SEQUENCE LISTING

<110> Regeneron Pharmaceuticals, Inc.

<120> High Affinity Human Antibodies to Human Angiopoietin-2

<130> 6200A WO

<140> To be assigned
<141> Filed herewith

<150> 61/229,418
<151> 2009-07-29

<150> 61/295,194
<151> 2010-01-15

<160> 531

<170> FastSEQ for Windows Version 4.0

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acaggaaaag gtctggagtg ggtctcagct attggtcctg ctggtgacac atactatcca 180
ggctccgtga agggccgatt caccatctcc agagaaaatg ccaagaactc cttgtatctt 240
caaatgaaca gcctgagagc cggggacacg gctgtgtatt actgtgcaag aggtttgatt 300
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Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr
            20                  25                  30
Asp Ile His Trp Val Arg Gln Ala Thr Gly Lys Gly Leu Glu Trp Val
        35                  40                  45
Ser Ala Ile Gly Pro Ala Gly Asp Thr Tyr Tyr Pro Gly Ser Val Lys
    50                  55                  60
Gly Arg Phe Thr Ile Ser Arg Glu Asn Ala Lys Asn Ser Leu Tyr Leu
65                  70                  75                  80
Gln Met Asn Ser Leu Arg Ala Gly Asp Thr Ala Val Tyr Tyr Cys Ala
                85                  90                  95
Arg Gly Leu Ile Thr Phe Gly Gly Leu Ile Ala Pro Phe Asp Tyr Trp

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Gly Gln Gly Thr Leu Val Thr Val Ser Ser
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<400> 6

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<211> 324
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cctggccagg ctcccaggct cctcatctat ggtgcatcca gcagggccac tggcatccca 180
gacaggttca gtggcagtgg gtctgggaca gacttcactc tcaccatcag cagactggag 240
cctgaagatt ttgcagtgta ttactgtcag cattatgata actcacaaac gttcggccaa 300
gggaccaagg tggaaatcaa acga 324

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


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<400> 12
Gln Ser Val Ser Ser Thr Tyr
1 5

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<220>
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<400> 14
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cagcattatg ataactcaca aacg 24

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<400> 16
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acaggaaaag gtctggagtg ggtctcagct attggtcctg ctggtgacac atactatcca 180
ggctccgtga agggccgatt caccatctcc agagaaaatg ccaagaactc cttgtatctt 240
caaatgaaca gcctgagagc cggggacacg gctgtgtatt actgtgcaag aggtttgatt 300
acgtttgggg ggcttatcgc cccgtttgac tactggggcc agggaaccct ggtcaccgtc 360
tcctca                                                          366

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


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

<220>
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<400> 19
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ctctcctgca gggccagtca gagtgttagc agcacctact tagcctggta ccagcagaaa 120
cctggccagg ctcccaggct cctcatctat ggtgcatcca gcagggccac tggcatccca 180
gacaggttca gtggcagtgg gtctgggaca gacttcactc tcaccatcag cagactggag 240
cctgaagatt ttgcagtgta ttactgtcag cattatgata actcacaaac gttcggccaa 300
gggaccaagg tggaaatcaa a 321

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


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tcctgtgcag cctctggatt caccttcagt agctacgaca tgcactgggt ccgccaagct 120
acaggaaaag gtctggagtg ggtctcagct attggtcctg ctggtgacac atactatcca 180
ggctccgtga agggccgatt caccatctcc agagaaaatg ccaagaactc cttgtatctt 240
caaatgaaca gcctgagagc cggggacacg gctgtgtatt actgtgcaag aggtttgatt 300
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tcctca 366

<210> 22
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<400> 22
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

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Asp Met His Trp Val Arg Gln Ala Thr Gly Lys Gly Leu Glu Trp Val
        35                  40                  45
Ser Ala Ile Gly Pro Ala Gly Asp Thr Tyr Tyr Pro Gly Ser Val Lys
    50                  55                  60
Gly Arg Phe Thr Ile Ser Arg Glu Asn Ala Lys Asn Ser Leu Tyr Leu
65                  70                  75                  80
Gln Met Asn Ser Leu Arg Ala Gly Asp Thr Ala Val Tyr Tyr Cys Ala
                85                  90                  95
Arg Gly Leu Ile Thr Phe Gly Gly Leu Ile Ala Pro Phe Asp Tyr Trp
            100                 105                 110
Gly Gln Gly Thr Leu Val Thr Val Ser Ser
        115                 120
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ctctcctgca gggccagtca gagtgttagc agcacctact tagcctggta ccagcagaaa 120
cctggccagg ctcccaggct cctcatctat ggtgcatcca gcagggccac tggcatccca 180
gacaggttca gtggcagtgg gtctgggaca gacttcactc tcaccatcag cagactggag 240
cctgaagatt ttgcagtgta ttactgtcag cattatgata actcacaaac gttcggccaa 300
gggaccaagg tggaaatcaa ac                                          322

<210> 24
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<400> 24
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Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Ser Thr
            20                  25                  30
Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu
        35                  40                  45
Ile Tyr Gly Ala Ser Ser Arg Ala Thr Gly Ile Pro Asp Arg Phe Ser
    50                  55                  60
Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu
65                  70                  75                  80
Pro Glu Asp Phe Ala Val Tyr Tyr Cys Gln His Tyr Asp Asn Ser Gln
                85                  90                  95
Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
            100                 105
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tcctgtgcag cctctggatt cacctttagc agctatgcca tgagctgggt ccgccagggt 120
ccagggaagg gcctggagtg ggtctcaagt attactggga gtggtgatac cacatactac 180
gcagactccg tgaagggccg gttcaccatc tccagagaca attccaagaa cacgctgtat 240
ctgcacatga acagcctgag agccgaggac acggccgtat attactgtgc gaaagatttt 300
cttgactaca gtacctacct tgcttttgat ctctggggcc aagggacaat ggtcaccgtc 360
tcttca 366

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<400> 26
Glu Val Gln Leu Val Gln Ser Gly Gly Gly Leu Val Gln Pro Gly Glu
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Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr
            20                  25                  30
Ala Met Ser Trp Val Arg Gln Gly Pro Gly Lys Gly Leu Glu Trp Val
        35                  40                  45
Ser Ser Ile Thr Gly Ser Gly Asp Thr 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 His Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
                85                  90                  95
Ala Lys Asp Phe Leu Asp Tyr Ser Thr Tyr Leu Ala Phe Asp Leu Trp
            100                 105                 110
Gly Gln Gly Thr Met Val Thr Val Ser Ser
        115                 120


<210> 27
<211> 24
<212> DNA
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<220>
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<400> 27
ggattcacct ttagcagcta tgcc 24

<210> 28
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<212> PRT
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<220>
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<400> 28
Gly Phe Thr Phe Ser Ser Tyr Ala
 1               5

<210> 29
<211> 24
<212> DNA
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<220>
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<400> 29
attactggga gtggtgatac caca 24

<210> 30
<211> 8
<212> PRT
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<220>
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<400> 30
Ile Thr Gly Ser Gly Asp Thr Thr
1 5

<210> 31
<211> 45
<212> DNA
<213> Artificial Sequence

<220>
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<400> 31
gcgaaagatt ttcttgacta cagtacctac cttgcttttg atctc 45

<210> 32
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<212> PRT
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<400> 32
Ala Lys Asp Phe Leu Asp Tyr Ser Thr Tyr Leu Ala Phe Asp Leu
1 5 10 15

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

<220>
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<400> 33
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ggccaggctc ccaggctcct cagctatgat gcatctaaca gggccactgg catcccagcc 180

aggttcagtg gcagtgggtc tgggacagac ttcactctca ccatcagcag cctagagcct 240
gaagattttg cagtttatta ctgtcagcag cgtagcaact ggccgctcac tttcggcgga 300
gggaccaagg tggaaatcaa acga 324

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<400> 34
Asp Ile Gln Met Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly
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Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Ser Tyr
20 25 30
Leu Thr Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ser
35 40 45
Tyr Asp Ala Ser Asn Arg Ala Thr Gly Ile Pro Ala Arg Phe Ser Gly
50 55 60
Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Glu Pro
65 70 75 80
Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Arg Ser Asn Trp Pro Leu
85 90 95
Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Arg
100 105

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<400> 35
cagagtgtta gcagctac 18

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<400> 36
Gln Ser Val Ser Ser Tyr
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<210> 37
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<400> 37
gatgcatct 9

<210> 38
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<400> 38
Asp Ala Ser
1

<210> 39
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<212> DNA
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cagcagcgta gcaactggcc gctcact 27

<210> 40
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<400> 40
Gln Gln Arg Ser Asn Trp Pro Leu Thr
1 5

<210> 41
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tcctgtgcag cctctggatt cacctttagc agctatgcca tgagctgggt ccgccagggt 120
ccagggaagg gcctggagtg ggtctcaagt attactggga gtggtgatac cacatactac 180
gcagactccg tgaagggccg gttcaccatc tccagagaca attccaagaa cacgctgtat 240
ctgcacatga acagcctgag agccgaggac acggccgtat attactgtgc gaaagatttt 300
cttgactaca gtacctacct tgcttttgat ctctggggcc aagggacaat ggtcaccgtc 360
tcttca 366

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<400> 42
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Glu
 1               5                  10                  15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr
            20                  25                  30
Ala Met Ser Trp Val Arg Gln Gly Pro Gly Lys Gly Leu Glu Trp Val
        35                  40                  45
Ser Ser Ile Thr Gly Ser Gly Asp Thr 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 His Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
                85                  90                  95
Ala Lys Asp Phe Leu Asp Tyr Ser Thr Tyr Leu Ala Phe Asp Leu Trp
            100                 105                 110
Gly Gln Gly Thr Met Val Thr Val Ser Ser
        115                 120


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<400> 43
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ctctcctgca gggccagtca gagtgttagc agctacttaa cctggtacca gcagaaacct 120
ggccaggctc ccaggctcct cagctatgat gcatctaaca gggccactgg catcccagcc 180
aggttcagtg gcagtgggtc tgggacagac ttcactctca ccatcagcag cctagagcct 240
gaagattttg cagtttatta ctgtcagcag cgtagcaact ggccgctcac tttcggcgga 300
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<400> 44
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 Ser Tyr
            20                  25                  30
Leu Thr Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ser
        35                  40                  45
Tyr Asp Ala Ser Asn Arg Ala Thr Gly Ile Pro Ala Arg Phe Ser Gly
    50                  55                  60
Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Glu Pro
65                  70                  75                  80
Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Arg Ser Asn Trp Pro Leu
                85                  90                  95
Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys

100 105

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tcctgtgcag cctctggatt cacctttagc agctatgcca tgagctgggt ccgccaggct 120
ccagggaagg ggctggagtg ggtctcagct attactggga gtggtgatac cacatactac 180
gcagactccg tgaagggccg gttcaccatc tccagagaca attccaagaa cacgctgtat 240
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tcttca 366

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

<210> 47
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<400> 47
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ctctcctgca gggccagtca gagtgttagc agctacttag cctggtacca acagaaacct 120
ggccaggctc ccaggctcct catctatgat gcatctaaca gggccactgg catcccagcc 180
aggttcagtg gcagtgggtc tgggagagac ttcactctca ccatcagcag cctagagcct 240
gaagattttg cagtttatta ctgtcagcag cgtagcaact ggccgctcac tttcggcgga 300

gggaccaagg tggagatcaa ac 322

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


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tcctgtgcag cctctggatt cacctttgat gattatgcca tgcactgggt ccggcaagct 120
ccagggaagg gcctggagtg ggtctcaggt attagttgga atagtggtga cataggctat 180
gcggactctg tgaagggccg attcaccatc tccagagaca acgccaagaa ctccctgtat 240
ctgcaaatga acagtctgag agctcaggac acggccttgt attactgtgc aaaagcttac 300
ggtgactact actactttta cggtatggac gtctggggcc aagggaccac ggtcaccgtc 360
tcctca 366

<210> 50
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<400> 50
Gln Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Arg
 1               5                  10                  15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Asp Asp Tyr
            20                  25                  30
Ala Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35                  40                  45
Ser Gly Ile Ser Trp Asn Ser Gly Asp Ile Gly Tyr Ala Asp Ser Val
    50                  55                  60

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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 Gln Asp Thr Ala Leu Tyr Tyr Cys
                85                  90                  95
Ala Lys Ala Tyr Gly Asp Tyr Tyr Tyr Phe Tyr Gly Met Asp Val Trp
            100                 105                 110
Gly Gln Gly Thr Thr Val Thr Val Ser Ser
        115                 120
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<210> 51
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 51
ggattcacct ttgatgatta tgcc 24

<210> 52
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 52
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Gly Phe Thr Phe Asp Asp Tyr Ala
 1               5
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<210> 53
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 53
attagttgga atagtggtga cata 24

<210> 54
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 54
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Ile Ser Trp Asn Ser Gly Asp Ile
 1               5
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<210> 55
<211> 45
<212> DNA

<213> Artificial Sequence

<220>
<223> synthetic

<400> 55
gcaaaagctt acggtgacta ctactacttt tacggtatgg acgtc 45

<210> 56
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 56
Ala Lys Ala Tyr Gly Asp Tyr Tyr Tyr Phe Tyr Gly Met Asp Val
 1               5                  10                  15


<210> 57
<211> 324
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 57
gacatcgtga tgacccagtc tccaggcacc ctgtctttgt ctccagggga aagagccacc 60
ctctcctgca gggccagtca gagtgttagc agcagctact tagcctggta ccagcagaaa 120
cctggccagg ctcccaggct cctcatcttt agtgcatcca gcagggccac tggcatccca 180
gacaggttca gtggcagtgg gtctgggaca gacttcactc tcaccatcag cagactggag 240
cctgaagatt ttgcagtgta ttactgtcag cagtatgata actcactcac tttcggcgga 300
gggaccaaag tggatatcaa acga 324

<210> 58
<211> 108
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 58
Asp Ile Val Met Thr Gln Ser Pro Gly 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 Ser Ser
            20                  25                  30
Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu
        35                  40                  45
Ile Phe Ser Ala Ser Ser Arg Ala Thr Gly Ile Pro Asp Arg Phe Ser
    50                  55                  60
Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu
65                  70                  75                  80
Pro Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Asp Asn Ser Leu
                85                  90                  95
Thr Phe Gly Gly Gly Thr Lys Val Asp Ile Lys Arg
            100                 105

<210> 59
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 59
cagagtgtta gcagcagcta c 21

<210> 60
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 60
Gln Ser Val Ser Ser Ser Tyr
1 5

<210> 61
<211> 9
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 61
agtgcatcc 9

<210> 62
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 62
Ser Ala Ser
1

<210> 63
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 63
cagcagtatg ataactcact cact 24

<210> 64

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

<220>
<223> synthetic

<400> 64
Gln Gln Tyr Asp Asn Ser Leu Thr
 1               5


<210> 65
<211> 363
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 65
gaagtgcagc tggtggagtc tgggggaggc ttggtgcagc ctggcaggtc cctgagactc 60
tcctgtgcag cctctggatt cacctttgat gattatgcca tgcactgggt ccggcaagct 120
ccagggaagg gcctggagtg ggtctcaggt attagttgga atagtggtga cataggctat 180
gcggactctg tgaagggccg attcaccatc tccagagaca acgccaagaa ctccctgtat 240
ctgcaaatga acagtctgag agctcaggac acggccttgt attactgtgc aaaagcttac 300
ggtgactact actactttta cggtatggac gtctggggcc aagggaccac ggtcaccgtc 360
tcc                                                               363

<210> 66
<211> 121
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 66
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Arg
 1               5                  10                  15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Asp Asp Tyr
            20                  25                  30
Ala Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35                  40                  45
Ser Gly Ile Ser Trp Asn Ser Gly Asp Ile Gly Tyr Ala Asp Ser Val
    50                  55                  60
Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Ser Leu Tyr
65                  70                  75                  80
Leu Gln Met Asn Ser Leu Arg Ala Gln Asp Thr Ala Leu Tyr Tyr Cys
                85                  90                  95
Ala Lys Ala Tyr Gly Asp Tyr Tyr Tyr Phe Tyr Gly Met Asp Val Trp
            100                 105                 110
Gly Gln Gly Thr Thr Val Thr Val Ser
        115                 120


<210> 67
<211> 321
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 67
gaaattgtgt tgacgcagtc tccaggcacc ctgtctttgt ctccagggga aagagccacc 60
ctctcctgca gggccagtca gagtgttagc agcagctact tagcctggta ccagcagaaa 120
cctggccagg ctcccaggct cctcatcttt agtgcatcca gcagggccac tggcatccca 180
gacaggttca gtggcagtgg gtctgggaca gacttcactc tcaccatcag cagactggag 240
cctgaagatt ttgcagtgta ttactgtcag cagtatgata actcactcac tttcggcgga 300
gggaccaagg tggagatcaa a 321

<210> 68
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 68
Glu Ile Val Leu Thr Gln Ser Pro Gly 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 Ser Ser
            20                  25                  30
Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu
        35                  40                  45
Ile Phe Ser Ala Ser Ser Arg Ala Thr Gly Ile Pro Asp Arg Phe Ser
    50                  55                  60
Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu
65                  70                  75                  80
Pro Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Asp Asn Ser Leu
                85                  90                  95
Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
            100                 105


<210> 69
<211> 364
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 69
gaagtgcagc tggtggagtc tgggggaggc ttggtacagc ctggcaggtc cctgagactc 60
tcctgtgcag cctctggatt cacctttgat gattatgcca tgcactgggt ccggcaagct 120
ccagggaagg gcctggagtg ggtctcaggt attagttgga atagtggtga cataggctat 180
gcggactctg tgaagggccg attcaccatc tccagagaca acgccaagaa ctccctgtat 240
ctgcaaatga acagtctgag agctgaggac acggccttgt attactgtgc aaaagcttac 300
ggtgactact actactttta cggtatggac gtctggggcc aagggaccac ggtcaccgtc 360
tcct 364

<210> 70
<211> 121
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

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

<210> 71
<211> 322
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 71
gaaattgtgt tgacgcagtc tccaggcacc ctgtctttgt ctccagggga aagagccacc 60
ctctcctgca gggccagtca gagtgttagc agcagctact tagcctggta ccagcagaaa 120
cctggccagg ctcccaggct cctcatctat agtgcatcca gcagggccac tggcatccca 180
gacaggttca gtggcagtgg gtctgggaca gacttcactc tcaccatcag cagactggag 240
cctgaagatt ttgcagtgta ttactgtcag cagtatgata actcactcac tttcggcgga 300
gggaccaagg tggagatcaa ac                                          322

<210> 72
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 72
Glu Ile Val Leu Thr Gln Ser Pro Gly 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 Ser Ser
            20                  25                  30
Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu
        35                  40                  45
Ile Tyr Ser Ala Ser Ser Arg Ala Thr Gly Ile Pro Asp Arg Phe Ser
    50                  55                  60
Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu
65                  70                  75                  80
Pro Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Asp Asn Ser Leu
                85                  90                  95
Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
            100                 105

<210> 73

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

<220>
<223> synthetic

<400> 73
caggtgcagc tggtggagtc tgggggaggc ttggttcagc ctggggagtc cctgagactc 60
tcctgtgcag cctctggatt cacctttagc agctatgcca tgagctgggt ccgccagggt 120
ccagggaagg gcctggagtg ggtctcaagt attagtggga gtggtggtac cacttactac 180
gcagactccg tggagggccg gttcaccatc tccagagaca attccaagaa cacgctgtat 240
ctgcacatga acagcctgag agccgaggac acggccgtat attactgtgc gaaagatttt 300
cttgactaca gtacctacct tgcttttgat ctctggggcc aagggacaat ggtcaccgtc 360
tcttca 366

<210> 74
<211> 122
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 74
Gln Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Glu
 1               5                  10                  15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr
            20                  25                  30
Ala Met Ser Trp Val Arg Gln Gly Pro Gly Lys Gly Leu Glu Trp Val
        35                  40                  45
Ser Ser Ile Ser Gly Ser Gly Gly Thr Thr Tyr Tyr Ala Asp Ser Val
    50                  55                  60
Glu Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
65                  70                  75                  80
Leu His Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
                85                  90                  95
Ala Lys Asp Phe Leu Asp Tyr Ser Thr Tyr Leu Ala Phe Asp Leu Trp
            100                 105                 110
Gly Gln Gly Thr Met Val Thr Val Ser Ser
        115                 120


<210> 75
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 75
ggattcacct ttagcagcta tgcc 24

<210> 76
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 76
Gly Phe Thr Phe Ser Ser Tyr Ala
 1               5


<210> 77
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 77
attagtggga gtggtggtac cact                                          24

<210> 78
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 78
Ile Ser Gly Ser Gly Gly Thr Thr
 1               5


<210> 79
<211> 45
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 79
gcgaaagatt ttcttgacta cagtacctac cttgcttttg atctc                   45

<210> 80
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 80
Ala Lys Asp Phe Leu Asp Tyr Ser Thr Tyr Leu Ala Phe Asp Leu
 1               5                  10                  15


<210> 81
<211> 324
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 81
gacatccaga tgacccagtc tccatcttcc gtgtctgcat ctgtaggaga cagagtcacc 60
atcacttgtc gggcgagtca gggtattagc agctggttag cctggtatca gcagaaacca 120
gggaaagccc ctaagctcct gatctatgct gcatccagtt tgcaaagtgg ggtcccatca 180
aggttcagcg gcagtggatc tgggacagat ttcactctca ccatcagcag cctgcagcct 240
gaagattttg caacttacta ttgtcaacag gctaacagtt tccctcggac gttcggccaa 300
gggaccaagg tggagatcaa acga 324

<210> 82
<211> 108
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

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


<210> 83
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 83
cagggtatta gcagctgg 18

<210> 84
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 84
Gln Gly Ile Ser Ser Trp
 1               5


<210> 85
<211> 9
<212> DNA

<213> Artificial Sequence

<220>
<223> synthetic

<400> 85
gctgcatcc 9

<210> 86
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 86
Ala Ala Ser
 1

<210> 87
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 87
caacaggcta acagtttccc tcggacg 27

<210> 88
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 88
Gln Gln Ala Asn Ser Phe Pro Arg Thr
 1               5

<210> 89
<211> 366
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 89
gaggtgcagc tggtggagtc tgggggaggc ttggttcagc ctggggagtc cctgagactc 60
tcctgtgcag cctctggatt cacctttagc agctatgcca tgagctgggt ccgccagggt 120
ccagggaagg gcctggagtg ggtctcaagt attagtggga gtggtggtac cacttactac 180
gcagactccg tggagggccg gttcaccatc tccagagaca attccaagaa cacgctgtat 240
ctgcacatga acagcctgag agccgaggac acggccgtat attactgtgc gaaagatttt 300
cttgactaca gtacctacct tgcttttgat ctctggggcc aagggacaat ggtcaccgtc 360
tcttca 366

<210> 90
<211> 122
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

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


<210> 91
<211> 321
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 91
gacatccaga tgacccagtc tccatcttcc gtgtctgcat ctgtaggaga cagagtcacc 60
atcacttgtc gggcgagtca gggtattagc agctggttag cctggtatca gcagaaacca 120
gggaaagccc ctaagctcct gatctatgct gcatccagtt tgcaaagtgg ggtcccatca 180
aggttcagcg gcagtggatc tgggacagat ttcactctca ccatcagcag cctgcagcct 240
gaagattttg caacttacta ttgtcaacag gctaacagtt tccctcggac gttcggccaa 300
gggaccaagg tggaaatcaa a                                          321

<210> 92
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 92
Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Val Ser Ala Ser Val Gly
 1               5                  10                  15
Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Gly Ile Ser Ser Trp
            20                  25                  30
Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
        35                  40                  45
Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
    50                  55                  60

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


<210> 93
<211> 366
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 93
gaggtgcagc tggtggagtc tgggggaggc ttggtacagc ctgggggtc cctgagactc 60
tcctgtgcag cctctggatt cacctttagc agctatgcca tgagctgggt ccgccaggct 120
ccagggaagg ggctggagtg ggtctcagct attagtggga gtggtggtac cacttactac 180
gcagactccg tgaagggccg gttcaccatc tccagagaca attccaagaa cacgctgtat 240
ctgcaaatga acagcctgag agccgaggac acggccgtat attactgtgc gaaagatttt 300
cttgactaca gtacctacct tgcttttgat ctctggggcc aagggacaat ggtcaccgtc 360
tcttca                                                          366

<210> 94
<211> 122
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 94
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
Ala Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35                  40                  45
Ser Ala Ile Ser Gly Ser Gly Gly Thr 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 Val Tyr Tyr Cys
                85                  90                  95
Ala Lys Asp Phe Leu Asp Tyr Ser Thr Tyr Leu Ala Phe Asp Leu Trp
            100                 105                 110
Gly Gln Gly Thr Met Val Thr Val Ser Ser
        115                 120


