1800-WO SEQUENCE LISTING

<110> Regeneron Pharmaceuticals, Inc.

<120> Human Antibodies to Respiratory
Syncytial Virus F Protein and Methods of Use Thereof

<130> 1800A-WO

<140> TBA
<141>

<150> 61/782,215
<151> 2013-03-14

<150> 61/911,093
<151> 2013-12-03

<160> 364

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cctggacaag ggcttgagtg gttgggaggg ttcaacccga tctttgatac tgcaaactac 180
gcgcaaaagt tccagggcag aatcacgatc accctggacg catccacggg cacagtctac 240
atggaactga gcagcctgag atctgaggac acgggcgtgt attactgcgc gggaactggg 300
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Ser Val Lys Val Ser Cys Lys Ala Ser Gly Gly Thr Leu Ser Asn Asn
            20   25   30
Ala Phe Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Leu
        35   40   45
Gly Gly Phe Asn Pro Ile Phe Asp Thr Ala Asn Tyr Ala Gln Lys Phe
    50   55   60
Gln Gly Arg Ile Thr Ile Thr Leu Asp Ala Ser Thr Gly Thr Val Tyr

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

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ttcaacccga tctttgatac tgca 24

<210> 6
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<400> 6
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<400> 8
Ala Gly Thr Gly Ala His Phe Glu Phe
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ggaaaagccc ctaagttcct gatctatgct gcatccacct tacaaagtgg ggtcccatca 180
aggttcagtg gcagtggatc tcggacagat ttcactctca ccatcagcag tctgcaacct 240
gaagattttg caacttacta ctgtcaacag agtgtcagtg tcccgtacac ttttggccag 300
gggaccaagc tggagatcaa a 321

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20 25 30
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35 40 45
Tyr Ala Ala Ser Thr Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
50 55 60
Ser Gly Ser Arg 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 Val Ser Val Pro Tyr
85 90 95

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100 105

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ccaggcaagg ggctggagtg ggtgacattc atatggtctg atggaagtaa taaatattat 180
ttagactccg tgaagggccg attcaccatc tccagagaca attccaagaa cacactgtat 240
ctgcaaatga acagcctgag agccgaggac acggctgtat attactgtgc gagaagtgga 300
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            20   25   30
Gly Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35   40   45
Thr Phe Ile Trp Ser Asp Gly Ser Asn Lys Tyr Tyr Leu Asp Ser Val
    50   55   60
Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
65   70   75   80
Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
                85   90   95
Ala Arg Ser Gly Leu Ala Ser Tyr Tyr Tyr Tyr Gly Met Asp Val Trp
            100   105   110
Gly Gln Gly Thr Thr Val Thr Val Ser Ser
        115   120

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<400> 19
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<400> 20
Gly Phe Thr Phe Asn Ser Tyr Gly
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<210> 21
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<400> 21
atatggtctg atggaagtaa taaa 24

<210> 22
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<400> 22
Ile Trp Ser Asp Gly Ser Asn Lys
1 5

<210> 23
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<400> 23

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<400> 24
Ala Arg Ser Gly Leu Ala Ser Tyr Tyr Tyr Tyr Gly Met Asp Val
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<210> 25
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atcacttgcc gggcaagtca gggcattaga aatgatttag gctggtatca gcagaaacca 120
gggaaagccc ctaagcgcct gatctatggt gcatccagtt tgcaaagtgg ggtcccgtca 180
aggttcagcg gcagtggatc tgggacagaa ttcactctca caatcagcag cctgcagcct 240
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Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Gly Ile Arg Asn Asp
            20   25   30
Leu Gly Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Arg Leu Ile
        35   40   45
Tyr Gly Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
    50   55   60
Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
65   70   75   80
Glu Asp Phe Ala Thr Tyr Ser 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

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<210> 28
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<400> 28
Gln Gly Ile Arg Asn Asp
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<210> 29
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<212> DNA
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<220>
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<400> 29
ggtgcatcc 9

<210> 30
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<400> 30
Gly Ala Ser
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<210> 31
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<400> 31
ctacagcata atagttaccc gtggacg 27

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<400> 32
Leu Gln His Asn Ser Tyr Pro Trp Thr
 1   5

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ccaggcaagg ggctggagtg ggtggtattt ctatggtatg atggaagtaa taaacactat 180
gcagactccg tgaagggccg attcaccatc tccagagaca attccaagaa cacattgtat 240
ttgcaaatga atagtctgag agccgaggac acggctgtat attactgtgc gagaagtgga 300
ctagcctcct attattatta cagtatggac gtctggggcc aagggaccac ggtcaccgtc 360
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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
Val Phe Leu Trp Tyr Asp Gly Ser Asn Lys His Tyr Ala Asp Ser Val
    50   55   60
Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
65   70   75   80
Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
                85   90   95
Ala Arg Ser Gly Leu Ala Ser Tyr Tyr Tyr Tyr Ser Met Asp Val Trp
            100   105   110
Gly Gln Gly Thr Thr Val Thr Val Ser Ser
        115   120

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<400> 35
ggattcacct tcagtagtta tggc 24

<210> 36
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<220>
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<400> 36
Gly Phe Thr Phe Ser Ser Tyr Gly
1 5

<210> 37
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<400> 37
ctatggtatg atggaagtaa taaa 24

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<400> 38
Leu Trp Tyr Asp Gly Ser Asn Lys
1 5

<210> 39
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<212> DNA
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<400> 39
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<210> 40
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<220>
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<400> 40
Ala Arg Ser Gly Leu Ala Ser Tyr Tyr Tyr Tyr Ser Met Asp Val
 1   5   10   15

<210> 41
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atcacttgcc gggcaagtca gggcattaga aatgatttag cctggtatca gcagaaacca 120
gggaaagccc ctaagcgcct gatctatggt gcatccagtt tacacagtgg ggtcccatca 180
aggttcagcg gcagtggatc tgggacagaa ttcactctca caatcagcag cctgcagcct 240
gaagattttg caacttattc ctgtctacag cataatagtt acccgtggac gttcggccaa 300
gggaccaagg tggaaatcaa a   321

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<400> 42
Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
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Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Gly Ile Arg Asn Asp
            20   25   30
Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Arg Leu Ile
        35   40   45
Tyr Gly Ala Ser Ser Leu His Ser Gly Val Pro Ser Arg Phe Ser Gly
    50   55   60
Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
65   70   75   80
Glu Asp Phe Ala Thr Tyr Ser 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> 43
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<400> 43
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<400> 44
Gln Gly Ile Arg Asn Asp
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<210> 45
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<212> DNA
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<220>
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<400> 45
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<210> 46
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<400> 46
Gly Ala Ser
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<210> 47
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<212> DNA
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<400> 47
ctacagcata atagttaccc gtggacg   27

<210> 48
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<400> 48
Leu Gln His Asn Ser Tyr Pro Trp Thr

1 5

<210> 49
<211> 354
<212> DNA
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<400> 49
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tcctgcaagg cttctggata caccctcacc ggctattatc tacactgggt gcgacaggcc 120
cctggacaag ggcttgagtg gatgggatgg atcaacccta ccagtggtgg cacaaactat 180
gcacagaagt ttcagggcag ggtcaccatg accagggaca cgtccatcag tgcagccttc 240
atggagctga gtaggctgag atctgacgac acggccgtgt atcactgtgc gagagaattt 300
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<212> PRT
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<400> 50
Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
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Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Leu Thr Gly Tyr
20 25 30
Tyr Leu His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
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 Ala Ala Phe
65 70 75 80
Met Glu Leu Ser Arg Leu Arg Ser Asp Asp Thr Ala Val Tyr His Cys
85 90 95
Ala Arg Glu Phe Trp Pro His Gly Met Asp Val Trp Gly Gln Gly Thr
100 105 110
Thr Val Thr Val Ser Ser
115

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<400> 51
ggatacaccc tcaccggcta ttat 24

<210> 52
<211> 8

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<220>
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<400> 52
Gly Tyr Thr Leu Thr Gly Tyr Tyr
 1   5

<210> 53
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<400> 53
atcaacccta ccagtggtgg caca   24

<210> 54
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<400> 54
Ile Asn Pro Thr Ser Gly Gly Thr
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<210> 55
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<400> 55
gcgagagaat tttggcccca cggtatggac gtc   33

<210> 56
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<400> 56
Ala Arg Glu Phe Trp Pro His Gly Met Asp Val
 1   5   10

<210> 57
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<400> 57
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gggaaagccc ctaagctcct gatctatgct tcatccagtt tacaaagtgg ggtcccttca 180
aggttcagcg gcagtggatc tggcacagat ttcactctca ccatcagcag cctgcagcct 240
gaagattttg caacttatta ctgtcttgca gattacaaat acacgtggac gttcggccaa 300
gggaccaagg tggaaatcaa a 321

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<220>
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<400> 58
Ala Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
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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 Leu Leu Ile
        35   40   45
Tyr Ala Ser 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 Leu Ala Asp Tyr Lys Tyr Thr Trp
                85   90   95
Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
            100   105

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

<220>
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<400> 59
caggccatta gaaatgat 18

<210> 60
<211> 6
<212> PRT
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<220>
<223> Synthetic

<400> 60
Gln Ala Ile Arg Asn Asp
 1   5

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

<220>
<223> Synthetic

<400> 61
gcttcatcc   9

<210> 62
<211> 3
<212> PRT
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<220>
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<400> 62
Ala Ser Ser
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<210> 63
<211> 27
<212> DNA
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<220>
<223> Synthetic

<400> 63
cttgcagatt acaaatacac gtggacg   27

<210> 64
<211> 9
<212> PRT
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<220>
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<400> 64
Leu Ala Asp Tyr Lys Tyr Thr Trp Thr
 1   5

<210> 65
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<220>
<223> Synthetic

<400> 65
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tcctgtgaag cctctggatt cacacttagc agccatgtca tgagctgggt ccgccaggtt 120
ccaggcaagg ggctggagtg ggtctcacgt atcagtggtc ctggtggtag tacaaagtat 180
gcggactccg tgcagggccg gttcaccacc tccagagaca actccaagaa caccctgtat 240
ctacaaatga acagcctgat agccgaggac tcggccgcat attactgtgc gaaaggggggg 300
ggatatagtg gctacgattg ggacttttat tacggtatgg acgtctgggg ccaagggacc 360
acggtcaccg tctcctca 378

