SEQUENCE LISTING

<110> Regeneron Pharmaceuticals, Inc.

<120> Anti-HLA-B*27 Antibodies and Uses Thereof

<130> 7750A-WO

<140> To be assigned
<141> Filed herewith

<150> 61/618,969
<151> 2012-04-02

<150> 61/778,703
<151> 2013-03-13

<160> 393

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ccagggaagg ggctggagtg gattggggaa atcaatcata gtggaaacac caactacaac 180
ccgtccctca agagtcgagt caccatatca gtagacacgt ccaagaacca gttctccctg 240
aaactgaggt ctgtgaccgc cgcggacatg gctgtgtatt actgtgcgag gatacagtta 300
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            20   25   30
Tyr Trp Ser Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp Ile
        35   40   45
Gly Glu Ile Asn His Ser Gly Asn Thr Asn Tyr Asn Pro Ser Leu Lys
    50   55   60
Ser Arg Val Thr Ile Ser Val Asp Thr Ser Lys Asn Gln Phe Ser Leu
65   70   75   80

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Lys Leu Arg Ser Val Thr Ala Ala Asp Met Ala Val Tyr Tyr Cys Ala
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Arg Ile Gln Leu Trp Leu Arg Gly Tyr Asp Tyr Tyr Gly Met Asp Val
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Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser
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gggaaagccc ctaagcgcct gatctatgct gcatccagtt tgcaaggtgg ggtcccatca 180
aggttcagcg gcagtggatc tgggacagaa ttcagtctca caatcagcag cctgcagcct 240
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            20   25   30
Leu Gly Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Arg Leu Ile
        35   40   45
Tyr Ala Ala Ser Ser Leu Gln Gly Gly Val Pro Ser Arg Phe Ser Gly
    50   55   60
Ser Gly Ser Gly Thr Glu Phe Ser Leu Thr Ile Ser Ser Leu Gln Pro

65 70 75 80
Glu Asp Phe Ala Ser Tyr Tyr Cys Leu Gln His Asn Thr Tyr Pro Trp
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cctggacaag ggcttgagtg gatgggatgg atcaacccta acaatggtgg cacaaattat 180
gcacagaagt ttcagggcag ggtcaccatg accagggaca cgtccatcac cacagtctac 240
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gatttggaac tacggaacta ctactactac ggtatggacg tctggggcca agggacctcg 360
gtcaccgtct cctca 375

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

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                85                  90                  95
Ala Arg Gly Glu Asp Leu Glu Leu Arg Asn Tyr Tyr Tyr Tyr Gly Met
            100                 105                 110
Asp Val Trp Gly Gln Gly Thr Ser Val Thr Val Ser Ser
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gggaaagccc ctaaactcct gatctatgct gcatccaatt tgcaaagtgg ggtcccatca 180
aggttcagtg gcagtggatt tgggacagat ttcactctca ccatcagcag tctgcaatct 240
gaagattttg caacttacta ctgtcagcag acttacagta cccggacgtt cggccgaggg 300
accaaggtgg aaatcaat 318

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

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

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<400> 28
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1 5

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<400> 29
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<400> 30
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cagcagactt acagtacccg gacg 24

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ccaggcaagg ggctggagtg ggtggcactt atatcatatg atggaaaaaa taaatattat 180
gtagactccg tgaagggccg attcaccatc tccagagaca attccaagaa cacgctgtat 240
ctgcaaatga acagcttgag agctgaggac acggctgtgt attactgtgc gaaagagagg 300
aatatagcgg acggtatgga cgtctggggc caagggacca cggtcaccgt ctcctca 357

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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 Leu Ile Ser Tyr Asp Gly Lys Asn Lys Tyr Tyr Val 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 Arg Asn Ile Ala Asp Gly Met Asp Val Trp Gly Gln Gly

100 105 110
Thr Thr Val Thr Val Ser Ser
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<400> 36
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<220>
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<400> 38
Ile Ser Tyr Asp Gly Lys Asn Lys
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<210> 39
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gggaaagccc ctaagctcct gatctatgct gcatccagtt tgcaaagtgg ggtcccatca 180
aacttcagtg gcagtggatc tgggacagat ttcactctca ccatcagcag tctgcaacct 240
gaagattttg caacttacta ctgtcaacag agttacagta ccccgtacac ttttggccag 300
gggaccaagc tggagatcaa a 321

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

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<400> 46
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ccagggaagg ggctggagtg gattggggaa atcaatcata ggggaaacac caactacaac 180
ccgtccctca agagtcgagt caccatatca gtagacacgt ccaagaacca gttctccctg 240
aaactgaggt ctgtgaccgc cgcggacatg gctgtgtatt actgtgcgag gatacagtta 300
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gtctcctca 369

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20 25 30
Tyr Trp Ser Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp Ile
35 40 45
Gly Glu Ile Asn His Arg Gly Asn Thr Asn Tyr Asn Pro Ser Leu Lys
50 55 60
Ser Arg Val Thr Ile Ser Val Asp Thr Ser Lys Asn Gln Phe Ser Leu
65 70 75 80
Lys Leu Arg Ser Val Thr Ala Ala Asp Met Ala Val Tyr Tyr Cys Ala
85 90 95
Arg Ile Gln Leu Trp Leu Arg Gly Tyr Asp Tyr Tyr Gly Met Asp Val
100 105 110
Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser
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<400> 56
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gggaaagccc ctaagcgcct gatctatgct gcatccagtt tgcaaggtgg ggtcccatca 180
aggttcagcg gcagtggatc tgggacagaa ttcagtctca caatcagcag cctgcagcct 240
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gggaccaagg tggaaatcaa a 321

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

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<400> 59
cagggcatca gaaatgat 18

<210> 60
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<210> 61
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<210> 62
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<400> 62
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<400> 63

ctacagcata atacttatcc gtggacg 27

<210> 64
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<400> 64
Leu Gln His Asn Thr Tyr Pro Trp Thr
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<210> 65
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tcctgcaggg cttctggata caccttcacc ggctactata tgcactgggt gcggcaggcc 120
cctggacaag ggcttgagtg gatgggatgg atcaacccta acaatggtgg cacaaattat 180
gcacagaagt ttcagggcag ggtcaccatg accagggaca cgtccatcac cacagtctac 240
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gtcaccgtct cctca 375

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Ser Val Lys Val Ser Cys Arg Ala Ser Gly Tyr Thr Phe Thr Gly Tyr
20 25 30
Tyr Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45
Gly Trp Ile Asn Pro Asn Asn Gly Gly Thr Asn Tyr Ala Gln Lys Phe
50 55 60
Gln Gly Arg Val Thr Met Thr Arg Asp Thr Ser Ile Thr Thr Val Tyr
65 70 75 80
Met Glu Leu Ser Ser Leu Ile Ser Asp Asp Thr Ala Val Tyr Tyr Cys
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Ala Arg Gly Glu Asp Leu Glu Leu Arg Asn Tyr Tyr Tyr Tyr Gly Met
100 105 110
Asp Val Trp Gly Gln Gly Thr Ser Val Thr Val Ser Ser
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Gly Tyr Thr Phe Thr Gly Tyr Tyr
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<210> 69
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atcaacccta acaatggtgg caca 24

<210> 70
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Ile Asn Pro Asn Asn Gly Gly Thr
1 5

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<400> 72
Ala Arg Gly Glu Asp Leu Glu Leu Arg Asn Tyr Tyr Tyr Tyr Gly Met
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<210> 73
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atcacttgcc gggcaagtca gagtattagt agctatttaa attggtatca gcagaaacca 120
gggaaagccc ctaaactcct gatctatgct gcatccaatt tgcaaagtgg ggtcccatca 180
aggttcagtg gcagtggatt tgggacagat ttcactctca ccatcagcag tctgcaatct 240
gaagattttg caacttacta ctgtcagcag acttacagta cccggacgtt cggccgaggg 300
accaaggtgg aaatcaaa 318

<210> 74
<211> 106
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

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

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

<220>
<223> Synthetic

<400> 75
cagagtatta gtagctat 18

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

<220>
<223> Synthetic

<400> 76
Gln Ser Ile Ser Ser Tyr
 1   5

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

<220>
<223> Synthetic

<400> 77
gctgcatcc 9

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

<220>
<223> Synthetic

<400> 78
Ala Ala Ser
 1

<210> 79
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 79
cagcagactt acagtacccg gacg 24

<210> 80
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 80
Gln Gln Thr Tyr Ser Thr Arg Thr
 1   5

<210> 81
<211> 357
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 81
caggtgcagg tggtggagtc tgggggaggc gtggtccagc ctgggggggtc cctgagactc 60
tcctgtgcag cctctggatt caccttcagt agttatggca tgcattgggt ccgccaggct 120
ccaggcaagg ggctggagtg ggtggcactt atatcatatg atggaaaaaa taaatattat 180
gtagactccg tgaagggccg attcaccatc tccagagaca attccaagaa cacgctgtat 240
ctgcaaatga acagcttgag agctgaggac acggctgtgt attactgtgc gaaagagagg 300
aatatagcgg acggtatgga cgtctggggc caagggacca cggtcaccgt ctcctca   357