<210> 95
<211> 322
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 95
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gacatccaga tgacccagtc tccatcttct gtgtctgcat ctgtaggaga cagagtcacc 60
atcacttgtc gggcgagtca gggtattagc agctggttag cctggtatca gcagaaacca 120
gggaaagccc ctaagctcct gatctatgct gcatccagtt tgcaaagtgg ggtcccatca 180
aggttcagcg gcagtggatc tgggacagat ttcactctca ctatcagcag cctgcagcct 240
gaagattttg caacttacta ttgtcaacag gctaacagtt tccctcggac gttcggccaa 300
gggaccaagg tggaaatcaa ac                                          322

<210> 96
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 96
Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Val Ser Ala Ser Val Gly
 1               5                  10                  15
Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Gly Ile Ser Ser Trp
            20                  25                  30
Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
        35                  40                  45
Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
    50                  55                  60
Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
65                  70                  75                  80
Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Ala Asn Ser Phe Pro Arg
                85                  90                  95
Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
            100                 105


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

<220>
<223> synthetic

<400> 97
caggtgcagc tggtggagtc tgggggaggc ttggtaaagc ctgggggtc ccttagactc 60
tcctgtgcag cctctggatt cactttcagt aacgcctgga tgagctgggt ccgccaggct 120
ccagggaagg ggctggagtg ggttggccgt attaaaagca aaactgatgg tgggacaaca 180
gactacgctg cacccgtgaa aggcagattc accatctcaa gagatgattc aaaaaacacg 240
ctgtatctgc aaatgaacag cctgaaaacc gaggacacag ccgtgtatta ctgtaccaca 300
gatggcgtag cagctcgtta ctttgactac tggggccagg gaaccctggt caccgtctcc 360
tca                                                              363

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

<220>
<223> synthetic

<400> 98
Gln Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Lys Pro Gly Gly
 1               5                  10                  15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Asn Ala
```

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

<220>
<223> synthetic

<400> 99
ggattcactt tcagtaacgc ctgg 24

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

<220>
<223> synthetic

<400> 100
```
Gly Phe Thr Phe Ser Asn Ala Trp
 1               5
```

<210> 101
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 101
attaaaagca aaactgatgg tgggacaaca 30

<210> 102
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 102
```
Ile Lys Ser Lys Thr Asp Gly Gly Thr Thr
 1               5                  10
```

<210> 103
<211> 36
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 103
accacagatg gcgtagcagc tcgttacttt gactac 36

<210> 104
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 104
Thr Thr Asp Gly Val Ala Ala Arg Tyr Phe Asp Tyr
 1               5                  10


<210> 105
<211> 324
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 105
gacatccaga tgacccagtc tccttccacc ctgtctgcat ctgtaggaga cagagtcacc 60
atcacttgcc gggccagtca gagtattagt agctggttgg cctggtatca gcagaaacca 120
gggaaagccc ctaagctcct gatctataag gcgtctagtt tagaaagtgg ggtcccatca 180
aggttcagcg gcagtggatc tgggacagaa ttcactctca ccatcagcag cctgcagcct 240
gatgattttg caacttatta ctgccaacag tataatagtt attctcggac gttcggccaa 300
gggaccaagg tggagatcaa acga 324

<210> 106
<211> 108
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 106
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 Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys 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 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 Arg
            100                 105


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

<220>
<223> synthetic

<400> 107
cagagtatta gtagctgg                                                  18

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

<220>
<223> synthetic

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


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

<220>
<223> synthetic

<400> 109
aaggcgtct                                                             9

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

<220>
<223> synthetic

<400> 110
Lys Ala Ser
 1


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

<220>
<223> synthetic
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<400> 111
caacagtata atagttattc tcggacg 27

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

<220>
<223> synthetic

<400> 112
Gln Gln Tyr Asn Ser Tyr Ser Arg Thr
1 5

<210> 113
<211> 363
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 113
gaggtgcagc tggtggagtc tgggggaggc ttggtaaagc ctgggggtc ccttagactc 60
tcctgtgcag cctctggatt cactttcagt aacgcctgga tgagctgggt ccgccaggct 120
ccagggaagg ggctggagtg ggttggccgt attaaaagca aaactgatgg tgggacaaca 180
gactacgctg cacccgtgaa aggcagattc accatctcaa gagatgattc aaaaaacacg 240
ctgtatctgc aaatgaacag cctgaaaacc gaggacacag ccgtgtatta ctgtaccaca 300
gatggcgtag cagctcgtta ctttgactac tggggccagg gaaccctggt caccgtctcc 360
tca 363

<210> 114
<211> 121
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

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

<210> 115
<211> 321
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 115
gacatccaga tgacccagtc tccttccacc ctgtctgcat ctgtaggaga cagagtcacc 60
atcacttgcc gggccagtca gagtattagt agctggttgg cctggtatca gcagaaacca 120
gggaaagccc ctaagctcct gatctataag gcgtctagtt tagaaagtgg ggtcccatca 180
aggttcagcg gcagtggatc tgggacagaa ttcactctca ccatcagcag cctgcagcct 240
gatgattttg caacttatta ctgccaacag tataatagtt attctcggac gttcggccaa 300
gggaccaagg tggaaatcaa a 321

<210> 116
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 116
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 Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys 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 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> 117
<211> 363
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 117
gaggtgcagc tggtggagtc tgggggaggc ttggtaaagc ctgggggtc ccttagactc 60
tcctgtgcag cctctggatt cactttcagt aacgcctgga tgagctgggt ccgccaggct 120
ccagggaagg ggctggagtg ggttggccgt attaaaagca aaactgatgg tgggacaaca 180
gactacgctg cacccgtgaa aggcagattc accatctcaa gagatgattc aaaaaacacg 240
ctgtatctgc aaatgaacag cctgaaaacc gaggacacag ccgtgtatta ctgtaccaca 300
gatggcgtag cagctcgtta ctttgactac tggggccagg gaaccctggt caccgtctcc 360
tca 363

<210> 118
<211> 121
<212> PRT

<213> Artificial Sequence

<220>
<223> synthetic

<400> 118
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Lys Pro Gly Gly
 1               5                  10                  15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Asn Ala
            20                  25                  30
Trp Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35                  40                  45
Gly Arg Ile Lys Ser Lys Thr Asp Gly Gly Thr Thr Asp Tyr Ala Ala
    50                  55                  60
Pro Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asp Ser Lys Asn Thr
65                  70                  75                  80
Leu Tyr Leu Gln Met Asn Ser Leu Lys Thr Glu Asp Thr Ala Val Tyr
                85                  90                  95
Tyr Cys Thr Thr Asp Gly Val Ala Ala Arg Tyr Phe Asp Tyr Trp Gly
            100                 105                 110
Gln Gly Thr Leu Val Thr Val Ser Ser
        115                 120


<210> 119
<211> 322
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 119
gacatccaga tgacccagtc tccttccacc ctgtctgcat ctgtaggaga cagagtcacc 60
atcacttgcc gggccagtca gagtattagt agctggttgg cctggtatca gcagaaacca 120
gggaaagccc ctaagctcct gatctataag gcgtctagtt tagaaagtgg ggtcccatca 180
aggttcagcg gcagtggatc tgggacagaa ttcactctca ccatcagcag cctgcagcct 240
gatgattttg caacttatta ctgccaacag tataatagtt attctcggac gttcggccaa 300
gggaccaagg tggaaatcaa ac                                          322

<210> 120
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 120
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 Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys 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 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> 121
<211> 366
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 121
gaggtgcagc tggtgcagtc tgggggaggc gtggtccagc ctgggaggtc cctgagactc 60
tcctgtgcag cgtctggatt caccttcagt agctatggca tgcactgggt ccgccaggct 120
ccaggcaagg ggctggagtg ggtggcagtt atgtggtatg atgaaactaa taaatactat 180
gcagactccg tgaagggccg attcaccatc tccagagaca attccaagaa cacgctgtat 240
ctgcaaatga acagcctgag agccgaggac acggctgtgt attactgtgc gagatatagt 300
ggctacgagg actactacca cggtatggac gtctggggcc aagggaccac ggtcaccgtc 360
tcctca                                                          366

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

<220>
<223> synthetic

<400> 122
Glu Val Gln Leu Val Gln 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 Ser Tyr
            20                  25                  30
Gly Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35                  40                  45
Ala Val Met Trp Tyr Asp Glu Thr Asn Lys Tyr Tyr Ala Asp Ser Val
    50                  55                  60
Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
65                  70                  75                  80
Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
                85                  90                  95
Ala Arg Tyr Ser Gly Tyr Glu Asp Tyr Tyr His Gly Met Asp Val Trp
            100                 105                 110
Gly Gln Gly Thr Thr Val Thr Val Ser Ser
        115                 120


<210> 123
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 123
ggattcacct tcagtagcta tggc                                      24

<210> 124
<211> 8
```

<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 124
Gly Phe Thr Phe Ser Ser Tyr Gly
 1               5


<210> 125
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 125
atgtggtatg atgaaactaa taaa                                          24

<210> 126
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 126
Met Trp Tyr Asp Glu Thr Asn Lys
 1               5


<210> 127
<211> 45
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 127
gcgagatata gtggctacga ggactactac cacggtatgg acgtc                    45

<210> 128
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 128
Ala Arg Tyr Ser Gly Tyr Glu Asp Tyr Tyr His Gly Met Asp Val
 1               5                  10                  15


<210> 129
<211> 321

<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 129
gccatccaga tgacccagtc tccagccacc ccgtctgtgt ctccagggga aagagccacc 60
ctctcctgca gggccagtca gagtattagc agcaacttag cctggtacca gcagaaacct 120
ggccaggctc ccaggctcct catctatggt gcatccacca gggccactgg tatcccagcc 180
aggttcagtg gcagtgggtc tgggacagag ttcactctca ccatcagcag cctgcagtct 240
gaagattttg cagtttatta ctgtcagcac tataataact ggatcacctt cggccaaggg 300
acacgactgg agattaaacg a 321

<210> 130
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

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


<210> 131
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 131
cagagtatta gcagcaac 18

<210> 132
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 132
Gln Ser Ile Ser Ser Asn
 1               5

<210> 133
<211> 9
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 133
ggtgcatcc 9

<210> 134
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 134
Gly Ala Ser
1

<210> 135
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 135
cagcactata ataactggat cacc 24

<210> 136
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 136
Gln His Tyr Asn Asn Trp Ile Thr
1 5

<210> 137
<211> 363
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 137
caggtgcagc tggtggagtc tgggggaggc gtggtccagc ctgggaggtc cctgagactc 60
tcctgtgcag cgtctggatt caccttcagt agctatggca tgcactgggt ccgccaggct 120

ccaggcaagg ggctggagtg ggtggcagtt atgtggtatg atgaaactaa taaatactat 180
gcagactccg tgaagggccg attcaccatc tccagagaca attccaagaa cacgctgtat 240
ctgcaaatga acagcctgag agccgaggac acggctgtgt attactgtgc gagatatagt 300
ggctacgagg actactacca cggtatggac gtctggggcc aagggaccac ggtcaccgtc 360
tcc 363

<210> 138
<211> 121
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 138
Gln Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Arg
 1               5                  10                  15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr
            20                  25                  30
Gly Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35                  40                  45
Ala Val Met Trp Tyr Asp Glu Thr Asn Lys Tyr Tyr Ala Asp Ser Val
    50                  55                  60
Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
65                  70                  75                  80
Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
                85                  90                  95
Ala Arg Tyr Ser Gly Tyr Glu Asp Tyr Tyr His Gly Met Asp Val Trp
            100                 105                 110
Gly Gln Gly Thr Thr Val Thr Val Ser
        115                 120


<210> 139
<211> 318
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 139
gaaatagtga tgacgcagtc tccagccacc ccgtctgtgt ctccagggga aagagccacc 60
ctctcctgca gggccagtca gagtattagc agcaacttag cctggtacca gcagaaacct 120
ggccaggctc ccaggctcct catctatggt gcatccacca gggccactgg tatcccagcc 180
aggttcagtg gcagtgggtc tgggacagag ttcactctca ccatcagcag cctgcagtct 240
gaagattttg cagtttatta ctgtcagcac tataataact ggatcacctt cggccaaggg 300
acacgactgg agattaaa 318

<210> 140
<211> 106
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 140
Glu Ile Val Met Thr Gln Ser Pro Ala Thr Pro Ser Val Ser Pro Gly
 1               5                  10                  15
Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Ile Ser Ser Asn

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

<210> 141
<211> 364
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 141
caggtgcagc tggtggagtc tgggggaggc gtggtccagc ctgggaggtc cctgagactc 60
tcctgtgcag cgtctggatt caccttcagt agctatggca tgcactgggt ccgccaggct 120
ccaggcaagg ggctggagtg ggtggcagtt atgtggtatg atgaaactaa taaatactat 180
gcagactccg tgaagggccg attcaccatc tccagagaca actccaagaa cacgctgtat 240
ctgcaaatga acagcctgag agccgaggac acggctgtgt attactgtgc gagatatagt 300
ggctacgagg actactacca cggtatggac gtctggggcc aagggaccac ggtcaccgtc 360
tcct                                                              364

<210> 142
<211> 121
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 142
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Gln Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Arg
 1               5                  10                  15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr
            20                  25                  30
Gly Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35                  40                  45
Ala Val Met Trp Tyr Asp Glu Thr Asn Lys Tyr Tyr Ala Asp Ser Val
    50                  55                  60
Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
65                  70                  75                  80
Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
                85                  90                  95
Ala Arg Tyr Ser Gly Tyr Glu Asp Tyr Tyr His Gly Met Asp Val Trp
            100                 105                 110
Gly Gln Gly Thr Thr Val Thr Val Ser
        115                 120
```

<210> 143
<211> 319
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 143
gaaatagtga tgacgcagtc tccagccacc ctgtctgtgt ctccagggga aagagccacc 60
ctctcctgca gggccagtca gagtattagc agcaacttag cctggtacca gcagaaacct 120
ggccaggctc ccaggctcct catctatggt gcatccacca gggccactgg tatcccagcc 180
aggttcagtg gcagtgggtc tgggacagag ttcactctca ccatcagcag cctgcagtct 240
gaagattttg cagtttatta ctgtcagcac tataataact ggatcacctt cggccaaggg 300
acacgactgg agattaaac 319

<210> 144
<211> 106
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 144
Glu Ile Val Met Thr Gln Ser Pro Ala Thr Leu Ser Val Ser Pro Gly
 1               5                  10                  15
Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Ile Ser Ser Asn
            20                  25                  30
Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile
        35                  40                  45
Tyr Gly Ala Ser Thr Arg Ala Thr Gly Ile Pro Ala Arg Phe Ser Gly
    50                  55                  60
Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln Ser
65                  70                  75                  80
Glu Asp Phe Ala Val Tyr Tyr Cys Gln His Tyr Asn Asn Trp Ile Thr
                85                  90                  95
Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys
            100                 105


<210> 145
<211> 357
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 145
caggtgcagc tggtgcagtc tgggggaggc ttggtcaagc ctggagggtc cctgagactc 60
tcctgtgcag cctctggatt caccttcagt gactactaca tgagctggat ccgccaggct 120
ccagggaagg ggctggagtg ggtttcatac attagttata ctggtaggac catatactac 180
gcggactctg tgaagggccg attcaccatc tccagggaca acgccaagaa ctcactgtat 240
ctgcaaatga acagcctgag agccgaggac acggccgtgt attactgtgc gagagatacg 300
gactacggtg acttctttga ctactggggc cagggaaccc tggtcaccgt ctcctca 357

<210> 146
<211> 119
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

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

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

<220>
<223> synthetic

<400> 147
ggattcacct tcagtgacta ctac 24

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

<220>
<223> synthetic

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

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

<220>
<223> synthetic

<400> 149
attagttata ctggtaggac cata 24

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

<220>
<223> synthetic

<400> 150
Ile Ser Tyr Thr Gly Arg Thr Ile
 1               5


<210> 151
<211> 36
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 151
gcgagagata cggactacgg tgacttcttt gactac                                36

<210> 152
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 152
Ala Arg Asp Thr Asp Tyr Gly Asp Phe Phe Asp Tyr
 1               5                   10


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

<220>
<223> synthetic

<400> 153
gccatccaga tgacccagtc tccatcctca ctgtctgcat ctgtaggaga cagagtcacc 60
atcacttgtc gggcgagtca gggcattagc aattatttag cctggtttca gcagaaacca 120
gggaaagccc ctaagtccct gatctatgct gcatccagtt tgcaaagtgg ggtcccatca 180
aagttcagcg gcagtggatc tgggacagat ttcactctca ccatcagcag cctgcagcct 240
gaagattttg caacttatta ctgccaacag tataatagtt acccgctcac tttcggcgga 300
gggaccaagg tggagatcaa acga                                          324

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

<220>
<223> synthetic

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

```
Tyr Ala 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 Ser Tyr Pro Leu
                85                  90                  95
Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Arg
            100                 105


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

<220>
<223> synthetic

<400> 155
cagggcatta gcaattat                                                  18

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

<220>
<223> synthetic

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


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

<220>
<223> synthetic

<400> 157
gctgcatcc                                                            9

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

<220>
<223> synthetic

<400> 158
Ala Ala Ser
 1


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

<220>
<223> synthetic

<400> 159
caacagtata atagttaccc gctcact 27

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

<220>
<223> synthetic

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

<210> 161
<211> 357
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 161
caggtgcagc tggtggagtc tgggggaggc ttggtcaagc ctggagggtc cctgagactc 60
tcctgtgcag cctctggatt caccttcagt gactactaca tgagctggat ccgccaggct 120
ccagggaagg ggctggagtg ggtttcatac attagttata ctggtaggac catatactac 180
gcggactctg tgaagggccg attcaccatc tccagggaca acgccaagaa ctcactgtat 240
ctgcaaatga acagcctgag agccgaggac acggccgtgt attactgtgc gagagatacg 300
gactacggtg acttctttga ctactggggc cagggaaccc tggtcaccgt ctcctca 357

<210> 162
<211> 119
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

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

115

<210> 163
<211> 321
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 163
gacatccaga tgacccagtc tccatcctca ctgtctgcat ctgtaggaga cagagtcacc 60
atcacttgtc gggcgagtca gggcattagc aattatttag cctggtttca gcagaaacca 120
gggaaagccc ctaagtccct gatctatgct gcatccagtt tgcaaagtgg ggtcccatca 180
aagttcagcg gcagtggatc tgggacagat ttcactctca ccatcagcag cctgcagcct 240
gaagattttg caacttatta ctgccaacag tataatagtt acccgctcac tttcggcgga 300
gggaccaagg tggagatcaa a 321

<210> 164
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 164
Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
 1               5                  10                  15
Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Gly Ile Ser Asn Tyr
            20                  25                  30
Leu Ala Trp Phe Gln Gln Lys Pro Gly Lys Ala Pro Lys Ser Leu Ile
        35                  40                  45
Tyr Ala 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 Ser Tyr Pro Leu
                85                  90                  95
Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
            100                 105


<210> 165
<211> 357
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 165
caggtgcagc tggtggagtc tgggggaggc ttggtcaagc ctggagggtc cctgagactc 60
tcctgtgcag cctctggatt caccttcagt gactactaca tgagctggat ccgccaggct 120
ccagggaagg ggctggagtg ggtttcatac attagttata ctggtaggac catatactac 180
gcagactctg tgaagggccg attcaccatc tccagggaca acgccaagaa ctcactgtat 240
ctgcaaatga acagcctgag agccgaggac acggccgtgt attactgtgc gagagatacg 300
gactacggtg acttctttga ctactggggc cagggaaccc tggtcaccgt ctcctca 357

<210> 166

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

<220>
<223> synthetic

<400> 166
Gln Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Lys Pro Gly Gly
 1               5                  10                  15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Asp Tyr
            20                  25                  30
Tyr Met Ser Trp Ile Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35                  40                  45
Ser Tyr Ile Ser Tyr Thr Gly Arg Thr Ile Tyr Tyr Ala Asp Ser Val
    50                  55                  60
Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Ser Leu Tyr
65                  70                  75                  80
Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
                85                  90                  95
Ala Arg Asp Thr Asp Tyr Gly Asp Phe Phe Asp Tyr Trp Gly Gln Gly
            100                 105                 110
Thr Leu Val Thr Val Ser Ser
        115


<210> 167
<211> 322
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 167
gacatccaga tgacccagtc tccatcctca ctgtctgcat ctgtaggaga cagagtcacc 60
atcacttgtc gggcgagtca gggcattagc aattatttag cctggtttca gcagaaacca 120
gggaaagccc ctaagtccct gatctatgct gcatccagtt tgcaaagtgg ggtcccatca 180
aggttcagcg gcagtggatc tgggacagat ttcactctca ccatcagcag cctgcagcct 240
gaagattttg caacttatta ctgccaacag tataatagtt acccgctcac tttcggcgga 300
gggaccaagg tggagatcaa ac                                          322

<210> 168
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 168
Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
 1               5                  10                  15
Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Gly Ile Ser Asn Tyr
            20                  25                  30
Leu Ala Trp Phe Gln Gln Lys Pro Gly Lys Ala Pro Lys Ser Leu Ile
        35                  40                  45
Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
    50                  55                  60
Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
65                  70                  75                  80

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

<210> 169
<211> 360
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 169
caggtgcagc tggtgcagtc ggggggagac gtggtccagc ctgggaggtc cctgagactc 60
tcctgtgcag cgtctggatt caccttcagt agttatggca tgcactgggt ccgccaggct 120
ccaggcaagg gactggagtg ggtggcaatt atatggtatg atggaagtaa taaatattat 180
gcagactccg tgaagggccg attcaccatc tccagagaca attccaagaa cacgctttat 240
ctccaaatga acagcctgag agtcgaggac acggctgtgt actcctgtgc gagagatttt 300
agtatatcat ctcgccactt tgactattgg ggccagggaa ccctggtcac cgtctcctca 360

<210> 170
<211> 120
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 170
```
Gln Val Gln Leu Val Gln Ser Gly Gly Asp Val Val Gln Pro Gly Arg
 1               5                  10                  15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr
            20                  25                  30
Gly Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35                  40                  45
Ala Ile Ile Trp Tyr Asp Gly Ser Asn Lys Tyr Tyr Ala Asp Ser Val
    50                  55                  60
Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
65                  70                  75                  80
Leu Gln Met Asn Ser Leu Arg Val Glu Asp Thr Ala Val Tyr Ser Cys
                85                  90                  95
Ala Arg Asp Phe Ser Ile Ser Ser Arg His Phe Asp Tyr Trp Gly Gln
            100                 105                 110
Gly Thr Leu Val Thr Val Ser Ser
        115                 120
```

<210> 171
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 171
ggattcacct tcagtagtta tggc 24

<210> 172
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 172
Gly Phe Thr Phe Ser Ser Tyr Gly
 1               5


<210> 173
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 173
atatggtatg atggaagtaa taaa                                          24

<210> 174
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 174
Ile Trp Tyr Asp Gly Ser Asn Lys
 1               5


<210> 175
<211> 39
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 175
gcgagagatt ttagtatatc atctcgccac tttgactat                           39

<210> 176
<211> 13
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 176
Ala Arg Asp Phe Ser Ile Ser Ser Arg His Phe Asp Tyr
 1               5                  10

<210> 177
<211> 324
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 177
gacatccaga tgacccagtc tccatcctct ctgtctgcat ctgtaggaga cagagtcacc 60
atcacttgtc gggcgagtca ggccattaac aattatttag cctggtttca gcagaaacca 120
gggaaagccc ctaagtccct gatctatgct acatccaatt tgcaaagtgg ggtcccttca 180
cagttcagcg gcagtggatc tgggacagat tacactctca ccatcagcag cctgcagcct 240
gaagattttg caacttatta ctgccaacag tattatattt acccgatcac cttcggccaa 300
gggacacgac tggagattaa acga 324

<210> 178
<211> 108
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

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


<210> 179
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 179
caggccatta acaattat 18

<210> 180
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 180

Gln Ala Ile Asn Asn Tyr
1 5

<210> 181
<211> 9
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 181
gctacatcc 9

<210> 182
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 182
Ala Thr Ser
1

<210> 183
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 183
caacagtatt atatttaccc gatcacc 27

<210> 184
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 184
Gln Gln Tyr Tyr Ile Tyr Pro Ile Thr
1 5

<210> 185
<211> 360
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 185

caggtgcagc tggtggagtc tgggggagac gtggtccagc ctgggaggtc cctgagactc 60
tcctgtgcag cgtctggatt caccttcagt agttatggca tgcactgggt ccgccaggct 120
ccaggcaagg gactggagtg ggtggcaatt atatggtatg atggaagtaa taaatattat 180
gcagactccg tgaagggccg attcaccatc tccagagaca attccaagaa cacgctttat 240
ctccaaatga acagcctgag agtcgaggac acggctgtgt actcctgtgc gagagatttt 300
agtatatcat ctcgccactt tgactattgg ggccagggaa ccctggtcac cgtctcctca 360