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<220>
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<400> 66
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val His Pro Gly Gly
 1   5   10   15
Ser Leu Arg Leu Ser Cys Glu Ala Ser Gly Phe Thr Leu Ser Ser His
            20   25   30
Val Met Ser Trp Val Arg Gln Val Pro Gly Lys Gly Leu Glu Trp Val
        35   40   45
Ser Arg Ile Ser Gly Pro Gly Gly Ser Thr Lys Tyr Ala Asp Ser Val
    50   55   60
Gln Gly Arg Phe Thr Thr Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
65   70   75   80
Leu Gln Met Asn Ser Leu Ile Ala Glu Asp Ser Ala Ala Tyr Tyr Cys
                85   90   95
Ala Lys Gly Gly Gly Tyr Ser Gly Tyr Asp Trp Asp Phe Tyr Tyr Gly
            100   105   110
Met Asp Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser
        115   120   125

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<220>
<223> Synthetic

<400> 67
ggattcacac ttagcagcca tgtc 24

<210> 68
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<400> 68

Gly Phe Thr Leu Ser Ser His Val
1 5

<210> 69
<211> 24
<212> DNA
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<220>
<223> Synthetic

<400> 69
atcagtggtc ctggtggtag taca 24

<210> 70
<211> 8
<212> PRT
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<220>
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<400> 70
Ile Ser Gly Pro Gly Gly Ser Thr
1 5

<210> 71
<211> 57
<212> DNA
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<220>
<223> Synthetic

<400> 71
gcgaaagggg ggggatatag tggctacgat tgggactttt attacggtat ggacgtc 57

<210> 72
<211> 19
<212> PRT
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<220>
<223> Synthetic

<400> 72
Ala Lys Gly Gly Gly Tyr Ser Gly Tyr Asp Trp Asp Phe Tyr Tyr Gly
1 5 10 15
Met Asp Val

<210> 73
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atcacttgtc gggcgagtca gggtattagc agctggttag cctggtatca gcagaaacca 120
gggaaagccc ctaagctcct gatctatgct gcatccagtt tgcaaagtgg ggtcccatca 180
aggttcagcg gcagtggatc tgggacagat ttcactctca ccatcagcag cctgcagcct 240
gaagattttg caacttacta ttgtcaacag actaacagtt tccctctcac tttcggcgga 300
gggaccaaag tggatatcaa a 321

<210> 74
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

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

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

<220>
<223> Synthetic

<400> 75
cagggtatta gcagctgg 18

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

<220>
<223> Synthetic

<400> 76
Gln Gly Ile Ser Ser Trp
 1   5

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

<220>
<223> Synthetic

<400> 77
gctgcatcc 9

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

<220>
<223> Synthetic

<400> 78
Ala Ala Ser
 1

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

<220>
<223> Synthetic

<400> 79
caacagacta acagtttccc tctcact 27

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

<220>
<223> Synthetic

<400> 80
Gln Gln Thr Asn Ser Phe Pro Leu Thr
 1   5

<210> 81
<211> 366
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 81
caggtgcagc tggtgcagtc tggggctgag gtgaagaagt ctgggtcctc ggtgaaggtc 60

tcctgcaagg cttctggagg caccttcagc agctatgcta tcagctgggt gcgacaggcc 120
ccgggacaag ggcttgagtg gatgggaggg atcatcccta tctttggtac aggaaattac 180
gcacagaagt tccagggcag agtcacgatt accacggacg aatccacgag cacagcctat 240
atggagctga gcagcctgag atctgaggac acggccgtgt attattgtgc gagagatagc 300
agctcgtccc cgaggtacta cggtatggac gtctggggcc acgggaccac ggtcaccgtc 360
tcctca 366

<210> 82
<211> 122
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

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

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

<220>
<223> Synthetic

<400> 83
ggaggcacct tcagcagcta tgct 24

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

<220>
<223> Synthetic

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

<210> 85

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

<220>
<223> Synthetic

<400> 85
atcatcccta tctttggtac agga 24

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

<220>
<223> Synthetic

<400> 86
Ile Ile Pro Ile Phe Gly Thr Gly
 1 5

<210> 87
<211> 45
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 87
gcgagagata gcagctcgtc cccgaggtac tacggtatgg acgtc 45

<210> 88
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 88
Ala Arg Asp Ser Ser Ser Ser Pro Arg Tyr Tyr Gly Met Asp Val
 1 5 10 15

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

<220>
<223> Synthetic

<400> 89
gaaattgtgt tgacacagtc tccagccacc ctgtctttgt ctccagggga aagagccacc 60
ctctcctgca gggccagtca gagtgttacc agctacttag cctggtacca acagaaacct 120
ggccaggctc ccaggctcct catctatgat gtatccaaga gggccactgg catcccagcc 180

aggttcagtg gcagtgggtc tgggacagac ttcactctca ccatcagcag cctagagcct 240
gaagattttg caacttatta ttgtcagcag cgtagcaact ggcctcccac cttcggccaa 300
gggacacgac tggagattaa a 321

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

<220>
<223> Synthetic

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

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

<220>
<223> Synthetic

<400> 91
cagagtgtta ccagctac 18

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

<220>
<223> Synthetic

<400> 92
Gln Ser Val Thr Ser Tyr
1 5

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

<220>

<223> Synthetic

<400> 93
gatgtatcc 9

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

<220>
<223> Synthetic

<400> 94
Asp Val Ser
1

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

<220>
<223> Synthetic

<400> 95
cagcagcgta gcaactggcc tcccacc 27

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

<220>
<223> Synthetic

<400> 96
Gln Gln Arg Ser Asn Trp Pro Pro Thr
1 5

<210> 97
<211> 375
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 97
gaggtgcagc tggtggagtc tgggggaggc ttggtccagc ctgggggggtc cctgagactc 60
tcctgtgaag cctctggatt cacctttagt acctattgga tgagttgggt ccgccaggct 120
ccagggaagg ggctagagtg ggtggccaac ataaaacaag atggaagtgt gaaatacttt 180
gtggactctg tgaagggccg attcaccgtc tccagagaca acgccaagaa ctccctgtat 240
ctgcaaatga acagcctgag agccgaggac acggctctgt atcactgtgc gagagagagg 300
cacagaggga gctactacgg ctactacgac ggtatggacg tctggggcca agggaccacg 360
gtcaccgtct cctca 375

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

<220>
<223> Synthetic

<400> 98
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 Glu Ala Ser Gly Phe Thr Phe Ser Thr 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 Val Lys Tyr Phe Val Asp Ser Val
    50   55   60
Lys Gly Arg Phe Thr Val Ser Arg Asp Asn Ala Lys Asn Ser Leu Tyr
65   70   75   80
Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Leu Tyr His Cys
                85   90   95
Ala Arg Glu Arg His Arg Gly Ser Tyr Tyr Gly Tyr Tyr Asp Gly Met
            100   105   110
Asp Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser
        115   120   125

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

<220>
<223> Synthetic

<400> 99
ggattcacct ttagtaccta ttgg   24

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

<220>
<223> Synthetic

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

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

<220>
<223> Synthetic

<400> 101
ataaaacaag atggaagtgt gaaa 24

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

<220>
<223> Synthetic

<400> 102
Ile Lys Gln Asp Gly Ser Val Lys
 1 5

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

<220>
<223> Synthetic

<400> 103
gcgagagaga ggcacagagg gagctactac ggctactacg acggtatgga cgtc 54

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

<220>
<223> Synthetic

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

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

<220>
<223> Synthetic

<400> 105
gacatccaga tgacccagtc tccatcctcc ctgtctgcat ctgtaggaga cagagtcacc 60
atcacttgcc gggcaagtca aaacattgac atctatttaa attggtatca ggagaggcca 120
gggaaagccc ctaatctcct gatctatgct gcatccagtt tgcaaagtgg ggtcccatca 180
aggttcagtg gcagtggatc tgggacagat ttcactctca ccatcagtag tctgcaacct 240
gaagattttg caacttacta ctgtcaacag agttacaata ccccgttcac tttcggcggc 300
gggaccaagg tggagatcaa 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 Asn Ile Asp Ile Tyr
            20   25   30
Leu Asn Trp Tyr Gln Glu Arg Pro Gly Lys Ala Pro Asn Leu Leu Ile
        35   40   45
Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe 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 Asn Thr Pro Phe
                85   90   95
Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
            100   105

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

<220>
<223> Synthetic

<400> 107
caaaacattg acatctat   18

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

<220>
<223> Synthetic

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

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

<220>
<223> Synthetic

<400> 109
gctgcatcc   9

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

<220>
<223> Synthetic

<400> 110
Ala Ala Ser
 1

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

<220>
<223> Synthetic

<400> 111
caacagagtt acaatacccc gttcact 27

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

<220>
<223> Synthetic

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

<210> 113
<211> 369
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 113
gaagtgcagc tggtggagtc tgggggaggc ttggtacagc ctggcaggtc cctgagactc 60
tcctgtgcag cctctggatt cacctttgat gattatgcca tgcactgggt ccggcaaact 120
ccagggaagg gcctggagtg gatctcaggt attagttgga gtagtggtac catagtctat 180
gcagactctg tgaagggccg cttcaccatc tccagagaca acgccaagaa ctccctgtat 240
ctgcaaatga acagtctgag aggtgaggac acggccttgt atcactgtgc aaaagatggg 300
tataggtgga agtcctactc gtacggtttg gacgtctggg gccaagggac cacggtcacc 360
gtctcctca 369

<210> 114
<211> 123
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

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

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

<220>
<223> Synthetic

<400> 115
ggattcacct ttgatgatta tgcc   24

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

<220>
<223> Synthetic

<400> 116
Gly Phe Thr Phe Asp Asp Tyr Ala
 1   5

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

<220>
<223> Synthetic

<400> 117
attagttgga gtagtggtac cata   24

<210> 118
<211> 8

<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 118
Ile Ser Trp Ser Ser Gly Thr Ile
 1   5

<210> 119
<211> 48
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 119
gcaaaagatg ggtataggtg gaagtcctac tcgtacggtt tggacgtc   48

<210> 120
<211> 16
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 120
Ala Lys Asp Gly Tyr Arg Trp Lys Ser Tyr Ser Tyr Gly Leu Asp Val
 1   5   10   15

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

<220>
<223> Synthetic

<400> 121
gaaatagtga tgacgcagtc tccagccacc ctctctttgt ctccagggga aagagccacc 60
ctctcctgca ggcccagtca gagtgttatc aataacttag cctggtacca gcagaaacct 120
ggccaggctc ccagactcct catctttggt gcatcctcca gggccactgg tatcccagcc 180
agattcagtg gcagtgggtc tgggacagag tttactctca ccatcagcag cctgcagtct 240
gaagattttg cactttatta ctgtcagcag tataataact ggccgctcac cttcggcgga 300
gggaccaagg tggagatcaa a   321

