<110> REGENERON PHARMACEUTICALS, INC.

<120> ANTI-PDGFR-beta ANTIBODIES AND USES THEREOF

<130> 9850A-WO

<140> TBA
<141> Filed herewith

<150> 61/750,437
<151> 2013-01-09

<150> 61/863,452
<151> 2013-08-08

<150> 61/909,421
<151> 2013-11-27

<160> 345

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ccaggcaagg ggctggagtg ggtggcactt atatcaaatg ttggaagtaa taaatactat 180
gcagactccg tgaagggccg attcaccatc tccagagaca attccaagaa ctcgctgttt 240
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            20   25   30
Gly Leu His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35   40   45
Ala Leu Ile Ser Asn Val Gly Ser Asn Lys Tyr Tyr Ala Asp Ser Val
    50   55   60
Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Ser Leu Phe
65   70   75   80
Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
                85   90   95

Ala Lys Gly Ala Asp Tyr Tyr Tyr Tyr Gly Met Asp Val Trp Gly Gln
100 105 110
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115 120

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tggtaccagc agaaaccagg acagcctcct aagctgatca tttactggac atccacccgg 180
gaatccgggg tccctgaccg attcagtggc agcgggtctg ggacagattt cactctcacc 240
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20 25 30
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35 40 45
Pro Pro Lys Leu Ile Ile Tyr Trp Thr Ser Thr Arg Glu Ser Gly Val
50 55 60
Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr
65 70 75 80
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85 90 95
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Lys

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cagcccccag ggaagggact ggagtggatt gggagtctct attatagtgg gatcaccttc 180
tacaacccgt ccctcaagag tcgagtcacc atatccgtag acacgtccaa gaaccagttc 240
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Thr Leu Ser Leu Thr Cys Ile Val Ser Gly Gly Ser Ile Ser Ser Ser
            20   25   30
Ser Tyr Tyr Trp Gly Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu Glu
        35   40   45
Trp Ile Gly Ser Leu Tyr Tyr Ser Gly Ile Thr Phe Tyr Asn Pro Ser
    50   55   60
Leu Lys Ser Arg Val Thr Ile Ser Val Asp Thr Ser Lys Asn Gln Phe
65   70   75   80
Ser Leu Thr Leu Thr Ser Val Thr Ala Ala Asp Thr Ala Val Phe Tyr
                85   90   95
Cys Ala Arg His Arg Val Met Ala Ser Ser Pro Phe Asp His Trp Gly
            100   105   110
Gln Gly Thr Leu Val Thr Val Ser Ser
        115   120

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<210> 20
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<400> 20
Gly Gly Ser Ile Ser Ser Ser Ser Tyr Tyr
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<210> 21
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<210> 22
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<400> 22
Leu Tyr Tyr Ser Gly Ile Thr
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<210> 23
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<400> 23
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<400> 24
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atcaactgca agtccagcca gagtatttta tacagctcca acaataagaa ctaccttgct 120
tggtaccagc tgaaaccagg acagcctcct aacctgctca tttattgggc atctacccgg 180
gaatccgggg tccctgaccg attcagtggc agcgggtctg ggacagattt cactctcacc 240
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ccattcactt tcggccctgg gaccaaagtg gatatcaaa   339

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

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<400> 27
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<210> 28
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<400> 28
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<400> 29
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<210> 30
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<400> 30
Trp Ala Ser
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<210> 31
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<400> 31
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<400> 32

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ccagggaagg ggctggagtg ggtctcaact gttagtgtta gtgctggtat cacatactac 180
gcagactccg tgaagggccg gttcaccatc tccagagaca attccaagaa cacactttat 240
ctgcaaatga acagcctgag agccgaggac acggccatat attattgtgc gaaatctagt 300
tgtactacta acagctgccc cgcttacttt gactactggg gcctgggaac cctggtcacc 360
gtctcctca                                                         369

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


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<400> 35
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<210> 36
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<211> 8
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<220>
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<400> 36
Gly Ile Thr Phe Ser Ser Phe Ala
 1   5

<210> 37
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<400> 37
gttagtgtta gtgctggtat caca   24

<210> 38
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<400> 38
Val Ser Val Ser Ala Gly Ile Thr
 1   5

<210> 39
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<212> DNA
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<400> 39
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<210> 40
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<400> 40
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<210> 41
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<220>
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<400> 41
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atcaactgca agtccagcca gaatatttta tacaggtcca ataataagaa ctacttagct 120
tggtaccagc agaaaccagg acagcctcct aagctgctca tttactgggc atctacccgg 180
gaatccgggg tccctgaccg attcagtggc agcgggtctg ggacagattt cactctcacc 240
atcagcagcc tgcaggctga agatgtggca gtttattact gtcagcaata ttatggcact 300
ccgtacactt ttggccaggg gaccaacctg gagatcaaa 339

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<400> 42
Asp Ile Val Met Thr Gln Ser Pro Glu Ser Leu Ala Val Ser Leu Gly
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Glu Arg Ala Thr Ile Asn Cys Lys Ser Ser Gln Asn Ile Leu Tyr Arg
            20   25   30
Ser Asn Asn Lys Asn Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln
        35   40   45
Pro Pro Lys Leu Leu Ile Tyr Trp Ala Ser Thr Arg Glu Ser Gly Val
    50   55   60
Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr
65   70   75   80
Ile Ser Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln Gln
                85   90   95
Tyr Tyr Gly Thr Pro Tyr Thr Phe Gly Gln Gly Thr Asn Leu Glu Ile
            100   105   110
Lys

<210> 43
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<400> 43
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<210> 44
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<400> 44
Gln Asn Ile Leu Tyr Arg Ser Asn Asn Lys Asn Tyr
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<400> 45
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<210> 46
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<400> 46
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<400> 47
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<210> 48
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Gln Gln Tyr Tyr Gly Thr Pro Tyr Thr
 1   5

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ccagggaagg ggctggagtg ggtggccaac ataaggcaag atggaagtga caaatactat 180
gtggactctg tgaagggccg attcaccatc tccagagaca acgccaagaa ctcactgttt 240
ctgcaaatga acagcctgag agccgaagac acggctgtgt attactgtgc gaggactaac 300
ggtgggacct acggttataa ccactactac tacggtatgg acgtctgggg ccaagggacc 360
acggtcaccg tctcctca 378

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

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<400> 51
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<210> 52
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<400> 52
Gly Phe Thr Phe Ser Ser Tyr Trp

1 5

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<400> 54
Ile Arg Gln Asp Gly Ser Asp Lys
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<210> 55
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<210> 56
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<400> 56
Ala Arg Thr Asn Gly Gly Thr Tyr Gly Tyr Asn His Tyr Tyr Tyr Gly
1 5 10 15
Met Asp Val

<210> 57
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atcacttgcc gggcaagtca gggcattaga aatgatttag gctggtatca gttgaaacca 120
gggaaagccc ctaagcgcct gatctttgct gcatccagtt tgcaaagtgg ggtcccatca 180
aggttcagcg gcagtggatc tgggacagaa ttcactctca caatcagcag cctgcagcct 240
gaagattttg caacttatta ctgtctacaa cataatagtt acccgtggac gttcggccaa 300
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Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Gly Ile Arg Asn Asp
            20   25   30
Leu Gly Trp Tyr Gln Leu Lys Pro Gly Lys Ala Pro Lys Arg 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 Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
65   70   75   80
Glu Asp Phe Ala Thr Tyr Tyr Cys Leu Gln His Asn Ser Tyr Pro Trp
                85   90   95
Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
            100   105

<210> 59
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<400> 59
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<220>
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<400> 60
Gln Gly Ile Arg Asn Asp
 1   5

<210> 61
<211> 9

<212> DNA
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<400> 61
gctgcatcc 9

<210> 62
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<400> 62
Ala Ala Ser
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<210> 63
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<400> 63
ctacaacata atagttaccc gtggacg 27

<210> 64
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<400> 64
Leu Gln His Asn Ser Tyr Pro Trp Thr
1 5

<210> 65
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cagcccccag ggaaggggct tgagtggatt gggagtatct attataatgg gatctcctcc 180
tacaacccgt ccctcaagag tcgagtcacc atatccgtag agtcgtccaa gaaccaattc 240
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cgagcagctc gccgtttttc tgaggctttt gatatctggg gccaagggac aatggtcacc 360
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Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Asp Ser Ile Ser Ser Ser
            20   25   30
Ser Tyr Tyr Trp Gly Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu Glu
        35   40   45
Trp Ile Gly Ser Ile Tyr Tyr Asn Gly Ile Ser Ser Tyr Asn Pro Ser
    50   55   60
Leu Lys Ser Arg Val Thr Ile Ser Val Glu Ser Ser Lys Asn Gln Phe
65   70   75   80
Ser Leu Arg Leu Ala Ser Val Thr Ala Ala Asp Thr Ala Leu Tyr Tyr
                85   90   95
Cys Ala Arg His Arg Ala Ala Arg Arg Phe Ser Glu Ala Phe Asp Ile
            100   105   110
Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser
        115   120

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<400> 67
ggtgactcca tcagcagtag tagctactac 30

<210> 68
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<220>
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<400> 68
Gly Asp Ser Ile Ser Ser Ser Ser Tyr Tyr
 1   5   10

<210> 69
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<400> 69
atctattata atgggatctc c 21

<210> 70
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<400> 70
Ile Tyr Tyr Asn Gly Ile Ser
1 5

<210> 71
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<400> 71
gcgagacatc gagcagctcg ccgtttttct gaggcttttg atatc 45

<210> 72
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<220>
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<400> 72
Ala Arg His Arg Ala Ala Arg Arg Phe Ser Glu Ala Phe Asp Ile
1 5 10 15

<210> 73
<211> 339
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 73
gacatcgtga tgacccagtc tccagactcc ccggctgtgt ctctgggcga gagggccacc 60
atcaactgca agtccagcca gagtgtttta tacagctcca gcaataagaa ctacttagct 120
tggtaccagc agaaaccagg acagcctcct aggttgctca tttactgggc atctacccgg 180
gaatccgggg tccctgaccg attcagtggc agcgggtctg ggacagattt cactctcacc 240
atcagcagcc tgcaggctga agatgtggca gtttattact gtcagcaata ttatagtggt 300
ccgtacactt ttggccaggg gaccaagctg gagatcaaa 339

<210> 74
<211> 113

<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 74
Asp Ile Val Met Thr Gln Ser Pro Asp Ser Pro Ala Val Ser Leu Gly
 1   5   10   15
Glu Arg Ala Thr Ile Asn Cys Lys Ser Ser Gln Ser Val Leu Tyr Ser
            20   25   30
Ser Ser Asn Lys Asn Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln
        35   40   45
Pro Pro Arg Leu Leu Ile Tyr Trp Ala Ser Thr Arg Glu Ser Gly Val
    50   55   60
Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr
65   70   75   80
Ile Ser Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln Gln
                85   90   95
Tyr Tyr Ser Gly Pro Tyr Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile
            100   105   110
Lys

<210> 75
<211> 36
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 75
cagagtgttt tatacagctc cagcaataag aactac 36

<210> 76
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 76
Gln Ser Val Leu Tyr Ser Ser Ser Asn Lys Asn Tyr
 1   5   10

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

<220>
<223> Synthetic

<400> 77
tgggcatct 9

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

<220>
<223> Synthetic

<400> 78
Trp Ala Ser
 1

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

<220>
<223> Synthetic

<400> 79
cagcaatatt atagtggtcc gtacact 27

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

<220>
<223> Synthetic

<400> 80
Gln Gln Tyr Tyr Ser Gly Pro Tyr Thr
 1   5

<210> 81
<211> 360
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 81
gaagtgcagt tggtggagtc tgggggaggc ttggtacagc ctggcaggtc cctgagactc 60
tcctgtgcag cctctggatt cacctttgat gattttgcca tgcactgggt ccggcaagtt 120
ccagggaagg gcctggagtg ggtctcaggc attagttgga gtagtggaac cataggctat 180
gtgggctctg tgaagggccg cttcaccatc tccagagaca acgccaagaa ctccctgtat 240
ctgcaaatga acagtctgag agctgaggac acggccatgt atttctgtac aaaggataaa 300
gcagctttcc atgatgcctt tgatatctgg ggccaaggga caatggtcac cgtctcttca 360

