SEQUENCE LISTING

<110> Regeneron Pharmaceuticals, Inc.

<120> Anti-CD48 Antibodies and Uses Thereof

<130> 6350A-WO

<140> Te be assigned
<141> Filed herewith

<150> 61/386,746
<151> 2010-09-27

<150> 61/475,280
<151> 2011-04-14

<150> 61/515,490
<151> 2011-08-05

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

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Gln Ser Val Ser Ser Ser Tyr
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            20   25   30
Phe Ile His Trp Val Arg Gln Ala Pro Gly Gln Gly Pro Glu Trp Met
        35   40   45
Gly Trp Ile Asn Pro Asp Ser Gly Ala Thr Asn Tyr Ala Gln Gln Phe
    50   55   60
Gln Gly Arg Val Thr Met Thr Arg Asp Thr Ser Ile Ser Ala Thr Tyr
65   70   75   80
Met Glu Met Ser Arg Leu Arg Ser Asp Asp Thr Ala Val Phe Tyr Cys
                85   90   95
Ala Arg Asp Lys Asp Gly Ser Gly Trp Tyr Leu Asp Asp Trp Gly Gln
            100   105   110
Gly Thr Leu Val Thr Val Ser Ser
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<400> 38
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ggccaggctc ccaggctcct catctatgat gcatccaaca gggcctctgg catcccagcc
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aggttcagtg gcagtgggtc tgggacagac ttcactctca ccatcagcag cctagagcct
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Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Asn Ile Tyr
            20   25   30
Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile
        35   40   45
Tyr Asp Ala Ser Asn Arg Ala Ser Gly Ile Pro Ala Arg Phe Ser Gly
    50   55   60
Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Glu Pro
65   70   75   80
Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Arg Ser Asn Trp Pro Pro
                85   90   95
Ser Ile Thr Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys
            100   105

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Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Ser Tyr
            20   25   30
Gly Ile Asn Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
        35   40   45
Gly Trp Ile Ser Ala Tyr Asn Gly Asp Thr Asn Tyr Ala Gln Lys Leu
    50   55   60
Gln Gly Arg Val Thr Met Thr Thr Asp Thr Ser Thr Thr Thr Ala Tyr
65   70   75   80
Met Glu Val Arg Ser Leu Arg Ser Asp Asp Thr Ala Val Tyr Tyr Cys
                85   90   95
Ala Arg Phe Leu Thr Gly Thr Lys Asp Leu Tyr Tyr Gly Met Asp Val
            100   105   110
Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser
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<400> 51
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Asp Arg Val Thr Ile Thr Cys Gln Ala Ser Gln Asp Ile Ser Asn Phe
            20   25   30
Leu Asn Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Asp Leu Leu Ile
        35   40   45
Asn Asp Ala Ser Ile Leu Glu Thr Gly Val Pro Ser Arg Phe Ser Gly
    50   55   60
Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Asn Ser Leu Gln Pro
65   70   75   80
Glu Asp Ile Ala Thr Tyr Tyr Cys Gln Gln Tyr Asp Asn Leu Pro Leu
                85   90   95
Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
            100   105

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<400> 61
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<400> 62
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<400> 63
caacaatatg ataatctccc tctcact   27

<210> 64
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<400> 64
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180
gcacagaagt tccagggcag aatctccatg acctgggaca cgtccacgag cacagtcttc
240
atggaactga gcagcctaaa atctgaggac acggccgtgt attactgtgc gggacttcgc
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Ser Val Lys Val Ser Cys Lys Ala Ser Gly His Thr Phe Thr Asn Tyr
            20   25   30
Tyr Ile His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
        35   40   45
Gly Ile Thr Asn Pro Asn Asp Gly Asn Thr Arg Tyr Ala Gln Lys Phe
    50   55   60
Gln Gly Arg Ile Ser Met Thr Trp Asp Thr Ser Thr Ser Thr Val Phe
65   70   75   80
Met Glu Leu Ser Ser Leu Lys Ser Glu Asp Thr Ala Val Tyr Tyr Cys
                85   90   95
Ala Gly Leu Arg Tyr Trp Phe Phe Asp Leu Trp Gly Arg Gly Thr Pro
            100   105   110
Val Thr Val Ser Ser
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<210> 68
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<210> 69
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accaacccta atgatggtaa caca   24

<210> 70
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Thr Asn Pro Asn Asp Gly Asn Thr
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<223> Synthetic

<400> 73
gacatccaga tgacccagtc tccatcttcc gtgtctgcat ctgtaggaga cagagtcacc 60
atcacttgtc gggcgagcca ggatattagc agctggttag cctggtatca gcagaaacca
120
gggaaagccc ctaacctcct gatctttgct gcatccagtt tgcaaagtgg ggtcccatca
180
aggttcagcg gcagtggatc tgggacagat ttcactctca ccatcagcag cctgcagcct
240
gaagattttg gaacttacta ttgtcaacag actgacaatt tccctcggac gttcggccaa
300
gggaccaagg tggaaatcaa c
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 Val Ser Ala Ser Val Gly
 1   5   10   15
Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Asp Ile Ser Ser Trp
            20   25   30
Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Asn 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 Pro
65   70   75   80
Glu Asp Phe Gly Thr Tyr Tyr Cys Gln Gln Thr Asp Asn Phe Pro Arg
                85   90   95
Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Asn
            100   105

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

<220>
<223> Synthetic

<400> 75
caggatatta gcagctgg 18

<210> 76

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

<220>
<223> Synthetic

<400> 76
Gln Asp Ile Ser Ser Trp
 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
caacagactg acaatttccc tcggacg   27

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

<220>
<223> Synthetic

<400> 80
Gln Gln Thr Asp Asn Phe Pro Arg Thr
 1   5

<210> 81
<211> 369
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 81
cagattcaac tggtgcagtc tggagctgag atgaagaggc ctgggacctc agtgaaggtc 60
tcctgcaagg cctctggtta cacctttacc agctatggta tcaactgggt gcgtcaggcc
120
cctggacaag ggcttgagtg gatgggatgg atcagcgctt acaatggtga cacaaactat
180
gcacagaaac tccagggcag agtcaccatg accacggaca catccacgac cacagcctat
240
atggaggtga ggagcctgag atctgacgac acggccgttt attactgtgc gagatttta
300
actggaacta aggactacta ctacggtatg gacgtctggg gccaagggac cacggtcacc
360
gtctcctca
369

<210> 82
<211> 123
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

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

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

<220>

<223> Synthetic

<400> 83
ggttacacct ttaccagcta tggt 24

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

<220>
<223> Synthetic

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

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

<220>
<223> Synthetic

<400> 85
atcagcgctt acaatggtga caca 24

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

<220>
<223> Synthetic

<400> 86
Ile Ser Ala Tyr Asn Gly Asp Thr
1 5

<210> 87
<211> 48
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 87
gcgagatttt taactggaac taaggactac tactacggta tggacgtc 48

<210> 88
<211> 16
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

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

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

<220>
<223> Synthetic

<400> 89
gacatccaga tgacccagtc tccatcctcc ctgtctgcat ctgtaggaga cagagtcacc 60
atcacttgcc aggcgagtca ggacattagc aacttttaa attggtatca gcagaaacca
120
gggaaagccc ctgatctcct gatcaacgat gcatccattt tggaaacagg ggtcccatca
180
aggttcagtg gaagtggatc tgggacagat tttactctca ccatcaacaa cctgcagcct
240
gaagatattg caacatatta ctgtcaacaa tatgataatc tccctctcac tttcggcgga
300
gggaccaagg tagagatcaa 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 Ala Ser Val Gly
 1   5   10   15
Asp Arg Val Thr Ile Thr Cys Gln Ala Ser Gln Asp Ile Ser Asn Phe
            20   25   30
Leu Asn Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Asp Leu Leu Ile
        35   40   45
Asn Asp Ala Ser Ile Leu Glu Thr Gly Val Pro Ser Arg Phe Ser Gly
    50   55   60
Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Asn Asn Leu Gln Pro
65   70   75   80
Glu Asp Ile Ala Thr Tyr Tyr Cys Gln Gln Tyr Asp Asn Leu Pro Leu
                85   90   95
Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
            100   105

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

<220>
<223> Synthetic

<400> 91
caggacatta gcaacttt 18

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

<220>
<223> Synthetic

<400> 92
Gln Asp Ile Ser Asn Phe
1 5

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

<220>
<223> Synthetic

<400> 93
gatgcatcc 9

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

<220>
<223> Synthetic

<400> 94
Asp Ala Ser
1

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

<220>
<223> Synthetic

<400> 95
caacaatatg ataatctccc tctcact 27

<210> 96
<211> 9
<212> PRT

<213> Artificial Sequence

<220>
<223> Synthetic

<400> 96
Gln Gln Tyr Asp Asn Leu Pro Leu Thr
 1   5

<210> 97
<211> 363
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 97
caggtgcagc tggtggagtc tgggggaggc gtggtccagc ctgggaggtc cctgagactc 60
tcctgtgcag cgtctggatt caccttcagt gactatggca tgcactgggt ccgccaggct
120
ccaggcaagg ggctggagtg ggtggcagtt atatggaatg atggaagtaa taaaaattat
180
gcagactccg tgaagggccg attcagcatc tccagtgaca gttccaagaa cacgctgtat
240
ctacatatga acagcctgag agccgaggac acggctgtgt attactgtgc gagatcgttg
300
tatagtacca gtccctggta tttcgatctc tggggccgtg gcaccctggt cactgtctcc
360
tca
363

<210> 98
<211> 121
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 98
Gln Val Gln 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 Asp Tyr
            20   25   30
Gly Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35   40   45
Ala Val Ile Trp Asn Asp Gly Ser Asn Lys Asn Tyr Ala Asp Ser Val
    50   55   60
Lys Gly Arg Phe Ser Ile Ser Ser Asp Ser Ser Lys Asn Thr Leu Tyr
65   70   75   80
Leu His Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
                85   90   95
Ala Arg Ser Leu Tyr Ser Thr Ser Pro Trp Tyr Phe Asp Leu Trp Gly
            100   105   110
Arg Gly Thr Leu Val Thr Val Ser Ser
        115   120

<210> 99
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 99
ggattcacct tcagtgacta tggc 24

<210> 100
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 100
Gly Phe Thr Phe Ser Asp Tyr Gly
 1 5

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

<220>
<223> Synthetic

<400> 101
atatggaatg atggaagtaa taaa 24

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

<220>
<223> Synthetic

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

<210> 103
<211> 42
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 103
gcgagatcgt tgtatagtac cagtccctgg tatttcgatc tc 42

<210> 104
<211> 14
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 104
Ala Arg Ser Leu Tyr Ser Thr Ser Pro Trp Tyr Phe Asp Tyr
1 5 10

<210> 105
<211> 318
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 105
gacatccaga tgacccagtc tccatcctcc ctgtctgcat ctgtaggaga cagagtcacc 60
atcacttgcc gggcaagtca gagcattagc agctatttaa attggtatca ggagaaatca
120
gggaaagccc ctaagctcct gatctatgct gcatccagtt tgcaaagtgg ggtcccatca
180
aggttcagtg gcagtggatc tgggacagat ttcactctca ccatcagcag tctgcaacct
240
gaagattttg caacttacta ctgtcaacag agttacagta cccccacttt cggcggaggg
300
accaaggtgg agatcaaa
318

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

<220>
<223> Synthetic

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

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

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

<220>
<223> Synthetic

<400> 107
cagagcatta gcagctat 18

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

<220>
<223> Synthetic

<400> 108
Gln Ser Ile Ser Ser Tyr
1 5

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

<220>
<223> Synthetic

<400> 109
gctgcatcc 9

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

<220>
<223> Synthetic

<400> 110
Ala Ala Ser
1

<210> 111
<211> 24
<212> DNA
<213> Artificial Sequence

<220>

<223> Synthetic

<400> 111
caacagagtt acagtacccc cact 24

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

<220>
<223> Synthetic

<400> 112
Gln Gln Ser Tyr Ser Thr Pro Thr
1 5

<210> 113
<211> 360
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 113
caggtacaac tggtgcagtc tggggctgag gcgagggagc ctggggcctc agtgagggtc 60
tcctgcaagg cctctggata caccttcacc gactacttta ttcactgggt gcgacaggcc
120
cctggacaag ggcttgagtg gatgggatgg atcaacccta acagtggtgc cacaaacttt
180
gcacagaagt ttcagggcag ggtcaccatg accagggaca cgtccctcat tacagcctac
240
atggacctga gcaggctgaa atctgacgac gcggccgtgt tttactgtgc gagagatgtg
300
gatggcagtg gctggtacct tgacttttgg ggccagggaa ccctggtcac cgtctcctca
360