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

<220>
<223> Synthetic

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

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

<220>
<223> Synthetic

<400> 123
cagagtgtta tcaataac   18

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

<220>
<223> Synthetic

<400> 124
Gln Ser Val Ile Asn Asn
 1   5

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

<220>
<223> Synthetic

<400> 125
ggtgcatcc   9

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

<220>
<223> Synthetic

<400> 126
Gly Ala Ser
 1

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

<220>
<223> Synthetic

<400> 127
cagcagtata ataactggcc gctcacc 27

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

<220>
<223> Synthetic

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

<210> 129
<211> 369
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 129
gaagtgcagc tggtggagtc tgggggagac ttggtacagc ctggcaggtc cctgagactc 60
tcctgtgtag cctctggatt cacctttgat gattatgcca tgcactgggt ccggcaagct 120
ccagggaagg gcctggagtg ggtctcaggt gttagttgga gtggtagtac cgtaggctat 180
gcggactctg tgaagggccg attcaccgtc tccagagaca acgcccagaa atccctgtat 240
ctacaaatga acagtctgag agctgaggac acggccttgt attactgtgt aaaagacgcg 300
tataaatgga actactacta ctacggtttg gacgtctggg gccaagggac cacggtcacc 360
gtctcctca 369

<210> 130
<211> 123
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 130
Glu Val Gln Leu Val Glu Ser Gly Gly Asp Leu Val Gln Pro Gly Arg
 1   5   10   15
Ser Leu Arg Leu Ser Cys Val Ala Ser Gly Phe Thr Phe Asp Asp Tyr

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

<220>
<223> Synthetic

<400> 131
ggattcacct ttgatgatta tgcc 24

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

<220>
<223> Synthetic

<400> 132
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Gly Phe Thr Phe Asp Asp Tyr Ala
 1               5
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<210> 133
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 133
gttagttgga gtggtagtac cgta 24

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

<220>
<223> Synthetic

<400> 134

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Val Ser Trp Ser Gly Ser Thr Val
 1               5


<210> 135
<211> 48
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 135
gtaaaagacg cgtataaatg gaactactac tactacggtt tggacgtc                48

<210> 136
<211> 16
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 136
Val Lys Asp Ala Tyr Lys Trp Asn Tyr Tyr Tyr Tyr Gly Leu Asp Val
 1               5                  10                  15


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

<220>
<223> Synthetic

<400> 137
gaaatagtga tgacgcagtc tccagccacc ctgtctgtgt ctccagggga aagagccacc 60
ctctcctgca gggccagtca gactattctc agcaacttag cctggtacct acagaaacct 120
ggccaggctc ccaggctcct catctatggt gcatccacca gggccactgg tctcccagcc 180
aggttcagtg gcagtgggtc tgggacagag ttcactctca ccatcagcag cctgcagtct 240
gaagattttg cagtttatta ctgtcagcag tataataact ggcctctcac tttcggcgga 300
gggaccaagg tggagatcaa a                                           321

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

<220>
<223> Synthetic

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


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

<220>
<223> Synthetic

<400> 139
cagactattc tcagcaac                                                  18

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

<220>
<223> Synthetic

<400> 140
Gln Thr Ile Leu Ser Asn
 1               5


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

<220>
<223> Synthetic

<400> 141
ggtgcatcc                                                            9

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

<220>
<223> Synthetic

<400> 142
Gly Ala Ser
 1


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

<220>
<223> Synthetic

<400> 143
cagcagtata ataactggcc tctcact 27

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

<220>
<223> Synthetic

<400> 144
Gln Gln Tyr Asn Asn Trp Pro Leu Thr
1 5

<210> 145
<211> 369
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 145
gaggtgcagc tggtggagtc tgggggaggc ttggtacagc ctgggggtc cctgagactc 60
tcctgtggag cctctggatt cacctttagg gactttgaca tgaattgggt ccgtcaggct 120
ccagggaggg ggctggagtg ggtctcaggt attggtggta gtggtggtaa cacatattac 180
gcagactccg tgaagggccg gttcaccata tccagggaca attccaaaaa cacgctgttt 240
ctgcaaatga gcagcctgag agccgaggac acggccgttt attactgtgt gaaagatccc 300
tatggtgact ataggaacta ctacggtatg gacgtctggg gccaagggac cacggtcacc 360
gtctcctca 369