<210> 82
<211> 120
<212> PRT
<213> Artificial Sequence

<220>

<223> Synthetic

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

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

<220>
<223> Synthetic

<400> 83
ggattcacct ttgatgattt tgcc   24

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

<220>
<223> Synthetic

<400> 84
Gly Phe Thr Phe Asp Asp Phe Ala
 1   5

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

<220>
<223> Synthetic

<400> 85
attagttgga gtagtggaac cata   24

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

<220>
<223> Synthetic

<400> 86
Ile Ser Trp Ser Ser Gly Thr Ile
 1   5

<210> 87
<211> 39
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 87
acaaaggata aagcagcttt ccatgatgcc tttgatatc   39

<210> 88
<211> 13
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 88
Thr Lys Asp Lys Ala Ala Phe His Asp Ala Phe Asp Ile
 1   5   10

<210> 89
<211> 339
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 89
gacatcgtga tgacccagtc tccagactcc ctggctgtgt ctctgggcga gagggccacc 60
atcaactgca agtccagcca gagtgtgtta tacaggtccg acaataagaa ctacttagct 120
tggtaccagc agagaccagg acagcctcct aagctgctca tttactgggc atctacccgg 180
gaatccgggg tccctggccg attcagtggc agcgggtctg ggacagattt cactctcacc 240
atcagcagcc tgcagggtga agatgtggca gtttattact gtcatcaata ttataatatt 300
ccattcactt tcggccctgg gaccaaagtg gatatcaaa   339

<210> 90
<211> 113
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 90
Asp Ile Val Met Thr Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly
 1   5   10   15

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Glu Arg Ala Thr Ile Asn Cys Lys Ser Ser Gln Ser Val Leu Tyr Arg
            20                  25                  30
Ser Asp Asn Lys Asn Tyr Leu Ala Trp Tyr Gln Gln Arg Pro Gly Gln
        35                  40                  45
Pro Pro Lys Leu Leu Ile Tyr Trp Ala Ser Thr Arg Glu Ser Gly Val
    50                  55                  60
Pro Gly Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr
65                  70                  75                  80
Ile Ser Ser Leu Gln Gly Glu Asp Val Ala Val Tyr Tyr Cys His Gln
                85                  90                  95
Tyr Tyr Asn Ile Pro Phe Thr Phe Gly Pro Gly Thr Lys Val Asp Ile
            100                 105                 110
Lys
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<210> 91
<211> 36
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 91
cagagtgtgt tatacaggtc cgacaataag aactac 36

<210> 92
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 92
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Gln Ser Val Leu Tyr Arg Ser Asp Asn Lys Asn Tyr
 1               5                  10
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<210> 93
<211> 9
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 93
tgggcatct 9

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

<220>
<223> Synthetic

<400> 94

Trp Ala Ser
 1

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

<220>
<223> Synthetic

<400> 95
catcaatatt ataatattcc attcact 27

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

<220>
<223> Synthetic

<400> 96
His Gln Tyr Tyr Asn Ile Pro Phe Thr
 1   5

<210> 97
<211> 369
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 97
caggtgcagc tacagcagtg gggcgcagga ctgttgaagc cttcggagac cctgtccctc 60
acctgcgctg tctatggtgg gtccttcagt ggttactact ggacctggat ccgccagtcc 120
ccagggaagg ggctggagtg gatgggggaa atcagtcatc gtggaaccac caactacaac 180
ccgtccctca agagtcgact caccatttct cttgacacgt ccaataacca cttctccctg 240
aaattgagct ctgtgaccgc cgcggacacg gctgtttatt attgcgcgag agaggaaagg 300
ttggggatgg gctacgacta cttcggtttg gacgtctggg gccaagggac cacggtcacc 360
gtctcgtca 369

<210> 98
<211> 123
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 98
Gln Val Gln Leu Gln Gln Trp Gly Ala Gly Leu Leu Lys Pro Ser Glu
 1   5   10   15
Thr Leu Ser Leu Thr Cys Ala Val Tyr Gly Gly Ser Phe Ser Gly Tyr
            20   25   30
Tyr Trp Thr Trp Ile Arg Gln Ser Pro Gly Lys Gly Leu Glu Trp Met
        35   40   45

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


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

<220>
<223> Synthetic

<400> 99
ggtgggtcct tcagtggtta ctac                                          24

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

<220>
<223> Synthetic

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


<210> 101
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 101
atcagtcatc gtggaaccac c                                             21

<210> 102
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 102
Ile Ser His Arg Gly Thr Thr
 1               5
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<210> 103
<211> 51
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 103
gcgagagagg aaaggttggg gatgggctac gactacttcg gtttggacgt c 51

<210> 104
<211> 17
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

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

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

<220>
<223> Synthetic

<400> 105
gaaattgtgt tgacacagtc tccagccacc ctgtctttgt ctccagggga aagagccacc 60
ctctcctgca gggccagtca gagtgtcagc acttacttaa cctggtacca acagaaacct 120
ggccaggctc ccaggctcct catctatgat gcatccaaca gggccactgg catcccagcc 180
aggttcagtg gcagtggatc tgggacagac ttcactctca ccatcagtag cctagagcct 240
gaagattgtg cagtttatta ctgtcagcag cgtagcatct ggatcacctt cggccagggg 300
acacgactgg agattaaa 318

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

<220>
<223> Synthetic

<400> 106
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 Thr Tyr
            20   25   30
Leu Thr 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 Cys Ala Val Tyr Tyr Cys Gln Gln Arg Ser Ile Trp Ile Thr
85 90 95
Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys
100 105

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

<220>
<223> Synthetic

<400> 107
cagagtgtca gcacttac 18

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

<220>
<223> Synthetic

<400> 108
Gln Ser Val Ser Thr Tyr
1 5

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

<220>
<223> Synthetic

<400> 109
gatgcatcc 9

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

<220>
<223> Synthetic

<400> 110
Asp Ala Ser
1

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

<220>
<223> Synthetic

<400> 111
cagcagcgta gcatctggat cacc 24

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

<220>
<223> Synthetic

<400> 112
Gln Gln Arg Ser Ile Trp Ile Thr
 1 5

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

<220>
<223> Synthetic

<400> 113
gaggtacaac tgagagactc tgggggaggc ttggtccagc cgggggggtc cctgagactc 60
tcctgtgtag cctctggatt cacctttagt tcctattgga tgagttgggt ccgccaggct 120
ccagggaagg ggctggagtg ggtggtcaat ataaaccgag atggaagtga gaaatactat 180
gtggattctg tgaagggccg attcatcatc tccagagaca acaccaagaa ctcactatat 240
ttacaaatgg agagcctgag agccgaagac acggctgtat attactgtgc gagagatccc 300
ccctaccact tatacggtat ggacgtctgg ggccaaggga ccacggtcac cgtctcctca 360

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

<220>
<223> Synthetic

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

115 120

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

<220>
<223> Synthetic

<400> 115
ggattcacct ttagttccta ttgg 24

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

<220>
<223> Synthetic

<400> 116
Gly Phe Thr Phe Ser Ser Tyr Trp
1 5

<210> 117
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 117
ataaaccgag atggaagtga gaaa 24

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

<220>
<223> Synthetic

<400> 118
Ile Asn Arg Asp Gly Ser Glu Lys
1 5

<210> 119
<211> 39
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 119

gcgagagatc ccccctacca cttatacggt atggacgtc 39

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

<220>
<223> Synthetic

<400> 120
Ala Arg Asp Pro Pro Tyr His Leu Tyr Gly Met Asp Val
1 5 10

<210> 121
<211> 321
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 121
gacatccaga tgacccagtc tccatcctcc ctgtctgcat ctgtaggaga cagagtcacc 60
atcacttgcc ggacaagtca gggcattaga gttgatttag cctggtatca gcagaaacca 120
gggaaagccc ctgagcgcct gatctatgct gcatccagtt tgcaaagtgg ggtcccatca 180
aggttcagcg gcggtggatc tgggacagag ttcactctca cagtcagcag cctgcagcct 240
gaagattttg caacttatta ttgtctacag catcataatt tcccgtacac ttttggccag 300
gggaccaagc tggagatcaa a 321

<210> 122
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

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

<210> 123
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 123
cagggcatta gagttgat 18

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

<220>
<223> Synthetic

<400> 124
Gln Gly Ile Arg Val Asp
1 5

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

<220>
<223> Synthetic

<400> 125
gctgcatcc 9

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

<220>
<223> Synthetic

<400> 126
Ala Ala Ser
1

<210> 127
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 127
ctacagcatc ataatttccc gtacact 27

<210> 128
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 128
Leu Gln His His Asn Phe Pro Tyr Thr
 1   5

<210> 129
<211> 366
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 129
cagctgcagc tgcaggagtc gggcccagga ctggtgaagc cttcggagac cctgtccctc 60
acctgcactg tctctggtgg ttccatcacc agtagcagtt actactgggg ctggatccgc 120
cagcccccag ggaaggggct ggagtggatt gggagtatct attatagagg gagcaccaac 180
tacaatccgt ccctcaagag tcgagtcacc atatccgtag actcgtccaa gaaccagttc 240
tacctgaagg tgtcctctgt gaccgccgta gacacggctg tgtattactg tgcgagacag 300
aatggagcag ctcgtccgag ctggttcgac ccctggggcc agggaaccct ggtcaccgtc 360
tcctca   366

<210> 130
<211> 122
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

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

<210> 131
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 131
ggtggttcca tcaccagtag cagttactac 30

<210> 132
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 132
Gly Gly Ser Ile Thr Ser Ser Ser Tyr Tyr
1 5 10

<210> 133
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 133
atctattata gagggagcac c 21

<210> 134
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

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

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

<220>
<223> Synthetic

<400> 135
gcgagacaga atggagcagc tcgtccgagc tggttcgacc cc 42

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

<220>
<223> Synthetic

<400> 136

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Ala Arg Gln Asn Gly Ala Ala Arg Pro Ser Trp Phe Asp Pro
 1               5                  10
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<210> 137
<211> 324
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 137
gaaattgtgt tgacgcagtc tccagacacc atatctttgt ctccagggga aagagccacc 60
ctctcctgca gggccagtca gagtattagc agcatctact tagcctggta ccagcagaaa 120
cctggccagg ctcccaggct cctcatctat ggtgcatcca gcagggtcac tggcatccca 180
gacaggttca gtgtcagtgg gtctgggaca gacttcactc tcaccatcag cagactggag 240
cctgaagatt ttgcagtgta ttactgtcag cattatggta tttcaccatt cactttcggc 300
cctgggacca aagtggatat caga 324

<210> 138
<211> 108
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 138

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Glu Ile Val Leu Thr Gln Ser Pro Asp Thr Ile Ser Leu Ser Pro Gly
 1               5                  10                  15
Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Ile Ser Ser Ile
            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 Val Thr Gly Ile Pro Asp Arg Phe Ser
    50                  55                  60
Val 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 His Tyr Gly Ile Ser Pro
                85                  90                  95
Phe Thr Phe Gly Pro Gly Thr Lys Val Asp Ile Arg
            100                 105
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<210> 139
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 139
cagagtatta gcagcatcta c 21

<210> 140
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 140
Gln Ser Ile Ser Ser Ile Tyr
 1   5

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

<220>
<223> Synthetic

<400> 141
ggtgcatcc   9

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

<220>
<223> Synthetic

<400> 142
Gly Ala Ser
 1

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

<220>
<223> Synthetic

<400> 143
cagcattatg gtatttcacc attcact   27

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

<220>
<223> Synthetic

<400> 144
Gln His Tyr Gly Ile Ser Pro Phe Thr
 1   5

<210> 145
<211> 381
<212> DNA

<213> Artificial Sequence

<220>
<223> Synthetic

<400> 145
gaggtgcagc tggtggagtc tgggggaggc ttggtccagc cgggggggtc cctgagactc 60
tcctgtgcag cctctggatt caccttcagt agttattgga tgagttgggt ccgccaggct 120
ccaggcaagg ggctagaatg ggtggccaac atgaaccaag atggaagtga gacacactat 180
gtggactctg tgaagggccg actctccatt tccagagaca atgccaagaa atcactgttt 240
ctgcacatga acagcctgag agccgaggac acggctgttt atttctgtgc gagagatctt 300
gttccacctc gtcaggatga ttactactat tatttcggca tggacgtctg gggccatggg 360
accacggtca ccgtctcctc a 381