<210> 114
<211> 120
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 114
Gln Val Gln Leu Val Gln Ser Gly Ala Glu Ala Arg Glu Pro Gly Ala
1 5 10 15
Ser Val Arg Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asp Tyr
20 25 30
Phe Ile His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45
Gly Trp Ile Asn Pro Asn Ser Gly Ala Thr Asn Phe Ala Gln Lys Phe
50 55 60
Gln Gly Arg Val Thr Met Thr Arg Asp Thr Ser Leu Ile Thr Ala Tyr

```
65                  70                  75                  80
Met Asp Leu Ser Arg Leu Lys Ser Asp Asp Ala Ala Val Phe Tyr Cys
                85                  90                  95
Ala Arg Asp Val Asp Gly Ser Gly Trp Tyr Leu Asp Phe Trp Gly Gln
            100                 105                 110
Gly Thr Leu Val Thr Val Ser Ser
        115                 120
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<210> 115
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 115
ggatacacct tcaccgacta cttt 24

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

<220>
<223> Synthetic

<400> 116
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Gly Tyr Thr Phe Thr Asp Tyr Phe
 1               5
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<210> 117
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 117
atcaacccta acagtggtgc caca 24

<210> 118
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 118
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Ile Asn Pro Asn Ser Gly Ala Thr
 1               5
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<210> 119

<211> 39
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 119
gcgagagatg tggatggcag tggctggtac cttgacttt 39

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

<220>
<223> Synthetic

<400> 120
Ala Arg Asp Val Asp Gly Ser Gly Trp Tyr Leu Asp Phe
1 5 10

<210> 121
<211> 327
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 121
gaaattgtgt tgactcagtc tccagccacc ctgtctttgt ctccagggga aagagccacc 60
ctctcctgca gggccagtca gagtgttagc atctacttag cctggtacca acagaaacct
120
ggccaggctc ccaggctcct catctatgat gcatccaaca gggccactgg catcccagcc
180
aggttcagtg gcagtgggtc tgggacagac ttcactctca ccatcagcag gttagagcct
240
gaagattttg cagtttatta ctgtcagcag cgtagcgact ggcctccatc gatcaccttc
300
ggccaaggga cacgactgga gattaaa
327

<210> 122
<211> 109
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 122
Glu Ile Val Leu Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly
1 5 10 15
Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Ile Tyr
20 25 30
Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile

```
        35                  40                  45
Tyr Asp Ala Ser Asn Arg Ala Thr Gly Ile Pro Ala Arg Phe Ser Gly
    50                  55                  60
Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro
65                  70                  75                  80
Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Arg Ser Asp Trp Pro Pro
                85                  90                  95
Ser Ile Thr Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys
            100                 105
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<210> 123
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 123
cagagtgtta gcatctac 18

<210> 124
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 124
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Gln Ser Val Ser Ile Tyr
 1               5
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<210> 125
<211> 9
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 125
gatgcatcc 9

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

<220>
<223> Synthetic

<400> 126
```
Asp Ala Ser
 1
```

<210> 127
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 127
cagcagcgta gcgactggcc tccatcgatc acc 33

<210> 128
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 128
Gln Gln Arg Ser Asp Trp Pro Pro Ser Ile Thr
 1 5 10

<210> 129
<211> 384
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 129
gaggtgcagt tggtggagtc tgggggaggc ttggcacagc ctggagggtc cctgagactg 60
tcctgtgcag cctctggatt caccttcagt agttatgaga tgaactgggt ccgccaggct
120
ccagggaagg ggctggagtg ggtttcatac attactacta gtggtagcac catatactac
180
gcagactctg tgaagggccg attcaccatg tccagagaca acgccaagaa gtcactgtat
240
ctggaaatga acagcctgag agccgaggac acggctgttt attactgtgc gagagaagag
300
tgtactaatg gtgtatgtta taaagactac cagtactacg gtatggacgt ctggggccaa
360
gggaccacgg tcaccgtctc ctca
384

<210> 130
<211> 128
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 130
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Ala Gln Pro Gly Gly

```
 1               5                  10                  15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr
            20                  25                  30
Glu Met Asn Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35                  40                  45
Ser Tyr Ile Thr Thr Ser Gly Ser Thr Ile Tyr Tyr Ala Asp Ser Val
    50                  55                  60
Lys Gly Arg Phe Thr Met Ser Arg Asp Asn Ala Lys Lys Ser Leu Tyr
65                  70                  75                  80
Leu Glu Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
                85                  90                  95
Ala Arg Glu Glu Cys Thr Asn Gly Val Cys Tyr Lys Asp Tyr Gln Tyr
            100                 105                 110
Tyr Gly Met Asp Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser
        115                 120                 125
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<210> 131
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 131
ggattcacct tcagtagtta tgag 24

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

<220>
<223> Synthetic

<400> 132
```
Gly Phe Thr Phe Ser Ser Tyr Glu
 1               5
```

<210> 133
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 133
attactacta gtggtagcac cata 24

<210> 134
<211> 8
<212> PRT
<213> Artificial Sequence

<220>

<223> Synthetic

<400> 134
Ile Thr Thr Ser Gly Ser Thr Ile
 1   5

<210> 135
<211> 63
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 135
gcgagagaag agtgtactaa tggtgtatgt tataaagact accagtacta cggtatggac 60
gtc   63

<210> 136
<211> 21
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 136
Ala Arg Glu Glu Cys Thr Asn Gly Val Cys Tyr Lys Asp Tyr Gln Tyr
 1   5   10   15
Tyr Gly Met Asp Val
            20

<210> 137
<211> 321
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 137
gacatccaga tgacccagtc tccatcttcc gtgtctgcat ctgtaggtga cagagtcacc 60
atcacttgtc gggcgagtca gaatattaac acctggttag cctggtatca gcagaaacca
120
gggaaagtcc ctaagctcct gatctatgct gcatccagtt tgcaaagtgg ggtcccatca
180
agattcagcg gcagtggatc tgggacagat ttcactctca ccatcagcag cctgcagcct
240
gaagattttg caacttacta ttgtcaacag gctaacagtt tccctctcac tttcggcgga
300
gggaccaagg tggagatcaa a
321

<210> 138
<211> 107
<212> PRT

<213> Artificial Sequence

<220>
<223> Synthetic

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

<210> 139
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 139
cagaatatta acacctgg   18

<210> 140
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 140
Gln Asn Ile Asn Thr Trp
 1   5

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

<220>
<223> Synthetic

<400> 141
gctgcatcc   9

<210> 142

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

<220>
<223> Synthetic

<400> 142
Ala Ala Ser
 1

<210> 143
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 143
caacaggcta acagtttccc tctcact 27

<210> 144
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 144
Gln Gln Ala Asn Ser Phe Pro Leu Thr
 1   5

<210> 145
<211> 324
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 145
gaaattgtat tgacacagtc tccagccacc ctgtctttgt ctccagggga aagagccacc 60
ctctcctgca gggccagtca gagtgttagc aactacttag cctggtacca acagaaacct
120
ggccaggctc ccaggctcct catctatgat gcatccaaca gggccactgg catcccagcc
180
aggttcagtg gcagtgggtc tgggacagac ttcactctca ccatcagcag ccttgaacct
240
gaagattttg ctgtttatta ctgtcagcag cgtgacgact ggcctccgta cacttttggc
300
caggggacca ggctggagat caaa
324

<210> 146

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

<220>
<223> Synthetic

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

<210> 147
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 147
cagagtgtta gcaactac 18

<210> 148
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 148
Gln Ser Val Ser Asn Tyr
 1   5

<210> 149
<211> 9
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 149
gatgcatcc 9

<210> 150
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 150
Asp Ala Ser
 1

<210> 151
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 151
cagcagcgtg acgactggcc tccgtacact 30

<210> 152
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 152
Gln Gln Arg Asp Asp Trp Pro Pro Tyr Thr
 1   5   10

<210> 153
<211> 324
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 153
gaaatagtga tgacgcagtc tccagccacc ctgtctgtgt ctccagggga aagagtcacc 60
ctctcctgca gggccagtca gagtgttagt agtaacttag cctggtacca gcagaaacct
120
ggccaggctc cccggctcct catctatggt tcatccacca gggccactgg tatcccagcc
180
aggttcagtg gcagtgggtc tgggacagaa ttcactctca ccatcagcag cctgcagtct
240
gaggattttg cagtttatta ctgtcagcag tatgatgact ggcctccgct cactttcggc
300
ggagggacca aggtggatat caaa
324

<210> 154
<211> 108
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

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

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

<220>
<223> Synthetic

<400> 155
cagagtgtta gtagtaac   18

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

<220>
<223> Synthetic

<400> 156
Gln Ser Val Ser Ser Asn
 1   5

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

<220>
<223> Synthetic

<400> 157
ggttcatcc 9

<210> 158
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 158
Gly Ser Ser
1

<210> 159
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 159
cagcagtatg atgactggcc tccgctcact 30

<210> 160
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 160
Gln Gln Tyr Asp Asp Trp Pro Pro Leu Thr
1 5 10

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

<220>
<223> Synthetic

<400> 161
caggtgcgac tggtggagtc tggagctgag gtgaagaagc ctggggcctc agtgaaggtc 60
tcctgcaaga cttctggtta cacctttgcc ggctatggta tcacttgggt gcgacaggcc
120
cctggacgag gacttgagtg gatgggatgg gtcagcgctt acaatggtga cacagactat
180
gcacagagcc tccagggcag agtcaccatg accacagaca catccacgag cacagcctac
240
atggagctga ggagcctgag atctgacgac acggccatgt attactgtgc gagagatcgg
300

tatagcagct cgtcgggcta ctttgactac tggggccagg gaaccctggt caccgtctcc
360
tca
363

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

<220>
<223> Synthetic

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

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

<220>
<223> Synthetic

<400> 163
ggttacacct ttgccggcta tggt   24

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

<220>
<223> Synthetic

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

<210> 165
<211> 24

<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 165
gtcagcgctt acaatggtga caca 24

<210> 166
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 166
Val Ser Ala Tyr Asn Gly Asp Thr
1 5

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

<220>
<223> Synthetic

<400> 167
gcgagagatc ggtatagcag ctcgtcgggc tactttgact ac 42

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

<220>
<223> Synthetic

<400> 168
Ala Arg Asp Arg Tyr Ser Ser Ser Ser Gly Tyr Phe Asp Tyr
1 5 10

<210> 169
<211> 324
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 169
gacatcgtga tgacccagtc tccatcttcc gtgtctgcat ctgtaggaga cagagtcacc 60
atcacttgtc gggcgagtca gggtattagc agctggttag cctggcatca gcagaaacca
120

gggaaagccc ctaaggtcct gatctatgcg gcatccagtt tgcatagtgg ggtcccctca
180
aggttcagcg gcagtggatc tgggacagaa ttcactctca ccatcagcag cctgcagcct
240
gaagattttg caacttacta ttgtcaacag gctaacactt tcccgtacac ttttggccag
300
gggaccaagg tggagatcaa acga
324

<210> 170
<211> 108
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 170
Asp Ile Val 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 Ser Ser Trp
            20   25   30
Leu Ala Trp His Gln Gln Lys Pro Gly Lys Ala Pro Lys Val Leu Ile
        35   40   45
Tyr Ala Ala Ser Ser Leu His 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 Gln Gln Ala Asn Thr Phe Pro Tyr
                85   90   95
Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys Arg
            100   105

<210> 171
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 171
cagggtatta gcagctgg   18

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

<220>
<223> Synthetic

<400> 172
Gln Gly Ile Ser Ser Trp
 1   5

<210> 173
<211> 9
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 173
gcggcatcc 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 acactttccc gtacact 27

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

<220>
<223> Synthetic

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

<210> 177
<211> 363
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 177
caggtgcagc tggtacagtc tggagctgag gtgaagaagc ctggggcctc agtgaaggtc 60

tcctgcaaga cttctggtta cacctttgcc ggctatggta tcacttgggt gcgacaggcc
120
cctggacgag gacttgagtg gatgggatgg gtcagcgctt acaatggtga cacagactat
180
gcacagagcc tccagggcag agtcaccatg accacagaca catccacgag cacagcctac
240
atggagctga ggagcctgag atctgacgac acggccatgt attactgtgc gagagatcgg
300
tatagcagct cgtcgggcta ctttgactac tggggccagg gaaccctggt caccgtctcc
360
tca
363

<210> 178
<211> 121
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 178
Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
 1   5   10   15
Ser Val Lys Val Ser Cys Lys Thr Ser Gly Tyr Thr Phe Ala Gly Tyr
            20   25   30
Gly Ile Thr Trp Val Arg Gln Ala Pro Gly Arg Gly Leu Glu Trp Met
        35   40   45
Gly Trp Val Ser Ala Tyr Asn Gly Asp Thr Asp Tyr Ala Gln Ser Leu
    50   55   60
Gln Gly Arg Val Thr Met Thr Thr Asp Thr Ser Thr Ser Thr Ala Tyr
65   70   75   80
Met Glu Leu Arg Ser Leu Arg Ser Asp Asp Thr Ala Met Tyr Tyr Cys
                85   90   95
Ala Arg Asp Arg Tyr Ser Ser Ser Ser Gly Tyr Phe Asp Tyr Trp Gly
            100   105   110
Gln Gly Thr Leu Val Thr Val Ser Ser
        115   120

<210> 179
<211> 321
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 179
gacatccaga tgacccagtc tccatcttcc gtgtctgcat ctgtaggaga cagagtcacc 60
atcacttgtc gggcgagtca gggtattagc agctggttag cctggcatca gcagaaacca
120
gggaaagccc ctaaggtcct gatctatgcg gcatccagtt tgcatagtgg ggtcccctca
180
aggttcagcg gcagtggatc tgggacagaa ttcactctca ccatcagcag cctgcagcct
240
gaagattttg caacttacta ttgtcaacag gctaacactt tcccgtacac ttttggccag
300

gggaccaagc tggagatcaa a
321

<210> 180
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 180
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 Ser Ser Trp
            20   25   30
Leu Ala Trp His Gln Gln Lys Pro Gly Lys Ala Pro Lys Val Leu Ile
        35   40   45
Tyr Ala Ala Ser Ser Leu His 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 Gln Gln Ala Asn Thr Phe Pro Tyr
                85   90   95
Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
            100   105

<210> 181
<211> 324
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 181
gccatccagt tgacccagtc tccatcttcc gtgtctgcat ctgtaggaga cagagtcacc 60
atcacttgtc gggcgagtca gggtattagc agctggttag cctggtatca gcagaaacca
120
gggaaagccc ctaagctcct gatgtttggt gcatccagtt tgcaaagtgg ggtcccatca
180
aggttcagcg gcagtggatc tgggacagat ttcattctca ccatcagcag cctgcagcct
240
gaagattttg caacttacta ttgtcaacag gctaacagtt tcccgtactc ttttggccag
300
gggaccaagg tggaaatcaa acga
324

<210> 182
<211> 108
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 182

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Ala Ile Gln Leu 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 Ser Ser Trp
            20                  25                  30
Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Met
        35                  40                  45
Phe Gly Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
    50                  55                  60
Ser Gly Ser Gly Thr Asp Phe Ile 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 Tyr
                85                  90                  95
Ser Phe Gly Gln Gly Thr Lys Val Glu Ile Lys Arg
            100                 105
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<210> 183
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 183
cagggtatta gcagctgg 18

<210> 184
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 184
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Gln Gly Ile Ser Ser Trp
 1               5
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<210> 185
<211> 9
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 185
ggtgcatcc 9

<210> 186
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 186
Gly Ala Ser
 1

<210> 187
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 187
caacaggcta acagtttccc gtactct 27

<210> 188
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 188
Gln Gln Ala Asn Ser Phe Pro Tyr Ser
 1   5

<210> 189
<211> 321
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 189
gacatccaga tgacccagtc tccatcttcc gtgtctgcat ctgtaggaga cagagtcacc 60
atcacttgtc gggcgagtca gggtattagc agctggttag cctggtatca gcagaaacca
120
gggaaagccc ctaagctcct gatgtttggt gcatccagtt tgcaaagtgg ggtcccatca
180
aggttcagcg gcagtggatc tgggacagat ttcattctca ccatcagcag cctgcagcct
240
gaagattttg caacttacta ttgtcaacag gctaacagtt tcccgtactc ttttggccag
300
gggaccaagc tggagatcaa a
321

<210> 190
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 190
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 Ser Ser Trp
            20   25   30
Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Met
        35   40   45
Phe Gly Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
    50   55   60
Ser Gly Ser Gly Thr Asp Phe Ile 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 Tyr
                85   90   95
Ser Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
            100   105

<210> 191
<211> 363
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 191
gaggtgcagc tgttggagtc tggagctgag gtgaagaagc ctggggccgc agtgaaggtc 60
tcctgcaagg cttctggtta cacctttacc gcctatggta tcagctgggt gcgacaggcc
120
cctggacaag ggctagagtg gatgggatgg atcagcgctt acgatggtga cacaaacaat
180
gcacagaagt tccagggcag agtcaccatg accacagaca catcctcgag cacagcctac
240
atggagctga ggagcctggg atctgacgac acggccgtgt attactgtgc gagagatcgc
300
tatagcagct cctcgggcta ctttgactac tggggccagg gaaccctggt caccgtctcc
360
tca
363

<210> 192
<211> 121
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 192
Glu Val Gln Leu Val Glu Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
 1   5   10   15
Ala Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Ala Tyr
            20   25   30
Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
        35   40   45
Gly Trp Ile Ser Ala Tyr Asp Gly Asp Thr Asn Asn Ala Gln Lys Phe
    50   55   60

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

<210> 193
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 193
ggttacacct ttaccgccta tggt 24

<210> 194
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 194
Gly Tyr Thr Phe Thr Ala Tyr Gly
1 5

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

<220>
<223> Synthetic

<400> 195
atcagcgctt acgatggtga caca 24

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

<220>
<223> Synthetic

<400> 196
Ile Ser Ala Tyr Asp Gly Asp Thr
1 5

<210> 197
<211> 42
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 197
gcgagagatc gctatagcag ctcctcgggc tactttgact ac 42

<210> 198
<211> 14
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 198
Ala Arg Asp Arg Tyr Ser Ser Ser Ser Gly Tyr Phe Asp Tyr
1 5 10

<210> 199
<211> 324
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 199
gacatcgtga tgacccagtc tccatcttcc gtgtctgcat ctgtaggaga cagagtcacc 60
atcacttgtc gggcgagtca ggatattagc agctggttag cctggtctca gcagaagcca
120
gggaaagccc ctaaggccct gatctatgct gcatccagtt tgcaaagtgg ggtcccatca
180
aggttcagcg gcagtggatc tgggacagat ttcactctca ccatcagcag cctgcagcct
240
gaagattttg caacttacta ttgtcaacag gctaacagtt tcccgtacac ttttggccag
300
gggaccaagg tggagatcaa acga
324

<210> 200
<211> 108
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 200
Asp Ile Val 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 Ile Ser Ser Trp
20 25 30

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


<210> 201
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 201
caggatatta gcagctgg                                                  18

<210> 202
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 202
Gln Asp Ile Ser Ser Trp
 1               5


<210> 203
<211> 9
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 203
gctgcatcc                                                            9

<210> 204
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 204
Ala Ala Ser
 1
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<210> 205
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 205
caacaggcta acagtttccc gtacact 27

<210> 206
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 206
Gln Gln Ala Asn Ser Phe Pro Tyr Thr
1 5

<210> 207
<211> 363
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 207
caggtgcagc tggtacagtc tggagctgag gtgaagaagc ctggggccgc agtgaaggtc 60
tcctgcaagg cttctggtta cacctttacc gcctatggta tcagctgggt gcgacaggcc
120
cctggacaag ggctagagtg gatgggatgg atcagcgctt acgatggtga cacaaacaat
180
gcacagaagt tccagggcag agtcaccatg accacagaca catcctcgag cacagcctac
240
atggagctga ggagcctggg atctgacgac acggccgtgt attactgtgc gagagatcgc
300
tatagcagct cctcgggcta ctttgactac tggggccagg gaaccctggt cactgtctcc
360
tca
363

<210> 208
<211> 121
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 208

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Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
 1               5                  10                  15
Ala Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Ala Tyr
            20                  25                  30
Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
        35                  40                  45
Gly Trp Ile Ser Ala Tyr Asp Gly Asp Thr Asn Asn Ala Gln Lys Phe
    50                  55                  60
Gln Gly Arg Val Thr Met Thr Thr Asp Thr Ser Ser Ser Thr Ala Tyr
65                  70                  75                  80
Met Glu Leu Arg Ser Leu Gly Ser Asp Asp Thr Ala Val Tyr Tyr Cys
                85                  90                  95
Ala Arg Asp Arg Tyr Ser Ser Ser Ser Gly Tyr Phe Asp Tyr Trp Gly
            100                 105                 110
Gln Gly Thr Leu Val Thr Val Ser Ser
        115                 120
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<210> 209
<211> 321
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 209
gacatccaga tgacccagtc tccatcttcc gtgtctgcat ctgtaggaga cagagtcacc 60
atcacttgtc gggcgagtca ggatattagc agctggttag cctggtctca gcagaagcca
120
gggaaagccc ctaaggccct gatctatgct gcatccagtt tgcaaagtgg ggtcccatca
180
aggttcagcg gcagtggatc tgggacagat ttcactctca ccatcagcag cctgcagcct
240
gaagattttg caacttacta ttgtcaacag gctaacagtt tcccgtacac ttttggccag
300
gggaccaagc tggagatcaa a
321

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

<220>
<223> Synthetic

<400> 210
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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 Asp Ile Ser Ser Trp
            20                  25                  30
Leu Ala Trp Ser Gln Gln Lys Pro Gly Lys Ala Pro Lys Ala Leu Ile
        35                  40                  45
Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
    50                  55                  60
Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
65                  70                  75                  80
```

```
Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Ala Asn Ser Phe Pro Tyr
                85                  90                  95
Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
            100                 105
```