<210> 146
<211> 123
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

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

```
Leu Gln Met Ser Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
                85                  90                  95
Val Lys Asp Pro Tyr Gly Asp Tyr Arg Asn Tyr Tyr Gly Met Asp Val
            100                 105                 110
Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser
        115                 120
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<210> 147
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 147
ggattcacct ttagggactt tgac 24

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

<220>
<223> Synthetic

<400> 148
```
Gly Phe Thr Phe Arg Asp Phe Asp
 1               5
```

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

<220>
<223> Synthetic

<400> 149
attggtggta gtggtggtaa caca 24

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

<220>
<223> Synthetic

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

<210> 151
<211> 48
<212> DNA

<213> Artificial Sequence

<220>
<223> Synthetic

<400> 151
gtgaaagatc cctatggtga ctataggaac tactacggta tggacgtc 48

<210> 152
<211> 16
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 152
Val Lys Asp Pro Tyr Gly Asp Tyr Arg Asn Tyr Tyr Gly Met Asp Val
 1   5   10   15

<210> 153
<211> 333
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 153
gatattgtga tgactcagtc tccactctcc ctgcccgtca cccctggaga gccggcctcc 60
atctcctgca ggtctagtca gagcctccta catagtaatg gatacaacta tttggattgg 120
tacctgcaga agccagggca gtctccacaa ctcctgatct atttgggttc taatcgggcc 180
tccggggtcc ctgacaggtt caggggcagt ggatcagaca aggactttac actgaaaatc 240
agcagagtgg gggctgagga tgttggggtt tattactgca tgcaagctct acaaactatc 300
accttcggcc aagggacacg actggagatt aaa 333

<210> 154
<211> 111
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

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

100 105 110

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

<220>
<223> Synthetic

<400> 155
cagagcctcc tacatagtaa tggatacaac tat 33

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

<220>
<223> Synthetic

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

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

<220>
<223> Synthetic

<400> 157
ttgggttct 9

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

<220>
<223> Synthetic

<400> 158
Leu Gly Ser
1

<210> 159
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 159
atgcaagctc tacaaactat cacc 24

<210> 160
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 160
Met Gln Ala Leu Gln Thr Ile Thr
 1 5

<210> 161
<211> 369
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 161
gaggtgcagc tggtggagtc tgggggaggc ttgggacagc ctgggggtc cctgagactc 60
tcctgtggag cctctggatt catgtttaga aactatgcca tgagttgggt ccgccaggct 120
ccagggaagg ggctggagtg ggtctcaact attcttgata gtggtgataa cacatattac 180
gcagactccg tgaagggccg gttcaccatc tccagggaca attccaagaa cacactgtat 240
ctgcaaatga acagcctgag agccgaggac acggccgttt attactgtgc gaaagatccc 300
tatggtgact acagggacta ctacggtatg gacgtctggg gccaagggac cacggtcacc 360
gtctcctca 369

<210> 162
<211> 123
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

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

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

<220>
<223> Synthetic

<400> 163
ggattcatgt ttagaaacta tgcc 24

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

<220>
<223> Synthetic

<400> 164
Gly Phe Met Phe Arg Asn Tyr Ala
1 5

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

<220>
<223> Synthetic

<400> 165
attcttgata gtggtgataa caca 24

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

<220>
<223> Synthetic

<400> 166
Ile Leu Asp Ser Gly Asp Asn Thr
1 5

<210> 167
<211> 48
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 167
gcgaaagatc cctatggtga ctacagggac tactacggta tggacgtc 48

<210> 168
<211> 16
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 168
Ala Lys Asp Pro Tyr Gly Asp Tyr Arg Asp Tyr Tyr Gly Met Asp Val
 1   5   10   15

<210> 169
<211> 333
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 169
gatattgtga tgactcagtc tccactctcc ctgcccgtca cccctggaga gccggcctcc 60
atctcctgca ggtctagtca gagcctccta catagtaatg gatacaacta tttggattgg 120
tacctgcaga agccagggca gtctccgcaa ctcctgatct atttgggttc taatcgggcc 180
tccggggtcc ctgacaggtt caggggcagt ggatcaggca aagactttac actgaaaatc 240
agcagagtgg aggctgagga tgttggactt tattactgca tgcaagctct acaaactatc 300
accttcggcc aagggacacg actggagatt aaa   333

<210> 170
<211> 111
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

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

<210> 171
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 171
cagagcctcc tacatagtaa tggatacaac tat 33

<210> 172
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 172
Gln Ser Leu Leu His Ser Asn Gly Tyr Asn Tyr
1 5 10

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

<220>
<223> Synthetic

<400> 173
ttgggttct 9

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

<220>
<223> Synthetic

<400> 174
Leu Gly Ser
1

<210> 175
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 175
atgcaagctc tacaaactat cacc 24

<210> 176
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 176
Met Gln Ala Leu Gln Thr Ile Thr
 1   5

<210> 177
<211> 384
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 177
caggtgcagc tgcaggagtc gggcccagga ctggtgaagc cttcggagac cctgtccctc 60
acctgcactg tctctggtgg ctccatcagt ggttactact ggacctggat ccggcagccc 120
ccagggaagg gactggagtg gattggatat atctattaca gtggggccac caactacaac 180
ccctccctca agagtcgagt caccatatca ttagacacgt ccaagaacca gttctccctg 240
aaactgagct ctgtgaccgc tgcggacacg gccgtgtatt attgtgcgag agatgggaat 300
tacgatattt tgactggtta ttataactac cactattacg gcatggacgt ctggggccaa 360
gggaccacgg tcaccgtctc ctca   384

<210> 178
<211> 128
<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 Glu
 1   5   10   15
Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Gly Ser Ile Ser Gly Tyr
            20   25   30
Tyr Trp Thr Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp Ile
        35   40   45
Gly Tyr Ile Tyr Tyr Ser Gly Ala Thr Asn Tyr Asn Pro Ser Leu Lys
    50   55   60
Ser Arg Val Thr Ile Ser Leu 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 Asp Gly Asn Tyr Asp Ile Leu Thr Gly Tyr Tyr Asn Tyr His Tyr
            100   105   110
Tyr Gly Met Asp Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser
        115   120   125

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

<220>

<223> Synthetic

<400> 179
ggtggctcca tcagtggtta ctac 24

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

<220>
<223> Synthetic

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

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

<220>
<223> Synthetic

<400> 181
atctattaca gtggggccac c 21

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

<220>
<223> Synthetic

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

<210> 183
<211> 66
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 183
gcgagagatg ggaattacga tattttgact ggttattata actaccacta ttacggcatg 60
gacgtc 66

<210> 184
<211> 22
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 184
Ala Arg Asp Gly Asn Tyr Asp Ile Leu Thr Gly Tyr Tyr Asn Tyr His
 1   5   10   15
Tyr Tyr Gly Met Asp Val
            20

<210> 185
<211> 321
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 185
gacatccaga tgacccagtc tccatcctca ctgtctgcat ctgtaggaga cagagtcacc 60
atcacttgtc gggcgagtca ggacattggt aattatttag cctggtttca gcagaaacca 120
gggaaagccc ctgagtccct gatctatgct gcatccattt tacaaagtgg ggtcccatca 180
aagttcagcg gcagtggatc tgggacagat ttcactctca ccatcagcag cctgcagcct 240
gaagattttg caacttatta ctgccaacag tataatactt tcccgtggac gttcggccaa 300
gggaccaagg tggaaatcaa a   321

<210> 186
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

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

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

<220>
<223> Synthetic

<400> 187
caggacattg gtaattat 18

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

<220>
<223> Synthetic

<400> 188
Gln Asp Ile Gly Asn Tyr
 1   5

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

<220>
<223> Synthetic

<400> 189
gctgcatcc 9

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

<220>
<223> Synthetic

<400> 190
Ala Ala Ser
 1

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

<220>
<223> Synthetic

<400> 191
caacagtata atactttccc gtggacg 27

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

<220>
<223> Synthetic

<400> 192
Gln Gln Tyr Asn Thr Phe Pro Trp Thr
 1   5

<210> 193
<211> 366
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 193
caggtgcagc tggtggagtc tgggggaggc ttggtcaagc ctggagggtc cctgaggctc 60
tcctgtgcag cctctggatt caccttcagt gactactaca tgacctggat ccgtcaggct 120
ccagggaggg ggctggagtg ggtttcatac attagtgata ctggcagtca cttatactac 180
gcagactctg tgaggggccg attcaccatc tccagggaca acgccaaaaa ctcactgtat 240
ctgcaaatga acaacctgag agccgaggac acggccgtat attactgtgc gcgagatcag 300
gatggggaaa tggaactacg tttctttgac tactggggcc agggaaccct ggtcaccgtc 360
tcctca   366

<210> 194
<211> 122
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 194
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 Thr Trp Ile Arg Gln Ala Pro Gly Arg Gly Leu Glu Trp Val
        35   40   45
Ser Tyr Ile Ser Asp Thr Gly Ser His Leu Tyr Tyr Ala Asp Ser Val
    50   55   60
Arg Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Ser Leu Tyr
65   70   75   80
Leu Gln Met Asn Asn Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
                85   90   95
Ala Arg Asp Gln Asp Gly Glu Met Glu Leu Arg Phe Phe Asp Tyr Trp
            100   105   110
Gly Gln 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 tcagtgacta ctac   24

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

<220>
<223> Synthetic

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

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

<220>
<223> Synthetic

<400> 197
attagtgata ctggcagtca ctta   24

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

<220>
<223> Synthetic

<400> 198
Ile Ser Asp Thr Gly Ser His Leu
 1   5

<210> 199
<211> 45
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 199
gcgcgagatc aggatgggga aatggaacta cgtttctttg actac   45

<210> 200
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 200
Ala Arg Asp Gln Asp Gly Glu Met Glu Leu Arg Phe Phe Asp Tyr

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 1               5                  10                  15
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<210> 201
<211> 321
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 201
gaaatagtgt tgacgcagtc tccagccact ctgtctttgt ctccagggga aagaggcacc 60
ctctcctgca gggccagtca gagtattaac aactacttag cctggtacca gcagaaacct 120
ggccaggctc ccaggctcct catctttgat gcatccaaca gggccactgg catcccagcc 180
aggttcagtg gcagtgggtc tgggacagac ttcactctca ccatcagcag aatagagcct 240
gaagattttg cagtttatta ctgtcagcag cgtaccaact ggccgctcac tttcggcgga 300
gggaccaagg tggagatcaa a   321

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

<220>
<223> Synthetic

<400> 202
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Glu Ile Val Leu Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly
 1               5                  10                  15
Glu Arg Gly Thr Leu Ser Cys Arg Ala Ser Gln Ser Ile Asn Asn Tyr
            20                  25                  30
Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile
        35                  40                  45
Phe Asp Ala Ser Asn Arg Ala Thr Gly Ile Pro Ala Arg Phe Ser Gly
    50                  55                  60
Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Ile Glu Pro
65                  70                  75                  80
Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Arg Thr Asn Trp Pro Leu
                85                  90                  95
Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
            100                 105
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<210> 203
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 203
cagagtatta acaactac   18

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

<220>
<223> Synthetic

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

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

<220>
<223> Synthetic

<400> 205
gatgcatcc   9

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

<220>
<223> Synthetic

<400> 206
Asp Ala Ser
 1

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

<220>
<223> Synthetic

<400> 207
cagcagcgta ccaactggcc gctcact   27

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

<220>
<223> Synthetic

<400> 208
Gln Gln Arg Thr Asn Trp Pro Leu Thr
 1   5

<210> 209
<211> 381

<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 209
caggtgcagc tgcaggagtc gggcccagga ctggtgaagc cttcggagac cctgtccctc 60
acctgcactg tctctggtgg cttcatcagt aattactact ggagctggat ccggcagccc 120
ccagggaagg gactggagtg gattggatat atctattata gtgggagcac caagtacaac 180
ccctccctca agagtcgagt caccatatca gtagacacgt ccaagaacca gttctccctg 240
aagctgagct ctgtgagcgc tgcggacacg gccgtgtatt actgtgcgag agatggggtt 300
gtagcagcag ctggtccccc ttaccactac cactacggtt tggacgtctg gggccaaggg 360
accacggtca ccgtctcctc a 381

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

<220>
<223> Synthetic

<400> 210
Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Glu
 1   5   10   15
Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Gly Phe Ile Ser Asn Tyr
            20   25   30
Tyr Trp Ser Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp Ile
        35   40   45
Gly Tyr Ile Tyr Tyr Ser Gly Ser Thr Lys 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 Ser Ser Val Ser Ala Ala Asp Thr Ala Val Tyr Tyr Cys Ala
                85   90   95
Arg Asp Gly Val Val Ala Ala Ala Gly Pro Pro Tyr His Tyr His Tyr
            100   105   110
Gly Leu Asp Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser
        115   120   125

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

<220>
<223> Synthetic

<400> 211
ggtggcttca tcagtaatta ctac 24

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

<220>

<223> Synthetic

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

