SEQUENCE LISTING

<110> Regeneron Pharmaceuticals, Inc.
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Ivan B. Lobov

<120> APLNR MODULATORS AND USES THEREOF

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<151> 2013-11-20

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

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

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gggaaagccc ctaagtccct gatctatgct acatccagtt tacaaagtgg ggtcccatca 180
aagttcagcg gcagtggatc tgggacagat ttcactctca ccatcagcag cctgcagcct 240
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20 25 30
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35 40 45
Tyr Ala Thr Ser Ser Leu Gln Ser Gly Val Pro Ser Lys Phe Ser Gly
50 55 60
Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
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85 90 95
Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
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Trp Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35   40   45
Ala Asn Ile Lys Gln Asp Gly Ser Glu Arg Tyr Tyr Val Gly Ser Val
    50   55   60
Lys Gly Arg Phe Thr Ile Ser Arg Gly Asp Ala Glu Asn Ser Leu Tyr
65   70   75   80
Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
                85   90   95
Ala Arg Asp Arg Phe Gly Tyr Ser Ala Tyr Asp Lys Gly Val Arg Tyr
            100   105   110
Tyr Tyr Gly Met Asp Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser
        115   120   125
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Tyr Tyr Gly Met Asp Val
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gggaaagccc ctaagcgcct gatctatgct gcatccagtt tgcaaagtgg ggtcccatca 180
aggttcagcg gcagtggatc tgggacagaa ttcactctca caatcagcag cctgcagcct 240
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            20   25   30
Leu Gly Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Arg Leu Ile
        35   40   45
Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
    50   55   60
Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
65   70   75   80
Glu Asp Phe Ala Thr Tyr Tyr Cys Leu Gln His Asn Ser Tyr Pro Arg
                85   90   95
Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
            100   105

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<210> 46
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<400> 46
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<210> 47
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            20   25   30
Trp Met Ser Trp Val Arg Gln Val Pro Gly Lys Gly Leu Glu Trp Val
        35   40   45
Ala Asn Ile Lys Gln Asp Gly Ser Glu Lys Tyr Tyr Val Asp Ser Val
    50   55   60
Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Ser Leu Tyr
65   70   75   80
Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
                85   90   95
Ala Arg Asp Arg Phe Gly Tyr Ser Phe Tyr Asp Lys Gly Val Arg Tyr
            100   105   110
Tyr Tyr Gly Met Asp Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser
        115   120   125
Ser

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gacgtc 66

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aggttcagcg gcagtggatc tgggacagaa ttcactctca caatcagcgg cctgcagcct 240
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Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Gly Ile Arg Asn Asp
            20   25   30
Leu Gly Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Arg Leu Ile
        35   40   45
Tyr Ala Thr Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
    50   55   60
Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Gly Leu Gln Pro
65   70   75   80
Glu Asp Phe Ala Thr Tyr Tyr Cys Leu Gln His Asn Ser Tyr Pro Arg
                85   90   95
Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
            100   105

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<223> synthetic

<400> 59
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<210> 60
<211> 6
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<220>
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<400> 60
Gln Gly Ile Arg Asn Asp
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<210> 61
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<400> 61
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<210> 62
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<400> 62
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<210> 63
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<400> 64
Leu Gln His Asn Ser Tyr Pro Arg Thr
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ccagggaagg ggctggagtg ggtggccaac ataaagcaag atggaagtga gagatactat 180
gtgggctctg tgaagggccg attcaccatc tccagaggcg acgccaagaa ctcactgtat 240
ctgcaaatga acagcctgag agccgaggac acggctgtgt attactgtgc gagagatcga 300
tttggatata gtgccttcga taagggggta cgctactact acggtatgga cgtctggggc 360
caagggacca cggtcaccgt ctcttca   387

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

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<400> 67
ggattcacct ttagtaacta ttgg 24

<210> 68
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<400> 68
Gly Phe Thr Phe Ser Asn Tyr Trp
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<210> 69
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<400> 69
ataaagcaag atggaagtga gaga 24

<210> 70
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<400> 70
Ile Lys Gln Asp Gly Ser Glu Arg
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<210> 71
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<210> 72
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<400> 72
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Tyr Tyr Gly Met Asp Val
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<210> 73
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<400> 73
gacatccaga tgacccagtc tccatcctcc ctgtctgcat ctgtaggaga cagagtcacc 60
atcacttgcc gggcaagtca gggcattaga aatgatttag gctggtatca gcagaaacca 120
gggaaagccc ctaagcgcct gatctatgct gcatccagtt tgcaaagtgg ggtcccatca 180
aggttcagcg gcagtggatc tgggacagaa ttcactctca caatcagcag cctgcagcct 240
gaagattttg caacttatta ctgtctacag cataatagtt accctcggac gttcggccaa 300
gggaccaagg tggaaatcaa a   321

<210> 74
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 74
Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
 1   5   10   15
Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Gly Ile Arg Asn Asp
            20   25   30
Leu Gly Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Arg Leu Ile
        35   40   45
Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
    50   55   60
Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
65   70   75   80
Glu Asp Phe Ala Thr Tyr Tyr Cys Leu Gln His Asn Ser Tyr Pro Arg
                85   90   95
Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
            100   105

<210> 75
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 75
cagggcatta gaaatgat 18

<210> 76
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 76
Gln Gly Ile Arg Asn Asp
 1   5

<210> 77
<211> 9
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 77
gctgcatcc 9

<210> 78
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 78
Ala Ala Ser
 1

<210> 79
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 79
ctacagcata atagttaccc tcggacg 27

<210> 80
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 80
Leu Gln His Asn Ser Tyr Pro Arg Thr
 1   5

<210> 81
<211> 387
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 81
gaggtgcagc tggtggagtc tgggggaggt ttggtccagc ctgggggtc cctgagactc 60
tcctgtgcag cctctggatt cacctttagt agcttttgga tgagttgggt ccgccaggtt 120
ccagggaagg ggctgcagtg ggtggccaac ataaagcaag atggaagtga gaaatactat 180
gtggactctg tgaagggccg attcaccatc tccagagaca acgccaagaa ctcactgtat 240
ctgcaaatga acagcctgag agccgaggac acggctgtgt attactgtgc gagagataga 300
tttggatata gtgtctacga taaggggta cgctactact acggtatgga cgtctggggc 360
caagggacca cggtcaccgt ctcctca   387

<210> 82
<211> 129
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 82
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
 1   5   10   15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Phe
            20   25   30
Trp Met Ser Trp Val Arg Gln Val Pro Gly Lys Gly Leu Gln Trp Val
        35   40   45
Ala Asn Ile Lys Gln Asp Gly Ser Glu Lys Tyr Tyr Val Asp Ser Val
    50   55   60
Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Ser Leu Tyr
65   70   75   80
Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
                85   90   95
Ala Arg Asp Arg Phe Gly Tyr Ser Val Tyr Asp Lys Gly Val Arg Tyr
            100   105   110
Tyr Tyr Gly Met Asp Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser
        115   120   125
Ser

<210> 83
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 83
ggattcacct ttagtagctt ttgg 24

<210> 84
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 84
Gly Phe Thr Phe Ser Ser Phe Trp
1 5

<210> 85
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 85
ataaagcaag atggaagtga gaaa 24

<210> 86
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 86
Ile Lys Gln Asp Gly Ser Glu Lys
1 5

<210> 87
<211> 66
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 87
gcgagagata gatttggata tagtgtctac gataaggggg tacgctacta ctacggtatg 60
gacgtc 66

<210> 88
<211> 22
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 88
Ala Arg Asp Arg Phe Gly Tyr Ser Val Tyr Asp Lys Gly Val Arg Tyr
 1   5   10   15
Tyr Tyr Gly Met Asp Val
            20

<210> 89
<211> 321
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 89
gacatccaga tgacccagtc tccatcctcc ctgtctgtat ctgtaggaga cagagtcacc 60
atcacttgcc gggcaagtca gggcattaga aatgatttag gctggtatca gcagaaacca 120
gggaaagccc ctaagcgcct gatctatgct gcatccagtt tgcaaagtgg ggtcccatca 180
aggttcagcg gcagtggatc tgggacagaa ttcactctca caatcagcgg cctgcagtct 240
gaagattttg caacttatta ctgtctacag cataagagtt accctcggac gttcggccaa 300
gggaccaagg tggaaatcaa a   321

<210> 90
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

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

<210> 91
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 91
cagggcatta gaaatgat   18

<210> 92
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 92
Gln Gly Ile Arg Asn Asp
 1   5

<210> 93
<211> 9
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 93
gctgcatcc   9

<210> 94
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 94
Ala Ala Ser
 1

<210> 95
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 95
ctacagcata agagttaccc tcggacg   27

<210> 96
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 96
Leu Gln His Lys Ser Tyr Pro Arg Thr

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 1               5
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<210> 97
<211> 378
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 97
caggtgaagt tggtggagtc tgggggaggc gtggtccagc ctgggaggtc cctgagactc 60
tcctgtgcag cgtctggatt caccttcagt aactatgtca tacactgggt ccgccaggct 120
ccaggcaagg ggctggagtg ggtggcggtt atatggtatg atggaagtaa taaatactat 180
gcagactccg tgaagggccg attcaccatc tccagagaca actccaagaa tacgctgtat 240
ttgcaaatga acagcctgag agccgaggac acggctgtgt attactgtgc gagagatcgg 300
gtggttcggg gagtcgatta ctactactac tacggtttgg acgtctgggg ccaagggacc 360
tcggtcaccg tctcctca   378

