SEQUENCE LISTING

<110> Regeneron Pharmaceuticals, Inc.

<120> ANTI-ASIC1 ANTIBODIES AND USES THEREOF

<130> 7250A-WO

<140> To be assigned
<141> Filed herewith

<150> 61/592,837
<151> 2012-01-31

<150> 61/644,038
<151> 2012-05-08

<150> 61/692,925
<151> 2012-08-24

<160> 401

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actggacaag ggcttgagtg gatgggggtgg atgaacccta ggagtggtag cacaggctat 180
tcacagaagt tccagggcag agtcaccatg accaggaaca cctccataaa cacagcctac 240
atggaactga gtagcctcag gtctgatgac acggccgtgt attactgtgt gagagggcaa 300
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            20   25   30
Asp Ile Asn Trp Val Arg Gln Ala Thr Gly Gln Gly Leu Glu Trp Met
        35   40   45
Gly Trp Met Asn Pro Arg Ser Gly Ser Thr Gly Tyr Ser Gln Lys Phe

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    50                  55                  60
Gln Gly Arg Val Thr Met Thr Arg Asn Thr Ser Ile Asn Thr Ala Phe
65                  70                  75                  80
Met Glu Leu Ser Ser Leu Arg Ser Asp Asp Thr Ala Val Tyr Tyr Cys
                85                  90                  95
Val Arg Gly Glu Leu Val Leu Gly Tyr Trp Gly Gln Gly Thr Leu Val
            100                 105                 110
Thr Val Ser Ser
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Met Asn Pro Arg Ser Gly Ser Thr
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<400> 8
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tggtaccagc agaaaccagg acagcctcct aaactgctca tttactgggc atctacccgg 180
gaatccgggg tccctgaccg attcagtggc cgcgggtctg ggacagattt cactctcacc 240
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20 25 30
Ser Thr Pro Lys Asn Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln
35 40 45
Pro Pro Lys Leu Leu Ile Tyr Trp Ala Ser Thr Arg Glu Ser Gly Val
50 55 60

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Pro Asp Arg Phe Ser Gly Arg Gly Ser Gly Thr Asp Phe Thr Leu Thr
65                  70                  75                  80
Ile Ser Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln Gln
                85                  90                  95
Tyr Phe Ser Thr Pro Tyr Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile
            100                 105                 110
Lys
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<210> 14
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<400> 14
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actggacaag ggcttgagtg gatggggtgg atgaaccctа ggagtggtag cacaggctat 180
tcacagaagt tccagggcag agtcaccatg accaggaaca cctccataaa cacagcctac 240
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ctcgtcctgg gctactgggg ccagggaacc ctggtcaccg tctcctca 348

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

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

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<400> 19
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<210> 20
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<220>
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<400> 20
Gly Tyr Thr Phe Thr Ile Tyr Asp
1 5

<210> 21
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<400> 21
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<210> 22
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<220>
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<400> 22
Met Asn Pro Arg Ser Gly Ser Thr
1 5

<210> 23

<211> 27
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<400> 23
gtgagagggc aactcgtcct gggctac 27

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<220>
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<400> 24
Val Arg Gly Gln Leu Val Leu Gly Tyr
 1   5

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tggtaccagc agaaaccagg acagcctcct aacctgctca tttactgggc atctacccgg 180
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Glu Arg Ala Thr Ile Asn Cys Lys Ser Ser Gln Ser Val Val Tyr Ser
            20   25   30
Ser Asn Thr Lys Asn Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln
        35   40   45
Pro Pro Asn Leu Leu Ile Tyr Trp Ala Ser Thr Arg Glu Ser Gly Val
    50   55   60
Pro Asp Arg Phe Ser Gly Arg Gly Ser Gly Thr Asp Phe Thr Leu Thr
65   70   75   80

Ile Ser Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln Gln
85 90 95
Tyr Phe Ser Thr Pro Tyr Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile
100 105 110
Lys

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<220>
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<400> 27
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<210> 28
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<220>
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<400> 28
Gln Ser Val Val Tyr Ser Ser Asn Thr Lys Asn Tyr
1 5 10

<210> 29
<211> 9
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<220>
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<400> 29
tgggcatct 9

<210> 30
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<220>
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<400> 30
Trp Ala Ser
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<210> 31
<211> 27

<212> DNA
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<400> 31
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<400> 32
Gln Gln Tyr Phe Ser Thr Pro Tyr Thr
 1   5