<210> 146
<211> 127
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 146
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 Met Asn Gln Asp Gly Ser Glu Thr His Tyr Val Asp Ser Val
    50   55   60
Lys Gly Arg Leu Ser Ile Ser Arg Asp Asn Ala Lys Lys Ser Leu Phe
65   70   75   80
Leu His Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Phe Cys
                85   90   95
Ala Arg Asp Leu Val Pro Pro Arg Gln Asp Asp Tyr Tyr Tyr Tyr Phe
            100   105   110
Gly Met Asp Val Trp Gly His Gly Thr Thr Val Thr Val Ser Ser
        115   120   125

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

<220>
<223> Synthetic

<400> 147
ggattcacct tcagtagtta ttgg 24

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

<220>
<223> Synthetic

<400> 148
Gly Phe Thr Phe Ser Ser Tyr Trp
 1   5

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

<220>
<223> Synthetic

<400> 149
atgaaccaag atggaagtga gaca   24

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

<220>
<223> Synthetic

<400> 150
Met Asn Gln Asp Gly Ser Glu Thr
 1   5

<210> 151
<211> 60
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 151
gcgagagatc ttgttccacc tcgtcaggat gattactact attatttcgg catggacgtc 60

<210> 152
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 152
Ala Arg Asp Leu Val Pro Pro Arg Gln Asp Asp Tyr Tyr Tyr Tyr Phe
 1   5   10   15
Gly Met Asp Val
            20

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

<220>
<223> Synthetic

<400> 153
gacatccaga tgacccagtc tccctccacc ctgtctgcat ctgtaggaga cagagtcacc 60
atcacttgcc gggccagtca gagtattagt gactggttgg cctggtatca gcagaaacca 120
gggaaagccc ctaaactcct gatctttaag gcgtctactt tagaaagtgg ggtcccatca 180
aggttcagcg gcagtggatc tgggacagag ttcactctca ccatcagcag cctacagcct 240
gatgattttg caacttatta ctgccaacag tataatagtt attctcggac gttcggccaa 300
gggaccaagg tggaaatcaa a 321

<210> 154
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

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

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

<220>
<223> Synthetic

<400> 155
cagagtatta gtgactgg 18

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

<220>
<223> Synthetic

<400> 156
Gln Ser Ile Ser Asp Trp
 1   5

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

<220>
<223> Synthetic

<400> 157
aaggcgtct 9

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

<220>
<223> Synthetic

<400> 158
Lys Ala Ser
1

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

<220>
<223> Synthetic

<400> 159
caacagtata atagttattc tcggacg 27

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

<220>
<223> Synthetic

<400> 160
Gln Gln Tyr Asn Ser Tyr Ser Arg Thr
1 5

<210> 161
<211> 383
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 161
gaggtgcagc tggtggagtc tgggggaggc ttggtccagc ctgggggtc cctgagactc 60
tcctgtggag cctctggatt cacctttagt agttattgga tgacctgggt ccgccaggct 120

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ccagggaagg ggctggagtg ggtgggcaac ataaaccaag atggcagtga gaaatactct 180
gtggactctg tgaagggccg attcaccatc tccagagaca acgccaagaa ctcactgtat 240
ctgcaaatga acagggtgag agccgaggac acggctgtat attattgttc gagagatctt 300
gttccacctc gtcaggggga taactactac tacttcggta tggacgtctg gggcctaggg 360
accacggtca ccgtctcctc agc                                         383

<210> 162
<211> 127
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 162
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
 1               5                  10                  15
Ser Leu Arg Leu Ser Cys Gly Ala Ser Gly Phe Thr Phe Ser Ser Tyr
            20                  25                  30
Trp Met Thr Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35                  40                  45
Gly Asn Ile Asn Gln Asp Gly Ser Glu Lys Tyr Ser 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 Arg Val Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
                85                  90                  95
Ser Arg Asp Leu Val Pro Pro Arg Gln Gly Asp Asn Tyr Tyr Tyr Phe
            100                 105                 110
Gly Met Asp Val Trp Gly Leu Gly Thr Thr Val Thr Val Ser Ser
        115                 120                 125


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

<220>
<223> Synthetic

<400> 163
ggattcacct ttagtagtta ttgg                                        24

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

<220>
<223> Synthetic

<400> 164
Gly Phe Thr Phe Ser Ser Tyr Trp
 1               5


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

<220>
<223> Synthetic

<400> 165
ataaaccaag atggcagtga gaaa 24

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

<220>
<223> Synthetic

<400> 166
Ile Asn Gln Asp Gly Ser Glu Lys
 1   5

<210> 167
<211> 60
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 167
tcgagagatc ttgttccacc tcgtcagggg gataactact actacttcgg tatggacgtc 60

<210> 168
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 168
Ser Arg Asp Leu Val Pro Pro Arg Gln Gly Asp Asn Tyr Tyr Tyr Phe
 1   5   10   15
Gly Met Asp Val
            20

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

<220>
<223> Synthetic

<400> 169
gacatccaga tgacccagtc tccttccacc ctgtctgcat ctgtaggaga cagagtcatt 60
atcacttgcc gggccagtca gaatattaat aattggttgg cctggtatca gcagcaacca 120
gggaaagccc ctaagctcct gatctatgag gcgtcttctt tagaaagtgg ggtcccatca 180

aggttcagcg gcagtggatc tgggacagaa ttcactctca ccatcggcag cctgcagcct 240
gatgattttg caacttatta ctgccaacac tataattctt attctcggac gttcggccaa 300
gggaccaaag tggatatcaa a 321

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

<220>
<223> Synthetic

<400> 170
Asp Ile Gln Met Thr Gln Ser Pro Ser Thr Leu Ser Ala Ser Val Gly
 1   5   10   15
Asp Arg Val Ile Ile Thr Cys Arg Ala Ser Gln Asn Ile Asn Asn Trp
            20   25   30
Leu Ala Trp Tyr Gln Gln Gln Pro Gly Lys Ala Pro Lys Leu Leu Ile
        35   40   45
Tyr Glu Ala Ser Ser Leu Glu Ser Gly Val Pro Ser Arg Phe Ser Gly
    50   55   60
Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Gly Ser Leu Gln Pro
65   70   75   80
Asp Asp Phe Ala Thr Tyr Tyr Cys Gln His Tyr Asn Ser Tyr Ser Arg
                85   90   95
Thr Phe Gly Gln Gly Thr Lys Val Asp Ile Lys
            100   105

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

<220>
<223> Synthetic

<400> 171
cagaatatta ataattgg 18

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

<220>
<223> Synthetic

<400> 172
Gln Asn Ile Asn Asn Trp
 1   5

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

<220>
<223> Synthetic

<400> 173
gaggcgtct 9

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

<220>
<223> Synthetic

<400> 174
Glu Ala Ser
1

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

<220>
<223> Synthetic

<400> 175
caacactata attcttattc tcggacg 27

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

<220>
<223> Synthetic

<400> 176
Gln His Tyr Asn Ser Tyr Ser Arg Thr
1 5

<210> 177
<211> 383
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 177
gaggtgcagc tggtgcagtc tgggggaagt ttggtccagc cgggggggtc cctgagactc 60
tcctgtacag cctctggatt cacctttagt agctattgga tgagctgggt ccgccaggct 120
ccagggaagg ggctggagtg ggtggccaac atacaacaag atgaaagtga gaaatactat 180
gtggactctg tgaagggccg attctccatc tccagagaca acgccaagaa gtcactgtat 240
ctgcaaatga acagcctgag agccgaagac acggctgttt atttctgtgc gagagatctt 300
gtaccacctc gtcaggggga ttactaccac tatttcggta tggacgtctg gggccaaggg 360
accctggtca ccgtctcctc agc 383

<210> 178
<211> 127

<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 178
Glu Val Gln Leu Val Gln Ser Gly Gly Ser Leu Val Gln Pro Gly Gly
 1   5   10   15
Ser Leu Arg Leu Ser Cys Thr 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 Gln Gln Asp Glu Ser Glu Lys Tyr Tyr Val Asp Ser Val
    50   55   60
Lys Gly Arg Phe Ser Ile Ser Arg Asp Asn Ala Lys Lys Ser Leu Tyr
65   70   75   80
Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Phe Cys
                85   90   95
Ala Arg Asp Leu Val Pro Pro Arg Gln Gly Asp Tyr Tyr His Tyr Phe
            100   105   110
Gly Met Asp Val Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
        115   120   125

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

<220>
<223> Synthetic

<400> 179
ggattcacct ttagtagcta ttgg   24

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

<220>
<223> Synthetic

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

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

<220>
<223> Synthetic

<400> 181
atacaacaag atgaaagtga gaaa   24

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

<220>
<223> Synthetic

<400> 182
Ile Gln Gln Asp Glu Ser Glu Lys
 1   5

<210> 183
<211> 60
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 183
gcgagagatc ttgtaccacc tcgtcagggg gattactacc actatttcgg tatggacgtc 60

<210> 184
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

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

<210> 185
<211> 324
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 185
gccatccgga tgacccagtc tccttccacc ctgtctgcat ctgtaggaga cagagtcacc 60
atcacttgcc gggccagtca gagtattagt gactggttgg cctggtatca gcagaaacca 120
gggaaagccc ctaatctcct gatctataag gcgtctagtt tagaaagtgg ggtcccatca 180
aggttcagcg gcagtggatc tgggacagaa ttcactctca ccatcagcgg cctgcagcct 240
gatgattttg caacttatta ctgccaacag tataatagtt attctcggac gttcggccaa 300
gggaccaagc tggagatcaa acga   324

<210> 186
<211> 108
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 186
Ala Ile Arg Met Thr Gln Ser Pro Ser Thr Leu Ser Ala Ser Val Gly
 1   5   10   15
Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Ser Asp Trp
            20   25   30
Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Asn Leu Leu Ile
        35   40   45
Tyr Lys Ala Ser Ser Leu Glu Ser Gly Val Pro Ser Arg Phe Ser Gly
    50   55   60
Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Gly Leu Gln Pro
65   70   75   80
Asp Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Tyr Asn Ser Tyr Ser Arg
                85   90   95
Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys Arg
            100   105

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

<220>
<223> Synthetic

<400> 187
cagagtatta gtgactgg   18

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

<220>
<223> Synthetic

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

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

<220>
<223> Synthetic

<400> 189
aaggcgtct   9

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

<220>
<223> Synthetic

<400> 190
Lys Ala Ser
 1

<210> 191
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 191
caacagtata atagttattc tcggacg 27

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

<220>
<223> Synthetic

<400> 192
Gln Gln Tyr Asn Ser Tyr Ser Arg Thr
 1   5

<210> 193
<211> 371
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 193
caggtgcagt tggtggagtc tggagctgaa atgaagaagc ctggggcctc agtgaaggtc 60
tcctgcaagg cttctggtta cacctttacc gactatggta tcaactgggt gcgacaggcc 120
cctggacaag ggcttgagtg gatgggatgg gtcagcggtt acaatggtaa cacagtcttt 180
gcacagaaga tccagggcag agtcaccatg accacagaca catccacgag cacggcctac 240
atggagctga ggagcctgag atctgacgac acggccgtgt atttctgtgc ccgtatctca 300
gttcggggac actcctacta ccacggtatg ggcgtctggg gccaagggac cacggtcacc 360
gtctcctcag c 371

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

<220>
<223> Synthetic

<400> 194
Gln Val Gln Leu Val Glu Ser Gly Ala Glu Met Lys Lys Pro Gly Ala

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 1               5                  10                  15
Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asp 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 Val Ser Gly Tyr Asn Gly Asn Thr Val Phe Ala Gln Lys Ile
    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 Val Tyr Phe Cys
                85                  90                  95
Ala Arg Ile Ser Val Arg Gly His Ser Tyr Tyr His Gly Met Gly Val
            100                 105                 110
Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser
        115                 120
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<210> 195
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 195
ggttacacct ttaccgacta tggt 24