<210> 98
<211> 126
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 98
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Gln Val Lys Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Arg
 1               5                  10                  15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Asn Tyr
            20                  25                  30
Val Ile His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35                  40                  45
Ala Val Ile Trp Tyr Asp Gly Ser Asn Lys Tyr Tyr Ala Asp Ser Val
    50                  55                  60
Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
65                  70                  75                  80
Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
                85                  90                  95
Ala Arg Asp Arg Val Val Arg Gly Val Asp Tyr Tyr Tyr Tyr Tyr Gly
            100                 105                 110
Leu Asp Val Trp Gly Gln Gly Thr Ser Val Thr Val Ser Ser
        115                 120                 125
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<210> 99
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 99
ggattcacct tcagtaacta tgtc   24

<210> 100

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

<220>
<223> synthetic

<400> 100
Gly Phe Thr Phe Ser Asn Tyr Val
 1   5

<210> 101
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 101
atatggtatg atggaagtaa taaa   24

<210> 102
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 102
Ile Trp Tyr Asp Gly Ser Asn Lys
 1   5

<210> 103
<211> 57
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 103
gcgagagatc gggtggttcg gggagtcgat tactactact actacggttt ggacgtc   57

<210> 104
<211> 19
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 104
Ala Arg Asp Arg Val Val Arg Gly Val Asp Tyr Tyr Tyr Tyr Tyr Gly
 1   5   10   15
Leu Asp Val

<210> 105
<211> 321
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 105
gaaatagtga tgacgcagtc tccagccacc ctgtctgtgt ctccagggga aagagccacc 60
ctctcctgca gggccagtca gagtgttaga agcaacttag cctggtacca acagaaacct 120
ggccaggctc ccaggctcct catctatggt gcatcctcca gggccactgg tatcccagcc 180
aggttcagtg gcactgggtc tgggacagag ttcactctca ccatcagcag cctgcagtct 240
gacgattttg cagtttatta ctgtcagcaa tataataagt ggcctcggac gttcggccaa 300
gggaccaagg tggaaatcaa g 321

<210> 106
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

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

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

<220>
<223> synthetic

<400> 107
cagagtgtta gaagcaac 18

<210> 108
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 108
Gln Ser Val Arg Ser Asn
 1   5

<210> 109
<211> 9
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 109
ggtgcatcc   9

<210> 110
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 110
Gly Ala Ser
 1

<210> 111
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 111
cagcaatata ataagtggcc tcggacg   27

<210> 112
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 112
Gln Gln Tyr Asn Lys Trp Pro Arg Thr
 1   5

<210> 113
<211> 369

<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 113
gaggtgcagc tggtggagtc tgggggaggc ttggtaaaac ctgggggtc ccttagactc 60
tcctgtgcag cctctggaat cactttcagt aacgcctgga tgagctgggt ccgccaggct 120
ccagggaagg ggctggagtg ggttggccgt attaaaagca aagttgatgg tgggacaata 180
gactacgctg cacccgtgaa aggcagattc accatctcaa gagatgattc aaaaaacacg 240
ctgtatctgc aaatgaacag cctgaaaacc gaggacacag ccgtttatta ctgtaccaca 300
ggtcgaatta ctatggttcg gggagttttg ggctactggg gccagggaac cctggtcacc 360
gtctcctca 369

<210> 114
<211> 123
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

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

<210> 115
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 115
ggaatcactt tcagtaacgc ctgg 24

<210> 116
<211> 8
<212> PRT
<213> Artificial Sequence

<220>

<223> synthetic

<400> 116
Gly Ile Thr Phe Ser Asn Ala Trp
 1   5

<210> 117
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 117
attaaaagca aagttgatgg tgggacaata   30

<210> 118
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 118
Ile Lys Ser Lys Val Asp Gly Gly Thr Ile
 1   5   10

<210> 119
<211> 42
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 119
accacaggtc gaattactat ggttcgggga gttttgggct ac   42

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

<220>
<223> synthetic

<400> 120
Thr Thr Gly Arg Ile Thr Met Val Arg Gly Val Leu Gly Tyr
 1   5   10

<210> 121
<211> 336
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 121
gacatcgtga tgacccagtc tccagactcc ctggctgtgt ctctgggcga gagggccacc 60
atcaactgca agtccagcca gagtgtttta tacagctcca acaataagaa ctacttagct 120
tggtaccagc agaaaccagg acagcctcct aagctgctca tttactgggc atctacccgg 180
gaatccgggg tccctgaccg attcagtggc agcgggtctg ggacagattt cactctcacc 240
atcagcagcc tgcaggctga agatgtggct gtttattact gtcagcaata ttatagtact 300
tacacttttg gccaggggac caagctggag atcaaa 336

<210> 122
<211> 112
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 122
Asp Ile Val Met Thr Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly
 1   5   10   15
Glu Arg Ala Thr Ile Asn Cys Lys Ser Ser Gln Ser Val Leu Tyr Ser
            20   25   30
Ser Asn Asn Lys Asn Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln
        35   40   45
Pro Pro Lys Leu Leu Ile Tyr Trp Ala Ser Thr Arg Glu Ser Gly Val
    50   55   60
Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr
65   70   75   80
Ile Ser Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln Gln
                85   90   95
Tyr Tyr Ser Thr Tyr Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
            100   105   110

<210> 123
<211> 36
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 123
cagagtgttt tatacagctc caacaataag aactac 36

<210> 124
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 124
Gln Ser Val Leu Tyr Ser Ser Asn Asn Lys Asn Tyr
 1   5   10

<210> 125
<211> 9
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 125
tgggcatct 9

<210> 126
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 126
Trp Ala Ser
1

<210> 127
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 127
cagcaatatt atagtactta cact 24

<210> 128
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 128
Gln Gln Tyr Tyr Ser Thr Tyr Thr
1 5

<210> 129
<211> 369
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 129

gaggtgcagc tggtggagtc tgggggaggc ttggtaaagc ctgggggtc ccttagactc 60
tcctgtgcag cctctggaat cactttcagt aacgcctgga tgagctgggt ccgccaggct 120
ccagggaagg ggctggagtg ggttggccgt tttaaaggca aagctgatgg tgggacagtt 180
gactatgctg cacccgtgaa aggcagattc accatctcaa gagatgattc gaaaaacacg 240
ctgtatctgc aaatgaacag tctgaaaaac gaggacacag ccgtgtatta ctgcaccaca 300
ggtcgaatta ctatggttcg gggagttttg ggctactggg gccagggaac cctggtcact 360
gtctcctca 369

<210> 130
<211> 123
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

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

<210> 131
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 131
ggaatcactt tcagtaacgc ctgg 24

<210> 132
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 132
Gly Ile Thr Phe Ser Asn Ala Trp
 1   5

<210> 133
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 133
tttaaaggca aagctgatgg tgggacagtt 30

<210> 134
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 134
Phe Lys Gly Lys Ala Asp Gly Gly Thr Val
1 5 10

<210> 135
<211> 42
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 135
accacaggtc gaattactat ggttcgggga gttttgggct ac 42

<210> 136
<211> 14
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 136
Thr Thr Gly Arg Ile Thr Met Val Arg Gly Val Leu Gly Tyr
1 5 10

<210> 137
<211> 336
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 137
gacatcgtga tgacccagtc tccagactcc ctggctgtgt ctctgggcga gagggccacc 60
atcaactgca agtccagcca gagtgtttta tacacctcca acaataagaa ctacttagct 120

tggtaccagc agaaaccagg acagcctcct aaactgctca tttactgggc atctacccgg 180
gaatccgggg tccctgaccg attcagtggc agcgggtctg ggacagattt cactctcacc 240
atcagcagcc tgcaggctga agatgtggca gtttattact gtcagcaata ttatagtact 300
tacacttttg gccaggggac caagctggag atcaaa 336

<210> 138
<211> 112
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 138
Asp Ile Val Met Thr Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly
 1   5   10   15
Glu Arg Ala Thr Ile Asn Cys Lys Ser Ser Gln Ser Val Leu Tyr Thr
            20   25   30
Ser Asn Asn Lys Asn Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln
        35   40   45
Pro Pro Lys Leu Leu Ile Tyr Trp Ala Ser Thr Arg Glu Ser Gly Val
    50   55   60
Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr
65   70   75   80
Ile Ser Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln Gln
                85   90   95
Tyr Tyr Ser Thr Tyr Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
            100   105   110

<210> 139
<211> 36
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 139
cagagtgttt tatacacctc caacaataag aactac 36

<210> 140
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 140
Gln Ser Val Leu Tyr Thr Ser Asn Asn Lys Asn Tyr
 1   5   10

<210> 141
<211> 9
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 141
tgggcatct 9

<210> 142
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 142
Trp Ala Ser
1

<210> 143
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 143
cagcaatatt atagtactta cact 24

<210> 144
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 144
Gln Gln Tyr Tyr Ser Thr Tyr Thr
1 5