<210> 211
<211> 360
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 211
caggtgcgac tggtggagtc tgggactgag gtgaagaagc ctggggcctc agtgaaggtc 60
tcctgcaagg tttccggata caccctcatt gacttatcca tacactgggt gcgacaggct
120
cctggagaag gccttgagtg gatgggggggt tttgatcctg aagaaagtga aacaatctat
180
gcacagaaat tccagggcag agtcaccatg accgaggaca catctacaga cacagcctac
240
atggagctaa gcagcctgag atctgaggac acggccgtct attactgtgt gacagagccg
300
atttttggaa tccttatcca tgagtcctgg ggccagggaa ccctggtcac tgtctcctca
360

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

<220>
<223> Synthetic

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

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

<213> Artificial Sequence

<220>
<223> Synthetic

<400> 213
ggatacaccc tcattgactt atcc 24

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

<220>
<223> Synthetic

<400> 214
Gly Tyr Thr Leu Ile Asp Leu Ser
1 5

<210> 215
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 215
tttgatcctg aagaaagtga aaca 24

<210> 216
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 216
Phe Asp Pro Glu Glu Ser Glu Thr
1 5

<210> 217
<211> 39
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 217
gtgacagagc cgatttttgg aatccttatc catgagtcc 39

<210> 218
<211> 13

<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 218
Val Thr Glu Pro Ile Phe Gly Ile Leu Ile His Glu Ser
 1   5   10

<210> 219
<211> 339
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 219
gaaattgtgc tgactcagac tccactctcc tcacctgtca cccttggaca gccggcctcc 60
atctcctgca ggtctagtca gcccccgta cacagtaatg gacataccta cttgagttgg
120
cttcagcaga ggccaggcca gcctccaaga atcctaattt ataagatttc tagacggttc
180
tctggggtcc cagacagatt cagtggcagt ggggcaggga cagatttcac gctgaagatc
240
agcagggtgg aaactgagga tgtcgggatt tattactgca tgcaagcttc acaatttccg
300
tggacgttcg gccaagggac caaagtggat atcaaacga
339

<210> 220
<211> 113
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 220
Glu Ile Val Leu Thr Gln Thr Pro Leu Ser Ser Pro Val Thr Leu Gly
 1   5   10   15
Gln Pro Ala Ser Ile Ser Cys Arg Ser Ser His Ser Pro Val His Ser
            20   25   30
Asn Gly His Thr Tyr Leu Ser Trp Leu Gln Gln Arg Pro Gly Gln Pro
        35   40   45
Pro Arg Ile Leu Ile Tyr Lys Ile Ser Arg Arg Phe Ser Gly Val Pro
    50   55   60
Asp Arg Phe Ser Gly Ser Gly Ala Gly Thr Asp Phe Thr Leu Lys Ile
65   70   75   80
Ser Arg Val Glu Thr Glu Asp Val Gly Ile Tyr Tyr Cys Met Gln Ala
                85   90   95
Ser Gln Phe Pro Trp Thr Phe Gly Gln Gly Thr Lys Val Asp Ile Lys
            100   105   110
Arg

<210> 221
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 221
cacagccccg tacacagtaa tggacatacc tac 33

<210> 222
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 222
His Ser Pro Val His Ser Asn Gly His Thr Tyr
 1 5 10

<210> 223
<211> 9
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 223
aagatttct 9

<210> 224
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 224
Lys Ile Ser
 1

<210> 225
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 225

atgcaagctt cacaatttcc gtggacg 27

<210> 226
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 226
Met Gln Ala Ser Gln Phe Pro Trp Thr
 1   5

<210> 227
<211> 360
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 227
caggtgcagc tggtacagtc tgggactgag gtgaagaagc ctggggcctc agtgaaggtc 60
tcctgcaagg tttccggata caccctcatt gacttatcca tacactgggt gcgacaggct
120
cctggagaag gccttgagtg gatgggggggt tttgatcctg aagaaagtga aacaatctat
180
gcacagaaat tccagggcag agtcaccatg accgaggaca catctacaga cacagcctac
240
atggagctaa gcagcctgag atctgaggac acggccgtct attactgtgt gacagagccg
300
atttttggaa tccttatcca tgagtcctgg ggccagggaa ccctggtcac cgtctcctca
360