<210> 82
<211> 119
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 82
Gln Val Gln Val Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Gly
 1   5   10   15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr
            20   25   30
Gly Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35   40   45
Ala Leu Ile Ser Tyr Asp Gly Lys Asn Lys Tyr Tyr Val 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 Arg Asn Ile Ala Asp Gly Met Asp Val Trp Gly Gln Gly
            100   105   110
Thr Thr Val Thr Val Ser Ser
        115

<210> 83

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

<220>
<223> Synthetic

<400> 83
ggattcacct tcagtagtta tggc 24

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

<220>
<223> Synthetic

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

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

<220>
<223> Synthetic

<400> 85
atatcatatg atggaaaaaa taaa 24

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

<220>
<223> Synthetic

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

<210> 87
<211> 36
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 87
gcgaaagaga ggaatatagc ggacggtatg gacgtc 36

<210> 88
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 88
Ala Lys Glu Arg Asn Ile Ala Asp Gly Met Asp Val
 1   5   10

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

<220>
<223> Synthetic

<400> 89
gacatccaga tgacccagtc tccatcctcc ctgtctgcat ctgtaggaga cagagtcacc 60
atcacttgcc gggcaagtca gagcattagc agctatttaa attggtatca gcagaaacca 120
gggaaagccc ctaagctcct gatctatgct gcatccagtt tgcaaagtgg ggtcccatca 180
agattcagtg gcagtggatc tgggacagat ttcactctca ccatcagcag tctgcaacct 240
gaagattttg caacttacta ctgtcaacag agttacagta ccccgtacac ttttggccag 300
gggaccaagc tggagatcaa a   321

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

<220>
<223> Synthetic

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

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

<220>
<223> Synthetic

<400> 91
cagagcatta gcagctat 18

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

<220>
<223> Synthetic

<400> 92
Gln Ser Ile Ser Ser Tyr
 1   5

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

<220>
<223> Synthetic

<400> 93
gctgcatcc 9

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

<220>
<223> Synthetic

<400> 94
Ala Ala Ser
 1

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

<220>
<223> Synthetic

<400> 95
caacagagtt acagtacccc gtacact 27

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

<213> Artificial Sequence

<220>
<223> Synthetic

<400> 96
Gln Gln Ser Tyr Ser Thr Pro Tyr Thr
 1   5

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

<220>
<223> Synthetic

<400> 97
caggtgcagc tacagcagtg gggcgcagga ctgttgaagc cttcggagac cctgtccctc 60
acctgcgctg tctatggtgg gtccttcagt ggttactact ggagctggat ccgccagacc 120
ccagggaagg ggctggagtg gattggggaa atcagtcata gtggaaacaa caactacaac 180
ccgtccctca agagtcgagt caccatgtca aaagacacgt ccaagaacca gttctccctg 240
aagctgagct ctgtgaccgc cgcggacacg gctgtctatt attgtgcgag gatacagtta 300
tggttaagag ggaacgacta ctacggtatg gacgtctggg gccaagggat cacggtcacc 360
gtctcctca   369

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

<220>
<223> Synthetic

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

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

<220>
<223> Synthetic

<400> 99
ggtgggtcct tcagtggtta ctac 24

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

<220>
<223> Synthetic

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

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

<220>
<223> Synthetic

<400> 101
atcagtcata gtggaaacaa c 21

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

<220>
<223> Synthetic

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

<210> 103
<211> 51
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 103
gcgaggatac agttatggtt aagagggaac gactactacg gtatggacgt c 51

<210> 104
<211> 17
<212> PRT

<213> Artificial Sequence

<220>
<223> Synthetic

<400> 104
Ala Arg Ile Gln Leu Trp Leu Arg Gly Asn Asp Tyr Tyr Gly Met Asp
 1   5   10   15
Val

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

<220>
<223> Synthetic

<400> 105
gacatccaga tgacccagtc tccatcctcc ctgtctgcat ctgtaggaga cagagtcacc 60
atcacttgcc gggcaagtca gggcattaga aatgatttag ggtggtatca gcagaaacca 120
gggaaagccc ctaagcgcct gatctatgct gcatccagtt tgcaaggtgg ggtcccatca 180
aggttcagcg gcagtggatc tgggacagaa ttcactctca caatcagcag cctgcagcct 240
gaagattttg caacttatta ctgtctacag cataatagtt acccgtggac gttcggccaa 300
gggaccaagg tggaaatcaa a   321

<210> 106
<211> 107
<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 Gly Ile Arg Asn Asp
            20   25   30
Leu Gly Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Arg Leu Ile
        35   40   45
Tyr Ala Ala Ser Ser Leu Gln Gly Gly Val Pro Ser Arg Phe Ser Gly
    50   55   60
Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
65   70   75   80
Glu Asp Phe Ala Thr Tyr Tyr Cys Leu Gln His Asn Ser Tyr Pro Trp
                85   90   95
Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
            100   105

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

<220>
<223> Synthetic

<400> 107
cagggcatta gaaatgat 18

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

<220>
<223> Synthetic

<400> 108
Gln Gly Ile Arg Asn Asp
 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
ctacagcata atagttaccc gtggacg 27

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

<220>
<223> Synthetic

<400> 112
Leu Gln His Asn Ser Tyr Pro Trp Thr
 1   5

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

<220>
<223> Synthetic

<400> 113
caggtgcagc tggtggagtc tgggggaggc gtggtccagc ctgggaggtc cctgagactc 60
tcctgtgcag cctctggatt caccttcagt acctatggca tggattgggt ccgccaggct 120
ccaggcaagg ggctggagtg ggtggcagtg atatcatatg atggacgtaa taaaaactat 180
gtagactccg tgaagggccg attcaccatc tccagagaca attccaagaa cacgctgtat 240
ctgcaaatga acagcctgag agctgaggac tcggctgtgt atttctgtgc gaaagagggg 300
ggactgggga cctggtactt cgatctctgg ggccgtggca ccctggtcac tgtctcttca 360

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

<220>
<223> Synthetic

<400> 114
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 Thr Tyr
            20   25   30
Gly Met Asp Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35   40   45
Ala Val Ile Ser Tyr Asp Gly Arg Asn Lys Asn Tyr Val 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 Ser Ala Val Tyr Phe Cys
                85   90   95
Ala Lys Glu Gly Gly Leu Gly Thr Trp Tyr Phe Asp Leu Trp Gly Arg
            100   105   110
Gly Thr Leu Val Thr Val Ser Ser
        115   120

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

<220>
<223> Synthetic

<400> 115
ggattcacct tcagtaccta tggc 24

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

<220>
<223> Synthetic

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

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

<220>
<223> Synthetic

<400> 117
atatcatatg atggacgtaa taaa 24

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

<220>
<223> Synthetic

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

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

<220>
<223> Synthetic

<400> 119
gcgaaagagg ggggactggg gacctggtac ttcgatctc 39

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

<220>
<223> Synthetic

<400> 120
Ala Lys Glu Gly Gly Leu Gly Thr Trp Tyr Phe Asp Leu
 1   5   10

<210> 121
<211> 339
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 121
gacatcgtga tgacccagtc tccagactcc ctggctatgt ctctgggcga gagggccacc 60
atcaactgca agtccagcca gagtgtttta tacaactcca acaataagaa ctacttagtt 120
tggtaccagc agaaatttgg acagcctcct aaactgctca tttactgggc atctacccgg 180
gaatccgggg tccctgaccg gttcagtggc agcgggtctg ggacagattt cactctcacc 240
atcagcagcc tgcaggctga agatgtggca gtttattact gtcaacaata tcatagtact 300
ccgtacacct ttggccaggg gaccaagctg gagatcaaa   339

<210> 122
<211> 113
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

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

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

<220>

<223> Synthetic

<400> 123
cagagtgttt tatacaactc caacaataag aactac 36

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

<220>
<223> Synthetic

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

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

<220>
<223> Synthetic

<400> 125
tgggcatct 9

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

<220>
<223> Synthetic

<400> 126
Trp Ala Ser
 1

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

<220>
<223> Synthetic

<400> 127
caacaatatc atagtactcc gtacacc 27

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

<220>
<223> Synthetic

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

<210> 129
<211> 345
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 129
gaggtgcagc tggtggagtc tgggggaggc ttggtccagc ctgggggtc cctgagactc 60
tcctgtgcag cctctggatt cacctttagt agctattgga tgagctgggt ccgccaggct 120
ccagggaagg ggctggagtg ggtggccaac ataaagcaag atggaagtga gaaatactat 180
gtggactctg tgaagggccg attcaccatc tccagagaca acgccaagaa ctcactgaat 240
cttcaaatga acagcctgag agccgaggac acggctttat attactgtgc gagaggtatt 300
acgattttct tctggggcca gggaaccctg gtcaccgtct cctca   345

