Leu Leu Asn Lys Lys Asp Lys Arg Leu Ser Leu
                85                  90                  95


Asn Leu Thr Ala Ala His Pro Gly Asp Ser Ala Ala Tyr Phe Cys Ala
            100                 105                 110


Val Ser Gly Gly Thr Asn Ser Ala Gly Asn Lys Leu Thr Phe Gly Ile
        115                 120                 125


Gly Thr Arg Val Leu Val Arg Pro Asp
    130                 135
```

<210> 132
<211> 133
<212> PRT
<213> Murine

<400> 132

```
Met Gly Cys Arg Leu Leu Ser Cys Val Ala Phe Cys Leu Leu Gly Ile
1               5                   10                  15


Gly Pro Leu Glu Thr Ala Val Phe Gln Thr Pro Asn Tyr His Val Thr
            20                  25                  30


Gln Val Gly Asn Glu Val Ser Phe Asn Cys Lys Gln Thr Leu Gly His
        35                  40                  45


Asp Thr Met Tyr Trp Tyr Lys Gln Asp Ser Lys Lys Leu Leu Lys Ile
    50                  55                  60


Met Phe Ser Tyr Asn Asn Lys Gln Leu Ile Val Asn Glu Thr Val Pro
65                  70                  75                  80


Arg Arg Phe Ser Pro Gln Ser Ser Asp Lys Ala His Leu Asn Leu Arg
                85                  90                  95


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

Ser Arg Asp Trp Gly Pro Ala Glu Gln Phe Phe Gly Pro Gly Thr Arg
        115   120   125

Leu Thr Val Leu Glu
    130

<210> 133
<211> 273
<212> PRT
<213> Murine

<400> 133

Met Lys Thr Val Thr Gly Pro Leu Phe Leu Cys Phe Trp Leu Gln Leu
1   5   10   15

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

Ser Val Arg Glu Gly Asp Ser Ala Val Ile Thr Cys Thr Tyr Thr Asp
        35   40   45

Pro Asn Ser Tyr Tyr Phe Phe Trp Tyr Lys Gln Glu Pro Gly Ala Ser
    50   55   60

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

Gln Gly Phe Thr Val Leu Leu Asn Lys Lys Asp Lys Arg Leu Ser Leu
                85   90   95

Asn Leu Thr Ala Ala His Pro Gly Asp Ser Ala Ala Tyr Phe Cys Ala
            100   105   110

Val Ser Gly Gly Thr Asn Ser Ala Gly Asn Lys Leu Thr Phe Gly Ile
        115   120   125

Gly Thr Arg Val Leu Val Arg Pro Asp Ile Gln Asn Pro Glu Pro Ala
    130   135   140

```
Val Tyr Gln Leu Lys Asp Pro Arg Ser Gln Asp Ser Thr Leu Cys Leu
145                 150                 155                 160


Phe Thr Asp Phe Asp Ser Gln Ile Asn Val Pro Lys Thr Met Glu Ser
                165                 170                 175


Gly Thr Phe Ile Thr Asp Lys Thr Val Leu Asp Met Lys Ala Met Asp
            180                 185                 190


Ser Lys Ser Asn Gly Ala Ile Ala Trp Ser Asn Gln Thr Ser Phe Thr
        195                 200                 205


Cys Gln Asp Ile Phe Lys Glu Thr Asn Ala Thr Tyr Pro Ser Ser Asp
    210                 215                 220


Val Pro Cys Asp Ala Thr Leu Thr Glu Lys Ser Phe Glu Thr Asp Met
225                 230                 235                 240


Asn Leu Asn Phe Gln Asn Leu Ser Val Met Gly Leu Arg Ile Leu Leu
                245                 250                 255


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


Ser
```

<210> 134
<211> 305
<212> PRT
<213> Murine

<400> 134

```
Met Gly Cys Arg Leu Leu Ser Cys Val Ala Phe Cys Leu Leu Gly Ile
1               5                   10                  15


Gly Pro Leu Glu Thr Ala Val Phe Gln Thr Pro Asn Tyr His Val Thr
```

```
            20                  25                  30

Gln Val Gly Asn Glu Val Ser Phe Asn Cys Lys Gln Thr Leu Gly His
        35                  40                  45

Asp Thr Met Tyr Trp Tyr Lys Gln Asp Ser Lys Lys Leu Leu Lys Ile
    50                  55                  60

Met Phe Ser Tyr Asn Asn Lys Gln Leu Ile Val Asn Glu Thr Val Pro
65                  70                  75                  80

Arg Arg Phe Ser Pro Gln Ser Ser Asp Lys Ala His Leu Asn Leu Arg
                85                  90                  95

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

Ser Arg Asp Trp Gly Pro Ala Glu Gln Phe Phe Gly Pro Gly Thr Arg
        115                 120                 125

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

Leu Phe Glu Pro Ser Lys Ala Glu Ile Ala Asn Lys Gln Lys Ala Thr
145                 150                 155                 160

Leu Val Cys Leu Ala Arg Gly Phe Phe Pro Asp His Val Glu Leu Ser
                165                 170                 175

Trp Trp Val Asn Gly Lys Glu Val His Ser Gly Val Ser Thr Asp Pro
            180                 185                 190

Gln Ala Tyr Lys Glu Ser Asn Tyr Ser Tyr Cys Leu Ser Ser Arg Leu
        195                 200                 205

Arg Val Ser Ala Thr Phe Trp His Asn Pro Arg Asn His Phe Arg Cys
    210                 215                 220
```

```
Gln Val Gln Phe His Gly Leu Ser Glu Glu Asp Lys Trp Pro Glu Gly
225                 230                 235                 240


Ser Pro Lys Pro Val Thr Gln Asn Ile Ser Ala Glu Ala Trp Gly Arg
                245                 250                 255


Ala Asp Cys Gly Ile Thr Ser Ala Ser Tyr His Gln Gly Val Leu Ser
            260                 265                 270


Ala Thr Ile Leu Tyr Glu Ile Leu Leu Gly Lys Ala Thr Leu Tyr Ala
        275                 280                 285


Val Leu Val Ser Gly Leu Val Leu Met Ala Met Val Lys Lys Lys Asn
    290                 295                 300


Ser
305


<210>  135
<211>  136
<212>  PRT
<213>  Murine

<400>  135

Ile Gln Asn Pro Glu Pro Ala Val Tyr Gln Leu Lys Asp Pro Arg Ser
1               5                   10                  15


Gln Asp Ser Thr Leu Cys Leu Phe Thr Asp Phe Asp Ser Gln Ile Asn
            20                  25                  30


Val Pro Lys Thr Met Glu Ser Gly Thr Phe Ile Thr Asp Lys Thr Val
        35                  40                  45


Leu Asp Met Lys Ala Met Asp Ser Lys Ser Asn Gly Ala Ile Ala Trp
    50                  55                  60


Ser Asn Gln Thr Ser Phe Thr Cys Gln Asp Ile Phe Lys Glu Thr Asn
65                  70                  75                  80
```

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


Lys Ser Phe Glu Thr Asp Met Asn Leu Asn Phe Gln Asn Leu Ser Val
            100                 105                 110


Met Gly Leu Arg Ile Leu Leu Leu Lys Val Ala Gly Phe Asn Leu Leu
        115                 120                 125


Met Thr Leu Arg Leu Trp Ser Ser
    130                 135


<210>  136
<211>  172
<212>  PRT
<213>  Murine

<400>  136

Asp Leu Arg Asn Val Thr Pro Pro Lys Val Ser Leu Phe Glu Pro Ser
1               5                   10                  15


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


Arg Gly Phe Phe Pro Asp His Val Glu Leu Ser Trp Trp Val Asn Gly
        35                  40                  45


Lys Glu Val His Ser Gly Val Ser Thr Asp Pro Gln Ala Tyr Lys Glu
    50                  55                  60


Ser Asn Tyr Ser Tyr Cys Leu Ser Ser Arg Leu Arg Val Ser Ala Thr
65                  70                  75                  80


Phe Trp His Asn Pro Arg Asn His Phe Arg Cys Gln Val Gln Phe His
                85                  90                  95


Gly Leu Ser Glu Glu Asp Lys Trp Pro Glu Gly Ser Pro Lys Pro Val
```

```
            100                 105                 110


Thr Gln Asn Ile Ser Ala Glu Ala Trp Gly Arg Ala Asp Cys Gly Ile
        115                 120                 125


Thr Ser Ala Ser Tyr His Gln Gly Val Leu Ser Ala Thr Ile Leu Tyr
    130                 135                 140


Glu Ile Leu Leu Gly Lys Ala Thr Leu Tyr Ala Val Leu Val Ser Gly
145                 150                 155                 160


Leu Val Leu Met Ala Met Val Lys Lys Lys Asn Ser
                165                 170


<210>  137
<211>  6
<212>  PRT
<213>  Murine

<400>  137

Asn Asp Met Phe Asp Tyr
1               5


<210>  138
<211>  7
<212>  PRT
<213>  Murine

<400>  138

Val Arg Ser Asn Val Asp Lys
1               5


<210>  139
<211>  15
<212>  PRT
<213>  Murine

<400>  139

Cys Ala Ala Gly Asp Ser Gly Gly Ser Asn Tyr Lys Leu Thr Phe
1               5                   10                  15
```

<210> 140
<211> 5
<212> PRT
<213> Murine

<400> 140

Asn Ser His Asn Tyr
1   5

<210> 141
<211> 6
<212> PRT
<213> Murine

<400> 141

Ser Tyr Gly Ala Gly Asn
1   5

<210> 142
<211> 14
<212> PRT
<213> Murine

<400> 142

Cys Ala Ser Ala Ser Trp Gly Gly Tyr Ala Glu Gln Phe Phe
1   5   10

<210> 143
<211> 141
<212> PRT
<213> Murine

<400> 143

Met Thr Gly Phe Leu Lys Ala Leu Leu Leu Val Leu Cys Leu Arg Pro
1   5   10   15

Glu Trp Ile Lys Ser Gln Gln Lys Thr Gly Gly Gln Gln Val Lys Gln
            20   25   30