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

<220>
<223> Synthetic

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

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

<220>
<223> Synthetic

<400> 197
gtcagcggtt acaatggtaa caca 24

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

<220>
<223> Synthetic

<400> 198
Val Ser Gly Tyr Asn Gly Asn Thr
 1   5

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

<220>
<223> Synthetic

<400> 199
gcccgtatct cagttcgggg acactcctac taccacggta tgggcgtc   48

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

<220>
<223> Synthetic

<400> 200
Ala Arg Ile Ser Val Arg Gly His Ser Tyr Tyr His Gly Met Gly Val
 1   5   10   15

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

<220>
<223> Synthetic

<400> 201
gccatccgga tgacccagtc tccatcctca ctgtctgcat ctgtaggaga cagagtcacc 60
atcacttgtc gggcgagtca ggacattaac agttatttag cctggtttca gcagaaacca 120
gggaaagccc ctaagtccct gatctatact gcatccagtt tgcaaagtgg ggtcccatca 180
aagttcagcg gcagtggatc tgggacagat ttcactctca ccatcagcag cctgcagcct 240
gaagattttg caacttatta ctgccaacag tataatactt acccgtacac ttttggccag 300
gggaccaagg tggagagcaa a   321

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

<220>
<223> Synthetic

<400> 202
Ala Ile Arg 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 Asp Ile Asn Ser Tyr
            20   25   30
Leu Ala Trp Phe Gln Gln Lys Pro Gly Lys Ala Pro Lys Ser Leu Ile
        35   40   45

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Tyr Thr Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Lys Phe Ser Gly
    50                  55                  60
Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
65                  70                  75                  80
Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Tyr Asn Thr Tyr Pro Tyr
                85                  90                  95
Thr Phe Gly Gln Gly Thr Lys Val Glu Ser Lys
            100                 105
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<210> 203
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 203
caggacatta acagttat 18

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

<220>
<223> Synthetic

<400> 204
```
Gln Asp Ile Asn Ser Tyr
 1               5
```

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

<220>
<223> Synthetic

<400> 205
actgcatcc 9

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

<220>
<223> Synthetic

<400> 206
```
Thr Ala Ser
 1
```

<210> 207
<211> 27

<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 207
caacagtata atacttaccc gtacact 27

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

<220>
<223> Synthetic

<400> 208
Gln Gln Tyr Asn Thr Tyr Pro Tyr Thr
 1   5

<210> 209
<211> 354
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 209
gaagtgcagc tggtggagtc tgggggaggc gtggtccagc ctgggaggtc cctgagactc 60
tcctgtgcag cgtctggatt caccttcagt aattatggca tgcactgggt ccgccaggct 120
ccaggcaagg ggctggagtg ggtgacagtt atatggtatg atggaagtta taaatattat 180
gcagactccg tgaagggccg attcaccatc tccagagaca attccaagaa tagattgtat 240
ctgcaaatga atagcctgag agccgaggac acggctgtgt attactgtgc gagaggagag 300
ctcggggatg cttttgatat ctggggccaa gggacaatgg tcaccgtctc ttca 354

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

<220>
<223> Synthetic

<400> 210
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
Thr Val Ile Trp Tyr Asp Gly Ser Tyr Lys Tyr Tyr Ala Asp Ser Val
    50   55   60
Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Arg Leu Tyr
65   70   75   80
Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
                85   90   95
Ala Arg Gly Glu Leu Gly Asp Ala Phe Asp Ile Trp Gly Gln Gly Thr

100 105 110
Met Val Thr Val Ser Ser
115

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

<220>
<223> Synthetic

<400> 211
ggattcacct tcagtaatta tggc 24

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

<220>
<223> Synthetic

<400> 212
Gly Phe Thr Phe Ser Asn Tyr Gly
1 5

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

<220>
<223> Synthetic

<400> 213
atatggtatg atggaagtta taaa 24

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

<220>
<223> Synthetic

<400> 214
Ile Trp Tyr Asp Gly Ser Tyr Lys
1 5

<210> 215
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 215
gcgagaggag agctcgggga tgcttttgat atc 33

<210> 216
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 216
Ala Arg Gly Glu Leu Gly Asp Ala Phe Asp Ile
1 5 10

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

<220>
<223> Synthetic

<400> 217
gacatccaga tgacccagtc tccttccacc ctgtctgcat ctgtaggaga cagacttacc 60
atcacttgcc gggccagtca gagtattagt acctggttgg cctggtatca gcagaaacca 120
gggaaagccc ctaccctcct gatctataag gcgtctagtt tagagagtgg ggtcccatca 180
aggttcagcg gcagtggatc tgggacagat ttcactctca ccatcagcag cctgcagcct 240
gatgattttg caacttatta ctgccaacag tataagactt cttggacatt cggccaaggg 300
accaagctgg agatcaaacg a 321

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

<220>
<223> Synthetic

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

<210> 219
<211> 18

<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 219
cagagtatta gtacctgg 18

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

<220>
<223> Synthetic

<400> 220
Gln Ser Ile Ser Thr Trp
 1   5

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

<220>
<223> Synthetic

<400> 221
aaggcgtct 9

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

<220>
<223> Synthetic

<400> 222
Lys Ala Ser
 1

<210> 223
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 223
caacagtata agacttcttg gaca 24

<210> 224
<211> 8
<212> PRT

<213> Artificial Sequence

<220>
<223> Synthetic

<400> 224
Gln Gln Tyr Lys Thr Ser Trp Thr
 1   5

<210> 225
<211> 372
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 225
cagatcacct tgaaggagtc tggtcctacg ctggtgaaac ccacacagac cctcacgctg 60
acctgcacct tctctggatt ctcactcact actactgggg tgggtgtggg ctggatccgt 120
cagcccccag gaaaggccct ggaatggctt gcactcattt attggaatga tcttaagcgc 180
tacagcccat ctctgaagaa caggctcacc atcaccaagg acacctccag acaccaggtg 240
gtccttacaa tgaccaacat ggaccctatg gacacagcca catattactg tgcacacaga 300
ccccctttact atggttcggg gagtggctgg ttcgaccccct ggggcccggg aaccacggtc 360
accgtctcct ca   372

<210> 226
<211> 124
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 226
Gln Ile Thr Leu Lys Glu Ser Gly Pro Thr Leu Val Lys Pro Thr Gln
 1   5   10   15
Thr Leu Thr Leu Thr Cys Thr Phe Ser Gly Phe Ser Leu Thr Thr Thr
            20   25   30
Gly Val Gly Val Gly Trp Ile Arg Gln Pro Pro Gly Lys Ala Leu Glu
        35   40   45
Trp Leu Ala Leu Ile Tyr Trp Asn Asp Leu Lys Arg Tyr Ser Pro Ser
    50   55   60
Leu Lys Asn Arg Leu Thr Ile Thr Lys Asp Thr Ser Arg His Gln Val
65   70   75   80
Val Leu Thr Met Thr Asn Met Asp Pro Met Asp Thr Ala Thr Tyr Tyr
                85   90   95
Cys Ala His Arg Pro Leu Tyr Tyr Gly Ser Gly Ser Gly Trp Phe Asp
            100   105   110
Pro Trp Gly Pro Gly Thr Thr Val Thr Val Ser Ser
        115   120

<210> 227
<211> 30
<212> DNA
<213> Artificial Sequence

<220>

<223> Synthetic

<400> 227
ggattctcac tcactactac tggggtgggt 30

<210> 228
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 228
Gly Phe Ser Leu Thr Thr Thr Gly Val Gly
1 5 10

<210> 229
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 229
atttattgga atgatcttaa g 21

<210> 230
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 230
Ile Tyr Trp Asn Asp Leu Lys
1 5

<210> 231
<211> 48
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 231
gcacacagac ccctttacta tggttcgggg agtggctggt tcgacccc 48

<210> 232
<211> 16
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 232
Ala His Arg Pro Leu Tyr Tyr Gly Ser Gly Ser Gly Trp Phe Asp Pro
 1   5   10   15

<210> 233
<211> 339
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 233
gccatccagt tgacccagtc tccagactcc ctggctctgt ctctgggcga gagggccacc 60
atcaactgca agtccagcca gagtgtttta tacagttcca acaataagaa ctacttagct 120
tggtaccagc agaaaccagg acagcctcct aaactactca tttactgggc atcttcccgg 180
gaatccgggg tccctgaccg attcagtggc agcgggtctg ggacagattt cactctcacc 240
atcagcagcc tgcaggctga ggatgtggca gtttattact gtcagcaatt ttatggtact 300
ccgtacactt ttggccaggg gaccaaagtg gatatcaaa   339

<210> 234
<211> 113
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 234
Ala Ile Gln Leu Thr Gln Ser Pro Asp Ser Leu Ala Leu Ser Leu Gly
 1   5   10   15
Glu Arg Ala Thr Ile Asn Cys Lys Ser Ser Gln Ser Val Leu Tyr Ser
            20   25   30
Ser Asn Asn Lys Asn Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln
        35   40   45
Pro Pro Lys Leu Leu Ile Tyr Trp Ala Ser Ser Arg Glu Ser Gly Val
    50   55   60
Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr
65   70   75   80
Ile Ser Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln Gln
                85   90   95
Phe Tyr Gly Thr Pro Tyr Thr Phe Gly Gln Gly Thr Lys Val Asp Ile
            100   105   110
Lys

<210> 235
<211> 36
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 235
cagagtgttt tatacagttc caacaataag aactac   36

<210> 236
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 236
Gln Ser Val Leu Tyr Ser Ser Asn Asn Lys Asn Tyr
 1   5   10

<210> 237
<211> 9
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 237
tgggcatct   9

<210> 238
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 238
Trp Ala Ser
 1

<210> 239
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 239
cagcaatttt atggtactcc gtacact   27

<210> 240
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 240
Gln Gln Phe Tyr Gly Thr Pro Tyr Thr
 1   5

<210> 241
<211> 357
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 241
gaggtgcagc tggtggagtc tgggggagac ttggtacatc ctggcaggtc cctgagactc 60
tcctgtgtag cctctggatt cacctttgat gattatacca tgcactgggt ccggcaagct 120
ccagggaagg gcctggagtg ggtctcagct attagttgga atggtgataa cataaactat 180
gcgggctctg tgaagggccg attcaccatc tccagagaca acgccaagaa ctccctgtat 240
ctggaaatga acagtctgcg agttgaggac acggccttct attattgtgc aaaagggcgt 300
ggattcagtt ttggctttaa ctacttgggc cagggaacca tggtcaccgt ctcctca 357

<210> 242
<211> 119
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 242
Glu Val Gln Leu Val Glu Ser Gly Gly Asp Leu Val His Pro Gly Arg
 1   5   10   15
Ser Leu Arg Leu Ser Cys Val Ala Ser Gly Phe Thr Phe Asp Asp Tyr
            20   25   30
Thr Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35   40   45
Ser Ala Ile Ser Trp Asn Gly Asp Asn Ile Asn Tyr Ala Gly 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 Glu Met Asn Ser Leu Arg Val Glu Asp Thr Ala Phe Tyr Tyr Cys
                85   90   95
Ala Lys Gly Arg Gly Phe Ser Phe Gly Phe Asn Tyr Leu Gly Gln Gly
            100   105   110
Thr Met Val Thr Val Ser Ser
        115

<210> 243
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 243
ggattcacct ttgatgatta tacc 24

<210> 244
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 244
Gly Phe Thr Phe Asp Asp Tyr Thr
 1   5

<210> 245
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 245
attagttgga atggtgataa cata   24

<210> 246
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 246
Ile Ser Trp Asn Gly Asp Asn Ile
 1   5

<210> 247
<211> 36
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 247
gcaaaagggc gtggattcag ttttggcttt aactac   36

<210> 248
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 248
Ala Lys Gly Arg Gly Phe Ser Phe Gly Phe Asn Tyr
 1   5   10

<210> 249
<211> 321
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 249
gccatccgga tgacccagtc tccatcctca ctgtctgcat ctgtgggaga cagagttacc 60
atcacttgtc gggcgagtca ggacattagc aattatttag cctggtttca gcagcaacca 120
ggaaaagccc ctaagtccct gatctatgct acatccagtt tgaacagtgg ggtcccatca 180
aagttcagcg gcagtggatc tgggacagac ttcactctca ccatcagcag cctgcagcct 240
gaagattttg caacttatta ctgccaacaa tataagtcct accctctcac tttcggcgga 300
gggaccaagg tggaaatcaa a 321