<210> 130
<211> 115
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

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

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

<220>
<223> Synthetic

<400> 131
ggattcacct ttagtagcta ttgg 24

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

<220>
<223> Synthetic

<400> 132
Gly Phe Thr Phe Ser Ser Tyr Trp
1 5

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

<220>
<223> Synthetic

<400> 133
ataaagcaag atggaagtga gaaa 24

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

<220>
<223> Synthetic

<400> 134
Ile Lys Gln Asp Gly Ser Glu Lys
1 5

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

<220>
<223> Synthetic

<400> 135
gcgagaggta ttacgatttt cttc 24

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

<220>

<223> Synthetic

<400> 136
Ala Arg Gly Ile Thr Ile Phe Phe
 1   5

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

<220>
<223> Synthetic

<400> 137
gacatccaga tgacccagtc tccatcctcc ctgtctgcat ctgtaggaga cagagtcacc 60
atcacttgcc gggcaagtca gagcattagc agctatttaa attggtatca gcagaaacca 120
gggaaagccc ctaagctcct gatctatgct gcatccagtt tgcaaagtgg ggtcccatca 180
aggttcagtg gcagtggatc tgggacagat ttcactctca ccatcagcag tctgcaacct 240
gaagattttg caacttacta ctgtcaaaag agttacagta ccccgtacac ttttggccag 300
gggaccaagc tggagatcaa a   321

<210> 138
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

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

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

<220>
<223> Synthetic

<400> 139
cagagcatta gcagctat   18

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

<220>
<223> Synthetic

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

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

<220>
<223> Synthetic

<400> 141
gctgcatcc 9

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

<220>
<223> Synthetic

<400> 142
Ala Ala Ser
 1

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

<220>
<223> Synthetic

<400> 143
caaaagagtt acagtacccc gtacact 27

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

<220>
<223> Synthetic

<400> 144

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Gln Lys Ser Tyr Ser Thr Pro Tyr Thr
 1               5


<210> 145
<211> 351
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 145
caggtgcagc tggtggagtc tgggggaggc ttggtcaagc ctggagggtc cctgagactc 60
tcctgtgcag cctctggatt caccttcagt gactactata tgagttggat ccgccaggct 120
ccagggaagg ggctggagtg ggtttcatat attagtacta gtggtagtac catatactac 180
ccagactctg tgaagggccg attcaccatc tccagggaca acgccaagaa ctcactgaat 240
ctgcaaatga acagcctgag agccgaggac acggccgtat attattgcct actccactac 300
tactacggta tggacgtctg gggccaaggg accacggtca ccgtctcctc a          351

<210> 146
<211> 117
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

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


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

<220>
<223> Synthetic

<400> 147
ggattcacct tcagtgacta ctat                                        24
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<210> 148
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

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

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

<220>
<223> Synthetic

<400> 149
attagtacta gtggtagtac cata   24

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

<220>
<223> Synthetic

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

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

<220>
<223> Synthetic

<400> 151
ctactccact actactacgg tatggacgtc   30

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

<220>
<223> Synthetic

<400> 152
Leu Leu His Tyr Tyr Tyr Gly Met Asp Val

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 1               5                  10


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

<220>
<223> Synthetic

<400> 153
gaaattgtgt tgacacagtc tccagccacc ctgtctttgt ctccagggga aagagccccc 60
ctctcctgca gggccagtca gagtgttagc agctacttag cctggtacca gcagaaacct 120
ggccaacctc ccaggctcct catctatgat gcatccaaca gggccactgg catcccagcc 180
agattcagtg gcagtgggtc tgggacagac ttcactctca ccatcagcag cctcgagcct 240
gaagattttg cagtttatta ctgtcagcag cgtagcaact ggccgtggac gttcggccaa 300
gggaccaagg tggaaatcaa a                                          321

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

<220>
<223> Synthetic

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


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

<220>
<223> Synthetic

<400> 155
cagagtgtta gcagctac                                             18

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

<220>
<223> Synthetic

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

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

<220>
<223> Synthetic

<400> 157
gatgcatcc   9

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

<220>
<223> Synthetic

<400> 158
Asp Ala Ser
 1

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

<220>
<223> Synthetic

<400> 159
cagcagcgta gcaactggcc gtggacg   27

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

<220>
<223> Synthetic

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

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

<220>
<223> Synthetic

<400> 161
gaagtgcagc tggtggagtc tgggggaggc ttggtacagc ctggcaggtc cctgagactc 60
tcctgtgcag cctctggatt cacctttgat gaatatgcca tgcactgggt ccggcaagtt 120
ccagggaagg gcctggagtg ggtctcaggc attagtcgga atagtggtac cataggctat 180
gtggactctg tgctgggccg attcaccatc tccagagaca acgccaagaa ctccctgtat 240
ctgcaaatga acagtctgag acctgaggac acggccttgt attactgtgc aaaagataag 300
gggtggctac tcggtatgga cgtctggggc caagggacca cggtcaccgt ctcctca 357

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

<220>
<223> Synthetic

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

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

<220>
<223> Synthetic

<400> 163
ggattcacct ttgatgaata tgcc 24

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

<220>
<223> Synthetic

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

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

<220>
<223> Synthetic

<400> 165
attagtcgga atagtggtac cata   24

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

<220>
<223> Synthetic

<400> 166
Ile Ser Arg Asn Ser Gly Thr Ile
 1   5

<210> 167
<211> 36
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 167
gcaaaagata aggggtggct actcggtatg gacgtc   36

<210> 168
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 168
Ala Lys Asp Lys Gly Trp Leu Leu Gly Met Asp Val
 1   5   10

<210> 169

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

<220>
<223> Synthetic

<400> 169
gacatccaga tgacccagtc tccatcctcc ctgtctgcat ctgtaggaga cagagtcacc 60
atcacttgcc gggcaagtca ggccattaga aatgatttag gctggtatca gcagaaacca 120
gggaaagccc ctaagcgcct gatctatgct gcatccagtc tgcaaagtgg ggtcccatca 180
aggttcagcg gcagtggatc tgggacagaa ttcgctctca caatcagcag cctgcagcct 240
gaagattttg caacttatta ctgtctacag tacaatagtt atctgtacac ttttggccag 300
gggaccaagc tggagatcaa a 321

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

<220>
<223> Synthetic

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

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

<220>
<223> Synthetic

<400> 171
caggccatta gaaatgat 18

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

<220>
<223> Synthetic

<400> 172
Gln Ala Ile Arg Asn Asp
 1   5

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

<220>
<223> Synthetic

<400> 173
gctgcatcc   9

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

<220>
<223> Synthetic

<400> 174
Ala Ala Ser
 1

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

<220>
<223> Synthetic

<400> 175
ctacagtaca atagttatct gtacact   27

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

<220>
<223> Synthetic

<400> 176
Leu Gln Tyr Asn Ser Tyr Leu Tyr Thr
 1   5

<210> 177
<211> 369
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 177
caggtgcagc tgcaggagtc gggcccagga ctggtgaagc cttcacagac cctgtccctc 60
acctgcactg tctctggtgg ctccatcagc agtgatggtt actactggag ctggatccgc 120
cagcacccag ggaagggcct ggagtggatt ggttacatct attacagtgg gaacacctac 180
tacaacccgt ccctcaagag tcgagttacc atatcagttg acacgtctaa gaaccacttc 240
tccctgaaac tgagctctgt gactgccgcg gacacggccg tgtattactg tacgagagat 300
ccccgcggta taactggaac ccactacttt gactactggg gccagggaac cctggtcacc 360
gtctcctca 369

<210> 178
<211> 123
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

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

<210> 179
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 179
ggtggctcca tcagcagtga tggttactac 30

<210> 180
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 180
Gly Gly Ser Ile Ser Ser Asp Gly Tyr Tyr
 1   5   10

<210> 181
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 181
atctattaca gtgggaacac c   21

<210> 182
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

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

<210> 183
<211> 45
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 183
acgagagatc cccgcggtat aactggaacc cactactttg actac   45

<210> 184
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 184
Thr Arg Asp Pro Arg Gly Ile Thr Gly Thr His Tyr Phe Asp Tyr
 1   5   10   15

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

<220>
<223> Synthetic

<400> 185
gaaattgtgt tgacgcagtc tccaggcacc ctgtctttgt ctccagggga aagagccacc 60
ctctcctgca ggaccagtca gagtgttagc agcagctacc tagcctggta ccagcagaaa 120
cctggccagg ctcccaggct cctcatctat ggtgcatcca gcagggccac tggcatccca 180
gacaggttca gtggcagtgg gtctggaaca gacttcactc tcaccatcag cagactggag 240
cctgaagatt ttgcagtata ttactgtcag cagtttggta cttcactatt cactttcggc 300
cctgggacca aagtggatat caaa 324

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

<220>
<223> Synthetic

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

<210> 187
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 187
cagagtgtta gcagcagcta c 21

