9150A-WO SEQUENCE LISTING

<110> Regeneron Pharmaceuticals, Inc.

<120> Methods for Treating Atopic Dermatitis by Administering an IL-4R Antagonist

<130> 9150A-WO

<140> To be assigned
<141> Filed herewith

<150> 61/697,972
<151> 2012-09-07

<150> 61/738,715
<151> 2012-12-18

<150> 61/748,588
<151> 2013-01-03

<150> 61/764,624
<151> 2013-02-14

<150> 61/768,229
<151> 2013-02-22

<150> 61/770,091
<151> 2013-02-27

<150> 61/782,420
<151> 2013-03-14

<150> 61/816,191
<151> 2013-04-26

<150> 1356759
<151> 2013-07-10

<160> 275

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ccaggcaagg ggctggagtg ggtggcggtc atatcatatg atggaagtaa taaatattat 180
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ctgcaaatga acagcctgag acttgaggac acggctgtat attactgtgc gaaagagggg 300
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            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 Ser Tyr Asp Gly Ser Asn Lys Tyr Tyr Ile Asp Ser Val
    50   55   60
Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Asn
65   70   75   80
Leu Gln Met Asn Ser Leu Arg Leu Glu Asp Thr Ala Val Tyr Tyr Cys
                85   90   95
Ala Lys Glu Gly Arg Gly Gly Phe Asp Tyr Trp Gly Gln Gly Ile Pro
            100   105   110
Val Thr Val Ser Ser
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<400> 8
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gggaaagtcc ctaagtccct gatccatgct gcatccagtt tacaaagtgg ggtcccatca 180
aagttcagcg gcagtggatc tgggacagat ttcactctca ccatcagcag cctgcagcct 240
gaagattttg caacttatta ctgccaacag tataatagtc acccgtggac gttcggccaa 300
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Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Val Ile Asn Asn Tyr
            20   25   30
Leu Ala Trp Phe Gln Gln Lys Pro Gly Lys Val Pro Lys Ser Leu Ile
        35   40   45
His 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 His Pro Trp
                85   90   95
Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys Arg
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<400> 12
Gln Val Ile Asn Asn Tyr
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<400> 14

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<400> 16
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ccaggcaagg ggctggagtg ggtggcggtc atatcatatg atggaagtaa taaatattat 180
atagactccg tgaagggccg attcaccatc tccagagaca attccaagaa cacgctgaat 240
ctgcaaatga acagcctgag acttgaggac acggctgtat attactgtgc gaaagagggg 300
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Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Arg 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 Ser Tyr Asp Gly Ser Asn Lys Tyr Tyr Ile Asp Ser Val
    50   55   60

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Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Asn
65                  70                  75                  80
Leu Gln Met Asn Ser Leu Arg Leu Glu Asp Thr Ala Val Tyr Tyr Cys
                85                  90                  95
Ala Lys Glu Gly Arg Gly Gly Phe Asp Tyr Trp Gly Gln Gly Thr Leu
            100                 105                 110
Val Thr Val Ser Ser
        115
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<210> 19
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<220>
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atcacttgtc gggcgagtca ggtcataaac aattatttag cctggtttca gcagaaacca 120
gggaaagtcc ctaagtccct gatccatgct gcatccagtt tacaaagtgg ggtcccatca 180
aagttcagcg gcagtggatc tgggacagat ttcactctca ccatcagcag cctgcagcct 240
gaagattttg caacttatta ctgccaacag tataatagtc acccgtggac gttcggccaa 300
gggaccaagg tggaaatcaa a   321

<210> 20
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<220>
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 1               5                  10                  15
Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Val Ile Asn Asn Tyr
            20                  25                  30
Leu Ala Trp Phe Gln Gln Lys Pro Gly Lys Val Pro Lys Ser Leu Ile
        35                  40                  45
His 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 His Pro Trp
                85                  90                  95
Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
            100                 105
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tcctgtgcag cctctggatt caccttccgc tcttatggca tgcactgggt ccgccaggct 120
ccaggcaagg ggctggagtg ggtggcagtt atatcatatg atggaagtaa taaatactat 180
gcagactccg tgaagggccg attcaccatc tccagagaca attccaagaa cacgctgtat 240
ctgcaaatga acagcctgag agctgaggac acggctgtgt attactgtgc gaaagagggg 300
agggggggat ttgactactg gggccaggga accctggtca ccgtctcctc a 351

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 1   5   10   15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Arg 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 Ser 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 Lys Glu Gly Arg Gly Gly Phe Asp Tyr Trp Gly Gln Gly Thr Leu
            100   105   110
Val Thr Val Ser Ser
        115

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atcacttgtc gggcgagtca ggtcataaac aattatttag cctggtttca gcagaaacca 120
gggaaagccc ctaagtccct gatctatgct gcatccagtt tgcaaagtgg ggtcccatca 180
aggttcagcg gcagtggatc tgggacagat ttcactctca ccatcagcag cctgcagcct 240
gaagattttg caacttatta ctgccaacag tataatagtc acccgtggac gttcggccaa 300
gggaccaagg tggaaatcaa ac 322

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 1   5   10   15
Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Val Ile Asn Asn Tyr

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            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 His Pro Trp
                85                  90                  95
Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
            100                 105
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<210> 25
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tcctgtgcag cctctggatt caccttcaga agctatggca tacactgggt ccgccaggct 120
ccaggcaagg ggctggagtg ggtggcagtt atatcatatg atggaagtaa taaatactat 180
gcagactccg tgaagggccg attcaccatc tccagagaca attccaagaa cacactgtat 240
ctgcaaatga acagcctgat aactgaggac acggctgtgt attattgtgt gaaagagggg 300
agggggggt ttgactactg gggccaggga accacggtca ccgtctcctc a 351

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<400> 26
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 1               5                  10                  15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Arg Ser Tyr
            20                  25                  30
Gly Ile His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35                  40                  45
Ala Val Ile Ser 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 Ile Thr Glu Asp Thr Ala Val Tyr Tyr Cys
                85                  90                  95
Val Lys Glu Gly Arg Gly Gly Phe Asp Tyr Trp Gly Gln Gly Thr Thr
            100                 105                 110
Val Thr Val Ser Ser
        115
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<220>
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<400> 27
ggattcacct tcagaagcta tggc 24

<210> 28
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 28
Gly Phe Thr Phe Arg Ser Tyr Gly
1 5

<210> 29
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<400> 29
atatcatatg atggaagtaa taaa 24

<210> 30
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<212> PRT
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<220>
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<400> 30
Ile Ser Tyr Asp Gly Ser Asn Lys
1 5

<210> 31
<211> 30
<212> DNA
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<220>
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<400> 31
gtgaaagagg ggaggggggg gtttgactac 30

<210> 32
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<220>
<223> Synthetic

<400> 32
Val Lys Glu Gly Arg Gly Gly Phe Asp Tyr
 1   5   10

<210> 33
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atcacttgtc gggcgagtca ggtcattaat aattatttag cctggtttca gcagaaacca 120
gggaaagtcc ctaagtccct gatccatgct gcatccagtt tgcaaagagg ggtcccatca 180
aagttcagcg gcagtggatc tgggacagat ttcactctca ccatcaacag cctgcagcct 240
gaagattttg caacttatta ctgccaacaa tataatagtt acccgtggac gttcggccaa 300
gggaccaagg tggaaatcaa acga   324

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

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<400> 35
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<400> 36
Gln Val Ile Asn Asn Tyr
 1   5

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<400> 37
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<210> 38
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<400> 38
Ala Ala Ser
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<210> 39
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<223> Synthetic

<400> 39
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<210> 40
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<400> 40
Gln Gln Tyr Asn Ser Tyr Pro Trp Thr
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ccaggcaagg ggctggagtg ggtggcagtt atatcatatg atggaagtaa taaatactat 180
gcagactccg tgaagggccg attcaccatc tccagagaca attccaagaa cacactgtat 240
ctgcaaatga acagcctgat aactgaggac acggctgtgt attattgtgt gaaagagggg 300
agggggggt ttgactactg gggccaggga accctggtca ccgtctcctc a 351

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

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gggaaagtcc ctaagtccct gatccatgct gcatccagtt tgcaaagagg ggtcccatca 180
aagttcagcg gcagtggatc tgggacagat ttcactctca ccatcaacag cctgcagcct 240
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gggaccaagg tggaaatcaa a 321

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

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tcctgtgcag cctctggatt caccttcaga agctatggca tgcactgggt ccgccaggct 120
ccaggcaagg ggctggagtg ggtggcagtt atatcatatg atggaagtaa taaatactat 180
gcagactccg tgaagggccg attcaccatc tccagagaca attccaagaa cacgctgtat 240
ctgcaaatga acagcctgag agctgaggac acggctgtgt attactgtgt gaaagagggg 300
agggggggt ttgactactg gggccaggga accctggtca ccgtctcctc a   351

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<400> 46
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 Arg 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 Ser 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
Val Lys Glu Gly Arg Gly Gly Phe Asp Tyr Trp Gly Gln Gly Thr Leu
            100   105   110
Val Thr Val Ser Ser
        115

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<400> 47
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atcacttgtc gggcgagtca ggtcattaat aattatttag cctggtttca gcagaaacca 120
gggaaagccc ctaagtccct gatctatgct gcatccagtt tgcaaagtgg ggtcccatca 180
aggttcagcg gcagtggatc tgggacagat ttcactctca ccatcagcag cctgcagcct 240
gaagattttg caacttatta ctgccaacaa tataatagtt acccgtggac gttcggccaa 300
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<210> 48
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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 Val 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 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 Trp
                85   90   95
Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
            100   105