<210> 228
<211> 120
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 228
Gln Val Gln Leu Val Gln Ser Gly Thr Glu Val Lys Lys Pro Gly Ala
 1   5   10   15
Ser Val Lys Val Ser Cys Lys Val Ser Gly Tyr Thr Leu Ile Asp Leu
            20   25   30
Ser Ile His Trp Val Arg Gln Ala Pro Gly Glu Gly Leu Glu Trp Met
        35   40   45
Gly Gly Phe Asp Pro Glu Glu Ser Glu Thr Ile Tyr Ala Gln Lys Phe
    50   55   60
Gln Gly Arg Val Thr Met Thr Glu Asp Thr Ser Thr Asp Thr Ala Tyr
65   70   75   80
Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
                85   90   95

```
Val Thr Glu Pro Ile Phe Gly Ile Leu Ile His Glu Ser Trp Gly Gln
            100                 105                 110
Gly Thr Leu Val Thr Val Ser Ser
        115                 120


<210> 229
<211> 336
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 229
gatattgtga tgactcagac tccactctcc tcacctgtca cccttggaca gccggcctcc 60
atctcctgca ggtctagtca gccccgta cacagtaatg gacataccta cttgagttgg
120
cttcagcaga ggccaggcca gcctccaaga atcctaattt ataagatttc tagacggttc
180
tctggggtcc cagacagatt cagtggcagt ggggcaggga cagatttcac gctgaagatc
240
agcagggtgg aaactgagga tgtcgggatt tattactgca tgcaagcttc acaatttccg
300
tggacgttcg gccaagggac caaggtggaa atcaaa
336

<210> 230
<211> 112
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 230
Asp Ile Val Met Thr Gln Thr Pro Leu Ser Ser Pro Val Thr Leu Gly
 1               5                  10                  15
Gln Pro Ala Ser Ile Ser Cys Arg Ser Ser His Ser Pro Val His Ser
            20                  25                  30
Asn Gly His Thr Tyr Leu Ser Trp Leu Gln Gln Arg Pro Gly Gln Pro
        35                  40                  45
Pro Arg Ile Leu Ile Tyr Lys Ile Ser Arg Arg Phe Ser Gly Val Pro
    50                  55                  60
Asp Arg Phe Ser Gly Ser Gly Ala Gly Thr Asp Phe Thr Leu Lys Ile
65                  70                  75                  80
Ser Arg Val Glu Thr Glu Asp Val Gly Ile Tyr Tyr Cys Met Gln Ala
                85                  90                  95
Ser Gln Phe Pro Trp Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
            100                 105                 110


<210> 231
<211> 369
<212> DNA
<213> Artificial Sequence

<220>
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<223> Synthetic

<400> 231
caggtgcarc tggtggagtc tgggggaggc ttggtccagc ctgggggatc cctgagactc 60
tcctgtgcag cctctggatt cacctttagt agttattgga tgagttgggt ccgccaggct
120
ccagggaagg ggctggagtg ggtggccaac ataatgcgag atggaagtga gaaatattat
180
gtggactctg tgaagggccg attcaccatc tccagagaca acgccaagaa ctcactgtat
240
ctgcaaatga acagcctgag aggcgaggac acggctgtct attactgtgc gagagaaagg
300
gggttctaca ctaactacgg gaactggttc gacccctggg gccagggaac cctggtcacc
360
gtctcctca
369

<210> 232
<211> 123
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 232
Gln Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
 1   5   10   15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr
            20   25   30
Trp Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35   40   45
Ala Asn Ile Met Arg 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 Gly Glu Asp Thr Ala Val Tyr Tyr Cys
                85   90   95
Ala Arg Glu Arg Gly Phe Tyr Thr Asn Tyr Gly Asn Trp Phe Asp Pro
            100   105   110
Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
        115   120

<210> 233
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 233
ggattcacct ttagtagtta ttgg 24

<210> 234
<211> 8
<212> PRT

<213> Artificial Sequence

<220>
<223> Synthetic

<400> 234
Gly Phe Thr Phe Ser Ser Tyr Trp
 1   5

<210> 235
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 235
ataatgcgag atggaagtga gaaa   24

<210> 236
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 236
Ile Met Arg Asp Gly Ser Glu Lys
 1   5

<210> 237
<211> 48
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 237
gcgagagaaa gggggttcta cactaactac gggaactggt tcgacccc   48

<210> 238
<211> 16
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 238
Ala Arg Glu Arg Gly Phe Tyr Thr Asn Tyr Gly Asn Trp Phe Asp Pro
 1   5   10   15

<210> 239
<211> 339
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 239
gacatcctga tgacccagtc tccactctcc ctgaccgtca cccctggaga gtcggcctcc 60
atctcctgca ggtctagtca gagcctcctg catagttatg gatacaattc tttggattgg
120
tacctgcaga agccagggca gtctccacag ttcctgatct atttggtttc taatcgggcc
180
tccggggtcc ctgacaggtt cagtggcagt ggatcaggca cagattttac actgaaaatc
240
agcagagtgg aggctgagga tgttggggtt tattactgca tgcaagttct acaaactccg
300
tacacttttg gccaggggac caaggtggag atcaaacga
339

<210> 240
<211> 113
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 240
Asp Ile Leu Met Thr Gln Ser Pro Leu Ser Leu Thr Val Thr Pro Gly
 1   5   10   15
Glu Ser Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Leu His Ser
            20   25   30
Tyr Gly Tyr Asn Ser Leu Asp Trp Tyr Leu Gln Lys Pro Gly Gln Ser
        35   40   45
Pro Gln Phe Leu Ile Tyr Leu Val Ser Asn Arg Ala Ser Gly Val Pro
    50   55   60
Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile
65   70   75   80
Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln Val
                85   90   95
Leu Gln Thr Pro Tyr Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
            100   105   110
Arg

<210> 241
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 241
cagagcctcc tgcatagtta tggatacaat tct   33

<210> 242
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 242
Gln Ser Leu Leu His Ser Tyr Gly Tyr Asn Ser
 1   5   10

<210> 243
<211> 9
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 243
ttggtttct   9

<210> 244
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 244
Leu Val Ser
 1

<210> 245
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 245
atgcaagttc tacaaactcc gtacact   27

<210> 246
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 246

Met Gln Val Leu Gln Thr Pro Tyr Thr
 1   5

<210> 247
<211> 369
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 247
gaggtgcagc tggtggagtc tgggggaggc ttggtccagc ctgggggatc cctgagactc 60
tcctgtgcag cctctggatt cacctttagt agttattgga tgagttgggt ccgccaggct
120
ccagggaagg ggctggagtg ggtggccaac ataatgcgag atggaagtga gaaatattat
180
gtggactctg tgaagggccg attcaccatc tccagagaca acgccaagaa ctcactgtat
240
ctgcaaatga acagcctgag aggcgaggac acggctgtct attactgtgc gagagaaagg
300
gggttctaca ctaactacgg gaactggttc gacccctggg gccagggaac cctggtcacc
360
gtctcctca
369

<210> 248
<211> 123
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 248
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 Tyr
            20   25   30
Trp Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35   40   45
Ala Asn Ile Met Arg 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 Gly Glu Asp Thr Ala Val Tyr Tyr Cys
                85   90   95
Ala Arg Glu Arg Gly Phe Tyr Thr Asn Tyr Gly Asn Trp Phe Asp Pro
            100   105   110
Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
        115   120

<210> 249
<211> 336
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 249
gacatcgtga tgacccagtc tccactctcc ctgaccgtca cccctggaga gtcggcctcc 60
atctcctgca ggtctagtca gagcctcctg catagttatg gatacaattc tttggattgg
120
tacctgcaga agccagggca gtctccacag ttcctgatct atttggtttc taatcgggcc
180
tccggggtcc ctgacaggtt cagtggcagt ggatcaggca cagattttac actgaaaatc
240
agcagagtgg aggctgagga tgttggggtt tattactgca tgcaagttct acaaactccg
300
tacacttttg gccaggggac caagctggag atcaaa
336

<210> 250
<211> 112
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 250
Asp Ile Val Met Thr Gln Ser Pro Leu Ser Leu Thr Val Thr Pro Gly
 1   5   10   15
Glu Ser Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Leu His Ser
            20   25   30
Tyr Gly Tyr Asn Ser Leu Asp Trp Tyr Leu Gln Lys Pro Gly Gln Ser
        35   40   45
Pro Gln Phe Leu Ile Tyr Leu Val Ser Asn Arg Ala Ser Gly Val Pro
    50   55   60
Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile
65   70   75   80
Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln Val
                85   90   95
Leu Gln Thr Pro Tyr Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
            100   105   110

<210> 251
<211> 360
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 251
caggtgcagc tggtggagtc tgggggaggc gtggtccagc ctgggaggtc cctgagactc 60
tcctgtgcag cgtctggatt caccttcagt aattatggca tgcactgggt ccgccaggct
120
ccaggcaagg ggctggagtg ggtggcagtt atttggtatg atgaaagtag taaatactat
180
acagactccg tgaagggccg attcaccatc tccagagaca attcccagaa cacgctgtat
240

ctgcaaatga ccagcctgag agccgaggac acggctgtgt attactgtgc gagagatcgc
300
tggacctact cccactactt tgaatattgg ggccagggaa ccctggtcac tgtctcctca
360

<210> 252
<211> 120
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 252
Gln Val Gln 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
Gly Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35   40   45
Ala Val Ile Trp Tyr Asp Glu Ser Ser Lys Tyr Tyr Thr Asp Ser Val
    50   55   60
Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Gln Asn Thr Leu Tyr
65   70   75   80
Leu Gln Met Thr Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
                85   90   95
Ala Arg Asp Arg Trp Thr Tyr Ser His Tyr Phe Glu Tyr Trp Gly Gln
            100   105   110
Gly Thr Leu Val Thr Val Ser Ser
        115   120

<210> 253
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 253
ggattcacct tcagtaatta tggc   24

<210> 254
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 254
Gly Phe Thr Phe Ser Asn Tyr Gly
 1   5

<210> 255

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

<220>
<223> Synthetic

<400> 255
atttggtatg atgaaagtag taaa 24

<210> 256
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 256
Ile Trp Tyr Asp Glu Ser Ser Lys
1 5

<210> 257
<211> 39
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 257
gcgagagatc gctggaccta ctcccactac tttgaatat 39

<210> 258
<211> 13
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 258
Ala Arg Asp Arg Trp Thr Tyr Ser His Tyr Phe Glu Tyr
1 5 10

<210> 259
<211> 324
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 259
gacatccagt tgacccagtc tccatcttcc gtgtctgcat ctgtaggaga cagagtcacc 60

atcacttgtc gggcgagtca gggtattagc agctgggtag cctggtatca gcagaaacca
120
gggaaagccc ctaaactcct gatctatgct gcatccagtt tgcaaagtgg ggtcccatct
180
aggttcagcg gcagtggatc tgggacagat ttcactctca ccatcagcag cctgcagcct
240
gaagattttg caacttacta ttgtcaacag gctaacagtt tccctcggac gttcggccaa
300
gggaccaaag tggagatcaa acga
324

<210> 260
<211> 108
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 260
Asp Ile Gln Leu 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 Ser Ser Trp
            20   25   30
Val 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 Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
65   70   75   80
Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Ala Asn Ser Phe Pro Arg
                85   90   95
Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys Arg
            100   105

<210> 261
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 261
cagggtatta gcagctgg   18

<210> 262
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 262
Gln Gly Ile Ser Ser Trp
 1   5

<210> 263
<211> 9
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 263
gctgcatcc 9

<210> 264
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 264
Ala Ala Ser
1

<210> 265
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 265
caacaggcta acagtttccc tcggacg 27

<210> 266
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 266
Gln Gln Ala Asn Ser Phe Pro Arg Thr
1 5

<210> 267
<211> 360
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 267
caggtgcagc tggtggagtc tgggggaggc gtggtccagc ctgggaggtc cctgagactc 60
tcctgtgcag cgtctggatt caccttcagt aattatggca tgcactgggt ccgccaggct
120
ccaggcaagg ggctggagtg ggtggcagtt atttggtatg atgaaagtag taaatactat
180
acagactccg tgaagggccg attcaccatc tccagagaca attcccagaa cacgctgtat
240
ctgcaaatga ccagcctgag agccgaggac acggctgtgt attactgtgc gagagatcgc
300
tggacctact cccactactt tgaatattgg ggccagggaa ccctggtcac cgtctcctca
360

<210> 268
<211> 120
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 268
Gln Val Gln 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
Gly Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35   40   45
Ala Val Ile Trp Tyr Asp Glu Ser Ser Lys Tyr Tyr Thr Asp Ser Val
    50   55   60
Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Gln Asn Thr Leu Tyr
65   70   75   80
Leu Gln Met Thr Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
                85   90   95
Ala Arg Asp Arg Trp Thr Tyr Ser His Tyr Phe Glu Tyr Trp Gly Gln
            100   105   110
Gly Thr Leu Val Thr Val Ser Ser
        115   120

<210> 269
<211> 321
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 269
gacatccaga tgacccagtc tccatcttcc gtgtctgcat ctgtaggaga cagagtcacc 60
atcacttgtc gggcgagtca gggtattagc agctgggtag cctggtatca gcagaaacca
120
gggaaagccc ctaaactcct gatctatgct gcatccagtt tgcaaagtgg ggtcccatct
180
aggttcagcg gcagtggatc tgggacagat ttcactctca ccatcagcag cctgcagcct
240

gaagattttg caacttacta ttgtcaacag gctaacagtt tccctcggac gttcggccaa
300
gggaccaagg tggagatcaa a
321

<210> 270
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 270
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 Ser Ser Trp
            20   25   30
Val 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 Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
65   70   75   80
Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Ala Asn Ser Phe Pro Arg
                85   90   95
Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
            100   105

<210> 271
<211> 360
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 271
caggtgcagc tggtggagtc tgggggaggc gtggtccagc ctgggaggtc cctgagactc 60
tcctgtgcag cgtctggatt caccttcagt aactatggca tgcattgggt ccgccaggct
120
ccaggcaagg gtctggagtg ggtggcagtt atttggtatg atgaaagtgg taaacactat
180
gcagactccg tgaagggccg attcaccatc tccagagaca attcccagaa cacgctgtat
240
ctgcaaatga ccagcctgag agccgaggac acggctgtgt attactgtgc gagagatcgc
300
tggacctact cccactactt tgaatattgg ggccagggaa ccctggtcac cgtctcctca
360

<210> 272
<211> 120
<212> PRT
<213> Artificial Sequence

<220>

<223> Synthetic

<400> 272
Gln Val Gln 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
Gly Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35   40   45
Ala Val Ile Trp Tyr Asp Glu Ser Gly Lys His Tyr Ala Asp Ser Val
    50   55   60
Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Gln Asn Thr Leu Tyr
65   70   75   80
Leu Gln Met Thr Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
                85   90   95
Ala Arg Asp Arg Trp Thr Tyr Ser His Tyr Phe Glu Tyr Trp Gly Gln
            100   105   110
Gly Thr Leu Val Thr Val Ser Ser
        115   120

<210> 273
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 273
ggattcacct tcagtaacta tggc   24

<210> 274
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 274
Gly Phe Thr Phe Ser Asn Tyr Gly
 1   5

<210> 275
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 275
atttggtatg atgaaagtgg taaa   24

<210> 276
<211> 8

<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 276
Ile Trp Tyr Asp Glu Ser Gly Lys
 1   5

<210> 277
<211> 39
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 277
gcgagagatc gctggaccta ctcccactac tttgaatat   39

<210> 278
<211> 13
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 278
Ala Arg Asp Arg Trp Thr Tyr Ser His Tyr Phe Glu Tyr
 1   5   10

<210> 279
<211> 324
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 279
gacatccaga tgacccagtc tccatcttcc gtgtctgcat ctgtaggaga cagagtcacc 60
atcacttgtc gggcgagtca ggatattagc agctgggtag cctggtatca acagaaacca
120
gggaaagccc ctaaactcct gatctatgct gcatccagtt tgcaaagtgg ggtcccatct
180
aggttcagcg gcagtggatc tgggacagat ttcactctca ccatcagcag cctgcagcct
240
gaagattttg caacttacta ttgtcaacag gctaacagtt tccctcggac gttcggccaa
300
gggaccaagg tggagatcaa acga
324

<210> 280
<211> 108

<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 280
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 Ile Ser Ser Trp
            20   25   30
Val 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 Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
65   70   75   80
Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Ala Asn Ser Phe Pro Arg
                85   90   95
Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys Arg
            100   105

<210> 281
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 281
caggatatta gcagctgg   18

<210> 282
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 282
Gln Asp Ile Ser Ser Trp
 1   5

<210> 283
<211> 9
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 283
gctgcatcc   9

<210> 284
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 284
Ala Ala Ser
 1

<210> 285
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 285
caacaggcta acagtttccc tcggacg 27

<210> 286
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 286
Gln Gln Ala Asn Ser Phe Pro Arg Thr
 1   5

<210> 287
<211> 360
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 287
caggtgcagc tggtggagtc tgggggaggc gtggtccagc ctgggaggtc cctgagactc 60
tcctgtgcag cgtctggatt caccttcagt aactatggca tgcattgggt ccgccaggct
120
ccaggcaagg gtctggagtg ggtggcagtt atttggtatg atgaaagtgg taaacactat
180
gcagactccg tgaagggccg attcaccatc tccagagaca attcccagaa cacgctgtat
240
ctgcaaatga ccagcctgag agccgaggac acggctgtgt attactgtgc gagagatcgc
300
tggacctact cccactactt tgaatattgg ggccagggaa ccctggtcac tgtctcctca
360

<210> 288
<211> 120
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 288
Gln Val Gln 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
Gly Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35   40   45
Ala Val Ile Trp Tyr Asp Glu Ser Gly Lys His Tyr Ala Asp Ser Val
    50   55   60
Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Gln Asn Thr Leu Tyr
65   70   75   80
Leu Gln Met Thr Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
                85   90   95
Ala Arg Asp Arg Trp Thr Tyr Ser His Tyr Phe Glu Tyr Trp Gly Gln
            100   105   110
Gly Thr Leu Val Thr Val Ser Ser
        115   120

<210> 289
<211> 321
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 289
gacatccaga tgacccagtc tccatcttcc gtgtctgcat ctgtaggaga cagagtcacc 60
atcacttgtc gggcgagtca ggatattagc agctgggtag cctggtatca acagaaacca
120
gggaaagccc ctaaactcct gatctatgct gcatccagtt tgcaaagtgg ggtcccatct
180
aggttcagcg gcagtggatc tgggacagat ttcactctca ccatcagcag cctgcagcct
240
gaagattttg caacttacta ttgtcaacag gctaacagtt tccctcggac gttcggccaa
300
gggaccaagg tggagatcaa a
321

<210> 290
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 290