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ccagggaagg gactggagtg ggtctcaggt attagtggta gtggtggtgg cacacactac 180
gcagactccg tgaagggccg gttcaccatc tccagagaca attccgaaga catggtgtat 240
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Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Phe
            20   25   30
Ala Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35   40   45
Ser Gly Ile Ser Gly Ser Gly Gly Gly Thr His Tyr Ala Asp Ser Val
    50   55   60
Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Met Val Tyr
65   70   75   80
Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Ala Tyr Tyr Cys

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                85                  90                  95
Ala Lys Glu Ala Tyr Lys Trp Gln Pro Trp Gly Gln Gly Thr Leu Val
            100                 105                 110
Thr Val Ser Ser
        115
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<210> 36
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<220>
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<400> 36
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<400> 37
attagtggta gtggtggtgg caca 24

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<400> 38
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 1               5
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gcgaaagagg cctataaatg gcagccc 27

<210> 40
<211> 9
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<400> 40
Ala Lys Glu Ala Tyr Lys Trp Gln Pro
1 5

<210> 41
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gggaaagccc ctaacctcct gatctataag gcgtctattt tagaaagtgg ggtcccatca 180
aggttcagcg gcagtggatc tgggacagaa ttcactctca ccatcagcag cctgcagcct 240
gatgattttg caacttatta ctgccaacag tataatagtt attcgtacac ttttggccag 300
gggaccaaac tggagatcaa a 321

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

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

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<400> 43
cagaggatta gtagctgg 18

<210> 44
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<400> 44
Gln Arg Ile Ser Ser Trp
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<210> 45
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<400> 45
aaggcgtct 9

<210> 46
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<400> 46
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<210> 47
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<400> 47
caacagtata atagttattc gtacact 27

<210> 48
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<400> 48
Gln Gln Tyr Asn Ser Tyr Ser Tyr Thr
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<220>
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<400> 49
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ccagggaagg ggctggagtg ggtctcaggt attagtggta gtggtggtag cacatactac 180
gcagactccg tgaagggccg gttcaccatc tccagagaca attccaagaa cacgctgtat 240
ctgcaaatga acagcctgag agccgaggac acggccgtat attattgtgc gaaagaggcc 300
tataaatggc agccctgggg ccagggaatc cgggtcaccg tctcctca 348

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

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<400> 51
ggattcacct ttagtagctt tgcc 24

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<400> 52
Gly Phe Thr Phe Ser Ser Phe Ala
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attagtggta gtggtggtag caca 24

<210> 54
<211> 8
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<400> 54
Ile Ser Gly Ser Gly Gly Ser Thr
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Ala Lys Glu Ala Tyr Lys Trp Gln Pro
 1   5

<210> 57
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gggaaagccc ctaacctcct gatctataag acgtctaatt tagaaagtgg ggtcccatca 180
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Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Ser Ser Trp
            20   25   30
Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Asn Leu Leu Ile
        35   40   45
Tyr Lys Thr Ser Asn Leu Glu Ser Gly Val Pro Ser Arg Phe Ser Gly
    50   55   60
Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
65   70   75   80
Asp Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Tyr Asn Ser Tyr Ser Tyr
                85   90   95
Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
            100   105

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<220>
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<400> 59
cagagtatta gtagctgg 18

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

<400> 60
Gln Ser Ile Ser Ser Trp
1 5

<210> 61
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<220>
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<400> 61
aagacgtct 9

<210> 62
<211> 3
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<220>
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<400> 62
Lys Thr Ser
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<210> 63
<211> 27
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<400> 63
caacagtata atagttattc gtacact 27

<210> 64
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<400> 64
Gln Gln Tyr Asn Ser Tyr Ser Tyr Thr
1 5

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tcctgtgcag cctctggatt cacctttagt agcttttgga tgagctgggt ccgccaggct 120
ccagggaagg ggctggagtg ggtggccaat ataaagcaaa atggaagtga gacatactat 180
gtggactctg tgaagggccg attcaccatc tccagagaca acaccaagaa ctcactgtat 240
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Ser Leu Lys Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Phe
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 Asn Gly Ser Glu Thr Tyr Tyr Val Asp Ser Val
50 55 60
Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Thr Lys Asn Ser Leu Tyr
65 70 75 80
Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Ile Tyr Tyr Cys
85 90 95
Ala Arg Gly Gly Arg Ile Gln Leu Trp Ser Ser Trp Phe Asp Pro Trp
100 105 110
Gly Gln Gly Thr Leu Val Thr Val Ser Ser
115 120

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<400> 67
ggattcacct ttagtagctt ttgg 24

<210> 68
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<220>
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<400> 68
Gly Phe Thr Phe Ser Ser Phe Trp
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<210> 69
<211> 24
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<220>
<223> Synthetic