<210> 186
<211> 120
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 186
Gln Val Gln Leu Val Glu Ser Gly Gly Asp Val Val Gln Pro Gly Arg
 1               5                  10                  15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr
            20                  25                  30
Gly Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35                  40                  45
Ala Ile Ile Trp Tyr Asp Gly Ser Asn Lys Tyr Tyr Ala Asp Ser Val
    50                  55                  60
Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
65                  70                  75                  80
Leu Gln Met Asn Ser Leu Arg Val Glu Asp Thr Ala Val Tyr Ser Cys
                85                  90                  95
Ala Arg Asp Phe Ser Ile Ser Ser Arg His Phe Asp Tyr Trp Gly Gln
            100                 105                 110
Gly Thr Leu Val Thr Val Ser Ser
        115                 120

<210> 187
<211> 321
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 187
gacatccaga tgacccagtc tccatcctct ctgtctgcat ctgtaggaga cagagtcacc 60
atcacttgtc gggcgagtca ggccattaac aattatttag cctggtttca gcagaaacca 120
gggaaagccc ctaagtccct gatctatgct acatccaatt tgcaaagtgg ggtcccttca 180
cagttcagcg gcagtggatc tgggacagat tacactctca ccatcagcag cctgcagcct 240
gaagattttg caacttatta ctgccaacag tattatattt acccgatcac cttcggccaa 300
gggacacgac tggagattaa a                                          321

<210> 188
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 188
Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly

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

<210> 189
<211> 360
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 189
caggtgcagc tggtggagtc tgggggaggc gtggtccagc ctgggaggtc cctgagactc 60
tcctgtgcag cgtctggatt caccttcagt agttatggca tgcactgggt ccgccaggct 120
ccaggcaagg ggctagagtg ggtggcagtt atatggtatg atggaagtaa taaatactat 180
gcagactccg tgaagggccg attcaccatc tccagagaca attccaagaa cacgctgtat 240
ctgcaaatga acagcctgag agccgaggac acggctgtgt attactgtgc gagagatttt 300
agtatatcat ctcgccactt tgactattgg ggccagggaa ccctggtcac cgtctcctca 360

<210> 190
<211> 120
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 190
```
Gln Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Arg
 1               5                  10                  15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr
            20                  25                  30
Gly Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35                  40                  45
Ala Val Ile Trp Tyr Asp Gly Ser Asn Lys Tyr Tyr Ala Asp Ser Val
    50                  55                  60
Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
65                  70                  75                  80
Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
                85                  90                  95
Ala Arg Asp Phe Ser Ile Ser Ser Arg His Phe Asp Tyr Trp Gly Gln
            100                 105                 110
Gly Thr Leu Val Thr Val Ser Ser
        115                 120
```

<210> 191
<211> 322

<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 191
gacatccaga tgacccagtc tccatcctca ctgtctgcat ctgtaggaga cagagtcacc 60
atcacttgtc gggcgagtca ggccattaac aattatttag cctggtttca gcagaaacca 120
gggaaagccc ctaagtccct gatctatgct acatccagtt tgcaaagtgg ggtcccatca 180
aggttcagcg gcagtggatc tgggacagat ttcactctca ccatcagcag cctgcagcct 240
gaagattttg caacttatta ctgccaacag tattatattt acccgatcac cttcggccaa 300
gggacacgac tggagattaa ac 322

<210> 192
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 192
Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
 1               5                  10                  15
Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Ala Ile Asn Asn Tyr
            20                  25                  30
Leu Ala Trp Phe Gln Gln Lys Pro Gly Lys Ala Pro Lys Ser Leu Ile
        35                  40                  45
Tyr Ala Thr Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
    50                  55                  60
Ser Gly Ser Gly Thr 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 Tyr Ile Tyr Pro Ile
                85                  90                  95
Thr Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys
            100                 105


<210> 193
<211> 372
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 193
gaggtgcagc tggtggagtc tgggggaggc gtggtccagc ctgggaggtc cctgagactc 60
tcctgtgcag cgtctggatt caccttcagt agctatggca tgcactgggt ccgccaggct 120
ccagacaagg ggctggagtg ggtggcagtt aaatgggatg atggaagtaa taaatattat 180
gcagactccg tgaagggccg attcaccatc tccagagaca attccaagaa cacgctgtat 240
ctgcaaatga acagcctgag agccgaggac acggctgtgt attactgtgc gagagaaggc 300
ccttacgatt tttacagtgg ttatggagct tttgatatct ggggccaagg gacaatggtc 360
accgtctctt ca 372

<210> 194
<211> 124
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 194
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 Ser Tyr
            20                  25                  30
Gly Met His Trp Val Arg Gln Ala Pro Asp Lys Gly Leu Glu Trp Val
        35                  40                  45
Ala Val Lys Trp Asp Asp Gly Ser Asn Lys Tyr Tyr Ala Asp Ser Val
    50                  55                  60
Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
65                  70                  75                  80
Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
                85                  90                  95
Ala Arg Glu Gly Pro Tyr Asp Phe Tyr Ser Gly Tyr Gly Ala Phe Asp
            100                 105                 110
Ile Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser
        115                 120


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

<220>
<223> synthetic

<400> 195
ggattcacct tcagtagcta tggc                                          24

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

<220>
<223> synthetic

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


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

<220>
<223> synthetic

<400> 197
aaatgggatg atggaagtaa taaa                                          24

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

<220>
<223> synthetic

<400> 198
Lys Trp Asp Asp Gly Ser Asn Lys
 1               5


<210> 199
<211> 51
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 199
gcgagagaag gcccttacga tttttacagt ggttatggag cttttgatat c          51

<210> 200
<211> 17
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

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



<210> 201
<211> 324
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 201
gacatccaga tgacccagtc tccatcctca ctgtctgcat ctgtaggaga cagagtcacc 60
atcacttgtc gggcgagtca gggcattagc aattatttag cctggtttca gcagaaacca 120
gggaaagccc ctaagtccct gatctatgct gcatccagtt tgcaaagtgg ggtcccatca 180
aagttcagcg gcagtggatc tgggacagat ttcactctca ccatcagcag cctgcagcct 240
gaagattttg caacttatta ctgccaacag tataatagtt accctcggac gttcggccaa 300
gggaccaagg tggagatcaa acga                                        324

<210> 202
<211> 108
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 202
Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly

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

<210> 203
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 203
cagggcatta gcaattat 18

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

<220>
<223> synthetic

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

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

<220>
<223> synthetic

<400> 205
gctgcatcc 9

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

<220>
<223> synthetic

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

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

<220>
<223> synthetic

<400> 207
caacagtata atagttaccc tcggacg 27

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

<220>
<223> synthetic

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


<210> 209
<211> 372
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 209
caggtgcagc tggtggagtc tgggggaggc gtggtccagc ctgggaggtc cctgagactc 60
tcctgtgcag cgtctggatt caccttcagt agctatggca tgcactgggt ccgccaggct 120
ccagacaagg ggctggagtg ggtggcagtt aaatgggatg atggaagtaa taaatattat 180
gcagactccg tgaagggccg attcaccatc tccagagaca attccaagaa cacgctgtat 240
ctgcaaatga acagcctgag agccgaggac acggctgtgt attactgtgc gagagaaggc 300
ccttacgatt tttacagtgg ttatggagct tttgatatct ggggccaagg gacaatggtc 360
accgtctctt ca 372

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

<220>
<223> synthetic

<400> 210
Gln Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Arg
 1               5                  10                  15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr
            20                  25                  30
Gly Met His Trp Val Arg Gln Ala Pro Asp Lys Gly Leu Glu Trp Val
        35                  40                  45
Ala Val Lys Trp Asp Asp Gly Ser Asn Lys Tyr Tyr Ala Asp Ser Val
    50                  55                  60
Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr

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

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

<220>
<223> synthetic

<400> 211
gacatccaga tgacccagtc tccatcctca ctgtctgcat ctgtaggaga cagagtcacc 60
atcacttgtc gggcgagtca gggcattagc aattatttag cctggtttca gcagaaacca 120
gggaaagccc ctaagtccct gatctatgct gcatccagtt tgcaaagtgg ggtcccatca 180
aagttcagcg gcagtggatc tgggacagat ttcactctca ccatcagcag cctgcagcct 240
gaagattttg caacttatta ctgccaacag tataatagtt accctcggac gttcggccaa 300
gggaccaagg tggaaatcaa a 321

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

<220>
<223> synthetic

<400> 212
```
Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
 1               5                  10                  15
Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Gly Ile Ser Asn Tyr
            20                  25                  30
Leu Ala Trp Phe Gln Gln Lys Pro Gly Lys Ala Pro Lys Ser Leu Ile
        35                  40                  45
Tyr Ala 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 Ser Tyr Pro Arg
                85                  90                  95
Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
            100                 105
```

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

<220>
<223> synthetic

<400> 213
caggtgcagc tggtggagtc tgggggaggc gtggtccagc ctgggaggtc cctgagactc 60
tcctgtgcag cgtctggatt caccttcagt agctatggca tgcactgggt ccgccaggct 120

ccaggcaagg ggctagagtg ggtggcagtt aaatgggatg atggaagtaa taaatactat 180
gcagactccg tgaagggccg attcaccatc tccagagaca attccaagaa cacgctgtat 240
ctgcaaatga acagcctgag agccgaggac acggctgtgt attactgtgc gagagaaggc 300
ccttacgatt tttacagtgg ttatggagct tttgatatct ggggccaagg gacaatggtc 360
accgtctctt ca 372

<210> 214
<211> 124
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 214
Gln Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Arg
 1               5                  10                  15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr
            20                  25                  30
Gly Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35                  40                  45
Ala Val Lys Trp Asp Asp Gly Ser Asn Lys Tyr Tyr Ala Asp Ser Val
    50                  55                  60
Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
65                  70                  75                  80
Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
                85                  90                  95
Ala Arg Glu Gly Pro Tyr Asp Phe Tyr Ser Gly Tyr Gly Ala Phe Asp
            100                 105                 110
Ile Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser
        115                 120


<210> 215
<211> 322
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 215
gacatccaga tgacccagtc tccatcctca ctgtctgcat ctgtaggaga cagagtcacc 60
atcacttgtc gggcgagtca gggcattagc aattatttag cctggtttca gcagaaacca 120
gggaaagccc ctaagtccct gatctatgct gcatccagtt tgcaaagtgg ggtcccatca 180
aggttcagcg gcagtggatc tgggacagat ttcactctca ccatcagcag cctgcagcct 240
gaagattttg caacttatta ctgccaacag tataatagtt accctcggac gttcggccaa 300
gggaccaagg tggaaatcaa ac 322

<210> 216
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 216
Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
 1               5                  10                  15
Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Gly Ile Ser Asn Tyr

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


<210> 217
<211> 372
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 217
gaggtgcagc tggtgcagtc tgggggaggc gtggtccagc ctgggaggtc cctgagactc 60
tcctgtgcag cgtctggatt caccttcagt agctatggca tgcactgggt ccgccaggct 120
ccagacaagg ggctggagtg ggtggcagtt aaatgggatg atggaagtaa taaatattat 180
gcagactccg tgaagggccg attcaccatc tccagagaca attccaagaa cacgctgtat 240
ctgcaaatga acagcctgag agccgaggac acggctgtgt attactgtgc gagagaaggc 300
ccttacgatt tttacagtgg ttatggagct tttgatatct ggggccaagg gacaatggtc 360
accgtctctt ca                                                     372

<210> 218
<211> 124
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 218
Glu Val Gln Leu Val Gln 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 Ser Tyr
            20                  25                  30
Gly Met His Trp Val Arg Gln Ala Pro Asp Lys Gly Leu Glu Trp Val
        35                  40                  45
Ala Val Lys Trp Asp Asp Gly Ser Asn Lys Tyr Tyr Ala Asp Ser Val
    50                  55                  60
Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
65                  70                  75                  80
Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
                85                  90                  95
Ala Arg Glu Gly Pro Tyr Asp Phe Tyr Ser Gly Tyr Gly Ala Phe Asp
            100                 105                 110
Ile Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser
        115                 120


<210> 219
<211> 24
<212> DNA
<213> Artificial Sequence
```

<220>
<223> synthetic

<400> 219
ggattcacct tcagtagcta tggc 24

<210> 220
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 220
Gly Phe Thr Phe Ser Ser Tyr Gly
1 5

<210> 221
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 221
aaatgggatg atggaagtaa taaa 24

<210> 222
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 222
Lys Trp Asp Asp Gly Ser Asn Lys
1 5

<210> 223
<211> 51
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 223
gcgagagaag gcccttacga tttttacagt ggttatggag cttttgatat c 51

<210> 224
<211> 17
<212> PRT
<213> Artificial Sequence

<220>

<223> synthetic

<400> 224
Ala Arg Glu Gly Pro Tyr Asp Phe Tyr Ser Gly Tyr Gly Ala Phe Asp
 1               5                  10                  15
Ile

<210> 225
<211> 324
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 225
gacatccagt tgacccagtc tccaggcacc ctgtctttgt ctccagggga aagagccacc 60
ctctcctgca gggccagtca gagtgttagc agcagctact tagcctggta ccagcagaaa 120
cctggccagg ctcccaggct cctcatctat ggtgcatcca gcagggccac tggcatccca 180
gacaggttca gtggcagtgg gtctgggaca gacttcactc tcaccatcag cagactggag 240
cctgaagatt ttgcagtgta ttactgtcag cagtatggta gctcactcac tttcggcgga 300
gggaccaagc tggagatcaa acga                                        324

<210> 226
<211> 108
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 226
Asp Ile Gln Leu Thr Gln Ser Pro Gly 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 Ser Ser
            20                  25                  30
Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu
        35                  40                  45
Ile Tyr Gly Ala Ser Ser Arg Ala Thr Gly Ile Pro Asp Arg Phe Ser
    50                  55                  60
Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu
65                  70                  75                  80
Pro Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Gly Ser Ser Leu
                85                  90                  95
Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys Arg
            100                 105

<210> 227
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 227
cagagtgtta gcagcagcta c                                          21

<210> 228
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 228
Gln Ser Val Ser Ser Ser Tyr
 1               5


<210> 229
<211> 9
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 229
ggtgcatcc                                                                9

<210> 230
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 230
Gly Ala Ser
 1


<210> 231
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 231
cagcagtatg gtagctcact cact                                               24

<210> 232
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 232
Gln Gln Tyr Gly Ser Ser Leu Thr
 1               5

<210> 233
<211> 372
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 233
caggtgcagc tggtggagtc tgggggaggc gtggtccagc ctgggaggtc cctgagactc 60
tcctgtgcag cgtctggatt caccttcagt agctatggca tgcactgggt ccgccaggct 120
ccagacaagg ggctggagtg ggtggcagtt aaatgggatg atggaagtaa taaatattat 180
gcagactccg tgaagggccg attcaccatc tccagagaca attccaagaa cacgctgtat 240
ctgcaaatga acagcctgag agccgaggac acggctgtgt attactgtgc gagagaaggc 300
ccttacgatt tttacagtgg ttatggagct tttgatatct ggggccaagg gacaatggtc 360
accgtctctt ca 372

<210> 234
<211> 124
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 234
Gln Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Arg
 1               5                  10                  15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr
            20                  25                  30
Gly Met His Trp Val Arg Gln Ala Pro Asp Lys Gly Leu Glu Trp Val
        35                  40                  45
Ala Val Lys Trp Asp Asp Gly Ser Asn Lys Tyr Tyr Ala Asp Ser Val
    50                  55                  60
Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
65                  70                  75                  80
Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
                85                  90                  95
Ala Arg Glu Gly Pro Tyr Asp Phe Tyr Ser Gly Tyr Gly Ala Phe Asp
            100                 105                 110
Ile Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser
        115                 120


<210> 235
<211> 321
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 235
gaaattgtgt tgacgcagtc tccaggcacc ctgtctttgt ctccagggga aagagccacc 60
ctctcctgca gggccagtca gagtgttagc agcagctact tagcctggta ccagcagaaa 120
cctggccagg ctcccaggct cctcatctat ggtgcatcca gcagggccac tggcatccca 180
gacaggttca gtggcagtgg gtctgggaca gacttcactc tcaccatcag cagactggag 240
cctgaagatt ttgcagtgta ttactgtcag cagtatggta gctcactcac tttcggcgga 300
gggaccaagg tggagatcaa a 321

<210> 236

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

<220>
<223> synthetic

<400> 236
Glu Ile Val Leu Thr Gln Ser Pro Gly 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 Ser Ser
            20                  25                  30
Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu
        35                  40                  45
Ile Tyr Gly Ala Ser Ser Arg Ala Thr Gly Ile Pro Asp Arg Phe Ser
    50                  55                  60
Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu
65                  70                  75                  80
Pro Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Gly Ser Ser Leu
                85                  90                  95
Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
            100                 105


<210> 237
<211> 372
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 237
caggtgcagc tggtggagtc tgggggaggc gtggtccagc ctgggaggtc cctgagactc 60
tcctgtgcag cgtctggatt caccttcagt agctatggca tgcactgggt ccgccaggct 120
ccaggcaagg ggctagagtg ggtggcagtt aaatgggatg atggaagtaa taaatactat 180
gcagactccg tgaagggccg attcaccatc tccagagaca attccaagaa cacgctgtat 240
ctgcaaatga acagcctgag agccgaggac acggctgtgt attactgtgc gagagaaggc 300
ccttacgatt tttacagtgg ttatggagct tttgatatct ggggccaagg gacaatggtc 360
accgtctctt ca                                                     372

<210> 238
<211> 124
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 238
Gln Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Arg
 1               5                  10                  15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr
            20                  25                  30
Gly Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35                  40                  45
Ala Val Lys Trp Asp Asp Gly Ser Asn Lys Tyr Tyr Ala Asp Ser Val
    50                  55                  60
Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
65                  70                  75                  80
Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys

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

<210> 239
<211> 322
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 239
gaaattgtgt tgacgcagtc tccaggcacc ctgtctttgt ctccagggga aagagccacc 60
ctctcctgca gggccagtca gagtgttagc agcagctact tagcctggta ccagcagaaa 120
cctggccagg ctcccaggct cctcatctat ggtgcatcca gcagggccac tggcatccca 180
gacaggttca gtggcagtgg gtctgggaca gacttcactc tcaccatcag cagactggag 240
cctgaagatt ttgcagtgta ttactgtcag cagtatggta gctcactcac tttcggcgga 300
gggaccaagg tggagatcaa ac                                          322

<210> 240
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

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

<210> 241
<211> 360
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 241
gaggtgcaat tggtggagtc gggggggaggc ttggtaaggc cgggggggtc ccttagactc 60
tcctgtgcag cctctggatt cactttcact aacgcctgga tgagctgggt ccgccaggct 120
ccagggaagg ggctggagtg gattggccag attaaaagca aaactgatgg tgggacaata 180
gactacgctg cacccgtgaa aggcagattc accgtctcaa gagatgattc agaaaatacg 240

ctgtttctgc aaatgaacag cctgaaaacc gaggacacag ccgtgtatta ctgtgcgggg 300
aactggaact acgtggactt tgactactgg ggccagggaa ccctggtcac cgtctcctca 360

<210> 242
<211> 120
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 242
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Arg Pro Gly Gly
 1               5                  10                  15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Thr Asn Ala
            20                  25                  30
Trp Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Ile
        35                  40                  45
Gly Gln Ile Lys Ser Lys Thr Asp Gly Gly Thr Ile Asp Tyr Ala Ala
    50                  55                  60
Pro Val Lys Gly Arg Phe Thr Val Ser Arg Asp Asp Ser Glu Asn Thr
65                  70                  75                  80
Leu Phe Leu Gln Met Asn Ser Leu Lys Thr Glu Asp Thr Ala Val Tyr
                85                  90                  95
Tyr Cys Ala Gly Asn Trp Asn Tyr Val Asp Phe Asp Tyr Trp Gly Gln
            100                 105                 110
Gly Thr Leu Val Thr Val Ser Ser
        115                 120

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

<220>
<223> synthetic

<400> 243
ggattcactt tcactaacgc ctgg 24

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

<220>
<223> synthetic

<400> 244
Gly Phe Thr Phe Thr Asn Ala Trp
 1               5

<210> 245
<211> 30
<212> DNA
<213> Artificial Sequence

<220>

<223> synthetic

<400> 245
attaaaagca aaactgatgg tgggacaata 30

<210> 246
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 246
Ile Lys Ser Lys Thr Asp Gly Gly Thr Ile
1 5 10

<210> 247
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 247
gcggggaact ggaactacgt ggactttgac tac 33

<210> 248
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 248
Ala Gly Asn Trp Asn Tyr Val Asp Phe Asp Tyr
1 5 10

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

<220>
<223> synthetic

<400> 249
gacatccaga tgacccagtc tccatcctcc ctgtctgcat ctgtaggaga cagagtcacc 60
atcacttgcc gggcaagtca ggacattaga aatgatttag gctggtatca gcagaaacca 120
gggaaagccc ctaagcgcct gatctatgct gcatccagtt tgcaaggtgg ggtcccatca 180
aggttcagcg gcagtggatc tgggacagaa ttcactctca caatcagcag cctgcagcct 240
gaagattttg caacttatta ctgtctacag cataatagtt acccttttcac tttcggccct 300
gggaccaaag tggatatcaa a 321

<210> 250
<211> 107
<212> PRT

<213> Artificial Sequence

<220>
<223> synthetic

<400> 250
Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
 1               5                  10                  15
Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Asp Ile Arg Asn Asp
            20                  25                  30
Leu Gly Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Arg Leu Ile
        35                  40                  45
Tyr Ala Ala Ser Ser Leu Gln Gly 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 Phe
                85                  90                  95
Thr Phe Gly Pro Gly Thr Lys Val Asp Ile Lys
            100                 105


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

<220>
<223> synthetic

<400> 251
caggacatta gaaatgat                                                  18

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

<220>
<223> synthetic

<400> 252
Gln Asp Ile Arg Asn Asp
 1               5


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

<220>
<223> synthetic

<400> 253
gctgcatcc                                                            9

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

<220>
<223> synthetic

<400> 254
Ala Ala Ser
 1


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

<220>
<223> synthetic

<400> 255
ctacagcata atagttaccc tttcact 27

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

<220>
<223> synthetic

<400> 256
Leu Gln His Asn Ser Tyr Pro Phe Thr
 1               5


<210> 257
<211> 360
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 257
gaggtgcagc tggtggagtc tgggggaggc ttggtaaggc cgggggggtc ccttagactc 60
tcctgtgcag cctctggatt cactttcact aacgcctgga tgagctgggt ccgccaggct 120
ccagggaagg ggctggagtg gattggccag attaaaagca aaactgatgg tgggacaata 180
gactacgctg cacccgtgaa aggcagattc accgtctcaa gagatgattc agaaaatacg 240
ctgtttctgc aaatgaacag cctgaaaacc gaggacacag ccgtgtatta ctgtgcgggg 300
aactggaact acgtggactt tgactactgg ggccagggaa ccctggtcac cgtctcctca 360


<210> 258
<211> 120
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 258
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Arg Pro Gly Gly
 1               5                  10                  15

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

<210> 259
<211> 321
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 259
gacatccaga tgacccagtc tccatcctcc ctgtctgcat ctgtaggaga cagagtcacc 60
atcacttgcc gggcaagtca ggacattaga aatgatttag gctggtatca gcagaaacca 120
gggaaagccc ctaagcgcct gatctatgct gcatccagtt tgcaaggtgg ggtcccatca 180
aggttcagcg gcagtggatc tgggacagaa ttcactctca caatcagcag cctgcagcct 240
gaagattttg caacttatta ctgtctacag cataatagtt acccttttcac tttcggccct 300
gggaccaaag tggatatcaa a 321

<210> 260
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 260
```
Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
 1               5                  10                  15
Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Asp Ile Arg Asn Asp
            20                  25                  30
Leu Gly Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Arg Leu Ile
        35                  40                  45
Tyr Ala Ala Ser Ser Leu Gln Gly 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 Phe
                85                  90                  95
Thr Phe Gly Pro Gly Thr Lys Val Asp Ile Lys
            100                 105
```

<210> 261
<211> 360
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 261
gaggtgcagc tggtggagtc tgggggaggc ttggtaaagc ctgggggGTC ccttagactc 60
tcctgtgcag cctctggatt cactttcact aacgcctgga tgagctgggt ccgccaggct 120
ccagggaagg ggctggagtg ggttggccgt attaaaagca aaactgatgg tgggacaata 180
gactacgctg cacccgtgaa aggcagattc accatctcaa gagatgattc aaaaaacacg 240
ctgtatctgc aaatgaacag cctgaaaacc gaggacacag ccgtgtatta ctgtgcgggg 300
aactggaact acgtggactt tgactactgg ggccagggaa ccctggtcac cgtctcctca 360


<210> 262
<211> 120
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 262
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Lys Pro Gly Gly
 1               5                  10                  15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Thr Asn Ala
            20                  25                  30
Trp Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35                  40                  45
Gly Arg Ile Lys Ser Lys Thr Asp Gly Gly Thr Ile Asp Tyr Ala Ala
    50                  55                  60
Pro Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asp Ser Lys Asn Thr
65                  70                  75                  80
Leu Tyr Leu Gln Met Asn Ser Leu Lys Thr Glu Asp Thr Ala Val Tyr
                85                  90                  95
Tyr Cys Ala Gly Asn Trp Asn Tyr Val Asp Phe Asp Tyr Trp Gly Gln
            100                 105                 110
Gly Thr Leu Val Thr Val Ser Ser
        115                 120


<210> 263
<211> 322
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 263
gacatccaga tgacccagtc tccatcctcc ctgtctgcat ctgtaggaga cagagtcacc 60
atcacttgcc gggcaagtca ggacattaga aatgatttag gctggtatca gcagaaacca 120
gggaaagccc ctaagcgcct gatctatgct gcatccagtt tgcaaagtgg ggtcccatca 180
aggttcagcg gcagtggatc tgggacagaa ttcactctca caatcagcag cctgcagcct 240
gaagattttg caacttatta ctgtctacag cataatagtt acccttTcac tttcggccct 300
gggaccaaag tggatatcaa ac                                          322

<210> 264
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 264
Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
 1               5                  10                  15
Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Asp Ile Arg Asn Asp
            20                  25                  30
Leu Gly Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Arg Leu Ile
        35                  40                  45
Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
    50                  55                  60
Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
65                  70                  75                  80
Glu Asp Phe Ala Thr Tyr Tyr Cys Leu Gln His Asn Ser Tyr Pro Phe
                85                  90                  95
Thr Phe Gly Pro Gly Thr Lys Val Asp Ile Lys
            100                 105


<210> 265
<211> 375
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 265
caggtgcagc tggtggagtc tgggggaggc gtggtccagc ctgggaggtc cctgagactc 60
tcctgtgcag cgtctggatt caccctcagt aactatggca tgcactgggt ccgccaggct 120
ccaggcaagg ggctggagtg ggtggcagtt atatggcatg atggaagtaa tacatactat 180
gcagactccg tgaagggccg attcaccatc tccagagaca attctaagaa cacgctgtat 240
ctgcaaatga acagcctgag agccgaagac acggctgtgt attactgtac gagagagggg 300
ctcgattttt ggagtggtta ttaccctaac tggttcgacc cctggggcca gggaaccctg 360
gtcaccgtct cctca                                                  375

<210> 266
<211> 125
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 266
Gln Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Arg
 1               5                  10                  15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Leu Ser Asn Tyr
            20                  25                  30
Gly Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35                  40                  45
Ala Val Ile Trp His Asp Gly Ser Asn 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 Val Tyr Tyr Cys
                85                  90                  95
Thr Arg Glu Gly Leu Asp Phe Trp Ser Gly Tyr Tyr Pro Asn Trp Phe
            100                 105                 110
Asp Pro Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser

115 120 125

<210> 267
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 267
ggattcaccc tcagtaacta tggc 24

<210> 268
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 268
Gly Phe Thr Leu Ser Asn Tyr Gly
1 5

<210> 269
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 269
atatggcatg atggaagtaa taca 24

<210> 270
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 270
Ile Trp His Asp Gly Ser Asn Thr
1 5

<210> 271
<211> 54
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 271
acgagagagg ggctcgattt ttggagtggt tattacccta actggttcga cccc 54

<210> 272
<211> 18
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 272
Thr Arg Glu Gly Leu Asp Phe Trp Ser Gly Tyr Tyr Pro Asn Trp Phe
 1               5                  10                  15
Asp Pro

<210> 273
<211> 321
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 273
gacatccaga tgacccagtc tccatcctcc ctgtctgcat ctgtaggaga cagagtcacc 60
atcacttgcc gggcaagtca gggcattaga aatgatttag gctggtatca gcagaaacca 120
gggaaagccc ctaagcgcct gatctatgct gcatccaatt tgcaaggtgg ggtcccatca 180
aggttcagcg gcagtggatc tgggacagaa ttcactctca caatcagcag cctgcagcct 240
gaagattttg cagcttatta ctgtctacag cataatattt acccgctcac tttcggcgga 300
gggaccaagg tggagatcaa a                                          321

<210> 274
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 274
Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
 1               5                  10                  15
Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Gly Ile Arg Asn Asp
            20                  25                  30
Leu Gly Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Arg Leu Ile
        35                  40                  45
Tyr Ala Ala Ser Asn Leu Gln Gly 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 Ala Tyr Tyr Cys Leu Gln His Asn Ile Tyr Pro Leu
                85                  90                  95
Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
            100                 105

<210> 275
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 275
cagggcatta gaaatgat 18

<210> 276
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 276
Gln Gly Ile Arg Asn Asp
 1               5


<210> 277
<211> 9
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 277
gctgcatcc 9

<210> 278
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 278
Ala Ala Ser
 1


<210> 279
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 279
ctacagcata atatttaccc gctcact 27

<210> 280
<211> 9
<212> PRT
<213> Artificial Sequence

<220>

<223> synthetic

<400> 280
Leu Gln His Asn Ile Tyr Pro Leu Thr
 1               5


<210> 281
<211> 375
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 281
caggtgcagc tggtggagtc tgggggaggc gtggtccagc ctgggaggtc cctgagactc 60
tcctgtgcag cgtctggatt caccctcagt aactatggca tgcactgggt ccgccaggct 120
ccaggcaagg ggctggagtg ggtggcagtt atatggcatg atggaagtaa tacatactat 180
gcagactccg tgaagggccg attcaccatc tccagagaca attctaagaa cacgctgtat 240
ctgcaaatga acagcctgag agccgaagac acggctgtgt attactgtac gagagagggg 300
ctcgattttt ggagtggtta ttaccctaac tggttcgacc cctggggcca gggaaccctg 360
gtcaccgtct cctca                                                  375

<210> 282
<211> 125
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

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


<210> 283
<211> 321
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 283
gacatccaga tgacccagtc tccatcctcc ctgtctgcat ctgtaggaga cagagtcacc 60

atcacttgcc gggcaagtca gggcattaga aatgatttag gctggtatca gcagaaacca 120
gggaaagccc ctaagcgcct gatctatgct gcatccaatt tgcaaggtgg ggtcccatca 180
aggttcagcg gcagtggatc tgggacagaa ttcactctca caatcagcag cctgcagcct 240
gaagattttg cagcttatta ctgtctacag cataatattt acccgctcac tttcggcgga 300
gggaccaagg tggagatcaa a 321

<210> 284
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 284
Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
 1               5                  10                  15
Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Gly Ile Arg Asn Asp
            20                  25                  30
Leu Gly Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Arg Leu Ile
        35                  40                  45
Tyr Ala Ala Ser Asn Leu Gln Gly 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 Ala Tyr Tyr Cys Leu Gln His Asn Ile Tyr Pro Leu
                85                  90                  95
Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
            100                 105


<210> 285
<211> 375
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 285
caggtgcagc tggtggagtc tgggggaggc gtggtccagc ctgggaggtc cctgagactc 60
tcctgtgcag cgtctggatt cacctcagt aactatggca tgcactgggt ccgccaggct 120
ccaggcaagg ggctagagtg ggtggcagtt atatggcatg atggaagtaa tacatactat 180
gcagactccg tgaagggccg attcaccatc tccagagaca attccaagaa cacgctgtat 240
ctgcaaatga acagcctgag agccgaggac acggctgtgt attactgtac gagagagggg 300
ctcgattttt ggagtggtta ttaccctaac tggttcgacc cctggggcca gggaaccctg 360
gtcaccgtct cctca 375

<210> 286
<211> 125
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 286
Gln Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Arg
 1               5                  10                  15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Leu Ser Asn Tyr
            20                  25                  30