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tcctgtgcag gctctggatt cacgtttaga gactatgcca tgacctgggt ccgccaggct 120
ccagggaagg ggctggagtg ggtcgcatcg attagtggtt ccggtggtaa cacatacttc 180
gcagactccg tgaagggccg gttcaccatc tccagagaca attccaagaa cacgctgtat 240
ctgcaaatga acagcctgag agccgaggac acggccgtat attactgtgc gaaagatcga 300
ctctctataa caattcgccc acgctattat ggtttggacg tctggggcca agggtccacg 360
gtcaccgtct cctca 375

<210> 50

<211> 125
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<400> 50
Gln Val Gln Leu Val Glu Ser Gly Gly Gly Leu Glu Gln Pro Gly Gly
 1   5   10   15
Ser Leu Arg Leu Ser Cys Ala Gly Ser Gly Phe Thr Phe Arg Asp Tyr
            20   25   30
Ala Met Thr Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35   40   45
Ala Ser Ile Ser Gly Ser Gly Gly Asn Thr Tyr Phe 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 Arg Leu Ser Ile Thr Ile Arg Pro Arg Tyr Tyr Gly Leu
            100   105   110
Asp Val Trp Gly Gln Gly Ser Thr Val Thr Val Ser Ser
        115   120   125

<210> 51
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 51
ggattcacgt ttagagacta tgcc   24

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

<220>
<223> Synthetic

<400> 52
Gly Phe Thr Phe Arg Asp Tyr Ala
 1   5

<210> 53
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 53
attagtggtt ccggtggtaa caca   24

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

<220>
<223> Synthetic

<400> 54
Ile Ser Gly Ser Gly Gly Asn Thr
 1   5

<210> 55
<211> 54
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 55
gcgaaagatc gactctctat aacaattcgc ccacgctatt atggtttgga cgtc   54

<210> 56
<211> 18
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 56
Ala Lys Asp Arg Leu Ser Ile Thr Ile Arg Pro Arg Tyr Tyr Gly Leu
 1   5   10   15
Asp Val

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

<220>
<223> Synthetic

<400> 57
gacatccaga tgacccagtc tccatcctca ctgtctgcat ctgttggaga cagagtcacc 60
atcacttgtc gggcgagtca ggccattaac aatcatttag cctggtttca gcagaaacca 120
gggaaagccc ctaagtccct gatctttgct gtatccagtt tgcaaagtgg ggtcccatca 180
aagttcagcg gcagtggatc tgggacagac ttcactctca ccatcagcag cctgcagcct 240
gaagattttg caacttatta ctgccaacag tataatagtt acccgtggac gttcggccaa 300
gggaccaagg tggaaatcaa acga   324

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

<220>

<223> Synthetic

<400> 58
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 His
            20   25   30
Leu Ala Trp Phe Gln Gln Lys Pro Gly Lys Ala Pro Lys Ser Leu Ile
        35   40   45
Phe Ala Val 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 Trp
                85   90   95
Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys Arg
            100   105

<210> 59
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 59
caggccatta acaatcat 18

<210> 60
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 60
Gln Ala Ile Asn Asn His
 1   5

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

<220>
<223> Synthetic

<400> 61
gctgtatcc 9

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

<220>
<223> Synthetic

<400> 62
Ala Val Ser
 1

<210> 63
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 63
caacagtata atagttaccc gtggacg 27

<210> 64
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

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

<210> 65
<211> 372
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 65
gaggtgcagc tggtggagtc tgggggaggc ttggaacagc cgggggggtc cttgagactc 60
tcctgtgcag gctctggatt cacgtttaga gactatgcca tgacctgggt ccgccaggct 120
ccagggaagg ggctggagtg ggtcgcatcg attagtggtt ccggtggtaa cacatacttc 180
gcagactccg tgaagggccg gttcaccatc tccagagaca attccaagaa cacgctgtat 240
ctgcaaatga acagcctgag agccgaggac acggccgtat attactgtgc gaaagatcga 300
ctctctataa caattcgccc acgctattat ggtttggacg tctggggcca agggaccacg 360
gtcaccgtct cc 372