<210> 145
<211> 369
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 145
caggtgcagc tggtgcagtc tggggctgag gtgaagaagc ctggggcctc agtggaggtc 60
tcctgcaagg cttctggata caccttcacc gactactata tacactggat acgacaggcc 120
cctggacaag ggcttgagtg gatgggatgg atcaaccctg acagtggtcg cacaaactat 180
gcacagaagt ttcaggtcag ggtcaccatg accagggaca cgtccatcac cacagcctac 240
atggaactga acagactgaa atctgacgac acggccgtgt attactgtgc gagaggaccc 300
ctacgtggat atagcggcta cgatttttttt gactactggg gccagggaac cctggtcacc 360
gtctcctca 369

<210> 146
<211> 123
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 146
Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
 1   5   10   15
Ser Val Glu Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asp Tyr
            20   25   30
Tyr Ile His Trp Ile Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
        35   40   45
Gly Trp Ile Asn Pro Asp Ser Gly Arg Thr Asn Tyr Ala Gln Lys Phe
    50   55   60
Gln Val Arg Val Thr Met Thr Arg Asp Thr Ser Ile Thr Thr Ala Tyr
65   70   75   80
Met Glu Leu Asn Arg Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
                85   90   95
Ala Arg Gly Pro Leu Arg Gly Tyr Ser Gly Tyr Asp Phe Phe Asp Tyr
            100   105   110
Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
        115   120

<210> 147
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 147
ggatacacct tcaccgacta ctat   24

<210> 148
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 148
Gly Tyr Thr Phe Thr Asp Tyr Tyr
 1   5

<210> 149
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 149
atcaaccctg acagtggtcg caca 24

<210> 150
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 150
Ile Asn Pro Asp Ser Gly Arg Thr
1 5

<210> 151
<211> 48
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 151
gcgagaggac ccctacgtgg atatagcggc tacgattttt ttgactac 48

<210> 152
<211> 16
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 152
Ala Arg Gly Pro Leu Arg Gly Tyr Ser Gly Tyr Asp Phe Phe Asp Tyr
1 5 10 15

<210> 153
<211> 321
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 153
gacatccagt tgacccagtc tccatccttc ctgtctgcat ctgtaggaga cagagtcacc 60
atcacttgct gggccagtca gggcattagc agttatttag cctggtatca gcaaaaacca 120
gggaaagccc ctaagctcct gatctatgct gcatccactt tgcaaagtgg ggtcccatca 180
aggttcagcg gcagtggatc tgggacagaa ttcactctca caatcagcag cctgcagcct 240
gaagattttg caagttattt ctgtcaacag cttaatagta accctcggac gttcggccaa 300
gggaccaagg tggaaatcaa a 321

<210> 154
<211> 107

<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 154
Asp Ile Gln Leu Thr Gln Ser Pro Ser Phe Leu Ser Ala Ser Val Gly
 1   5   10   15
Asp Arg Val Thr Ile Thr Cys Trp Ala Ser Gln Gly Ile Ser Ser Tyr
            20   25   30
Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
        35   40   45
Tyr Ala Ala Ser Thr Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
    50   55   60
Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
65   70   75   80
Glu Asp Phe Ala Ser Tyr Phe Cys Gln Gln Leu Asn Ser Asn Pro Arg
                85   90   95
Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
            100   105

<210> 155
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 155
cagggcatta gcagttat   18

<210> 156
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 156
Gln Gly Ile Ser Ser Tyr
 1   5

<210> 157
<211> 9
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 157
gctgcatcc   9

<210> 158

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

<220>
<223> synthetic

<400> 158
Ala Ala Ser
 1

<210> 159
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 159
caacagctta atagtaaccc tcggacg 27

<210> 160
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 160
Gln Gln Leu Asn Ser Asn Pro Arg Thr
 1   5

<210> 161
<211> 363
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 161
gaagtgcagc tggtggagtc tgggggaggc ttggtacagc ctggcaggtc cctgagactc 60
tcctgtgcag cctctggatt cacctttgat gattatgcca tgcactgggt ccggcaagtt 120
ccagggaagg gcctggagtg ggtctcaggt attacttgga atagtggtga cataggctat 180
gcggactctg tgaagggccg attcaccatc tccagagaca acgccaagaa ctccctatat 240
ctgcaaatga acagtctaag agctgaggac acggccttgt attactgtac aaaagataaa 300
gatagcagtg gctactacgg tattgacgtc tggggccaag ggaccacggt caccgtctcc 360
tca 363

<210> 162
<211> 121
<212> PRT
<213> Artificial Sequence

<220>

<223> synthetic

<400> 162
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Arg
 1   5   10   15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Asp Asp Tyr
            20   25   30
Ala Met His Trp Val Arg Gln Val Pro Gly Lys Gly Leu Glu Trp Val
        35   40   45
Ser Gly Ile Thr Trp Asn Ser Gly Asp Ile Gly Tyr Ala Asp Ser Val
    50   55   60
Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Ser Leu Tyr
65   70   75   80
Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Leu Tyr Tyr Cys
                85   90   95
Thr Lys Asp Lys Asp Ser Ser Gly Tyr Tyr Gly Ile Asp Val Trp Gly
            100   105   110
Gln Gly Thr Thr Val Thr Val Ser Ser
        115   120

<210> 163
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 163
ggattcacct ttgatgatta tgcc   24

<210> 164
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 164
Gly Phe Thr Phe Asp Asp Tyr Ala
 1   5

<210> 165
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 165
attacttgga atagtggtga cata   24

<210> 166
<211> 8
<212> PRT

<213> Artificial Sequence

<220>
<223> synthetic

<400> 166
Ile Thr Trp Asn Ser Gly Asp Ile
 1   5

<210> 167
<211> 42
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 167
acaaaagata aagatagcag tggctactac ggtattgacg tc   42

<210> 168
<211> 14
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 168
Thr Lys Asp Lys Asp Ser Ser Gly Tyr Tyr Gly Ile Asp Val
 1   5   10

<210> 169
<211> 321
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 169
gacatccaga tgacccagtc tccatcttcc gtgtctgcat ctgtaggaga cagagtcacc 60
atcacttgtc gggcgagtca gggtattcgc acctggttag cctggtatca gcagaaacca 120
gggaaagccc ctaagctcct gatctatgca gcatccagtt tgcaaagtgg ggtcccatca 180
aggttcagcg gcagtgaatc tgggacagat ttcactctca ccatcagcag cctgcagcct 240
gaagattttg caacttacta ttgtcaacag gctaacagtt tcccattcac tttcggccct 300
gggaccaaag tggatatcaa a   321

<210> 170
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 170

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Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Val Ser Ala Ser Val Gly
 1               5                  10                  15
Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Gly Ile Arg Thr Trp
            20                  25                  30
Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
        35                  40                  45
Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
    50                  55                  60
Ser Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
65                  70                  75                  80
Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Ala Asn Ser Phe Pro Phe
                85                  90                  95
Thr Phe Gly Pro Gly Thr Lys Val Asp Ile Lys
            100                 105
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<210> 171
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 171
cagggtattc gcacctgg 18

<210> 172
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 172
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Gln Gly Ile Arg Thr Trp
 1               5
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<210> 173
<211> 9
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 173
gcagcatcc 9

<210> 174
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 174
Ala Ala Ser
 1

<210> 175
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 175
caacaggcta acagtttccc attcact 27

<210> 176
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 176
Gln Gln Ala Asn Ser Phe Pro Phe Thr
 1   5

<210> 177
<211> 384
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 177
caggtgcagc tggtggagtc tgggggagac ttggtcaagc ctggagggtc cctgagactc 60
tcctgtgcag cctctggatt caccttcagt gactactaca tgaactggat ccgccaggct 120
ccagggaagg gcctggagtg ggtttcatat attagtagta gtggcagtac catacactac 180
gcagactctg tgaagggccg attcaccatc tccagggaca acgccaagaa tttagtgtat 240
ctgcgaatga acagcctgag agccgaggac acggccgtat atttctgtgc gagagagaga 300
gaggtccatg actacagtga tccttacttc ttcttctacg gtatggacgt ctggggccaa 360
gggaccacgg tcaccgtctc ctca 384

<210> 178
<211> 128
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 178
Gln Val Gln Leu Val Glu Ser Gly Gly Asp Leu Val Lys Pro Gly Gly
 1   5   10   15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Asp Tyr
            20   25   30

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


<210> 179
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 179
ggattcacct tcagtgacta ctac                                          24

<210> 180
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 180
Gly Phe Thr Phe Ser Asp Tyr Tyr
 1               5


<210> 181
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 181
attagtagta gtggcagtac cata                                          24

<210> 182
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 182
Ile Ser Ser Ser Gly Ser Thr Ile
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1 5

<210> 183
<211> 63
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 183
gcgagagaga gagaggtcca tgactacagt gatccttact tcttcttcta cggtatggac 60
gtc 63

<210> 184
<211> 21
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 184
Ala Arg Glu Arg Glu Val His Asp Tyr Ser Asp Pro Tyr Phe Phe Phe
1 5 10 15
Tyr Gly Met Asp Val
20

<210> 185
<211> 321
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 185
gacatccaga tgacccagtc tccatcttcc gtgtctgcat ctgttggaga cagagtcacc 60
atcacttgtc gggcgagtca ggatgttagc agctggttag cctggtatca acacaaacca 120
gggaaagccc ctaagctcct gatctttgct gcatccagtt tgcaaagtgg ggtcccatca 180
aggttcagcg gcagtggatc tgggacagat ttcactctca ccatcagcag tctgcagtct 240
gaagattttg caacttacta ttgtcaacag gctaacagtt tcccgctcac tttcggcgga 300
gggaccaagg tggagatcaa a 321