<210> 188
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 188
Gln Ser Val Ser Ser Ser Tyr

1 5

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

<220>
<223> Synthetic

<400> 189
ggtgcatcc 9

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

<220>
<223> Synthetic

<400> 190
Gly Ala Ser
1

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

<220>
<223> Synthetic

<400> 191
cagcagtttg gtacttcact attcact 27

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

<220>
<223> Synthetic

<400> 192
Gln Gln Phe Gly Thr Ser Leu Phe Thr
1 5

<210> 193
<211> 360
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 193
caggtgcagc tggtggagtc tgggggaggc gtggtccagc ctgggaggtc cctgagactc 60
tcctgcgcag cctctggatt caccttcagt agatttggca tggactgggt ccgccaggct 120
ccaggcaagg ggctggagtg ggtggcagtt atatcatatg atggaaaaaa taaactttat 180
gcagactccg tgaagggccg attcaccatc tccagagaca attccaagaa cacgctgtat 240
atgcaaatga acagcctgcg agctgaggac acggctgtat attactgtgc gaaagaggga 300
gataactgga acttcgtggg ggactcctgg ggccagggaa ccctggtcac cgtctcctca 360

<210> 194
<211> 120
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

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

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

<220>
<223> Synthetic

<400> 195
ggattcacct tcagtagatt tggc   24

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

<220>
<223> Synthetic

<400> 196
Gly Phe Thr Phe Ser Arg Phe Gly

1 5

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

<220>
<223> Synthetic

<400> 197
atatcatatg atggaaaaaa taaa 24

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

<220>
<223> Synthetic

<400> 198
Ile Ser Tyr Asp Gly Lys Asn Lys
1 5

<210> 199
<211> 39
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 199
gcgaaagagg gagataactg gaacttcgtg ggggactcc 39

<210> 200
<211> 13
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 200
Ala Lys Glu Gly Asp Asn Trp Asn Phe Val Gly Asp Ser
1 5 10

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

<220>
<223> Synthetic

<400> 201
gacatccaga tgacccagtc tccatcttcc gtgtctgcat ctgtgggaga cagagtcacc 60
atcacttgtc gggcgagtca ggatattagt gccaggttag cctggtatca gcagaaacca 120
gggaaagccc ctaaactcct gatctatgct gcatccagtt tgcaaagtgg ggtcccatca 180
aggttcagcg gcagtggatc tgggacagat ttcactctca ccatcagtag cctggagcct 240
gaagattttg caacttacta ttgtcaacag gctgacagtt tcccgtacac tttgggccag 300
gggaccaagc tggagatcaa a 321

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

<220>
<223> Synthetic

<400> 202
Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Val Ser Ala Ser Val Gly
 1   5   10   15
Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Asp Ile Ser Ala Arg
            20   25   30
Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
        35   40   45
Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
    50   55   60
Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Glu Pro
65   70   75   80
Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Ala Asp Ser Phe Pro Tyr
                85   90   95
Thr Leu Gly Gln Gly Thr Lys Leu Glu Ile Lys
            100   105

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

<220>
<223> Synthetic

<400> 203
caggatatta gtgccagg 18

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

<220>
<223> Synthetic

<400> 204
Gln Asp Ile Ser Ala Arg
 1   5

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

<220>
<223> Synthetic

<400> 205
gctgcatcc 9

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

<220>
<223> Synthetic

<400> 206
Ala Ala Ser
 1

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

<220>
<223> Synthetic

<400> 207
caacaggctg acagtttccc gtacact 27

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

<220>
<223> Synthetic

<400> 208
Gln Gln Ala Asp Ser Phe Pro Tyr Thr
 1   5

<210> 209
<211> 360
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 209
caggtgcagc tggtggagtc tgggggaggc gtggtccagc ctgggaggtc cctgagactc 60

tcctgcgcag cctctggatt caccttcagt agatttggca tggactgggt ccgccaggct 120
ccaggcaagg ggctggagtg ggtggcagtt atttcatatg atggaaaaaa taaactttat 180
gcagactccg tgaagggccg attcaccatc tccagagaca attccaagaa cacgctgtat 240
ctgcaaatga acagcctgag agctgaggac acggctgtgt attactgtgc gaaagaggga 300
gataactgga acttcgtggg ggactcctgg ggccagggaa ccctggtcac cgtctcctca 360

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

<220>
<223> Synthetic

<400> 210
Gln Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Arg
 1   5   10   15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Arg Phe
            20   25   30
Gly Met Asp Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35   40   45
Ala Val Ile Ser Tyr Asp Gly Lys Asn Lys Leu 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 Asp Asn Trp Asn Phe Val Gly Asp Ser Trp Gly Gln
            100   105   110
Gly Thr Leu Val Thr Val Ser Ser
        115   120

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

<220>
<223> Synthetic

<400> 211
ggattcacct tcagtagatt tggc   24

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

<220>
<223> Synthetic

<400> 212
Gly Phe Thr Phe Ser Arg Phe Gly
 1   5

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

<220>
<223> Synthetic

<400> 213
atttcatatg atggaaaaaa taaa 24

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

<220>
<223> Synthetic

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

<210> 215
<211> 39
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 215
gcgaaagagg gagataactg gaacttcgtg ggggactcc 39

<210> 216
<211> 13
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 216
Ala Lys Glu Gly Asp Asn Trp Asn Phe Val Gly Asp Ser
 1 5 10

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

<220>
<223> Synthetic

<400> 217
gacatccaga tgacccagtc tccatcttcc gtgtctgcat ctgtaggaga cagagtcacc 60

atcacttgtc gggcgagtca gggtattagt gccaggttag cctggtatca gcagaaacca 120
gggaaagccc ctaaactcct gatctatgct gcatccagtt tgcaaagtgg ggtcccatca 180
aggttcagcg gcagtggatc tgggacatat ttcactctca ccatcagtaa cctgcagcct 240
gaagattttg caacttacta ttgtcaacag gctaacagtt tcccgtacac tttaggccag 300
gggaccaagc tggagatcaa a 321

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

<220>
<223> Synthetic

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

<210> 219
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 219
cagggtatta gtgccagg 18

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

<220>
<223> Synthetic

<400> 220
Gln Gly Ile Ser Ala Arg
 1   5

<210> 221
<211> 9
<212> DNA

<213> Artificial Sequence

<220>
<223> Synthetic

<400> 221
gctgcatcc 9

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

<220>
<223> Synthetic

<400> 222
Ala Ala Ser
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<210> 223
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 223
caacaggcta acagtttccc gtacact 27

<210> 224
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 224
Gln Gln Ala Asn Ser Phe Pro Tyr Thr
 1   5

<210> 225
<211> 369
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 225
gaagtgcagc tggtggagtc gggcccagga ctggtgaagc cttcacagac cctgtccctc 60
acctgcactg tctctggtgg ctccatcaac agtggtggtt cctattggag ttggatccgc 120
cagcacccag ggaagggcct ggagtggatt gggtacatct attccagtgg gaacacctac 180
tacaagccgt ccctcaagag tcgagttacc atatcactag acacgtctaa gaaccagttc 240

tccctgaaga tgagctctgt gactgccgcg gacacggcca tatattactg tgcgagagat 300
ccccgcggta taactggaac ccactacttt gattactggg gccagggaac cacggtcacc 360
gtctcctca 369

<210> 226
<211> 123
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

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

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

<220>
<223> Synthetic

<400> 227
ggtggctcca tcaacagtgg tggttcctat 30

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

<220>
<223> Synthetic

<400> 228
Gly Gly Ser Ile Asn Ser Gly Gly Ser Tyr
 1   5   10

<210> 229
<211> 21
<212> DNA

<213> Artificial Sequence

<220>
<223> Synthetic

<400> 229
atctattcca gtgggaacac c 21

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

<220>
<223> Synthetic

<400> 230
Ile Tyr Ser Ser Gly Asn Thr
1 5

<210> 231
<211> 45
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 231
gcgagagatc cccgcggtat aactggaacc cactactttg attac 45

<210> 232
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 232
Ala Arg Asp Pro Arg Gly Ile Thr Gly Thr His Tyr Phe Asp Tyr
1 5 10 15

<210> 233
<211> 324
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 233
gaaattgtgt tgacacagtc tccaggcacc ctgtctttgt ctccagggga aagagccacc 60
ctctcctgca ggaccagtca gagtattagc aacaaatact tggcctggta ccaacagaaa 120
cctggccagg ctcccaggct cctcatctat ggtgcatcca ccagggccac tggcatccca 180
gacaggttca gtggcagtgg gtctgggaca gacttcactc tcaccatcag cagactggag 240

cctgaagatt ttgcagttta ttactgtcag cagtttggta cctcactatt cactttcggc 300
cctgggacca aggtggagat caaa 324

<210> 234
<211> 108
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

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

<210> 235
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 235
cagagtatta gcaacaaata c 21

<210> 236
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 236
Gln Ser Ile Ser Asn Lys Tyr
1 5