<210> 250
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

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

<210> 251
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 251
caggacatta gcaattat 18

<210> 252
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 252
Gln Asp Ile Ser Asn Tyr
 1   5

<210> 253
<211> 9
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 253
gctacatcc 9

<210> 254
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 254
Ala Thr Ser
1

<210> 255
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 255
caacaatata agtcctaccc tctcact 27

<210> 256
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 256
Gln Gln Tyr Lys Ser Tyr Pro Leu Thr
1 5

<210> 257
<211> 372
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 257
gaggtgcagc tgttgcagtc cgggggaggc ttggtccagc ctgggggtc cctgagactc 60
tcctgtgcag cctctggatt cacctttagt cactattgga tgagctgggt ccgccagggt 120

cctgggaagg ggctggagtg ggtggccact attaagaaag atggaagtga gagctactat 180
gtggactctg tgaggggccg attcaccatt tccagagaca acgccaagaa ctcactgtat 240
ttgcaaatga acagcctgcg aaccgaggac acggctgtgt attactgtgc gagagatata 300
gtgactccga atgtgggtta ttacttcgga atggacgtct ggggccaagg gaccacggtc 360
accgtctcct ca 372

<210> 258
<211> 124
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 258
Glu Val Gln Leu Leu Gln 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 His Tyr
            20   25   30
Trp Met Ser Trp Val Arg Gln Gly Pro Gly Lys Gly Leu Glu Trp Val
        35   40   45
Ala Thr Ile Lys Lys Asp Gly Ser Glu Ser Tyr Tyr Val Asp Ser Val
    50   55   60
Arg 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 Thr Glu Asp Thr Ala Val Tyr Tyr Cys
                85   90   95
Ala Arg Asp Ile Val Thr Pro Asn Val Gly Tyr Tyr Phe Gly Met Asp
            100   105   110
Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser
        115   120

<210> 259
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 259
ggattcacct ttagtcacta ttgg 24

<210> 260
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 260
Gly Phe Thr Phe Ser His Tyr Trp
 1   5

<210> 261
<211> 24
<212> DNA

<213> Artificial Sequence

<220>
<223> Synthetic

<400> 261
attaagaaag atggaagtga gagc 24

<210> 262
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 262
Ile Lys Lys Asp Gly Ser Glu Ser
 1 5

<210> 263
<211> 51
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 263
gcgagagata tagtgactcc gaatgtgggt tattacttcg gaatggacgt c 51

<210> 264
<211> 17
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 264
Ala Arg Asp Ile Val Thr Pro Asn Val Gly Tyr Tyr Phe Gly Met Asp
 1 5 10 15
Val

<210> 265
<211> 321
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 265
gacatccaga tgacccagtc tccttccacc ctgtctgcat ctgtaggaga cagagtcacc 60
atcacttgcc gggccagtca gagtattagt agttggttgt cctggtatca gcagaaacct 120
gggaaagccc ctaagctcct gatctatatg gcgtctactt tagaaagtgg ggtcccatca 180
aggttcagcg gcagtggatc tgggacagat ttcactctca ccatcaccag cctgcagcct 240

gatgattttg caacttatta ctgccaacag tctaatagtt attctcggac gttcggccac 300
gggaccaagc tggagatcaa a 321

<210> 266
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 266
Asp Ile Gln Met Thr Gln Ser Pro Ser Thr 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 Trp
 20 25 30
Leu Ser Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
 35 40 45
Tyr Met Ala Ser Thr Leu Glu Ser Gly Val Pro Ser Arg Phe Ser Gly
 50 55 60
Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Thr Ser Leu Gln Pro
65 70 75 80
Asp Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Ser Asn Ser Tyr Ser Arg
 85 90 95
Thr Phe Gly His Gly Thr Lys Leu Glu Ile Lys
 100 105

<210> 267
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 267
cagagtatta gtagttgg 18

<210> 268
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 268
Gln Ser Ile Ser Ser Trp
 1 5

<210> 269
<211> 9
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 269
atggcgtct 9

<210> 270
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 270
Met Ala Ser
 1

<210> 271
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 271
caacagtcta atagttattc tcggacg 27

<210> 272
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 272
Gln Gln Ser Asn Ser Tyr Ser Arg Thr
 1 5

<210> 273
<211> 372
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 273
caggtgcagc tggtggagtc cgggggaggc ctggtccagc ctgggggtc cctgagactc 60
tcctgtgcag ccgctggatt cacttttagt cactattgga tgagctgggt ccgccaggct 120
cctgggaagg ggctggagtg ggtggccacc ataaagaaag atggaagtga gagatactat 180
gtggactctg tgaagggccg attcaccatt tccagagaca acgccaggaa ctcaatgtat 240
ttggaaatga atagcctgcg aaccgaggac acggctatat attactgtgc gagagatata 300
gtgactccga atacggacta ctacttcggt atggacgtct ggggccaagg gaccacggtc 360
accgtctcct ca 372

<210> 274
<211> 124
<212> PRT

<213> Artificial Sequence

<220>
<223> Synthetic

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

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

<220>
<223> Synthetic

<400> 275
ggattcactt ttagtcacta ttgg   24

<210> 276
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 276
Gly Phe Thr Phe Ser His Tyr Trp
 1   5

<210> 277
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 277
ataaagaaag atggaagtga gaga   24

<210> 278

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

<220>
<223> Synthetic

<400> 278
Ile Lys Lys Asp Gly Ser Glu Arg
 1   5

<210> 279
<211> 51
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 279
gcgagagata tagtgactcc gaatacggac tactacttcg gtatggacgt c   51

<210> 280
<211> 17
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 280
Ala Arg Asp Ile Val Thr Pro Asn Thr Asp Tyr Tyr Phe Gly Met Asp
 1   5   10   15
Val

<210> 281
<211> 321
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 281
gacatccagt tgacccagtc tccttccacc ctgtctgcat ctgtaggaga cagagtcacc 60
atcacttgcc gggccagtca gagttttaat aactggttgt cctggtatca gcagaaacct 120
gggaaagccc ctaagctcct gatctatatg gcgtctactt tagaaagtgg ggtcccatca 180
aggttcagcg gcagtggatc tgggacagat ttcactctca ccatcaacag cctgcagcct 240
gatgattttg caacttatta ctgccaacag tctaatagtt attctcggac gttcggccac 300
gggaccaagg tggaaatcaa a   321

<210> 282
<211> 107
<212> PRT
<213> Artificial Sequence

<220>

<223> Synthetic

<400> 282
Asp Ile Gln Leu Thr Gln Ser Pro Ser Thr Leu Ser Ala Ser Val Gly
 1   5   10   15
Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Phe Asn Asn Trp
            20   25   30
Leu Ser Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
        35   40   45
Tyr Met Ala Ser Thr Leu Glu Ser 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
Asp Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Ser Asn Ser Tyr Ser Arg
                85   90   95
Thr Phe Gly His Gly Thr Lys Val Glu Ile Lys
            100   105

<210> 283
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 283
cagagtttta ataactgg   18

<210> 284
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 284
Gln Ser Phe Asn Asn Trp
 1   5

<210> 285
<211> 9
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 285
atggcgtct   9

<210> 286
<211> 3
<212> PRT
<213> Artificial Sequence

<220>

<223> Synthetic

<400> 286
Met Ala Ser
 1

<210> 287
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 287
caacagtcta atagttattc tcggacg 27

<210> 288
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 288
Gln Gln Ser Asn Ser Tyr Ser Arg Thr
 1   5

<210> 289
<211> 381
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 289
caggtgcagc tggtggagtc tgggggaagt ttggtccagc cgggggggtc cctgagactc 60
gcctgtacag cctctggatt cacctttagt agctattgga tgagctgggt ccgccaggct 120
ccagggaagg ggctggagtg ggtggccaac atacaacaag atgaaaatga gaaatactat 180
gtggactctg tgaagggccg attctccatc tccagagaca acgccaagaa gtcactgtat 240
ctgcaaatga acagcctgag agtcgaagat acggctgtgt atttctgtgc gagagatctt 300
gtgccacctc gtcaggggga ttattaccac tatttcggta tggacgtctg gggccaaggg 360
accacggtca ccgtctcctc a 381

<210> 290
<211> 127
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 290
Gln Val Gln Leu Val Glu Ser Gly Gly Ser Leu Val Gln Pro Gly Gly
 1   5   10   15
Ser Leu Arg Leu Ala Cys Thr Ala Ser Gly Phe Thr Phe Ser Ser Tyr

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            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 Gln Gln Asp Glu Asn Glu Lys Tyr Tyr Val Asp Ser Val
    50                  55                  60
Lys Gly Arg Phe Ser Ile Ser Arg Asp Asn Ala Lys Lys Ser Leu Tyr
65                  70                  75                  80
Leu Gln Met Asn Ser Leu Arg Val Glu Asp Thr Ala Val Tyr Phe Cys
                85                  90                  95
Ala Arg Asp Leu Val Pro Pro Arg Gln Gly Asp Tyr Tyr His Tyr Phe
            100                 105                 110
Gly Met Asp Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser
        115                 120                 125
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<210> 291
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 291
ggattcacct ttagtagcta ttgg 24

<210> 292
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 292
```
Gly Phe Thr Phe Ser Ser Tyr Trp
 1               5
```

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

<220>
<223> Synthetic

<400> 293
atacaacaag atgaaaatga gaaa 24

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

<220>
<223> Synthetic

<400> 294
```
Ile Gln Gln Asp Glu Asn Glu Lys
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1 5

<210> 295
<211> 60
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 295
gcgagagatc ttgtgccacc tcgtcagggg gattattacc actatttcgg tatggacgtc 60

<210> 296
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 296
Ala Arg Asp Leu Val Pro Pro Arg Gln Gly Asp Tyr Tyr His Tyr Phe
1 5 10 15
Gly Met Asp Val
20

<210> 297
<211> 321
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 297
gacatccagt tgacccagtc tccttccacc ctgtctgcat ctgtaggaga cagagtcacc 60
atcacttgcc gggccagtca gagtattagt gactggttgg cctggtatca gcagaaacca 120
gggaaagccc ctaatctcct gatctataag gcgtctactt tagaaagtgg ggtcccatca 180
aggttcagcg gcagtggatc tgggacagaa ttcactctca ccatcagcag cctgcagcct 240
gatgattttg caacttatta ctgccaacag tataatagtt attctcggac gttcggccaa 300
gggaccaagg tggaaatcaa a 321

<210> 298
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 298
Asp Ile Gln Leu Thr Gln Ser Pro Ser Thr Leu Ser Ala Ser Val Gly
1 5 10 15
Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Ser Asp Trp
20 25 30
Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Asn Leu Leu Ile

```
        35                  40                  45
Tyr Lys Ala Ser Thr Leu Glu 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
Asp Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Tyr Asn Ser Tyr Ser Arg
                85                  90                  95
Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
            100                 105
```

<210> 299
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 299
cagagtatta gtgactgg 18

<210> 300
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 300
```
Gln Ser Ile Ser Asp Trp
 1               5
```

<210> 301
<211> 9
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 301
aaggcgtct 9

<210> 302
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 302
```
Lys Ala Ser
 1
```

<210> 303

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

<220>
<223> Synthetic

<400> 303
caacagtata atagttattc tcggacg 27

<210> 304
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 304
Gln Gln Tyr Asn Ser Tyr Ser Arg Thr
1 5

<210> 305
<211> 381
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 305
caggtgcagc tggtggagtc tgggggaggc ttggtccagc ctgggggtc cctgagactc 60
tcctgtgcag cctctggatt caccttcagt agttattgga tgagttgggt ccgccaggtt 120
ccagggaagg ggctggagtg ggtggccaac atgaaccaag atggaactga gaaatactat 180
gtggactctg tgaagggccg actcaccata tccagagaaa atgtcaagaa ttcattgtat 240
ctgcaaatga acggcctgag agccgaagac acggctgtgt attactgtgc gagagatctt 300
gttccacctc gtcaggggga ttactactac tacttcggta tggacgtctg gggccatggg 360
acaatggtca ccgtctcttc a 381

<210> 306
<211> 127
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 306
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 Val Pro Gly Lys Gly Leu Glu Trp Val
35 40 45
Ala Asn Met Asn Gln Asp Gly Thr Glu Lys Tyr Tyr Val Asp Ser Val
50 55 60
Lys Gly Arg Leu Thr Ile Ser Arg Glu Asn Val Lys Asn Ser Leu Tyr
65 70 75 80
Leu Gln Met Asn Gly Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys

```
                85                  90                  95
Ala Arg Asp Leu Val Pro Pro Arg Gln Gly Asp Tyr Tyr Tyr Tyr Phe
            100                 105                 110
Gly Met Asp Val Trp Gly His Gly Thr Met Val Thr Val Ser Ser
        115                 120                 125


<210> 307
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 307
ggattcacct tcagtagtta ttgg                                          24

<210> 308
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 308
Gly Phe Thr Phe Ser Ser Tyr Trp
 1               5


<210> 309
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 309
atgaaccaag atggaactga gaaa                                          24

<210> 310
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 310
Met Asn Gln Asp Gly Thr Glu Lys
 1               5


<210> 311
<211> 60
<212> DNA
<213> Artificial Sequence
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<220>
<223> Synthetic

<400> 311
gcgagagatc ttgttccacc tcgtcagggg gattactact actacttcgg tatggacgtc 60

<210> 312
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 312
Ala Arg Asp Leu Val Pro Pro Arg Gln Gly Asp Tyr Tyr Tyr Tyr Phe
 1   5   10   15
Gly Met Asp Val
            20

<210> 313
<211> 321
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 313
gccatccaga tgacccagtc tccttccacc ctgtctgcat ctgtaggaga catcgtcacc 60
atcacttgcc gggccagtca gagtattagt gactggttgg cctggtatca gcagaaacca 120
gggaaagccc ctaaactcct gatttttaag gcgtctagtt tagaaagtgg ggtcccatca 180
aggttcagcg gcagtggatc tgggacagat ttcactctca ccatcagcag cctgcagcct 240
gatgattttg caacttacta ctgccaacag tataatagct attctcggac gttcggccaa 300
gggaccaaag tggatatcaa a   321

<210> 314
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 314
Ala Ile Gln Met Thr Gln Ser Pro Ser Thr Leu Ser Ala Ser Val Gly
 1   5   10   15
Asp Ile Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Ser Asp Trp
            20   25   30
Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
        35   40   45
Phe Lys Ala Ser Ser Leu Glu Ser Gly Val Pro Ser Arg Phe Ser Gly
    50   55   60
Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
65   70   75   80
Asp Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Tyr Asn Ser Tyr Ser Arg
                85   90   95
Thr Phe Gly Gln Gly Thr Lys Val Asp Ile Lys

100 105

<210> 315
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 315
cagagtatta gtgactgg 18

<210> 316
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 316
Gln Ser Ile Ser Asp Trp
1 5

<210> 317
<211> 9
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 317
aaggcgtct 9

<210> 318
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 318
Lys Ala Ser
1

<210> 319
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 319

caacagtata atagctattc tcggacg 27

<210> 320
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 320
Gln Gln Tyr Asn Ser Tyr Ser Arg Thr
1 5

<210> 321
<211> 354
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 321
caggtgcagc tggtggagtc tgggggaggc ttcgtccagc ctgggggggtc cctgagactc 60
tcctgtgcag cctctggatt cacctttacc aactatgcca tgagctgggt ccgccaggct 120
ccagggaagg ggctggagtg ggtctcagct attagtggtg ttggtggtag cacatactac 180
gcagactccg tgaagggccg gttcaccatc tccagagaca cttccaagaa tatgctgtat 240
ctgcaaatga acagcctgag agccgaggac acggccgtat attactgtgc gaaagccccg 300
cactggggcc cctttggctc ctggggccag ggaaccctgg tcaccgtctc ctca 354

<210> 322
<211> 118
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 322
Gln Val Gln Leu Val Glu Ser Gly Gly Gly Phe Val Gln Pro Gly Gly
1 5 10 15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Thr Asn Tyr
20 25 30
Ala Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45
Ser Ala Ile Ser Gly Val Gly Gly Ser Thr Tyr Tyr Ala Asp Ser Val
50 55 60
Lys Gly Arg Phe Thr Ile Ser Arg Asp Thr Ser Lys Asn Met Leu Tyr
65 70 75 80
Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95
Ala Lys Ala Pro His Trp Gly Pro Phe Gly Ser Trp Gly Gln Gly Thr
100 105 110
Leu Val Thr Val Ser Ser
115

<210> 323
<211> 24

<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 323
ggattcacct ttaccaacta tgcc 24

<210> 324
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 324
Gly Phe Thr Phe Thr Asn Tyr Ala
 1 5

<210> 325
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 325
attagtggtg ttggtggtag caca 24

<210> 326
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 326
Ile Ser Gly Val Gly Gly Ser Thr
 1 5

<210> 327
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 327
gcgaaagccc cgcactgggg ccccttggc tcc 33

<210> 328
<211> 11
<212> PRT

<213> Artificial Sequence

<220>
<223> Synthetic

<400> 328
Ala Lys Ala Pro His Trp Gly Pro Phe Gly Ser
 1   5   10

<210> 329
<211> 339
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 329
gacatccagt tgacccagtc tccagactcc ctggctgtgt ctctgggcga gagggccacc 60
atcaactgca agtccagcca gagtgtttta tacaggtcca acaataagaa gttcttagtt 120
tggtaccagc agaaaccagg acagcctcct aagccgctca tttactgggc atctacccgg 180
gaatccgggg tccctgaccg attcagtggc agcgggtctg ggacagattt cactctcacc 240
atcaacagcc tgcaggctga agatgtggca gtttattact gtcaacaata ttatagtact 300
ccgtacactt ttggccaggg gaccaaggtg gagatcaaa   339

<210> 330
<211> 113
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 330
Asp Ile Gln Leu Thr Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly
 1   5   10   15
Glu Arg Ala Thr Ile Asn Cys Lys Ser Ser Gln Ser Val Leu Tyr Arg
            20   25   30
Ser Asn Asn Lys Lys Phe Leu Val Trp Tyr Gln Gln Lys Pro Gly Gln
        35   40   45
Pro Pro Lys Pro Leu Ile Tyr Trp Ala Ser Thr Arg Glu Ser Gly Val
    50   55   60
Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr
65   70   75   80
Ile Asn Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln Gln
                85   90   95
Tyr Tyr Ser Thr Pro Tyr Thr Phe Gly Gln Gly Thr Lys Val Glu Ile
            100   105   110
Lys

<210> 331
<211> 36
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 331
cagagtgttt tatacaggtc caacaataag aagttc 36

<210> 332
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 332
Gln Ser Val Leu Tyr Arg Ser Asn Asn Lys Lys Phe
1 5 10

<210> 333
<211> 9
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 333
tgggcatct 9

<210> 334
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 334
Trp Ala Ser
1

<210> 335
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 335
caacaatatt atagtactcc gtacact 27

<210> 336
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 336
Gln Gln Tyr Tyr Ser Thr Pro Tyr Thr
 1   5

<210> 337
<211> 527
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 337
Leu Val Val Thr Pro Pro Gly Pro Glu Leu Val Leu Asn Val Ser Ser
 1   5   10   15
Thr Phe Val Leu Thr Cys Ser Gly Ser Ala Pro Val Val Trp Glu Arg
            20   25   30
Met Ser Gln Glu Pro Pro Gln Glu Met Ala Lys Ala Gln Asp Gly Thr
        35   40   45
Phe Ser Ser Val Leu Thr Leu Thr Asn Leu Thr Gly Leu Asp Thr Gly
    50   55   60
Glu Tyr Phe Cys Thr His Asn Asp Ser Arg Gly Leu Glu Thr Asp Glu
65   70   75   80
Arg Lys Arg Leu Tyr Ile Phe Val Pro Asp Pro Thr Val Gly Phe Leu
                85   90   95
Pro Asn Asp Ala Glu Glu Leu Phe Ile Phe Leu Thr Glu Ile Thr Glu
            100   105   110
Ile Thr Ile Pro Cys Arg Val Thr Asp Pro Gln Leu Val Val Thr Leu
        115   120   125
His Glu Lys Lys Gly Asp Val Ala Leu Pro Val Pro Tyr Asp His Gln
    130   135   140
Arg Gly Phe Phe Gly Ile Phe Glu Asp Arg Ser Tyr Ile Cys Lys Thr
145   150   155   160
Thr Ile Gly Asp Arg Glu Val Asp Ser Asp Ala Tyr Tyr Val Tyr Arg
                165   170   175
Leu Gln Val Ser Ser Ile Asn Val Ser Val Asn Ala Val Gln Thr Val
            180   185   190
Val Arg Gln Gly Glu Asn Ile Thr Leu Met Cys Ile Val Ile Gly Asn
        195   200   205
Glu Val Val Asn Phe Glu Trp Thr Tyr Pro Arg Lys Glu Ser Gly Arg
    210   215   220
Leu Val Glu Pro Val Thr Asp Phe Leu Leu Asp Met Pro Tyr His Ile
225   230   235   240
Arg Ser Ile Leu His Ile Pro Ser Ala Glu Leu Glu Asp Ser Gly Thr
                245   250   255
Tyr Thr Cys Asn Val Thr Glu Ser Val Asn Asp His Gln Asp Glu Lys
            260   265   270
Ala Ile Asn Ile Thr Val Val Glu Ser Gly Tyr Val Arg Leu Leu Gly
        275   280   285
Glu Val Gly Thr Leu Gln Phe Ala Glu Leu His Arg Ser Arg Thr Leu
    290   295   300
Gln Val Val Phe Glu Ala Tyr Pro Pro Pro Thr Val Leu Trp Phe Lys
305   310   315   320
Asp Asn Arg Thr Leu Gly Asp Ser Ser Ala Gly Glu Ile Ala Leu Ser
                325   330   335
Thr Arg Asn Val Ser Glu Thr Arg Tyr Val Ser Glu Leu Thr Leu Val
            340   345   350
Arg Val Lys Val Ala Glu Ala Gly His Tyr Thr Met Arg Ala Phe His
        355   360   365

```
Glu Asp Ala Glu Val Gln Leu Ser Phe Gln Leu Gln Ile Asn Val Pro
    370                 375                 380
Val Arg Val Leu Glu Leu Ser Glu Ser His Pro Asp Ser Gly Glu Gln
385                 390                 395                 400
Thr Val Arg Cys Arg Gly Arg Gly Met Pro Gln Pro Asn Ile Ile Trp
                405                 410                 415
Ser Ala Cys Arg Asp Leu Lys Arg Cys Pro Arg Glu Leu Pro Pro Thr
            420                 425                 430
Leu Leu Gly Asn Ser Ser Glu Glu Glu Ser Gln Leu Glu Thr Asn Val
        435                 440                 445
Thr Tyr Trp Glu Glu Glu Gln Glu Phe Glu Val Val Ser Thr Leu Arg
    450                 455                 460
Leu Gln His Val Asp Arg Pro Leu Ser Val Arg Cys Thr Leu Arg Asn
465                 470                 475                 480
Ala Val Gly Gln Asp Thr Gln Glu Val Ile Val Val Pro His Ser Leu
                485                 490                 495
Pro Phe Lys Glu Gln Lys Leu Ile Ser Glu Glu Asp Leu Gly Gly Glu
            500                 505                 510
Gln Lys Leu Ile Ser Glu Glu Asp Leu His His His His His His
        515                 520                 525
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<210> 338
<211> 732
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 338

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

225 230 235 240
Arg Ser Ile Leu His Ile Pro Ser Ala Glu Leu Glu Asp Ser Gly Thr
245 250 255
Tyr Thr Cys Asn Val Thr Glu Ser Val Asn Asp His Gln Asp Glu Lys
260 265 270
Ala Ile Asn Ile Thr Val Val Glu Ser Gly Tyr Val Arg Leu Leu Gly
275 280 285
Glu Val Gly Thr Leu Gln Phe Ala Glu Leu His Arg Ser Arg Thr Leu
290 295 300
Gln Val Val Phe Glu Ala Tyr Pro Pro Pro Thr Val Leu Trp Phe Lys
305 310 315 320
Asp Asn Arg Thr Leu Gly Asp Ser Ser Ala Gly Glu Ile Ala Leu Ser
325 330 335
Thr Arg Asn Val Ser Glu Thr Arg Tyr Val Ser Glu Leu Thr Leu Val
340 345 350
Arg Val Lys Val Ala Glu Ala Gly His Tyr Thr Met Arg Ala Phe His
355 360 365
Glu Asp Ala Glu Val Gln Leu Ser Phe Gln Leu Gln Ile Asn Val Pro
370 375 380
Val Arg Val Leu Glu Leu Ser Glu Ser His Pro Asp Ser Gly Glu Gln
385 390 395 400
Thr Val Arg Cys Arg Gly Arg Gly Met Pro Gln Pro Asn Ile Ile Trp
405 410 415
Ser Ala Cys Arg Asp Leu Lys Arg Cys Pro Arg Glu Leu Pro Pro Thr
420 425 430
Leu Leu Gly Asn Ser Ser Glu Glu Glu Ser Gln Leu Glu Thr Asn Val
435 440 445
Thr Tyr Trp Glu Glu Glu Gln Glu Phe Glu Val Val Ser Thr Leu Arg
450 455 460
Leu Gln His Val Asp Arg Pro Leu Ser Val Arg Cys Thr Leu Arg Asn
465 470 475 480
Ala Val Gly Gln Asp Thr Gln Glu Val Ile Val Val Pro His Ser Leu
485 490 495
Pro Phe Lys Glu Pro Arg Gly Pro Thr Ile Lys Pro Cys Pro Pro Cys
500 505 510
Lys Cys Pro Ala Pro Asn Leu Leu Gly Gly Pro Ser Val Phe Ile Phe
515 520 525
Pro Pro Lys Ile Lys Asp Val Leu Met Ile Ser Leu Ser Pro Ile Val
530 535 540
Thr Cys Val Val Val Asp Val Ser Glu Asp Asp Pro Asp Val Gln Ile
545 550 555 560
Ser Trp Phe Val Asn Asn Val Glu Val His Thr Ala Gln Thr Gln Thr
565 570 575
His Arg Glu Asp Tyr Asn Ser Thr Leu Arg Val Val Ser Ala Leu Pro
580 585 590
Ile Gln His Gln Asp Trp Met Ser Gly Lys Glu Phe Lys Cys Lys Val
595 600 605
Asn Asn Lys Asp Leu Pro Ala Pro Ile Glu Arg Thr Ile Ser Lys Pro
610 615 620
Lys Gly Ser Val Arg Ala Pro Gln Val Tyr Val Leu Pro Pro Pro Glu
625 630 635 640
Glu Glu Met Thr Lys Lys Gln Val Thr Leu Thr Cys Met Val Thr Asp
645 650 655
Phe Met Pro Glu Asp Ile Tyr Val Glu Trp Thr Asn Asn Gly Lys Thr
660 665 670
Glu Leu Asn Tyr Lys Asn Thr Glu Pro Val Leu Asp Ser Asp Gly Ser
675 680 685
Tyr Phe Met Tyr Ser Lys Leu Arg Val Glu Lys Lys Asn Trp Val Glu
690 695 700
Arg Asn Ser Tyr Ser Cys Ser Val Val His Glu Gly Leu His Asn His