<210> 66
<211> 124
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 66
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Glu Gln Pro Gly Gly
 1   5   10   15
Ser Leu Arg Leu Ser Cys Ala Gly Ser Gly Phe Thr Phe Arg Asp Tyr
            20   25   30
Ala Met Thr Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val

```
        35                  40                  45
Ala Ser Ile Ser Gly Ser Gly Gly Asn Thr Tyr Phe 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 Arg Leu Ser Ile Thr Ile Arg Pro Arg Tyr Tyr Gly Leu
            100                 105                 110
Asp Val Trp 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
gacatccaga tgacccagtc tccatcctca ctgtctgcat ctgttggaga cagagtcacc 60
atcacttgtc gggcgagtca ggccattaac aatcatttag cctggtttca gcagaaacca 120
gggaaagccc ctaagtccct gatctttgct gtatccagtt tgcaaagtgg ggtcccatca 180
aagttcagcg gcagtggatc tgggacagac ttcactctca ccatcagcag cctgcagcct 240
gaagattttg caacttatta ctgccaacag tataatagtt acccgtggac gttcggccaa 300
gggaccaagg tggaaatcaa a   321

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

<220>
<223> Synthetic

<400> 68
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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 Ala Ile Asn Asn His
            20                  25                  30
Leu Ala Trp Phe Gln Gln Lys Pro Gly Lys Ala Pro Lys Ser Leu Ile
        35                  40                  45
Phe Ala Val 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 Trp
                85                  90                  95
Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
            100                 105
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<210> 69
<211> 373
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 69
gaggtgcagc tggtggagtc tgggggaggc ttggtacagc ctgggggtc cctgagactc 60
tcctgtgcag cctctggatt cacgtttaga gactatgcca tgagctgggt ccgccaggct 120
ccagggaagg ggctggagtg ggtctcagct attagtggtt ccggtggtaa cacatactac 180
gcagactccg tgaagggccg gttcaccatc tccagagaca attccaagaa cacgctgtat 240
ctgcaaatga acagcctgag agccgaggac acggccgtat attactgtgc gaaagatcga 300
ctctctataa caattcgccc acgctattat ggtttggacg tctggggcca agggaccacg 360
gtcaccgtct cct 373

<210> 70
<211> 124
<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 Gly
 1   5   10   15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Arg Asp 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 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 Arg Leu Ser Ile Thr Ile Arg Pro Arg Tyr Tyr Gly Leu
            100   105   110
Asp Val Trp 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
gacatccaga tgacccagtc tccatcctca ctgtctgcat ctgtaggaga cagagtcacc 60
atcacttgtc gggcgagtca ggccattaac aatcatttag cctggtttca gcagaaacca 120
gggaaagccc ctaagtccct gatctatgct gtatccagtt tgcaaagtgg ggtcccatca 180
aggttcagcg gcagtggatc tgggacagat ttcactctca ccatcagcag cctgcagcct 240
gaagattttg caacttatta ctgccaacag tataatagtt acccgtggac gttcggccaa 300
gggaccaagg tggaaatcaa ac 322

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

<220>
<223> Synthetic

<400> 72
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 His
            20   25   30
Leu Ala Trp Phe Gln Gln Lys Pro Gly Lys Ala Pro Lys Ser Leu Ile
        35   40   45
Tyr Ala Val 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 Trp
                85   90   95
Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
            100   105

<210> 73
<211> 375
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 73
caggtgcagc tggtggagtc tgggggaggc ttggaacagc cgggggggtc cttgagactc 60
tcctgtgcag gctctggatt cacgtttaga gactatgcca tgacctgggt ccgccaggct 120
ccagggaagg ggctggagtg ggtcgcatcg attagtggtt ccggtggtaa cacatacttc 180
gcagactccg tgaagggccg gttcaccatc tccagagaca attccaagaa cacgctgtat 240
ctgcaaatga acagcctgag agccgaggac acggccgtat attactgtgc gaaagatcga 300
ctctctataa caattcgccc acgctattat ggtttggacg tctggggcca agggtccacg 360
gtcaccgtct cctca   375

<210> 74
<211> 125
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 74
Gln Val Gln Leu Val Glu Ser Gly Gly Gly Leu Glu Gln Pro Gly Gly
 1   5   10   15
Ser Leu Arg Leu Ser Cys Ala Gly Ser Gly Phe Thr Phe Arg Asp Tyr
            20   25   30
Ala Met Thr Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35   40   45
Ala Ser Ile Ser Gly Ser Gly Gly Asn Thr Tyr Phe 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 Arg Leu Ser Ile Thr Ile Arg Pro Arg Tyr Tyr Gly Leu
            100   105   110
Asp Val Trp Gly Gln Gly Ser Thr Val Thr Val Ser Ser
        115   120   125

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

<220>
<223> Synthetic

<400> 75
ggattcacgt ttagagacta tgcc 24

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

<220>
<223> Synthetic

<400> 76
Gly Phe Thr Phe Arg Asp Tyr Ala
 1 5

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

<220>
<223> Synthetic

<400> 77
attagtggtt ccggtggtaa caca 24

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

<220>
<223> Synthetic

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

<210> 79
<211> 54
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 79
gcgaaagatc gactctctat aacaattcgc ccacgctatt atggtttgga cgtc 54

<210> 80
<211> 18

<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 80
Ala Lys Asp Arg Leu Ser Ile Thr Ile Arg Pro Arg Tyr Tyr Gly Leu
 1   5   10   15
Asp Val

<210> 81
<211> 339
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 81
gaaatagtgt tgacgcagtc tccactctcc ctgcccgtca cccctggaga gccggcctcc 60
atctcctgca ggtctagtca gagcctcctg tatagtattg gatacaacta tttggattgg 120
tacctgcaga agtcagggca gtctccacag ctccttatct atttgggttc taatcgggcc 180
tccggggtcc ctgacaggtt cagtggcagt ggatcaggca cagattttac actgaaaatc 240
agcagagtgg aggctgagga tgttgggttt tattactgca tgcaagctct acaaactccg 300
tacacttttg gcccggggac caagctggag atcaaacga   339

<210> 82
<211> 113
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 82
Glu Ile Val Leu 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 Tyr Ser
            20   25   30
Ile Gly Tyr Asn Tyr Leu Asp Trp Tyr Leu Gln Lys Ser 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 Phe Tyr Tyr Cys Met Gln Ala
                85   90   95
Leu Gln Thr Pro Tyr Thr Phe Gly Pro Gly Thr Lys Leu Glu Ile Lys
            100   105   110
Arg

<210> 83
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 83
cagagcctcc tgtatagtat tggatacaac tat 33

<210> 84
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 84
Gln Ser Leu Leu Tyr Ser Ile Gly Tyr Asn Tyr
1 5 10

<210> 85
<211> 9
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 85
ttgggttct 9

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

<220>
<223> Synthetic

<400> 86
Leu Gly Ser
1

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

<220>
<223> Synthetic

<400> 87
atgcaagctc tacaaactcc gtacact 27

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

<220>
<223> Synthetic

<400> 88
Met Gln Ala Leu Gln Thr Pro Tyr Thr
 1   5

<210> 89
<211> 372
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 89
gaggtgcagc tggtggagtc tgggggaggc ttggaacagc cgggggggtc cttgagactc 60
tcctgtgcag gctctggatt cacgtttaga gactatgcca tgacctgggt ccgccaggct 120
ccagggaagg ggctggagtg ggtcgcatcg attagtggtt ccggtggtaa cacatacttc 180
gcagactccg tgaagggccg gttcaccatc tccagagaca attccaagaa cacgctgtat 240
ctgcaaatga acagcctgag agccgaggac acggccgtat attactgtgc gaaagatcga 300
ctctctataa caattcgccc acgctattat ggtttggacg tctggggcca agggaccacg 360
gtcaccgtct cc   372

<210> 90
<211> 124
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

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

<210> 91
<211> 336
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 91
gatattgtga tgactcagtc tccactctcc ctgcccgtca cccctggaga gccggcctcc 60
atctcctgca ggtctagtca gagcctcctg tatagtattg gatacaacta tttggattgg 120

tacctgcaga agtcagggca gtctccacag ctccttatct atttgggttc taatcgggcc 180
tccggggtcc ctgacaggtt cagtggcagt ggatcaggca cagattttac actgaaaatc 240
agcagagtgg aggctgagga tgttgggttt tattactgca tgcaagctct acaaactccg 300
tacacttttg gcccggggac caagctggag atcaaa 336

<210> 92
<211> 112
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 92
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 Tyr Ser
            20   25   30
Ile Gly Tyr Asn Tyr Leu Asp Trp Tyr Leu Gln Lys Ser 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 Phe Tyr Tyr Cys Met Gln Ala
                85   90   95
Leu Gln Thr Pro Tyr Thr Phe Gly Pro Gly Thr Lys Leu Glu Ile Lys
            100   105   110

<210> 93
<211> 373
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 93
gaggtgcagc tggtggagtc tgggggaggc ttggtacagc ctgggggtc cctgagactc 60
tcctgtgcag cctctggatt cacgtttaga gactatgcca tgagctgggt ccgccaggct 120
ccagggaagg ggctggagtg ggtctcagct attagtggtt ccggtggtaa cacatactac 180
gcagactccg tgaagggccg gttcaccatc tccagagaca attccaagaa cacgctgtat 240
ctgcaaatga acagcctgag agccgaggac acggccgtat attactgtgc gaaagatcga 300
ctctctataa caattcgccc acgctattat ggtttggacg tctggggcca agggaccacg 360
gtcaccgtct cct 373

<210> 94
<211> 124
<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 Arg Asp 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 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 Arg Leu Ser Ile Thr Ile Arg Pro Arg Tyr Tyr Gly Leu
            100                 105                 110
Asp Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser
        115                 120
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<210> 95
<211> 337
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 95
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gatattgtga tgactcagtc tccactctcc ctgcccgtca cccctggaga gccggcctcc 60
atctcctgca ggtctagtca gagcctcctg tatagtattg gatacaacta tttggattgg 120
tacctgcaga agccagggca gtctccacag ctcctgatct atttgggttc taatcgggcc 180
tccggggtcc ctgacaggtt cagtggcagt ggatcaggca cagattttac actgaaaatc 240
agcagagtgg aggctgagga tgttggggtt tattactgca tgcaagctct acaaactccg 300
tacacttttg gccaggggac caagctggag atcaaac                          337
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<210> 96
<211> 112
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 96
```
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 Tyr Ser
            20                  25                  30
Ile 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 Tyr Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
            100                 105                 110
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<210> 97
<211> 375
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 97
caggtgcagc tggtggagtc tgagggactc ttggaacagc ctgggggtc cctgagactc 60
tcctgtgcag cctctggatt caactttaga gactttgcca tgacctgggt ccgccaggct 120
ccagggaagg ggctggagtg ggtctcatct attagtggta gtggtagtaa tacatactac 180
gcagactccg tgaagggccg gttcaccatc tccagagaca attccaacca cacgctgtat 240
ctgcgaatga acagcctgag agccgaagac acggccgtgt attactgtgc gaaagatcga 300
ctctctataa caattcgccc acgctattac ggtctggacg tctggggcca agggtccacg 360
gtcaccgtct cctca 375

<210> 98
<211> 125
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

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

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

<220>
<223> Synthetic

<400> 99
ggattcaact ttagagactt tgcc 24

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

<220>
<223> Synthetic

<400> 100
Gly Phe Asn Phe Arg Asp Phe Ala
 1   5

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

<220>
<223> Synthetic

<400> 101
attagtggta gtggtagtaa taca 24

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

<220>
<223> Synthetic

<400> 102
Ile Ser Gly Ser Gly Ser Asn Thr
1 5

<210> 103
<211> 54
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 103
gcgaaagatc gactctctat aacaattcgc ccacgctatt acggtctgga cgtc 54

<210> 104
<211> 18
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 104
Ala Lys Asp Arg Leu Ser Ile Thr Ile Arg Pro Arg Tyr Tyr Gly Leu
1 5 10 15
Asp Val

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

<220>
<223> Synthetic

<400> 105
gacatccaga tgacccagtc tccatcctcc ctgtctgcat ctgtaggaga cagagtcacc 60
atcacttgcc gggcgagtca ggacattagc aattattttg cctggtatca gcagaagcca 120

gggaaagttc ctaagctcct gatctttgct gcatccactt tgcatccagg ggtcccatct 180
cggttcagtg gcagtggatc tgggacagat ttcactctca ccattcgcag cctgcagcct 240
gaagatgttg caacttatta ctgtcaaaaa tatgacagtg ccccgtacac ttttggccag 300
gggaccaagg tggaaatcaa 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 Ser Leu Ser Ala Ser Val Gly
 1   5   10   15
Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Asp Ile Ser Asn Tyr
            20   25   30
Phe Ala Trp Tyr Gln Gln Lys Pro Gly Lys Val Pro Lys Leu Leu Ile
        35   40   45
Phe Ala Ala Ser Thr Leu His Pro Gly Val Pro Ser Arg Phe Ser Gly
    50   55   60
Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Arg Ser Leu Gln Pro
65   70   75   80
Glu Asp Val Ala Thr Tyr Tyr Cys Gln Lys Tyr Asp Ser Ala Pro Tyr
                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
caggacatta gcaattat 18

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

<220>
<223> Synthetic

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

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

<220>
<223> Synthetic

<400> 109
gctgcatcc 9

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

<220>
<223> Synthetic

<400> 110
Ala Ala Ser
 1

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

<220>
<223> Synthetic

<400> 111
caaaaatatg acagtgcccc gtacact 27

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

<220>
<223> Synthetic

<400> 112
Gln Lys Tyr Asp Ser Ala Pro Tyr Thr
 1   5

<210> 113
<211> 372
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 113
gaggtgcagc tggtggagtc tgagggactc ttggaacagc ctgggggtc cctgagactc 60
tcctgtgcag cctctggatt caactttaga gactttgcca tgacctgggt ccgccaggct 120
ccagggaagg ggctggagtg ggtctcatct attagtggta gtggtagtaa tacatactac 180
gcagactccg tgaagggccg gttcaccatc tccagagaca attccaacca cacgctgtat 240
ctgcgaatga acagcctgag agccgaagac acggccgtgt attactgtgc gaaagatcga 300
ctctctataa caattcgccc acgctattac ggtctggacg tctggggcca agggaccacg 360
gtcaccgtct cc 372