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

<220>

<223> Synthetic

<400> 237
ggtgcatcc 9

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

<220>
<223> Synthetic

<400> 238
Gly Ala Ser
1

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

<220>
<223> Synthetic

<400> 239
cagcagtttg gtacctcact attcact 27

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

<220>
<223> Synthetic

<400> 240
Gln Gln Phe Gly Thr Ser Leu Phe Thr
1 5

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

<220>
<223> Synthetic

<400> 241
caggtgcagc tggtgcagtc tgggactgag gtgaagaagc ctggggccgc agtgagggtc 60
tcctgcaagg cttctggata caccttcacc gactaccata tgcactgggt acgacaggcc 120
cctggacaag ggcttgagtg gatgggatgg atcaacccta acagtggtgg cacaaactct 180
gcacagaagt ttcagggcag ggtcaccatg accagggaca cgtccatcag cacagcctac 240
atggagctga acgggctgag atctgacgac acggccgtct attactgtgc gagaaaggcc 300
gggtatacca gtagctggtt cgactactgg ggccagggaa ccacggtcac cgtctcctca 360

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

<220>
<223> Synthetic

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

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

<220>
<223> Synthetic

<400> 243
ggatacacct tcaccgacta ccat   24

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

<220>
<223> Synthetic

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

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

<220>

<223> Synthetic

<400> 245
atcaacccta acagtggtgg caca 24

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

<220>
<223> Synthetic

<400> 246
Ile Asn Pro Asn Ser Gly Gly Thr
1 5

<210> 247
<211> 39
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 247
gcgagaaagg ccgggtatac cagtagctgg ttcgactac 39

<210> 248
<211> 13
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 248
Ala Arg Lys Ala Gly Tyr Thr Ser Ser Trp Phe Asp Tyr
1 5 10

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

<220>
<223> Synthetic

<400> 249
gacatcgtga tgacccagtc tccagactcc ctggctgtgt ctctgggcga gagggccacc 60
atcaactgca agtccagcca gagtgtttta tacagcttca acaataagaa ctacttaact 120
tggtaccagc agaaaccagg acagcctcct aagctgctca tttactgggc atctactcgg 180
gaatccgggg tccctgaccg attcagtggc agcgggtctg ggacagattt cactctcacc 240
atcagcagcc tgcaggctga agatgtggca gtttattact gtcagcaata ttatagtctg 300
atcactttcg gccaagggac acgactggag attaaa 336

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

<220>
<223> Synthetic

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

<210> 251
<211> 36
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 251
cagagtgttt tatacagctt caacaataag aactac   36

<210> 252
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 252
Gln Ser Val Leu Tyr Ser Phe Asn Asn Lys Asn Tyr
 1   5   10

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

<220>
<223> Synthetic

<400> 253

tgggcatct 9

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

<220>
<223> Synthetic

<400> 254
Trp Ala Ser
1

<210> 255
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 255
cagcaatatt atagtctgat cact 24

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

<220>
<223> Synthetic

<400> 256
Gln Gln Tyr Tyr Ser Leu Ile Thr
1 5

<210> 257
<211> 369
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 257
gaggtgcagc tggtggagtc gggcccagga ctggtgaagc ctgcacagac cctgtctctc 60
acctgtactg tctctggtgg ctccatcaac agtggtggta attactggag ttggatccgc 120
cagcacccag ggaagggcct ggagtggatt gggtacatct attacagtgg gaacacctac 180
tacaacccgt ccctcaagag tcgagttacc atatcagtag acatgtctaa gaaccagttc 240
tccctgaaac tgaggtctgt gactgcggcg gacacggccg tgtatttctg tgcgagagat 300
ccccgcggta taactggaac ccaccacttt gactgctggg gccagggaac cctggtcact 360
gtctcctca 369

<210> 258
<211> 123

<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 258
Glu Val Gln Leu Val Glu Ser Gly Pro Gly Leu Val Lys Pro Ala Gln
 1   5   10   15
Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Gly Ser Ile Asn Ser Gly
            20   25   30
Gly Asn Tyr Trp Ser Trp Ile Arg Gln His Pro Gly Lys Gly Leu Glu
        35   40   45
Trp Ile Gly Tyr Ile Tyr Tyr Ser Gly Asn Thr Tyr Tyr Asn Pro Ser
    50   55   60
Leu Lys Ser Arg Val Thr Ile Ser Val Asp Met Ser Lys Asn Gln Phe
65   70   75   80
Ser Leu Lys Leu Arg Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Phe
                85   90   95
Cys Ala Arg Asp Pro Arg Gly Ile Thr Gly Thr His His Phe Asp Cys
            100   105   110
Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
        115   120

<210> 259
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 259
ggtggctcca tcaacagtgg tggtaattac   30

<210> 260
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 260
Gly Gly Ser Ile Asn Ser Gly Gly Asn Tyr
 1   5   10

<210> 261
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 261

atctattaca gtgggaacac c 21

<210> 262
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 262
Ile Tyr Tyr Ser Gly Asn Thr
1 5

<210> 263
<211> 45
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 263
gcgagagatc cccgcggtat aactggaacc caccactttg actgc 45

<210> 264
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 264
Ala Arg Asp Pro Arg Gly Ile Thr Gly Thr His His Phe Asp Cys
1 5 10 15

<210> 265
<211> 324
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 265
gaaattgtgt tgacgcagtc tccaggcacc ctgtctttgt ctccagggga aagagccacc 60
ctctcctgca ggacaagtca gagtgttagc agcaggtact tagcctggta ccagcaaaaa 120
cctggccagg ctcccaggct cctcatctat gatgcatcca gcagggccac tggcatccca 180
gacaggttca gtggcagtgg gtctgggaca gacttcactc tcaccatcag cagactggag 240
cctgaagatt ttgcagtgta ttactgtcag cagtttggtc cctcactatt cactttcggc 300
cctgggacca aagtggatat caaa 324

<210> 266
<211> 108
<212> PRT

<213> Artificial Sequence

<220>
<223> Synthetic

<400> 266
Glu Ile Val Leu Thr Gln Ser Pro Gly Thr Leu Ser Leu Ser Pro Gly
 1   5   10   15
Glu Arg Ala Thr Leu Ser Cys Arg Thr Ser Gln Ser Val Ser Ser Arg
            20   25   30
Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu
        35   40   45
Ile Tyr Asp Ala Ser Ser Arg Ala Thr Gly Ile Pro Asp Arg Phe Ser
    50   55   60
Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu
65   70   75   80
Pro Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Phe Gly Pro Ser Leu
                85   90   95
Phe Thr Phe Gly Pro Gly Thr Lys Val Asp Ile Lys
            100   105

<210> 267
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 267
cagagtgtta gcagcaggta c   21

<210> 268
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 268
Gln Ser Val Ser Ser Arg Tyr
 1   5

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

<220>
<223> Synthetic

<400> 269
gatgcatcc   9

<210> 270

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

<220>
<223> Synthetic

<400> 270
Asp Ala Ser
 1

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

<220>
<223> Synthetic

<400> 271
cagcagtttg gtccctcact attcact 27

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

<220>
<223> Synthetic

<400> 272
Gln Gln Phe Gly Pro Ser Leu Phe Thr
 1   5

<210> 273
<211> 360
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 273
caggtgcagc tggtgcagtc tggggctgag gtgaagaagc ctggggcctc agtgaaggtc 60
tcctgcaagg cttctggata caccttcacc gactactata tgcactgggt gcgacaggcc 120
cctgggcaag ggcttgagtg gataggatgg atcaacccta acagtggtgg ctcaaacttt 180
gcacagaagt ttcagggcag ggtcaccatg accagggaca cgtccatcag cacagcctac 240
atggagctga gcaggctgag atctgacgac acggccgtgt attactgtgc gagaaaggcc 300
gggtatacca gcagctggtt cgactactgg ggccagggaa ccctggtcac tgtctcctca 360

<210> 274
<211> 120
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

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

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

<220>
<223> Synthetic

<400> 275
ggatacacct tcaccgacta ctat   24

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

<220>
<223> Synthetic

<400> 276
Gly Tyr Thr Phe Thr Asp Tyr Tyr
 1   5

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

<220>
<223> Synthetic

<400> 277
atcaacccta acagtggtgg ctca   24

<210> 278

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

<220>
<223> Synthetic

<400> 278
Ile Asn Pro Asn Ser Gly Gly Ser
 1   5

<210> 279
<211> 39
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 279
gcgagaaagg ccgggtatac cagcagctgg ttcgactac   39

<210> 280
<211> 13
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 280
Ala Arg Lys Ala Gly Tyr Thr Ser Ser Trp Phe Asp Tyr
 1   5   10