```
Ser Ser Pro Ser Leu Thr Val Gln Glu Gly Gly Ile Leu Ile Leu Asn
        35                  40                  45

Cys Asp Tyr Glu Asn Asp Met Phe Asp Tyr Phe Ala Trp Tyr Lys Lys
    50                  55                  60

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

Asp Lys Arg Glu Asp Gly Arg Phe Thr Val Phe Leu Asn Lys Ser Gly
                85                  90                  95

Lys His Phe Ser Leu His Ile Thr Ala Ser Gln Pro Glu Asp Thr Ala
            100                 105                 110

Val Tyr Leu Cys Ala Ala Gly Asp Ser Gly Gly Ser Asn Tyr Lys Leu
        115                 120                 125

Thr Phe Gly Lys Gly Thr Leu Leu Thr Val Thr Pro Asn
    130                 135                 140
```

<210> 144
<211> 131
<212> PRT
<213> Murine

<400> 144

```
Met Gly Ser Arg Leu Phe Leu Val Leu Ser Leu Leu Cys Thr Lys His
1               5                   10                  15

Met Glu Ala Ala Val Thr Gln Ser Pro Arg Asn Lys Val Thr Val Thr
            20                  25                  30

Gly Gly Asn Val Thr Leu Ser Cys Arg Gln Thr Asn Ser His Asn Tyr
        35                  40                  45

Met Tyr Trp Tyr Arg Gln Asp Thr Gly His Gly Leu Arg Leu Ile His
    50                  55                  60
```

Tyr Ser Tyr Gly Ala Gly Asn Leu Gln Ile Gly Asp Val Pro Asp Gly
65 70 75 80

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

Leu Ala Ser Pro Ser Gln Thr Ser Leu Tyr Phe Cys Ala Ser Ala Ser
100 105 110

Trp Gly Gly Tyr Ala Glu Gln Phe Phe Gly Pro Gly Thr Arg Leu Thr
115 120 125

Val Leu Glu
130

<210> 145
<211> 277
<212> PRT
<213> Murine

<400> 145

Met Thr Gly Phe Leu Lys Ala Leu Leu Leu Val Leu Cys Leu Arg Pro
1 5 10 15

Glu Trp Ile Lys Ser Gln Gln Lys Thr Gly Gly Gln Gln Val Lys Gln
20 25 30

Ser Ser Pro Ser Leu Thr Val Gln Glu Gly Gly Ile Leu Ile Leu Asn
35 40 45

Cys Asp Tyr Glu Asn Asp Met Phe Asp Tyr Phe Ala Trp Tyr Lys Lys
50 55 60

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

Asp Lys Arg Glu Asp Gly Arg Phe Thr Val Phe Leu Asn Lys Ser Gly
85 90 95

```
Lys His Phe Ser Leu His Ile Thr Ala Ser Gln Pro Glu Asp Thr Ala
            100                 105                 110

Val Tyr Leu Cys Ala Ala Gly Asp Ser Gly Gly Ser Asn Tyr Lys Leu
        115                 120                 125

Thr Phe Gly Lys Gly Thr Leu Leu Thr Val Thr Pro Asn Ile Gln Asn
    130                 135                 140

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

Thr Leu Cys Leu Phe Thr Asp Phe Asp Ser Gln Ile Asn Val Pro Lys
                165                 170                 175

Thr Met Glu Ser Gly Thr Phe Ile Thr Asp Lys Thr Val Leu Asp Met
            180                 185                 190

Lys Ala Met Asp Ser Lys Ser Asn Gly Ala Ile Ala Trp Ser Asn Gln
        195                 200                 205

Thr Ser Phe Thr Cys Gln Asp Ile Phe Lys Glu Thr Asn Ala Thr Tyr
    210                 215                 220

Pro Ser Ser Asp Val Pro Cys Asp Ala Thr Leu Thr Glu Lys Ser Phe
225                 230                 235                 240

Glu Thr Asp Met Asn Leu Asn Phe Gln Asn Leu Ser Val Met Gly Leu
                245                 250                 255

Arg Ile Leu Leu Leu Lys Val Ala Gly Phe Asn Leu Leu Met Thr Leu
            260                 265                 270

Arg Leu Trp Ser Ser
        275
```

<210> 146
<211> 303
<212> PRT
<213> Murine

<400> 146

```
Met Gly Ser Arg Leu Phe Leu Val Leu Ser Leu Leu Cys Thr Lys His
1               5                   10                  15


Met Glu Ala Ala Val Thr Gln Ser Pro Arg Asn Lys Val Thr Val Thr
            20                  25                  30


Gly Gly Asn Val Thr Leu Ser Cys Arg Gln Thr Asn Ser His Asn Tyr
        35                  40                  45


Met Tyr Trp Tyr Arg Gln Asp Thr Gly His Gly Leu Arg Leu Ile His
    50                  55                  60


Tyr Ser Tyr Gly Ala Gly Asn Leu Gln Ile Gly Asp Val Pro Asp Gly
65                  70                  75                  80


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


Leu Ala Ser Pro Ser Gln Thr Ser Leu Tyr Phe Cys Ala Ser Ala Ser
            100                 105                 110


Trp Gly Gly Tyr Ala Glu Gln Phe Phe Gly Pro Gly Thr Arg Leu Thr
        115                 120                 125


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


Glu Pro Ser Lys Ala Glu Ile Ala Asn Lys Gln Lys Ala Thr Leu Val
145                 150                 155                 160


Cys Leu Ala Arg Gly Phe Phe Pro Asp His Val Glu Leu Ser Trp Trp
                165                 170                 175
```

```
Val Asn Gly Lys Glu Val His Ser Gly Val Ser Thr Asp Pro Gln Ala
            180                 185                 190


Tyr Lys Glu Ser Asn Tyr Ser Tyr Cys Leu Ser Ser Arg Leu Arg Val
        195                 200                 205


Ser Ala Thr Phe Trp His Asn Pro Arg Asn His Phe Arg Cys Gln Val
    210                 215                 220


Gln Phe His Gly Leu Ser Glu Glu Asp Lys Trp Pro Glu Gly Ser Pro
225                 230                 235                 240


Lys Pro Val Thr Gln Asn Ile Ser Ala Glu Ala Trp Gly Arg Ala Asp
                245                 250                 255


Cys Gly Ile Thr Ser Ala Ser Tyr His Gln Gly Val Leu Ser Ala Thr
            260                 265                 270


Ile Leu Tyr Glu Ile Leu Leu Gly Lys Ala Thr Leu Tyr Ala Val Leu
        275                 280                 285


Val Ser Gly Leu Val Leu Met Ala Met Val Lys Lys Lys Asn Ser
    290                 295                 300


<210>  147
<211>  136
<212>  PRT
<213>  Murine

<400>  147

Ile Gln Asn Pro Glu Pro Ala Val Tyr Gln Leu Lys Asp Pro Arg Ser
1               5                   10                  15


Gln Asp Ser Thr Leu Cys Leu Phe Thr Asp Phe Asp Ser Gln Ile Asn
            20                  25                  30


Val Pro Lys Thr Met Glu Ser Gly Thr Phe Ile Thr Asp Lys Thr Val
        35                  40                  45
```

```
Leu Asp Met Lys Ala Met Asp Ser Lys Ser Asn Gly Ala Ile Ala Trp
    50                  55                  60

Ser Asn Gln Thr Ser Phe Thr Cys Gln Asp Ile Phe Lys Glu Thr Asn
65                  70                  75                  80

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

Lys Ser Phe Glu Thr Asp Met Asn Leu Asn Phe Gln Asn Leu Ser Val
            100                 105                 110

Met Gly Leu Arg Ile Leu Leu Leu Lys Val Ala Gly Phe Asn Leu Leu
        115                 120                 125

Met Thr Leu Arg Leu Trp Ser Ser
    130                 135
```

<210> 148
<211> 172
<212> PRT
<213> Murine

<400> 148

```
Asp Leu Arg Asn Val Thr Pro Pro Lys Val Ser Leu Phe Glu Pro Ser
1               5                   10                  15

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

Arg Gly Phe Phe Pro Asp His Val Glu Leu Ser Trp Trp Val Asn Gly
        35                  40                  45

Lys Glu Val His Ser Gly Val Ser Thr Asp Pro Gln Ala Tyr Lys Glu
    50                  55                  60