```
Gly Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35                  40                  45
Ala Val Ile Trp His Asp Gly Ser Asn 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 Val Tyr Tyr Cys
                85                  90                  95
Thr Arg Glu Gly Leu Asp Phe Trp Ser Gly Tyr Tyr Pro Asn Trp Phe
            100                 105                 110
Asp Pro Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
        115                 120                 125
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<210> 287
<211> 322
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 287
gacatccaga tgacccagtc tccatcctcc ctgtctgcat ctgtaggaga cagagtcacc 60
atcacttgcc gggcaagtca gggcattaga aatgatttag gctggtatca gcagaaacca 120
gggaaagccc ctaagcgcct gatctatgct gcatccagtt tgcaaagtgg ggtcccatca 180
aggttcagcg gcagtggatc tgggacagaa ttcactctca caatcagcag cctgcagcct 240
gaagattttg caacttatta ctgtctacag cataatattt acccgctcac tttcggcgga 300
gggaccaagg tggagatcaa ac                                          322

<210> 288
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 288
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Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
 1               5                  10                  15
Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Gly Ile Arg Asn Asp
            20                  25                  30
Leu Gly Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Arg Leu Ile
        35                  40                  45
Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
    50                  55                  60
Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
65                  70                  75                  80
Glu Asp Phe Ala Thr Tyr Tyr Cys Leu Gln His Asn Ile Tyr Pro Leu
                85                  90                  95
Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
            100                 105
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<210> 289
<211> 363
<212> DNA
<213> Artificial Sequence

<220>

<223> synthetic

<400> 289
gaggtgcagc tggtggagtc tgggggagac ttggtccagc ctgggggtc cctgagactc 60
tcctgtacag cctctggatt cacctttagt aaatattgga tgacctgggt ccgccaggct 120
ccagggaggg ggctggagtg ggtggccaac ataaaggaag atggaaatga aaaatacttt 180
ctggactctg tgaagggccg cttcaccatt tccagagaca acgccaagga tttattgttt 240
ctgcaaatga acagcctgag aggcgaggac acggctgtgt attactgtgt gagagatcga 300
ggtatagaag tggctggccc ctttgactac tggggccagg gaaccctggt caccgtctcc 360
tca 363

<210> 290
<211> 121
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 290
Glu Val Gln Leu Val Glu Ser Gly Gly Asp Leu Val Gln Pro Gly Gly
 1               5                  10                  15
Ser Leu Arg Leu Ser Cys Thr Ala Ser Gly Phe Thr Phe Ser Lys Tyr
            20                  25                  30
Trp Met Thr Trp Val Arg Gln Ala Pro Gly Arg Gly Leu Glu Trp Val
        35                  40                  45
Ala Asn Ile Lys Glu Asp Gly Asn Glu Lys Tyr Phe Leu Asp Ser Val
    50                  55                  60
Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asp Leu Leu Phe
65                  70                  75                  80
Leu Gln Met Asn Ser Leu Arg Gly Glu Asp Thr Ala Val Tyr Tyr Cys
                85                  90                  95
Val Arg Asp Arg Gly Ile Glu Val Ala Gly Pro Phe Asp Tyr Trp Gly
            100                 105                 110
Gln Gly Thr Leu Val Thr Val Ser Ser
        115                 120


<210> 291
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 291
ggattcacct ttagtaaata ttgg 24

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

<220>
<223> synthetic

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

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

<220>
<223> synthetic

<400> 293
ataaaggaag atggaaatga aaaa 24

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

<220>
<223> synthetic

<400> 294
Ile Lys Glu Asp Gly Asn Glu Lys
1 5

<210> 295
<211> 42
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 295
gtgagagatc gaggtataga agtggctggc ccctttgact ac 42

<210> 296
<211> 14
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 296
Val Arg Asp Arg Gly Ile Glu Val Ala Gly Pro Phe Asp Tyr
1 5 10

<210> 297
<211> 318
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 297
gacatccaga tgacccagtc tccttccacc ctgtctgcat ctgttgggga cagagtcacc 60
gtcacttgcc gggccagtca gactattatt aattggttgg cctggtatca gcagaaacca 120
gggaaagccc ctaaactcct gatctctaag gcgtctagtt tagaaagtgg ggtcccatca 180

aggttcagcg gcagtggatc tgggacagaa ttcactctca ccattagcag cctgcagcct 240
gatgattttg caacttatta ctgccaacag tataataggt attggacgtt cggccaaggg 300
accatggtgg aaatcaaa 318

<210> 298
<211> 106
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 298
Asp Ile Gln Met Thr Gln Ser Pro Ser Thr Leu Ser Ala Ser Val Gly
 1               5                  10                  15
Asp Arg Val Thr Val Thr Cys Arg Ala Ser Gln Thr Ile Ile Asn Trp
            20                  25                  30
Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
        35                  40                  45
Ser 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 Ser Leu Gln Pro
65                  70                  75                  80
Asp Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Tyr Asn Arg Tyr Trp Thr
                85                  90                  95
Phe Gly Gln Gly Thr Met Val Glu Ile Lys
            100                 105


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

<220>
<223> synthetic

<400> 299
cagactatta ttaattgg 18

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

<220>
<223> synthetic

<400> 300
Gln Thr Ile Ile Asn 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> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 303
caacagtata ataggtattg gacg 24

<210> 304
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

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

<210> 305
<211> 363
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 305
gaggtgcagc tggtggagtc tgggggagac ttggtccagc ctgggggggtc cctgagactc 60
tcctgtacag cctctggatt cacctttagt aaatattgga tgacctgggt ccgccaggct 120
ccagggaggg ggctggagtg ggtggccaac ataaaggaag atggaaatga aaaatacttt 180
ctggactctg tgaagggccg cttcaccatt tccagagaca acgccaagga tttattgttt 240
ctgcaaatga acagcctgag aggcgaggac acggctgtgt attactgtgt gagagatcga 300
ggtatagaag tggctggccc ctttgactac tggggccagg gaaccctggt caccgtctcc 360
tca 363

<210> 306
<211> 121
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 306
Glu Val Gln Leu Val Glu Ser Gly Gly Asp Leu Val Gln Pro Gly Gly
 1               5                  10                  15
Ser Leu Arg Leu Ser Cys Thr Ala Ser Gly Phe Thr Phe Ser Lys Tyr
            20                  25                  30
Trp Met Thr Trp Val Arg Gln Ala Pro Gly Arg Gly Leu Glu Trp Val
        35                  40                  45
Ala Asn Ile Lys Glu Asp Gly Asn Glu Lys Tyr Phe Leu Asp Ser Val
    50                  55                  60
Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asp Leu Leu Phe
65                  70                  75                  80
Leu Gln Met Asn Ser Leu Arg Gly Glu Asp Thr Ala Val Tyr Tyr Cys
                85                  90                  95
Val Arg Asp Arg Gly Ile Glu Val Ala Gly Pro Phe Asp Tyr Trp Gly
            100                 105                 110
Gln Gly Thr Leu Val Thr Val Ser Ser
        115                 120


<210> 307
<211> 318
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 307
gacatccaga tgacccagtc tccttccacc ctgtctgcat ctgttgggga cagagtcacc 60
gtcacttgcc gggccagtca gactattatt aattggttgg cctggtatca gcagaaacca 120
gggaaagccc ctaaactcct gatctctaag gcgtctagtt tagaaagtgg ggtcccatca 180
aggttcagcg gcagtggatc tgggacagaa ttcactctca ccattagcag cctgcagcct 240
gatgattttg caacttatta ctgccaacag tataataggt attggacgtt cggccaaggg 300
accaaggtgg aaatcaaa                                              318

<210> 308
<211> 106
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 308
Asp Ile Gln Met Thr Gln Ser Pro Ser Thr Leu Ser Ala Ser Val Gly
 1               5                  10                  15
Asp Arg Val Thr Val Thr Cys Arg Ala Ser Gln Thr Ile Ile Asn Trp
            20                  25                  30
Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
        35                  40                  45
Ser 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 Ser Leu Gln Pro
65                  70                  75                  80
Asp Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Tyr Asn Arg Tyr Trp Thr
                85                  90                  95
Phe Gly Gln Gly Thr Lys Val Glu Ile Lys

100 105

<210> 309
<211> 363
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 309
gaggtgcagc tggtggagtc tgggggaggc ttggtccagc ctgggggtc cctgagactc 60
tcctgtgcag cctctggatt cacctttagt aaatattgga tgagctgggt ccgccaggct 120
ccagggaagg ggctggagtg ggtggccaac ataaaggaag atggaaatga aaaatactat 180
gtggactctg tgaagggccg attcaccatc tccagagaca acgccaagaa ctcactgtat 240
ctgcaaatga acagcctgag agccgaggac acggctgtgt attactgtgt gagagatcga 300
ggtatagaag tggctggccc ctttgactac tggggccagg gaaccctggt caccgtctcc 360
tca 363

<210> 310
<211> 121
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 310
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 Lys 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 Lys Glu Asp Gly Asn Glu Lys Tyr Tyr Val Asp Ser Val
50 55 60
Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Ser Leu Tyr
65 70 75 80
Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95
Val Arg Asp Arg Gly Ile Glu Val Ala Gly Pro Phe Asp Tyr Trp Gly
100 105 110
Gln Gly Thr Leu Val Thr Val Ser Ser
115 120

<210> 311
<211> 319
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 311
gacatccaga tgacccagtc tccttccacc ctgtctgcat ctgtaggaga cagagtcacc 60
atcacttgcc gggccagtca gactattatt aattggttgg cctggtatca gcagaaacca 120
gggaaagccc ctaagctcct gatctataag gcgtctagtt tagaaagtgg ggtcccatca 180
aggttcagcg gcagtggatc tgggacagaa ttcactctca ccatcagcag cctgcagcct 240
gatgattttg caacttatta ctgccaacag tataataggt attggacgtt cggccaaggg 300

accaaggtgg aaatcaaac 319

<210> 312
<211> 106
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 312
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 Thr Ile Ile Asn Trp
            20                  25                  30
Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys 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 Ser Leu Gln Pro
65                  70                  75                  80
Asp Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Tyr Asn Arg Tyr Trp Thr
                85                  90                  95
Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
            100                 105


<210> 313
<211> 363
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 313
caggtgcagc tggtggagtc tgggggaggc gtggtccagc ctgggaggtc cctgagactc 60
tcctgtgcag cgtctggatt caccttcagt agctatggca tgcactgggt ccgccaggct 120
ccaggcaagg ggctggagtg ggtggcagtt atatggtatg atgaatttaa taaatactat 180
gcagactccg tgaagggccg attcaccatc tccagagaca attccaagaa cacgctgtat 240
ctgcaaatga acagcctgag agccgaggac acggctgtgt attactgtgc gagagagaga 300
gagagtggat acagttatgg ttttgactac tggggccagg gaaccctggt caccgtctcc 360
tca 363

<210> 314
<211> 121
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

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

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

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

<220>
<223> synthetic

<400> 315
ggattcacct tcagtagcta tggc 24

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

<220>
<223> synthetic

<400> 316
Gly Phe Thr Phe Ser Ser Tyr Gly
1 5

<210> 317
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 317
atatggtatg atgaatttaa taaa 24

<210> 318
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 318
Ile Trp Tyr Asp Glu Phe Asn Lys
1 5

<210> 319
<211> 42
<212> DNA

<213> Artificial Sequence

<220>
<223> synthetic

<400> 319
gcgagagaga gagagagtgg atacagttat ggttttgact ac 42

<210> 320
<211> 14
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 320
Ala Arg Glu Arg Glu Ser Gly Tyr Ser Tyr Gly Phe Asp Tyr
1 5 10

<210> 321
<211> 318
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 321
gaaatagtga tgacgcagtc tccagccacc ctgtctgtgt ctccagggga aagagccacc 60
ctctcctgca gggccggtca gagtgttagc agcaacttag cctggtacca gcaaaaacct 120
ggccaggctc ccaggctcct catctatggt gcgtccacca gggccactgg tatcccagcc 180
aggttcagtg gcagtgggtc tgggacagag ttcactctca ccatcagcag cctgcagtct 240
gaagattttg cagtttatta ctgtcagcag tataataact ggtggacgtt cggccaaggg 300
accaaggtgg aaatcaaa 318

<210> 322
<211> 106
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

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

<210> 323
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 323
cagagtgtta gcagcaac 18

<210> 324
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 324
Gln Ser Val Ser Ser Asn
 1               5


<210> 325
<211> 9
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 325
ggtgcgtcc 9

<210> 326
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 326
Gly Ala Ser
 1


<210> 327
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 327
cagcagtata ataactggtg gacg 24

<210> 328

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

<220>
<223> synthetic

<400> 328
Gln Gln Tyr Asn Asn Trp Trp Thr
 1               5


<210> 329
<211> 363
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 329
caggtgcagc tggtggagtc tgggggaggc gtggtccagc ctgggaggtc cctgagactc 60
tcctgtgcag cgtctggatt caccttcagt agctatggca tgcactgggt ccgccaggct 120
ccaggcaagg ggctggagtg ggtggcagtt atatggtatg atgaatttaa taaatactat 180
gcagactccg tgaagggccg attcaccatc tccagagaca attccaagaa cacgctgtat 240
ctgcaaatga acagcctgag agccgaggac acggctgtgt attactgtgc gagagagaga 300
gagagtggat acagttatgg ttttgactac tggggccagg gaaccctggt caccgtctcc 360
tca                                                               363

<210> 330
<211> 121
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 330
Gln Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Arg
 1               5                  10                  15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr
            20                  25                  30
Gly Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35                  40                  45
Ala Val Ile Trp Tyr Asp Glu Phe Asn Lys Tyr Tyr Ala Asp Ser Val
    50                  55                  60
Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
65                  70                  75                  80
Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
                85                  90                  95
Ala Arg Glu Arg Glu Ser Gly Tyr Ser Tyr Gly Phe Asp Tyr Trp Gly
            100                 105                 110
Gln Gly Thr Leu Val Thr Val Ser Ser
        115                 120


<210> 331
<211> 318
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 331
gaaatagtga tgacgcagtc tccagccacc ctgtctgtgt ctccagggga aagagccacc 60
ctctcctgca gggccggtca gagtgttagc agcaacttag cctggtacca gcaaaaacct 120
ggccaggctc ccaggctcct catctatggt gcgtccacca gggccactgg tatcccagcc 180
aggttcagtg gcagtgggtc tgggacagag ttcactctca ccatcagcag cctgcagtct 240
gaagattttg cagtttatta ctgtcagcag tataataact ggtggacgtt cggccaaggg 300
accaaggtgg aaatcaaa 318

<210> 332
<211> 106
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 332
Glu Ile Val Met Thr Gln Ser Pro Ala Thr Leu Ser Val Ser Pro Gly
 1               5                  10                  15
Glu Arg Ala Thr Leu Ser Cys Arg Ala Gly Gln Ser Val Ser Ser Asn
            20                  25                  30
Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile
        35                  40                  45
Tyr Gly Ala Ser Thr Arg Ala Thr Gly Ile Pro Ala Arg Phe Ser Gly
    50                  55                  60
Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln Ser
65                  70                  75                  80
Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Asn Asn Trp Trp Thr
                85                  90                  95
Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
            100                 105


<210> 333
<211> 363
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 333
caggtgcagc tggtggagtc tgggggaggc gtggtccagc ctgggaggtc cctgagactc 60
tcctgtgcag cgtctggatt caccttcagt agctatggca tgcactgggt ccgccaggct 120
ccaggcaagg ggctggagtg ggtggcagtt atatggtatg atgaatttaa taaatactat 180
gcagactccg tgaagggccg attcaccatc tccagagaca actccaagaa cacgctgtat 240
ctgcaaatga acagcctgag agccgaggac acggctgtgt attactgtgc gagagagaga 300
gagagtggat acagttatgg ttttgactac tggggccagg gaaccctggt caccgtctcc 360
tca 363

<210> 334
<211> 121
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 334
Gln Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Arg
 1               5                  10                  15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr
            20                  25                  30
Gly Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35                  40                  45
Ala Val Ile Trp Tyr Asp Glu Phe Asn Lys Tyr Tyr Ala Asp Ser Val
    50                  55                  60
Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
65                  70                  75                  80
Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
                85                  90                  95
Ala Arg Glu Arg Glu Ser Gly Tyr Ser Tyr Gly Phe Asp Tyr Trp Gly
            100                 105                 110
Gln Gly Thr Leu Val Thr Val Ser Ser
        115                 120


<210> 335
<211> 319
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 335
gaaatagtga tgacgcagtc tccagccacc ctgtctgtgt ctccagggga aagagccacc 60
ctctcctgca gggccagtca gagtgttagc agcaacttag cctggtacca gcagaaacct 120
ggccaggctc ccaggctcct catctatggt gcgtccacca gggccactgg tatcccagcc 180
aggttcagtg gcagtgggtc tgggacagag ttcactctca ccatcagcag cctgcagtct 240
gaagattttg cagtttatta ctgtcagcag tataataact ggtggacgtt cggccaaggg 300
accaaggtgg aaatcaaac                                              319

<210> 336
<211> 106
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 336
Glu Ile Val Met Thr Gln Ser Pro Ala Thr Leu Ser Val Ser Pro Gly
 1               5                  10                  15
Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Ser Asn
            20                  25                  30
Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile
        35                  40                  45
Tyr Gly Ala Ser Thr Arg Ala Thr Gly Ile Pro Ala Arg Phe Ser Gly
    50                  55                  60
Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln Ser
65                  70                  75                  80
Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Asn Asn Trp Trp Thr
                85                  90                  95
Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
            100                 105