<210> 281
<211> 336
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 281
gacatcgtga tgacccagtc tccagactcc ctggctgtgt ctctgggcga gagggccacc 60
atcaactgca agtccagcca gagtgtttta tacagcttca acaataagaa ctacttaagt 120
tggtaccagc agaaaccagg acagcctcct aagctgctca tttactgggc atctacccgg 180
gaatccgggg tccctgaccg attcagtggc agcgggtctg ggacagattt cactctcacc 240
atcagcagcc tgcaggctga agatgcggca gtttattact gtcagcaata ttatagtatg 300
atcaccttcg gccaagggac acgactggag attaaa   336

<210> 282
<211> 112
<212> PRT
<213> Artificial Sequence

<220>

<223> Synthetic

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

<210> 283
<211> 36
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 283
cagagtgttt tatacagctt caacaataag aactac   36

<210> 284
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 284
Gln Ser Val Leu Tyr Ser Phe Asn Asn Lys Asn Tyr
 1   5   10

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

<220>
<223> Synthetic

<400> 285
tgggcatct   9

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

<220>
<223> Synthetic

<400> 286
Trp Ala Ser
 1

<210> 287
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 287
cagcaatatt atagtatgat cacc 24

<210> 288
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 288
Gln Gln Tyr Tyr Ser Met Ile Thr
 1   5

<210> 289
<211> 378
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 289
gaggtgcagc tggtggagtc tgggggaggc ttggtacagc ctggcaggtc cctgagactc 60
tcctgtgcag cctccggatt cacctttgat gattatgcca tgcactgggt ccggcaaggt 120
ccagggaagg gcctggagtg ggtctcaggt attagttgga atggtagaac catggaccat 180
gcggactctg tgaagggccg attcaccatc tccagagaca acgccaagaa ctccctgtat 240
ctgcaaatga acagtctgag aaatgacgac acgggcgtgt atttctgtgc aaaagagggt 300
ataccagtgg ctgggacgta tttccacttc tacggtatgg acgtctgggg ccaagggacc 360
acggtcaccg tctcctca 378

<210> 290
<211> 126
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 290
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 Gly Pro Gly Lys Gly Leu Glu Trp Val
        35   40   45
Ser Gly Ile Ser Trp Asn Gly Arg Thr Met Asp His 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 Asn Asp Asp Thr Gly Val Tyr Phe Cys
                85   90   95
Ala Lys Glu Gly Ile Pro Val Ala Gly Thr Tyr Phe His Phe Tyr Gly
            100   105   110
Met Asp Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser
        115   120   125

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

<220>
<223> Synthetic

<400> 291
ggattcacct ttgatgatta tgcc   24

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

<220>
<223> Synthetic

<400> 292
Gly Phe Thr Phe Asp Asp Tyr Ala
 1   5

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

<220>
<223> Synthetic

<400> 293
attagttgga atggtagaac catg   24

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

<220>
<223> Synthetic

<400> 294
Ile Ser Trp Asn Gly Arg Thr Met
 1   5

<210> 295
<211> 57
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 295
gcaaaagagg gtataccagt ggctgggacg tatttccact tctacggtat ggacgtc   57

<210> 296
<211> 19
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 296
Ala Lys Glu Gly Ile Pro Val Ala Gly Thr Tyr Phe His Phe Tyr Gly
 1   5   10   15
Met Asp Val

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

<220>
<223> Synthetic

<400> 297
gaaatagtga tgacgcagtc tccagccacc ctgtctgtgt ctccagggga aagagtcacc 60
ctctcctgca gggccagtca gagtattggc aactacttag cctggtacca gcagaaacct 120
ggccaggctc ccaggctcct catctatggt acatccacca gggccactgg tatcccagcc 180
aggttcagtg gcagtgggtc tgggacagag ttcactctca ccttcagcag cctgcagtct 240
gaagattttg cagtttatta ctgtcagcag tataatcact ggccgctcac tttcggcgga 300
gggaccaagg tggagatcaa a   321

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

<220>
<223> Synthetic

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

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

<220>
<223> Synthetic

<400> 299
cagagtattg gcaactac   18

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

<220>
<223> Synthetic

<400> 300
Gln Ser Ile Gly Asn Tyr
 1   5

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

<220>
<223> Synthetic

<400> 301
ggtacatcc   9

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

<220>
<223> Synthetic

<400> 302
Gly Thr Ser
 1

<210> 303
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 303
cagcagtata atcactggcc gctcact 27

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

<220>
<223> Synthetic

<400> 304
Gln Gln Tyr Asn His Trp Pro Leu Thr
 1 5

<210> 305
<211> 360
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 305
caggttcagc tggtgcagtc tggggctgag gtgaagaagc ctggggccgc agtgaaggtc 60
tcctgcaagg cttctggata caccttcacc gactaccata tgcattgggt gcgacaggcc 120
cctggacaag ggcttgagtg gatgggatgg atcaacccta acagtggtgg cacaaactct 180
gcacagaagt ttcagggcag ggtcaccatg accagggaca cgtccatcag cacagcctac 240
atggaactga acggtctgag atctgacgac acggccgtct attactgtgc gagaaaggcc 300
gggtttacca gtagctggtt cgaccactgg ggccagggaa ccacggtcac cgtctcctca 360

<210> 306
<211> 120
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 306

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

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

<220>
<223> Synthetic

<400> 307
ggatacacct tcaccgacta ccat 24

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

<220>
<223> Synthetic

<400> 308
```
Gly Tyr Thr Phe Thr Asp Tyr His
 1               5
```

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

<220>
<223> Synthetic

<400> 309
atcaacccta acagtggtgg caca 24

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

<220>
<223> Synthetic

<400> 310
Ile Asn Pro Asn Ser Gly Gly Thr
 1   5

<210> 311
<211> 39
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 311
gcgagaaagg ccgggtttac cagtagctgg ttcgaccac   39

<210> 312
<211> 13
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 312
Ala Arg Lys Ala Gly Phe Thr Ser Ser Trp Phe Asp His
 1   5   10

<210> 313
<211> 336
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 313
gatattgtga tgacccagtc tccagactcc ctggctgtgt ctctgggcga gagggccacc 60
atcaactgca agtccagcca gagtgtttta tacagcttca acaataagaa ctacttaact 120
tggtaccagc agaaaccagg acagcctcct aagctgctca tttactgggc atctactcgg 180
gaatccgggg tccctgaccg attcagtggc agcgggtctg ggacagattt cactctcacc 240
atcagcagcc tgcaggctga agatgtggca gtttattact gtcagcaata ttatagtctg 300
atcactttcg gccaagggac acgactggag attaaa   336

<210> 314
<211> 112
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 314
Asp Ile Val Met Thr Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly

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


<210> 315
<211> 36
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 315
cagagtgttt tatacagctt caacaataag aactac                                36

<210> 316
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 316
Gln Ser Val Leu Tyr Ser Phe Asn Asn Lys Asn Tyr
 1               5                  10


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

<220>
<223> Synthetic

<400> 317
tgggcatct                                                              9