Ser Asn Tyr Ser Tyr Cys Leu Ser Ser Arg Leu Arg Val Ser Ala Thr
```

65 70 75 80

Phe Trp His Asn Pro Arg Asn His Phe Arg Cys Gln Val Gln Phe His
85 90 95

Gly Leu Ser Glu Glu Asp Lys Trp Pro Glu Gly Ser Pro Lys Pro Val
100 105 110

Thr Gln Asn Ile Ser Ala Glu Ala Trp Gly Arg Ala Asp Cys Gly Ile
115 120 125

Thr Ser Ala Ser Tyr His Gln Gly Val Leu Ser Ala Thr Ile Leu Tyr
130 135 140

Glu Ile Leu Leu Gly Lys Ala Thr Leu Tyr Ala Val Leu Val Ser Gly
145 150 155 160

Leu Val Leu Met Ala Met Val Lys Lys Lys Asn Ser
165 170

<210> 149
<211> 5
<212> PRT
<213> Murine

<400> 149

Thr Thr Met Arg Ser
1 5

<210> 150
<211> 5
<212> PRT
<213> Murine

<400> 150

Leu Ala Ser Gly Thr
1 5

<210> 151

<211> 15
<212> PRT
<213> Murine

<400> 151

Cys Ala Ala Asp Ser Ser Asn Thr Gly Tyr Gln Asn Phe Tyr Phe
1 5 10 15

<210> 152
<211> 5
<212> PRT
<213> Murine

<400> 152

Ser Gly His Leu Ser
1 5

<210> 153
<211> 6
<212> PRT
<213> Murine

<400> 153

His Tyr Asp Lys Met Glu
1 5

<210> 154
<211> 15
<212> PRT
<213> Murine

<400> 154

Cys Ala Ser Ser Leu Thr Asp Pro Leu Asp Ser Asp Tyr Thr Phe
1 5 10 15

<210> 155
<211> 133
<212> PRT
<213> Murine

<400> 155

```
Met Gln Arg Asn Leu Gly Ala Val Leu Gly Ile Leu Trp Val Gln Ile
1               5                   10                  15


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


Leu His Glu Gly Thr Asp Ser Ala Leu Arg Cys Asn Phe Thr Thr Thr
        35                  40                  45


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


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


Ser Ala Phe Asp Ser Lys Glu Arg Arg Tyr Ser Thr Leu His Ile Arg
                85                  90                  95


Asp Ala Gln Leu Glu Asp Ser Gly Thr Tyr Phe Cys Ala Ala Asp Ser
            100                 105                 110


Ser Asn Thr Gly Tyr Gln Asn Phe Tyr Phe Gly Lys Gly Thr Ser Leu
        115                 120                 125


Thr Val Ile Pro Asn
    130


<210>  156
<211>  143
<212>  PRT
<213>  Murine

<400>  156

Met Ser Asn Thr Ala Phe Pro Asp Pro Ala Trp Asn Thr Thr Leu Leu
1               5                   10                  15


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

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

Ile Leu Lys Cys Ile Pro Ile Ser Gly His Leu Ser Val Ala Trp Tyr
    50                  55                  60

Gln Gln Thr Gln Gly Gln Glu Leu Lys Phe Phe Ile Gln His Tyr Asp
65                  70                  75                  80

Lys Met Glu Arg Asp Lys Gly Asn Leu Pro Ser Arg Phe Ser Val Gln
                85                  90                  95

Gln Phe Asp Asp Tyr His Ser Glu Met Asn Met Ser Ala Leu Glu Leu
            100                 105                 110

Glu Asp Ser Ala Val Tyr Phe Cys Ala Ser Ser Leu Thr Asp Pro Leu
        115                 120                 125

Asp Ser Asp Tyr Thr Phe Gly Ser Gly Thr Arg Leu Leu Val Ile
    130                 135                 140
```

<210> 157
<211> 269
<212> PRT
<213> Murine

<400> 157

```
Met Gln Arg Asn Leu Gly Ala Val Leu Gly Ile Leu Trp Val Gln Ile
1               5                   10                  15

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

Leu His Glu Gly Thr Asp Ser Ala Leu Arg Cys Asn Phe Thr Thr Thr
        35                  40                  45

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

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

Ser Ala Phe Asp Ser Lys Glu Arg Arg Tyr Ser Thr Leu His Ile Arg
                85                  90                  95

Asp Ala Gln Leu Glu Asp Ser Gly Thr Tyr Phe Cys Ala Ala Asp Ser
            100                 105                 110

Ser Asn Thr Gly Tyr Gln Asn Phe Tyr Phe Gly Lys Gly Thr Ser Leu
        115                 120                 125

Thr Val Ile Pro Asn Ile Gln Asn Pro Glu Pro Ala Val Tyr Gln Leu
    130                 135                 140

Lys Asp Pro Arg Ser Gln Asp Ser Thr Leu Cys Leu Phe Thr Asp Phe
145                 150                 155                 160

Asp Ser Gln Ile Asn Val Pro Lys Thr Met Glu Ser Gly Thr Phe Ile
                165                 170                 175

Thr Asp Lys Thr Val Leu Asp Met Lys Ala Met Asp Ser Lys Ser Asn
            180                 185                 190

Gly Ala Ile Ala Trp Ser Asn Gln Thr Ser Phe Thr Cys Gln Asp Ile
        195                 200                 205

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

Ala Thr Leu Thr Glu Lys Ser Phe Glu Thr Asp Met Asn Leu Asn Phe
225                 230                 235                 240

Gln Asn Leu Ser Val Met Gly Leu Arg Ile Leu Leu Leu Lys Val Ala
                245                 250                 255
```

Gly Phe Asn Leu Leu Met Thr Leu Arg Leu Trp Ser Ser
260 265

<210> 158
<211> 316
<212> PRT
<213> Murine

<400> 158

Met Ser Asn Thr Ala Phe Pro Asp Pro Ala Trp Asn Thr Thr Leu Leu
1 5 10 15

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

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

Ile Leu Lys Cys Ile Pro Ile Ser Gly His Leu Ser Val Ala Trp Tyr
50 55 60

Gln Gln Thr Gln Gly Gln Glu Leu Lys Phe Phe Ile Gln His Tyr Asp
65 70 75 80

Lys Met Glu Arg Asp Lys Gly Asn Leu Pro Ser Arg Phe Ser Val Gln
85 90 95

Gln Phe Asp Asp Tyr His Ser Glu Met Asn Met Ser Ala Leu Glu Leu
100 105 110

Glu Asp Ser Ala Val Tyr Phe Cys Ala Ser Ser Leu Thr Asp Pro Leu
115 120 125

Asp Ser Asp Tyr Thr Phe Gly Ser Gly Thr Arg Leu Leu Val Ile Glu
130 135 140

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

```
Lys Ala Glu Ile Ala Asn Lys Gln Lys Ala Thr Leu Val Cys Leu Ala
                165                 170                 175


Arg Gly Phe Phe Pro Asp His Val Glu Leu Ser Trp Trp Val Asn Gly
            180                 185                 190


Lys Glu Val His Ser Gly Val Ser Thr Asp Pro Gln Ala Tyr Lys Glu
        195                 200                 205


Ser Asn Tyr Ser Tyr Cys Leu Ser Ser Arg Leu Arg Val Ser Ala Thr
    210                 215                 220


Phe Trp His Asn Pro Arg Asn His Phe Arg Cys Gln Val Gln Phe His
225                 230                 235                 240


Gly Leu Ser Glu Glu Asp Lys Trp Pro Glu Gly Ser Pro Lys Pro Val
                245                 250                 255


Thr Gln Asn Ile Ser Ala Glu Ala Trp Gly Arg Ala Asp Cys Gly Ile
            260                 265                 270


Thr Ser Ala Ser Tyr Gln Gln Gly Val Leu Ser Ala Thr Ile Leu Tyr
        275                 280                 285


Glu Ile Leu Leu Gly Lys Ala Thr Leu Tyr Ala Val Leu Val Ser Thr
    290                 295                 300


Leu Val Val Met Ala Met Val Lys Arg Lys Asn Ser
305                 310                 315


<210>  159
<211>  136
<212>  PRT
<213>  Murine

<400>  159

Ile Gln Asn Pro Glu Pro Ala Val Tyr Gln Leu Lys Asp Pro Arg Ser
1               5                   10                  15
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Gln Asp Ser Thr Leu Cys Leu Phe Thr Asp Phe Asp Ser Gln Ile Asn
            20                  25                  30

Val Pro Lys Thr Met Glu Ser Gly Thr Phe Ile Thr Asp Lys Thr Val
        35                  40                  45

Leu Asp Met Lys Ala Met Asp Ser Lys Ser Asn Gly Ala Ile Ala Trp
    50                  55                  60

Ser Asn Gln Thr Ser Phe Thr Cys Gln Asp Ile Phe Lys Glu Thr Asn
65                  70                  75                  80

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

Lys Ser Phe Glu Thr Asp Met Asn Leu Asn Phe Gln Asn Leu Ser Val
            100                 105                 110

Met Gly Leu Arg Ile Leu Leu Leu Lys Val Ala Gly Phe Asn Leu Leu
        115                 120                 125

Met Thr Leu Arg Leu Trp Ser Ser
    130                 135
```

<210> 160
<211> 173
<212> PRT
<213> Murine

<400> 160

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Glu Asp Leu Arg Asn Val Thr Pro Pro Lys Val Ser Leu Phe Glu Pro
1               5                   10                  15

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

Ala Arg Gly Phe Phe Pro Asp His Val Glu Leu Ser Trp Trp Val Asn
```

```
        35                  40                  45

Gly Lys Glu Val His Ser Gly Val Ser Thr Asp Pro Gln Ala Tyr Lys
    50                  55                  60

Glu Ser Asn Tyr Ser Tyr Cys Leu Ser Ser Arg Leu Arg Val Ser Ala
65                  70                  75                  80

Thr Phe Trp His Asn Pro Arg Asn His Phe Arg Cys Gln Val Gln Phe
                85                  90                  95

His Gly Leu Ser Glu Glu Asp Lys Trp Pro Glu Gly Ser Pro Lys Pro
            100                 105                 110

Val Thr Gln Asn Ile Ser Ala Glu Ala Trp Gly Arg Ala Asp Cys Gly
        115                 120                 125

Ile Thr Ser Ala Ser Tyr Gln Gln Gly Val Leu Ser Ala Thr Ile Leu
    130                 135                 140

Tyr Glu Ile Leu Leu Gly Lys Ala Thr Leu Tyr Ala Val Leu Val Ser
145                 150                 155                 160

Thr Leu Val Val Met Ala Met Val Lys Arg Lys Asn Ser
                165                 170
```