```
705                 710                 715                 720
His Thr Thr Lys Ser Phe Ser Arg Thr Pro Gly Lys
                725                 730
```

<210> 339
<211> 726
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 339

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

```
Glu Asp Ala Glu Val Gln Leu Ser Phe Gln Leu Gln Ile Asn Val Pro
    370                 375                 380
Val Arg Val Leu Glu Leu Ser Glu Ser His Pro Asp Ser Gly Glu Gln
385                 390                 395                 400
Thr Val Arg Cys Arg Gly Arg Gly Met Pro Gln Pro Asn Ile Ile Trp
                405                 410                 415
Ser Ala Cys Arg Asp Leu Lys Arg Cys Pro Arg Glu Leu Pro Pro Thr
            420                 425                 430
Leu Leu Gly Asn Ser Ser Glu Glu Glu Ser Gln Leu Glu Thr Asn Val
        435                 440                 445
Thr Tyr Trp Glu Glu Glu Gln Glu Phe Glu Val Val Ser Thr Leu Arg
    450                 455                 460
Leu Gln His Val Asp Arg Pro Leu Ser Val Arg Cys Thr Leu Arg Asn
465                 470                 475                 480
Ala Val Gly Gln Asp Thr Gln Glu Val Ile Val Val Pro His Ser Leu
                485                 490                 495
Pro Phe Lys Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu
            500                 505                 510
Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp
        515                 520                 525
Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp
    530                 535                 540
Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly
545                 550                 555                 560
Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn
                565                 570                 575
Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp
            580                 585                 590
Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro
        595                 600                 605
Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu
    610                 615                 620
Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn
625                 630                 635                 640
Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile
                645                 650                 655
Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr
            660                 665                 670
Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys
        675                 680                 685
Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys
    690                 695                 700
Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu
705                 710                 715                 720
Ser Leu Ser Pro Gly Lys
                725
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<210> 340
<211> 527
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 340

```
Leu Val Ile Thr Pro Pro Gly Pro Glu Leu Ile Leu Asn Val Ser Ser
 1               5                  10                  15
Thr Phe Val Leu Thr Cys Ser Gly Ser Ala Pro Val Val Trp Glu Arg
```

```
            20                  25                  30
Met Ser Gln Glu Leu Pro Gln Glu Met Ala Lys Ala Gln Asp Asn Thr
        35                  40                  45
Phe Ser Ser Val Leu Thr Leu Thr Asn Leu Thr Gly Leu Asp Thr Gly
    50                  55                  60
Glu Tyr Phe Cys Thr Tyr Asn Asp Ser Arg Gly Leu Glu Pro Asp Glu
65                  70                  75                  80
Arg Lys Arg Leu Tyr Ile Phe Val Pro Asp Pro Thr Val Gly Phe Leu
                85                  90                  95
Pro Asn Asp Ala Glu Glu Leu Phe Ile Phe Leu Thr Glu Ile Thr Glu
            100                 105                 110
Ile Thr Ile Pro Cys Arg Val Thr Asp Pro Gln Leu Val Val Thr Leu
        115                 120                 125
His Glu Lys Lys Gly Asp Ile Ala Leu Pro Val Pro Tyr Asp His Gln
    130                 135                 140
Arg Gly Phe Ser Gly Ile Phe Glu Asp Arg Ser Tyr Ile Cys Lys Thr
145                 150                 155                 160
Thr Ile Gly Asp Arg Glu Val Asp Ser Asp Ala Tyr Tyr Val Tyr Arg
                165                 170                 175
Leu Gln Val Ser Ser Ile Asn Val Ser Val Asn Ala Val Gln Thr Val
            180                 185                 190
Val Arg Gln Gly Glu Asn Ile Thr Leu Met Cys Ile Val Ile Gly Asn
        195                 200                 205
Glu Val Val Asn Phe Glu Trp Met Tyr Pro Arg Lys Glu Ser Gly Arg
    210                 215                 220
Leu Val Glu Pro Val Thr Asp Phe Leu Leu Asp Met Pro Tyr His Ile
225                 230                 235                 240
Arg Ser Ile Leu His Ile Pro Ser Ala Glu Leu Glu Asp Ser Gly Thr
                245                 250                 255
Tyr Thr Cys Asn Val Thr Glu Ser Val Asn Asp His Gln Asp Glu Lys
            260                 265                 270
Ala Ile Asn Ile Thr Val Val Glu Ser Gly Tyr Val Arg Leu Leu Gly
        275                 280                 285
Glu Val Gly Ala Leu Gln Phe Ala Glu Leu His Arg Ser Arg Thr Leu
    290                 295                 300
Gln Val Val Phe Glu Ala Tyr Pro Pro Pro Thr Val Leu Trp Phe Lys
305                 310                 315                 320
Asp Asn Arg Thr Leu Gly Asp Ser Ser Ala Gly Glu Ile Ala Leu Ser
                325                 330                 335
Thr Arg Asn Val Ser Glu Thr Arg Tyr Val Ser Glu Leu Thr Leu Val
            340                 345                 350
Arg Val Lys Val Ala Glu Ala Gly His Tyr Thr Met Arg Ala Phe His
        355                 360                 365
Glu Asp Ala Glu Val Gln Leu Ser Phe Gln Leu Gln Ile Asn Val Pro
    370                 375                 380
Val Arg Val Leu Glu Leu Ser Glu Ser His Pro Asp Ser Gly Glu Gln
385                 390                 395                 400
Thr Val Arg Cys Arg Gly Arg Gly Met Pro Gln Pro Asn Ile Ile Trp
                405                 410                 415
Ser Ala Cys Arg Asp Leu Lys Arg Cys Pro Arg Glu Leu Pro Pro Met
            420                 425                 430
Leu Leu Gly Asn Ser Ser Glu Glu Glu Ser Gln Leu Glu Thr Asn Val
        435                 440                 445
Thr Tyr Trp Glu Glu Glu Gln Glu Phe Glu Val Val Ser Thr Leu Arg
    450                 455                 460
Leu Gln His Val Asp Arg Pro Leu Ser Val Arg Cys Thr Leu Arg Asn
465                 470                 475                 480
Ala Val Gly Gln Asp Met Gln Glu Val Ile Val Val Pro His Ser Leu
                485                 490                 495
Pro Phe Lys Glu Gln Lys Leu Ile Ser Glu Glu Asp Leu Gly Gly Glu
```

```
            500                 505                 510
Gln Lys Leu Ile Ser Glu Glu Asp Leu His His His His His His
        515                 520                 525


<210> 341
<211> 1106
<212> PRT
<213> Homo sapiens

<400> 341
Met Arg Leu Pro Gly Ala Met Pro Ala Leu Ala Leu Lys Gly Glu Leu
 1               5                  10                  15
Leu Leu Leu Ser Leu Leu Leu Leu Leu Glu Pro Gln Ile Ser Gln Gly
            20                  25                  30
Leu Val Val Thr Pro Pro Gly Pro Glu Leu Val Leu Asn Val Ser Ser
        35                  40                  45
Thr Phe Val Leu Thr Cys Ser Gly Ser Ala Pro Val Val Trp Glu Arg
    50                  55                  60
Met Ser Gln Glu Pro Pro Gln Glu Met Ala Lys Ala Gln Asp Gly Thr
65                  70                  75                  80
Phe Ser Ser Val Leu Thr Leu Thr Asn Leu Thr Gly Leu Asp Thr Gly
                85                  90                  95
Glu Tyr Phe Cys Thr His Asn Asp Ser Arg Gly Leu Glu Thr Asp Glu
            100                 105                 110
Arg Lys Arg Leu Tyr Ile Phe Val Pro Asp Pro Thr Val Gly Phe Leu
        115                 120                 125
Pro Asn Asp Ala Glu Glu Leu Phe Ile Phe Leu Thr Glu Ile Thr Glu
    130                 135                 140
Ile Thr Ile Pro Cys Arg Val Thr Asp Pro Gln Leu Val Val Thr Leu
145                 150                 155                 160
His Glu Lys Lys Gly Asp Val Ala Leu Pro Val Pro Tyr Asp His Gln
                165                 170                 175
Arg Gly Phe Ser Gly Ile Phe Glu Asp Arg Ser Tyr Ile Cys Lys Thr
            180                 185                 190
Thr Ile Gly Asp Arg Glu Val Asp Ser Asp Ala Tyr Tyr Val Tyr Arg
        195                 200                 205
Leu Gln Val Ser Ser Ile Asn Val Ser Val Asn Ala Val Gln Thr Val
    210                 215                 220
Val Arg Gln Gly Glu Asn Ile Thr Leu Met Cys Ile Val Ile Gly Asn
225                 230                 235                 240
Glu Val Val Asn Phe Glu Trp Thr Tyr Pro Arg Lys Glu Ser Gly Arg
                245                 250                 255
Leu Val Glu Pro Val Thr Asp Phe Leu Leu Asp Met Pro Tyr His Ile
            260                 265                 270
Arg Ser Ile Leu His Ile Pro Ser Ala Glu Leu Glu Asp Ser Gly Thr
        275                 280                 285
Tyr Thr Cys Asn Val Thr Glu Ser Val Asn Asp His Gln Asp Glu Lys
    290                 295                 300
Ala Ile Asn Ile Thr Val Val Glu Ser Gly Tyr Val Arg Leu Leu Gly
305                 310                 315                 320
Glu Val Gly Thr Leu Gln Phe Ala Glu Leu His Arg Ser Arg Thr Leu
                325                 330                 335
Gln Val Val Phe Glu Ala Tyr Pro Pro Pro Thr Val Leu Trp Phe Lys
            340                 345                 350
Asp Asn Arg Thr Leu Gly Asp Ser Ser Ala Gly Glu Ile Ala Leu Ser
        355                 360                 365
Thr Arg Asn Val Ser Glu Thr Arg Tyr Val Ser Glu Leu Thr Leu Val
    370                 375                 380
Arg Val Lys Val Ala Glu Ala Gly His Tyr Thr Met Arg Ala Phe His
```