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

<220>
<223> Synthetic

<400> 213
atctattata gtgggagcac c   21

<210> 214
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

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

<210> 215
<211> 63
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 215
gcgagagatg gggttgtagc agcagctggt ccccccttacc actaccacta cggtttggac 60
gtc   63

<210> 216
<211> 21
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 216
Ala Arg Asp Gly Val Val Ala Ala Ala Gly Pro Pro Tyr His Tyr His
 1   5   10   15
Tyr Gly Leu Asp Val
            20

<210> 217

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

<220>
<223> Synthetic

<400> 217
gacatcgtga tgacccagtc tccagactcc ctggctgtgt ctctgggcga gagggccacc 60
atcaactgca agtccagcca gaatctttta tacacctcca gcaataagaa ctccttagct 120
tggtaccagc agaaaccagg acagcctcct gagctgctca tttactgggc atctacccgg 180
gaatccgggg tccctgaccg attcagtggc agcgggtctg ggacagattt cattctcacc 240
atcagcagcc tgcaggctga agatgtggca gtttattact gtcagcaata ttatagtagt 300
ccgtggacgt tcggccaagg gaccaaggtg gaaatcaaa 339

<210> 218
<211> 113
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 218
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 Asn Leu Leu Tyr Thr
            20   25   30
Ser Ser Asn Lys Asn Ser Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln
        35   40   45
Pro Pro Glu 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 Ile 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 Ser Pro Trp Thr Phe Gly Gln Gly Thr Lys Val Glu Ile
            100   105   110
Lys

<210> 219
<211> 36
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 219
cagaatcttt tatacacctc cagcaataag aactcc 36

<210> 220
<211> 12
<212> PRT
<213> Artificial Sequence

<220>

<223> Synthetic

<400> 220
Gln Asn Leu Leu Tyr Thr Ser Ser Asn Lys Asn Ser
 1   5   10

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

<220>
<223> Synthetic

<400> 221
tgggcatct   9

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

<220>
<223> Synthetic

<400> 222
Trp Ala Ser
 1

<210> 223
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 223
cagcaatatt atagtagtcc gtggacg   27

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

<220>
<223> Synthetic

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

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

<220>
<223> Synthetic

<400> 225
caggtgcagc tggtggagtc tgggggaggc ttggtcaagc ctggagggtc cctgagactc 60
tcctgtgcag cctctggatt caccttcagt gactactaca tgacctggat ccgccaggtt 120
ccagggaagg gactggagtg ggtttcatat atcagtagta ctgggaataa cagatattac 180
ggagactctg tgaagggccg attcgccatc tcaagggaca acgccaagaa cttactgttt 240
ctgcaaatga acagcctgaa agccgaggac acggccgttt attactgtgc aagagagaat 300
aattggaatc cttacttctt ctactatggt atggacgtct ggggccaagg gaccacggtc 360
accgtctcct ca 372

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

<220>
<223> Synthetic

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

<210> 227
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 227
ggattcacct tcagtgacta ctac 24

<210> 228
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 228
Gly Phe Thr Phe Ser Asp Tyr Tyr
 1   5

<210> 229
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 229
atcagtagta ctgggaataa caga   24

<210> 230
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

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

<210> 231
<211> 51
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 231
gcaagagaga ataattggaa tccttacttc ttctactatg gtatggacgt c   51

<210> 232
<211> 17
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 232
Ala Arg Glu Asn Asn Trp Asn Pro Tyr Phe Phe Tyr Tyr Gly Met Asp
 1   5   10   15
Val

<210> 233
<211> 321
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 233
gacatccaga tgacccagtc tccatcttcc gtgtctgcat ctgtaggaga cagagtcacc 60
atcacttgtc gggcgagtca gggtattagc atctggttag cctggtatca gcagaaacca 120
gggaaagccc ctaaactcct gatctctgct gcgtccactt tgcaaagtgg ggtcccatca 180
aggttcagcg gcagtggatc tgggacagat ttcactctca ccatcagcag cctgcagcct 240
gaagattttg caacttacta ttgtcaacag gctaacagtt tcccgttgac gttcggccaa 300
gggaccaagg tggaaatcaa a 321

<210> 234
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

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

<210> 235
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 235
cagggtatta gcatctgg 18

<210> 236
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 236
Gln Gly Ile Ser Ile Trp
 1   5

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

<220>
<223> Synthetic

<400> 237
gctgcgtcc 9

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

<220>
<223> Synthetic

<400> 238
Ala Ala Ser
 1

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

<220>
<223> Synthetic

<400> 239
caacaggcta acagtttccc gttgacg 27

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

<220>
<223> Synthetic

<400> 240
Gln Gln Ala Asn Ser Phe Pro Leu Thr
 1   5

<210> 241
<211> 351
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 241

caggtgcagc tggtggagtc tgggggaggc gtggtccagc ctgggaggtc cctgagactc 60
tcctgtgcag cgtctggatt caccttcagt agctatggca tgcactgggt ccgccaggct 120
ccaggcaagg ggctggagtg ggtggcagtt atatattatg aaggaagtaa tgattactat 180
gtagactccg tgaagggccg attcaccatc tccagagaca attccaaaaa cacgctatat 240
ctgcaaatga acagcctgag agccgaggac acggctgtgt attactgtgc gagaagggac 300
tggaactcct ttgactattg gggccagggc accctggtca ccgtctcctc a 351

<210> 242
<211> 117
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

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

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

<220>
<223> Synthetic

<400> 243
ggattcacct tcagtagcta tggc 24

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

<220>
<223> Synthetic

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

<210> 245

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

<220>
<223> Synthetic

<400> 245
atatattatg aaggaagtaa tgat 24

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

<220>
<223> Synthetic

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

<210> 247
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 247
gcgagaaggg actggaactc ctttgactat 30

<210> 248
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 248
Ala Arg Arg Asp Trp Asn Ser Phe Asp Tyr
 1 5 10

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

<220>
<223> Synthetic

<400> 249
gatattgtga tgactcagtc tccactctcc ctgtccgtca cccctggaga gccggcctcc 60
atctcctgca ggtccagtca gaacctccta aatagaaatg gattcaacta tttggattgg 120
tatttgcaga agccagggca gtctccacag ctcctgatct atttgggttc taatcgggcc 180

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tccggggtcc ctgacaggtt cagtggcagt ggatcaggca cagattttac actgaaaatc 240
agcagagtgg aggttgagga tgttggggtt tattattgca tgcaagctat acaaactccg 300
tacacttttg gccaggggac caagctggag atcaaa                          336

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

<220>
<223> Synthetic

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


<210> 251
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 251
cagaacctcc taaatagaaa tggattcaac tat                             33

<210> 252
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 252
Gln Asn Leu Leu Asn Arg Asn Gly Phe Asn Tyr
 1               5                  10


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

<220>
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<223> Synthetic

<400> 253
ttgggttct 9

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

<220>
<223> Synthetic

<400> 254
Leu Gly Ser
1

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

<220>
<223> Synthetic

<400> 255
atgcaagcta tacaaactcc gtacact 27

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

<220>
<223> Synthetic

<400> 256
Met Gln Ala Ile Gln Thr Pro Tyr Thr
1 5

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

<220>
<223> Synthetic

<400> 257
gaagtgcagc tggtggagtc tgggggagac ttggtacagc ctggcaggtc cctgagactc 60
tcctgtgtag cctctggatt cacctttgat gattatgcca tgcactgggt ccggcaagct 120
ccagggaagg gcctggagtg ggtctcaggt gttagttgga gtggtagtac cgtaggctat 180
gcggactctg tgaagggccg attcaccgtc tccagagaca acgcccagaa atccctgtat 240
ctacaaatga acagtctgag agctgaggac acggccttgt attactgtgt aaaagacgcg 300
tataaataca actactacta ctacggtttg gacgtctggg gccaagggac cacggtcacc 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 Gly Asp Leu Val Gln Pro Gly Arg
 1   5   10   15
Ser Leu Arg Leu Ser Cys Val Ala Ser Gly Phe Thr Phe Asp Asp Tyr
            20   25   30
Ala Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35   40   45
Ser Gly Val Ser Trp Ser Gly Ser Thr Val Gly Tyr Ala Asp Ser Val
    50   55   60
Lys Gly Arg Phe Thr Val Ser Arg Asp Asn Ala Gln Lys Ser Leu Tyr
65   70   75   80
Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Leu Tyr Tyr Cys
                85   90   95
Val Lys Asp Ala Tyr Lys Tyr Asn Tyr Tyr Tyr Tyr Gly Leu Asp Val
            100   105   110
Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser
        115   120

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

<220>
<223> Synthetic

<400> 259
ggattcacct ttgatgatta tgcc   24

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

<220>
<223> Synthetic

<400> 260
Gly Phe Thr Phe Asp Asp Tyr Ala
 1   5

<210> 261
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 261
gttagttgga gtggtagtac cgta 24

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

<220>
<223> Synthetic

<400> 262
Val Ser Trp Ser Gly Ser Thr Val
1 5

<210> 263
<211> 48
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 263
gtaaaagacg cgtataaata caactactac tactacggtt tggacgtc 48

<210> 264
<211> 16
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 264
Val Lys Asp Ala Tyr Lys Tyr Asn Tyr Tyr Tyr Tyr Gly Leu Asp Val
1 5 10 15

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

<220>
<223> Synthetic

<400> 265
gaaatagtga tgacgcagtc tccagccacc ctgtctgtgt ctccagggga aagagccacc 60
ctctcctgca gggccagtca gactattctc agcaacttag cctggtacct acagaaacct 120
ggccaggctc ccaggctcct catctatggt gcatccacca gggccactgg tctcccagcc 180
aggttcagtg gcagtgggtc tgggacagag ttcactctca ccatcagcag cctgcagtct 240
gaagattttg cagtttatta ctgtcagcag tataataact ggcctctcac tttcggcgga 300
gggaccaagg tggagatcaa a 321

<210> 266
<211> 107
<212> PRT

<213> Artificial Sequence

<220>
<223> Synthetic

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

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

<220>
<223> Synthetic

<400> 267
cagactattc tcagcaac 18

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

<220>
<223> Synthetic

<400> 268
Gln Thr Ile Leu Ser Asn
 1   5

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

<220>
<223> Synthetic

<400> 269
ggtgcatcc 9

<210> 270
<211> 3

<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 270
Gly Ala Ser
 1

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

<220>
<223> Synthetic

<400> 271
cagcagtata ataactggcc tctcact 27

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

<220>
<223> Synthetic

<400> 272
Gln Gln Tyr Asn Asn Trp Pro Leu Thr
 1   5

<210> 273
<211> 369
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 273
gaagtgcagc tggtggagtc tgggggagac ttggtacagc ctggcaggtc cctgagactc 60
tcctgtgtag cctctggatt cacctttgat gattatgcca tgcactgggt ccggcaagct 120
ccagggaagg gcctggagtg ggtctcaggt gttagttgga gtggtagtac cgtaggctat 180
gcggactctg tgaagggccg attcaccgtc tccagagaca acgcccagaa atccctgtat 240
ctacaaatga acagtctgag agctgaggac acggccttgt attactgtgt aaaagacgcg 300
tataaattca actactacta ctacggtttg gacgtctggg gccaagggac cacggtcacc 360
gtctcctca 369

<210> 274
<211> 123
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

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

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

<220>
<223> Synthetic

<400> 275
ggattcacct ttgatgatta tgcc   24

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

<220>
<223> Synthetic

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

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

<220>
<223> Synthetic

<400> 277
gttagttgga gtggtagtac cgta   24

<210> 278
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 278
Val Ser Trp Ser Gly Ser Thr Val
 1   5

<210> 279
<211> 48
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 279
gtaaaagacg cgtataaatt caactactac tactacggtt tggacgtc   48

<210> 280
<211> 16
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 280
Val Lys Asp Ala Tyr Lys Phe Asn Tyr Tyr Tyr Tyr Gly Leu Asp Val
 1   5   10   15

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

<220>
<223> Synthetic

<400> 281
gaaatagtga tgacgcagtc tccagccacc ctgtctgtgt ctccagggga aagagccacc 60
ctctcctgca gggccagtca gactattctc agcaacttag cctggtacct acagaaacct 120
ggccaggctc ccaggctcct catctatggt gcatccacca gggccactgg tctcccagcc 180
aggttcagtg gcagtgggtc tgggacagag ttcactctca ccatcagcag cctgcagtct 240
gaagattttg cagtttatta ctgtcagcag tataataact ggcctctcac tttcggcgga 300
gggaccaagg tggagatcaa a   321

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

<220>
<223> Synthetic

<400> 282
Glu Ile Val Met Thr Gln Ser Pro Ala Thr Leu Ser Val Ser Pro Gly

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 1               5                  10                  15
Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Thr Ile Leu Ser Asn
            20                  25                  30
Leu Ala Trp Tyr Leu Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile
        35                  40                  45
Tyr Gly Ala Ser Thr Arg Ala Thr Gly Leu Pro Ala Arg Phe Ser Gly
    50                  55                  60
Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln Ser
65                  70                  75                  80
Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Asn Asn Trp Pro Leu
                85                  90                  95
Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
            100                 105
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<210> 283
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 283
cagactattc tcagcaac 18

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

<220>
<223> Synthetic

<400> 284
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Gln Thr Ile Leu Ser Asn
 1               5
```