<210> 161
<211> 13
<212> PRT
<213> Murine

<400> 161

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Cys Ala Ala Leu Asn Thr Gly Tyr Gln Asn Phe Tyr Phe
1               5                   10
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<210> 162
<211> 612
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 162

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Met Gln Arg Asn Leu Gly Ala Val Leu Gly Ile Leu Trp Val Gln Ile
1               5                  10                  15


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


Leu His Glu Gly Thr Asp Ser Ala Leu Arg Cys Asn Phe Thr Thr Thr
        35                  40                  45


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


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


Ser Ala Phe Asp Ser Lys Glu Arg Arg Tyr Ser Thr Leu His Ile Arg
                85                  90                  95


Asp Ala Gln Leu Glu Asp Ser Gly Thr Tyr Phe Cys Ala Ala Asp Ser
            100                 105                 110


Ser Asn Thr Gly Tyr Gln Asn Phe Tyr Phe Gly Lys Gly Thr Ser Leu
        115                 120                 125


Thr Val Ile Pro Asn Ile Gln Asn Pro Glu Pro Ala Val Tyr Gln Leu
    130                 135                 140


Lys Asp Pro Arg Ser Gln Asp Ser Thr Leu Cys Leu Phe Thr Asp Phe
145                 150                 155                 160


Asp Ser Gln Ile Asn Val Pro Lys Thr Met Glu Ser Gly Thr Phe Ile
                165                 170                 175
```

```
Thr Asp Lys Thr Val Leu Asp Met Lys Ala Met Asp Ser Lys Ser Asn
            180                 185                 190

Gly Ala Ile Ala Trp Ser Asn Gln Thr Ser Phe Thr Cys Gln Asp Ile
        195                 200                 205

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

Ala Thr Leu Thr Glu Lys Ser Phe Glu Thr Asp Met Asn Leu Asn Phe
225                 230                 235                 240

Gln Asn Leu Ser Val Met Gly Leu Arg Ile Leu Leu Leu Lys Val Ala
                245                 250                 255

Gly Phe Asn Leu Leu Met Thr Leu Arg Leu Trp Ser Ser Arg Ala Lys
            260                 265                 270

Arg Ser Gly Ser Gly Ala Thr Asn Phe Ser Leu Leu Lys Gln Ala Gly
        275                 280                 285

Asp Val Glu Glu Asn Pro Gly Pro Met Ser Asn Thr Ala Phe Pro Asp
    290                 295                 300

Pro Ala Trp Asn Thr Thr Leu Leu Ser Trp Val Ala Leu Phe Leu Leu
305                 310                 315                 320

Gly Thr Ser Ser Ala Asn Ser Gly Val Val Gln Ser Pro Arg Tyr Ile
                325                 330                 335

Ile Lys Gly Lys Gly Glu Arg Ser Ile Leu Lys Cys Ile Pro Ile Ser
            340                 345                 350

Gly His Leu Ser Val Ala Trp Tyr Gln Gln Thr Gln Gly Gln Glu Leu
        355                 360                 365

Lys Phe Phe Ile Gln His Tyr Asp Lys Met Glu Arg Asp Lys Gly Asn
    370                 375                 380
```

```
Leu Pro Ser Arg Phe Ser Val Gln Gln Phe Asp Asp Tyr His Ser Glu
385                 390                 395                 400

Met Asn Met Ser Ala Leu Glu Leu Glu Asp Ser Ala Val Tyr Phe Cys
                405                 410                 415

Ala Ser Ser Leu Thr Asp Pro Leu Asp Ser Asp Tyr Thr Phe Gly Ser
            420                 425                 430

Gly Thr Arg Leu Leu Val Ile Glu Asp Leu Arg Asn Val Thr Pro Pro
        435                 440                 445

Lys Val Ser Leu Phe Glu Pro Ser Lys Ala Glu Ile Ala Asn Lys Gln
    450                 455                 460

Lys Ala Thr Leu Val Cys Leu Ala Arg Gly Phe Phe Pro Asp His Val
465                 470                 475                 480

Glu Leu Ser Trp Trp Val Asn Gly Lys Glu Val His Ser Gly Val Ser
                485                 490                 495

Thr Asp Pro Gln Ala Tyr Lys Glu Ser Asn Tyr Ser Tyr Cys Leu Ser
            500                 505                 510

Ser Arg Leu Arg Val Ser Ala Thr Phe Trp His Asn Pro Arg Asn His
        515                 520                 525

Phe Arg Cys Gln Val Gln Phe His Gly Leu Ser Glu Glu Asp Lys Trp
    530                 535                 540

Pro Glu Gly Ser Pro Lys Pro Val Thr Gln Asn Ile Ser Ala Glu Ala
545                 550                 555                 560

Trp Gly Arg Ala Asp Cys Gly Ile Thr Ser Ala Ser Tyr Gln Gln Gly
                565                 570                 575
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Val Leu Ser Ala Thr Ile Leu Tyr Glu Ile Leu Leu Gly Lys Ala Thr
580 585 590

Leu Tyr Ala Val Leu Val Ser Thr Leu Val Val Met Ala Met Val Lys
595 600 605

Arg Lys Asn Ser
610

<210> 163
<211> 1839
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 163
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ggggatcagg tggagcagag tccttcagcc ctgagcctcc acgagggaac cgattctgct 120

ctgagatgca attttacgac caccatgagg agtgtgcagt ggttccgaca gaattccagg 180

ggcagcctca tcagtttgtt ctacttggct tcaggaacaa aggagaatgg gaggctaaag 240

tcagcatttg attctaagga gcggcgctac agcaccctgc acatcaggga tgcccagctg 300

gaggactcag gcacttactt ctgtgctgct gactcttcga acacgggtta ccagaacttc 360

tattttggga aaggaacaag tttgactgtc attccaaaca tccagaaccc agaacctgct 420

gtgtaccagt taaaagatcc tcggtctcag gacagcaccc tctgcctgtt caccgacttt 480

gactcccaaa tcaatgtgcc gaaaaccatg gaatctggaa cgttcatcac tgacaaaact 540

gtgctggaca tgaaagctat ggattccaag agcaatgggg ccattgcctg gagcaaccag 600

acaagcttca cctgccaaga tatcttcaaa gagaccaacg ccacctaccc cagttcagac 660

gttccctgtg atgccacgtt gaccgagaaa agctttgaaa cagatatgaa cctgaacttt 720

caaaacctgt cagttatggg actccgaatc ctcctgctga aagtagcggg atttaacctg 780

ctcatgacgc tgaggctgtg gtccagtcgg gccaagcggt ccggatccgg agccaccaac 840

ttcagcctgc tgaagcaggc cggcgacgtg gaggagaacc ccggccccat gtctaacact 900

gccttccctg accccgcctg gaacaccacc ctgctatctt gggttgctct ctttctcctg 960

ggaacaagtt cagcaaattc tggggttgtc cagtctccaa gatacataat caaaggaaag 1020

ggagaaaggt ccattctaaa atgtattccc atctctggac atctctctgt ggcctggtat 1080

caacagactc aggggcagga actaaagttc ttcattcagc attatgataa aatggagaga 1140

gataaaggaa acctgcccag cagattctca gtccaacagt ttgatgacta tcactctgag 1200

atgaacatga gtgccttgga gctagaggac tctgccgtgt acttctgtgc cagctctctc 1260

acagatccgc tagactccga ctacaccttc ggctcaggga ccaggctttt ggtaatagag 1320

gatctgagaa atgtgactcc acccaaggtc tccttgtttg agccatcaaa agcagagatt 1380

gcaaacaaac aaaaggctac cctcgtgtgc ttggccaggg gcttcttccc tgaccacgtg 1440

gagctgagct ggtgggtgaa tggcaaggag gtccacagtg gggtcagcac ggaccctcag 1500

gcctacaagg agagcaatta tagctactgc ctgagcagcc gcctgagggt ctctgctacc 1560

ttctggcaca atcctcgcaa ccacttccgc tgccaagtgc agttccatgg gctttcagag 1620

gaggacaagt ggccagaggg ctcacccaaa cctgtcacac agaacatcag tgcagaggcc 1680

tggggccgag cagactgtgg gattacctca gcatcctatc aacaaggggt cttgtctgcc 1740

accatcctct atgagatcct gctagggaaa gccaccctgt atgctgtgct tgtcagtaca 1800

ctggtggtga tggctatggt caaaagaaag aattcatga 1839

<210> 164
<211> 15
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 164
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<210> 165
<211> 15
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 165
ttggcttcag gaaca 15

<210> 166
<211> 39
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 166
gctgctgact cttcgaacac gggttaccag aacttctat 39

<210> 167
<211> 15
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 167
tctggacatc tctct 15