<210> 337

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

<220>
<223> synthetic

<400> 337
caggttcagc tggtgcagtc tggacctgag gtgaaggagc ctggggcctc agtgaaggtc 60
tcctgcaagg cttctggtta cacctttacc acctatagta tcacctgggt gcgacaggcc 120
cctggacaag ggcttgagtg gatgggatgg atcagcgctt acaattatga cacaaattat 180
gcacagaaga tccagggcag agtcaccatg accacagaca catccacgaa cacagcctac 240
atggaactga ggagcctgag atctgacgac acggccgtgt attactgtgc gagaggcgat 300
ttctggatta attattccta ctactactac ggtgtggacg tctggggcca agggaccacg 360
gtcaccgtct cctca 375

<210> 338
<211> 125
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 338
Gln Val Gln Leu Val Gln Ser Gly Pro Glu Val Lys Glu Pro Gly Ala
 1               5                  10                  15
Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Thr Tyr
            20                  25                  30
Ser Ile Thr Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
        35                  40                  45
Gly Trp Ile Ser Ala Tyr Asn Tyr Asp Thr Asn Tyr Ala Gln Lys Ile
    50                  55                  60
Gln Gly Arg Val Thr Met Thr Thr Asp Thr Ser Thr Asn Thr Ala Tyr
65                  70                  75                  80
Met Glu Leu Arg Ser Leu Arg Ser Asp Asp Thr Ala Val Tyr Tyr Cys
                85                  90                  95
Ala Arg Gly Asp Phe Trp Ile Asn Tyr Ser Tyr Tyr Tyr Tyr Gly Val
            100                 105                 110
Asp Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser
        115                 120                 125


<210> 339
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 339
ggttacacct ttaccaccta tagt 24

<210> 340
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 340
Gly Tyr Thr Phe Thr Thr Tyr Ser
 1               5


<210> 341
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 341
atcagcgctt acaattatga caca                                          24

<210> 342
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 342
Ile Ser Ala Tyr Asn Tyr Asp Thr
 1               5


<210> 343
<211> 54
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 343
gcgagaggcg atttctggat taattattcc tactactact acggtgtgga cgtc          54

<210> 344
<211> 18
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 344
Ala Arg Gly Asp Phe Trp Ile Asn Tyr Ser Tyr Tyr Tyr Tyr Gly Val
 1               5                  10                  15
Asp Val



<210> 345
<211> 339
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 345
gacattgtga tgacgcagtc tccactctcc ctgcccgtca tccctggaga gccggcctcc 60
atctcctgca ggtctagtca gagcctcctg catagtaatg gatacaacta tttggattgg 120
tacctgcaga agccagggca gtctccacag ctcctgatct atttgggttc taatcgggcc 180
tccggggtcc ctgacaggtt cagtggcagt ggatcaggca cagattttac actgaaaatc 240
agcagagtgg aggctgagga tgttggggtt tattactgca tgcaagctct acaaactccc 300
atgtacactt ttggccaggg gaccaagctg gagatcaaa 339

<210> 346
<211> 113
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 346
Asp Ile Val Met Thr Gln Ser Pro Leu Ser Leu Pro Val Ile Pro Gly
 1               5                  10                  15
Glu Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Leu His Ser
            20                  25                  30
Asn Gly Tyr Asn Tyr Leu Asp Trp Tyr Leu Gln Lys Pro Gly Gln Ser
        35                  40                  45
Pro Gln Leu Leu Ile Tyr Leu Gly Ser Asn Arg Ala Ser Gly Val Pro
    50                  55                  60
Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile
65                  70                  75                  80
Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln Ala
                85                  90                  95
Leu Gln Thr Pro Met Tyr Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile
            100                 105                 110
Lys



<210> 347
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 347
cagagcctcc tgcatagtaa tggatacaac tat 33

<210> 348
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 348
Gln Ser Leu Leu His Ser Asn Gly Tyr Asn Tyr
 1               5                  10

<210> 349
<211> 9
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 349
ttgggttct 9

<210> 350
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 350
Leu Gly Ser
1

<210> 351
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 351
atgcaagctc tacaaactcc catgtacact 30

<210> 352
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 352
Met Gln Ala Leu Gln Thr Pro Met Tyr Thr
1 5 10

<210> 353
<211> 372
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 353
caggttcagc tggtgcagtc tggacctgag gtgaaggagc ctggggcctc agtgaaggtc 60
tcctgcaagg cttctggtta cacctttacc acctatagta tcacctgggt gcgacaggcc 120
cctggacaag ggcttgagtg gatgggatgg atcagcgctt acaattatga cacaaattat 180

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gcacagaaga tccagggcag agtcaccatg accacagaca catccacgaa cacagcctac 240
atggaactga ggagcctgag atctgacgac acggccgtgt attactgtgc gagaggcgat 300
ttctggatta attattccta ctactactac ggtgtggacg tctggggcca agggaccacg 360
gtcaccgtct cc                                                     372

<210> 354
<211> 124
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 354
Gln Val Gln Leu Val Gln Ser Gly Pro Glu Val Lys Glu Pro Gly Ala
 1               5                  10                  15
Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Thr Tyr
            20                  25                  30
Ser Ile Thr Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
        35                  40                  45
Gly Trp Ile Ser Ala Tyr Asn Tyr Asp Thr Asn Tyr Ala Gln Lys Ile
    50                  55                  60
Gln Gly Arg Val Thr Met Thr Thr Asp Thr Ser Thr Asn Thr Ala Tyr
65                  70                  75                  80
Met Glu Leu Arg Ser Leu Arg Ser Asp Asp Thr Ala Val Tyr Tyr Cys
                85                  90                  95
Ala Arg Gly Asp Phe Trp Ile Asn Tyr Ser Tyr Tyr Tyr Tyr Gly Val
            100                 105                 110
Asp Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser
        115                 120


<210> 355
<211> 339
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 355
gatattgtga tgactcagtc tccactctcc ctgcccgtca tccctggaga gccggcctcc 60
atctcctgca ggtctagtca gagcctcctg catagtaatg gatacaacta tttggattgg 120
tacctgcaga agccagggca gtctccacag ctcctgatct atttgggttc taatcgggcc 180
tccggggtcc ctgacaggtt cagtggcagt ggatcaggca cagattttac actgaaaatc 240
agcagagtgg aggctgagga tgttggggtt tattactgca tgcaagctct acaaactccc 300
atgtacactt ttggccaggg gaccaagctg gagatcaaa                        339

<210> 356
<211> 113
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 356
Asp Ile Val Met Thr Gln Ser Pro Leu Ser Leu Pro Val Ile Pro Gly
 1               5                  10                  15
Glu Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Leu His Ser
            20                  25                  30
```

```
Asn Gly Tyr Asn Tyr Leu Asp Trp Tyr Leu Gln Lys Pro Gly Gln Ser
        35                  40                  45
Pro Gln Leu Leu Ile Tyr Leu Gly Ser Asn Arg Ala Ser Gly Val Pro
    50                  55                  60
Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile
65                  70                  75                  80
Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln Ala
                85                  90                  95
Leu Gln Thr Pro Met Tyr Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile
            100                 105                 110
Lys
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<210> 357
<211> 373
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 357
caggttcagc tggtgcagtc tggagctgag gtgaagaagc ctggggcctc agtgaaggtc 60
tcctgcaagg cttctggtta cacctttacc acctatagta tcagctgggt gcgacaggcc 120
cctggacaag ggcttgagtg gatgggatgg atcagcgctt acaattatga cacaaactat 180
gcacagaagc tccagggcag agtcaccatg accacagaca catccacgag cacagcctac 240
atggagctga ggagcctgag atctgacgac acggccgtgt attactgtgc gagaggcgat 300
ttctggatta attattccta ctactactac ggtgtggacg tctggggcca agggaccacg 360
gtcaccgtct cct 373

<210> 358
<211> 124
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 358
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Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
 1               5                  10                  15
Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Thr Tyr
            20                  25                  30
Ser Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
        35                  40                  45
Gly Trp Ile Ser Ala Tyr Asn Tyr Asp Thr Asn Tyr Ala Gln Lys Leu
    50                  55                  60
Gln Gly Arg Val Thr Met Thr Thr Asp Thr Ser Thr Ser Thr Ala Tyr
65                  70                  75                  80
Met Glu Leu Arg Ser Leu Arg Ser Asp Asp Thr Ala Val Tyr Tyr Cys
                85                  90                  95
Ala Arg Gly Asp Phe Trp Ile Asn Tyr Ser Tyr Tyr Tyr Tyr Gly Val
            100                 105                 110
Asp Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser
        115                 120
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<210> 359
<211> 340
<212> DNA

<213> Artificial Sequence

<220>
<223> synthetic

<400> 359
gatattgtga tgactcagtc tccactctcc ctgcccgtca cccctggaga gccggcctcc 60
atctcctgca ggtctagtca gagcctcctg catagtaatg gatacaacta tttggattgg 120
tacctgcaga agccagggca gtctccacag ctcctgatct atttgggttc taatcgggcc 180
tccggggtcc ctgacaggtt cagtggcagt ggatcaggca cagattttac actgaaaatc 240
agcagagtgg aggctgagga tgttggggtt tattactgca tgcaagctct acaaactccc 300
atgtacactt ttggccaggg gaccaagctg gagatcaaac 340

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

<220>
<223> synthetic

<400> 360
Asp Ile Val Met Thr Gln Ser Pro Leu Ser Leu Pro Val Thr Pro Gly
 1               5                  10                  15
Glu Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Leu His Ser
            20                  25                  30
Asn Gly Tyr Asn Tyr Leu Asp Trp Tyr Leu Gln Lys Pro Gly Gln Ser
        35                  40                  45
Pro Gln Leu Leu Ile Tyr Leu Gly Ser Asn Arg Ala Ser Gly Val Pro
    50                  55                  60
Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile
65                  70                  75                  80
Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln Ala
                85                  90                  95
Leu Gln Thr Pro Met Tyr Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile
            100                 105                 110
Lys



<210> 361
<211> 363
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 361
gaggtgcagc tggtggagtc tgggggaggc ttggtccagc ctgggggtc cctgagactc 60
tcctgtgcag cctctggatt cgcctttaga agttattgga tgacctgggt ccgccaggct 120
ccagggaagg ggctggagtg ggtggccaac atacagcaag atggaaatga taaatactat 180
gtggactctg tgaagggccg attcaccatc tccagagaca acgccaagaa ctcactgtat 240
ctgcaaatga acagcctgag agccgaggac acggctgtgt attactgtgc gagagatacc 300
ggtatagcag aagctggtcc ttttgactac tggggccagg gaaccctggt caccgtctcc 360
tca 363

<210> 362
<211> 121
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 362
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 Ala Phe Arg 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 Gln Gln Asp Gly Asn 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 Tyr
65                  70                  75                  80
Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
                85                  90                  95
Ala Arg Asp Thr Gly Ile Ala Glu Ala Gly Pro Phe Asp Tyr Trp Gly
            100                 105                 110
Gln Gly Thr Leu Val Thr Val Ser Ser
        115                 120


<210> 363
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 363
ggattcgcct ttagaagtta ttgg                                          24

<210> 364
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 364
Gly Phe Ala Phe Arg Ser Tyr Trp
 1               5


<210> 365
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 365
atacagcaag atggaaatga taaa                                          24

<210> 366
<211> 8
<212> PRT

<213> Artificial Sequence

<220>
<223> synthetic

<400> 366
Ile Gln Gln Asp Gly Asn Asp Lys
 1               5


<210> 367
<211> 42
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 367
gcgagagata ccggtatagc agaagctggt ccttttgact ac                    42

<210> 368
<211> 14
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 368
Ala Arg Asp Thr Gly Ile Ala Glu Ala Gly Pro Phe Asp Tyr
 1               5                  10


<210> 369
<211> 318
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 369
gacatccaga tgacccagtc tccttccacc ctgtctgcat ctgtaggaga cagagtctcc 60
atcacttgcc gggccagtca gactattatt agctggttgg cctggtatca gcagaaacca 120
gggaaagccc ctaggctcct gatctataag gcgtctagtt tagaaagtgg ggtcccatca 180
aggttcagcg gcagtggatc tgggacagaa ttcactctca ccatcaacag cctgcagcct 240
gatgattttg caacttatta ctgccaacag tataatcgtt attggacgtt cggccaaggg 300
accaaggtgg aaatcaaa                                               318

<210> 370
<211> 106
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 370
Asp Ile Gln Met Thr Gln Ser Pro Ser Thr Leu Ser Ala Ser Val Gly
 1               5                  10                  15

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

<210> 371
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 371
cagactatta ttagctgg 18

<210> 372
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 372
Gln Thr Ile Ile Ser Trp
 1               5

<210> 373
<211> 9
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 373
aaggcgtct 9

<210> 374
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 374
Lys Ala Ser
 1

<210> 375
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 375
caacagtata atcgttattg gacg 24

<210> 376
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 376
Gln Gln Tyr Asn Arg Tyr Trp Thr
1 5

<210> 377
<211> 363
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 377
gaggtgcagc tggtggagtc tgggggaggc ttggtccagc ctgggggtc cctgagactc 60
tcctgtgcag cctctggatt cgcctttaga agttattgga tgacctgggt ccgccaggct 120
ccagggaagg ggctggagtg ggtggccaac atacagcaag atggaaatga taaatactat 180
gtggactctg tgaagggccg attcaccatc tccagagaca acgccaagaa ctcactgtat 240
ctgcaaatga acagcctgag agccgaggac acggctgtgt attactgtgc gagagatacc 300
ggtatagcag aagctggtcc ttttgactac tggggccagg gaaccctggt caccgtctcc 360
tca 363

<210> 378
<211> 121
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 378
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 Ala Phe Arg 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 Gln Gln Asp Gly Asn 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 Tyr
65 70 75 80

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


<210> 379
<211> 318
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 379
gacatccaga tgacccagtc tccttccacc ctgtctgcat ctgtaggaga cagagtctcc 60
atcacttgcc gggccagtca gactattatt agctggttgg cctggtatca gcagaaacca 120
gggaaagccc ctaggctcct gatctataag gcgtctagtt tagaaagtgg ggtcccatca 180
aggttcagcg gcagtggatc tgggacagaa ttcactctca ccatcaacag cctgcagcct 240
gatgattttg caacttatta ctgccaacag tataatcgtt attggacgtt cggccaaggg 300
accaaggtgg aaatcaaa                                              318

<210> 380
<211> 106
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 380
Asp Ile Gln Met Thr Gln Ser Pro Ser Thr Leu Ser Ala Ser Val Gly
 1               5                  10                  15
Asp Arg Val Ser Ile Thr Cys Arg Ala Ser Gln Thr Ile Ile Ser Trp
            20                  25                  30
Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Arg 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 Asn Ser Leu Gln Pro
65                  70                  75                  80
Asp Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Tyr Asn Arg Tyr Trp Thr
                85                  90                  95
Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
            100                 105


<210> 381
<211> 363
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 381
gaggtgcagc tggtggagtc tgggggaggc ttggtccagc ctgggggtc cctgagactc 60
tcctgtgcag cctctggatt cgcctttaga agttattgga tgagctgggt ccgccaggct 120
ccagggaagg ggctggagtg ggtggccaac atacagcaag atggaaatga taaatactat 180
```

gtggactctg tgaagggccg attcaccatc tccagagaca acgccaagaa ctcactgtat 240
ctgcaaatga acagcctgag agccgaggac acggctgtgt attactgtgc gagagatacc 300
ggtatagcag aagctggtcc ttttgactac tggggccagg gaaccctggt caccgtctcc 360
tca 363

<210> 382
<211> 121
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 382
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 Ala Phe Arg 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 Gly Asn 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 Tyr
65                  70                  75                  80
Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
                85                  90                  95
Ala Arg Asp Thr Gly Ile Ala Glu Ala Gly Pro Phe Asp Tyr Trp Gly
            100                 105                 110
Gln Gly Thr Leu Val Thr Val Ser Ser
        115                 120


<210> 383
<211> 319
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 383
gacatccaga tgacccagtc tccttccacc ctgtctgcat ctgtaggaga cagagtcacc 60
atcacttgcc gggccagtca gactattatt agctggttgg cctggtatca gcagaaacca 120
gggaaagccc ctaagctcct gatctataag gcgtctagtt tagaaagtgg ggtcccatca 180
aggttcagcg gcagtggatc tgggacagaa ttcactctca ccatcagcag cctgcagcct 240
gatgattttg caacttatta ctgccaacag tataatcgtt attggacgtt cggccaaggg 300
accaaggtgg aaatcaaac 319

<210> 384
<211> 106
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 384
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 Thr Ile Ile Ser Trp
            20                  25                  30

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

<210> 385
<211> 372
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 385
gacgtgcaac tgttggagtc tgggggagac ttggtacagc ctgggggtc cctgagactc 60
tcctgtgaag cctctggatt cacctttaga aactatgtca tgatctgggt ccgccaggct 120
ccagggaagg ggctggagtg ggtctcaggt attagtaata gtggtggtac tacacactac 180
acagactccg tgaagggccg gttcaccatt tccagagaca attccaaaaa cacgctgtat 240
ctgcaaatta acagtctgcg agccgaggat acggccgtct attactgtgc gaagggctac 300
ttagacacat ctctgattga ggggaactgg ttcgacccct ggggccaggg aaccctggtc 360
accgtctcct ca 372

<210> 386
<211> 124
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 386
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Asp Val Gln Leu Leu Glu Ser Gly Gly Asp Leu Val Gln Pro Gly Gly
 1               5                  10                  15
Ser Leu Arg Leu Ser Cys Glu Ala Ser Gly Phe Thr Phe Arg Asn Tyr
            20                  25                  30
Val Met Ile Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35                  40                  45
Ser Gly Ile Ser Asn Ser Gly Gly Thr Thr His Tyr Thr 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 Ile Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
                85                  90                  95
Ala Lys Gly Tyr Leu Asp Thr Ser Leu Ile Glu Gly Asn Trp Phe Asp
            100                 105                 110
Pro Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
        115                 120
```

<210> 387
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 387
ggattcacct ttagaaacta tgtc 24

<210> 388
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 388
Gly Phe Thr Phe Arg Asn Tyr Val
1 5

<210> 389
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 389
attagtaata gtggtggtac taca 24

<210> 390
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 390
Ile Ser Asn Ser Gly Gly Thr Thr
1 5

<210> 391
<211> 51
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 391
gcgaagggct acttagacac atctctgatt gaggggaact ggttcgaccc c 51

<210> 392
<211> 17
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 392
Ala Lys Gly Tyr Leu Asp Thr Ser Leu Ile Glu Gly Asn Trp Phe Asp
 1               5                  10                  15
Pro

<210> 393
<211> 336
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 393
aatattgtga tgactcagtc tccactctcc ctgcccgtca cccctggaga gccggcctcc 60
atctcctgca ggtctagtca gagcctccta catagtaatg gattcaacta tttgaattgg 120
ttcctgcaga agccagggca gtctccacag ctcctgatct atttgggttc taatcgggcc 180
tccggggtcc ctgacaagtt cagtggcagt ggatcaggca cagattttac actgaacatc 240
aacagagtgg aggctgagga tgttggaatt tatttctgca tgcagactct acaaactccc 300
ctcactttcg gcggagggac caaggtggag atcaaa                          336

<210> 394
<211> 112
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 394
Asn Ile Val Met Thr Gln Ser Pro Leu Ser Leu Pro Val Thr Pro Gly
 1               5                  10                  15
Glu Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Leu His Ser
            20                  25                  30
Asn Gly Phe Asn Tyr Leu Asn Trp Phe Leu Gln Lys Pro Gly Gln Ser
        35                  40                  45
Pro Gln Leu Leu Ile Tyr Leu Gly Ser Asn Arg Ala Ser Gly Val Pro
    50                  55                  60
Asp Lys Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Asn Ile
65                  70                  75                  80
Asn Arg Val Glu Ala Glu Asp Val Gly Ile Tyr Phe Cys Met Gln Thr
                85                  90                  95
Leu Gln Thr Pro Leu Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
            100                 105                 110

<210> 395
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 395
cagagcctcc tacatagtaa tggattcaac tat                            33

<210> 396

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

<220>
<223> synthetic

<400> 396
Gln Ser Leu Leu His Ser Asn Gly Phe Asn Tyr
 1               5                  10


<210> 397
<211> 9
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 397
ttgggttct                                                                9

<210> 398
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 398
Leu Gly Ser
 1


<210> 399
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 399
atgcagactc tacaaactcc cctcact                                            27

<210> 400
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 400
Met Gln Thr Leu Gln Thr Pro Leu Thr
 1               5


<210> 401

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

<220>
<223> synthetic

<400> 401
gaggtgcagc tgttggagtc tgggggagac ttggtacagc ctgggggtc cctgagactc 60
tcctgtgaag cctctggatt cacctttaga aactatgtca tgatctgggt ccgccaggct 120
ccagggaagg ggctggagtg ggtctcaggt attagtaata gtggtggtac tacacactac 180
acagactccg tgaagggccg gttcaccatt tccagagaca attccaaaaa cacgctgtat 240
ctgcaaatta acagtctgcg agccgaggat acggccgtct attactgtgc gaagggctac 300
ttagacacat ctctgattga ggggaactgg ttcgacccct ggggccaggg aaccctggtc 360
accgtctcct ca 372

<210> 402
<211> 124
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 402
Glu Val Gln Leu Leu Glu Ser Gly Gly Asp Leu Val Gln Pro Gly Gly
 1               5                  10                  15
Ser Leu Arg Leu Ser Cys Glu Ala Ser Gly Phe Thr Phe Arg Asn Tyr
            20                  25                  30
Val Met Ile Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35                  40                  45
Ser Gly Ile Ser Asn Ser Gly Gly Thr Thr His Tyr Thr 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 Ile Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
                85                  90                  95
Ala Lys Gly Tyr Leu Asp Thr Ser Leu Ile Glu Gly Asn Trp Phe Asp
            100                 105                 110
Pro Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
        115                 120


<210> 403
<211> 336
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 403
gatattgtga tgactcagtc tccactctcc ctgcccgtca cccctggaga gccggcctcc 60
atctcctgca ggtctagtca gagcctccta catagtaatg gattcaacta tttgaattgg 120
ttcctgcaga agccagggca gtctccacag ctcctgatct atttgggttc taatcgggcc 180
tccggggtcc ctgacaagtt cagtggcagt ggatcaggca cagattttac actgaacatc 240
aacagagtgg aggctgagga tgttggaatt tatttctgca tgcagactct acaaactccc 300
ctcactttcg gcggagggac caaggtggag atcaaa 336

<210> 404
<211> 112

<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 404
Asp Ile Val Met Thr Gln Ser Pro Leu Ser Leu Pro Val Thr Pro Gly
 1               5                  10                  15
Glu Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Leu His Ser
            20                  25                  30
Asn Gly Phe Asn Tyr Leu Asn Trp Phe Leu Gln Lys Pro Gly Gln Ser
        35                  40                  45
Pro Gln Leu Leu Ile Tyr Leu Gly Ser Asn Arg Ala Ser Gly Val Pro
    50                  55                  60
Asp Lys Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Asn Ile
65                  70                  75                  80
Asn Arg Val Glu Ala Glu Asp Val Gly Ile Tyr Phe Cys Met Gln Thr
                85                  90                  95
Leu Gln Thr Pro Leu Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
            100                 105                 110


<210> 405
<211> 372
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 405
gaggtgcagc tgttggagtc tgggggaggc ttggtacagc ctgggggtc cctgagactc 60
tcctgtgcag cctctggatt cacctttaga aactatgtca tgagctgggt ccgccaggct 120
ccagggaagg ggctggagtg ggtctcagct attagtaata gtggtggtac tacatactac 180
gcagactccg tgaagggccg gttcaccatc tccagagaca attccaagaa cacgctgtat 240
ctgcaaatga acagcctgag agccgaggac acggccgtat attactgtgc gaagggctac 300
ttagacacat ctctgattga ggggaactgg ttcgaccct ggggccaggg aaccctggtc 360
accgtctcct ca                                                    372

<210> 406
<211> 124
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 406
Glu Val Gln Leu Leu 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 Arg Asn Tyr
            20                  25                  30
Val Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35                  40                  45
Ser Ala Ile Ser Asn Ser Gly Gly Thr 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 Val Tyr Tyr Cys
                85                  90                  95

```
Ala Lys Gly Tyr Leu Asp Thr Ser Leu Ile Glu Gly Asn Trp Phe Asp
            100                 105                 110
Pro Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
        115                 120
```

<210> 407
<211> 337
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 407
gatattgtga tgactcagtc tccactctcc ctgcccgtca cccctggaga gccggcctcc 60
atctcctgca ggtctagtca gagcctccta catagtaatg gattcaacta tttggattgg 120
tacctgcaga agccagggca gtctccacag ctcctgatct atttgggttc taatcgggcc 180
tccggggtcc ctgacaggtt cagtggcagt ggatcaggca cagattttac actgaaaatc 240
agcagagtgg aggctgagga tgttggggtt tattactgca tgcagactct acaaactccc 300
ctcactttcg gcggagggac caaggtggag atcaaac 337