<210> 186
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 186
Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Val Ser Ala Ser Val Gly
1 5 10 15
Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Asp Val Ser Ser Trp
20 25 30

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


<210> 187
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 187
caggatgtta gcagctgg                                                  18

<210> 188
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 188
Gln Asp Val Ser Ser Trp
 1               5


<210> 189
<211> 9
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 189
gctgcatcc                                                            9

<210> 190
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 190
Ala Ala Ser
 1
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<210> 191
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 191
caacaggcta acagtttccc gctcact 27

<210> 192
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 192
Gln Gln Ala Asn Ser Phe Pro Leu Thr
 1   5

<210> 193
<211> 369
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 193
caggtgcagc tggtgcagtc tggggctgag gtgaagaagc ctggggcctc agtggaggtc 60
tcctgcaagg cttctggata caccttcacc gactactata tacactggat acgacaggcc 120
cctggacaag ggcttgagtg gatgggatgg atcaaccctg acagtggtcg cacaaactat 180
gcacagaagt ttcaggtcag ggtcaccatg accagggaca cgtccatcac cacagcctac 240
atggaactga acagactgaa atctgacgac acggccgtgt attactgtgc gagaggaccc 300
ctacgtggat atagcggcta cgatttttt gactactggg gccagggaac cctggtcacc 360
gtctcctca 369

<210> 194
<211> 123
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 194
Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
 1   5   10   15
Ser Val Glu Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asp Tyr
            20   25   30
Tyr Ile His Trp Ile Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
        35   40   45
Gly Trp Ile Asn Pro Asp Ser Gly Arg Thr Asn Tyr Ala Gln Lys Phe
    50   55   60

```
Gln Val Arg Val Thr Met Thr Arg Asp Thr Ser Ile Thr Thr Ala Tyr
65                  70                  75                  80
Met Glu Leu Asn Arg Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
                85                  90                  95
Ala Arg Gly Pro Leu Arg Gly Tyr Ser Gly Tyr Asp Phe Phe Asp Tyr
            100                 105                 110
Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
        115                 120


<210> 195
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 195
ggatacacct tcaccgacta ctat                                          24

<210> 196
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 196
Gly Tyr Thr Phe Thr Asp Tyr Tyr
 1               5


<210> 197
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 197
atcaaccctg acagtggtcg caca                                          24

<210> 198
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 198
Ile Asn Pro Asp Ser Gly Arg Thr
 1               5


<210> 199
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<211> 48
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 199
gcgagaggac ccctacgtgg atatagcggc tacgattttt ttgactac 48

<210> 200
<211> 16
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 200
Ala Arg Gly Pro Leu Arg Gly Tyr Ser Gly Tyr Asp Phe Phe Asp Tyr
 1   5   10   15

<210> 201
<211> 321
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 201
gacatccaga tgacccagtc tccatcctcc ctgtctgcat ttgtaggaga cagagtcacc 60
atcacttgcc gggcaagtca gagtattagt agttatttaa attggtatca gcagaaacca 120
gggaaagccc cgaaactcct gatctatact gcatccactt tgcaaagagg ggtcccatca 180
aggttcagag gcagtgggtc tgggacagat ttcactctca ccatcagcag tctgcaacct 240
gaagattttg caacttacta ttgtcatcag acttacagta tccccatcac cttcggccaa 300
gggacacgac tggagattaa a 321

<210> 202
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 202
Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Phe Val Gly
 1   5   10   15
Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Ser Ser Tyr
            20   25   30
Leu Asn Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
        35   40   45
Tyr Thr Ala Ser Thr Leu Gln Arg Gly Val Pro Ser Arg Phe Arg Gly
    50   55   60
Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
65   70   75   80
Glu Asp Phe Ala Thr Tyr Tyr Cys His Gln Thr Tyr Ser Ile Pro Ile

```
                85                  90                  95
Thr Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys
            100                 105
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<210> 203
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 203
cagagtatta gtagttat 18

<210> 204
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 204
Gln Ser Ile Ser Ser Tyr
 1   5

<210> 205
<211> 9
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 205
actgcatcc 9

<210> 206
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 206
Thr Ala Ser
 1

<210> 207
<211> 27
<212> DNA
<213> Artificial Sequence

<220>

<223> synthetic

<400> 207
catcagactt acagtatccc catcacc 27

<210> 208
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 208
His Gln Thr Tyr Ser Ile Pro Ile Thr
 1   5

<210> 209
<211> 369
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 209
caggtgcagc tggtgcagtc tggggctgag gtgaagaagc ctggggcctc agtggaggtc 60
tcctgcaagg cttctggata caccttcacc gactactata tacactggat acgacaggcc 120
cctggacaag ggcttgagtg gatgggatgg atcaaccctg acagtggtcg cacaaactat 180
gcacagaagt ttcaggtcag ggtcaccatg accagggaca cgtccatcac cacagcctac 240
atggaactga acagactgaa atctgacgac acggccgtgt attactgtgc gagaggaccc 300
ctacgtggat atagcggcta cgatttttttt gactactggg gccagggaac cctggtcacc 360
gtctcctca 369

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

<220>
<223> synthetic

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

115 120

<210> 211
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 211
ggatacacct tcaccgacta ctat 24

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

<220>
<223> synthetic

<400> 212
Gly Tyr Thr Phe Thr Asp Tyr Tyr
1 5

<210> 213
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 213
atcaaccctg acagtggtcg caca 24

<210> 214
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 214
Ile Asn Pro Asp Ser Gly Arg Thr
1 5

<210> 215
<211> 48
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 215
gcgagaggac ccctacgtgg atatagcggc tacgattttt ttgactac 48

<210> 216
<211> 16
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 216
Ala Arg Gly Pro Leu Arg Gly Tyr Ser Gly Tyr Asp Phe Phe Asp Tyr
 1   5   10   15

<210> 217
<211> 321
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 217
gacatccaga tgacccagtc tccatcctcc ctgtctgcat ctgtaggaga cagagtcacc 60
atcacttgcc gggcaagtca gggcattaga aatgatttag gctggtatca gcagaaacca 120
gggaaagccc ctaaccgcct gatctatgct gcatccagtt tgcaaagtgg ggtcccatca 180
aggttcagcg gcagtggatc tgggacagaa ttcactctca caatcagcag cctgcatcct 240
gaggattttg caacttattc ctgtctacag cataatagtt tcccgctcac tttcggcggg 300
gggaccaagg tggagatcaa a 321

<210> 218
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 218
Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
 1   5   10   15
Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Gly Ile Arg Asn Asp
            20   25   30
Leu Gly Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Asn Arg Leu Ile
        35   40   45
Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
    50   55   60
Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu His Pro
65   70   75   80
Glu Asp Phe Ala Thr Tyr Ser Cys Leu Gln His Asn Ser Phe Pro Leu
                85   90   95
Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
            100   105

<210> 219
<211> 18

<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 219
cagggcatta gaaatgat 18

<210> 220
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 220
Gln Gly Ile Arg Asn Asp
 1   5

<210> 221
<211> 9
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 221
gctgcatcc 9

<210> 222
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 222
Ala Ala Ser
 1

<210> 223
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 223
ctacagcata atagtttccc gctcact 27

<210> 224
<211> 9

<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 224
Leu Gln His Asn Ser Phe Pro Leu Thr
 1   5

<210> 225
<211> 380
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

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

```
305                 310                 315                 320
Thr Ser Met Leu Cys Cys Gly Gln Ser Arg Cys Ala Gly Thr Ser His
                325                 330                 335
Ser Ser Ser Gly Glu Lys Ser Ala Ser Tyr Ser Ser Gly His Ser Gln
            340                 345                 350
Gly Pro Gly Pro Asn Met Gly Lys Gly Gly Glu Gln Met His Glu Lys
        355                 360                 365
Ser Ile Pro Tyr Ser Gln Glu Thr Leu Val Val Asp
    370                 375                 380


<210> 226
<211> 380
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 226
Met Glu Glu Gly Gly Asp Phe Asp Asn Tyr Tyr Gly Ala Asp Asn Gln
 1               5                  10                  15
Ser Glu Cys Glu Tyr Thr Asp Trp Lys Ser Ser Gly Ala Leu Ile Pro
            20                  25                  30
Ala Ile Tyr Met Leu Val Phe Leu Leu Gly Thr Thr Gly Asn Gly Leu
        35                  40                  45
Val Leu Trp Thr Val Phe Arg Ser Ser Arg Glu Lys Arg Arg Ser Ala
    50                  55                  60
Asp Ile Phe Ile Ala Ser Leu Ala Val Ala Asp Leu Thr Phe Val Val
65                  70                  75                  80
Thr Leu Pro Leu Trp Ala Thr Tyr Thr Tyr Arg Asp Tyr Asp Trp Pro
                85                  90                  95
Phe Gly Thr Phe Ser Cys Lys Leu Ser Ser Tyr Leu Ile Phe Val Asn
            100                 105                 110
Met Tyr Ala Ser Val Phe Cys Leu Thr Gly Leu Ser Phe Asp Arg Tyr
        115                 120                 125
Leu Ala Ile Val Arg Pro Val Ala Asn Ala Arg Leu Arg Leu Arg Val
    130                 135                 140
Ser Gly Ala Val Ala Thr Ala Val Leu Trp Val Leu Ala Ala Leu Leu
145                 150                 155                 160
Ala Met Pro Val Met Val Phe Arg Thr Thr Gly Asp Leu Glu Asn Thr
                165                 170                 175
Thr Lys Val Gln Cys Tyr Met Asp Tyr Ser Met Val Ala Thr Val Ser
            180                 185                 190
Ser Asp Trp Ala Trp Glu Val Gly Leu Gly Val Ser Ser Thr Thr Val
        195                 200                 205
Gly Phe Val Val Pro Phe Thr Ile Met Leu Thr Cys Tyr Phe Phe Ile
    210                 215                 220
Ala Gln Thr Ile Ala Gly His Phe Arg Lys Glu Arg Ile Glu Gly Leu
225                 230                 235                 240
Arg Lys Arg Arg Arg Leu Leu Ser Ile Ile Val Val Leu Val Val Thr
                245                 250                 255
Phe Ala Leu Cys Trp Met Pro Tyr His Leu Val Lys Thr Leu Tyr Met
            260                 265                 270
Leu Gly Ser Leu Leu His Trp Pro Cys Asp Phe Asp Leu Phe Leu Met
        275                 280                 285
Asn Val Phe Pro Tyr Cys Thr Cys Ile Ser Tyr Val Asn Ser Cys Leu
    290                 295                 300
Asn Pro Phe Leu Tyr Ala Phe Phe Asp Pro Arg Phe Arg Gln Ala Cys
```