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

<220>
<223> Synthetic
```

<400> 318
Trp Ala Ser
 1

<210> 319
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 319
cagcaatatt atagtctgat cact 24

<210> 320
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 320
Gln Gln Tyr Tyr Ser Leu Ile Thr
 1   5

<210> 321
<211> 360
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 321
caggtgcagc tggtacagtc tggggctgag gtgaagaagc ctggggcctc agtgaaggtc 60
tcctgtaagg cttctggata caccttcacc gactactttc ttcactgggt gcgacaggcc 120
cctggacaag gccttgagtg ggtgggatgg atcaacccta acagtggtgg cacaaacttt 180
gcacagaagt ttcagggcag ggtcaccatg accagggaca cgtccatcag cacagcctac 240
atggacctga gcagactgag atctgacgac acggccgttt attactgtgc gagaaaggcc 300
ggatatacca gcagctggtt cgactactgg ggccagggaa ccctggtcac cgtctcctca 360

<210> 322
<211> 120
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 322
Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
 1   5   10   15
Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asp Tyr

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

<210> 323
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 323
ggatacacct tcaccgacta cttt 24

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

<220>
<223> Synthetic

<400> 324
```
Gly Tyr Thr Phe Thr Asp Tyr Phe
 1               5
```

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

<220>
<223> Synthetic

<400> 325
atcaacccta acagtggtgg caca 24

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

<220>
<223> Synthetic

<400> 326
Ile Asn Pro Asn Ser Gly Gly Thr
 1   5

<210> 327
<211> 39
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 327
gcgagaaagg ccggatatac cagcagctgg ttcgactac   39

<210> 328
<211> 13
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 328
Ala Arg Lys Ala Gly Tyr Thr Ser Ser Trp Phe Asp Tyr
 1   5   10

<210> 329
<211> 336
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 329
gacatcgtga tgacccagtc tccagactcc ctggctgtgt ctctgggcga gagggccacc 60
ataaactgca agtccagcca gagtatttta tacagcttca acaataagaa ctacttagct 120
tggtaccagc agaaaatagg acagcctcct atgctgctca tttactgggc atctacccgg 180
gaatccgggg tccctgaccg attcagtggc agcgggtctg ggacagattt cactctcacc 240
ataagcagac tgcaggctga agatgtggca gtttattact gtcagcaata ttatagttcg 300
atcaccttcg gccaagggac acgactggag attaaa   336

<210> 330
<211> 112
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 330
Asp Ile Val Met Thr Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly
 1   5   10   15
Glu Arg Ala Thr Ile Asn Cys Lys Ser Ser Gln Ser Ile Leu Tyr Ser
            20   25   30

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

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

<220>
<223> Synthetic

<400> 331
cagagtattt tatacagctt caacaataag aactac 36

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

<220>
<223> Synthetic

<400> 332
```
Gln Ser Ile Leu Tyr Ser Phe Asn Asn Lys Asn Tyr
 1               5                  10
```

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

<220>
<223> Synthetic

<400> 333
tgggcatct 9

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

<220>
<223> Synthetic

<400> 334
```
Trp Ala Ser
 1
```

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

<220>
<223> Synthetic

<400> 335
cagcaatatt atagttcgat cacc 24

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

<220>
<223> Synthetic

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

<210> 337
<211> 360
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 337
caggtgcagc tggtgcagtc tggggctgaa gtgaagaagc ctggggcctc agtgaaggtc 60
tcctgcaagg cttctggata caccttcacc ggctacttta tccactgggt gcgacaggcc 120
cctggacaag ggcttgagtg ggtgggatgg atcaacccta ccagtggtgg cacaaactat 180
gcacagaagt ttcagggcag ggtcaccatg accagggaca cgtccatcag cacagcctat 240
atggagatga acagtctgag atctgacgac acggccgtgt attactgtgc gagaaaggcc 300
gggtatacca gcacctggtt cgactactgg ggccagggaa ccacggtcac cgtctcctca 360

<210> 338
<211> 120
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 338
Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
 1   5   10   15
Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Gly Tyr
            20   25   30
Phe Ile His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val
        35   40   45

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

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

<220>
<223> Synthetic

<400> 339
ggatacacct tcaccggcta cttt 24

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

<220>
<223> Synthetic

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

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

<220>
<223> Synthetic

<400> 341
atcaacccta ccagtggtgg caca 24

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

<220>
<223> Synthetic

<400> 342
```
Ile Asn Pro Thr Ser Gly Gly Thr
 1               5
```

<210> 343
<211> 39
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 343
gcgagaaagg ccgggtatac cagcacctgg ttcgactac 39

<210> 344
<211> 13
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 344
Ala Arg Lys Ala Gly Tyr Thr Ser Thr Trp Phe Asp Tyr
 1   5   10

<210> 345
<211> 336
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 345
gacatcgtga tgacccagtc tccagactcc ctgactgtgt ctctgggcga gagggccacc 60
atcaactgca agtccagtca gagtgtttta tacagttcca aaaataagaa ctacttagct 120
tggtaccagc agaaaccagg acagcctcct aatctgctcg tttactgggc atctacccgg 180
gaatccgggg tccctgaccg attcagtggc agcgggtctg ggacagattt cactctcacc 240
atcagcagcc tgcaggctga agatgtggca gtttattact gtcagcaata ttatagtatg 300
atcaccttcg gccaagggac acgactggag attaaa 336

<210> 346
<211> 112
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 346
Asp Ile Val Met Thr Gln Ser Pro Asp Ser Leu Thr Val Ser Leu Gly
 1   5   10   15
Glu Arg Ala Thr Ile Asn Cys Lys Ser Ser Gln Ser Val Leu Tyr Ser
            20   25   30
Ser Lys Asn Lys Asn Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln
        35   40   45
Pro Pro Asn Leu Leu Val Tyr Trp Ala Ser Thr Arg Glu Ser Gly Val

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


<210> 347
<211> 36
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 347
cagagtgttt tatacagttc caaaaataag aactac                                36

<210> 348
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 348
Gln Ser Val Leu Tyr Ser Ser Lys Asn Lys Asn Tyr
 1               5                   10


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

<220>
<223> Synthetic

<400> 349
tgggcatct                                                              9

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

<220>
<223> Synthetic

<400> 350
Trp Ala Ser
 1


<210> 351
```

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

<220>
<223> Synthetic

<400> 351
cagcaatatt atagtatgat cacc 24

<210> 352
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 352
Gln Gln Tyr Tyr Ser Met Ile Thr
 1   5

<210> 353
<211> 360
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 353
gaggtgcagc tggtggagtc tgggggaggc ttggtacagc ctgggggtc cctgagactc 60
tcctgtgcag cctctggatt cacctttacc aactatgcca tgacctgggt ccgccaggct 120
ccagggaagg ggctggagtg ggtctcaact attagtggta ctggtgttga tatcacatac 180
tacgcagact ccgtgaaggg ccggttcacc atctccagag acaattccaa gaacacgctg 240
tatctgcaaa tgaacagcct gagagccgag gacacggccg tatattactg tgcgaaagga 300
ggactacggt ggttcccctt tgactactgg ggccagggaa ccacggtcac cgtctcctca 360

<210> 354
<211> 120
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 354
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 Thr Asn Tyr
            20   25   30
Ala Met Thr Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35   40   45
Ser Thr Ile Ser Gly Thr Gly Val Asp Ile Thr Tyr Tyr Ala Asp Ser
    50   55   60
Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu

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

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

<220>
<223> Synthetic

<400> 355
ggattcacct ttaccaacta tgcc 24

<210> 356
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 356
```
Gly Phe Thr Phe Thr Asn Tyr Ala
 1               5
```

<210> 357
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 357
attagtggta ctggtgttga tatcaca 27

<210> 358
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 358
```
Ile Ser Gly Thr Gly Val Asp Ile Thr
 1               5
```

<210> 359

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

<220>
<223> Synthetic

<400> 359
gcgaaaggag gactacggtg gttccccttt gactac 36

<210> 360
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 360
Ala Lys Gly Gly Leu Arg Trp Phe Pro Phe Asp Tyr
 1   5   10

<210> 361
<211> 321
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 361
gacatccaga tgacccagtc tccttccacc ctgtctgcat ctgtaggaga cagagtcacc 60
atcacttgcc gggccagtca gagtattagt agctggttgg cctggtatca gcagaaacca 120
gggaaagccc ctaagctcct gatctataag gcgtctagtt tagaaagtgg ggtcccatca 180
aggttcagcg gcagtggatc tgggacagaa ttcactctca ccatcagcag cctgcagcct 240
gatgattttg caacttatta ctgccaacag tataatagtt tttctcggac gttcggccaa 300
gggaccaagg tggaaatcaa a 321

<210> 362
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 362
Asp Ile Gln Met Thr Gln Ser Pro Ser Thr Leu Ser Ala Ser Val Gly
 1   5   10   15
Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Ser Ser Trp
            20   25   30
Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
        35   40   45
Tyr Lys Ala Ser Ser Leu Glu Ser Gly Val Pro Ser Arg Phe Ser Gly
    50   55   60
Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
65   70   75   80

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

<210> 363
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 363
cagagtatta gtagctgg 18

<210> 364
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 364
Gln Ser Ile Ser Ser Trp
1 5

<210> 365
<211> 9
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 365
aaggcgtct 9

<210> 366
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 366
Lys Ala Ser
1

<210> 367
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 367
caacagtata atagtttttc tcggacg 27

<210> 368
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 368
Gln Gln Tyr Asn Ser Phe Ser Arg Thr
1 5

<210> 369
<211> 357
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 369
gaggtgcagc tggtggagtc tgggggaggc ttggtacagc ctgggggtc cctgagactc 60
tcctgtgcag cctcaggaat cacctttagc agctttgtca tgaactgggt ccgccaggct 120
ccagggaagg ggctggagtg ggtctcagtt attagtggta gtggtggtag cacatactac 180
gcagactccg tgaagggccg gttcaccatc tccagagaca attccaagaa cacgctgtat 240
ctgcaaatga acagcctgag agccgaggac acggccgtat attactgtgc gaaaggagga 300
ctacggtggt tccccctttga ctactggggc cagggaaccc tggtcactgt ctcctca 357

<210> 370
<211> 119
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 370
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 Ile Thr Phe Ser Ser Phe
20 25 30
Val Met Asn Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45
Ser Val Ile Ser Gly Ser Gly Gly 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 Gly Gly Leu Arg Trp Phe Pro Phe Asp Tyr Trp Gly Gln Gly

100 105 110
Thr Leu Val Thr Val Ser Ser
115

<210> 371
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 371
ggaatcacct ttagcagctt tgtc 24

<210> 372
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 372
Gly Ile Thr Phe Ser Ser Phe Val
1 5

<210> 373
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 373
attagtggta gtggtggtag caca 24

<210> 374
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 374
Ile Ser Gly Ser Gly Gly Ser Thr
1 5

<210> 375
<211> 36
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 375
gcgaaaggag gactacggtg gttccccttt gactac 36