<210> 408
<211> 112
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 408
```
Asp Ile Val Met Thr Gln Ser Pro Leu Ser Leu Pro Val Thr Pro Gly
 1               5                  10                  15
Glu Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Leu His Ser
            20                  25                  30
Asn Gly Phe Asn Tyr Leu Asp Trp Tyr Leu Gln Lys Pro Gly Gln Ser
        35                  40                  45
Pro Gln Leu Leu Ile Tyr Leu Gly Ser Asn Arg Ala Ser Gly Val Pro
    50                  55                  60
Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile
65                  70                  75                  80
Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln Thr
                85                  90                  95
Leu Gln Thr Pro Leu Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
            100                 105                 110
```

<210> 409
<211> 366
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 409
gaggtgcagc tgttggagtc tgggggaggc ttggtacagc ctgggggtc cctgagactc 60
tcctgtgcag cctctggatt cacctttagg aagtatgcca tgagctgggt ccgccaggct 120
ccagggaagg ggctggagtg ggtctcagtt attagtgtta gtggtggtaa cacatactac 180
gcagactccg tgaagggccg gttcaccatc tccagagaca attccaagaa cacgctgtat 240
ctgcaactga acagcctgag agccgaggac acggccgtat attactgtgc gaaggatcta 300

acggatattg tacttatggt gtatgtcgac tactggggcc agggaaccct ggtcaccgtc 360
tcctca 366

<210> 410
<211> 122
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 410
Glu Val Gln Leu Leu 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 Arg Lys Tyr
            20                  25                  30
Ala Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35                  40                  45
Ser Val Ile Ser Val Ser Gly Gly Asn 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 Leu Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
                85                  90                  95
Ala Lys Asp Leu Thr Asp Ile Val Leu Met Val Tyr Val Asp Tyr Trp
            100                 105                 110
Gly Gln Gly Thr Leu Val Thr Val Ser Ser
        115                 120


<210> 411
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 411
ggattcacct ttaggaagta tgcc 24

<210> 412
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 412
Gly Phe Thr Phe Arg Lys Tyr Ala
 1               5


<210> 413
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 413
attagtgtta gtggtggtaa caca 24

<210> 414
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 414
Ile Ser Val Ser Gly Gly Asn Thr
 1 5

<210> 415
<211> 45
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 415
gcgaaggatc taacggatat tgtacttatg gtgtatgtcg actac 45

<210> 416
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 416
Ala Lys Asp Leu Thr Asp Ile Val Leu Met Val Tyr Val Asp Tyr
 1 5 10 15

<210> 417
<211> 321
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 417
gacatccaga tgacccagtc tccatcttcc gtgtctgcat ctgtaggaga cagagtcacc 60
atcacttgtc gggcgagtca ggatattgac aggtggttag cctggtatca gcagaaacca 120
gggaaagccc ctaagctcct gatctatgct gcatccagtt tgcaaagtgg ggtcccatca 180
aggttcagcg gcagtggatc tgggacagat ttcactctca ccatcagcac cctgcagcct 240
gaagattttg caacttacta ttgtcaacag gctaacagtt tgccgttcac tttcggcgga 300
gggaccaagg tggagatcaa a 321

<210> 418
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 418
Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Val Ser Ala Ser Val Gly
 1               5                  10                  15
Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Asp Ile Asp Arg Trp
            20                  25                  30
Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
        35                  40                  45
Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
    50                  55                  60
Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Thr Leu Gln Pro
65                  70                  75                  80
Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Ala Asn Ser Leu Pro Phe
                85                  90                  95
Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
            100                 105


<210> 419
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 419
caggatattg acaggtgg 18

<210> 420
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 420
Gln Asp Ile Asp Arg Trp
 1               5


<210> 421
<211> 9
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 421
gctgcatcc 9

<210> 422
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 422
Ala Ala Ser
 1


<210> 423
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 423
caacaggcta acagtttgcc gttcact 27

<210> 424
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 424
Gln Gln Ala Asn Ser Leu Pro Phe Thr
 1               5


<210> 425
<211> 366
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 425
gaggtgcagc tgttggagtc tgggggaggc ttggtacagc ctgggggtc cctgagactc 60
tcctgtgcag cctctggatt cacctttagg aagtatgcca tgagctgggt ccgccaggct 120
ccagggaagg ggctggagtg ggtctcagtt attagtgtta gtggtggtaa cacatactac 180
gcagactccg tgaagggccg gttcaccatc tccagagaca attccaagaa cacgctgtat 240
ctgcaactga acagcctgag agccgaggac acggccgtat attactgtgc gaaggatcta 300
acggatattg tacttatggt gtatgtcgac tactggggcc agggaaccct ggtcaccgtc 360
tcctca 366

<210> 426
<211> 122
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 426
Glu Val Gln Leu Leu 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 Arg Lys Tyr

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            20                  25                  30
Ala Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35                  40                  45
Ser Val Ile Ser Val Ser Gly Gly Asn 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 Leu Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
                85                  90                  95
Ala Lys Asp Leu Thr Asp Ile Val Leu Met Val Tyr Val Asp Tyr Trp
            100                 105                 110
Gly Gln Gly Thr Leu Val Thr Val Ser Ser
        115                 120
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<210> 427
<211> 321
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 427
gacatccaga tgacccagtc tccatcttcc gtgtctgcat ctgtaggaga cagagtcacc 60
atcacttgtc gggcgagtca ggatattgac aggtggttag cctggtatca gcagaaacca 120
gggaaagccc ctaagctcct gatctatgct gcatccagtt tgcaaagtgg ggtcccatca 180
aggttcagcg gcagtggatc tgggacagat ttcactctca ccatcagcac cctgcagcct 240
gaagattttg caacttacta ttgtcaacag gctaacagtt tgccgttcac tttcggcgga 300
gggaccaagg tggagatcaa a 321

<210> 428
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 428
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Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Val Ser Ala Ser Val Gly
 1               5                  10                  15
Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Asp Ile Asp Arg Trp
            20                  25                  30
Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
        35                  40                  45
Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
    50                  55                  60
Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Thr Leu Gln Pro
65                  70                  75                  80
Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Ala Asn Ser Leu Pro Phe
                85                  90                  95
Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
            100                 105
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<210> 429
<211> 366
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 429
gaggtgcagc tgttggagtc tgggggaggc ttggtacagc ctgggggtc cctgagactc 60
tcctgtgcag cctctggatt cacctttagg aagtatgcca tgagctgggt ccgccaggct 120
ccagggaagg ggctggagtg ggtctcagct attagtgtta gtggtggtaa cacatactac 180
gcagactccg tgaagggccg gttcaccatc tccagagaca attccaagaa cacgctgtat 240
ctgcaaatga acagcctgag agccgaggac acggccgtat attactgtgc gaaggatcta 300
acggatattg tacttatggt gtatgtcgac tactggggcc agggaaccct ggtcaccgtc 360
tcctca 366

<210> 430
<211> 122
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 430
Glu Val Gln Leu Leu 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 Arg Lys 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 Val Ser Gly Gly Asn 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 Val Tyr Tyr Cys
                85                  90                  95
Ala Lys Asp Leu Thr Asp Ile Val Leu Met Val Tyr Val Asp Tyr Trp
            100                 105                 110
Gly Gln Gly Thr Leu Val Thr Val Ser Ser
        115                 120


<210> 431
<211> 322
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 431
gacatccaga tgacccagtc tccatcttct gtgtctgcat ctgtaggaga cagagtcacc 60
atcacttgtc gggcgagtca ggatattgac aggtggttag cctggtatca gcagaaacca 120
gggaaagccc ctaagctcct gatctatgct gcatccagtt tgcaaagtgg ggtcccatca 180
aggttcagcg gcagtggatc tgggacagat ttcactctca ctatcagcag cctgcagcct 240
gaagattttg caacttacta ttgtcaacag gctaacagtt tgccgttcac tttcggcgga 300
gggaccaagg tggagatcaa ac 322

<210> 432
<211> 107
<212> PRT
<213> Artificial Sequence

<220>

<223> synthetic

<400> 432
Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Val Ser Ala Ser Val Gly
 1               5                  10                  15
Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Asp Ile Asp Arg Trp
            20                  25                  30
Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
        35                  40                  45
Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
    50                  55                  60
Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
65                  70                  75                  80
Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Ala Asn Ser Leu Pro Phe
                85                  90                  95
Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
            100                 105


<210> 433
<211> 363
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 433
caggttcaat tggtacagtc tggagttgag gtgaagaagc ctggggcctc agtgaaggtc 60
tcctgcaaga cttctggtta cacttttagc aacaatggtt tcagctgggt gcggcaggcc 120
cctggacaag ggcttgagtg gctgggatgg atcagcggtt acaatggaaa cacaaactat 180
gcacagaagt tccagggcag agtcaccatg accacagaca catccacgag tacagcctac 240
atggagttga ggactctgag atctgacgac acggccgtct attactgtgc gagagatcag 300
gactacagta acttccactg gctcgacccc tggggccagg gaaccctggt caccgtcgcc 360
tca                                                                 363

<210> 434
<211> 121
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 434
Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala
 1               5                  10                  15
Ser Val Lys Val Ser Cys Lys Thr Ser Gly Tyr Thr Phe Ser Asn Asn
            20                  25                  30
Gly Phe Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Leu
        35                  40                  45
Gly Trp Ile Ser Gly Tyr Asn Gly Asn Thr Asn Tyr Ala Gln Lys Phe
    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 Thr Leu Arg Ser Asp Asp Thr Ala Val Tyr Tyr Cys
                85                  90                  95
Ala Arg Asp Gln Asp Tyr Ser Asn Phe His Trp Leu Asp Pro Trp Gly
            100                 105                 110
Gln Gly Thr Leu Val Thr Val Ala Ser
        115                 120

<210> 435
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 435
ggttacactt ttagcaacaa tggt 24

<210> 436
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 436
Gly Tyr Thr Phe Ser Asn Asn Gly
 1 5

<210> 437
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 437
atcagcggtt acaatggaaa caca 24

<210> 438
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 438
Ile Ser Gly Tyr Asn Gly Asn Thr
 1 5

<210> 439
<211> 42
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 439
gcgagagatc aggactacag taacttccac tggctcgacc cc 42

<210> 440
<211> 14
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 440
Ala Arg Asp Gln Asp Tyr Ser Asn Phe His Trp Leu Asp Pro
 1               5                  10


<210> 441
<211> 321
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 441
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atcacttgtc gggcgagtca gggtcttagt agttggctag cctggtatca gcagaaacca 120
gggacagccc ctaagctcct gatccattct gcatccagtt tgcaaactgg ggtcccatca 180
agattcagcg gcagtggatc tgggacagaa ttcgctctca ccatcaacag cctgcagcct 240
gaagattttg gaacttacta ttgtcaacag gctaacagtt tcccgctcac tttcggcggg 300
gggaccaggg tggagatcaa a                                          321

<210> 442
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 442
Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Val Ser Ala Ser Val Gly
 1               5                  10                  15
Asp Arg Val Ile Ile Thr Cys Arg Ala Ser Gln Gly Leu Ser Ser Trp
            20                  25                  30
Leu Ala Trp Tyr Gln Gln Lys Pro Gly Thr Ala Pro Lys Leu Leu Ile
        35                  40                  45
His Ser Ala Ser Ser Leu Gln Thr Gly Val Pro Ser Arg Phe Ser Gly
    50                  55                  60
Ser Gly Ser Gly Thr Glu Phe Ala Leu Thr Ile Asn Ser Leu Gln Pro
65                  70                  75                  80
Glu Asp Phe Gly Thr Tyr Tyr Cys Gln Gln Ala Asn Ser Phe Pro Leu
                85                  90                  95
Thr Phe Gly Gly Gly Thr Arg Val Glu Ile Lys
            100                 105


<210> 443
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 443
cagggtctta gtagttgg 18

<210> 444
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 444
Gln Gly Leu Ser Ser Trp
 1               5


<210> 445
<211> 9
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 445
tctgcatcc 9

<210> 446
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 446
Ser Ala Ser
 1


<210> 447
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 447
caacaggcta acagtttccc gctcact 27

<210> 448
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 448

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Gln Gln Ala Asn Ser Phe Pro Leu Thr
 1               5


<210> 449
<211> 363
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 449
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tcctgcaaga cttctggtta cacttttagc aacaatggtt tcagctgggt gcggcaggcc 120
cctggacaag ggcttgagtg gctgggatgg atcagcggtt acaatggaaa cacaaactat 180
gcacagaagt tccagggcag agtcaccatg accacagaca catccacgag tacagcctac 240
atggagttga ggactctgag atctgacgac acggccgtct attactgtgc gagagatcag 300
gactacagta acttccactg gctcgacccc tggggccagg gaaccctggt caccgtctcc 360
tca                                                               363

<210> 450
<211> 121
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 450
Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala
 1               5                  10                  15
Ser Val Lys Val Ser Cys Lys Thr Ser Gly Tyr Thr Phe Ser Asn Asn
            20                  25                  30
Gly Phe Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Leu
        35                  40                  45
Gly Trp Ile Ser Gly Tyr Asn Gly Asn Thr Asn Tyr Ala Gln Lys Phe
    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 Thr Leu Arg Ser Asp Asp Thr Ala Val Tyr Tyr Cys
                85                  90                  95
Ala Arg Asp Gln Asp Tyr Ser Asn Phe His Trp Leu Asp Pro Trp Gly
            100                 105                 110
Gln Gly Thr Leu Val Thr Val Ser Ser
        115                 120


<210> 451
<211> 321
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 451
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atcacttgtc gggcgagtca gggtcttagt agttggctag cctggtatca gcagaaacca 120
gggacagccc ctaagctcct gatccattct gcatccagtt tgcaaactgg ggtcccatca 180
agattcagcg gcagtggatc tgggacagaa ttcgctctca ccatcaacag cctgcagcct 240
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gaagattttg gaacttacta ttgtcaacag gctaacagtt tcccgctcac tttcggcggg 300
gggaccaagg tggagatcaa a 321

<210> 452
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 452
Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Val Ser Ala Ser Val Gly
 1               5                  10                  15
Asp Arg Val Ile Ile Thr Cys Arg Ala Ser Gln Gly Leu Ser Ser Trp
            20                  25                  30
Leu Ala Trp Tyr Gln Gln Lys Pro Gly Thr Ala Pro Lys Leu Leu Ile
        35                  40                  45
His Ser Ala Ser Ser Leu Gln Thr Gly Val Pro Ser Arg Phe Ser Gly
    50                  55                  60
Ser Gly Ser Gly Thr Glu Phe Ala Leu Thr Ile Asn Ser Leu Gln Pro
65                  70                  75                  80
Glu Asp Phe Gly Thr Tyr Tyr Cys Gln Gln Ala Asn Ser Phe Pro Leu
                85                  90                  95
Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
            100                 105


<210> 453
<211> 363
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 453
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tcctgcaagg cttctggtta cacttttagc aacaatggta tcagctgggt gcgacaggcc 120
cctggacaag ggcttgagtg gatgggatgg atcagcggtt acaatggaaa cacaaactat 180
gcacagaagc tccagggcag agtcaccatg accacagaca catccacgag cacagcctac 240
atggagctga ggagcctgag atctgacgac acggccgtgt attactgtgc gagagatcag 300
gactacagta acttccactg gctcgacccc tggggccagg gaaccctggt caccgtctcc 360
tca 363

<210> 454
<211> 121
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 454
Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
 1               5                  10                  15
Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn Asn
            20                  25                  30
Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
        35                  40                  45
Gly Trp Ile Ser Gly Tyr Asn Gly Asn Thr Asn Tyr Ala Gln Lys Leu

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


<210> 455
<211> 322
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 455
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atcacttgtc gggcgagtca gggtcttagt agttggttag cctggtatca gcagaaacca 120
gggaaagccc ctaagctcct gatctattct gcatccagtt tgcaaagtgg ggtcccatca 180
aggttcagcg gcagtggatc tgggacagat ttcactctca ctatcagcag cctgcagcct 240
gaagattttg caacttacta ttgtcaacag gctaacagtt tcccgctcac tttcggcgga 300
gggaccaagg tggagatcaa ac                                          322

<210> 456
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 456
Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Val Ser Ala Ser Val Gly
 1               5                  10                  15
Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Gly Leu Ser Ser Trp
            20                  25                  30
Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
        35                  40                  45
Tyr Ser Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
    50                  55                  60
Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
65                  70                  75                  80
Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Ala Asn Ser Phe Pro Leu
                85                  90                  95
Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
            100                 105


<210> 457
<211> 360
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 457
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ccaggcaagg ggctggagtg gttggcaatt atatggtatg atggagataa taaatactat 180
tcagactccg tgaagggccg attcaccatc tccagagaca attccaagaa cacgctgtat 240
ctgcaaatga acagcctgag agccgaggac acggctgagt attactgtgt gagagatgcg 300
agtatagcat ctcgtttctt ggactattgg ggccagggaa ccttggtcac cgtctcctca 360

<210> 458
<211> 120
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 458
Gln Val Lys Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Arg
 1               5                  10                  15
Ser Leu Arg Val Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr
            20                  25                  30
Gly Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Leu
        35                  40                  45
Ala Ile Ile Trp Tyr Asp Gly Asp Asn Lys Tyr Tyr Ser 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 Glu Tyr Tyr Cys
                85                  90                  95
Val Arg Asp Ala Ser Ile Ala Ser Arg Phe Leu Asp Tyr Trp Gly Gln
            100                 105                 110
Gly Thr Leu Val Thr Val Ser Ser
        115                 120

<210> 459
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 459
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<210> 460
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 460
Gly Phe Thr Phe Ser Ser Tyr Gly
 1               5

<210> 461
<211> 24

<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 461
atatggtatg atggagataa taaa 24

<210> 462
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 462
Ile Trp Tyr Asp Gly Asp Asn Lys
1 5

<210> 463
<211> 39
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 463
gtgagagatg cgagtatagc atctcgtttc ttggactat 39

<210> 464
<211> 13
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 464
Val Arg Asp Ala Ser Ile Ala Ser Arg Phe Leu Asp Tyr
1 5 10

<210> 465
<211> 321
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 465
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atcacttgtc gggcgactca ggacattaac aattatttag cctggtttca gcagaaacca 120
gggaaagccc ctaagtccct gatctatgct acatccaatt tgcaaagtgg ggtcccatca 180
aagttcagcg gcagtggatc tgggacagat tacactctca ccatcagcag cctgcagcct 240
gaagattttt caacttatta ctgtcaacag tatcatagtt acccgctcac tttcggcgga 300
gggaccaagg tggagatcaa a 321

<210> 466
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 466
Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Ile Gly
 1               5                  10                  15
Asp Arg Val Thr Ile Thr Cys Arg Ala Thr Gln Asp Ile Asn Asn Tyr
            20                  25                  30
Leu Ala Trp Phe Gln Gln Lys Pro Gly Lys Ala Pro Lys Ser Leu Ile
        35                  40                  45
Tyr Ala Thr Ser Asn Leu Gln Ser Gly Val Pro Ser Lys Phe Ser Gly
    50                  55                  60
Ser Gly Ser Gly Thr Asp Tyr Thr Leu Thr Ile Ser Ser Leu Gln Pro
65                  70                  75                  80
Glu Asp Phe Ser Thr Tyr Tyr Cys Gln Gln Tyr His Ser Tyr Pro Leu
                85                  90                  95
Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
            100                 105


<210> 467
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 467
caggacatta acaattat                                                  18

<210> 468
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 468
Gln Asp Ile Asn Asn Tyr
 1               5


<210> 469
<211> 9
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 469
gctacatcc                                                             9

<210> 470
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 470
Ala Thr Ser
 1


<210> 471
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 471
caacagtatc atagttaccc gctcact 27

<210> 472
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 472
Gln Gln Tyr His Ser Tyr Pro Leu Thr
 1               5


<210> 473
<211> 360
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 473
caggtgcagc tggtggagtc tgggggaggc gtggtccagc ctgggaggtc cctgagagtc 60
tcctgtgcag cgtctggatt caccttcagt agctatggca tgcactgggt ccgccaggct 120
ccaggcaagg ggctggagtg gttggcaatt atatggtatg atggagataa taaatactat 180
tcagactccg tgaagggccg attcaccatc tccagagaca attccaagaa cacgctgtat 240
ctgcaaatga acagcctgag agccgaggac acggctgagt attactgtgt gagagatgcg 300
agtatagcat ctcgtttctt ggactattgg ggccagggaa ccctggtcac cgtctcctca 360


<210> 474
<211> 120
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 474
Gln Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Arg
 1               5                  10                  15
Ser Leu Arg Val Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr
            20                  25                  30
Gly Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Leu
        35                  40                  45
Ala Ile Ile Trp Tyr Asp Gly Asp Asn Lys Tyr Tyr Ser 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 Glu Tyr Tyr Cys
                85                  90                  95
Val Arg Asp Ala Ser Ile Ala Ser Arg Phe Leu Asp Tyr Trp Gly Gln
            100                 105                 110
Gly Thr Leu Val Thr Val Ser Ser
        115                 120


<210> 475
<211> 321
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 475
gacatccaga tgacccagtc tccatcctca ctgtctgcat ctataggaga cagagtcacc 60
atcacttgtc gggcgactca ggacattaac aattatttag cctggtttca gcagaaacca 120
gggaaagccc ctaagtccct gatctatgct acatccaatt tgcaaagtgg ggtcccatca 180
aagttcagcg gcagtggatc tgggacagat tacactctca ccatcagcag cctgcagcct 240
gaagattttt caacttatta ctgtcaacag tatcatagtt acccgctcac tttcggcgga 300
gggaccaagg tggagatcaa a                                          321

<210> 476
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 476
Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Ile Gly
 1               5                  10                  15
Asp Arg Val Thr Ile Thr Cys Arg Ala Thr Gln Asp Ile Asn Asn Tyr
            20                  25                  30
Leu Ala Trp Phe Gln Gln Lys Pro Gly Lys Ala Pro Lys Ser Leu Ile
        35                  40                  45
Tyr Ala Thr Ser Asn Leu Gln Ser Gly Val Pro Ser Lys Phe Ser Gly
    50                  55                  60
Ser Gly Ser Gly Thr Asp Tyr Thr Leu Thr Ile Ser Ser Leu Gln Pro
65                  70                  75                  80
Glu Asp Phe Ser Thr Tyr Tyr Cys Gln Gln Tyr His Ser Tyr Pro Leu
                85                  90                  95
Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
            100                 105

<210> 477
<211> 360
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 477
caggtgcagc tggtggagtc tgggggaggc gtggtccagc ctgggaggtc cctgagactc 60
tcctgtgcag cgtctggatt caccttcagt agctatggca tgcactgggt ccgccaggct 120
ccaggcaagg ggctggagtg ggtggcagtt atatggtatg atggagataa taaatactat 180
gcagactccg tgaagggccg attcaccatc tccagagaca actccaagaa cacgctgtat 240
ctgcaaatga acagcctgag agccgaggac acggctgtgt attactgtgt gagagatgcg 300
agtatagcat ctcgtttctt ggactattgg ggccagggaa ccctggtcac cgtctcctca 360


<210> 478
<211> 120
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 478
Gln Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Arg
 1               5                  10                  15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr
            20                  25                  30
Gly Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35                  40                  45
Ala Val Ile Trp Tyr Asp Gly Asp Asn Lys Tyr Tyr Ala Asp Ser Val
    50                  55                  60
Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
65                  70                  75                  80
Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
                85                  90                  95
Val Arg Asp Ala Ser Ile Ala Ser Arg Phe Leu Asp Tyr Trp Gly Gln
            100                 105                 110
Gly Thr Leu Val Thr Val Ser Ser
        115                 120


<210> 479
<211> 322
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 479
gacatccaga tgacccagtc tccatcctca ctgtctgcat ctgtaggaga cagagtcacc 60
atcacttgtc gggcgagtca ggacattaac aattatttag cctggtttca gcagaaacca 120
gggaaagccc ctaagtccct gatctatgct acatccagtt tgcaaagtgg ggtcccatca 180
aggttcagcg gcagtggatc tgggacagat ttcactctca ccatcagcag cctgcagcct 240
gaagattttg caacttatta ctgccaacag tatcatagtt acccgctcac tttcggcgga 300
gggaccaagg tggagatcaa ac                                          322

<210> 480

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

<220>
<223> synthetic

<400> 480
Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
 1               5                  10                  15
Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Asp Ile Asn Asn Tyr
            20                  25                  30
Leu Ala Trp Phe Gln Gln Lys Pro Gly Lys Ala Pro Lys Ser Leu Ile
        35                  40                  45
Tyr Ala Thr Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
    50                  55                  60
Ser Gly Ser Gly Thr 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 His Ser Tyr Pro Leu
                85                  90                  95
Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
            100                 105


<210> 481
<211> 363
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 481
gaggtgcaac tgttggagtc tgggggagac ttggtacagc ctgggggtc cctgagactc 60
tcctgtgcag cctctgaatt cacctttagc ggctatgcca tgagctgggt ccgccaggct 120
ccagggaagg ggctggagtg ggtctcagtg attcgtggta gtggtgataa cacatactac 180
gcagactccg tgaagggccg gttcagcatc tccagagaca attccaagaa cacactgtat 240
ctgcaaatga acagcctgag agccgaggac acggccgtat attactgtgc gagagtgtat 300
tacgattttt gggaaggggc ttttgatatc tggggccaag ggacaatggt caccgtctct 360
tca                                                                 363