<210> 168
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 168
cattatgata aaatggag 18

<210> 169
<211> 39
<212> DNA
<213> Artificial Sequence

<220>

<223> Synthetic

<400> 169
gccagctctc tcacagatcc gctagactcc gactacacc 39

<210> 170
<211> 399
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 170
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ggggatcagg tggagcagag tccttcagcc ctgagcctcc acgagggaac cgattctgct 120

ctgagatgca attttacgac caccatgagg agtgtgcagt ggttccgaca gaattccagg 180

ggcagcctca tcagtttgtt ctacttggct tcaggaacaa aggagaatgg gaggctaaag 240

tcagcatttg attctaagga gcggcgctac agcaccctgc acatcaggga tgcccagctg 300

gaggactcag gcacttactt ctgtgctgct gactcttcga acacgggtta ccagaacttc 360

tattttggga aaggaacaag tttgactgtc attccaaac 399

<210> 171
<211> 429
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 171
atgtctaaca ctgccttccc tgaccccgcc tggaacacca ccctgctatc ttgggttgct 60

ctctttctcc tgggaacaag ttcagcaaat tctggggttg tccagtctcc aagatacata 120

atcaaaggaa agggagaaag gtccattcta aaatgtattc ccatctctgg acatctctct 180

gtggcctggt atcaacagac tcaggggcag gaactaaagt tcttcattca gcattatgat 240

aaaatggaga gagataaagg aaacctgccc agcagattct cagtccaaca gtttgatgac 300

tatcactctg agatgaacat gagtgccttg gagctagagg actctgccgt gtacttctgt 360

gccagctctc tcacagatcc gctagactcc gactacacct tcggctcagg gaccaggctt 420

ttggtaata 429

<210> 172
<211> 807
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 172
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ggggatcagg tggagcagag tccttcagcc ctgagcctcc acgagggaac cgattctgct 120

ctgagatgca attttacgac caccatgagg agtgtgcagt ggttccgaca gaattccagg 180

ggcagcctca tcagtttgtt ctacttggct tcaggaacaa aggagaatgg gaggctaaag 240

tcagcatttg attctaagga gcggcgctac agcaccctgc acatcaggga tgcccagctg 300

gaggactcag gcacttactt ctgtgctgct gactcttcga acacgggtta ccagaacttc 360

tattttggga aaggaacaag tttgactgtc attccaaaca tccagaaccc agaacctgct 420

gtgtaccagt taaaagatcc tcggtctcag gacagcaccc tctgcctgtt caccgacttt 480

gactcccaaa tcaatgtgcc gaaaaccatg gaatctggaa cgttcatcac tgacaaaact 540

gtgctggaca tgaaagctat ggattccaag agcaatgggg ccattgcctg gagcaaccag 600

acaagcttca cctgccaaga tatcttcaaa gagaccaacg ccacctaccc cagttcagac 660

gttccctgtg atgccacgtt gaccgagaaa agctttgaaa cagatatgaa cctgaacttt 720

caaaacctgt cagttatggg actccgaatc ctcctgctga aagtagcggg atttaacctg 780

ctcatgacgc tgaggctgtg gtccagt 807

<210> 173
<211> 951
<212> DNA
<213> Artificial Sequence

<220>

<223> Synthetic

<400> 173
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ctctttctcc tgggaacaag ttcagcaaat tctggggttg tccagtctcc aagatacata 120

atcaaaggaa agggagaaag gtccattcta aaatgtattc ccatctctgg acatctctct 180

gtggcctggt atcaacagac tcaggggcag gaactaaagt tcttcattca gcattatgat 240

aaaatggaga gagataaagg aaacctgccc agcagattct cagtccaaca gtttgatgac 300

tatcactctg agatgaacat gagtgccttg gagctagagg actctgccgt gtacttctgt 360

gccagctctc tcacagatcc gctagactcc gactacacct tcggctcagg gaccaggctt 420

ttggtaatag aggatctgag aaatgtgact ccacccaagg tctccttgtt tgagccatca 480

aaagcagaga ttgcaaacaa acaaaaggct accctcgtgt gcttggccag gggcttcttc 540

cctgaccacg tggagctgag ctggtgggtg aatggcaagg aggtccacag tggggtcagc 600

acggaccctc aggcctacaa ggagagcaat tatagctact gcctgagcag ccgcctgagg 660

gtctctgcta ccttctggca caatcctcgc aaccacttcc gctgccaagt gcagttccat 720

gggctttcag aggaggacaa gtggccagag ggctcaccca aacctgtcac acagaacatc 780

agtgcagagg cctggggccg agcagactgt gggattacct cagcatccta tcaacaaggg 840

gtcttgtctg ccaccatcct ctatgagatc ctgctaggga aagccaccct gtatgctgtg 900

cttgtcagta cactggtggt gatggctatg gtcaaaagaa agaattcatg a 951

<210> 174
<211> 408
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 174
atccagaacc cagaacctgc tgtgtaccag ttaaaagatc ctcggtctca ggacagcacc 60

ctctgcctgt tcaccgactt tgactcccaa atcaatgtgc cgaaaaccat ggaatctgga 120

acgttcatca ctgacaaaac tgtgctggac atgaaagcta tggattccaa gagcaatggg 180

gccattgcct ggagcaacca gacaagcttc acctgccaag atatcttcaa agagaccaac 240

gccacctacc ccagttcaga cgttccctgt gatgccacgt tgaccgagaa aagctttgaa 300

acagatatga acctaaactt tcaaaacctg tcagttatgg gactccgaat cctcctgctg 360

aaagtagcgg gatttaacct gctcatgacg ctgaggctgt ggtccagt 408

<210> 175
<211> 522
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 175
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attgcaaaca aacaaaaggc taccctcgtg tgcttggcca ggggcttctt ccctgaccac 120

gtggagctga gctggtgggt gaatggcaag gaggtccaca gtggggtcag cacggaccct 180

caggcctaca aggagagcaa ttatagctac tgcctgagca gccgcctgag ggtctctgct 240

accttctggc acaatcctcg caaccacttc cgctgccaag tgcagttcca tgggctttca 300

gaggaggaca agtggccaga gggctcaccc aaacctgtca cacagaacat cagtgcagag 360

gcctggggcc gagcagactg tgggattacc tcagcatcct atcaacaagg ggtcttgtct 420

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acactggtgg tgatggctat ggtcaaaaga aagaattcat ga 522

<210> 176
<211> 1818
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 176
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agaggcgagc aggtggagca gcgccctcct cacctgagtg tccgggaggg agacagtgcc 120

gttatcacct gcacctacac agaccctaac agttattact tcttctggta caagcaagag 180

ccgggggcaa gtcttcagtt gcttatgaag gttttctcaa gtacggaaat aaacgaagga 240

caaggattca ctgtcctact gaacaagaaa gacaaacgac tctctctgaa cctcacagct 300

gcccatcctg gggactcagc cgcgtacttc tgcgcagtca gtggagggac taacagtgca 360

gggaacaagc taacttttgg aattggaacc agggtgctgg tcaggccaga catccagaac 420

ccagaacctg ctgtgtacca gttaaaagat cctcggtctc aggacagcac cctctgcctg 480

ttcaccgact ttgactccca aatcaatgtg ccgaaaacca tggaatctgg aacgttcatc 540

actgacaaaa ctgtgctgga catgaaagct atggattcca agagcaatgg ggccattgcc 600

tggagcaacc agacaagctt cacctgccaa gatatcttca aagagaccaa cgccacctac 660

cccagttcag acgttccctg tgatgccacg ttgaccgaga aaagctttga aacagatatg 720

aacctaaact ttcaaaacct gtcagttatg ggactccgaa tcctcctgct gaaagtagcg 780

ggatttaacc tgctcatgac gctgaggctg tggtccagtc gggccaagcg gtccggatcc 840

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acggctgttt tccagactcc aaactatcat gtcacacagg tgggaaatga agtgtctttc 1020

aattgtaagc aaactctggg ccacgatact atgtattggt acaagcaaga ctctaagaaa 1080

ttgctgaaga ttatgtttag ctacaataat aagcaactca ttgtaaacga aacagttcca 1140

aggcgcttct cacctcagtc ttcagataaa gctcatttga atcttcgaat caagtctgta 1200

gagccggagg actctgctgt gtatctctgt gccagcagtc gggactgggg gcctgctgag 1260

cagttcttcg gaccagggac acgactcacc gtcctagagg atctgagaaa tgtgactcca 1320

cccaaggtct ccttgtttga gccatcaaaa gcagagattg caaacaaaca aaaggctacc 1380

ctcgtgtgct tggccagggg cttcttccct gaccacgtgg agctgagctg gtgggtgaat 1440

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ctggggaagg ccaccctata tgctgtgctg gtcagtggcc tggtgctgat ggccatggtc 1800

aagaaaaaaa attcctga 1818

<210> 177
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 177
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<210> 178
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 178
gttttctcaa gtacggaaat a 21

<210> 179
<211> 48
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 179
tgcgcagtca gtggagggac taacagtgca gggaacaagc taactttt 48

<210> 180
<211> 15
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 180
ctgggccacg atact 15

<210> 181
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 181
tacaataata agcaactc 18

<210> 182
<211> 42
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 182
tgtgccagca gtcgggactg ggggcctgct gagcagttct tc 42