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

<220>
<223> Synthetic

<400> 285
ggtgcatcc 9

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

<220>
<223> Synthetic

<400> 286

Gly Ala Ser
 1

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

<220>
<223> Synthetic

<400> 287
cagcagtata ataactggcc tctcact 27

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

<220>
<223> Synthetic

<400> 288
Gln Gln Tyr Asn Asn Trp Pro Leu Thr
 1   5

<210> 289
<211> 369
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 289
caggtgcagc tggagcagtc tggggctgag gtgaagaagc ctggggcctc agtgaggatc 60
tcctgtaagg cttctggcga caccttcacc ggctactata taaactgggt gcgccaggcc 120
cctggacaag ggcttgagtg gatgggatgg atcaatacta acagtggtgg cacatacttt 180
tcacagaaat ttcaggtcag ggtcatcctg accagggaca cgtccatcaa cacagcctac 240
atggagttga gcaggctgag atctgacgac acggccgttt attactgtgc gagaatgttt 300
tacgatattt tgactaattc tgatattttt gatatttggg gccaagggac aatggtcacc 360
gtctcttca 369

<210> 290
<211> 123
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 290
Gln Val Gln Leu Glu Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
 1   5   10   15
Ser Val Arg Ile Ser Cys Lys Ala Ser Gly Asp Thr Phe Thr Gly Tyr
            20   25   30
Tyr Ile Asn Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met

```
        35                  40                  45
Gly Trp Ile Asn Thr Asn Ser Gly Gly Thr Tyr Phe Ser Gln Lys Phe
    50                  55                  60
Gln Val Arg Val Ile Leu Thr Arg Asp Thr Ser Ile Asn 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 Met Phe Tyr Asp Ile Leu Thr Asn Ser Asp Ile Phe Asp Ile
            100                 105                 110
Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser
        115                 120
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<210> 291
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 291
ggcgacacct tcaccggcta ctat 24

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

<220>
<223> Synthetic

<400> 292
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Gly Asp Thr Phe Thr Gly Tyr Tyr
 1               5
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<210> 293
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 293
atcaatacta acagtggtgg caca 24

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

<220>
<223> Synthetic

<400> 294
```
Ile Asn Thr Asn Ser Gly Gly Thr
 1               5
```

<210> 295
<211> 48
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 295
gcgagaatgt tttacgatat tttgactaat tctgatattt ttgatatt 48

<210> 296
<211> 16
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 296
Ala Arg Met Phe Tyr Asp Ile Leu Thr Asn Ser Asp Ile Phe Asp Ile
 1   5   10   15

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

<220>
<223> Synthetic

<400> 297
gacatccaga tgacccagtc tccatcctcc ctgtctgcat ctgtaggaga cagagtcacc 60
atcacttgcc gggcaagtca ggacataaga aatgatttag gctggtatca gcagaaacca 120
gggaaagccc ctaagtgcct gatctatggt gcatccagtt tgcaaagtgg ggtcccatca 180
aggttcagcg gcagtggatc tgggacagaa ttcactctca caatcagcag cctgcagcct 240
gaagattttg caacttatta ctgtctacaa cataaaaatt acatgtacac ttttggccag 300
gggaccaagt tggagatcaa a 321

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

<220>
<223> Synthetic

<400> 298
Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
 1   5   10   15
Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Asp Ile Arg Asn Asp
            20   25   30
Leu Gly Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Cys Leu Ile
        35   40   45
Tyr Gly Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
    50   55   60

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


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

<220>
<223> Synthetic

<400> 299
caggacataa gaaatgat                                                  18

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

<220>
<223> Synthetic

<400> 300
Gln Asp Ile Arg Asn Asp
 1               5


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

<220>
<223> Synthetic

<400> 301
ggtgcatcc                                                            9

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

<220>
<223> Synthetic

<400> 302
Gly Ala Ser
 1


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

<220>
<223> Synthetic

<400> 303
ctacaacata aaaattacat gtacact 27

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

<220>
<223> Synthetic

<400> 304
Leu Gln His Lys Asn Tyr Met Tyr Thr
1 5

<210> 305
<211> 345
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 305
caggtgcagc tacagcagtg gggcgcagga ctgttgaagc cttcggagac cctgtccctc 60
acctgcgctg tctatggtgg gtccctcagt gattactact ggagctggat ccgccagccc 120
ccagggaagg ggctggagtg gattggggaa atcaatcata gtggagacac caactacgac 180
ccgtccctca agagtcgact caccatctca gtagacacgt ccaagaacca gttctccctg 240
aagctgaact ctgtgaccgc cgcggacacg gctgtgtatt actgtgcgag cctgtatttc 300
aatttttgga tgtggggtcg aggagccctg gtcaccgtct cctca 345

<210> 306
<211> 115
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 306
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 Leu Ser Asp Tyr
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 Asp Thr Asn Tyr Asp Pro Ser Leu Lys
50 55 60
Ser Arg Leu Thr Ile Ser Val Asp Thr Ser Lys Asn Gln Phe Ser Leu
65 70 75 80
Lys Leu Asn Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr Cys Ala
85 90 95
Ser Leu Tyr Phe Asn Phe Trp Met Trp Gly Arg Gly Ala Leu Val Thr

100 105 110
Val Ser Ser
115

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

<220>
<223> Synthetic

<400> 307
ggtgggtccc tcagtgatta ctac 24

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

<220>
<223> Synthetic

<400> 308
Gly Gly Ser Leu Ser Asp Tyr Tyr
1 5

<210> 309
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 309
atcaatcata gtggagacac c 21

<210> 310
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 310
Ile Asn His Ser Gly Asp Thr
1 5

<210> 311
<211> 27
<212> DNA
<213> Artificial Sequence

<220>

<223> Synthetic

<400> 311
gcgagcctgt atttcaattt ttggatg 27

<210> 312
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 312
Ala Ser Leu Tyr Phe Asn Phe Trp Met
1 5

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

<220>
<223> Synthetic

<400> 313
gatattgtga tgacccagac tccactctcc tcacctgtca ttcttggaca gccggcctcc 60
atctcctgca ggtctagtca aagcctcgta tacagtgatg gaaacaccta cttgagttgg 120
cttcagcaga ggccaggcca gcctccaaga ctcctaattt ataagatttc taaccggttc 180
tctggggtcc cagacagatt cagtggcagt gggacaggga cagatttcac actgaaaatc 240
agcagggtgg aagctgagga tgtcggaatt tattactgca tgcaaactac acaatttccg 300
ctcactttcg gcggagggac caaggtggag atcaaa 336

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

<220>
<223> Synthetic

<400> 314
Asp Ile Val Met Thr Gln Thr Pro Leu Ser Ser Pro Val Ile Leu Gly
1 5 10 15
Gln Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Val Tyr Ser
20 25 30
Asp Gly Asn Thr Tyr Leu Ser Trp Leu Gln Gln Arg Pro Gly Gln Pro
35 40 45
Pro Arg Leu Leu Ile Tyr Lys Ile Ser Asn Arg Phe Ser Gly Val Pro
50 55 60
Asp Arg Phe Ser Gly Ser Gly Thr Gly Thr Asp Phe Thr Leu Lys Ile
65 70 75 80
Ser Arg Val Glu Ala Glu Asp Val Gly Ile Tyr Tyr Cys Met Gln Thr
85 90 95
Thr Gln Phe Pro Leu Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
100 105 110

<210> 315
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 315
caaagcctcg tatacagtga tggaaacacc tac 33

<210> 316
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 316
Gln Ser Leu Val Tyr Ser Asp Gly Asn Thr Tyr
 1 5 10

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

<220>
<223> Synthetic

<400> 317
aagatttct 9

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

<220>
<223> Synthetic

<400> 318
Lys Ile Ser
 1

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

<220>
<223> Synthetic

<400> 319
atgcaaacta cacaatttcc gctcact 27

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

<220>
<223> Synthetic

<400> 320
Met Gln Thr Thr Gln Phe Pro Leu Thr
 1   5

<210> 321
<211> 369
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 321
caggtgcagt tggagcaatc tggggctgag gtgaagaagc ctgggacctc agtgaggatc 60
tcctgcaagg cttctggcga catcttcacc ggctactata tgaactgggt gcgccaggcc 120
cctggacaag ggcttgagtg gatgggatgg atcaatacta acagtggtgg cacatacttt 180
tcacagagat ttcagggcag ggtcaccctg accagggaca cgtccatcag aacagcctac 240
atggagttga gcaggctgag atctgacgac acggccgttt attactgtgc gagaatgttt 300
tacgatattt tgactggttc tgatgttttt gatatttggg gccaagggac aatggtcacc 360
gtctcttca   369

<210> 322
<211> 123
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 322
Gln Val Gln Leu Glu Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Thr
 1   5   10   15
Ser Val Arg Ile Ser Cys Lys Ala Ser Gly Asp Ile Phe Thr Gly Tyr
            20   25   30
Tyr Met Asn Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
        35   40   45
Gly Trp Ile Asn Thr Asn Ser Gly Gly Thr Tyr Phe Ser Gln Arg Phe
    50   55   60
Gln Gly Arg Val Thr Leu Thr Arg Asp Thr Ser Ile Arg 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 Met Phe Tyr Asp Ile Leu Thr Gly Ser Asp Val Phe Asp Ile
            100   105   110
Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser
        115   120

<210> 323
<211> 24

<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 323
ggcgacatct tcaccggcta ctat 24

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

<220>
<223> Synthetic

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

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

<220>
<223> Synthetic

<400> 325
atcaatacta acagtggtgg caca 24

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

<220>
<223> Synthetic

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

<210> 327
<211> 48
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 327
gcgagaatgt tttacgatat tttgactggt tctgatgttt ttgatatt 48

<210> 328
<211> 16

<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 328
Ala Arg Met Phe Tyr Asp Ile Leu Thr Gly Ser Asp Val Phe Asp Ile
 1   5   10   15

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

<220>
<223> Synthetic

<400> 329
gacatccaga tgacccagtc tccatcctcc ctgtctgcat ctgttggaga cagagtcacc 60
atcacttgcc gggcaagtca ggacataaga aatgatttag gctggtatca ccagaaacca 120
gggaaagccc ctaagtgcct gatctatggt gcatccagtt tgcaaagtgg ggtcccatct 180
aggttcagcg gcagtggatc tgggacagaa ttcactctca caatcagcag cctgcagcct 240
gaagattttg caacttatta ctgtctacaa cataaaaatt acatgtacac ttttggccag 300
gggaccaagt tggagatcaa a   321

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

<220>
<223> Synthetic

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

<210> 331
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 331
caggacataa gaaatgat 18

<210> 332
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 332
Gln Asp Ile Arg Asn Asp
 1   5

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

<220>
<223> Synthetic

<400> 333
ggtgcatcc 9

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

<220>
<223> Synthetic

<400> 334
Gly Ala Ser
 1

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

<220>
<223> Synthetic