<210> 114
<211> 124
<212> PRT

<213> Artificial Sequence

<220>
<223> Synthetic

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

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

<220>
<223> Synthetic

<400> 115
gacatccaga tgacccagtc tccatcctcc ctgtctgcat ctgtaggaga cagagtcacc 60
atcacttgcc gggcgagtca ggacattagc aattattttg cctggtatca gcagaagcca 120
gggaaagttc ctaagctcct gatctttgct gcatccactt tgcatccagg ggtcccatct 180
cggttcagtg gcagtggatc tgggacagat ttcactctca ccattcgcag cctgcagcct 240
gaagatgttg caacttatta ctgtcaaaaa tatgacagtg ccccgtacac ttttggccag 300
gggaccaagc tggagatcaa 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 Ser Leu Ser Ala Ser Val Gly
 1   5   10   15
Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Asp Ile Ser Asn Tyr
            20   25   30
Phe Ala Trp Tyr Gln Gln Lys Pro Gly Lys Val Pro Lys Leu Leu Ile
        35   40   45
Phe Ala Ala Ser Thr Leu His Pro Gly Val Pro Ser Arg Phe Ser Gly
    50   55   60
Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Arg Ser Leu Gln Pro
65   70   75   80
Glu Asp Val Ala Thr Tyr Tyr Cys Gln Lys Tyr Asp Ser Ala Pro Tyr
                85   90   95

```
Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
            100                 105


<210> 117
<211> 373
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 117
gaggtgcagc tggtggagtc tgggggaggc ttggtacagc ctgggggtc cctgagactc 60
tcctgtgcag cctctggatt caactttaga gactttgcca tgagctgggt ccgccaggct 120
ccagggaagg ggctggagtg ggtctcagct attagtggta gtggtagtaa tacatactac 180
gcagactccg tgaagggccg gttcaccatc tccagagaca attccaagaa cacgctgtat 240
ctgcaaatga acagcctgag agccgaggac acggccgtat attactgtgc gaaagatcga 300
ctctctataa caattcgccc acgctattac ggtctggacg tctggggcca agggaccacg 360
gtcaccgtct cct                                                    373

<210> 118
<211> 124
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 118
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 Asn Phe Arg Asp Phe
            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 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
Ala Lys Asp Arg Leu Ser Ile Thr Ile Arg Pro Arg Tyr Tyr Gly Leu
            100                 105                 110
Asp Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser
        115                 120


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

<220>
<223> Synthetic

<400> 119
gacatccaga tgacccagtc tccatcctcc ctgtctgcat ctgtaggaga cagagtcacc 60
atcacttgcc gggcgagtca ggacattagc aattatttag cctggtatca gcagaaacca 120
gggaaagttc ctaagctcct gatctatgct gcatccactt tgcaatcagg ggtcccatct 180
cggttcagtg gcagtggatc tgggacagat ttcactctca ccatcagcag cctgcagcct 240
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gaagatgttg caacttatta ctgtcaaaaa tatgacagtg ccccgtacac ttttggccag 300
gggaccaagc tggagatcaa 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 Ser Leu Ser Ala Ser Val Gly
 1   5   10   15
Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Asp Ile Ser Asn Tyr
            20   25   30
Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Val Pro Lys Leu Leu Ile
        35   40   45
Tyr Ala Ala Ser Thr Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
    50   55   60
Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
65   70   75   80
Glu Asp Val Ala Thr Tyr Tyr Cys Gln Lys Tyr Asp Ser Ala Pro Tyr
                85   90   95
Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
            100   105

<210> 121
<211> 357
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 121
caggtgcagc tggtggagtc tgggggaggc ttggtacagc ctgggggtc cctgagactc 60
tcctgtgtag cttctggatt cacccttaac aactttgtca tgaactgggt ccgccaggtt 120
ccagggaagg gactggagtg ggtctctttt attagtgcta gtggtggtag tatatactac 180
gcagactccg tgaagggccg gttcaccatc tccagagaca cttccaagaa cacattatat 240
ctgcaaatga acagcctgag agccgacgac acggccgtct attactgtgc gaaatccccg 300
tataactgga acccctttga ctattggggc cagggaacca cggtcaccgt ctcctca 357

<210> 122
<211> 119
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 122
Gln Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
 1   5   10   15
Ser Leu Arg Leu Ser Cys Val Ala Ser Gly Phe Thr Leu Asn Asn Phe
            20   25   30
Val Met Asn Trp Val Arg Gln Val Pro Gly Lys Gly Leu Glu Trp Val
        35   40   45
Ser Phe Ile Ser Ala Ser Gly Gly Ser Ile Tyr Tyr Ala Asp Ser Val
    50   55   60

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

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

<220>
<223> Synthetic

<400> 123
ggattcaccc ttaacaactt tgtc 24

<210> 124
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 124
```
Gly Phe Thr Leu Asn Asn Phe Val
 1               5
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<210> 125
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 125
attagtgcta gtggtggtag tata 24

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

<220>
<223> Synthetic

<400> 126
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Ile Ser Ala Ser Gly Gly Ser Ile
 1               5
```

<210> 127
<211> 36
<212> DNA

<213> Artificial Sequence

<220>
<223> Synthetic

<400> 127
gcgaaatccc cgtataactg gaacccctttt gactat 36

<210> 128
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 128
Ala Lys Ser Pro Tyr Asn Trp Asn Pro Phe Asp Tyr
 1   5   10

<210> 129
<211> 327
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 129
gacatccagt tgacccagtc tccagccacc ctgtctgtgt ctccagggga acgagccacc 60
ctctcctgca gggccagtct gagtgttagc agcaaattag cctggtacca gcagacacct 120
ggccaggctc ccagactcct catctatagt gcctccaccc gggccactgg tatcccagtc 180
aggttcagtg gcagtgggtc tgggacagag ttcactctca ccatcagcag cctgcagtct 240
gaagattttg cggtttatta ctgtcagcag tataatcatt ggcctccgta cacttttggc 300
caggggacca aggtggagat caaacga 327

<210> 130
<211> 109
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 130
Asp Ile Gln Leu 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 Leu Ser Val Ser Ser Lys
            20   25   30
Leu Ala Trp Tyr Gln Gln Thr Pro Gly Gln Ala Pro Arg Leu Leu Ile
        35   40   45
Tyr Ser Ala Ser Thr Arg Ala Thr Gly Ile Pro Val 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 His Trp Pro Pro
                85   90   95
Tyr Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys Arg
            100   105

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

<220>
<223> Synthetic

<400> 131
ctgagtgtta gcagcaaa 18

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

<220>
<223> Synthetic

<400> 132
Leu Ser Val Ser Ser Lys
1 5

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

<220>
<223> Synthetic

<400> 133
agtgcctcc 9

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

<220>
<223> Synthetic

<400> 134
Ser Ala Ser
1

<210> 135
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 135
cagcagtata atcattggcc tccgtacact 30

<210> 136

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

<220>
<223> Synthetic

<400> 136
Gln Gln Tyr Asn His Trp Pro Pro Tyr Thr
 1   5   10

<210> 137
<211> 357
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 137
gaggtgcagc tggtggagtc tgggggaggc ttggtacagc ctgggggtc cctgagactc 60
tcctgtgtag cttctggatt cacccttaac aactttgtca tgaactgggt ccgccaggtt 120
ccagggaagg gactggagtg ggtctctttt attagtgcta gtggtggtag tatatactac 180
gcagactccg tgaagggccg gttcaccatc tccagagaca cttccaagaa cacattatat 240
ctgcaaatga acagcctgag agccgacgac acggccgtct attactgtgc gaaatccccg 300
tataactgga acccctttga ctattggggc cagggaaccc tggtcaccgt ctcctca   357

<210> 138
<211> 119
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

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

<210> 139
<211> 324
<212> DNA
<213> Artificial Sequence

<220>

<223> Synthetic

<400> 139
gaaatagtga tgacgcagtc tccagccacc ctgtctgtgt ctccagggga acgagccacc 60
ctctcctgca gggccagtct gagtgttagc agcaaattag cctggtacca gcagacacct 120
ggccaggctc ccagactcct catctatagt gcctccaccc gggccactgg tatcccagtc 180
aggttcagtg gcagtgggtc tgggacagag ttcactctca ccatcagcag cctgcagtct 240
gaagattttg cggtttatta ctgtcagcag tataatcatt ggcctccgta cacttttggc 300
caggggacca agctggagat caaa 324

<210> 140
<211> 108
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 140
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 Leu Ser Val Ser Ser Lys
            20   25   30
Leu Ala Trp Tyr Gln Gln Thr Pro Gly Gln Ala Pro Arg Leu Leu Ile
        35   40   45
Tyr Ser Ala Ser Thr Arg Ala Thr Gly Ile Pro Val 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 His Trp Pro Pro
                85   90   95
Tyr Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
            100   105

<210> 141
<211> 357
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 141
gaggtgcagc tggtggagtc tgggggaggc ttggtacagc ctgggggtc cctgagactc 60
tcctgtgcag cctctggatt cacccttaac aactttgtca tgagctgggt ccgccaggct 120
ccagggaagg ggctggagtg ggtctcagct attagtgcta gtggtggtag tatatactac 180
gcagactccg tgaagggccg gttcaccatc tccagagaca attccaagaa cacgctgtat 240
ctgcaaatga acagcctgag agccgaggac acggccgtat attactgtgc gaaatccccg 300
tataactgga acccctttga ctattggggc cagggaaccc tggtcaccgt ctcctca 357

<210> 142
<211> 119
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 142
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 Leu Asn Asn Phe
            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 Ala Ser Gly Gly Ser Ile 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 Ser Pro Tyr Asn Trp Asn Pro Phe Asp Tyr Trp Gly Gln Gly
            100                 105                 110
Thr Leu Val Thr Val Ser Ser
        115
```