<210> 183
<211> 411
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 183
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agaggcgagc aggtggagca gcgccctcct cacctgagtg tccgggaggg agacagtgcc 120

gttatcacct gcacctacac agaccctaac agttattact tcttctggta caagcaagag 180

ccgggggcaa gtcttcagtt gcttatgaag gttttctcaa gtacggaaat aaacgaagga 240

caaggattca ctgtcctact gaacaagaaa gacaaacgac tctctctgaa cctcacagct 300

gcccatcctg gggactcagc cgcgtacttc tgcgcagtca gtggagggac taacagtgca 360

gggaacaagc taacttttgg aattggaacc agggtgctgg tcaggccaga c 411

<210> 184
<211> 399
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 184
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acggctgttt tccagactcc aaactatcat gtcacacagg tgggaaatga agtgtctttc 120

aattgtaagc aaactctggg ccacgatact atgtattggt acaagcaaga ctctaagaaa 180

ttgctgaaga ttatgtttag ctacaataat aagcaactca ttgtaaacga aacagttcca 240

aggcgcttct cacctcagtc ttcagataaa gctcatttga atcttcgaat caagtctgta 300

gagccggagg actctgctgt gtatctctgt gccagcagtc gggactgggg gcctgctgag 360

cagttcttcg gaccagggac acgactcacc gtcctagag 399

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<211> 819
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 185
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gttatcacct gcacctacac agaccctaac agttattact tcttctggta caagcaagag 180

ccgggggcaa gtcttcagtt gcttatgaag gttttctcaa gtacggaaat aaacgaagga 240

caaggattca ctgtcctact gaacaagaaa gacaaacgac tctctctgaa cctcacagct 300

gcccatcctg gggactcagc cgcgtacttc tgcgcagtca gtggagggac taacagtgca 360

gggaacaagc taacttttgg aattggaacc agggtgctgg tcaggccaga catccagaac 420

ccagaacctg ctgtgtacca gttaaaagat cctcggtctc aggacagcac cctctgcctg 480

ttcaccgact ttgactccca aatcaatgtg ccgaaaacca tggaatctgg aacgttcatc 540

actgacaaaa ctgtgctgga catgaaagct atggattcca agagcaatgg ggccattgcc 600

tggagcaacc agacaagctt cacctgccaa gatatcttca aagagaccaa cgccacctac 660

cccagttcag acgttccctg tgatgccacg ttgaccgaga aaagctttga aacagatatg 720

aacctaaact ttcaaaacct gtcagttatg ggactccgaa tcctcctgct gaaagtagcg 780

ggatttaacc tgctcatgac gctgaggctg tggtccagt 819

<210> 186
<211> 918
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 186
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acggctgttt tccagactcc aaactatcat gtcacacagg tgggaaatga agtgtctttc 120

aattgtaagc aaactctggg ccacgatact atgtattggt acaagcaaga ctctaagaaa 180

ttgctgaaga ttatgtttag ctacaataat aagcaactca ttgtaaacga aacagttcca 240

aggcgcttct cacctcagtc ttcagataaa gctcatttga atcttcgaat caagtctgta 300

gagccggagg actctgctgt gtatctctgt gccagcagtc gggactgggg gcctgctgag 360

cagttcttcg gaccagggac acgactcacc gtcctagagg atctgagaaa tgtgactcca 420

cccaaggtct ccttgtttga gccatcaaaa gcagagattg caaacaaaca aaaggctacc 480

ctcgtgtgct tggccagggg cttcttccct gaccacgtgg agctgagctg gtgggtgaat 540

ggcaaggagg tccacagtgg ggtcagcacg gaccctcagg cctacaagga gagcaattat 600

agctactgcc tgagcagccg cctgagggtc tctgctacct tctggcacaa tcctcgaaac 660

cacttccgct gccaagtgca gttccatggg ctttcagagg aggacaagtg gccagagggc 720

tcacccaaac ctgtcacaca gaacatcagt gcagaggcct ggggccgagc agactgtgga 780

atcacttcag catcctatca tcaggggttt ctgtctgcaa ccatcctcta tgagatccta 840

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aagaaaaaaa attcctga 918

<210> 187
<211> 408
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 187
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acgttcatca ctgacaaaac tgtgctggac atgaaagcta tggattccaa gagcaatggg 180

gccattgcct ggagcaacca gacaagcttc acctgccaag atatcttcaa agagaccaac 240

gccacctacc ccagttcaga cgttccctgt gatgccacgt tgaccgagaa aagctttgaa 300

acagatatga acctaaactt tcaaaacctg tcagttatgg gactccgaat cctcctgctg 360

aaagtagcgg gatttaacct gctcatgacg ctgaggctgt ggtccagt 408

<210> 188
<211> 519
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 188
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gcaaacaaac aaaaggctac cctcgtgtgc ttggccaggg gcttcttccc tgaccacgtg 120

gagctgagct ggtgggtgaa tggcaaggag gtccacagtg gggtcagcac ggaccctcag 180

gcctacaagg agagcaatta tagctactgc ctgagcagcc gcctgagggt ctctgctacc 240

ttctggcaca atcctcgaaa ccacttccgc tgccaagtgc agttccatgg gctttcagag 300

gaggacaagt ggccagaggg ctcacccaaa cctgtcacac agaacatcag tgcagaggcc 360

tggggccgag cagactgtgg aatcacttca gcatcctatc atcaggggt tctgtctgca 420

accatcctct atgagatcct actggggaag gccaccctat atgctgtgct ggtcagtggc 480

ctggtgctga tggccatggt caagaaaaaa aattcctga 519

<210> 189
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 189
aatgatatgt ttgactat 18

<210> 190
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 190
gtacgctcaa atgtggataa g 21

<210> 191
<211> 45
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 191
tgcgcagcag gtgacagtgg aggcagcaat tacaaactga cattt 45

<210> 192
<211> 15

<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 192
aatagccaca actac 15

<210> 193
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 193
tcatatggtg ctggcaac 18

<210> 194
<211> 42
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 194
tgtgccagcg cgagctgggg gggctatgct gagcagttct tc 42

<210> 195
<211> 423
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 195
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agtcaacaga agactggtgg ccagcaagtt aaacaaagct ctccatcgct gactgttcaa 120

gagggaggga tattgatcct gaattgtgat tacgagaatg atatgtttga ctattttgcc 180

tggtacaaaa aataccctga caacagcccc acactcctga tatccgtacg ctcaaatgtg 240

gataagaggg aagacggaag attcacagtt ttcttgaaca aaagcggcaa acacttctca 300

ctgcacatca cagcctccca gcctgaagac acagcagtgt acctctgcgc agcaggtgac 360

agtggaggca gcaattacaa actgacattt gggaaaggaa ctctcttaac tgtgactcca 420

aac 423

<210> 196
<211> 393
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 196
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gtcacccaaa gccctagaaa caaggtgaca gtaacaggag gaaacgtgac attgagctgt 120

cgccagacta atagccacaa ctacatgtac tggtatcggc aggacactgg gcatgggctg 180

aggctgatcc attactcata tggtgctggc aaccttcaaa taggagatgt ccctgatggg 240

tacaaggcca ccagaacaac gcaagaagac ttcttcctcc tgctggaatt ggcttctccc 300

tctcagacat ctttgtactt ctgtgccagc gcgagctggg ggggctatgc tgagcagttc 360

ttcggaccag ggacacgact caccgtccta gag 393

<210> 197
<211> 831
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 197
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agtcaacaga agactggtgg ccagcaagtt aaacaaagct ctccatcgct gactgttcaa 120

gagggaggga tattgatcct gaattgtgat tacgagaatg atatgtttga ctattttgcc 180

tggtacaaaa aataccctga caacagcccc acactcctga tatccgtacg ctcaaatgtg 240

gataagaggg aagacggaag attcacagtt ttcttgaaca aaagcggcaa acacttctca 300

ctgcacatca cagcctccca gcctgaagac acagcagtgt acctctgcgc agcaggtgac 360

agtggaggca gcaattacaa actgacattt gggaaaggaa ctctcttaac tgtgactcca 420

aacatccaga acccagaacc tgctgtgtac cagttaaaag atcctcggtc tcaggacagc 480

accctctgcc tgttcaccga ctttgactcc caaatcaatg tgccgaaaac catggaatct 540

ggaacgttca tcactgacaa aactgtgctg gacatgaaag ctatggattc caagagcaat 600

ggggccattg cctggagcaa ccagacaagc ttcacctgcc aagatatctt caaagagacc 660

aacgccacct accccagttc agacgttccc tgtgatgcca cgttgaccga gaaaagcttt 720

gaaacagata tgaacctaaa ctttcaaaac ctgtcagtta tgggactccg aatcctcctg 780

ctgaaagtag cgggatttaa cctgctcatg acgctgaggc tgtggtccag t 831

<210> 198
<211> 912
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 198
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gtcacccaaa gccctagaaa caaggtgaca gtaacaggag gaaacgtgac attgagctgt 120