<400> 335
ctacaacata aaaattacat gtacact 27

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

<220>
<223> Synthetic

<400> 336
Leu Gln His Lys Asn Tyr Met Tyr Thr
 1   5

<210> 337
<211> 384
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 337
gaggtgcagc tggtggagtc tgggggaggc ttggtacagc ctggagggtc cctgagactc 60
tcctgtgcag cctctggatt caccatcagt aattatgaaa tgaactgggt ccgtcaggct 120
ccagggaagg ggctggagtg ggtttcatac attagtacta gtggtattac catatactac 180
gcagactctg tgcagggccg attcaccatc tccagagaca atgccaagaa ctcactgtat 240
ctgcaattga acagcctgag agccgaggac acggctgttt attactgtgc gcggggatat 300
tgtacaaatg gtgtatgcta tccccattac tactactccg atatggacgt ctggggccaa 360
gggaccacgg tcaccgtctc ctca   384

<210> 338
<211> 128
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

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

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

<220>
<223> Synthetic

<400> 339

ggattcacca tcagtaatta tgaa 24

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

<220>
<223> Synthetic

<400> 340
Gly Phe Thr Ile Ser Asn Tyr Glu
1 5

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

<220>
<223> Synthetic

<400> 341
attagtacta gtggtattac cata 24

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

<220>
<223> Synthetic

<400> 342
Ile Ser Thr Ser Gly Ile Thr Ile
1 5

<210> 343
<211> 63
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 343
gcgcggggat attgtacaaa tggtgtatgc tatccccatt actactactc cgatatggac 60
gtc 63

<210> 344
<211> 21
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 344
Ala Arg Gly Tyr Cys Thr Asn Gly Val Cys Tyr Pro His Tyr Tyr Tyr
 1   5   10   15
Ser Asp Met Asp Val
            20

<210> 345
<211> 321
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 345
gacatccaga tgacccagtc tccatcctcc ctgtctgcat ctgtaggaga cagactcacc 60
atcacttgcc gggcaagtca gaccattagc acctatttaa attggtttca gcagaaagta 120
gggaatgccc ctaaactcct gatctattct acatccagtt tgcaaagtgg ggtcccagca 180
aggttcagtg gcagtggatc tgggacagat ttcactctca ccatcagcag tctgcaacct 240
gaagattttg caacttacta ctgtcaacag agttacagta gtcctccgac gttcggccaa 300
gggaccaagg tggaaatcaa a   321

<210> 346
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

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

<210> 347
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 347
cagaccatta gcacctat   18

<210> 348
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 348
Gln Thr Ile Ser Thr Tyr
 1   5

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

<220>
<223> Synthetic

<400> 349
tctacatcc   9

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

<220>
<223> Synthetic

<400> 350
Ser Thr Ser
 1

<210> 351
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 351
caacagagtt acagtagtcc tccgacg   27

<210> 352
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 352
Gln Gln Ser Tyr Ser Ser Pro Pro Thr
 1   5

<210> 353
<211> 560
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 353
Met His Arg Pro Arg Arg Arg Gly Thr Arg Pro Pro Pro Leu Ala Leu
 1   5   10   15
Leu Ala Ala Leu Leu Leu Ala Ala Arg Gly Ala Asp Ala Asn Ile Thr
            20   25   30
Glu Glu Phe Tyr Gln Ser Thr Cys Ser Ala Val Ser Lys Gly Tyr Leu
        35   40   45
Ser Ala Leu Arg Thr Gly Trp Tyr Thr Ser Val Ile Thr Ile Glu Leu
    50   55   60
Ser Asn Ile Lys Glu Asn Lys Cys Asn Gly Thr Asp Ala Lys Val Lys
65   70   75   80
Leu Ile Asn Gln Glu Leu Asp Lys Tyr Lys Asn Ala Val Thr Glu Leu
                85   90   95
Gln Leu Leu Met Gln Ser Thr Thr Ala Ala Asn Asn Arg Ala Arg Arg
            100   105   110
Glu Leu Pro Arg Phe Met Asn Tyr Thr Leu Asn Asn Thr Lys Lys Thr
        115   120   125
Asn Val Thr Leu Ser Lys Lys Arg Lys Arg Arg Phe Leu Gly Phe Leu
    130   135   140
Leu Gly Val Gly Ser Ala Ile Ala Ser Gly Ile Ala Val Ser Lys Val
145   150   155   160
Leu His Leu Glu Gly Glu Val Asn Lys Ile Lys Ser Ala Leu Leu Ser
                165   170   175
Thr Asn Lys Ala Val Val Ser Leu Ser Asn Gly Val Ser Val Leu Thr
            180   185   190
Ser Lys Val Leu Asp Leu Lys Asn Tyr Ile Asp Lys Gln Leu Leu Pro
        195   200   205
Ile Val Asn Lys Gln Ser Cys Arg Ile Ser Asn Ile Glu Thr Val Ile
    210   215   220
Glu Phe Gln Gln Lys Asn Asn Arg Leu Leu Glu Ile Thr Arg Glu Phe
225   230   235   240
Ser Val Asn Ala Gly Val Thr Thr Pro Val Ser Thr Tyr Met Leu Thr
                245   250   255
Asn Ser Glu Leu Leu Ser Leu Ile Asn Asp Met Pro Ile Thr Asn Asp
            260   265   270
Gln Lys Lys Leu Met Ser Asn Asn Val Gln Ile Val Arg Gln Gln Ser
        275   280   285
Tyr Ser Ile Met Ser Ile Ile Lys Glu Glu Val Leu Ala Tyr Val Val
    290   295   300
Gln Leu Pro Leu Tyr Gly Val Ile Asp Thr Pro Cys Trp Lys Leu His
305   310   315   320
Thr Ser Pro Leu Cys Thr Thr Asn Thr Lys Glu Gly Ser Asn Ile Cys
                325   330   335
Leu Thr Arg Thr Asp Arg Gly Trp Tyr Cys Asp Asn Ala Gly Ser Val
            340   345   350
Ser Phe Phe Pro Gln Ala Glu Thr Cys Lys Val Gln Ser Asn Arg Val
        355   360   365
Phe Cys Asp Thr Met Asn Ser Leu Thr Leu Pro Ser Glu Val Asn Leu
    370   375   380

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Cys Asn Val Asp Ile Phe Asn Pro Lys Tyr Asp Cys Lys Ile Met Thr
385                 390                 395                 400
Ser Lys Thr Asp Val Ser Ser Ser Val Ile Thr Ser Leu Gly Ala Ile
                405                 410                 415
Val Ser Cys Tyr Gly Lys Thr Lys Cys Thr Ala Ser Asn Lys Asn Arg
            420                 425                 430
Gly Ile Ile Lys Thr Phe Ser Asn Gly Cys Asp Tyr Val Ser Asn Lys
        435                 440                 445
Gly Val Asp Thr Val Ser Val Gly Asn Thr Leu Tyr Tyr Val Asn Lys
    450                 455                 460
Gln Glu Gly Lys Ser Leu Tyr Val Lys Gly Glu Pro Ile Ile Asn Phe
465                 470                 475                 480
Tyr Asp Pro Leu Val Phe Pro Ser Asp Glu Phe Asp Ala Ser Ile Ser
                485                 490                 495
Gln Val Asn Glu Lys Ile Asn Gln Ser Leu Ala Phe Ile Arg Lys Ser
            500                 505                 510
Asp Glu Leu Leu His His Val Asn Ala Gly Lys Ser Thr Thr Asn Ile
        515                 520                 525
Met Ile Thr Thr Glu Gln Lys Leu Ile Ser Glu Glu Asp Leu Gly Gly
    530                 535                 540
Glu Gln Lys Leu Ile Ser Glu Glu Asp Leu His His His His His His
545                 550                 555                 560


<210> 354
<211> 574
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 354
Met Glu Leu Pro Ile Leu Lys Ala Asn Ala Ile Thr Thr Ile Leu Ala
 1               5                  10                  15
Ala Val Thr Phe Cys Phe Ala Ser Ser Gln Asn Ile Thr Glu Glu Phe
            20                  25                  30
Tyr Gln Ser Thr Cys Ser Ala Val Ser Lys Gly Tyr Leu Ser Ala Leu
        35                  40                  45
Arg Thr Gly Trp Tyr Thr Ser Val Ile Thr Ile Glu Leu Ser Asn Ile
    50                  55                  60
Lys Glu Asn Lys Cys Asn Gly Thr Asp Ala Lys Val Lys Leu Ile Asn
65                  70                  75                  80
Gln Glu Leu Asp Lys Tyr Lys Asn Ala Val Thr Glu Leu Gln Leu Leu
                85                  90                  95
Met Gln Ser Thr Thr Ala Ala Asn Asn Arg Ala Arg Arg Glu Leu Pro
            100                 105                 110
Arg Phe Met Asn Tyr Thr Leu Asn Asn Thr Lys Lys Thr Asn Val Thr
        115                 120                 125
Leu Ser Lys Lys Arg Lys Arg Arg Phe Leu Gly Phe Leu Leu Gly Val
    130                 135                 140
Gly Ser Ala Ile Ala Ser Gly Ile Ala Val Ser Lys Val Leu His Leu
145                 150                 155                 160
Glu Gly Glu Val Asn Lys Ile Lys Ser Ala Leu Leu Ser Thr Asn Lys
                165                 170                 175
Ala Val Val Ser Leu Ser Asn Gly Val Ser Val Leu Thr Ser Lys Val
            180                 185                 190
Leu Asp Leu Lys Asn Tyr Ile Asp Lys Gln Leu Leu Pro Ile Val Asn
        195                 200                 205
```

```
Lys Gln Ser Cys Arg Ile Ser Asn Ile Glu Thr Val Ile Glu Phe Gln
    210                 215                 220
Gln Lys Asn Asn Arg Leu Leu Glu Ile Thr Arg Glu Phe Ser Val Asn
225                 230                 235                 240
Ala Gly Val Thr Thr Pro Val Ser Thr Tyr Met Leu Thr Asn Ser Glu
                245                 250                 255
Leu Leu Ser Leu Ile Asn Asp Met Pro Ile Thr Asn Asp Gln Lys Lys
            260                 265                 270
Leu Met Ser Asn Asn Val Gln Ile Val Arg Gln Gln Ser Tyr Ser Ile
        275                 280                 285
Met Ser Ile Ile Lys Glu Glu Val Leu Ala Tyr Val Val Gln Leu Pro
    290                 295                 300
Leu Tyr Gly Val Ile Asp Thr Pro Cys Trp Lys Leu His Thr Ser Pro
305                 310                 315                 320
Leu Cys Thr Thr Asn Thr Lys Glu Gly Ser Asn Ile Cys Leu Thr Arg
                325                 330                 335
Thr Asp Arg Gly Trp Tyr Cys Asp Asn Ala Gly Ser Val Ser Phe Phe
            340                 345                 350
Pro Gln Ala Glu Thr Cys Lys Val Gln Ser Asn Arg Val Phe Cys Asp
        355                 360                 365
Thr Met Asn Ser Leu Thr Leu Pro Ser Glu Val Asn Leu Cys Asn Val
    370                 375                 380
Asp Ile Phe Asn Pro Lys Tyr Asp Cys Lys Ile Met Thr Ser Lys Thr
385                 390                 395                 400
Asp Val Ser Ser Ser Val Ile Thr Ser Leu Gly Ala Ile Val Ser Cys
                405                 410                 415
Tyr Gly Lys Thr Lys Cys Thr Ala Ser Asn Lys Asn Arg Gly Ile Ile
            420                 425                 430
Lys Thr Phe Ser Asn Gly Cys Asp Tyr Val Ser Asn Lys Gly Val Asp
        435                 440                 445
Thr Val Ser Val Gly Asn Thr Leu Tyr Tyr Val Asn Lys Gln Glu Gly
    450                 455                 460
Lys Ser Leu Tyr Val Lys Gly Glu Pro Ile Ile Asn Phe Tyr Asp Pro
465                 470                 475                 480
Leu Val Phe Pro Ser Asp Glu Phe Asp Ala Ser Ile Ser Gln Val Asn
                485                 490                 495
Glu Lys Ile Asn Gln Ser Leu Ala Phe Ile Arg Lys Ser Asp Glu Leu
            500                 505                 510
Leu His His Val Asn Ala Gly Lys Ser Thr Thr Asn Ile Met Ile Thr
        515                 520                 525
Thr Ile Ile Ile Val Ile Ile Val Ile Leu Leu Ser Leu Ile Ala Val
    530                 535                 540
Gly Leu Leu Leu Tyr Cys Lys Ala Arg Ser Thr Pro Val Thr Leu Ser
545                 550                 555                 560
Lys Asp Gln Leu Ser Gly Ile Asn Asn Ile Ala Phe Ser Asn
                565                 570


<210> 355
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 355
Glu Gly Glu Val Asn Lys Ile Lys Ser Ala Leu
 1               5                  10
```