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305                 310                 315                 320
Thr Ser Met Leu Cys Cys Gly Gln Ser Arg Cys Ala Gly Thr Ser His
                325                 330                 335
Ser Ser Ser Gly Glu Lys Ser Ala Ser Tyr Ser Ser Gly His Ser Gln
            340                 345                 350
Gly Pro Gly Pro Asn Met Gly Lys Gly Gly Glu Gln Met His Glu Lys
        355                 360                 365
Ser Ile Pro Tyr Ser Gln Glu Thr Leu Val Val Asp
    370                 375                 380


<210> 227
<211> 77
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 227
Met Asn Leu Arg Leu Cys Val Gln Ala Leu Leu Leu Leu Trp Leu Ser
 1               5                  10                  15
Leu Thr Ala Val Cys Gly Gly Ser Leu Met Pro Leu Pro Asp Gly Asn
            20                  25                  30
Gly Leu Glu Asp Gly Asn Val Arg His Leu Val Gln Pro Arg Gly Ser
        35                  40                  45
Arg Asn Gly Pro Gly Pro Trp Gln Gly Gly Arg Arg Lys Phe Arg Arg
    50                  55                  60
Gln Arg Pro Arg Leu Ser His Lys Gly Pro Met Pro Phe
65                  70                  75


<210> 228
<211> 13
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 228
Gln Arg Pro Arg Leu Ser His Lys Gly Pro Met Pro Phe
 1               5                  10


<210> 229
<211> 17
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 229
Lys Phe Arg Arg Gln Arg Pro Arg Leu Ser His Lys Gly Pro Met Pro
 1               5                  10                  15
Phe
```

<210> 230
<211> 36
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 230
Leu Val Gln Pro Arg Gly Ser Arg Asn Gly Pro Gly Pro Trp Gln Gly
 1   5   10   15
Gly Arg Arg Lys Phe Arg Arg Gln Arg Pro Arg Leu Ser His Lys Gly
            20   25   30
Pro Met Pro Phe
        35

<210> 231
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 231
Gly Gly Gly Gly Ser
 1   5

<210> 232
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 232
Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
 1   5   10

<210> 233
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 233
Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
 1   5   10   15

<210> 234
<211> 420

<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 234
caaagaccaa gactttcaca caaaggacct atgccattcg gtggtggtgg aagcggaggg 60
ggaggatctg gaggtggtgg atcagacatc gtgatgaccc agtctccaga ctccctggct 120
gtgtctctgg gcgagagggc caccatcaac tgcaagtcca gccagagtgt tttatacacc 180
tccaacaata agaactactt agcttggtac cagcagaaac caggacagcc tcctaaactg 240
ctcatttact gggcatctac ccgggaatcc ggggtccctg accgattcag tggcagcggg 300
tctgggacag atttcactct caccatcagc agcctgcagg ctgaagatgt ggcagtttat 360
tactgtcagc aatattatag tacttacact tttggccagg ggaccaagct ggagatcaaa 420

<210> 235
<211> 140
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 235
Gln Arg Pro Arg Leu Ser His Lys Gly Pro Met Pro Phe Gly Gly Gly
 1   5   10   15
Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Val Met
            20   25   30
Thr Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly Glu Arg Ala Thr
        35   40   45
Ile Asn Cys Lys Ser Ser Gln Ser Val Leu Tyr Thr Ser Asn Asn Lys
    50   55   60
Asn Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro Lys Leu
65   70   75   80
Leu Ile Tyr Trp Ala Ser Thr Arg Glu Ser Gly Val Pro Asp Arg Phe
                85   90   95
Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu
            100   105   110
Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln Gln Tyr Tyr Ser Thr
        115   120   125
Tyr Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
    130   135   140

<210> 236
<211> 744
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 236
gacatcgtga tgacccagtc tccagactcc ctggctgtgt ctctgggcga gagggccacc 60
atcaactgca agtccagcca gagtgtttta tacacctcca acaataagaa ctacttagct 120
tggtaccagc agaaaccagg acagcctcct aaactgctca tttactgggc atctacccgg 180
gaatccgggg tccctgaccg attcagtggc agcgggtctg ggacagattt cactctcacc 240
atcagcagcc tgcaggctga agatgtggca gtttattact gtcagcaata ttatagtact 300

tacacttttg gccaggggac caagctggag atcaaacgaa ctgtggctgc accatctgtc 360
ttcatcttcc cgccatctga tgagcagttg aaatctggaa ctgcctctgt tgtgtgcctg 420
ctgaataact tctatcccag agaggccaaa gtacagtgga aggtggataa cgccctccaa 480
tcgggtaact cccaggagag tgtcacagag caggacagca aggacagcac ctacagcctc 540
agcagcaccc tgacgctgag caaagcagac tacgagaaac acaaagtcta cgcctgcgaa 600
gtcacccatc agggcctgag ctcgcccgtc acaaagagct tcaacagggg agagtgtgga 660
ggtggtggat caggaggagg gggctccggg ggaggaggta gccaaagacc acgattgtct 720
cacaaaggac caatgccatt ttaa 744

<210> 237
<211> 247
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 237
Asp Ile Val Met Thr Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly
 1   5   10   15
Glu Arg Ala Thr Ile Asn Cys Lys Ser Ser Gln Ser Val Leu Tyr Thr
            20   25   30
Ser Asn Asn Lys Asn Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln
        35   40   45
Pro Pro Lys Leu Leu Ile Tyr Trp Ala Ser Thr Arg Glu Ser Gly Val
    50   55   60
Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr
65   70   75   80
Ile Ser Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln Gln
                85   90   95
Tyr Tyr Ser Thr Tyr Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
            100   105   110
Arg Thr Val Ala Ala Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu
        115   120   125
Gln Leu Lys Ser Gly Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe
    130   135   140
Tyr Pro Arg Glu Ala Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln
145   150   155   160
Ser Gly Asn Ser Gln Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser
                165   170   175
Thr Tyr Ser Leu Ser Ser Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu
            180   185   190
Lys His Lys Val Tyr Ala Cys Glu Val Thr His Gln Gly Leu Ser Ser
        195   200   205
Pro Val Thr Lys Ser Phe Asn Arg Gly Glu Cys Gly Gly Gly Gly Ser
    210   215   220
Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gln Arg Pro Arg Leu Ser
225   230   235   240
His Lys Gly Pro Met Pro Phe
                245

<210> 238
<211> 453
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 238
caaagaccaa gactttcaca caaaggacct atgccattcg gtggtggtgg aagcggaggg 60
ggaggatctg gaggtggtgg atcagaggtg cagctggtgg agtctggggg aggcttggta 120
aagcctgggg ggtcccttag actctcctgt gcagcctctg gaatcacttt cagtaacgcc 180
tggatgagct gggtccgcca ggctccaggg aaggggctgg agtgggttgg ccgttttaaa 240
ggcaaagctg atggtgggac agttgactat gctgcacccg tgaaaggcag attcaccatc 300
tcaagagatg attcgaaaaa cacgctgtat ctgcaaatga acagtctgaa aaacgaggac 360
acagccgtgt attactgcac cacaggtcga attactatgg ttcggggagt tttgggctac 420
tggggccagg gaaccctggt cacygtctcc tca 453

<210> 239
<211> 151
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 239
Gln Arg Pro Arg Leu Ser His Lys Gly Pro Met Pro Phe Gly Gly Gly
 1   5   10   15
Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Val Gln Leu
            20   25   30
Val Glu Ser Gly Gly Gly Leu Val Lys Pro Gly Gly Ser Leu Arg Leu
        35   40   45
Ser Cys Ala Ala Ser Gly Ile Thr Phe Ser Asn Ala Trp Met Ser Trp
    50   55   60
Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val Gly Arg Phe Lys
65   70   75   80
Gly Lys Ala Asp Gly Gly Thr Val Asp Tyr Ala Ala Pro Val Lys Gly
                85   90   95
Arg Phe Thr Ile Ser Arg Asp Asp Ser Lys Asn Thr Leu Tyr Leu Gln
            100   105   110
Met Asn Ser Leu Lys Asn Glu Asp Thr Ala Val Tyr Tyr Cys Thr Thr
        115   120   125
Gly Arg Ile Thr Met Val Arg Gly Val Leu Gly Tyr Trp Gly Gln Gly
    130   135   140
Thr Leu Val Thr Val Ser Ser
145   150

<210> 240
<211> 408
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 240
caaagaccaa gactttcaca caaaggacct atgcccttcg aggtgcagct ggtggagtct 60
gggggaggct tggtaaagcc tgggggggtcc cttagactct cctgtgcagc ctctggaatc 120
actttcagta acgcctggat gagctgggtc cgccaggctc cagggaaggg gctggagtgg 180
gttggccgtt ttaaaggcaa agctgatggt gggacagttg actatgctgc acccgtgaaa 240
ggcagattca ccatctcaag agatgattcg aaaaacacgc tgtatctgca aatgaacagt 300
ctgaaaaacg aggacacagc cgtgtattac tgcaccacag gtcgaattac tatggttcgg 360
ggagttttgg gctactgggg ccagggaacc ctggtcacyg tctcctca 408

<210> 241
<211> 136
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 241
Gln Arg Pro Arg Leu Ser His Lys Gly Pro Met Pro Phe Glu Val Gln
 1   5   10   15
Leu Val Glu Ser Gly Gly Gly Leu Val Lys Pro Gly Gly Ser Leu Arg
            20   25   30
Leu Ser Cys Ala Ala Ser Gly Ile Thr Phe Ser Asn Ala Trp Met Ser
        35   40   45
Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val Gly Arg Phe
    50   55   60
Lys Gly Lys Ala Asp Gly Gly Thr Val Asp Tyr Ala Ala Pro Val Lys
65   70   75   80
Gly Arg Phe Thr Ile Ser Arg Asp Asp Ser Lys Asn Thr Leu Tyr Leu
                85   90   95
Gln Met Asn Ser Leu Lys Asn Glu Asp Thr Ala Val Tyr Tyr Cys Thr
            100   105   110
Thr Gly Arg Ile Thr Met Val Arg Gly Val Leu Gly Tyr Trp Gly Gln
        115   120   125
Gly Thr Leu Val Thr Val Ser Ser
    130   135

<210> 242
<211> 423
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 242
caaagaccaa gactctcaca taaaggtcca atgcccttcg gtggtggcgg gtccgaggtg 60
cagctggtgg agtctggggg aggcttggta aagcctgggg ggtcccttag actctcctgt 120
gcagcctctg gaatcacttt cagtaacgcc tggatgagct gggtccgcca ggctccaggg 180
aaggggctgg agtgggttgg ccgttttaaa ggcaaagctg atggtgggac agttgactat 240
gctgcacccg tgaaaggcag attcaccatc tcaagagatg attcgaaaaa cacgctgtat 300
ctgcaaatga acagtctgaa aaacgaggac acagccgtgt attactgcac cacaggtcga 360
attactatgg ttcggggagt tttgggctac tggggccagg gaaccctggt cacygtctcc 420
tca   423

<210> 243
<211> 141
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 243
Gln Arg Pro Arg Leu Ser His Lys Gly Pro Met Pro Phe Gly Gly Gly
 1   5   10   15
Gly Ser Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Lys Pro

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

<210> 244
<211> 438
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 244
caaagaccta gactttcaca taaaggaccc atgcccttcg gaggaggagg atctggaggc 60
ggaggttctg aggtgcagct ggtggagtct gggggaggct tggtaaagcc tgggggtcc 120
cttagactct cctgtgcagc ctctggaatc actttcagta acgcctggat gagctgggtc 180
cgccaggctc cagggaaggg gctggagtgg gttggccgtt ttaaaggcaa agctgatggt 240
gggacagttg actatgctgc acccgtgaaa ggcagattca ccatctcaag agatgattcg 300
aaaaacacgc tgtatctgca aatgaacagt ctgaaaaacg aggacacagc cgtgtattac 360
tgcaccacag gtcgaattac tatggttcgg ggagttttgg gctactgggg ccagggaacc 420
ctggtcacyg tctcctca 438

<210> 245
<211> 146
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 245
```
Gln Arg Pro Arg Leu Ser His Lys Gly Pro Met Pro Phe Gly Gly Gly
 1               5                  10                  15
Gly Ser Gly Gly Gly Gly Ser Glu Val Gln Leu Val Glu Ser Gly Gly
            20                  25                  30
Gly Leu Val Lys Pro Gly Gly Ser Leu Arg Leu Ser Cys Ala Ala Ser
        35                  40                  45
Gly Ile Thr Phe Ser Asn Ala Trp Met Ser Trp Val Arg Gln Ala Pro
    50                  55                  60
Gly Lys Gly Leu Glu Trp Val Gly Arg Phe Lys Gly Lys Ala Asp Gly
65                  70                  75                  80
Gly Thr Val Asp Tyr Ala Ala Pro Val Lys Gly Arg Phe Thr Ile Ser
                85                  90                  95
Arg Asp Asp Ser Lys Asn Thr Leu Tyr Leu Gln Met Asn Ser Leu Lys
            100                 105                 110
Asn Glu Asp Thr Ala Val Tyr Tyr Cys Thr Thr Gly Arg Ile Thr Met
```