<210> 143
<211> 325
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 143
gaaatagtga tgacgcagtc tccagccacc ctgtctgtgt ctccagggga aagagccacc 60
ctctcctgca gggccagtct gagtgttagc agcaaattag cctggtacca gcagaaacct 120
ggccaggctc ccaggctcct catctatagt gcctccacca gggccactgg tatcccagcc 180
aggttcagtg gcagtgggtc tgggacagag ttcactctca ccatcagcag cctgcagtct 240
gaagattttg cagtttatta ctgtcagcag tataatcatt ggcctccgta cacttttggc 300
caggggacca agctggagat caaac 325

<210> 144
<211> 108
<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 Leu Ser Val Ser Ser Lys
            20                  25                  30
Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile
        35                  40                  45
Tyr Ser 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 His Trp Pro Pro
                85                  90                  95
Tyr Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
            100                 105
```

<210> 145
<211> 375
<212> DNA

<213> Artificial Sequence

<220>
<223> Synthetic

<400> 145
caggtgcagc tggtggagtc tgggggaggc ttggaacagc cgggggggtc cctgagactc 60
tcctgtgcag gctctggatt cacctttaga gactatgcca tgacctgggt ccgccaggct 120
ccagggaagg gactggagtg ggtctcatct attagtggtt ccggtggtaa cacatactac 180
gcagactccg tgaagggccg gttcaccatc tccagagaca attccaagaa cacgctgtat 240
ctgcaaatga acagcctgag agccgaggac acggccgtat attactgtgc gaaagatcga 300
ctctctataa caattcgccc acgctattat ggtttggacg tctggggcca agggtccacg 360
gtcaccgtct cctca 375

<210> 146
<211> 125
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 146
Gln Val Gln Leu Val Glu Ser Gly Gly Gly Leu Glu Gln Pro Gly Gly
 1   5   10   15
Ser Leu Arg Leu Ser Cys Ala Gly Ser Gly Phe Thr Phe Arg Asp Tyr
            20   25   30
Ala Met Thr Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35   40   45
Ser Ser Ile Ser Gly 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 Arg Leu Ser Ile Thr Ile Arg Pro Arg Tyr Tyr Gly Leu
            100   105   110
Asp Val Trp Gly Gln Gly Ser Thr Val Thr Val Ser Ser
        115   120   125

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

<220>
<223> Synthetic

<400> 147
ggattcacct ttagagacta tgcc 24

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

<220>
<223> Synthetic

<400> 148

Gly Phe Thr Phe Arg Asp Tyr Ala
1 5

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

<220>
<223> Synthetic

<400> 149
attagtggtt ccggtggtaa caca 24

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

<220>
<223> Synthetic

<400> 150
Ile Ser Gly Ser Gly Gly Asn Thr
1 5

<210> 151
<211> 54
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 151
gcgaaagatc gactctctat aacaattcgc ccacgctatt atggtttgga cgtc 54

<210> 152
<211> 18
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 152
Ala Lys Asp Arg Leu Ser Ile Thr Ile Arg Pro Arg Tyr Tyr Gly Leu
1 5 10 15
Asp Val

<210> 153
<211> 339
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 153
gacatcgtgt tgacccagtc tccactctcc ctgcccgtca cccctggaga gccggcctcc 60
atctcctgca ggtctagtca gagcctcctg tatagtattg gatacaacta tttggattgg 120
tacctgcaga agtcagggca gtctccacag ctccttatct atttgggttc taatcgggcc 180
tccggggtcc ctgacaggtt cagtggcagt ggatcaggca cagattttac actgaaaatc 240
agcagagtgg aggctgagga tgttgggttt tattactgca tgcaagctct acaaactccg 300
tacacttttg gccaggggac caagctggag atcaaacga 339

<210> 154
<211> 113
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 154
Asp Ile Val Leu 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 Tyr Ser
            20   25   30
Ile Gly Tyr Asn Tyr Leu Asp Trp Tyr Leu Gln Lys Ser 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 Phe Tyr Tyr Cys Met Gln Ala
                85   90   95
Leu Gln Thr Pro Tyr Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
            100   105   110
Arg

<210> 155
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 155
cagagcctcc tgtatagtat tggatacaac tat 33

<210> 156
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 156
Gln Ser Leu Leu Tyr Ser Ile Gly Tyr Asn Tyr
 1   5   10

<210> 157

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

<220>
<223> Synthetic

<400> 157
ttgggttct 9

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

<220>
<223> Synthetic

<400> 158
Leu Gly Ser
1

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

<220>
<223> Synthetic

<400> 159
atgcaagctc tacaaactcc gtacact 27

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

<220>
<223> Synthetic

<400> 160
Met Gln Ala Leu Gln Thr Pro Tyr Thr
1 5

<210> 161
<211> 372
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 161
gaggtgcagc tggtggagtc tgggggaggc ttggaacagc cgggggggtc cctgagactc 60
tcctgtgcag gctctggatt cacctttaga gactatgcca tgacctgggt ccgccaggct 120
ccagggaagg gactggagtg ggtctcatct attagtggtt ccggtggtaa cacatactac 180
gcagactccg tgaagggccg gttcaccatc tccagagaca attccaagaa cacgctgtat 240
ctgcaaatga acagcctgag agccgaggac acggccgtat attactgtgc gaaagatcga 300

ctctctataa caattcgccc acgctattat ggtttggacg tctggggcca agggaccacg 360
gtcaccgtct cc 372

<210> 162
<211> 124
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

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

<210> 163
<211> 336
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 163
gacatcgtga tgacccagtc tccactctcc ctgcccgtca cccctggaga gccggcctcc 60
atctcctgca ggtctagtca gagcctcctg tatagtattg gatacaacta tttggattgg 120
tacctgcaga agtcagggca gtctccacag ctccttatct atttgggttc taatcgggcc 180
tccggggtcc ctgacaggtt cagtggcagt ggatcaggca cagattttac actgaaaatc 240
agcagagtgg aggctgagga tgttgggttt tattactgca tgcaagctct acaaactccg 300
tacacttttg gccaggggac caagctggag atcaaa 336

<210> 164
<211> 112
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 164
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 Tyr Ser
            20   25   30
Ile Gly Tyr Asn Tyr Leu Asp Trp Tyr Leu Gln Lys Ser 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 Phe Tyr Tyr Cys Met Gln Ala
                85                  90                  95
Leu Gln Thr Pro Tyr Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
            100                 105                 110


<210> 165
<211> 373
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 165
gaggtgcagc tggtggagtc tgggggaggc ttggtacagc ctgggggtc cctgagactc 60
tcctgtgcag cctctggatt cacctttaga gactatgcca tgagctgggt ccgccaggct 120
ccagggaagg ggctggagtg ggtctcagct attagtggtt ccggtggtaa cacatactac 180
gcagactccg tgaagggccg gttcaccatc tccagagaca attccaagaa cacgctgtat 240
ctgcaaatga acagcctgag agccgaggac acggccgtat attactgtgc gaaagatcga 300
ctctctataa caattcgccc acgctattat ggtttggacg tctggggcca agggaccacg 360
gtcaccgtct cct                                                    373

<210> 166
<211> 124
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 166
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 Arg Asp 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 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 Arg Leu Ser Ile Thr Ile Arg Pro Arg Tyr Tyr Gly Leu
            100                 105                 110
Asp Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser
        115                 120


<210> 167
<211> 337
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic
```

<400> 167
gatattgtga tgactcagtc tccactctcc ctgcccgtca cccctggaga gccggcctcc 60
atctcctgca ggtctagtca gagcctcctg tatagtattg gatacaacta tttggattgg 120
tacctgcaga agccagggca gtctccacag ctcctgatct atttgggttc taatcgggcc 180
tccggggtcc ctgacaggtt cagtggcagt ggatcaggca cagattttac actgaaaatc 240
agcagagtgg aggctgagga tgttggggtt tattactgca tgcaagctct acaaactccg 300
tacacttttg gccaggggac caagctggag atcaaac 337

<210> 168
<211> 112
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 168
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 Tyr Ser
            20   25   30
Ile 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 Tyr Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
            100   105   110

<210> 169
<211> 375
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 169
caggtgcagc tggtggagtc tgggggagtc ttggagcagc ctgggggtc cctgagactc 60
tcctgtacag cctctggatt cacctttaga gactatgcca tgacctgggt ccgccaggct 120
ccagggaagg ggctggagtg ggtctcatct attagtggta gtggtggtaa tacatactac 180
gcagactccg tgaggggccg gttcaccatc tccagagaca actccaacca cacgctgtat 240
ctgcaaatga acagcctgag agccgaagac acggccgtat attactgtgc gaaagatcga 300
ctctccataa caattcgccc acgctattac ggtttggacg tctggggcca agggtccacg 360
gtcaccgtct cctca 375

<210> 170
<211> 125
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 170
Gln Val Gln Leu Val Glu Ser Gly Gly Val Leu Glu Gln Pro Gly Gly

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

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

<220>
<223> Synthetic

<400> 171
ggattcacct ttagagacta tgcc 24

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

<220>
<223> Synthetic

<400> 172
```
Gly Phe Thr Phe Arg Asp Tyr Ala
 1               5
```

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

<220>
<223> Synthetic

<400> 173
attagtggta gtggtggtaa taca 24

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

<220>
<223> Synthetic

<400> 174

Ile Ser Gly Ser Gly Gly Asn Thr
 1   5

<210> 175
<211> 54
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 175
gcgaaagatc gactctccat aacaattcgc ccacgctatt acggtttgga cgtc   54

<210> 176
<211> 18
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 176
Ala Lys Asp Arg Leu Ser Ile Thr Ile Arg Pro Arg Tyr Tyr Gly Leu
 1   5   10   15
Asp Val