```
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 Ile Ser Ser Trp
            20                  25                  30
Val 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 Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
65                  70                  75                  80
Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Ala Asn Ser Phe Pro Arg
                85                  90                  95
Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
            100                 105
```

<210> 291
<211> 360
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 291
gaggtgcagt tgttggagtc tgggggaggc gtggtccagc ctgggaggtc cctgagactc 60
tcctgtgcag cgtctggatt caccttcagt aattatggca tgcactgggt ccgccaggct
120
ccaggcaagg ggctggagtg ggtggcagtt atttggtatg atgaaagtag taaatactat
180
acagactccg tgaagggccg attcaccatc tccagagaca attcccagaa cacgctgtat
240
ctgcaaatga ccagcctgag agccgaggac acggctgtgt attactgtgc gagagatcgc
300
tggacctact cccactactt tgaatattgg ggccagggaa ccctggtcac cgtctcctca
360

<210> 292
<211> 120
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 292
```
Glu Val Gln Leu Leu 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
Gly Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35                  40                  45
Ala Val Ile Trp Tyr Asp Glu Ser Ser Lys Tyr Tyr Thr Asp Ser Val
    50                  55                  60
Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Gln Asn Thr Leu Tyr
65                  70                  75                  80
Leu Gln Met Thr Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
```

```
                85                  90                  95
Ala Arg Asp Arg Trp Thr Tyr Ser His Tyr Phe Glu Tyr Trp Gly Gln
            100                 105                 110
Gly Thr Leu Val Thr Val Ser Ser
        115                 120


<210> 293
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 293
ggattcacct tcagtaatta tggc                                          24

<210> 294
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 294
Gly Phe Thr Phe Ser Asn Tyr Gly
 1               5


<210> 295
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 295
atttggtatg atgaaagtag taaa                                          24

<210> 296
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 296
Ile Trp Tyr Asp Glu Ser Ser Lys
 1               5


<210> 297
<211> 39
<212> DNA
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<213> Artificial Sequence

<220>
<223> Synthetic

<400> 297
gcgagagatc gctggaccta ctcccactac tttgaatat 39

<210> 298
<211> 13
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 298
Ala Arg Asp Arg Trp Thr Tyr Ser His Tyr Phe Glu Tyr
 1 5 10

<210> 299
<211> 324
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 299
gacatccaga tgacccagtc tccatcttcc gtgtctgcat ctgtaggaga cagagtcacc 60
atcacttgtc gggcgagtca gggtattagc agctgggtag cctggtatca gcagaaacca
120
gggaaagccc ctaaactcct gatctatgct gcatccagtt tgcaaagtgg ggtcccatct
180
aggttcagcg gcagtggatc tgggacagat ttcactctca ccatcagcag cctgcagcct
240
gaagattttg caacttacta ttgtcaacag gctaacagtt tccctcggac gttcggccaa
300
gggaccaagg tggagatcaa acga
324