<210> 356
<211> 17
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 356
Leu Ser Thr Asn Lys Ala Val Val Ser Leu Ser Asn Gly Val Ser Val
 1   5   10   15
Leu

<210> 357
<211> 454
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic
      AM22 HC

<400> 357
Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
 1   5   10   15
Thr Val Lys Val Ser Cys Lys Ile Ser Gly His Thr Leu Ile Lys Leu
            20   25   30
Ser Ile His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Met
        35   40   45
Gly Gly Tyr Glu Gly Glu Val Asp Glu Ile Phe Tyr Ala Gln Lys Phe
    50   55   60
Gln His Arg Leu Thr Val Ile Ala Asp Thr Ala Thr Asp Thr Val Tyr
65   70   75   80
Met Glu Leu Gly Arg Leu Thr Ser Asp Asp Thr Ala Val Tyr Phe Cys
                85   90   95
Gly Thr Leu Gly Val Thr Val Thr Glu Ala Gly Leu Gly Ile Asp Asp
            100   105   110
Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Ala Ser Thr Lys
        115   120   125
Gly Pro Ser Val Phe Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly
    130   135   140
Gly Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro
145   150   155   160
Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr
                165   170   175
Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val
            180   185   190
Val Thr Val Pro Ser Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn
        195   200   205
Val Asn His Lys Pro Ser Asn Thr Lys Val Asp Lys Lys Val Glu Pro
    210   215   220
Lys Ser Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu
225   230   235   240
Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp
                245   250   255

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Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp
            260                 265                 270
Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly
        275                 280                 285
Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn
    290                 295                 300
Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp
305                 310                 315                 320
Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro
                325                 330                 335
Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu
            340                 345                 350
Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn
        355                 360                 365
Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile
    370                 375                 380
Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr
385                 390                 395                 400
Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys
                405                 410                 415
Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys
            420                 425                 430
Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu
        435                 440                 445
Ser Leu Ser Pro Gly Lys
    450
```

<210> 358
<211> 215
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic
AM22 LC

<400> 358

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


<210> 359
<211> 450
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic
      Motavizumab HC

<400> 359
Gln Val Thr Leu Arg Glu Ser Gly Pro Ala Leu Val Lys Pro Thr Gln
 1               5                  10                  15
Thr Leu Thr Leu Thr Cys Thr Phe Ser Gly Phe Ser Leu Ser Thr Ala
            20                  25                  30
Gly Met Ser Val Gly Trp Ile Arg Gln Pro Pro Gly Lys Ala Leu Glu
        35                  40                  45
Trp Leu Ala Asp Ile Trp Trp Asp Asp Lys Lys His Tyr Asn Pro Ser
    50                  55                  60
Leu Lys Asp Arg Leu Thr Ile Ser Lys Asp Thr Ser Lys Asn Gln Val
65                  70                  75                  80
Val Leu Lys Val Thr Asn Met Asp Pro Ala Asp Thr Ala Thr Tyr Tyr
                85                  90                  95
Cys Ala Arg Asp Met Ile Phe Asn Phe Tyr Phe Asp Val Trp Gly Gln
            100                 105                 110
Gly Thr Thr Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val
        115                 120                 125
Phe Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala
    130                 135                 140
Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser
145                 150                 155                 160
Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val
                165                 170                 175
Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro
            180                 185                 190
Ser Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys
        195                 200                 205
Pro Ser Asn Thr Lys Val Asp Lys Lys Val Glu Pro Lys Ser Cys Asp
    210                 215                 220
Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly
225                 230                 235                 240
Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile
                245                 250                 255
Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu
            260                 265                 270
Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His
        275                 280                 285
Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg
    290                 295                 300
Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys
305                 310                 315                 320
```

```
Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu
                325                 330                 335
Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr
            340                 345                 350
Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu
        355                 360                 365
Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp
    370                 375                 380
Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val
385                 390                 395                 400
Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp
                405                 410                 415
Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His
            420                 425                 430
Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro
        435                 440                 445
Gly Lys
    450


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

<220>
<223> Synthetic
      Motavizumab LC

<400> 360
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 Ser Ala Ser Ser Arg Val Gly Tyr Met
            20                  25                  30
His Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile Tyr
        35                  40                  45
Asp Thr Ser Lys Leu Ala Ser Gly Val Pro Ser Arg Phe Ser Gly Ser
    50                  55                  60
Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro Asp
65                  70                  75                  80
Asp Phe Ala Thr Tyr Tyr Cys Phe Gln Gly Ser Gly Tyr Pro Phe Thr
                85                  90                  95
Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Arg Thr Val Ala Ala Pro
            100                 105                 110
Ser Val Phe Ile Phe Pro Pro Ser Asp Glu Gln Leu Lys Ser Gly Thr
        115                 120                 125
Ala Ser Val Val Cys Leu Leu Asn Asn Phe Tyr Pro Arg Glu Ala Lys
    130                 135                 140
Val Gln Trp Lys Val Asp Asn Ala Leu Gln Ser Gly Asn Ser Gln Glu
145                 150                 155                 160
Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr Tyr Ser Leu Ser Ser
                165                 170                 175
Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu Lys His Lys Val Tyr Ala
            180                 185                 190
Cys Glu Val Thr His Gln Gly Leu Ser Ser Pro Val Thr Lys Ser Phe
        195                 200                 205
Asn Arg Gly Glu Cys
    210
```

<210> 361
<211> 450
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic
Palivizumab HC

<400> 361
Gln Val Thr Leu Arg Glu Ser Gly Pro Ala Leu Val Lys Pro Thr Gln
1 5 10 15
Thr Leu Thr Leu Thr Cys Thr Phe Ser Gly Phe Ser Leu Ser Thr Ser
20 25 30
Gly Met Ser Val Gly Trp Ile Arg Gln Pro Pro Gly Lys Ala Leu Glu
35 40 45
Trp Leu Ala Asp Ile Trp Trp Asp Asp Lys Lys Asp Tyr Asn Pro Ser
50 55 60
Leu Lys Ser Arg Leu Thr Ile Ser Lys Asp Thr Ser Lys Asn Gln Val
65 70 75 80
Val Leu Lys Val Thr Asn Met Asp Pro Ala Asp Thr Ala Thr Tyr Tyr
85 90 95
Cys Ala Arg Ser Met Ile Thr Asn Trp Tyr Phe Asp Val Trp Gly Ala
100 105 110
Gly Thr Thr Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val
115 120 125
Phe Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala
130 135 140
Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser
145 150 155 160
Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val
165 170 175
Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro
180 185 190
Ser Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys
195 200 205
Pro Ser Asn Thr Lys Val Asp Lys Lys Val Glu Pro Lys Ser Cys Asp
210 215 220
Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly
225 230 235 240
Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile
245 250 255
Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu
260 265 270
Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His
275 280 285
Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg
290 295 300
Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys
305 310 315 320
Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu
325 330 335
Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr
340 345 350
Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu
355 360 365
Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp
370 375 380

```
Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val
385                 390                 395                 400
Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp
                405                 410                 415
Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His
            420                 425                 430
Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro
        435                 440                 445
Gly Lys
    450
```

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

<220>
<223> Synthetic
Palivizumab LC

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

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

<220>
<223> Synthetic

<400> 363
Glu Val Gln Leu Val Glu Ser Gly Gly Asp Leu Val Gln Pro Gly Arg
 1   5   10   15
Ser Leu Arg Leu Ser Cys Val Ala Ser Gly Phe Thr Phe Asp Asp Tyr
            20   25   30
Ala Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35   40   45
Ser Gly Val Ser Trp Ser Gly Ser Thr Val Gly Tyr Ala Asp Ser Val
    50   55   60
Lys Gly Arg Phe Thr Val Ser Arg Asp Asn Ala Gln Lys Ser Leu Tyr
65   70   75   80
Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Leu Tyr Tyr Cys
                85   90   95
Val Lys Asp Ala Tyr Lys Phe Asn Tyr Tyr Tyr Tyr Gly Leu Asp Val
            100   105   110
Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser Ala Ser Thr Lys Gly
        115   120   125
Pro Ser Val Phe Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly
    130   135   140
Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val
145   150   155   160
Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe
                165   170   175
Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val
            180   185   190
Thr Val Pro Ser Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val
        195   200   205
Asn His Lys Pro Ser Asn Thr Lys Val Asp Lys Lys Val Glu Pro Lys
    210   215   220
Ser Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu
225   230   235   240
Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr
                245   250   255
Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val
            260   265   270
Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val
        275   280   285
Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser
    290   295   300
Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu
305   310   315   320
Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala
                325   330   335
Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro
            340   345   350
Gln Val Tyr Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln
        355   360   365
Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala
    370   375   380
Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr
385   390   395   400
Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu
                405   410   415
Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser
            420   425   430
Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser
        435   440   445
Leu Ser Pro Gly Lys

450

<210> 364
<211> 214
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 364
Glu Ile Val Met Thr Gln Ser Pro Ala Thr Leu Ser Val Ser Pro Gly
 1   5   10   15
Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Thr Ile Leu Ser Asn
            20   25   30
Leu Ala Trp Tyr Leu Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile
        35   40   45
Tyr Gly Ala Ser Thr Arg Ala Thr Gly Leu Pro Ala Arg Phe Ser Gly
    50   55   60
Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln Ser
65   70   75   80
Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Asn Asn Trp Pro Leu
                85   90   95
Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Arg Thr Val Ala Ala
            100   105   110
Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu Gln Leu Lys Ser Gly
        115   120   125
Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe Tyr Pro Arg Glu Ala
    130   135   140
Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln Ser Gly Asn Ser Gln
145   150   155   160
Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr Tyr Ser Leu Ser
                165   170   175
Ser Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu Lys His Lys Val Tyr
            180   185   190
Ala Cys Glu Val Thr His Gln Gly Leu Ser Ser Pro Val Thr Lys Ser
        195   200   205
Phe Asn Arg Gly Glu Cys
    210