```
        115                 120                 125
Val Arg Gly Val Leu Gly Tyr Trp Gly Gln Gly Thr Leu Val Thr Val
    130                 135                 140
Ser Ser
145
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<210> 246
<211> 453
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 246
caaagaccaa gactttcaca caaaggacct atgccattcg gtggtggtgg aagcggaggg 60
ggaggatctg gaggtggtgg atcagaggtg cagctggtgg agtctggggg aggcttggta 120
aaacctgggg ggtcccttag actctcctgt gcagcctctg gaatcacttt cagtaacgcc 180
tggatgagct gggtccgcca ggctccaggg aaggggctgg agtgggttgg ccgtattaaa 240
agcaaagttg atggtgggac aatagactac gctgcacccg tgaaaggcag attcaccatc 300
tcaagagatg attcaaaaaa cacgctgtat ctgcaaatga acagcctgaa aaccgaggac 360
acagccgttt attactgtac cacaggtcga attactatgg ttcggggagt tttgggctac 420
tggggccagg gaaccctggt cactgtctcc tca 453

<210> 247
<211> 151
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 247
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Gln Arg Pro Arg Leu Ser His Lys Gly Pro Met Pro Phe Gly Gly Gly
 1               5                  10                  15
Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Val Gln Leu
            20                  25                  30
Val Glu Ser Gly Gly Gly Leu Val Lys Pro Gly Gly Ser Leu Arg Leu
        35                  40                  45
Ser Cys Ala Ala Ser Gly Ile Thr Phe Ser Asn Ala Trp Met Ser Trp
    50                  55                  60
Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val Gly Arg Ile Lys
65                  70                  75                  80
Ser Lys Val Asp Gly Gly Thr Ile Asp Tyr Ala Ala Pro Val Lys Gly
                85                  90                  95
Arg Phe Thr Ile Ser Arg Asp Asp Ser Lys Asn Thr Leu Tyr Leu Gln
            100                 105                 110
Met Asn Ser Leu Lys Thr Glu Asp Thr Ala Val Tyr Tyr Cys Thr Thr
        115                 120                 125
Gly Arg Ile Thr Met Val Arg Gly Val Leu Gly Tyr Trp Gly Gln Gly
    130                 135                 140
Thr Leu Val Thr Val Ser Ser
145                 150
```

<210> 248
<211> 420
<212> DNA

<213> Artificial Sequence

<220>
<223> synthetic

<400> 248
caaagaccaa gactttcaca caaaggacct atgccattcg gtggtggtgg aagcggaggg 60
ggaggatctg gaggtggtgg atcagacatc gtgatgaccc agtctccaga ctccctggct 120
gtgtctctgg gcgagagggc caccatcaac tgcaagtcca gccagagtgt tttatacagc 180
tccaacaata agaactactt agcttggtac cagcagaaac caggacagcc tcctaagctg 240
ctcatttact gggcatctac ccgggaatcc ggggtccctg accgattcag tggcagcggg 300
tctgggacag atttcactct caccatcagc agcctgcagg ctgaagatgt ggctgtttat 360
tactgtcagc aatattatag tacttacact tttggccagg ggaccaagct ggagatcaaa 420

<210> 249
<211> 140
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 249
Gln Arg Pro Arg Leu Ser His Lys Gly Pro Met Pro Phe Gly Gly Gly
 1   5   10   15
Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Val Met
            20   25   30
Thr Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly Glu Arg Ala Thr
        35   40   45
Ile Asn Cys Lys Ser Ser Gln Ser Val Leu Tyr Ser Ser Asn Asn Lys
    50   55   60
Asn Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro Lys Leu
65   70   75   80
Leu Ile Tyr Trp Ala Ser Thr Arg Glu Ser Gly Val Pro Asp Arg Phe
                85   90   95
Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu
            100   105   110
Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln Gln Tyr Tyr Ser Thr
        115   120   125
Tyr Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
    130   135   140

<210> 250
<211> 744
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 250
gacatcgtga tgacccagtc tccagactcc ctggctgtgt ctctgggcga gagggccacc 60
atcaactgca agtccagcca gagtgtttta tacagctcca acaataagaa ctacttagct 120
tggtaccagc agaaaccagg acagcctcct aagctgctca tttactgggc atctacccgg 180
gaatccgggg tccctgaccg attcagtggc agcgggtctg ggacagattt cactctcacc 240
atcagcagcc tgcaggctga agatgtggct gtttattact gtcagcaata ttatagtact 300
tacacttttg gccaggggac caagctggag atcaaacgaa ctgtggctgc accatctgtc 360

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ttcatcttcc cgccatctga tgagcagttg aaatctggaa ctgcctctgt tgtgtgcctg 420
ctgaataact tctatcccag agaggccaaa gtacagtgga aggtggataa cgccctccaa 480
tcgggtaact cccaggagag tgtcacagag caggacagca aggacagcac ctacagcctc 540
agcagcaccc tgacgctgag caaagcagac tacgagaaac acaaagtcta cgcctgcgaa 600
gtcacccatc agggcctgag ctcgcccgtc acaaagagct tcaacagggg agagtgtgga 660
ggtggtggat caggaggagg gggctccggg ggaggaggta gccaaagacc acgattgtct 720
cacaaaggac caatgccatt ttaa                                        744

<210> 251
<211> 247
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 251
Asp Ile Val Met Thr Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly
 1               5                  10                  15
Glu Arg Ala Thr Ile Asn Cys Lys Ser Ser Gln Ser Val Leu Tyr Ser
            20                  25                  30
Ser Asn Asn Lys Asn Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln
        35                  40                  45
Pro Pro Lys Leu Leu Ile Tyr Trp Ala Ser Thr Arg Glu Ser Gly Val
    50                  55                  60
Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr
65                  70                  75                  80
Ile Ser Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln Gln
                85                  90                  95
Tyr Tyr Ser Thr Tyr Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
            100                 105                 110
Arg Thr Val Ala Ala Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu
        115                 120                 125
Gln Leu Lys Ser Gly Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe
    130                 135                 140
Tyr Pro Arg Glu Ala Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln
145                 150                 155                 160
Ser Gly Asn Ser Gln Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser
                165                 170                 175
Thr Tyr Ser Leu Ser Ser Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu
            180                 185                 190
Lys His Lys Val Tyr Ala Cys Glu Val Thr His Gln Gly Leu Ser Ser