<210> 300
<211> 108
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 300
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 Ser Ser Trp
            20 25 30
Val 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 Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
65                  70                  75                  80
Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Ala Asn Ser Phe Pro Arg
                85                  90                  95
Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys Arg
            100                 105
```

<210> 301
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 301
cagggtatta gcagctgg 18

<210> 302
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 302
Gln Gly Ile Ser Ser Trp
 1   5

<210> 303
<211> 9
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 303
gctgcatcc 9

<210> 304
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 304
Ala Ala Ser
 1

<210> 305

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

<220>
<223> Synthetic

<400> 305
caacaggcta acagtttccc tcggacg 27

<210> 306
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 306
Gln Gln Ala Asn Ser Phe Pro Arg Thr
 1 5

<210> 307
<211> 360
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 307
caggtgcagc tggtggagtc tgggggaggc gtggtccagc ctgggaggtc cctgagactc 60
tcctgtgcag cgtctggatt caccttcagt aattatggca tgcactgggt ccgccaggct
120
ccaggcaagg ggctggagtg ggtggcagtt atttggtatg atgaaagtag taaatactat
180
acagactccg tgaagggccg attcaccatc tccagagaca attcccagaa cacgctgtat
240
ctgcaaatga ccagcctgag agccgaggac acggctgtgt attactgtgc gagagatcgc
300
tggacctact cccactactt tgaatattgg ggccagggaa ccctggtcac tgtctcctca
360

<210> 308
<211> 120
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 308
Gln Val Gln 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

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

<210> 309
<211> 321
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 309
gacatccaga tgacccagtc tccatcttcc gtgtctgcat ctgtaggaga cagagtcacc 60
atcacttgtc gggcgagtca gggtattagc agctgggtag cctggtatca gcagaaacca
120
gggaaagccc ctaaactcct gatctatgct gcatccagtt tgcaaagtgg ggtcccatct
180
aggttcagcg gcagtggatc tgggacagat ttcactctca ccatcagcag cctgcagcct
240
gaagattttg caacttacta ttgtcaacag gctaacagtt tccctcggac gttcggccaa
300
gggaccaagg tggagatcaa a
321

<210> 310
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 310
```
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 Ser Ser Trp
            20                  25                  30
Val 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 Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
65                  70                  75                  80
Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Ala Asn Ser Phe Pro Arg
                85                  90                  95
Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
            100                 105
```

<210> 311
<211> 360
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 311
caggtgcagc tggtggagtc tgggggaggc gtggtccagc ctgggaggtc cctgagactc 60
tcctgtgcag cgtctggatt caccttcagt aactatggca tgcactgggt ccgccaggct
120
ccaggcaagg ggctggagtg ggtggcagtt atttggtatg atgaaagtag taaacactat
180
gcagactccg tgaagggccg attcaccatc tccagagaca attcccagaa cacgctgtat
240
ctgcaaatga ccagcctgag agccgaggac acggctgtgt attactgtgc gagagatcgc
300
tggacctact cccactactt tgaatattgg ggccagggaa ccctggtcac cgtctcctca
360

<210> 312
<211> 120
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 312
Gln Val Gln 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
Gly Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35   40   45
Ala Val Ile Trp Tyr Asp Glu Ser Ser Lys His Tyr Ala Asp Ser Val
    50   55   60
Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Gln Asn Thr Leu Tyr
65   70   75   80
Leu Gln Met Thr Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
                85   90   95
Ala Arg Asp Arg Trp Thr Tyr Ser His Tyr Phe Glu Tyr Trp Gly Gln
            100   105   110
Gly Thr Leu Val Thr Val Ser Ser
        115   120

<210> 313
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 313
ggattcacct tcagtaacta tggc 24

<210> 314
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 314
Gly Phe Thr Phe Ser Asn Tyr Gly
1 5

<210> 315
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 315
atttggtatg atgaaagtag taaa 24

<210> 316
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 316
Ile Trp Tyr Asp Glu Ser Ser Lys
1 5

<210> 317
<211> 39
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 317
gcgagagatc gctggaccta ctcccactac tttgaatat 39

<210> 318
<211> 13
<212> PRT
<213> Artificial Sequence

<220>

<223> Synthetic

<400> 318
Ala Arg Asp Arg Trp Thr Tyr Ser His Tyr Phe Glu Tyr
 1   5   10

<210> 319
<211> 324
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 319
gacatccaga tgacccagtc tccatcttcc gtgtctgcat ctgtaggaga cagagtcacc 60
atcacttgtc gggcgagtca ggatattagc agctgggtag cctggtatca gcagaaacca
120
gggaaagccc ctaaactcct gatctatgct gcatccagtt tgcaaagtgg ggtcccatct
180
aggttcagcg gcagtggatc tgggacagat ttcactctca ccatcagcag cctgcagcct
240
gaagattttg caacttacta ttgtcaacag gctaacagtt tccctcggac gttcggccaa
300
gggaccaagg tggagatcaa acga
324

<210> 320
<211> 108
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 320
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 Ile Ser Ser Trp
            20   25   30
Val 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 Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
65   70   75   80
Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Ala Asn Ser Phe Pro Arg
                85   90   95
Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys Arg
            100   105

<210> 321
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 321
caggatatta gcagctgg 18

<210> 322
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 322
Gln Asp Ile Ser Ser Trp
 1   5

<210> 323
<211> 9
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 323
gctgcatcc 9

<210> 324
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 324
Ala Ala Ser
 1

<210> 325
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 325
caacaggcta acagtttccc tcggacg 27

<210> 326
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 326
Gln Gln Ala Asn Ser Phe Pro Arg Thr
 1   5

<210> 327
<211> 360
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 327
caggtgcagc tggtggagtc tgggggaggc gtggtccagc ctgggaggtc cctgagactc 60
tcctgtgcag cgtctggatt caccttcagt aactatggca tgcactgggt ccgccaggct
120
ccaggcaagg ggctggagtg ggtggcagtt atttggtatg atgaaagtag taaacactat
180
gcagactccg tgaagggccg attcaccatc tccagagaca attcccagaa cacgctgtat
240
ctgcaaatga ccagcctgag agccgaggac acggctgtgt attactgtgc gagagatcgc
300
tggacctact cccactactt tgaatattgg ggccagggaa ccctggtcac cgtctcctca
360

<210> 328
<211> 120
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 328
Gln Val Gln 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
Gly Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35   40   45
Ala Val Ile Trp Tyr Asp Glu Ser Ser Lys His Tyr Ala Asp Ser Val
    50   55   60
Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Gln Asn Thr Leu Tyr
65   70   75   80
Leu Gln Met Thr Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
                85   90   95
Ala Arg Asp Arg Trp Thr Tyr Ser His Tyr Phe Glu Tyr Trp Gly Gln
            100   105   110
Gly Thr Leu Val Thr Val Ser Ser
        115   120

<210> 329
<211> 321
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 329
gacatccaga tgacccagtc tccatcttcc gtgtctgcat ctgtaggaga cagagtcacc 60
atcacttgtc gggcgagtca ggatattagc agctgggtag cctggtatca gcagaaacca
120
gggaaagccc ctaaactcct gatctatgct gcatccagtt tgcaaagtgg ggtcccatct
180
aggttcagcg gcagtggatc tgggacagat ttcactctca ccatcagcag cctgcagcct
240
gaagattttg caacttacta ttgtcaacag gctaacagtt tccctcggac gttcggccaa
300
gggaccaagg tggagatcaa a
321

<210> 330
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 330
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 Ile Ser Ser Trp
            20   25   30
Val 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 Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
65   70   75   80
Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Ala Asn Ser Phe Pro Arg
                85   90   95
Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
            100   105

<210> 331
<211> 360
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 331
gaggtgcagc tggtggagtc tgggggaggc gtggtccaac ctgggaggtc cctgagactc 60
tcctgtgcag cgtctggatt caccttcagt aactatggca tgcactgggt ccgccaggct
120

ccaggcaagg gactggagtg ggtggcagtt atatggtatg atgatagtaa taaaaattat
180
gcagactccg tgaagggccg attcaccatc tccagagaca attccaagaa cacgctgtat
240
ctgcaaatga acagcctgag agtcgaggac acggctgtgt attactgtgc gagagatcgc
300
tggacctact cccacttctt tgagtactgg ggccagggaa ccctggtcac cgtctcctca
360

<210> 332
<211> 120
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 332
Glu Val Gln 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
Gly Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35   40   45
Ala Val Ile Trp Tyr Asp Asp Ser Asn Lys Asn 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 Val Glu Asp Thr Ala Val Tyr Tyr Cys
                85   90   95
Ala Arg Asp Arg Trp Thr Tyr Ser His Phe Phe Glu Tyr Trp Gly Gln
            100   105   110
Gly Thr Leu Val Thr Val Ser Ser
        115   120

<210> 333
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 333
ggattcacct tcagtaacta tggc 24

<210> 334
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 334
Gly Phe Thr Phe Ser Asn Tyr Gly

1 5

<210> 335
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 335
atatggtatg atgatagtaa taaa 24

<210> 336
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 336
Ile Trp Tyr Asp Asp Ser Asn Lys
1 5

<210> 337
<211> 39
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 337
gcgagagatc gctggaccta ctcccacttc tttgagtac 39

<210> 338
<211> 13
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 338
Ala Arg Asp Arg Trp Thr Tyr Ser His Phe Phe Glu Tyr
1 5 10

<210> 339
<211> 324
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 339
gacatccaga tgacccagtc tccatcttcc gtgtctgcat ctgtaggaga cagagtcacc 60
atcacttgtc gggcgagtca gggtattagc agctggttag cctggtatca gcagaaacca
120
gggaaagccc ctaacctcct gatctatgct gcttccagtt tgcaaagtgg ggtcccatca
180
aggttcggcg gcagtggatc tgggacagat ttctctctca ccatcagcgg cctacagcct
240
gaagattttg caacttacta ttgtcagcag gctaacagtt tccctcggac gttcggccaa
300
gggaccaagg tggagatcaa acga
324

<210> 340
<211> 108
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 340
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 Ser Ser Trp
            20   25   30
Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Asn Leu Leu Ile
        35   40   45
Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Gly Gly
    50   55   60
Ser Gly Ser Gly Thr Asp Phe Ser Leu Thr Ile Ser Gly Leu Gln Pro
65   70   75   80
Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Ala Asn Ser Phe Pro Arg
                85   90   95
Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys Arg
            100   105

<210> 341
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 341
cagggtatta gcagctgg 18

<210> 342
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 342
Gln Gly Ile Ser Ser Trp
 1   5

<210> 343
<211> 9
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 343
gctgcttcc   9

<210> 344
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 344
Ala Ala Ser
 1

<210> 345
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 345
cagcaggcta acagtttccc tcggacg   27

<210> 346
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 346
Gln Gln Ala Asn Ser Phe Pro Arg Thr
 1   5

<210> 347
<211> 360
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 347
caggtgcagc tggtggagtc tgggggaggc gtggtccaac ctgggaggtc cctgagactc 60
tcctgtgcag cgtctggatt caccttcagt aactatggca tgcactgggt ccgccaggct
120
ccaggcaagg gactggagtg ggtggcagtt atatggtatg atgatagtaa taaaaattat
180
gcagactccg tgaagggccg attcaccatc tccagagaca attccaagaa cacgctgtat
240
ctgcaaatga acagcctgag agtcgaggac acggctgtgt attactgtgc gagagatcgc
300
tggacctact cccacttctt tgagtactgg ggccagggaa ccctggtcac cgtctcctca
360

<210> 348
<211> 120
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 348
Gln Val Gln 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
Gly Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35   40   45
Ala Val Ile Trp Tyr Asp Asp Ser Asn Lys Asn 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 Val Glu Asp Thr Ala Val Tyr Tyr Cys
                85   90   95
Ala Arg Asp Arg Trp Thr Tyr Ser His Phe Phe Glu Tyr Trp Gly Gln
            100   105   110
Gly Thr Leu Val Thr Val Ser Ser
        115   120

<210> 349
<211> 321
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 349
gacatccaga tgacccagtc tccatcttcc gtgtctgcat ctgtaggaga cagagtcacc 60
atcacttgtc gggcgagtca gggtattagc agctggttag cctggtatca gcagaaacca
120
gggaaagccc ctaacctcct gatctatgct gcttccagtt tgcaaagtgg ggtcccatca
180

aggttcggcg gcagtggatc tgggacagat ttctctctca ccatcagcgg cctacagcct
240
gaagattttg caacttacta ttgtcagcag gctaacagtt tccctcggac gttcggccaa
300
gggaccaagg tggagatcaa a
321

<210> 350
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 350
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 Ser Ser Trp
            20   25   30
Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Asn Leu Leu Ile
        35   40   45
Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Gly Gly
    50   55   60
Ser Gly Ser Gly Thr Asp Phe Ser Leu Thr Ile Ser Gly Leu Gln Pro
65   70   75   80
Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Ala Asn Ser Phe Pro Arg
                85   90   95
Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
            100   105

<210> 351
<211> 354
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 351
gaggtgcagc tggtggagtc tgggggaggc ttggtacacc ctgggggtc cctgagactc 60
tcctgtgcag cctctggatt cacctttggc ggctatgcca tgagctgggt ccgccaggct
120
ccagggaagg gcctggagtg ggtctcactt attagtggta gtggtggtag cacatactac
180
gcagactccg tgaagggccg gttcaccatt tttagagaca attccaagaa cacgctgtat
240
ctgcaaatga tcagcctgag agccgaggat tcggccgtat attactgtgc gaaatacagt
300
aactatgact acttcgaccc ctggggccag ggaaccctgg tcactgtctc ctca
354

<210> 352
<211> 118
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 352
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val His Pro Gly Gly
 1   5   10   15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Gly Gly Tyr
            20   25   30
Ala Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35   40   45
Ser Leu Ile Ser Gly Ser Gly Gly Ser Thr Tyr Tyr Ala Asp Ser Val
    50   55   60
Lys Gly Arg Phe Thr Ile Phe Arg Asp Asn Ser Lys Asn Thr Leu Tyr
65   70   75   80
Leu Gln Met Ile Ser Leu Arg Ala Glu Asp Ser Ala Val Tyr Tyr Cys
                85   90   95
Ala Lys Tyr Ser Asn Tyr Asp Tyr Phe Asp Pro Trp Gly Gln Gly Thr
            100   105   110
Leu Val Thr Val Ser Ser
        115

<210> 353
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 353
ggattcacct ttggcggcta tgcc   24

<210> 354
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 354
Gly Phe Thr Phe Gly Gly Tyr Ala
 1   5

<210> 355
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 355
attagtggta gtggtggtag caca   24

<210> 356

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

<220>
<223> Synthetic

<400> 356
Ile Ser Gly Ser Gly Gly Ser Thr
 1   5

<210> 357
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 357
gcgaaataca gtaactatga ctacttcgac ccc   33

<210> 358
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 358
Ala Lys Tyr Ser Asn Tyr Asp Tyr Phe Asp Pro
 1   5   10

<210> 359
<211> 327
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 359
gaaattgtgt tgacacagtc tccaggcacc ctgtctttgt ctccagggga aagagtcacc 60
ctctcctgca gggccagtca gagtgttagc agcagctact tagcctggta ccagcagaaa
120
cctggccagg ctcccaggct cctcatctat ggtgcatcca gcagggccac tggcatccca
180
gacaggttca gtggcagtgg gtctgggaca gacttcactc tcaccatcag cagactggag
240
cctgaagatt ttgcagtgta ttactgtcag cagtatggta gctcacctcg gacgttcggc
300
caagggacca aggtggagat caaacga
327

<210> 360

<211> 109
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 360
Glu Ile Val Leu Thr Gln Ser Pro Gly Thr Leu Ser Leu Ser Pro Gly
 1   5   10   15
Glu Arg Val Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Ser Ser
            20   25   30
Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu
        35   40   45
Ile Tyr Gly Ala Ser Ser Arg Ala Thr Gly Ile Pro Asp Arg Phe Ser
    50   55   60
Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu
65   70   75   80
Pro Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Gly Ser Ser Pro
                85   90   95
Arg Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys Arg
            100   105

<210> 361
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 361
cagagtgtta gcagcagcta c   21

<210> 362
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 362
Gln Ser Val Ser Ser Ser Tyr
 1   5

<210> 363
<211> 9
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 363
ggtgcatcc   9

<210> 364
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 364
Gly Ala Ser
 1

<210> 365
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 365
cagcagtatg gtagctcacc tcggacg 27

<210> 366
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 366
Gln Gln Tyr Gly Ser Ser Pro Arg Thr
 1   5

<210> 367
<211> 354
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 367
gaggtgcagc tgttggagtc tgggggaggc ttggtacacc ctgggggggtc cctgagactc 60
tcctgtgcag cctctggatt cacctttggc ggctatgcca tgagctgggt ccgccaggct
120
ccagggaagg gcctggagtg ggtctcactt attagtggta gtggtggtag cacatactac
180
gcagactccg tgaagggccg gttcaccatt tttagagaca attccaagaa cacgctgtat
240
ctgcaaatga tcagcctgag agccgaggat tcggccgtat attactgtgc gaaatacagt
300
aactatgact acttcgaccc ctggggccag ggaaccctgg tcactgtctc ctca
354

<210> 368
<211> 118
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 368
Glu Val Gln Leu Leu Glu Ser Gly Gly Gly Leu Val His Pro Gly Gly
 1   5   10   15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Gly Gly Tyr
            20   25   30
Ala Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35   40   45
Ser Leu Ile Ser Gly Ser Gly Gly Ser Thr Tyr Tyr Ala Asp Ser Val
    50   55   60
Lys Gly Arg Phe Thr Ile Phe Arg Asp Asn Ser Lys Asn Thr Leu Tyr
65   70   75   80
Leu Gln Met Ile Ser Leu Arg Ala Glu Asp Ser Ala Val Tyr Tyr Cys
                85   90   95
Ala Lys Tyr Ser Asn Tyr Asp Tyr Phe Asp Pro Trp Gly Gln Gly Thr
            100   105   110
Leu Val Thr Val Ser Ser
        115

<210> 369
<211> 324
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 369
gaaattgtgt tgacgcagtc tccaggcacc ctgtctttgt ctccagggga aagagtcacc 60
ctctcctgca gggccagtca gagtgttagc agcagctact tagcctggta ccagcagaaa
120
cctggccagg ctcccaggct cctcatctat ggtgcatcca gcagggccac tggcatccca
180
gacaggttca gtggcagtgg gtctgggaca gacttcactc tcaccatcag cagactggag
240
cctgaagatt ttgcagtgta ttactgtcag cagtatggta gctcacctcg gacgttcggc
300
caagggacca aggtggagat caaa
324

<210> 370
<211> 108
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 370

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Glu Ile Val Leu Thr Gln Ser Pro Gly Thr Leu Ser Leu Ser Pro Gly
 1               5                  10                  15
Glu Arg Val Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Ser Ser
            20                  25                  30
Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu
        35                  40                  45
Ile Tyr Gly Ala Ser Ser Arg Ala Thr Gly Ile Pro Asp Arg Phe Ser
    50                  55                  60
Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu
65                  70                  75                  80
Pro Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Gly Ser Ser Pro
                85                  90                  95
Arg Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
            100                 105
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<210> 371
<211> 324
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 371
gaaattgtgt tgacacagtc tccaggcacc ctgtctttgt ctccagggga aagagtcacc 60
ctctcctgca gggccagtca gagtgttagc agcagctact tagcctggta ccagcagaaa
120
cctggccagg ctcccaggct cctcatctat ggtgcatcca gcagggccac tggcatccca
180
gacaggttca gtggcagtgg gtctgggaca gacttcactc tcaccatcag cagactggag
240
cctgaagatt ttgcaatgta ttactgtcag cagtatggta gctcacctcg gacgttcggc
300
caagggacca aggtggaaat caaa
324

<210> 372
<211> 108
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 372
```
Glu Ile Val Leu Thr Gln Ser Pro Gly Thr Leu Ser Leu Ser Pro Gly
 1               5                  10                  15
Glu Arg Val Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Ser Ser
            20                  25                  30
Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu
        35                  40                  45
Ile Tyr Gly Ala Ser Ser Arg Ala Thr Gly Ile Pro Asp Arg Phe Ser
    50                  55                  60
Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu
65                  70                  75                  80
Pro Glu Asp Phe Ala Met Tyr Tyr Cys Gln Gln Tyr Gly Ser Ser Pro
                85                  90                  95
```

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

<210> 373
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 373
cagagtgtta gcagcagcta c 21

<210> 374
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 374
Gln Ser Val Ser Ser Ser Tyr
1 5

<210> 375
<211> 9
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 375
ggtgcatcc 9

<210> 376
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 376
Gly Ala Ser
1

<210> 377
<211> 27
<212> DNA
<213> Artificial Sequence

<220>

<223> Synthetic

<400> 377
cagcagtatg gtagctcacc tcggacg 27

<210> 378
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 378
Gln Gln Tyr Gly Ser Ser Pro Arg Thr
1 5

<210> 379
<211> 324
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 379
gaaattgtgt tgacacagtc tccaggcacc ctgtctttgt ctccagggga aagagtcacc 60
ctctcctgca gggccagtca gagtgttagc agcagctact tagcctggta ccagcagaaa
120
cctggccagg ctcccaggct cctcatctat ggtgcatcca gcagggccac tggcatccca
180
gacaggttca gtggcagtgg gtctgggaca gacttcactc tcaccatcag cagactggag
240
cctgaagatt ttgcaatgta ttactgtcag cagtatggta gctcacctcg gacgttcggc
300
caagggacca aggtggaaat caaa
324

<210> 380
<211> 108
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 380
Glu Ile Val Leu Thr Gln Ser Pro Gly Thr Leu Ser Leu Ser Pro Gly
1 5 10 15
Glu Arg Val Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Ser Ser
20 25 30
Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu
35 40 45
Ile Tyr Gly Ala Ser Ser Arg Ala Thr Gly Ile Pro Asp Arg Phe Ser
50 55 60
Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu
65 70 75 80