<210> 376
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 376
Ala Lys Gly Gly Leu Arg Trp Phe Pro Phe Asp Tyr
 1   5   10

<210> 377
<211> 321
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 377
gacatccaga tgacccagtc tccttccacc ctgtctgcat ctgtaggaga cagagtcacc 60
atcacttgcc gggccagtca gagtattagt agttggttgg cctggtatca gcagaaacca 120
gggaaagccc ctaagctcct gatctataag gcgtctagtt tagaaagtgg ggtcccatca 180
aggttcagcg gcagtggatc tgggacagaa ttcactctca ccatcagcag cctgcagcct 240
gatgattttg caacttatta ctgccaacag tataatagtt attctcggac gttcggccaa 300
gggaccaagg tggaaatcaa a 321

<210> 378
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 378
Asp Ile Gln Met Thr Gln Ser Pro Ser Thr Leu Ser Ala Ser Val Gly
 1   5   10   15
Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Ser Ser Trp
            20   25   30
Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
        35   40   45
Tyr Lys Ala Ser Ser Leu Glu Ser Gly Val Pro Ser Arg Phe Ser Gly
    50   55   60
Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
65   70   75   80
Asp Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Tyr Asn Ser Tyr Ser Arg
                85   90   95
Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
            100   105

<210> 379
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 379
cagagtatta gtagttgg 18

<210> 380
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 380
Gln Ser Ile Ser Ser Trp
 1   5

<210> 381
<211> 9
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 381
aaggcgtct 9

<210> 382
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 382
Lys Ala Ser
 1

<210> 383
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 383
caacagtata atagttattc tcggacg 27

<210> 384
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 384
Gln Gln Tyr Asn Ser Tyr Ser Arg Thr
1 5

<210> 385
<211> 362
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 385
Met Arg Val Thr Ala Pro Arg Thr Leu Leu Leu Leu Leu Trp Gly Ala
1 5 10 15
Val Ala Leu Thr Glu Thr Trp Ala Gly Ser His Ser Met Arg Tyr Phe
20 25 30
His Thr Ser Val Ser Arg Pro Gly Arg Gly Glu Pro Arg Phe Ile Thr
35 40 45
Val Gly Tyr Val Asp Asp Thr Leu Phe Val Arg Phe Asp Ser Asp Ala
50 55 60
Ala Ser Pro Arg Glu Glu Pro Arg Ala Pro Trp Ile Glu Gln Glu Gly
65 70 75 80
Pro Glu Tyr Trp Asp Arg Glu Thr Gln Ile Cys Lys Ala Lys Ala Gln
85 90 95
Thr Asp Arg Glu Asp Leu Arg Thr Leu Leu Arg Tyr Tyr Asn Gln Ser
100 105 110
Glu Ala Gly Ser His Thr Leu Gln Asn Met Tyr Gly Cys Asp Val Gly
115 120 125
Pro Asp Gly Arg Leu Leu Arg Gly Tyr His Gln Asp Ala Tyr Asp Gly
130 135 140
Lys Asp Tyr Ile Ala Leu Asn Glu Asp Leu Ser Ser Trp Thr Ala Ala
145 150 155 160
Asp Thr Ala Ala Gln Ile Thr Gln Arg Lys Trp Glu Ala Ala Arg Val
165 170 175
Ala Glu Gln Leu Arg Ala Tyr Leu Glu Gly Glu Cys Val Glu Trp Leu
180 185 190
Arg Arg Tyr Leu Glu Asn Gly Lys Glu Thr Leu Gln Arg Ala Asp Pro
195 200 205
Pro Lys Thr His Val Thr His His Pro Ile Ser Asp His Glu Ala Thr
210 215 220
Leu Arg Cys Trp Ala Leu Gly Phe Tyr Pro Ala Glu Ile Thr Leu Thr
225 230 235 240
Trp Gln Arg Asp Gly Glu Asp Gln Thr Gln Asp Thr Glu Leu Val Glu
245 250 255
Thr Arg Pro Ala Gly Asp Arg Thr Phe Gln Lys Trp Ala Ala Val Val

```
            260                 265                 270
Val Pro Ser Gly Glu Glu Gln Arg Tyr Thr Cys His Val Gln His Glu
        275                 280                 285
Gly Leu Pro Lys Pro Leu Thr Leu Arg Trp Glu Pro Ser Ser Gln Ser
    290                 295                 300
Thr Val Pro Ile Val Gly Ile Val Ala Gly Leu Ala Val Leu Ala Val
305                 310                 315                 320
Val Val Ile Gly Ala Val Val Ala Ala Val Met Cys Arg Arg Lys Ser
                325                 330                 335
Ser Gly Gly Lys Gly Gly Ser Tyr Ser Gln Ala Ala Cys Ser Asp Ser
            340                 345                 350
Ala Gln Gly Ser Asp Val Ser Leu Thr Ala
        355                 360
```

<210> 386
<211> 362
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 386

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

```
Val Pro Ser Gly Glu Glu Gln Arg Tyr Thr Cys His Val Gln His Glu
        275                 280                 285
Gly Leu Pro Lys Pro Leu Thr Leu Arg Trp Glu Pro Ser Ser Gln Ser
    290                 295                 300
Thr Val Pro Ile Val Gly Ile Val Ala Gly Leu Ala Val Leu Ala Val
305                 310                 315                 320
Val Val Ile Gly Ala Val Val Ala Ala Val Met Cys Arg Arg Lys Ser
                325                 330                 335
Ser Gly Gly Lys Gly Gly Ser Tyr Ser Gln Ala Ala Cys Ser Asp Ser
            340                 345                 350
Ala Gln Gly Ser Asp Val Ser Leu Thr Ala
        355                 360


<210> 387
<211> 437
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

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

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

<210> 388
<211> 119
<212> PRT
<213> Homo sapiens

<400> 388

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

<210> 389
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 389

```
Ser Arg Tyr Trp Ala Ile Arg Thr Arg
 1               5
```

<210> 390
<211> 276
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 390
Met Thr Arg Val Ser Leu Leu Trp Ala Val Val Val Ser Thr Cys Leu
 1   5   10   15
Glu Ser Gly Met Ala Gln Thr Val Thr Gln Ser Gln Pro Glu Met Ser
            20   25   30
Val Gln Glu Ala Glu Thr Val Thr Leu Ser Cys Thr Tyr Asp Thr Ser
        35   40   45
Glu Asn Asn Tyr Tyr Leu Phe Trp Tyr Lys Gln Pro Pro Ser Arg Gln
    50   55   60
Met Ile Leu Val Ile Arg Gln Glu Ala Tyr Lys Gln Gln Asn Ala Thr
65   70   75   80
Glu Asn Arg Phe Ser Val Asn Phe Gln Lys Ala Ala Lys Ser Phe Ser
                85   90   95
Leu Lys Ile Ser Asp Ser Gln Leu Gly Asp Ala Ala Met Tyr Phe Cys
            100   105   110
Ala Tyr Phe Ser Gly Gly Ser Asn Tyr Lys Leu Thr Phe Gly Lys Gly
        115   120   125
Thr Leu Leu Thr Val Asn Pro Asn Ile Gln Asn Pro Asp Pro Ala Val
    130   135   140
Tyr Gln Leu Arg Asp Ser Lys Ser Ser Asp Lys Ser Val Cys Leu Phe
145   150   155   160
Thr Asp Phe Asp Ser Gln Thr Asn Val Ser Gln Ser Lys Asp Ser Asp
                165   170   175
Val Tyr Ile Thr Asp Lys Thr Val Leu Asp Met Arg Ser Met Asp Phe
            180   185   190
Lys Ser Asn Ser Ala Val Ala Trp Ser Asn Lys Ser Asp Phe Ala Cys
        195   200   205
Ala Asn Ala Phe Asn Asn Ser Ile Ile Pro Glu Asp Thr Phe Phe Pro
    210   215   220
Ser Pro Glu Ser Ser Cys Asp Val Lys Leu Val Glu Lys Ser Phe Glu
225   230   235   240
Thr Asp Thr Asn Leu Asn Phe Gln Asn Leu Ser Val Ile Gly Phe Arg
                245   250   255
Ile Leu Leu Leu Lys Val Ala Gly Phe Asn Leu Leu Met Thr Leu Arg
            260   265   270
Leu Trp Ser Ser
        275

<210> 391
<211> 310
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 391

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


<210> 392
<211> 214
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 392
Ser Gln Phe Arg Val Ser Pro Leu Asp Arg Thr Trp Asn Leu Gly Glu
 1               5                  10                  15
Thr Val Glu Leu Lys Cys Gln Val Leu Leu Ser Asn Pro Thr Ser Gly
            20                  25                  30
Cys Ser Trp Leu Phe Gln Pro Arg Gly Ala Ala Ala Ser Pro Thr Phe
        35                  40                  45
Leu Leu Tyr Leu Ser Gln Asn Lys Pro Lys Ala Ala Glu Gly Leu Asp
```

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

<210> 393
<211> 189
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 393

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