        195                 200                 205
Pro Val Thr Lys Ser Phe Asn Arg Gly Glu Cys Gly Gly Gly Gly Ser
    210                 215                 220
Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gln Arg Pro Arg Leu Ser
225                 230                 235                 240
His Lys Gly Pro Met Pro Phe
                245


<210> 252
<211> 381
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic
```

<400> 252
caaagaccaa gactttcaca caaaggacct atgcccttcg aggtgcagct gttggagtct 60
gggggaggct tggttcagcc tgggggggtcc ctgagactct cctgtgcagc ctctggattc 120
acctttagca actatgccat gaactgggtc cgccaggctc cagggagggg gctggagtgg 180
gtctcagcta ttcattatga tggtagtaat tcatattacg cagactccgt gaagggccgg 240
ttcaccatct ccagagacaa ttccaagaac acgctgtatc tgcaaatgaa cagcctgaga 300
gccgaagaca cggccattta ttactgtgcg atattgtcaa gggtctactg gggccaggga 360
accctggtca ccgtctcctc a 381

<210> 253
<211> 127
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 253
Gln Arg Pro Arg Leu Ser His Lys Gly Pro Met Pro Phe Glu Val Gln
 1   5   10   15
Leu Leu Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly Ser Leu Arg
            20   25   30
Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Asn Tyr Ala Met Asn
        35   40   45
Trp Val Arg Gln Ala Pro Gly Arg Gly Leu Glu Trp Val Ser Ala Ile
    50   55   60
His Tyr Asp Gly Ser Asn Ser Tyr Tyr Ala Asp Ser Val Lys Gly Arg
65   70   75   80
Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr Leu Gln Met
                85   90   95
Asn Ser Leu Arg Ala Glu Asp Thr Ala Ile Tyr Tyr Cys Ala Ile Leu
            100   105   110
Ser Arg Val Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
        115   120   125

<210> 254
<211> 396
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 254
caaagaccaa gactctcaca taaaggtcca atgcccttcg gtggtggcgg gtctgaggtg 60
cagctgttgg agtctggggg aggcttggtt cagcctgggg ggtccctgag actctcctgt 120
gcagcctctg gattcacctt tagcaactat gccatgaact gggtccgcca ggctccaggg 180
agggggctgg agtgggtctc agctattcat tatgatggta gtaattcata ttacgcagac 240
tccgtgaagg gccggttcac catctccaga gacaattcca agaacacgct gtatctgcaa 300
atgaacagcc tgagagccga agacacggcc atttattact gtgcgatatt gtcaagggtc 360
tactggggcc agggaaccct ggtcaccgtc tcctca 396

<210> 255
<211> 132
<212> PRT
<213> Artificial Sequence

<220>

<223> synthetic

<400> 255
Gln Arg Pro Arg Leu Ser His Lys Gly Pro Met Pro Phe Gly Gly Gly
 1   5   10   15
Gly Ser Glu Val Gln Leu Leu Glu Ser Gly Gly Gly Leu Val Gln Pro
            20   25   30
Gly Gly Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser
        35   40   45
Asn Tyr Ala Met Asn Trp Val Arg Gln Ala Pro Gly Arg Gly Leu Glu
    50   55   60
Trp Val Ser Ala Ile His Tyr Asp Gly Ser Asn Ser Tyr Tyr Ala Asp
65   70   75   80
Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr
                85   90   95
Leu Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Ile Tyr
            100   105   110
Tyr Cys Ala Ile Leu Ser Arg Val Tyr Trp Gly Gln Gly Thr Leu Val
        115   120   125
Thr Val Ser Ser
    130

<210> 256
<211> 411
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 256
caaagaccta gactttcaca taaaggaccc atgcccttcg gaggaggagg atctggaggc 60
ggaggttctg aggtgcagct gttggagtct gggggaggct tggttcagcc tgggggtcc 120
ctgagactct cctgtgcagc ctctggattc acctttagca actatgccat gaactgggtc 180
cgccaggctc cagggagggg gctggagtgg gtctcagcta ttcattatga tggtagtaat 240
tcatattacg cagactccgt gaagggccgg ttcaccatct ccagagacaa ttccaagaac 300
acgctgtatc tgcaaatgaa cagcctgaga gccgaagaca cggccattta ttactgtgcg 360
atattgtcaa gggtctactg gggccaggga accctggtca ccgtctcctc a   411

<210> 257
<211> 137
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 257
Gln Arg Pro Arg Leu Ser His Lys Gly Pro Met Pro Phe Gly Gly Gly
 1   5   10   15
Gly Ser Gly Gly Gly Gly Ser Glu Val Gln Leu Leu Glu Ser Gly Gly
            20   25   30
Gly Leu Val Gln Pro Gly Gly Ser Leu Arg Leu Ser Cys Ala Ala Ser
        35   40   45
Gly Phe Thr Phe Ser Asn Tyr Ala Met Asn Trp Val Arg Gln Ala Pro
    50   55   60
Gly Arg Gly Leu Glu Trp Val Ser Ala Ile His Tyr Asp Gly Ser Asn
65   70   75   80

```
Ser Tyr Tyr Ala Asp Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp
                85                  90                  95
Asn Ser Lys Asn Thr Leu Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu
            100                 105                 110
Asp Thr Ala Ile Tyr Tyr Cys Ala Ile Leu Ser Arg Val Tyr Trp Gly
        115                 120                 125
Gln Gly Thr Leu Val Thr Val Ser Ser
    130                 135
```

<210> 258
<211> 426
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 258
caaagaccaa gactttcaca caaaggacct atgccattcg gtggtggtgg aagcggaggg 60
ggaggatctg gaggtggtgg atcagaggtg cagctgttgg agtctggggg aggcttggtt 120
cagcctgggg ggtccctgag actctcctgt gcagcctctg gattcacctt tagcaactat 180
gccatgaact gggtccgcca ggctccaggg agggggctgg agtgggtctc agctattcat 240
tatgatggta gtaattcata ttacgcagac tccgtgaagg gccggttcac catctccaga 300
gacaattcca agaacacgct gtatctgcaa atgaacagcc tgagagccga agacacggcc 360
atttattact gtgcgatatt gtcaagggtc tactggggcc agggaaccct ggtcaccgtc 420
tcctca 426

<210> 259
<211> 142
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 259
```
Gln Arg Pro Arg Leu Ser His Lys Gly Pro Met Pro Phe Gly Gly Gly
 1               5                  10                  15
Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Val Gln Leu
            20                  25                  30
Leu Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly Ser Leu Arg Leu
        35                  40                  45
Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Asn Tyr Ala Met Asn Trp
    50                  55                  60
Val Arg Gln Ala Pro Gly Arg Gly Leu Glu Trp Val Ser Ala Ile His
65                  70                  75                  80
Tyr Asp Gly Ser Asn Ser Tyr Tyr Ala Asp Ser Val Lys Gly Arg Phe
                85                  90                  95
Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr Leu Gln Met Asn
            100                 105                 110
Ser Leu Arg Ala Glu Asp Thr Ala Ile Tyr Tyr Cys Ala Ile Leu Ser
        115                 120                 125
Arg Val Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
    130                 135                 140
```