```
Pro Glu Asp Phe Ala Met Tyr Tyr Cys Gln Gln Tyr Gly Ser Ser Pro
                85                  90                  95
Arg Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
            100                 105


<210> 381
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<220>
<221> VARIANT
<222> (7)...(7)
<223> Xaa = Ser or Asn

<400> 381
Ile Trp Tyr Asp Asp Ser Xaa Lys
 1               5


<210> 382
<211> 13
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<220>
<221> VARIANT
<222> (10)...(10)
<223> Xaa = Tyr or Phe

<400> 382
Ala Arg Asp Arg Trp Thr Tyr Ser His Xaa Phe Glu Tyr
 1               5                  10


<210> 383
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<220>
<221> VARIANT
<222> (2)...(2)
<223> Xaa = Asp or Gly

<400> 383
Gln Xaa Ile Ser Ser Trp
 1               5
```

<210> 384
<211> 243
<212> PRT
<213> Homo sapiens

<400> 384
Met Cys Ser Arg Gly Trp Asp Ser Cys Leu Ala Leu Glu Leu Leu Leu
 1   5   10   15
Leu Pro Leu Ser Leu Leu Val Thr Ser Ile Gln Gly His Leu Val His
            20   25   30
Met Thr Val Val Ser Gly Ser Asn Val Thr Leu Asn Ile Ser Glu Ser
        35   40   45
Leu Pro Glu Asn Tyr Lys Gln Leu Thr Trp Phe Tyr Thr Phe Asp Gln
    50   55   60
Lys Ile Val Glu Trp Asp Ser Arg Lys Ser Lys Tyr Phe Glu Ser Lys
65   70   75   80
Phe Lys Gly Arg Val Arg Leu Asp Pro Gln Ser Gly Ala Leu Tyr Ile
                85   90   95
Ser Lys Val Gln Lys Glu Asp Asn Ser Thr Tyr Ile Met Arg Val Leu
            100   105   110
Lys Lys Thr Gly Asn Glu Gln Glu Trp Lys Ile Lys Leu Gln Val Leu
        115   120   125
Asp Pro Val Pro Lys Pro Val Ile Lys Ile Glu Lys Ile Glu Asp Met
    130   135   140
Asp Asp Asn Cys Tyr Leu Lys Leu Ser Cys Val Ile Pro Gly Glu Ser
145   150   155   160
Val Asn Tyr Thr Trp Tyr Gly Asp Lys Arg Pro Phe Pro Lys Glu Leu
                165   170   175
Gln Asn Ser Val Leu Glu Thr Thr Leu Met Pro His Asn Tyr Ser Arg
            180   185   190
Cys Tyr Thr Cys Gln Val Ser Asn Ser Val Ser Ser Lys Asn Gly Thr
        195   200   205
Val Cys Leu Ser Pro Pro Cys Thr Leu Ala Arg Ser Phe Gly Val Glu
    210   215   220
Trp Ile Ala Ser Trp Leu Val Val Thr Val Pro Thr Ile Leu Gly Leu
225   230   235   240
Leu Leu Thr

<210> 385
<211> 222
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 385
Gln Gly His Leu Val His Met Thr Val Val Ser Gly Ser Asn Val Thr
 1   5   10   15
Leu Asn Ile Ser Glu Ser Leu Pro Glu Asn Tyr Lys Gln Leu Thr Trp
            20   25   30
Phe Tyr Thr Phe Asp Gln Lys Ile Val Glu Trp Asp Ser Arg Lys Ser
        35   40   45
Lys Tyr Phe Glu Ser Lys Phe Lys Gly Arg Val Arg Leu Asp Pro Gln

```
    50                  55                  60
Ser Gly Ala Leu Tyr Ile Ser Lys Val Gln Lys Glu Asp Asn Ser Thr
65                  70                  75                  80
Tyr Ile Met Arg Val Leu Lys Lys Thr Gly Asn Glu Gln Glu Trp Lys
                85                  90                  95
Ile Lys Leu Gln Val Leu Asp Pro Val Pro Lys Pro Val Ile Lys Ile
            100                 105                 110
Glu Lys Ile Glu Asp Met Asp Asp Asn Cys Tyr Leu Lys Leu Ser Cys
        115                 120                 125
Val Ile Pro Gly Glu Ser Val Asn Tyr Thr Trp Tyr Gly Asp Lys Arg
    130                 135                 140
Pro Phe Pro Lys Glu Leu Gln Asn Ser Val Leu Glu Thr Thr Leu Met
145                 150                 155                 160
Pro His Asn Tyr Ser Arg Cys Tyr Thr Cys Gln Val Ser Asn Ser Val
                165                 170                 175
Ser Ser Lys Asn Gly Thr Val Cys Leu Ser Pro Pro Cys Thr Leu Ala
            180                 185                 190
Arg Ser Glu Gln Lys Leu Ile Ser Glu Glu Asp Leu Gly Gly Glu Gln
        195                 200                 205
Lys Leu Ile Ser Glu Glu Asp Leu His His His His His His
    210                 215                 220


<210> 386
<211> 218
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 386
Gly Arg Leu Val His Met Thr Val Val Ser Gly Ser Asn Val Thr Leu
 1               5                  10                  15
Asn Ile Ser Glu Ser Leu Pro Glu Asn Tyr Lys Gln Leu Thr Trp Phe
            20                  25                  30
Tyr Thr Phe Asp Gln Lys Ile Val Glu Trp Asp Ser Gly Lys Ser Lys
        35                  40                  45
Tyr Phe Glu Ser Lys Phe Lys Gly Arg Val Arg Leu Asp Pro Gln Ser
    50                  55                  60
Gly Ala Leu Tyr Ile Ser Lys Val Gln Lys Glu Asp Asn Ser Thr Tyr
65                  70                  75                  80
Val Met Arg Val Leu Lys Lys Asp Gly Tyr Glu Gln Glu Trp Lys Ile
                85                  90                  95
Lys Leu Gln Val Leu Asp Pro Val Pro Lys Pro Val Ile Lys Ile Glu
            100                 105                 110
Lys Arg Glu Asp Val Asp Asp Asn Cys Tyr Leu Lys Leu Ser Cys Val
        115                 120                 125
Ile Pro Gly Glu Ser Val Asn Tyr Thr Trp Tyr Gly Glu Leu Pro Lys
    130                 135                 140
Glu Ile Gln Asn Ser Val Leu Glu Thr Thr Leu Lys Pro His Lys His
145                 150                 155                 160
Ser Arg Cys Tyr Thr Cys Gln Val Ser Asn Ser Val Ser Ser Lys Asn
                165                 170                 175
Gly Thr Phe Cys Phe Ser Pro Pro Cys Thr Ala Ala Arg Ser Glu Gln
            180                 185                 190
Lys Leu Ile Ser Glu Glu Asp Leu Gly Gly Glu Gln Lys Leu Ile Ser
        195                 200                 205
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Glu Glu Asp Leu His His His His His His
    210                 215