<210> 482
<211> 121
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 482
Glu Val Gln Leu Leu Glu Ser Gly Gly Asp Leu Val Gln Pro Gly Gly
 1               5                  10                  15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Glu Phe Thr Phe Ser Gly Tyr
            20                  25                  30
Ala Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35                  40                  45
Ser Val Ile Arg Gly Ser Gly Asp Asn Thr Tyr Tyr Ala Asp Ser Val
    50                  55                  60
Lys Gly Arg Phe Ser Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
65                  70                  75                  80
Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys

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


<210> 483
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 483
gaattcacct ttagcggcta tgcc                                          24

<210> 484
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 484
Glu Phe Thr Phe Ser Gly Tyr Ala
 1               5


<210> 485
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 485
attcgtggta gtggtgataa caca                                          24

<210> 486
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 486
Ile Arg Gly Ser Gly Asp Asn Thr
 1               5


<210> 487
<211> 42
<212> DNA
<213> Artificial Sequence

<220>
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<223> synthetic

<400> 487
gcgagagtgt attacgattt ttgggaaggg gcttttgata tc 42

<210> 488
<211> 14
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 488
Ala Arg Val Tyr Tyr Asp Phe Trp Glu Gly Ala Phe Asp Ile
1 5 10

<210> 489
<211> 321
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 489
gacatccaga tgacccagtc tccatcttcc gtgtctgcat ctgtaggaga cagagtcacc 60
atcacttgtc gggcgagtca gggtattagc acctggttag cctggtatca gcagaaacca 120
gggaaagccc ctaagctcct gatctatgct gcaaccagtt tgcaaagtgg ggtcccatca 180
aggttcagcg gcagtggatc tgggacagat ttcactctcg ccatcagcgg cctgcagcct 240
gaagattttg caacttacta ttgtcaacag gctaacaatt tcccgtacac ttttggccag 300
gggaccaagc tggagatcaa a 321

<210> 490
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 490
Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Val Ser Ala Ser Val Gly
1 5 10 15
Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Gly Ile Ser Thr Trp
20 25 30
Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
35 40 45
Tyr Ala Ala Thr Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
50 55 60
Ser Gly Ser Gly Thr Asp Phe Thr Leu Ala Ile Ser Gly Leu Gln Pro
65 70 75 80
Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Ala Asn Asn Phe Pro Tyr
85 90 95
Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
100 105

<210> 491
<211> 18

<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 491
cagggtatta gcacctgg 18

<210> 492
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 492
Gln Gly Ile Ser Thr Trp
1 5

<210> 493
<211> 9
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 493
gctgcaacc 9

<210> 494
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 494
Ala Ala Thr
1

<210> 495
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 495
caacaggcta acaatttccc gtacact 27

<210> 496
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 496
Gln Gln Ala Asn Asn Phe Pro Tyr Thr
 1               5


<210> 497
<211> 363
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 497
gaggtgcagc tgttggagtc tgggggagac ttggtacagc ctgggggtc cctgagactc 60
tcctgtgcag cctctgaatt cacctttagc ggctatgcca tgagctgggt ccgccaggct 120
ccagggaagg ggctggagtg ggtctcagtg attcgtggta gtggtgataa cacatactac 180
gcagactccg tgaagggccg gttcagcatc tccagagaca attccaagaa cacactgtat 240
ctgcaaatga acagcctgag agccgaggac acggccgtat attactgtgc gagagtgtat 300
tacgattttt gggaaggggc ttttgatatc tggggccaag ggacaatggt caccgtctct 360
tca                                                               363

<210> 498
<211> 121
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 498
Glu Val Gln Leu Leu Glu Ser Gly Gly Asp Leu Val Gln Pro Gly Gly
 1               5                  10                  15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Glu Phe Thr Phe Ser Gly Tyr
            20                  25                  30
Ala Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35                  40                  45
Ser Val Ile Arg Gly Ser Gly Asp Asn Thr Tyr Tyr Ala Asp Ser Val
    50                  55                  60
Lys Gly Arg Phe Ser Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
65                  70                  75                  80
Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
                85                  90                  95
Ala Arg Val Tyr Tyr Asp Phe Trp Glu Gly Ala Phe Asp Ile Trp Gly
            100                 105                 110
Gln Gly Thr Met Val Thr Val Ser Ser
        115                 120


<210> 499
<211> 321
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 499
gacatccaga tgacccagtc tccatcttcc gtgtctgcat ctgtaggaga cagagtcacc 60
atcacttgtc gggcgagtca gggtattagc acctggttag cctggtatca gcagaaacca 120
gggaaagccc ctaagctcct gatctatgct gcaaccagtt tgcaaagtgg ggtcccatca 180
aggttcagcg gcagtggatc tgggacagat ttcactctcg ccatcagcgg cctgcagcct 240
gaagattttg caacttacta ttgtcaacag gctaacaatt tcccgtacac ttttggccag 300
gggaccaagc tggagatcaa a 321

<210> 500
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 500
Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Val Ser Ala Ser Val Gly
 1               5                  10                  15
Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Gly Ile Ser Thr Trp
            20                  25                  30
Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
        35                  40                  45
Tyr Ala Ala Thr Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
    50                  55                  60
Ser Gly Ser Gly Thr Asp Phe Thr Leu Ala Ile Ser Gly Leu Gln Pro
65                  70                  75                  80
Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Ala Asn Asn Phe Pro Tyr
                85                  90                  95
Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
            100                 105


<210> 501
<211> 363
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 501
gaggtgcagc tgttggagtc tgggggaggc ttggtacagc ctgggggtc cctgagactc 60
tcctgtgcag cctctgaatt cacctttagc ggctatgcca tgagctgggt ccgccaggct 120
ccagggaagg ggctggagtg ggtctcagct attcgtggta gtggtgataa cacatactac 180
gcagactccg tgaagggccg gttcaccatc tccagagaca attccaagaa cacgctgtat 240
ctgcaaatga acagcctgag agccgaggac acggccgtat attactgtgc gagagtgtat 300
tacgattttt gggaaggggc ttttgatatc tggggccaag ggacaatggt caccgtctct 360
tca 363

<210> 502
<211> 121
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 502
Glu Val Gln Leu Leu Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
 1               5                  10                  15

```
Ser Leu Arg Leu Ser Cys Ala Ala Ser Glu Phe Thr Phe Ser Gly Tyr
            20                  25                  30
Ala Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35                  40                  45
Ser Ala Ile Arg Gly Ser Gly Asp Asn 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 Val Tyr Tyr Cys
                85                  90                  95
Ala Arg Val Tyr Tyr Asp Phe Trp Glu Gly Ala Phe Asp Ile Trp Gly
            100                 105                 110
Gln Gly Thr Met Val Thr Val Ser Ser
        115                 120
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<210> 503
<211> 322
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 503
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gacatccaga tgacccagtc tccatcttct gtgtctgcat ctgtaggaga cagagtcacc 60
atcacttgtc gggcgagtca gggtattagc acctggttag cctggtatca gcagaaacca 120
gggaaagccc ctaagctcct gatctatgct gcaaccagtt tgcaaagtgg ggtcccatca 180
aggttcagcg gcagtggatc tgggacagat ttcactctca ctatcagcag cctgcagcct 240
gaagattttg caacttacta ttgtcaacag gctaacaatt tcccgtacac ttttggccag 300
gggaccaagc tggagatcaa ac                                          322
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<210> 504
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 504
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Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Val Ser Ala Ser Val Gly
 1               5                  10                  15
Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Gly Ile Ser Thr Trp
            20                  25                  30
Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
        35                  40                  45
Tyr Ala Ala Thr Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
    50                  55                  60
Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
65                  70                  75                  80
Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Ala Asn Asn Phe Pro Tyr
                85                  90                  95
Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
            100                 105
```

<210> 505
<211> 357
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 505
caggtgcagc tggtggagtc tgggggaggc gtggtccagc ctgggaggtc cctgagactc 60
tcctgtgcag cgtctggatt caccttcagt gcctatggca tgcactgggt ccgccaggct 120
ccaggcaagg ggctggagtg ggtggcaatt atatggtatg atggaagtaa taaatactac 180
gcagactccg tgaagggccg attcaccatc tccagagaca attccaagaa cacgctgtat 240
ctgcaaatga acagcctgag agccgaggac acggctgtgt attattgtgc gagagaggat 300
acctctatgg ttctctttga ctactggggc cagggaaccc tggtcaccgt ctcctca 357

<210> 506
<211> 119
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 506
Gln Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Arg
 1               5                  10                  15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ala Tyr
            20                  25                  30
Gly Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35                  40                  45
Ala Ile Ile Trp Tyr Asp Gly Ser Asn Lys Tyr Tyr Ala Asp Ser Val
    50                  55                  60
Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
65                  70                  75                  80
Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
                85                  90                  95
Ala Arg Glu Asp Thr Ser Met Val Leu Phe Asp Tyr Trp Gly Gln Gly
            100                 105                 110
Thr Leu Val Thr Val Ser Ser
        115


<210> 507
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 507
ggattcacct tcagtgccta tggc 24

<210> 508
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 508
Gly Phe Thr Phe Ser Ala Tyr Gly
 1               5

<210> 509
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 509
atatggtatg atggaagtaa taaa 24

<210> 510
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 510
Ile Trp Tyr Asp Gly Ser Asn Lys
 1               5


<210> 511
<211> 36
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 511
gcgagagagg atacctctat ggttctcttt gactac 36

<210> 512
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 512
Ala Arg Glu Asp Thr Ser Met Val Leu Phe Asp Tyr
 1               5                  10


<210> 513
<211> 357
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 513
caggtgcagc tggtggagtc tgggggaggc gtggtccagc ctgggaggtc cctgagactc 60
tcctgtgcag cgtctggatt caccttcagt gcctatggca tgcactgggt ccgccaggct 120

ccaggcaagg ggctggagtg ggtggcaatt atatggtatg atggaagtaa taaatactac 180
gcagactccg tgaagggccg attcaccatc tccagagaca attccaagaa cacgctgtat 240
ctgcaaatga acagcctgag agccgaggac acggctgtgt attattgtgc gagagaggat 300
acctctatgg ttctctttga ctactggggc cagggaaccc tggtcaccgt ctcctca 357

<210> 514
<211> 119
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 514
Gln Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Arg
 1               5                  10                  15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ala Tyr
            20                  25                  30
Gly Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35                  40                  45
Ala Ile Ile Trp Tyr Asp Gly Ser Asn Lys Tyr Tyr Ala Asp Ser Val
    50                  55                  60
Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
65                  70                  75                  80
Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
                85                  90                  95
Ala Arg Glu Asp Thr Ser Met Val Leu Phe Asp Tyr Trp Gly Gln Gly
            100                 105                 110
Thr Leu Val Thr Val Ser Ser
        115


<210> 515
<211> 357
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 515
caggtgcagc tggtggagtc tgggggaggc gtggtccagc ctgggaggtc cctgagactc 60
tcctgtgcag cgtctggatt caccttcagt gcctatggca tgcactgggt ccgccaggct 120
ccaggcaagg ggctagagtg ggtggcagtt atatggtatg atggaagtaa taaatactat 180
gcagactccg tgaagggccg attcaccatc tccagagaca attccaagaa cacgctgtat 240
ctgcaaatga acagcctgag agccgaggac acggctgtgt attactgtgc gagagaggat 300
acctctatgg ttctctttga ctactggggc cagggaaccc tggtcaccgt ctcctca 357

<210> 516
<211> 119
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 516
Gln Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Arg
 1               5                  10                  15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ala Tyr
            20                  25                  30

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

<210> 517
<211> 1488
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 517
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atgtggcaga ttgttttctt tactctgagc tgtgatcttg tcttggccgc agcctataac 60
aactttcgga agagcatgga cagcatagga aagaagcaat atcaggtcca gcatgggtcc 120
tgcagctaca ctttcctcct gccagagatg gacaactgcc gctcttcctc cagcccctac 180
gtgtccaatg ctgtgcagag ggacgcgccg ctcgaatacg atgactcggt gcagaggctg 240
caagtgctgg agaacatcat ggaaaacaac actcagtggc taatgaagct tgagaattat 300
atccaggaca acatgaagaa agaaatggta gagatacagc agaatgcagt acagaaccag 360
acggctgtga tgatagaaat agggacaaac ctgttgaacc aaacagctga gcaaacgcgg 420
aagttaactg atgtggaagc ccaagtatta aatcagacca cgagacttga acttcagctc 480
ttggaacact ccctctcgac aaacaaattg gaaaaacaga ttttggacca gaccagtgaa 540
ataaacaaat tgcaagataa gaacagtttc ctagaaaaga aggtgctagc tatggaagac 600
aagcacatca tccaactaca gtcaataaaa gaagagaaag atcagctaca ggtgttagta 660
tccaagcaaa attccatcat tgaagaacta gaaaaaaaaa tagtgactgc cacggtgaat 720
aattcagttc ttcaaaagca gcaacatgat ctcatggaga cagttaataa cttactgact 780
atgatgtcca catcaaactc agctaaggac cccactgttg ctaaagaaga acaaatcagc 840
ttcagagact gtgctgaagt attcaaatca ggacacacca caaatggcat ctacacgtta 900
acattcccta attctacaga agagatcaag gcctactgtg acatggaagc tggaggaggc 960
gggtggacaa ttattcagcg acgtgaggat ggcagcgttg attttcagag gacttggaaa 1020
gaatataaag tgggatttgg taacccttca ggagaatatt ggctgggaaa tgagtttgtt 1080
tcgcaactga ctaatcagca acgctatgtg cttaaaatac accttaaaga ctgggaaggg 1140
aatgaggctt actcattgta tgaacatttc tatctctcaa gtgaagaact caattatagg 1200
attcacctta aaggacttac agggacagcc ggcaaaataa gcagcatcag ccaaccagga 1260
aatgatttta gcacaaagga tggagacaac gacaaatgta tttgcaaatg ttcacaaatg 1320
ctaacaggag gctggtggtt tgatgcatgt ggtccttcca acttgaacgg aatgtactat 1380
ccacagaggc agaacacaaa taagttcaac ggcattaaat ggtactactg gaaaggctca 1440
ggctattcgc tcaaggccac aaccatgatg atccgaccag cagatttc              1488
```

<210> 518
<211> 496
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 518
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Met Trp Gln Ile Val Phe Phe Thr Leu Ser Cys Asp Leu Val Leu Ala
 1               5                  10                  15
Ala Ala Tyr Asn Asn Phe Arg Lys Ser Met Asp Ser Ile Gly Lys Lys
```

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

<210> 519
<211> 215
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 519
Arg Asp Cys Ala Glu Val Phe Lys Ser Gly His Thr Thr Asn Gly Ile
 1               5                  10                  15
Tyr Thr Leu Thr Phe Pro Asn Ser Thr Glu Glu Ile Lys Ala Tyr Cys
            20                  25                  30
Asp Met Glu Ala Gly Gly Gly Gly Trp Thr Ile Ile Gln Arg Arg Glu
        35                  40                  45
Asp Gly Ser Val Asp Phe Gln Arg Thr Trp Lys Glu Tyr Lys Val Gly
    50                  55                  60
Phe Gly Asn Pro Ser Gly Glu Tyr Trp Leu Gly Asn Glu Phe Val Ser
65                  70                  75                  80
Gln Leu Thr Asn Gln Gln Arg Tyr Val Leu Lys Ile His Leu Lys Asp
                85                  90                  95
Trp Glu Gly Asn Glu Ala Tyr Ser Leu Tyr Glu His Phe Tyr Leu Ser
            100                 105                 110
Ser Glu Glu Leu Asn Tyr Arg Ile His Leu Lys Gly Leu Thr Gly Thr
        115                 120                 125
Ala Gly Lys Ile Ser Ser Ile Ser Gln Pro Gly Asn Asp Phe Ser Thr
    130                 135                 140
Lys Asp Gly Asp Asn Asp Lys Cys Ile Cys Lys Cys Ser Gln Met Leu
145                 150                 155                 160
Thr Gly Gly Trp Trp Phe Asp Ala Cys Gly Pro Ser Asn Leu Asn Gly
                165                 170                 175
Met Tyr Tyr Pro Gln Arg Gln Asn Thr Asn Lys Phe Asn Gly Ile Lys
            180                 185                 190
Trp Tyr Tyr Trp Lys Gly Ser Gly Tyr Ser Leu Lys Ala Thr Thr Met
        195                 200                 205
Met Ile Arg Pro Ala Asp Phe
    210                 215


<210> 520
<211> 215
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 520
Arg Asp Cys Ala Glu Ile Phe Lys Ser Gly Leu Thr Thr Ser Gly Ile
 1               5                  10                  15
Tyr Thr Leu Thr Phe Pro Asn Ser Thr Glu Glu Ile Lys Ala Tyr Cys
            20                  25                  30
Asp Met Asp Val Gly Gly Gly Gly Trp Thr Val Ile Gln His Arg Glu
        35                  40                  45
Asp Gly Ser Val Asp Phe Gln Arg Thr Trp Lys Glu Tyr Lys Glu Gly
    50                  55                  60
Phe Gly Ser Pro Leu Gly Glu Tyr Trp Leu Gly Asn Glu Phe Val Ser
65                  70                  75                  80
Gln Leu Thr Gly Gln His Arg Tyr Val Leu Lys Ile Gln Leu Lys Asp
                85                  90                  95
Trp Glu Gly Asn Glu Ala His Ser Leu Tyr Asp His Phe Tyr Leu Ala

```
            100                 105                 110
Gly Glu Glu Ser Asn Tyr Arg Ile His Leu Thr Gly Leu Thr Gly Thr
        115                 120                 125
Ala Gly Lys Ile Ser Ser Ile Ser Gln Pro Gly Ser Asp Phe Ser Thr
    130                 135                 140
Lys Asp Ser Asp Asn Asp Lys Cys Ile Cys Lys Cys Ser Gln Met Leu
145                 150                 155                 160
Ser Gly Gly Trp Trp Phe Asp Ala Cys Gly Pro Ser Asn Leu Asn Gly
                165                 170                 175
Gln Tyr Tyr Pro Gln Lys Gln Asn Thr Asn Lys Phe Asn Gly Ile Lys
            180                 185                 190
Trp Tyr Tyr Trp Lys Gly Ser Gly Tyr Ser Leu Lys Ala Thr Thr Met
        195                 200                 205
Met Ile Arg Pro Ala Asp Phe
    210                 215


<210> 521
<211> 215
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 521
Arg Asp Cys Ala Glu Val Phe Lys Ser Gly His Thr Thr Asn Gly Val
 1               5                  10                  15
Tyr Thr Leu Thr Leu Pro Asn Ser Thr Glu Glu Val Lys Ala Tyr Cys
            20                  25                  30
Asp Met Glu Ala Gly Gly Gly Gly Trp Thr Ile Ile Gln Arg Arg Glu
        35                  40                  45
Asp Gly Ser Val Asp Phe Gln Arg Thr Trp Lys Glu Tyr Lys Val Gly
    50                  55                  60
Phe Gly Asn Pro Ser Gly Glu Tyr Trp Leu Gly Asn Glu Phe Val Ser
65                  70                  75                  80
Gln Leu Thr Asn Gln Gln Arg Tyr Val Leu Lys Ile His Leu Lys Asp
                85                  90                  95
Trp Glu Gly Asn Glu Ala Tyr Ser Leu Tyr Glu His Phe Tyr Leu Ser
            100                 105                 110
Ser Glu Glu Leu Asn Tyr Arg Ile His Leu Lys Gly Leu Thr Gly Thr
        115                 120                 125
Ala Gly Lys Ile Ser Ser Ile Ser Gln Pro Gly Asn Asp Phe Ser Thr
    130                 135                 140
Lys Asp Ala Asp Asn Asp Lys Cys Ile Cys Lys Cys Ser Gln Met Leu
145                 150                 155                 160
Thr Gly Gly Trp Trp Phe Asp Ala Cys Gly Pro Ser Asn Leu Asn Gly
                165                 170                 175
Met Tyr Tyr Pro Gln Arg Gln Asn Thr Asn Lys Phe Asn Gly Ile Lys
            180                 185                 190
Trp Tyr Tyr Trp Lys Gly Ser Gly Tyr Ser Leu Lys Gly Thr Thr Met
        195                 200                 205
Met Ile Arg Pro Ala Asp Phe
    210                 215


<210> 522
<211> 674
<212> PRT
<213> Artificial Sequence
```

<220>
<223> synthetic

<400> 522
Arg Asp Cys Ala Glu Val Phe Lys Ser Gly His Thr Thr Asn Gly Ile
 1               5                  10                  15
Tyr Thr Leu Thr Phe Pro Asn Ser Thr Glu Glu Ile Lys Ala Tyr Cys
            20                  25                  30
Asp Met Glu Ala Gly Gly Gly Gly Trp Thr Ile Ile Gln Arg Arg Glu
        35                  40                  45
Asp Gly Ser Val Asp Phe Gln Arg Thr Trp Lys Glu Tyr Lys Val Gly
    50                  55                  60
Phe Gly Asn Pro Ser Gly Glu Tyr Trp Leu Gly Asn Glu Phe Val Ser
65                  70                  75                  80
Gln Leu Thr Asn Gln Gln Arg Tyr Val Leu Lys Ile His Leu Lys Asp
                85                  90                  95
Trp Glu Gly Asn Glu Ala Tyr Ser Leu Tyr Glu His Phe Tyr Leu Ser
            100                 105                 110
Ser Glu Glu Leu Asn Tyr Arg Ile His Leu Lys Gly Leu Thr Gly Thr
        115                 120                 125
Ala Gly Lys Ile Ser Ser Ile Ser Gln Pro Gly Asn Asp Phe Ser Thr
    130                 135                 140
Lys Asp Gly Asp Asn Asp Lys Cys Ile Cys Lys Cys Ser Gln Met Leu
145                 150                 155                 160
Thr Gly Gly Trp Trp Phe Asp Ala Cys Gly Pro Ser Asn Leu Asn Gly
                165                 170                 175
Met Tyr Tyr Pro Gln Arg Gln Asn Thr Asn Lys Phe Asn Gly Ile Lys
            180                 185                 190
Trp Tyr Tyr Trp Lys Gly Ser Gly Tyr Ser Leu Lys Ala Thr Thr Met
        195                 200                 205
Met Ile Arg Pro Ala Asp Phe Gly Gly Pro Gly Glu Pro Lys Ser Cys
    210                 215                 220
Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly
225                 230                 235                 240
Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met
                245                 250                 255
Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His
            260                 265                 270
Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val
        275                 280                 285
His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr
    290                 295                 300
Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly
305                 310                 315                 320
Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile
                325                 330                 335
Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val
            340                 345                 350
Tyr Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser
        355                 360                 365
Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu
    370                 375                 380
Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro
385                 390                 395                 400
Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val
                405                 410                 415
Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met
            420                 425                 430
His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser
        435                 440                 445
Pro Gly Lys Gly Gly Gly Gly Ser Gly Ala Pro Arg Asp Cys Ala Glu