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

<220>
<223> Synthetic

<400> 177
gatattgtga tgacccagtc tccatcctcc ctgtctgcat ctgtaggaga cagagtcacc 60
attacttgcc gggcgagtca ggacattagc aattattttg cctggtatca gcagaagcca 120
gggaaagttc ctaaactcct gatctttgct gcatccactt tgcatccagg ggtcccatct 180
cggttcagtg gcagtggatc tgggacagat ttcactctca ccattagtag cctgcagcct 240
gaagatgttg caacttatta ctgtcaaaag tataacagtg ccccgtacac ttttggccag 300
gggaccaagg tggaaatcaa acga   324

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

<220>
<223> Synthetic

<400> 178
Asp Ile Val Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
 1   5   10   15
Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Asp Ile Ser Asn Tyr
            20   25   30
Phe Ala Trp Tyr Gln Gln Lys Pro Gly Lys Val Pro Lys Leu Leu Ile
        35   40   45

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

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

<220>
<223> Synthetic

<400> 179
caggacatta gcaattat 18

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

<220>
<223> Synthetic

<400> 180
```
Gln Asp Ile Ser Asn Tyr
 1               5
```

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

<220>
<223> Synthetic

<400> 181
gctgcatcc 9

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

<220>
<223> Synthetic

<400> 182
```
Ala Ala Ser
 1
```

<210> 183
<211> 27
<212> DNA

<213> Artificial Sequence

<220>
<223> Synthetic

<400> 183
caaaagtata acagtgcccc gtacact 27

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

<220>
<223> Synthetic

<400> 184
Gln Lys Tyr Asn Ser Ala Pro Tyr Thr
 1   5

<210> 185
<211> 372
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 185
gaggtgcagc tggtggagtc tgggggagtc ttggagcagc ctgggggggtc cctgagactc 60
tcctgtacag cctctggatt cacctttaga gactatgcca tgacctgggt ccgccaggct 120
ccagggaagg ggctggagtg ggtctcatct attagtggta gtggtggtaa tacatactac 180
gcagactccg tgaggggccg gttcaccatc tccagagaca actccaacca cacgctgtat 240
ctgcaaatga acagcctgag agccgaagac acggccgtat attactgtgc gaaagatcga 300
ctctccataa caattcgccc acgctattac ggtttggacg tctggggcca agggaccacg 360
gtcaccgtct cc 372

<210> 186
<211> 124
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

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

```
Asp Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser
        115                 120


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

<220>
<223> Synthetic

<400> 187
gacatccaga tgacccagtc tccatcctcc ctgtctgcat ctgtaggaga cagagtcacc 60
attacttgcc gggcgagtca ggacattagc aattattttg cctggtatca gcagaagcca 120
gggaaagttc ctaaactcct gatctttgct gcatccactt tgcatccagg ggtcccatct 180
cggttcagtg gcagtggatc tgggacagat ttcactctca ccattagtag cctgcagcct 240
gaagatgttg caacttatta ctgtcaaaag tataacagtg ccccgtacac ttttggccag 300
gggaccaagc tggagatcaa 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 Asp Ile Ser Asn Tyr
            20                  25                  30
Phe Ala Trp Tyr Gln Gln Lys Pro Gly Lys Val Pro Lys Leu Leu Ile
        35                  40                  45
Phe Ala Ala Ser Thr Leu His Pro 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 Val Ala Thr Tyr Tyr Cys Gln Lys Tyr Asn Ser Ala Pro Tyr
                85                  90                  95
Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
            100                 105


<210> 189
<211> 373
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 189
gaggtgcagc tggtggagtc tgggggaggc ttggtacagc ctgggggtc cctgagactc 60
tcctgtgcag cctctggatt cacctttaga gactatgcca tgagctgggt ccgccaggct 120
ccagggaagg ggctggagtg ggtctcagct attagtggta gtggtggtaa tacatactac 180
gcagactccg tgaagggccg gttcaccatc tccagagaca attccaagaa cacgctgtat 240
ctgcaaatga acagcctgag agccgaggac acggccgtat attactgtgc gaaagatcga 300
ctctccataa caattcgccc acgctattac ggtttggacg tctggggcca agggaccacg 360
gtcaccgtct cct                                                    373
```

<210> 190
<211> 124
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 190
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 Arg Asp 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 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 Arg Leu Ser Ile Thr Ile Arg Pro Arg Tyr Tyr Gly Leu
            100   105   110
Asp Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser
        115   120