cgccagacta atagccacaa ctacatgtac tggtatcggc aggacactgg gcatgggctg 180

aggctgatcc attactcata tggtgctggc aaccttcaaa taggagatgt ccctgatggg 240

tacaaggcca ccagaacaac gcaagaagac ttcttcctcc tgctggaatt ggcttctccc 300

tctcagacat ctttgtactt ctgtgccagc gcgagctggg ggggctatgc tgagcagttc 360

ttcggaccag ggacacgact caccgtccta gaggatctga gaaatgtgac tccacccaag 420

gtctccttgt ttgagccatc aaaagcagag attgcaaaca aacaaaaggc taccctcgtg 480

tgcttggcca ggggcttctt ccctgaccac gtggagctga gctggtgggt gaatggcaag 540

gaggtccaca gtggggtcag cacggaccct caggcctaca aggagagcaa ttatagctac 600

tgcctgagca gccgcctgag ggtctctgct accttctggc acaatcctcg aaaccacttc 660

cgctgccaag tgcagttcca tgggctttca gaggaggaca agtggccaga gggctcaccc 720

aaacctgtca cacagaacat cagtgcagag gcctggggcc gagcagactg tggaatcact 780

tcagcatcct atcatcaggg ggttctgtct gcaaccatcc tctatgagat cctactgggg 840

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aaaaattcct ga 912

<210> 199
<211> 408
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 199
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ctctgcctgt tcaccgactt tgactcccaa atcaatgtgc cgaaaaccat ggaatctgga 120

acgttcatca ctgacaaaac tgtgctggac atgaaagcta tggattccaa gagcaatggg 180

gccattgcct ggagcaacca gacaagcttc acctgccaag atatcttcaa agagaccaac 240

gccacctacc ccagttcaga cgttccctgt gatgccacgt tgaccgagaa aagctttgaa 300

acagatatga acctaaactt tcaaaacctg tcagttatgg gactccgaat cctcctgctg 360

aaagtagcgg gatttaacct gctcatgacg ctgaggctgt ggtccagt 408

<210> 200
<211> 519
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 200
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gcaaacaaac aaaaggctac cctcgtgtgc ttggccaggg gcttcttccc tgaccacgtg 120

gagctgagct ggtgggtgaa tggcaaggag gtccacagtg gggtcagcac ggaccctcag 180

gcctacaagg agagcaatta tagctactgc ctgagcagcc gcctgagggt ctctgctacc 240

ttctggcaca atcctcgaaa ccacttccgc tgccaagtgc agttccatgg gctttcagag 300

gaggacaagt ggccagaggg ctcacccaaa cctgtcacac agaacatcag tgcagaggcc 360

tggggccgag cagactgtgg aatcacttca gcatcctatc atcaggggtg tctgtctgca 420

accatcctct atgagatcct actggggaag gccaccctat atgctgtgct ggtcagtggc 480

ctggtgctga tggccatggt caagaaaaaa aattcctga 519

<210> 201
<211> 605
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 201

Met Lys Thr Val Thr Gly Pro Leu Phe Leu Cys Phe Trp Leu Gln Leu
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Asn Cys Val Ser Arg Gly Glu Gln Val Glu Gln Arg Pro Pro His Leu
20 25 30

Ser Val Arg Glu Gly Asp Ser Ala Val Ile Thr Cys Thr Tyr Thr Asp
35 40 45

Pro Asn Ser Tyr Tyr Phe Phe Trp Tyr Lys Gln Glu Pro Gly Ala Ser
50 55 60

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

Gln Gly Phe Thr Val Leu Leu Asn Lys Lys Asp Lys Arg Leu Ser Leu
85 90 95

```
Asn Leu Thr Ala Ala His Pro Gly Asp Ser Ala Ala Tyr Phe Cys Ala
            100                 105                 110

Val Ser Gly Gly Thr Asn Ser Ala Gly Asn Lys Leu Thr Phe Gly Ile
        115                 120                 125

Gly Thr Arg Val Leu Val Arg Pro Asp Ile Gln Asn Pro Glu Pro Ala
    130                 135                 140

Val Tyr Gln Leu Lys Asp Pro Arg Ser Gln Asp Ser Thr Leu Cys Leu
145                 150                 155                 160

Phe Thr Asp Phe Asp Ser Gln Ile Asn Val Pro Lys Thr Met Glu Ser
                165                 170                 175

Gly Thr Phe Ile Thr Asp Lys Thr Val Leu Asp Met Lys Ala Met Asp
            180                 185                 190

Ser Lys Ser Asn Gly Ala Ile Ala Trp Ser Asn Gln Thr Ser Phe Thr
        195                 200                 205

Cys Gln Asp Ile Phe Lys Glu Thr Asn Ala Thr Tyr Pro Ser Ser Asp
    210                 215                 220

Val Pro Cys Asp Ala Thr Leu Thr Glu Lys Ser Phe Glu Thr Asp Met
225                 230                 235                 240

Asn Leu Asn Phe Gln Asn Leu Ser Val Met Gly Leu Arg Ile Leu Leu
                245                 250                 255

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

Ser Arg Ala Lys Arg Ser Gly Ser Gly Ala Thr Asn Phe Ser Leu Leu
        275                 280                 285

Lys Gln Ala Gly Asp Val Glu Glu Asn Pro Gly Pro Met Gly Cys Arg
    290                 295                 300
```

```
Leu Leu Ser Cys Val Ala Phe Cys Leu Leu Gly Ile Gly Pro Leu Glu
305                 310                 315                 320

Thr Ala Val Phe Gln Thr Pro Asn Tyr His Val Thr Gln Val Gly Asn
                325                 330                 335

Glu Val Ser Phe Asn Cys Lys Gln Thr Leu Gly His Asp Thr Met Tyr
            340                 345                 350

Trp Tyr Lys Gln Asp Ser Lys Lys Leu Leu Lys Ile Met Phe Ser Tyr
        355                 360                 365

Asn Asn Lys Gln Leu Ile Val Asn Glu Thr Val Pro Arg Arg Phe Ser
    370                 375                 380

Pro Gln Ser Ser Asp Lys Ala His Leu Asn Leu Arg Ile Lys Ser Val
385                 390                 395                 400

Glu Pro Glu Asp Ser Ala Val Tyr Leu Cys Ala Ser Ser Arg Asp Trp
                405                 410                 415

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

Glu Asp Leu Arg Asn Val Thr Pro Pro Lys Val Ser Leu Phe Glu Pro
        435                 440                 445

Ser Lys Ala Glu Ile Ala Asn Lys Gln Lys Ala Thr Leu Val Cys Leu
    450                 455                 460

Ala Arg Gly Phe Phe Pro Asp His Val Glu Leu Ser Trp Trp Val Asn
465                 470                 475                 480

Gly Lys Glu Val His Ser Gly Val Ser Thr Asp Pro Gln Ala Tyr Lys
                485                 490                 495
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Glu Ser Asn Tyr Ser Tyr Cys Leu Ser Ser Arg Leu Arg Val Ser Ala
500 505 510

Thr Phe Trp His Asn Pro Arg Asn His Phe Arg Cys Gln Val Gln Phe
515 520 525

His Gly Leu Ser Glu Glu Asp Lys Trp Pro Glu Gly Ser Pro Lys Pro
530 535 540

Val Thr Gln Asn Ile Ser Ala Glu Ala Trp Gly Arg Ala Asp Cys Gly
545 550 555 560

Ile Thr Ser Ala Ser Tyr His Gln Gly Val Leu Ser Ala Thr Ile Leu
565 570 575

Tyr Glu Ile Leu Leu Gly Lys Ala Thr Leu Tyr Ala Val Leu Val Ser
580 585 590

Gly Leu Val Leu Met Ala Met Val Lys Lys Lys Asn Ser
595 600 605

<210> 202
<211> 1824
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 202
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gagggaggga tattgatcct gaattgtgat tacgagaatg atatgtttga ctattttgcc 180

tggtacaaaa aataccctga caacagcccc acactcctga tatccgtacg ctcaaatgtg 240

gataagaggg aagacggaag attcacagtt ttcttgaaca aaagcggcaa acacttctca 300

ctgcacatca cagcctccca gcctgaagac acagcagtgt acctctgcgc agcaggtgac 360

agtggaggca gcaattacaa actgacattt gggaaaggaa ctctcttaac tgtgactcca 420

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accctctgcc tgttcaccga ctttgactcc caaatcaatg tgccgaaaac catggaatct 540

ggaacgttca tcactgacaa aactgtgctg gacatgaaag ctatggattc caagagcaat 600

ggggccattg cctggagcaa ccagacaagc ttcacctgcc aagatatctt caaagagacc 660

aacgccacct accccagttc agacgttccc tgtgatgcca cgttgaccga gaaaagcttt 720

gaaacagata tgaacctaaa ctttcaaaac ctgtcagtta tgggactccg aatcctcctg 780

ctgaaagtag cgggatttaa cctgctcatg acgctgaggc tgtggtccag tcgggccaag 840

cggtccggat ccggagccac caacttcagc ctgctgaagc aggccggcga cgtggaggag 900

aaccccggcc ccatgggctc caggctcttt ctggtcttga gcctcctgtg tacaaaacac 960

atggaggctg cagtcaccca aagccctaga aacaaggtga cagtaacagg aggaaacgtg 1020

acattgagct gtcgccagac taatagccac aactacatgt actggtatcg gcaggacact 1080

gggcatgggc tgaggctgat ccattactca tatggtgctg gcaaccttca aataggagat 1140

gtccctgatg ggtacaaggc caccagaaca acgcaagaag acttcttcct cctgctggaa 1200

ttggcttctc cctctcagac atctttgtac ttctgtgcca gcgcgagctg gggggctat 1260

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<211> 607
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 203

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Glu Trp Ile Lys Ser Gln Gln Lys Thr Gly Gly Gln Gln Val Lys Gln
            20                  25                  30


Ser Ser Pro Ser Leu Thr Val Gln Glu Gly Gly Ile Leu Ile Leu Asn
        35                  40                  45


Cys Asp Tyr Glu Asn Asp Met Phe Asp Tyr Phe Ala Trp Tyr Lys Lys
    50                  55                  60


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


Asp Lys Arg Glu Asp Gly Arg Phe Thr Val Phe Leu Asn Lys Ser Gly
                85                  90                  95


Lys His Phe Ser Leu His Ile Thr Ala Ser Gln Pro Glu Asp Thr Ala
            100                 105                 110


Val Tyr Leu Cys Ala Ala Gly Asp Ser Gly Gly Ser Asn Tyr Lys Leu
        115                 120                 125


Thr Phe Gly Lys Gly Thr Leu Leu Thr Val Thr Pro Asn Ile Gln Asn
    130                 135                 140


Pro Glu Pro Ala Val Tyr Gln Leu Lys Asp Pro Arg Ser Gln Asp Ser
145                 150                 155                 160
```

```
Thr Leu Cys Leu Phe Thr Asp Phe Asp Ser Gln Ile Asn Val Pro Lys
                165                 170                 175

Thr Met Glu Ser Gly Thr Phe Ile Thr Asp Lys Thr Val Leu Asp Met
            180                 185                 190

Lys Ala Met Asp Ser Lys Ser Asn Gly Ala Ile Ala Trp Ser Asn Gln
        195                 200                 205

Thr Ser Phe Thr Cys Gln Asp Ile Phe Lys Glu Thr Asn Ala Thr Tyr
    210                 215                 220

Pro Ser Ser Asp Val Pro Cys Asp Ala Thr Leu Thr Glu Lys Ser Phe
225                 230                 235                 240

Glu Thr Asp Met Asn Leu Asn Phe Gln Asn Leu Ser Val Met Gly Leu
                245                 250                 255

Arg Ile Leu Leu Leu Lys Val Ala Gly Phe Asn Leu Leu Met Thr Leu
            260                 265                 270

Arg Leu Trp Ser Ser Arg Ala Lys Arg Ser Gly Ser Gly Ala Thr Asn
        275                 280                 285

Phe Ser Leu Leu Lys Gln Ala Gly Asp Val Glu Glu Asn Pro Gly Pro
    290                 295                 300

Met Gly Ser Arg Leu Phe Leu Val Leu Ser Leu Leu Cys Thr Lys His
305                 310                 315                 320

Met Glu Ala Ala Val Thr Gln Ser Pro Arg Asn Lys Val Thr Val Thr
                325                 330                 335

Gly Gly Asn Val Thr Leu Ser Cys Arg Gln Thr Asn Ser His Asn Tyr
            340                 345                 350

Met Tyr Trp Tyr Arg Gln Asp Thr Gly His Gly Leu Arg Leu Ile His
        355                 360                 365
```

```
Tyr Ser Tyr Gly Ala Gly Asn Leu Gln Ile Gly Asp Val Pro Asp Gly
    370                 375                 380

Tyr Lys Ala Thr Arg Thr Thr Gln Glu Asp Phe Phe Leu Leu Leu Glu
385                 390                 395                 400

Leu Ala Ser Pro Ser Gln Thr Ser Leu Tyr Phe Cys Ala Ser Ala Ser
                405                 410                 415

Trp Gly Gly Tyr Ala Glu Gln Phe Phe Gly Pro Gly Thr Arg Leu Thr
            420                 425                 430

Val Leu Glu Asp Leu Arg Asn Val Thr Pro Pro Lys Val Ser Leu Phe
        435                 440                 445

Glu Pro Ser Lys Ala Glu Ile Ala Asn Lys Gln Lys Ala Thr Leu Val
    450                 455                 460

Cys Leu Ala Arg Gly Phe Phe Pro Asp His Val Glu Leu Ser Trp Trp
465                 470                 475                 480

Val Asn Gly Lys Glu Val His Ser Gly Val Ser Thr Asp Pro Gln Ala
                485                 490                 495

Tyr Lys Glu Ser Asn Tyr Ser Tyr Cys Leu Ser Ser Arg Leu Arg Val
            500                 505                 510

Ser Ala Thr Phe Trp His Asn Pro Arg Asn His Phe Arg Cys Gln Val
        515                 520                 525

Gln Phe His Gly Leu Ser Glu Glu Asp Lys Trp Pro Glu Gly Ser Pro
    530                 535                 540

Lys Pro Val Thr Gln Asn Ile Ser Ala Glu Ala Trp Gly Arg Ala Asp
545                 550                 555                 560
```

```
Cys Gly Ile Thr Ser Ala Ser Tyr His Gln Gly Val Leu Ser Ala Thr
                565                 570                 575


Ile Leu Tyr Glu Ile Leu Leu Gly Lys Ala Thr Leu Tyr Ala Val Leu
            580                 585                 590


Val Ser Gly Leu Val Leu Met Ala Met Val Lys Lys Lys Asn Ser
        595                 600                 605
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<210> 204
<211> 16
<212> PRT
<213> Murine

<400> 204

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Cys Ala Val Ser Gly Gly Thr Asn Ser Ala Gly Asn Lys Leu Thr Phe
1               5                   10                  15
```