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

<210> 523
<211> 663
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 523

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

```
                 165                 170                 175
Met Tyr Tyr Pro Gln Arg Gln Asn Thr Asn Lys Phe Asn Gly Ile Lys
            180                 185                 190
Trp Tyr Tyr Trp Lys Gly Ser Gly Tyr Ser Leu Lys Ala Thr Thr Met
        195                 200                 205
Met Ile Arg Pro Ala Asp Phe Glu Pro Arg Gly Pro Thr Ile Lys Pro
    210                 215                 220
Cys Pro Pro Cys Lys Cys Pro Ala Pro Asn Leu Leu Gly Gly Pro Ser
225                 230                 235                 240
Val Phe Ile Phe Pro Pro Lys Ile Lys Asp Val Leu Met Ile Ser Leu
                245                 250                 255
Ser Pro Ile Val Thr Cys Val Val Val Asp Val Ser Glu Asp Asp Pro
            260                 265                 270
Asp Val Gln Ile Ser Trp Phe Val Asn Asn Val Glu Val His Thr Ala
        275                 280                 285
Gln Thr Gln Thr His Arg Glu Asp Tyr Asn Ser Thr Leu Arg Val Val
    290                 295                 300
Ser Ala Leu Pro Ile Gln His Gln Asp Trp Met Ser Gly Lys Glu Phe
305                 310                 315                 320
Lys Cys Lys Val Asn Asn Lys Asp Leu Pro Ala Pro Ile Glu Arg Thr
                325                 330                 335
Ile Ser Lys Pro Lys Gly Ser Val Arg Ala Pro Gln Val Tyr Val Leu
            340                 345                 350
Pro Pro Pro Glu Glu Glu Met Thr Lys Lys Gln Val Thr Leu Thr Cys
        355                 360                 365
Met Val Thr Asp Phe Met Pro Glu Asp Ile Tyr Val Glu Trp Thr Asn
    370                 375                 380
Asn Gly Lys Thr Glu Leu Asn Tyr Lys Asn Thr Glu Pro Val Leu Asp
385                 390                 395                 400
Ser Asp Gly Ser Tyr Phe Met Tyr Ser Lys Leu Arg Val Glu Lys Lys
                405                 410                 415
Asn Trp Val Glu Arg Asn Ser Tyr Ser Cys Ser Val Val His Glu Gly
            420                 425                 430
Leu His Asn His His Thr Thr Lys Ser Phe Ser Arg Thr Pro Gly Lys
        435                 440                 445
Arg Asp Cys Ala Glu Val Phe Lys Ser Gly His Thr Thr Asn Gly Ile
    450                 455                 460
Tyr Thr Leu Thr Phe Pro Asn Ser Thr Glu Glu Ile Lys Ala Tyr Cys
465                 470                 475                 480
Asp Met Glu Ala Gly Gly Gly Gly Trp Thr Ile Ile Gln Arg Arg Glu
                485                 490                 495
Asp Gly Ser Val Asp Phe Gln Arg Thr Trp Lys Glu Tyr Lys Val Gly
            500                 505                 510
Phe Gly Asn Pro Ser Gly Glu Tyr Trp Leu Gly Asn Glu Phe Val Ser
        515                 520                 525
Gln Leu Thr Asn Gln Gln Arg Tyr Val Leu Lys Ile His Leu Lys Asp
    530                 535                 540
Trp Glu Gly Asn Glu Ala Tyr Ser Leu Tyr Glu His Phe Tyr Leu Ser
545                 550                 555                 560
Ser Glu Glu Leu Asn Tyr Arg Ile His Leu Lys Gly Leu Thr Gly Thr
                565                 570                 575
Ala Gly Lys Ile Ser Ser Ile Ser Gln Pro Gly Asn Asp Phe Ser Thr
            580                 585                 590
Lys Asp Gly Asp Asn Asp Lys Cys Ile Cys Lys Cys Ser Gln Met Leu
        595                 600                 605
Thr Gly Gly Trp Trp Phe Asp Ala Cys Gly Pro Ser Asn Leu Asn Gly
    610                 615                 620
Met Tyr Tyr Pro Gln Arg Gln Asn Thr Asn Lys Phe Asn Gly Ile Lys
625                 630                 635                 640
Trp Tyr Tyr Trp Lys Gly Ser Gly Tyr Ser Leu Lys Ala Thr Thr Met
                645                 650                 655
```

```
Met Ile Arg Pro Ala Asp Phe
            660


<210> 524
<211> 448
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 524
Arg Asp Cys Ala Glu Val Phe Lys Ser Gly His Thr Thr Asn Gly Ile
 1               5                  10                  15
Tyr Thr Leu Thr Phe Pro Asn Ser Thr Glu Glu Ile Lys Ala Tyr Cys
            20                  25                  30
Asp Met Glu Ala Gly Gly Gly Gly Trp Thr Ile Ile Gln Arg Arg Glu
        35                  40                  45
Asp Gly Ser Val Asp Phe Gln Arg Thr Trp Lys Glu Tyr Lys Val Gly
    50                  55                  60
Phe Gly Asn Pro Ser Gly Glu Tyr Trp Leu Gly Asn Glu Phe Val Ser
65                  70                  75                  80
Gln Leu Thr Asn Gln Gln Arg Tyr Val Leu Lys Ile His Leu Lys Asp
                85                  90                  95
Trp Glu Gly Asn Glu Ala Tyr Ser Leu Tyr Glu His Phe Tyr Leu Ser
            100                 105                 110
Ser Glu Glu Leu Asn Tyr Arg Ile His Leu Lys Gly Leu Thr Gly Thr
        115                 120                 125
Ala Gly Lys Ile Ser Ser Ile Ser Gln Pro Gly Asn Asp Phe Ser Thr
    130                 135                 140
Lys Asp Gly Asp Asn Asp Lys Cys Ile Cys Lys Cys Ser Gln Met Leu
145                 150                 155                 160
Thr Gly Gly Trp Trp Phe Asp Ala Cys Gly Pro Ser Asn Leu Asn Gly
                165                 170                 175
Met Tyr Tyr Pro Gln Arg Gln Asn Thr Asn Lys Phe Asn Gly Ile Lys
            180                 185                 190
Trp Tyr Tyr Trp Lys Gly Ser Gly Tyr Ser Leu Lys Ala Thr Thr Met
        195                 200                 205
Met Ile Arg Pro Ala Asp Phe Glu Pro Arg Gly Pro Thr Ile Lys Pro
    210                 215                 220
Cys Pro Pro Cys Lys Cys Pro Ala Pro Asn Leu Leu Gly Gly Pro Ser
225                 230                 235                 240
Val Phe Ile Phe Pro Pro Lys Ile Lys Asp Val Leu Met Ile Ser Leu
                245                 250                 255
Ser Pro Ile Val Thr Cys Val Val Val Asp Val Ser Glu Asp Asp Pro
            260                 265                 270
Asp Val Gln Ile Ser Trp Phe Val Asn Asn Val Glu Val His Thr Ala
        275                 280                 285
Gln Thr Gln Thr His Arg Glu Asp Tyr Asn Ser Thr Leu Arg Val Val
    290                 295                 300
Ser Ala Leu Pro Ile Gln His Gln Asp Trp Met Ser Gly Lys Glu Phe
305                 310                 315                 320
Lys Cys Lys Val Asn Asn Lys Asp Leu Pro Ala Pro Ile Glu Arg Thr
                325                 330                 335
Ile Ser Lys Pro Lys Gly Ser Val Arg Ala Pro Gln Val Tyr Val Leu
            340                 345                 350
Pro Pro Pro Glu Glu Glu Met Thr Lys Lys Gln Val Thr Leu Thr Cys
        355                 360                 365
Met Val Thr Asp Phe Met Pro Glu Asp Ile Tyr Val Glu Trp Thr Asn
    370                 375                 380
```

```
Asn Gly Lys Thr Glu Leu Asn Tyr Lys Asn Thr Glu Pro Val Leu Asp
385                 390                 395                 400
Ser Asp Gly Ser Tyr Phe Met Tyr Ser Lys Leu Arg Val Glu Lys Lys
                405                 410                 415
Asn Trp Val Glu Arg Asn Ser Tyr Ser Cys Ser Val Val His Glu Gly
            420                 425                 430
Leu His Asn His His Thr Thr Lys Ser Phe Ser Arg Thr Pro Gly Lys
        435                 440                 445


<210> 525
<211> 981
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 525
Met Asp Ser Leu Ala Ser Leu Val Leu Cys Gly Val Ser Leu Leu Leu
 1               5                  10                  15
Ser Gly Thr Val Glu Gly Ala Met Asp Leu Ile Leu Ile Asn Ser Leu
            20                  25                  30
Pro Leu Val Ser Asp Ala Glu Thr Ser Leu Thr Cys Ile Ala Ser Gly
        35                  40                  45
Trp Arg Pro His Glu Pro Ile Thr Ile Gly Arg Asp Phe Glu Ala Leu
    50                  55                  60
Met Asn Gln His Gln Asp Pro Leu Glu Val Thr Gln Asp Val Thr Arg
65                  70                  75                  80
Glu Trp Ala Lys Lys Val Val Trp Lys Arg Glu Lys Ala Ser Lys Ile
                85                  90                  95
Asn Gly Ala Tyr Phe Cys Glu Gly Arg Val Arg Gly Glu Ala Ile Arg
            100                 105                 110
Ile Arg Thr Met Lys Met Arg Gln Gln Ala Ser Phe Leu Pro Ala Thr
        115                 120                 125
Leu Thr Met Thr Val Asp Lys Gly Asp Asn Val Asn Ile Ser Phe Lys
    130                 135                 140
Lys Val Leu Ile Lys Glu Glu Asp Ala Val Ile Tyr Lys Asn Gly Ser
145                 150                 155                 160
Phe Ile His Ser Val Pro Arg His Glu Val Pro Asp Ile Leu Glu Val
                165                 170                 175
His Leu Pro His Ala Gln Pro Gln Asp Ala Gly Val Tyr Ser Ala Arg
            180                 185                 190
Tyr Ile Gly Gly Asn Leu Phe Thr Ser Ala Phe Thr Arg Leu Ile Val
        195                 200                 205
Arg Arg Cys Glu Ala Gln Lys Trp Gly Pro Glu Cys Asn His Leu Cys
    210                 215                 220
Thr Ala Cys Met Asn Asn Gly Val Cys His Glu Asp Thr Gly Glu Cys
225                 230                 235                 240
Ile Cys Pro Pro Gly Phe Met Gly Arg Thr Cys Glu Lys Ala Cys Glu
                245                 250                 255
Leu His Thr Phe Gly Arg Thr Cys Lys Glu Arg Cys Ser Gly Gln Glu
            260                 265                 270
Gly Cys Lys Ser Tyr Val Phe Cys Leu Pro Asp Pro Tyr Gly Cys Ser
        275                 280                 285
Cys Ala Thr Gly Trp Lys Gly Leu Gln Cys Asn Glu Ala Cys His Pro
    290                 295                 300
Gly Phe Tyr Gly Pro Asp Cys Lys Leu Arg Cys Ser Cys Asn Asn Gly
305                 310                 315                 320
Glu Met Cys Asp Arg Phe Gln Gly Cys Leu Cys Ser Pro Gly Trp Gln
                325                 330                 335
```

```
Gly Leu Gln Cys Glu Arg Glu Gly Ile Pro Arg Met Thr Pro Lys Ile
            340                 345                 350
Val Asp Leu Pro Asp His Ile Glu Val Asn Ser Gly Lys Phe Asn Pro
        355                 360                 365
Ile Cys Lys Ala Ser Gly Trp Pro Leu Pro Thr Asn Glu Glu Met Thr
    370                 375                 380
Leu Val Lys Pro Asp Gly Thr Val Leu His Pro Lys Asp Phe Asn His
385                 390                 395                 400
Thr Asp His Phe Ser Val Ala Ile Phe Thr Ile His Arg Ile Leu Pro
                405                 410                 415
Pro Asp Ser Gly Val Trp Val Cys Ser Val Asn Thr Val Ala Gly Met
            420                 425                 430
Val Glu Lys Pro Phe Asn Ile Ser Val Lys Val Leu Pro Lys Pro Leu
        435                 440                 445
Asn Ala Pro Asn Val Ile Asp Thr Gly His Asn Phe Ala Val Ile Asn
    450                 455                 460
Ile Ser Ser Glu Pro Tyr Phe Gly Asp Gly Pro Ile Lys Ser Lys Lys
465                 470                 475                 480
Leu Leu Tyr Lys Pro Val Asn His Tyr Glu Ala Trp Gln His Ile Gln
                485                 490                 495
Val Thr Asn Glu Ile Val Thr Leu Asn Tyr Leu Glu Pro Arg Thr Glu
            500                 505                 510
Tyr Glu Leu Cys Val Gln Leu Val Arg Arg Gly Glu Gly Gly Glu Gly
        515                 520                 525
His Pro Gly Pro Val Arg Arg Phe Thr Thr Ala Ser Ile Gly Leu Pro
    530                 535                 540
Pro Pro Arg Gly Leu Asn Leu Leu Pro Lys Ser Gln Thr Thr Leu Asn
545                 550                 555                 560
Leu Thr Trp Gln Pro Ile Phe Pro Ser Ser Glu Asp Asp Phe Tyr Val
                565                 570                 575
Glu Val Glu Arg Arg Ser Val Gln Lys Ser Asp Gln Gln Asn Ile Lys
            580                 585                 590
Val Pro Gly Asn Leu Thr Ser Val Leu Leu Asn Asn Leu His Pro Arg
        595                 600                 605
Glu Gln Tyr Val Val Arg Ala Arg Val Asn Thr Lys Ala Gln Gly Glu
    610                 615                 620
Trp Ser Glu Asp Leu Thr Ala Trp Thr Leu Ser Asp Ile Leu Pro Pro
625                 630                 635                 640
Gln Pro Glu Asn Ile Lys Ile Ser Asn Ile Thr His Ser Ser Ala Val
                645                 650                 655
Ile Ser Trp Thr Ile Leu Asp Gly Tyr Ser Ile Ser Ser Ile Thr Ile
            660                 665                 670
Arg Tyr Lys Val Gln Gly Lys Asn Glu Asp Gln His Val Asp Val Lys
        675                 680                 685
Ile Lys Asn Ala Thr Ile Ile Gln Tyr Gln Leu Lys Gly Leu Glu Pro
    690                 695                 700
Glu Thr Ala Tyr Gln Val Asp Ile Phe Ala Glu Asn Asn Ile Gly Ser
705                 710                 715                 720
Ser Asn Pro Ala Phe Ser His Glu Leu Val Thr Leu Pro Glu Ser Gln
                725                 730                 735
Ala Pro Ala Asp Leu Gly Gly Gly Lys Gly Pro Gly Glu Pro Arg Gly
            740                 745                 750
Pro Thr Ile Lys Pro Cys Pro Pro Cys Lys Cys Pro Ala Pro Asn Leu
        755                 760                 765
Leu Gly Gly Pro Ser Val Phe Ile Phe Pro Pro Lys Ile Lys Asp Val
    770                 775                 780
Leu Met Ile Ser Leu Ser Pro Ile Val Thr Cys Val Val Val Asp Val
785                 790                 795                 800
Ser Glu Asp Asp Pro Asp Val Gln Ile Ser Trp Phe Val Asn Asn Val
                805                 810                 815
Glu Val His Thr Ala Gln Thr Gln Thr His Arg Glu Asp Tyr Asn Ser
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            820                 825                 830
Thr Leu Arg Val Val Ser Ala Leu Pro Ile Gln His Gln Asp Trp Met
        835                 840                 845
Ser Gly Lys Glu Phe Lys Cys Lys Val Asn Asn Lys Asp Leu Pro Ala
    850                 855                 860
Pro Ile Glu Arg Thr Ile Ser Lys Pro Lys Gly Ser Val Arg Ala Pro
865                 870                 875                 880
Gln Val Tyr Val Leu Pro Pro Pro Glu Glu Glu Met Thr Lys Lys Gln
                885                 890                 895
Val Thr Leu Thr Cys Met Val Thr Asp Phe Met Pro Glu Asp Ile Tyr
            900                 905                 910
Val Glu Trp Thr Asn Asn Gly Lys Thr Glu Leu Asn Tyr Lys Asn Thr
        915                 920                 925
Glu Pro Val Leu Asp Ser Asp Gly Ser Tyr Phe Met Tyr Ser Lys Leu
    930                 935                 940
Arg Val Glu Lys Lys Asn Trp Val Glu Arg Asn Ser Tyr Ser Cys Ser
945                 950                 955                 960
Val Val His Glu Gly Leu His Asn His His Thr Thr Lys Ser Phe Ser
                965                 970                 975
Arg Thr Pro Gly Lys
            980


<210> 526
<211> 753
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 526
Met Asp Ser Leu Ala Ser Leu Val Leu Cys Gly Val Ser Leu Leu Leu
 1               5                  10                  15
Ser Gly Thr Val Glu Gly Ala Met Asp Leu Ile Leu Ile Asn Ser Leu
            20                  25                  30
Pro Leu Val Ser Asp Ala Glu Thr Ser Leu Thr Cys Ile Ala Ser Gly
        35                  40                  45
Trp Arg Pro His Glu Pro Ile Thr Ile Gly Arg Asp Phe Glu Ala Leu
    50                  55                  60
Met Asn Gln His Gln Asp Pro Leu Glu Val Thr Gln Asp Val Thr Arg
65                  70                  75                  80
Glu Trp Ala Lys Lys Val Val Trp Lys Arg Glu Lys Ala Ser Lys Ile
                85                  90                  95
Asn Gly Ala Tyr Phe Cys Glu Gly Arg Val Arg Gly Glu Ala Ile Arg
            100                 105                 110
Ile Arg Thr Met Lys Met Arg Gln Gln Ala Ser Phe Leu Pro Ala Thr
        115                 120                 125
Leu Thr Met Thr Val Asp Lys Gly Asp Asn Val Asn Ile Ser Phe Lys
    130                 135                 140
Lys Val Leu Ile Lys Glu Glu Asp Ala Val Ile Tyr Lys Asn Gly Ser
145                 150                 155                 160
Phe Ile His Ser Val Pro Arg His Glu Val Pro Asp Ile Leu Glu Val
                165                 170                 175
His Leu Pro His Ala Gln Pro Gln Asp Ala Gly Val Tyr Ser Ala Arg
            180                 185                 190
Tyr Ile Gly Gly Asn Leu Phe Thr Ser Ala Phe Thr Arg Leu Ile Val
        195                 200                 205
Arg Arg Cys Glu Ala Gln Lys Trp Gly Pro Glu Cys Asn His Leu Cys
    210                 215                 220
Thr Ala Cys Met Asn Asn Gly Val Cys His Glu Asp Thr Gly Glu Cys
```

```
225                 230                 235                 240
Ile Cys Pro Pro Gly Phe Met Gly Arg Thr Cys Glu Lys Ala Cys Glu
                245                 250                 255
Leu His Thr Phe Gly Arg Thr Cys Lys Glu Arg Cys Ser Gly Gln Glu
            260                 265                 270
Gly Cys Lys Ser Tyr Val Phe Cys Leu Pro Asp Pro Tyr Gly Cys Ser
        275                 280                 285
Cys Ala Thr Gly Trp Lys Gly Leu Gln Cys Asn Glu Ala Cys His Pro
    290                 295                 300
Gly Phe Tyr Gly Pro Asp Cys Lys Leu Arg Cys Ser Cys Asn Asn Gly
305                 310                 315                 320
Glu Met Cys Asp Arg Phe Gln Gly Cys Leu Cys Ser Pro Gly Trp Gln
                325                 330                 335
Gly Leu Gln Cys Glu Arg Glu Gly Ile Pro Arg Met Thr Pro Lys Ile
            340                 345                 350
Val Asp Leu Pro Asp His Ile Glu Val Asn Ser Gly Lys Phe Asn Pro
        355                 360                 365
Ile Cys Lys Ala Ser Gly Trp Pro Leu Pro Thr Asn Glu Glu Met Thr
    370                 375                 380
Leu Val Lys Pro Asp Gly Thr Val Leu His Pro Lys Asp Phe Asn His
385                 390                 395                 400
Thr Asp His Phe Ser Val Ala Ile Phe Thr Ile His Arg Ile Leu Pro
                405                 410                 415
Pro Asp Ser Gly Val Trp Val Cys Ser Val Asn Thr Val Ala Gly Met
            420                 425                 430
Val Glu Lys Pro Phe Asn Ile Ser Val Lys Val Leu Pro Lys Pro Leu
        435                 440                 445
Asn Ala Pro Asn Val Ile Asp Thr Gly His Asn Phe Ala Val Ile Asn
    450                 455                 460
Ile Ser Ser Glu Pro Tyr Phe Gly Asp Gly Pro Ile Lys Ser Lys Lys
465                 470                 475                 480
Leu Leu Tyr Lys Pro Val Asn His Tyr Glu Ala Trp Gln His Ile Gln
                485                 490                 495
Val Thr Asn Glu Ile Val Thr Leu Asn Tyr Leu Glu Pro Arg Thr Glu
            500                 505                 510
Tyr Glu Leu Cys Val Gln Leu Val Arg Arg Gly Glu Gly Gly Glu Gly
        515                 520                 525
His Pro Gly Pro Val Arg Arg Phe Thr Thr Ala Ser Ile Gly Leu Pro
    530                 535                 540
Pro Pro Arg Gly Leu Asn Leu Leu Pro Lys Ser Gln Thr Thr Leu Asn
545                 550                 555                 560
Leu Thr Trp Gln Pro Ile Phe Pro Ser Ser Glu Asp Asp Phe Tyr Val
                565                 570                 575
Glu Val Glu Arg Arg Ser Val Gln Lys Ser Asp Gln Gln Asn Ile Lys
            580                 585                 590
Val Pro Gly Asn Leu Thr Ser Val Leu Leu Asn Asn Leu His Pro Arg
        595                 600                 605
Glu Gln Tyr Val Val Arg Ala Arg Val Asn Thr Lys Ala Gln Gly Glu
    610                 615                 620
Trp Ser Glu Asp Leu Thr Ala Trp Thr Leu Ser Asp Ile Leu Pro Pro
625                 630                 635                 640
Gln Pro Glu Asn Ile Lys Ile Ser Asn Ile Thr His Ser Ser Ala Val
                645                 650                 655
Ile Ser Trp Thr Ile Leu Asp Gly Tyr Ser Ile Ser Ser Ile Thr Ile
            660                 665                 670
Arg Tyr Lys Val Gln Gly Lys Asn Glu Asp Gln His Val Asp Val Lys
        675                 680                 685
Ile Lys Asn Ala Thr Ile Ile Gln Tyr Gln Leu Lys Gly Leu Glu Pro
    690                 695                 700
Glu Thr Ala Tyr Gln Val Asp Ile Phe Ala Glu Asn Asn Ile Gly Ser
705                 710                 715                 720
```

```
Ser Asn Pro Ala Phe Ser His Glu Leu Val Thr Leu Pro Glu Ser Gln
                725                 730                 735
Ala Pro Ala Asp Leu Gly Gly Gly Lys Ile Asp His His His His His
            740                 745                 750
His
```

<210> 527
<211> 498
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 527

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

```
Gly Glu Tyr Trp Leu Gly Asn Glu Phe Ile Phe Ala Ile Thr Ser Gln
        355                 360                 365
Arg Gln Tyr Met Leu Arg Ile Glu Leu Met Asp Trp Glu Gly Asn Arg
    370                 375                 380
Ala Tyr Ser Gln Tyr Asp Arg Phe His Ile Gly Asn Glu Lys Gln Asn
385                 390                 395                 400
Tyr Arg Leu Tyr Leu Lys Gly His Thr Gly Thr Ala Gly Lys Gln Ser
                405                 410                 415
Ser Leu Ile Leu His Gly Ala Asp Phe Ser Thr Lys Asp Ala Asp Asn
            420                 425                 430
Asp Asn Cys Met Cys Lys Cys Ala Leu Met Leu Thr Gly Gly Trp Trp
        435                 440                 445
Phe Asp Ala Cys Gly Pro Ser Asn Leu Asn Gly Met Phe Tyr Thr Ala
    450                 455                 460
Gly Gln Asn His Gly Lys Leu Asn Gly Ile Lys Trp His Tyr Phe Lys
465                 470                 475                 480
Gly Pro Ser Tyr Ser Leu Arg Ser Thr Thr Met Met Ile Arg Pro Leu
                485                 490                 495
Asp Phe
```

<210> 528
<211> 330
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 528

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

```
Leu Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
                245                 250                 255
Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
            260                 265                 270
Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
        275                 280                 285
Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn
    290                 295                 300
Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
305                 310                 315                 320
Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys
                325                 330


<210> 529
<211> 327
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 529
Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Cys Ser Arg
 1               5                  10                  15
Ser Thr Ser Glu Ser Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr
            20                  25                  30
Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser
        35                  40                  45
Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser
    50                  55                  60
Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Lys Thr
65                  70                  75                  80
Tyr Thr Cys Asn Val Asp His Lys Pro Ser Asn Thr Lys Val Asp Lys
                85                  90                  95
Arg Val Glu Ser Lys Tyr Gly Pro Pro Cys Pro Ser Cys Pro Ala Pro
            100                 105                 110
Glu Phe Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys
        115                 120                 125
Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val
    130                 135                 140
Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp
145                 150                 155                 160
Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe
                165                 170                 175
Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp
            180                 185                 190
Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu
        195                 200                 205
Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg
    210                 215                 220
Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys
225                 230                 235                 240
Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp
                245                 250                 255
Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys
            260                 265                 270
Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser
        275                 280                 285
Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser
    290                 295                 300
```

```
Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser
305                 310                 315                 320
Leu Ser Leu Ser Leu Gly Lys
                325
```

<210> 530
<211> 327
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 530

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

<210> 531
<211> 88

<212> PRT
<213> Homo sapiens

<400> 531
Thr Ala Gly Lys Gln Ser Ser Leu Ile Leu His Gly Ala Asp Phe Ser
 1               5                  10                  15
Thr Lys Asp Ala Asp Asn Asp Asn Cys Met Cys Lys Cys Ala Leu Met
            20                  25                  30
Leu Thr Gly Gly Trp Trp Phe Asp Ala Cys Gly Pro Ser Asn Leu Asn
        35                  40                  45
Gly Met Phe Tyr Thr Ala Gly Gln Asn His Gly Lys Leu Asn Gly Ile
    50                  55                  60
Lys Trp His Tyr Phe Lys Gly Pro Ser Tyr Ser Leu Arg Ser Thr Thr
65                  70                  75                  80
Met Met Ile Arg Pro Leu Asp Phe
                85