<210> 191
<211> 322
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 191
gacatccaga tgacccagtc tccatcctcc ctgtctgcat ctgtaggaga cagagtcacc 60
atcacttgcc gggcgagtca ggacattagc aattatttag cctggtatca gcagaaacca 120
gggaaagttc ctaagctcct gatctatgct gcatccactt tgcaatcagg ggtcccatct 180
cggttcagtg gcagtggatc tgggacagat ttcactctca ccatcagcag cctgcagcct 240
gaagatgttg caacttatta ctgtcaaaag tataacagtg ccccgtacac ttttggccag 300
gggaccaagc tggagatcaa 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 Asp Ile Ser Asn Tyr
            20   25   30
Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Val Pro Lys Leu Leu Ile
        35   40   45
Tyr Ala Ala Ser Thr 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 Val Ala Thr Tyr Tyr Cys Gln Lys Tyr Asn Ser Ala Pro Tyr
                85                  90                  95
Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
            100                 105
```

<210> 193
<211> 355
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 193
gaagtgcacc tggtggaatc tgggggaggc ttggtacagc ctggcaggtc cctgagactc 60
tcctgtgagg cctctggatt cacctttgat gattatgcca tgcactgggt ccggcaagct 120
ccggggaagg gcctggaatg ggtctcaggt cttagtcgga caagtgtcag tataggctat 180
gcggactctg tgaagggccg attcaccatc tccagagaca acgccaagaa ctccctttat 240
ttggaaatga acagtctgag acctgaggac acggccttat attactgtgc aaaatggggg 300
acccgggggt attttgacta ctggggccag ggaaccctgg tcaccgtctc ctcag 355

<210> 194
<211> 118
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 194
```
Glu Val His Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Arg
 1               5                  10                  15
Ser Leu Arg Leu Ser Cys Glu 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 Leu Ser Arg Thr Ser Val Ser 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 Glu Met Asn Ser Leu Arg Pro Glu Asp Thr Ala Leu Tyr Tyr Cys
                85                  90                  95
Ala Lys Trp Gly Thr Arg Gly Tyr Phe Asp Tyr Trp Gly Gln Gly Thr
            100                 105                 110
Leu Val Thr Val Ser Ser
        115
```

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

<220>
<223> Synthetic

<400> 195
ggattcacct ttgatgatta tgcc 24

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

<220>
<223> Synthetic

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

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

<220>
<223> Synthetic

<400> 197
cttagtcgga caagtgtcag tata   24

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

<220>
<223> Synthetic

<400> 198
Leu Ser Arg Thr Ser Val Ser Ile
 1   5

<210> 199
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 199
gcaaaatggg ggacccgggg gtattttgac tac   33

<210> 200
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 200
Ala Lys Trp Gly Thr Arg Gly Tyr Phe Asp Tyr
 1   5   10

<210> 201
<211> 322
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 201
gacatccaga tgacccagtc tccatcttcc gtgtctgcat ctgtgggaga cagagtcacc 60
atcacttgtc gggcgagtca ggatattagt atttggttag cctggtatca gcagagtcca 120
gggaaagccc ctaaactcct gatcaatgtt gcatcccgtt tgcaaagtgg ggtcccatca 180
aggttcagcg gcagtggatc tgggacagat ttcactctca ccatcaacag tctgcagcct 240
gaagattttg taacttacta ttgtcaacag gctaacagtt tcccgatcac cttcggccaa 300
gggacacgac tggcgaccaa ac 322

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

<220>
<223> Synthetic

<400> 202
Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Val Ser Ala Ser Val Gly
 1   5   10   15
Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Asp Ile Ser Ile Trp
            20   25   30
Leu Ala Trp Tyr Gln Gln Ser Pro Gly Lys Ala Pro Lys Leu Leu Ile
        35   40   45
Asn Val Ala Ser Arg 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 Asn Ser Leu Gln Pro
65   70   75   80
Glu Asp Phe Val Thr Tyr Tyr Cys Gln Gln Ala Asn Ser Phe Pro Ile
                85   90   95
Thr Phe Gly Gln Gly Thr Arg Leu Ala Thr Lys
            100   105

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

<220>
<223> Synthetic

<400> 203
caggatatta gtatttgg 18

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

<220>
<223> Synthetic

<400> 204
Gln Asp Ile Ser Ile Trp
 1   5

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

<220>
<223> Synthetic

<400> 205
gttgcatcc   9

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

<220>
<223> Synthetic

<400> 206
Val Ala Ser
 1

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

<220>
<223> Synthetic

<400> 207
caacaggcta acagtttccc gatcacc   27

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

<220>
<223> Synthetic

<400> 208
Gln Gln Ala Asn Ser Phe Pro Ile Thr
 1   5

<210> 209
<211> 355
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 209
gaggtgcagc tggtggagtc tgggggaggc ttggtacagc ctggcaggtc cctgagactc 60
tcctgtgagg cctctggatt cacctttgat gattatgcca tgcactgggt ccggcaagct 120
ccggggaagg gcctggaatg ggtctcaggt cttagtcgga caagtgtcag tataggctat 180
gcggactctg tgaagggccg attcaccatc tccagagaca acgccaagaa ctccctttat 240
ttggaaatga acagtctgag acctgaggac acggccttat attactgtgc aaaatggggg 300
acccgggggt attttgacta ctggggccag ggaaccctgg tcaccgtctc ctcag 355

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

<220>
<223> Synthetic

<400> 210
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 Glu 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 Leu Ser Arg Thr Ser Val Ser 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 Glu Met Asn Ser Leu Arg Pro Glu Asp Thr Ala Leu Tyr Tyr Cys
                85   90   95
Ala Lys Trp Gly Thr Arg Gly Tyr Phe Asp Tyr Trp Gly Gln Gly Thr
            100   105   110
Leu Val Thr Val Ser Ser
        115

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

<220>
<223> Synthetic

<400> 211
gacatccaga tgacccagtc tccatcttcc gtgtctgcat ctgtgggaga cagagtcacc 60
atcacttgtc gggcgagtca ggatattagt atttggttag cctggtatca gcagagtcca 120
gggaaagccc ctaaactcct gatcaatgtt gcatcccgtt tgcaaagtgg ggtcccatca 180
aggttcagcg gcagtggatc tgggacagat ttcactctca ccatcaacag tctgcagcct 240
gaagattttg taacttacta ttgtcaacag gctaacagtt tcccgatcac cttcggccaa 300
gggacacgac tggagattaa ac 322

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

<220>
<223> Synthetic

<400> 212
Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Val Ser Ala Ser Val Gly

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

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

<220>
<223> Synthetic

<400> 213
gaagtgcagc tggtggagtc tgggggaggc ttggtacagc ctggcaggtc cctgagactc 60
tcctgtgcag cctctggatt cacctttgat gattatgcca tgcactgggt ccggcaagct 120
ccagggaagg gcctggagtg ggtctcaggt cttagtcgga caagtgtcag tataggctat 180
gcggactctg tgaagggccg attcaccatc tccagagaca acgccaagaa ctccctgtat 240
ctgcaaatga acagtctgag agctgaggac acggccttgt attactgtgc aaaatggggg 300
acccgggggt attttgacta ctggggccaa ggaaccctgg tcaccgtctc ctcag 355

<210> 214
<211> 118
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 214
```
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 Leu Ser Arg Thr Ser Val Ser 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 Trp Gly Thr Arg Gly Tyr Phe Asp Tyr Trp Gly Gln Gly Thr
            100                 105                 110
Leu Val Thr Val Ser Ser
        115
```

<210> 215
<211> 322
<212> DNA

<213> Artificial Sequence

<220>
<223> Synthetic

<400> 215
gacatccaga tgacccagtc tccatcttcc gtgtctgcat ctgtaggaga cagagtcacc 60
atcacttgtc gggcgagtca ggatattagt atttggttag cctggtatca gcagaaacca 120
gggaaagccc ctaagctcct gatctatgtt gcatccagtt tgcaaagtgg ggtcccatca 180
aggttcagcg gcagtggatc tgggacagat ttcactctca ccatcagcag cctgcagcct 240
gaagattttg caacttacta ttgtcaacag gctaacagtt tcccgatcac cttcggccaa 300
gggacacgac tggagattaa 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 Val Ser Ala Ser Val Gly
 1   5   10   15
Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Asp Ile Ser Ile Trp
            20   25   30
Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
        35   40   45
Tyr Val 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 Ile
                85   90   95
Thr Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys
            100   105

<210> 217
<211> 363
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 217
gaggtgcagc tgttggagtc tgggggaggc ttgctacagc cgggggggtc cctgagactc 60
tcctgtgcag cctctggaat cacctttagc acctatgcca tgagctgggt ccgtcaggct 120
ccagggaggg ggctggagtg ggtctcagct attagtggta gtggtgatag cacatcctac 180
gcagactccg tgaagggccg gttcaccagc tccagagaca attccaagaa cacgctgtat 240
ctgcaaatga acagcctgag agccgaggac acggccgtat attactgtgc gaaagtcata 300
gcagctcgtc ctcactggaa cttcgatctc tggggccgtg gcaccctggt cactgtctcc 360
tca 363

<210> 218
<211> 121
<212> PRT
<213> Artificial Sequence

<220>

<223> Synthetic

<400> 218
Glu Val Gln Leu Leu Glu Ser Gly Gly Gly Leu Leu Gln Pro Gly Gly
 1   5   10   15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Ile Thr Phe Ser Thr Tyr
            20   25   30
Ala Met Ser Trp Val Arg Gln Ala Pro Gly Arg Gly Leu Glu Trp Val
        35   40   45
Ser Ala Ile Ser Gly Ser Gly Asp Ser Thr Ser Tyr Ala Asp Ser Val
    50   55   60
Lys Gly Arg Phe Thr Ser 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 Val Ile Ala Ala Arg Pro His Trp Asn Phe Asp Leu Trp Gly
            100   105   110
Arg Gly Thr Leu Val Thr Val Ser Ser
        115   120

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

<220>
<223> Synthetic

<400> 219
ggaatcacct ttagcaccta tgcc   24

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

<220>
<223> Synthetic

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

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

<220>
<223> Synthetic

<400> 221
attagtggta gtggtgatag caca   24

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

<220>
<223> Synthetic

<400> 222
Ile Ser Gly Ser Gly Asp Ser Thr
 1   5

<210> 223
<211> 42
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 223
gcgaaagtca tagcagctcg tcctcactgg aacttcgatc tc   42

<210> 224
<211> 14
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 224
Ala Lys Val Ile Ala Ala Arg Pro His Trp Asn Phe Asp Leu
 1   5   10

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

<220>
<223> Synthetic

<400> 225
gaaattgtgt tgacacagtc tccagccacc ctgtctttgt ctccagggga aagagccacc 60
ctctcctgca gggccagtca gagtgttagt agatatttag cctggtatca acagaaacct 120
ggccaggctc ccaggctcct catctatgat gcatccaaca gggccactgg catcccagcc 180
aggttcagtg gcagtgggtc tgggacagac ttcactctca ccatcagcag cctagagcct 240
gaagattttg gagtttatta ctgtcagcag cgtagtgact ggccgctcac tttcggcgga 300
gggaccaagg tggagatcaa acgg   324

<210> 226
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 226
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 Arg Tyr
            20   25   30

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

<210> 227
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 227
cagagtgtta gtagatat 18

<210> 228
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

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

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

<220>
<223> Synthetic

<400> 229
gatgcatcc 9

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

<220>
<223> Synthetic

<400> 230
Asp Ala Ser
 1

<210> 231

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

<220>
<223> Synthetic

<400> 231
cagcagcgta gtgactggcc gctcact 27

<210> 232
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 232
Gln Gln Arg Ser Asp Trp Pro Leu Thr
1 5

<210> 233
<211> 363
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 233
gaggtgcagc tgttggagtc tgggggaggc ttgctacagc cgggggggtc cctgagactc 60
tcctgtgcag cctctggaat cacctttagc acctatgcca tgagctgggt ccgtcaggct 120
ccagggaggg ggctggagtg ggtctcagct attagtggta gtggtgatag cacatcctac 180
gcagactccg tgaagggccg gttcaccagc tccagagaca attccaagaa cacgctgtat 240
ctgcaaatga acagcctgag agccgaggac acggccgtat attactgtgc gaaagtcata 300
gcagctcgtc ctcactggaa cttcgatctc tggggccgtg gcaccctggt cactgtctcc 360
tca 363

<210> 234
<211> 121
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

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

<210> 235
<211> 324
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 235
gaaattgtgt tgacacagtc tccagccacc ctgtctttgt ctccagggga aagagccacc 60
ctctcctgca gggccagtca gagtgttagt agatatttag cctggtatca acagaaacct 120
ggccaggctc ccaggctcct catctatgat gcatccaaca gggccactgg catcccagcc 180
aggttcagtg gcagtgggtc tgggacagac ttcactctca ccatcagcag cctagagcct 240
gaagattttg gagtttatta ctgtcagcag cgtagtgact ggccgctcac tttcggcgga 300
gggaccaagg tggagatcaa acgg   324

<210> 236
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

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

<210> 237
<211> 363
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 237
gaggtgcagc tgttggagtc tgggggaggc ttggtacagc cgggggggtc cctgagactc 60
tcctgtgcag cctctggaat cacctttagc acctatgcca tgagctgggt ccgtcaggct 120
ccagggaagg ggctggagtg ggtctcagct attagtggta gtggtgatag cacatactac 180
gcagactccg tgaagggccg gttcaccatc tccagagaca attccaagaa cacgctgtat 240
ctgcaaatga acagcctgag agccgaggac acggccgtat attactgtgc gaaagtcata 300

gcagctcgtc ctcactggaa cttcgatctc tggggccgtg gcaccctggt cactgtctcc 360
tca 363

<210> 238
<211> 121
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 238
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 Ile Thr Phe Ser Thr 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 Asp Ser 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 Val Ile Ala Ala Arg Pro His Trp Asn Phe Asp Leu Trp Gly
            100   105   110
Arg Gly Thr Leu Val Thr Val Ser Ser
        115   120

<210> 239
<211> 324
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 239
gaaattgtgt tgacacagtc tccagccacc ctgtctttgt ctccagggga aagagccacc 60
ctctcctgca gggccagtca gagtgttagt agatatttag cctggtatca acagaaacct 120
ggccaggctc ccaggctcct catctatgat gcatccaaca gggccactgg catcccagcc 180
aggttcagtg gcagtgggtc tgggacagac ttcactctca ccatcagcag cctagagcct 240
gaagattttg cagtttatta ctgtcagcag cgtagtgact ggccgctcac tttcggcgga 300
gggaccaagg tggagatcaa acgg 324

<210> 240
<211> 108
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 240
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 Arg Tyr
            20   25   30
Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile
        35   40   45

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

<210> 241
<211> 366
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 241
caggtgcagc tggtggagtc tgggggaggc gtggtccagc ctgggaggtc cctgagactc 60
acctgtgcag cctctggatt caccttcagt agtaatggca tgcactgggt ccgccaggct 120
ccaggcaagg ggctggagtg ggtggcaatt atatcatatg atggaaataa tcaatactat 180
gcagactccg tgaagggccg attcaccatc tccagagaca attccaagca cacgctgtat 240
ctggaaatga acagcctgag agctgaggac acggctgtgt attactgtac aaaagccatc 300
tctataagtg gaacttacaa ctggttcgat tcctggggcc agggaaccct ggtcaccgtc 360
tcctca 366

<210> 242
<211> 122
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

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

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

<220>
<223> Synthetic

<400> 243
ggattcacct tcagtagtaa tggc 24

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

<220>
<223> Synthetic

<400> 244
Gly Phe Thr Phe Ser Ser Asn Gly
1 5

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

<220>
<223> Synthetic

<400> 245
atatcatatg atggaaataa tcaa 24

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

<220>
<223> Synthetic

<400> 246
Ile Ser Tyr Asp Gly Asn Asn Gln
1 5

<210> 247
<211> 45
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 247
acaaaagcca tctctataag tggaacttac aactggttcg attcc 45

<210> 248
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 248