<210> 260
<211> 14

<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 260
Pro Gln Arg Pro Arg Leu Ser His Lys Gly Pro Met Pro Ala
 1   5   10

<210> 261
<211> 13
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 261
Pro Gln Arg Pro Arg Leu Ser His Lys Gly Pro Met Pro
 1   5   10

<210> 262
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 262
Pro Gln Arg Pro Arg Leu Ser His Lys Gly Pro Met
 1   5   10

<210> 263
<211> 13
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 263
Pro Arg Pro Arg Leu Ser His Lys Gly Pro Met Pro Phe
 1   5   10

<210> 264
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 264

Pro Pro Arg Leu Ser His Lys Gly Pro Met Pro Phe
1 5 10

<210> 265
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 265
Pro Arg Pro Arg Leu Ser His Lys Gly Pro Met Pro
1 5 10

<210> 266
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 266
Pro Pro Arg Leu Ser His Lys Gly Pro Met Pro
1 5 10

<210> 267
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 267
Pro Arg Pro Arg Leu Ser His Lys Gly Pro Met
1 5 10

<210> 268
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 268
Pro Pro Arg Leu Ser His Lys Gly Pro Met
1 5 10

<210> 269
<211> 19
<212> PRT

<213> Artificial Sequence

<220>
<223> synthetic

<400> 269
Pro Gln Arg Pro Arg Leu Ser His Lys Gly Pro Met Pro Phe Gly Gly
 1   5   10   15
Gly Gly Gly

<210> 270
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 270
Pro Gln Arg Pro Arg Leu Ser His Lys Gly
 1   5   10

<210> 271
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 271
Pro Gln Arg Pro Arg Leu Ser His Lys Gly Pro
 1   5   10

<210> 272
<211> 13
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 272
Pro Gln Arg Pro Arg Leu Ser His Lys Gly Pro Met Ser
 1   5   10

<210> 273
<211> 25
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 273
Gly Lys Pro Ile Pro Asn Pro Leu Leu Gly Leu Asp Ser Thr Gln Arg
 1   5   10   15
Pro Arg Leu Ser His Lys Gly Pro Met
            20   25

<210> 274
<211> 148
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 274
Pro Gln Arg Pro Arg Leu Ser His Lys Gly Gly Gly Gly Gly Ser Gly
 1   5   10   15
Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Val Gln Leu Val Glu Ser
            20   25   30
Gly Gly Gly Leu Val Lys Pro Gly Gly Ser Leu Arg Leu Ser Cys Ala
        35   40   45
Ala Ser Gly Ile Thr Phe Ser Asn Ala Trp Met Ser Trp Val Arg Gln
    50   55   60
Ala Pro Gly Lys Gly Leu Glu Trp Val Gly Arg Phe Lys Gly Lys Ala
65   70   75   80
Asp Gly Gly Thr Val Asp Tyr Ala Ala Pro Val Lys Gly Arg Phe Thr
                85   90   95
Ile Ser Arg Asp Asp Ser Lys Asn Thr Leu Tyr Leu Gln Met Asn Ser
            100   105   110
Leu Lys Asn Glu Asp Thr Ala Val Tyr Tyr Cys Thr Thr Gly Arg Ile
        115   120   125
Thr Met Val Arg Gly Val Leu Gly Tyr Trp Gly Gln Gly Thr Leu Val
    130   135   140
Thr Val Ser Ser
145

<210> 275
<211> 149
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 275
Pro Gln Arg Pro Arg Leu Ser His Lys Gly Pro Gly Gly Gly Gly Ser
 1   5   10   15
Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Val Gln Leu Val Glu
            20   25   30
Ser Gly Gly Gly Leu Val Lys Pro Gly Gly Ser Leu Arg Leu Ser Cys
        35   40   45
Ala Ala Ser Gly Ile Thr Phe Ser Asn Ala Trp Met Ser Trp Val Arg
    50   55   60
Gln Ala Pro Gly Lys Gly Leu Glu Trp Val Gly Arg Phe Lys Gly Lys
65   70   75   80
Ala Asp Gly Gly Thr Val Asp Tyr Ala Ala Pro Val Lys Gly Arg Phe
                85   90   95

```
Thr Ile Ser Arg Asp Asp Ser Lys Asn Thr Leu Tyr Leu Gln Met Asn
            100                 105                 110
Ser Leu Lys Asn Glu Asp Thr Ala Val Tyr Tyr Cys Thr Thr Gly Arg
        115                 120                 125
Ile Thr Met Val Arg Gly Val Leu Gly Tyr Trp Gly Gln Gly Thr Leu
    130                 135                 140
Val Thr Val Ser Ser
145
```

<210> 276
<211> 150
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 276

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

<210> 277
<211> 151
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 277

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

```
65                  70                  75                  80
Gly Lys Ala Asp Gly Gly Thr Val Asp Tyr Ala Ala Pro Val Lys Gly
                85                  90                  95
Arg Phe Thr Ile Ser Arg Asp Asp Ser Lys Asn Thr Leu Tyr Leu Gln
            100                 105                 110
Met Asn Ser Leu Lys Asn Glu Asp Thr Ala Val Tyr Tyr Cys Thr Thr
        115                 120                 125
Gly Arg Ile Thr Met Val Arg Gly Val Leu Gly Tyr Trp Gly Gln Gly
    130                 135                 140
Thr Leu Val Thr Val Ser Ser
145                 150
```

<210> 278
<211> 163
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 278

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

<210> 279
<211> 139
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 279

```
Pro Gln Arg Pro Arg Leu Ser His Lys Gly Gly Gly Gly Gly Ser Gly
 1               5                  10                  15
Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Val Gln Leu Leu Glu Ser
            20                  25                  30
```

```
Gly Gly Gly Leu Val Gln Pro Gly Gly Ser Leu Arg Leu Ser Cys Ala
        35                  40                  45
Ala Ser Gly Phe Thr Phe Ser Asn Tyr Ala Met Asn Trp Val Arg Gln
    50                  55                  60
Ala Pro Gly Arg Gly Leu Glu Trp Val Ser Ala Ile His Tyr Asp Gly
65                  70                  75                  80
Ser Asn Ser Tyr Tyr Ala Asp Ser Val Lys Gly Arg Phe Thr Ile Ser
                85                  90                  95
Arg Asp Asn Ser Lys Asn Thr Leu Tyr Leu Gln Met Asn Ser Leu Arg
            100                 105                 110
Ala Glu Asp Thr Ala Ile Tyr Tyr Cys Ala Ile Leu Ser Arg Val Tyr
        115                 120                 125
Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
    130                 135
```

<210> 280
<211> 140
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 280

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

<210> 281
<211> 141
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 281

```
Pro Gln Arg Pro Arg Leu Ser His Lys Gly Pro Met Gly Gly Gly Gly
 1               5                  10                  15
Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Val Gln Leu Leu
            20                  25                  30
Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly Ser Leu Arg Leu Ser
```

```
        35                  40                  45
Cys Ala Ala Ser Gly Phe Thr Phe Ser Asn Tyr Ala Met Asn Trp Val
    50                  55                  60
Arg Gln Ala Pro Gly Arg Gly Leu Glu Trp Val Ser Ala Ile His Tyr
65                  70                  75                  80
Asp Gly Ser Asn Ser Tyr Tyr Ala Asp Ser Val Lys Gly Arg Phe Thr
                85                  90                  95
Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr Leu Gln Met Asn Ser
            100                 105                 110
Leu Arg Ala Glu Asp Thr Ala Ile Tyr Tyr Cys Ala Ile Leu Ser Arg
        115                 120                 125
Val Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
    130                 135                 140


<210> 282
<211> 142
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 282
Pro Gln Arg Pro Arg Leu Ser His Lys Gly Pro Met Ser Gly Gly Gly
 1               5                  10                  15
Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Val Gln Leu
            20                  25                  30
Leu Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly Ser Leu Arg Leu
        35                  40                  45
Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Asn Tyr Ala Met Asn Trp
    50                  55                  60
Val Arg Gln Ala Pro Gly Arg Gly Leu Glu Trp Val Ser Ala Ile His
65                  70                  75                  80
Tyr Asp Gly Ser Asn Ser Tyr Tyr Ala Asp Ser Val Lys Gly Arg Phe
                85                  90                  95
Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr Leu Gln Met Asn
            100                 105                 110
Ser Leu Arg Ala Glu Asp Thr Ala Ile Tyr Tyr Cys Ala Ile Leu Ser
        115                 120                 125
Arg Val Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
    130                 135                 140


<210> 283
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 283
Pro Gln Arg Pro Arg Leu Ser His Lys Gly Pro Met Pro Phe Arg
 1               5                  10                  15


<210> 284
<211> 15
```

<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 284
Pro Gln Arg Pro Arg Leu Ser His Lys Gly Pro Met Pro Phe Ser
 1   5   10   15

<210> 285
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 285
Pro Gln Arg Pro Arg Leu Ser His Lys Gly Pro Met Pro Phe His
 1   5   10   15