<210> 205
<211> 14
<212> PRT
<213> Murine

<400> 205

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Cys Ala Ser Ala Ser Trp Gly Gly Tyr Ala Glu Gln Phe Phe
1               5                   10
```

<210> 206
<211> 14
<212> PRT
<213> Murine

<400> 206

```
Cys Thr Cys Ser Ala Asp Arg Gly Ala Glu Thr Leu Tyr Phe
1               5                   10
```

<210> 207
<211> 15
<212> PRT
<213> Murine

<220>
<221> MISC_FEATURE
<222> (9)..(9)
<223> Wherein X is alanine, arginine, asparagine, asparatic acid, cysteine, glutamic acid, glutamine, histidine, isoleucine, leucine, lysine, methionine, phenylalanine, proline, serine, threonine, tryptophan, tyrosine, or valine

<400> 207

Cys Ala Ala Asp Ser Ser Asn Thr Xaa Tyr Gln Asn Phe Tyr Phe
1 5 10 15

<210> 208
<211> 133
<212> PRT
<213> Murine

<220>
<221> MISC_FEATURE
<222> (116)..(116)
<223> Wherein X is alanine, arginine, asparagine, asparatic acid, cysteine, glutamic acid, glutamine, histidine, isoleucine, leucine, lysine, methionine, phenylalanine, proline, serine, threonine, tryptophan, tyrosine, or valine

<400> 208

Met Gln Arg Asn Leu Gly Ala Val Leu Gly Ile Leu Trp Val Gln Ile
1 5 10 15

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

Leu His Glu Gly Thr Asp Ser Ala Leu Arg Cys Asn Phe Thr Thr Thr
35 40 45

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

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

Ser Ala Phe Asp Ser Lys Glu Arg Arg Tyr Ser Thr Leu His Ile Arg
85 90 95

Asp Ala Gln Leu Glu Asp Ser Gly Thr Tyr Phe Cys Ala Ala Asp Ser
100 105 110

Ser Asn Thr Xaa Tyr Gln Asn Phe Tyr Phe Gly Lys Gly Thr Ser Leu
115 120 125

Thr Val Ile Pro Asn
130

<210> 209
<211> 269
<212> PRT
<213> Murine

<220>
<221> MISC_FEATURE
<222> (116)..(116)
<223> Wherein X is alanine, arginine, asparagine, asparatic acid, cysteine, glutamic acid, glutamine, histidine, isoleucine, leucine, lysine, methionine, phenylalanine, proline, serine, threonine, tryptophan, tyrosine, or valine

<400> 209

Met Gln Arg Asn Leu Gly Ala Val Leu Gly Ile Leu Trp Val Gln Ile
1 5 10 15

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

Leu His Glu Gly Thr Asp Ser Ala Leu Arg Cys Asn Phe Thr Thr Thr
35 40 45

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

Ser Leu Phe Tyr Leu Ala Ser Gly Thr Lys Glu Asn Gly Arg Leu Lys

```
65                  70                  75                  80

Ser Ala Phe Asp Ser Lys Glu Arg Arg Tyr Ser Thr Leu His Ile Arg
                85                  90                  95

Asp Ala Gln Leu Glu Asp Ser Gly Thr Tyr Phe Cys Ala Ala Asp Ser
            100                 105                 110

Ser Asn Thr Xaa Tyr Gln Asn Phe Tyr Phe Gly Lys Gly Thr Ser Leu
        115                 120                 125

Thr Val Ile Pro Asn Ile Gln Asn Pro Glu Pro Ala Val Tyr Gln Leu
    130                 135                 140

Lys Asp Pro Arg Ser Gln Asp Ser Thr Leu Cys Leu Phe Thr Asp Phe
145                 150                 155                 160

Asp Ser Gln Ile Asn Val Pro Lys Thr Met Glu Ser Gly Thr Phe Ile
                165                 170                 175

Thr Asp Lys Thr Val Leu Asp Met Lys Ala Met Asp Ser Lys Ser Asn
            180                 185                 190

Gly Ala Ile Ala Trp Ser Asn Gln Thr Ser Phe Thr Cys Gln Asp Ile
        195                 200                 205

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

Ala Thr Leu Thr Glu Lys Ser Phe Glu Thr Asp Met Asn Leu Asn Phe
225                 230                 235                 240

Gln Asn Leu Ser Val Met Gly Leu Arg Ile Leu Leu Leu Lys Val Ala
                245                 250                 255

Gly Phe Asn Leu Leu Met Thr Leu Arg Leu Trp Ser Ser
            260                 265
```