```
Thr Lys Ala Ile Ser Ile Ser Gly Thr Tyr Asn Trp Phe Asp Ser
 1               5                  10                  15


<210> 249
<211> 324
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 249
gaaattgtat tgacacagtc tccagccatc ctgtctttgt ctccagggga aagagccacc 60
ctctcctgca gggccagtca gagtgttagc aggtacttag cctggtacca acagaaacct 120
ggccaggctc ccaggctcct catctatgat gcatccaaca gggccactgg catcccagcc 180
aggttcagtg gcagtgggtc tgggacagac ttcactctca ccatcagcag cctagagcct 240
gaagattttg cagtttatta ctgtcaacag cgtagcaact ggccgctcac tttcggcgga 300
gggaccaagg tggagatcaa acgg                                        324

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

<220>
<223> Synthetic

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


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

<220>
<223> Synthetic

<400> 251
cagagtgtta gcaggtac                                              18

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

<220>
<223> Synthetic

<400> 252
Gln Ser Val Ser Arg Tyr
 1   5

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

<220>
<223> Synthetic

<400> 253
gatgcatcc   9

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

<220>
<223> Synthetic

<400> 254
Asp Ala Ser
 1

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

<220>
<223> Synthetic

<400> 255
caacagcgta gcaactggcc gctcact   27

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

<220>
<223> Synthetic

<400> 256
Gln Gln Arg Ser Asn Trp Pro Leu Thr
 1   5

<210> 257
<211> 366
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 257
caggtgcagc tggtggagtc tgggggaggc gtggtccagc ctgggaggtc cctgagactc 60
acctgtgcag cctctggatt caccttcagt agtaatggca tgcactgggt ccgccaggct 120
ccaggcaagg ggctggagtg ggtggcaatt atatcatatg atggaaataa tcaatactat 180
gcagactccg tgaagggccg attcaccatc tccagagaca attccaagca cacgctgtat 240
ctggaaatga acagcctgag agctgaggac acggctgtgt attactgtac aaaagccatc 300
tctataagtg gaacttacaa ctggttcgat tcctggggcc agggaaccct ggtcaccgtc 360
tcctca 366

<210> 258
<211> 122
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 258
Gln Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Arg
 1   5   10   15
Ser Leu Arg Leu Thr Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Asn
            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 Ser Tyr Asp Gly Asn Asn Gln Tyr Tyr Ala Asp Ser Val
    50   55   60
Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys His Thr Leu Tyr
65   70   75   80
Leu Glu Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
                85   90   95
Thr Lys Ala Ile Ser Ile Ser Gly Thr Tyr Asn Trp Phe Asp Ser Trp
            100   105   110
Gly Gln Gly Thr Leu Val Thr Val Ser Ser
        115   120

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

<220>
<223> Synthetic

<400> 259
gaaattgtat tgacacagtc tccagccatc ctgtctttgt ctccagggga aagagccacc 60
ctctcctgca gggccagtca gagtgttagc aggtacttag cctggtacca acagaaacct 120
ggccaggctc ccaggctcct catctatgat gcatccaaca gggccactgg catcccagcc 180
aggttcagtg gcagtgggtc tgggacagac ttcactctca ccatcagcag cctagagcct 240
gaagattttg cagtttatta ctgtcaacag cgtagcaact ggccgctcac tttcggcgga 300
gggaccaagg tggagatcaa acgg 324

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

<220>

<223> Synthetic

<400> 260
Glu Ile Val Leu Thr Gln Ser Pro Ala Ile Leu Ser Leu Ser Pro Gly
 1   5   10   15
Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Arg Tyr
            20   25   30
Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile
        35   40   45
Tyr Asp Ala Ser Asn Arg Ala Thr Gly Ile Pro Ala Arg Phe Ser Gly
    50   55   60
Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Glu Pro
65   70   75   80
Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Arg Ser Asn Trp Pro Leu
                85   90   95
Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
            100   105

<210> 261
<211> 366
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 261
caggtgcagc tggtggagtc tgggggaggc gtggtccagc ctgggaggtc cctgagactc 60
tcctgtgcag cctctggatt caccttcagt agtaatggca tgcactgggt ccgccaggct 120
ccaggcaagg ggctggagtg ggtggcagtt atatcatatg atggaaataa tcaatactat 180
gcagactccg tgaagggccg attcaccatc tccagagaca attccaagaa cacgctgtat 240
ctgcaaatga acagcctgag agctgaggac acggctgtgt attactgtac aaaagccatc 300
tctataagtg gaacttacaa ctggttcgat tcctggggcc agggaaccct ggtcaccgtc 360
tcctca   366

<210> 262
<211> 122
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 262
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 Asn
            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 Ser Tyr Asp Gly Asn Asn Gln 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 Lys Ala Ile Ser Ile Ser Gly Thr Tyr Asn Trp Phe Asp Ser Trp
            100   105   110
Gly Gln Gly Thr Leu Val Thr Val Ser Ser
        115   120

<210> 263
<211> 324
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 263
gaaattgtat tgacacagtc tccagccacc ctgtctttgt ctccagggga aagagccacc 60
ctctcctgca gggccagtca gagtgttagc aggtacttag cctggtacca acagaaacct 120
ggccaggctc ccaggctcct catctatgat gcatccaaca gggccactgg catcccagcc 180
aggttcagtg gcagtgggtc tgggacagac ttcactctca ccatcagcag cctagagcct 240
gaagattttg cagtttatta ctgtcaacag cgtagcaact ggccgctcac tttcggcgga 300
gggaccaagg tggagatcaa acgg 324

<210> 264
<211> 108
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

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

<210> 265
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<220>
<221> VARIANT
<222> (1)...(8)
<223> Xaa = Any amino acid

<400> 265
Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
 1   5

<210> 266
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<220>
<221> VARIANT
<222> (1)...(8)
<223> Xaa = Any amino acid

<400> 266
Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
 1   5

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

<220>
<223> Synthetic

<220>
<221> VARIANT
<222> (1)...(18)
<223> Xaa = Any amino acid

<400> 267
Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
 1   5   10   15
Xaa Xaa

<210> 268
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<220>
<221> VARIANT
<222> (1)...(11)
<223> Xaa = Any amino acid

<400> 268
Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
 1   5   10

<210> 269
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<220>
<221> VARIANT
<222> (1)...(3)
<223> Xaa = Any amino acid

<400> 269
Xaa Xaa Xaa
 1

<210> 270
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<220>
<221> VARIANT
<222> (1)...(9)
<223> Xaa = Any amino acid

<400> 270
Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
 1   5

<210> 271
<211> 330
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 271
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
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<210> 272
<211> 327
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 272

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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> 273
<211> 327
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 273
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> 274
<211> 207
<212> PRT
<213> Homo sapiens

<400> 274

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

<210> 275
<211> 231
<212> PRT
<213> Macaca fasicularis

<400> 275

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

```
Gly Ser Phe Lys Pro Ser Glu His Val Lys Pro Arg Ala Pro Gly Asn
        115                 120                 125
Leu Thr Val His Thr Asn Val Ser Asp Thr Val Leu Leu Thr Trp Ser
    130                 135                 140
Asn Pro Tyr Pro Pro Asp Asn Tyr Leu Tyr Asn Asp Leu Thr Tyr Ala
145                 150                 155                 160
Val Asn Ile Trp Ser Glu Asn Asp Pro Ala Tyr Ser Arg Ile His Asn
                165                 170                 175
Val Thr Tyr Leu Lys Pro Thr Leu Arg Ile Pro Ala Ser Thr Leu Lys
            180                 185                 190
Ser Gly Ile Ser Tyr Arg Ala Arg Val Arg Ala Trp Ala Gln His Tyr
        195                 200                 205
Asn Thr Thr Trp Ser Glu Trp Ser Pro Ser Thr Lys Trp Tyr Asn Ser
    210                 215                 220
Tyr Arg Glu Pro Phe Glu Gln
225                 230
```