<210> 387
<211> 427
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 387
Gln Gly His Leu Val His Met Thr Val Val Ser Gly Ser Asn Val Thr
 1               5                  10                  15
Leu Asn Ile Ser Glu Ser Leu Pro Glu Asn Tyr Lys Gln Leu Thr Trp
            20                  25                  30
Phe Tyr Thr Phe Asp Gln Lys Ile Val Glu Trp Asp Ser Arg Lys Ser
        35                  40                  45
Lys Tyr Phe Glu Ser Lys Phe Lys Gly Arg Val Arg Leu Asp Pro Gln
    50                  55                  60
Ser Gly Ala Leu Tyr Ile Ser Lys Val Gln Lys Glu Asp Asn Ser Thr
65                  70                  75                  80
Tyr Ile Met Arg Val Leu Lys Lys Thr Gly Asn Glu Gln Glu Trp Lys
                85                  90                  95
Ile Lys Leu Gln Val Leu Asp Pro Val Pro Lys Pro Val Ile Lys Ile
            100                 105                 110
Glu Lys Ile Glu Asp Met Asp Asp Asn Cys Tyr Leu Lys Leu Ser Cys
        115                 120                 125
Val Ile Pro Gly Glu Ser Val Asn Tyr Thr Trp Tyr Gly Asp Lys Arg
    130                 135                 140
Pro Phe Pro Lys Glu Leu Gln Asn Ser Val Leu Glu Thr Thr Leu Met
145                 150                 155                 160
Pro His Asn Tyr Ser Arg Cys Tyr Thr Cys Gln Val Ser Asn Ser Val
                165                 170                 175
Ser Ser Lys Asn Gly Thr Val Cys Leu Ser Pro Pro Cys Thr Leu Ala
            180                 185                 190
Arg Ser Glu Pro Arg Gly Pro Thr Ile Lys Pro Cys Pro Pro Cys Lys
        195                 200                 205
Cys Pro Ala Pro Asn Leu Leu Gly Gly Pro Ser Val Phe Ile Phe Pro
    210                 215                 220
Pro Lys Ile Lys Asp Val Leu Met Ile Ser Leu Ser Pro Ile Val Thr
225                 230                 235                 240
Cys Val Val Val Asp Val Ser Glu Asp Asp Pro Asp Val Gln Ile Ser
                245                 250                 255
Trp Phe Val Asn Asn Val Glu Val His Thr Ala Gln Thr Gln Thr His
            260                 265                 270
Arg Glu Asp Tyr Asn Ser Thr Leu Arg Val Val Ser Ala Leu Pro Ile
        275                 280                 285
Gln His Gln Asp Trp Met Ser Gly Lys Glu Phe Lys Cys Lys Val Asn
    290                 295                 300
Asn Lys Asp Leu Pro Ala Pro Ile Glu Arg Thr Ile Ser Lys Pro Lys
305                 310                 315                 320
Gly Ser Val Arg Ala Pro Gln Val Tyr Val Leu Pro Pro Pro Glu Glu
                325                 330                 335
Glu Met Thr Lys Lys Gln Val Thr Leu Thr Cys Met Val Thr Asp Phe
            340                 345                 350
Met Pro Glu Asp Ile Tyr Val Glu Trp Thr Asn Asn Gly Lys Thr Glu
```

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        355                 360                 365
Leu Asn Tyr Lys Asn Thr Glu Pro Val Leu Asp Ser Asp Gly Ser Tyr
    370                 375                 380
Phe Met Tyr Ser Lys Leu Arg Val Glu Lys Lys Asn Trp Val Glu Arg
385                 390                 395                 400
Asn Ser Tyr Ser Cys Ser Val Val His Glu Gly Leu His Asn His His
                405                 410                 415
Thr Thr Lys Ser Phe Ser Arg Thr Pro Gly Lys
            420                 425


<210> 388
<211> 423
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 388
Gly Arg Leu Val His Met Thr Val Val Ser Gly Ser Asn Val Thr Leu
 1               5                  10                  15
Asn Ile Ser Glu Ser Leu Pro Glu Asn Tyr Lys Gln Leu Thr Trp Phe
            20                  25                  30
Tyr Thr Phe Asp Gln Lys Ile Val Glu Trp Asp Ser Gly Lys Ser Lys
        35                  40                  45
Tyr Phe Glu Ser Lys Phe Lys Gly Arg Val Arg Leu Asp Pro Gln Ser
    50                  55                  60
Gly Ala Leu Tyr Ile Ser Lys Val Gln Lys Glu Asp Asn Ser Thr Tyr
65                  70                  75                  80
Val Met Arg Val Leu Lys Lys Asp Gly Tyr Glu Gln Glu Trp Lys Ile
                85                  90                  95
Lys Leu Gln Val Leu Asp Pro Val Pro Lys Pro Val Ile Lys Ile Glu
            100                 105                 110
Lys Arg Glu Asp Val Asp Asp Asn Cys Tyr Leu Lys Leu Ser Cys Val
        115                 120                 125
Ile Pro Gly Glu Ser Val Asn Tyr Thr Trp Tyr Gly Glu Leu Pro Lys
    130                 135                 140
Glu Ile Gln Asn Ser Val Leu Glu Thr Thr Leu Lys Pro His Lys His
145                 150                 155                 160
Ser Arg Cys Tyr Thr Cys Gln Val Ser Asn Ser Val Ser Ser Lys Asn
                165                 170                 175
Gly Thr Phe Cys Phe Ser Pro Pro Cys Thr Ala Ala Arg Ser Glu Pro
            180                 185                 190
Arg Gly Pro Thr Ile Lys Pro Cys Pro Pro Cys Lys Cys Pro Ala Pro
        195                 200                 205
Asn Leu Leu Gly Gly Pro Ser Val Phe Ile Phe Pro Pro Lys Ile Lys
    210                 215                 220
Asp Val Leu Met Ile Ser Leu Ser Pro Ile Val Thr Cys Val Val Val
225                 230                 235                 240
Asp Val Ser Glu Asp Asp Pro Asp Val Gln Ile Ser Trp Phe Val Asn
                245                 250                 255
Asn Val Glu Val His Thr Ala Gln Thr Gln Thr His Arg Glu Asp Tyr
            260                 265                 270
Asn Ser Thr Leu Arg Val Val Ser Ala Leu Pro Ile Gln His Gln Asp
        275                 280                 285
Trp Met Ser Gly Lys Glu Phe Lys Cys Lys Val Asn Asn Lys Asp Leu
    290                 295                 300
```

```
Pro Ala Pro Ile Glu Arg Thr Ile Ser Lys Pro Lys Gly Ser Val Arg
305                 310                 315                 320
Ala Pro Gln Val Tyr Val Leu Pro Pro Pro Glu Glu Glu Met Thr Lys
                325                 330                 335
Lys Gln Val Thr Leu Thr Cys Met Val Thr Asp Phe Met Pro Glu Asp
            340                 345                 350
Ile Tyr Val Glu Trp Thr Asn Asn Gly Lys Thr Glu Leu Asn Tyr Lys
        355                 360                 365
Asn Thr Glu Pro Val Leu Asp Ser Asp Gly Ser Tyr Phe Met Tyr Ser
    370                 375                 380
Lys Leu Arg Val Glu Lys Lys Asn Trp Val Glu Arg Asn Ser Tyr Ser
385                 390                 395                 400
Cys Ser Val Val His Glu Gly Leu His Asn His His Thr Thr Lys Ser
                405                 410                 415
Phe Ser Arg Thr Pro Gly Lys
            420
```

<210> 389
<211> 436
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 389

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

```
                245                 250                 255
Glu Asp Asp Pro Asp Val Gln Ile Ser Trp Phe Val Asn Asn Val Glu
            260                 265                 270
Val His Thr Ala Gln Thr Gln Thr His Arg Glu Asp Tyr Asn Ser Thr
        275                 280                 285
Leu Arg Val Val Ser Ala Leu Pro Ile Gln His Gln Asp Trp Met Ser
    290                 295                 300
Gly Lys Glu Phe Lys Cys Lys Val Asn Asn Lys Asp Leu Pro Ala Pro
305                 310                 315                 320
Ile Glu Arg Thr Ile Ser Lys Pro Lys Gly Ser Val Arg Ala Pro Gln
                325                 330                 335
Val Tyr Val Leu Pro Pro Pro Glu Glu Glu Met Thr Lys Lys Gln Val
            340                 345                 350
Thr Leu Thr Cys Met Val Thr Asp Phe Met Pro Glu Asp Ile Tyr Val
        355                 360                 365
Glu Trp Thr Asn Asn Gly Lys Thr Glu Leu Asn Tyr Lys Asn Thr Glu
    370                 375                 380
Pro Val Leu Asp Ser Asp Gly Ser Tyr Phe Met Tyr Ser Lys Leu Arg
385                 390                 395                 400
Val Glu Lys Lys Asn Trp Val Glu Arg Asn Ser Tyr Ser Cys Ser Val
                405                 410                 415
Val His Glu Gly Leu His Asn His His Thr Thr Lys Ser Phe Ser Arg
            420                 425                 430
Thr Pro Gly Lys
        435
```

<210> 390
<211> 365
<212> PRT
<213> Homo sapiens

<400> 390

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

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


<210> 391
<211> 222
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 391
Gln Gly His Leu Val His Met Thr Val Val Ser Gly Ser Asn Val Thr
 1               5                  10                  15
Leu Asn Ile Ser Glu Ser Leu Pro Glu Asn Tyr Lys Gln Leu Thr Trp
            20                  25                  30
Phe Tyr Thr Phe Asp Gln Lys Ile Val Glu Trp Asp Ser Arg Lys Ser
        35                  40                  45
Lys Tyr Phe Glu Ser Lys Phe Lys Gly Arg Val Arg Leu Asp Pro Gln
    50                  55                  60
Ser Gly Ala Leu Tyr Ile Ser Lys Val Gln Lys Glu Asp Asn Ser Thr
65                  70                  75                  80
Tyr Ile Met Arg Val Leu Lys Lys Thr Gly Asn Glu Gln Glu Trp Lys
                85                  90                  95
Ile Lys Leu Gln Val Leu Asp Pro Val Pro Lys Pro Val Ile Lys Ile
            100                 105                 110
Glu Lys Ile Glu Asp Met Asp Asp Asn Cys Tyr Leu Lys Leu Ser Cys
        115                 120                 125
Val Ile Pro Gly Glu Ser Val Asn Tyr Thr Trp Tyr Gly Asp Lys Arg
    130                 135                 140
Pro Phe Pro Lys Glu Leu Gln Asn Ser Val Leu Glu Thr Thr Leu Met
145                 150                 155                 160
Pro His Asn Tyr Ser Arg Cys Tyr Thr Cys Gln Val Ser Asn Ser Val
                165                 170                 175
Ser Ser Lys Asn Gly Thr Val Cys Leu Ser Pro Pro Cys Thr Leu Ala
            180                 185                 190
Arg Ser Glu Gln Lys Leu Ile Ser Glu Glu Asp Leu Gly Gly Glu Gln
        195                 200                 205
```

```
Lys Leu Ile Ser Glu Glu Asp Leu His His His His His His
    210                 215                 220


<210> 392
<211> 351
<212> PRT
<213> Homo sapiens

<400> 392
Met Ser Phe Pro Cys Lys Phe Val Ala Ser Phe Leu Leu Ile Phe Asn
 1               5                  10                  15
Val Ser Ser Lys Gly Ala Val Ser Lys Glu Ile Thr Asn Ala Leu Glu
            20                  25                  30
Thr Trp Gly Ala Leu Gly Gln Asp Ile Asn Leu Asp Ile Pro Ser Phe
        35                  40                  45
Gln Met Ser Asp Asp Ile Asp Asp Ile Lys Trp Glu Lys Thr Ser Asp
    50                  55                  60
Lys Lys Lys Ile Ala Gln Phe Arg Lys Glu Lys Glu Thr Phe Lys Glu
65                  70                  75                  80
Lys Asp Thr Tyr Lys Leu Phe Lys Asn Gly Thr Leu Lys Ile Lys His
                85                  90                  95
Leu Lys Thr Asp Asp Gln Asp Ile Tyr Lys Val Ser Ile Tyr Asp Thr
            100                 105                 110
Lys Gly Lys Asn Val Leu Glu Lys Ile Phe Asp Leu Lys Ile Gln Glu
        115                 120                 125
Arg Val Ser Lys Pro Lys Ile Ser Trp Thr Cys Ile Asn Thr Thr Leu
    130                 135                 140
Thr Cys Glu Val Met Asn Gly Thr Asp Pro Glu Leu Asn Leu Tyr Gln
145                 150                 155                 160
Asp Gly Lys His Leu Lys Leu Ser Gln Arg Val Ile Thr His Lys Trp
                165                 170                 175
Thr Thr Ser Leu Ser Ala Lys Phe Lys Cys Thr Ala Gly Asn Lys Val
            180                 185                 190
Ser Lys Glu Ser Ser Val Glu Pro Val Ser Cys Pro Glu Lys Gly Leu
        195                 200                 205
Asp Ile Tyr Leu Ile Ile Gly Ile Cys Gly Gly Gly Ser Leu Leu Met
    210                 215                 220
Val Phe Val Ala Leu Leu Val Phe Tyr Ile Thr Lys Arg Lys Lys Gln
225                 230                 235                 240
Arg Ser Arg Arg Asn Asp Glu Glu Leu Glu Thr Arg Ala His Arg Val
                245                 250                 255
Ala Thr Glu Glu Arg Gly Arg Lys Pro His Gln Ile Pro Ala Ser Thr
            260                 265                 270
Pro Gln Asn Pro Ala Thr Ser Gln His Pro Pro Pro Pro Pro Gly His
        275                 280                 285
Arg Ser Gln Ala Pro Ser His Arg Pro Pro Pro Pro Gly His Arg Val
    290                 295                 300
Gln His Gln Pro Gln Lys Arg Pro Pro Ala Pro Ser Gly Thr Gln Val
305                 310                 315                 320
His Gln Gln Lys Gly Pro Pro Leu Pro Arg Pro Arg Val Gln Pro Lys
                325                 330                 335
Pro Pro His Gly Ala Ala Glu Asn Ser Leu Ser Pro Ser Ser Asn
            340                 345                 350
```