385 390 395 400
Glu Asp Ala Glu Val Gln Leu Ser Phe Gln Leu Gln Ile Asn Val Pro
405 410 415
Val Arg Val Leu Glu Leu Ser Glu Ser His Pro Asp Ser Gly Glu Gln
420 425 430
Thr Val Arg Cys Arg Gly Arg Gly Met Pro Gln Pro Asn Ile Ile Trp
435 440 445
Ser Ala Cys Arg Asp Leu Lys Arg Cys Pro Arg Glu Leu Pro Pro Thr
450 455 460
Leu Leu Gly Asn Ser Ser Glu Glu Glu Ser Gln Leu Glu Thr Asn Val
465 470 475 480
Thr Tyr Trp Glu Glu Glu Gln Glu Phe Glu Val Val Ser Thr Leu Arg
485 490 495
Leu Gln His Val Asp Arg Pro Leu Ser Val Arg Cys Thr Leu Arg Asn
500 505 510
Ala Val Gly Gln Asp Thr Gln Glu Val Ile Val Val Pro His Ser Leu
515 520 525
Pro Phe Lys Val Val Val Ile Ser Ala Ile Leu Ala Leu Val Val Leu
530 535 540
Thr Ile Ile Ser Leu Ile Ile Leu Ile Met Leu Trp Gln Lys Lys Pro
545 550 555 560
Arg Tyr Glu Ile Arg Trp Lys Val Ile Glu Ser Val Ser Ser Asp Gly
565 570 575
His Glu Tyr Ile Tyr Val Asp Pro Met Gln Leu Pro Tyr Asp Ser Thr
580 585 590
Trp Glu Leu Pro Arg Asp Gln Leu Val Leu Gly Arg Thr Leu Gly Ser
595 600 605
Gly Ala Phe Gly Gln Val Val Glu Ala Thr Ala His Gly Leu Ser His
610 615 620
Ser Gln Ala Thr Met Lys Val Ala Val Lys Met Leu Lys Ser Thr Ala
625 630 635 640
Arg Ser Ser Glu Lys Gln Ala Leu Met Ser Glu Leu Lys Ile Met Ser
645 650 655
His Leu Gly Pro His Leu Asn Val Val Asn Leu Leu Gly Ala Cys Thr
660 665 670
Lys Gly Gly Pro Ile Tyr Ile Ile Thr Glu Tyr Cys Arg Tyr Gly Asp
675 680 685
Leu Val Asp Tyr Leu His Arg Asn Lys His Thr Phe Leu Gln His His
690 695 700
Ser Asp Lys Arg Arg Pro Pro Ser Ala Glu Leu Tyr Ser Asn Ala Leu
705 710 715 720
Pro Val Gly Leu Pro Leu Pro Ser His Val Ser Leu Thr Gly Glu Ser
725 730 735
Asp Gly Gly Tyr Met Asp Met Ser Lys Asp Glu Ser Val Asp Tyr Val
740 745 750
Pro Met Leu Asp Met Lys Gly Asp Val Lys Tyr Ala Asp Ile Glu Ser
755 760 765
Ser Asn Tyr Met Ala Pro Tyr Asp Asn Tyr Val Pro Ser Ala Pro Glu
770 775 780
Arg Thr Cys Arg Ala Thr Leu Ile Asn Glu Ser Pro Val Leu Ser Tyr
785 790 795 800
Met Asp Leu Val Gly Phe Ser Tyr Gln Val Ala Asn Gly Met Glu Phe
805 810 815
Leu Ala Ser Lys Asn Cys Val His Arg Asp Leu Ala Ala Arg Asn Val
820 825 830
Leu Ile Cys Glu Gly Lys Leu Val Lys Ile Cys Asp Phe Gly Leu Ala
835 840 845
Arg Asp Ile Met Arg Asp Ser Asn Tyr Ile Ser Lys Gly Ser Thr Phe
850 855 860
Leu Pro Leu Lys Trp Met Ala Pro Glu Ser Ile Phe Asn Ser Leu Tyr

865 870 875 880
Thr Thr Leu Ser Asp Val Trp Ser Phe Gly Ile Leu Leu Trp Glu Ile
885 890 895
Phe Thr Leu Gly Gly Thr Pro Tyr Pro Glu Leu Pro Met Asn Glu Gln
900 905 910
Phe Tyr Asn Ala Ile Lys Arg Gly Tyr Arg Met Ala Gln Pro Ala His
915 920 925
Ala Ser Asp Glu Ile Tyr Glu Ile Met Gln Lys Cys Trp Glu Glu Lys
930 935 940
Phe Glu Ile Arg Pro Pro Phe Ser Gln Leu Val Leu Leu Leu Glu Arg
945 950 955 960
Leu Leu Gly Glu Gly Tyr Lys Lys Lys Tyr Gln Gln Val Asp Glu Glu
965 970 975
Phe Leu Arg Ser Asp His Pro Ala Ile Leu Arg Ser Gln Ala Arg Leu
980 985 990
Pro Gly Phe His Gly Leu Arg Ser Pro Leu Asp Thr Ser Ser Val Leu
995 1000 1005
Tyr Thr Ala Val Gln Pro Asn Glu Gly Asp Asn Asp Tyr Ile Ile Pro
1010 1015 1020
Leu Pro Asp Pro Lys Pro Glu Val Ala Asp Glu Gly Pro Leu Glu Gly
1025 1030 1035 1040
Ser Pro Ser Leu Ala Ser Ser Thr Leu Asn Glu Val Asn Thr Ser Ser
1045 1050 1055
Thr Ile Ser Cys Asp Ser Pro Leu Glu Pro Gln Asp Glu Pro Glu Pro
1060 1065 1070
Glu Pro Gln Leu Glu Leu Gln Val Glu Pro Glu Pro Glu Leu Glu Gln
1075 1080 1085
Leu Pro Asp Ser Gly Cys Pro Ala Pro Arg Ala Glu Ala Glu Asp Ser
1090 1095 1100
Phe Leu
1105

<210> 342
<211> 145
<212> PRT
<213> Artificial Sequence

<220>
<223> hPDGFR-beta D1.mmH

<400> 342
Met His Arg Pro Arg Arg Arg Gly Thr Arg Pro Pro Pro Leu Ala Leu
1 5 10 15
Leu Ala Ala Leu Leu Leu Ala Ala Arg Gly Ala Asp Ala Leu Val Val
20 25 30
Thr Pro Pro Gly Pro Glu Leu Val Leu Asn Val Ser Ser Thr Phe Val
35 40 45
Leu Thr Cys Ser Gly Ser Ala Pro Val Val Trp Glu Arg Met Ser Gln
50 55 60
Glu Pro Pro Gln Glu Met Ala Lys Ala Gln Asp Gly Thr Phe Ser Ser
65 70 75 80
Val Leu Thr Leu Thr Asn Leu Thr Gly Leu Asp Thr Gly Glu Tyr Phe
85 90 95
Cys Thr His Asn Asp Ser Arg Gly Leu Glu Thr Asp Glu Arg Lys Arg
100 105 110
Leu Tyr Ile Phe Val Glu Gln Lys Leu Ile Ser Glu Glu Asp Leu Gly
115 120 125
Gly Glu Gln Lys Leu Ile Ser Glu Glu Asp Leu His His His His His
130 135 140

His
145

<210> 343
<211> 227
<212> PRT
<213> Artificial Sequence

<220>
<223> hPDGFR-beta D1-D2.mmH

<400> 343
Met His Arg Pro Arg Arg Arg Gly Thr Arg Pro Pro Pro Leu Ala Leu
 1   5   10   15
Leu Ala Ala Leu Leu Leu Ala Ala Arg Gly Ala Asp Ala Leu Val Val
            20   25   30
Thr Pro Pro Gly Pro Glu Leu Val Leu Asn Val Ser Ser Thr Phe Val
        35   40   45
Leu Thr Cys Ser Gly Ser Ala Pro Val Val Trp Glu Arg Met Ser Gln
    50   55   60
Glu Pro Pro Gln Glu Met Ala Lys Ala Gln Asp Gly Thr Phe Ser Ser
65   70   75   80
Val Leu Thr Leu Thr Asn Leu Thr Gly Leu Asp Thr Gly Glu Tyr Phe
                85   90   95
Cys Thr His Asn Asp Ser Arg Gly Leu Glu Thr Asp Glu Arg Lys Arg
            100   105   110
Leu Tyr Ile Phe Val Pro Asn Asp Ala Glu Glu Leu Phe Ile Phe Leu
        115   120   125
Thr Glu Ile Thr Glu Ile Thr Ile Pro Cys Arg Val Thr Asp Pro Gln
    130   135   140
Leu Val Val Thr Leu His Glu Lys Lys Gly Asp Val Ala Leu Pro Val
145   150   155   160
Pro Tyr Asp His Gln Arg Gly Phe Phe Gly Ile Phe Glu Asp Arg Ser
                165   170   175
Tyr Ile Cys Lys Thr Thr Ile Gly Asp Arg Glu Val Asp Ser Asp Ala
            180   185   190
Tyr Tyr Val Tyr Arg Leu Gln Glu Gln Lys Leu Ile Ser Glu Glu Asp
        195   200   205
Leu Gly Gly Glu Gln Lys Leu Ile Ser Glu Glu Asp Leu His His His
    210   215   220
His His His
225

<210> 344
<211> 323
<212> PRT
<213> Artificial Sequence

<220>
<223> hPDGFR-beta D1-D3.mmH

<400> 344
Met His Arg Pro Arg Arg Arg Gly Thr Arg Pro Pro Pro Leu Ala Leu
 1   5   10   15
Leu Ala Ala Leu Leu Leu Ala Ala Arg Gly Ala Asp Ala Leu Val Val
            20   25   30
Thr Pro Pro Gly Pro Glu Leu Val Leu Asn Val Ser Ser Thr Phe Val
        35   40   45

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

<210> 345
<211> 396
<212> PRT
<213> Artificial Sequence

<220>
<223> hPDGFR-beta D1-D4.mmH

```
<400> 345
Met His Arg Pro Arg Arg Arg Gly Thr Arg Pro Pro Pro Leu Ala Leu
 1               5                  10                  15
Leu Ala Ala Leu Leu Leu Ala Ala Arg Gly Ala Asp Ala Leu Val Val
            20                  25                  30
Thr Pro Pro Gly Pro Glu Leu Val Leu Asn Val Ser Ser Thr Phe Val
        35                  40                  45
Leu Thr Cys Ser Gly Ser Ala Pro Val Val Trp Glu Arg Met Ser Gln
    50                  55                  60
Glu Pro Pro Gln Glu Met Ala Lys Ala Gln Asp Gly Thr Phe Ser Ser
65                  70                  75                  80
Val Leu Thr Leu Thr Asn Leu Thr Gly Leu Asp Thr Gly Glu Tyr Phe
                85                  90                  95
Cys Thr His Asn Asp Ser Arg Gly Leu Glu Thr Asp Glu Arg Lys Arg
```

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