<400> 69
ataaagcaaa atggaagtga gaca 24

<210> 70
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<220>
<223> Synthetic

<400> 70
Ile Lys Gln Asn Gly Ser Glu Thr
1 5

<210> 71
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<400> 71
gcgagagggg ggcggataca gctatggtct agctggttcg acccc 45

<210> 72
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<220>
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<400> 72
Ala Arg Gly Gly Arg Ile Gln Leu Trp Ser Ser Trp Phe Asp Pro
 1   5   10   15

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<212> DNA
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gggaaagccc ctaaactcct gatctatgct gcatccagtt tgcaaagtgg ggtcccatca 180
aggttcagtg gcagtggatc tgggacagat ttcactctca ccatcagcag tctgcaacct 240
gaagattttg cagcttacta ctgtcaacag agtttcagtg cccccgctcac tttcggcgga 300
gggaccaagg tggagatcaa 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 Leu Ser Ala Ser Val Gly
 1   5   10   15
Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Lys Asn Tyr
            20   25   30
Leu Asn Trp Tyr Gln Gln Lys Ser Gly Lys Ala Pro Lys Leu Leu Ile
        35   40   45
Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Val Ser Gly
    50   55   60
Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu His Pro
65   70   75   80
Glu Asp Phe Ala Ala Tyr Tyr Cys Gln Gln Ser Phe Ser Ala Pro Leu
                85   90   95
Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
            100   105

<210> 75
<211> 18
<212> DNA

<213> Artificial Sequence

<220>
<223> Synthetic

<400> 75
cagagcatta aaaactat 18

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

<220>
<223> Synthetic

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

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

<220>
<223> Synthetic

<400> 77
gctgcatcc 9

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

<220>
<223> Synthetic

<400> 78
Ala Ala Ser
1

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

<220>
<223> Synthetic

<400> 79
caacagagtt tcagtgcccc gctcact 27

<210> 80
<211> 9

<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

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

<210> 81
<211> 363
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 81
gaggagctag tgttggaatc tgggggaggc ttggtacagc ctgggggggtc cctgagactc 60
tcctgtgcag cctctggatt catgtttagc acctatgcca tgagctgggt ccgccaggct 120
ccagggaagg ggctggagtg ggtctcactt attagtggtc gtgacggtag cacatactat 180
gcagactccg tgaagggccg gttcaccatc tccagagaca tttccaggaa cacgctctat 240
ctacacttga acagcctgcg agccgaggac acggccgtat attactgtgc gaaagataca 300
gctgtggttc ctggctacgg tttggacgtc tggggccaag ggaccacggt caccgtctcc 360
tca   363

<210> 82
<211> 121
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

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

<210> 83
<211> 24
<212> DNA

<213> Artificial Sequence

<220>
<223> Synthetic

<400> 83
ggattcatgt ttagcaccta tgcc 24

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

<220>
<223> Synthetic

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

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

<220>
<223> Synthetic

<400> 85
attagtggtc gtgacggtag caca 24

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

<220>
<223> Synthetic

<400> 86
Ile Ser Gly Arg Asp Gly Ser Thr
 1 5

<210> 87
<211> 42
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 87
gcgaaagata cagctgtggt tcctggctac ggtttggacg tc 42

<210> 88
<211> 14

<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 88
Ala Lys Asp Thr Ala Val Val Pro Gly Tyr Gly Leu Asp Val
 1   5   10

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

<220>
<223> Synthetic

<400> 89
gacatccaga tgacccagtc tcctgccacc ctgtctgcat ctgtaggaga cagagtcacc 60
atcacttgcc gggccagtca gactattagt aactggttgg cctggtatca gcagagacca 120
gggaaagccc ctaagctcct gatctataag gcgtctagtt tagaaagtgg ggtcccatca 180
aggttcagcg gcagtggatc tgggacagaa ttcactctca ccatcagcag cctgcagcct 240
gatgattttg caagttatta ctgccaacag tataatagtt attcgtggac gttcggccaa 300
gggaccaagg tggaaatcaa a   321

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

<220>
<223> Synthetic

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

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

<220>

<223> Synthetic

<400> 91
cagactatta gtaactgg 18

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

<220>
<223> Synthetic

<400> 92
Gln Thr Ile Ser Asn Trp
 1   5

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

<220>
<223> Synthetic

<400> 93
aaggcgtct 9

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

<220>
<223> Synthetic

<400> 94
Lys Ala Ser
 1

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

<220>
<223> Synthetic

<400> 95
caacagtata atagttattc gtggacg 27

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

<220>
<223> Synthetic

<400> 96
Glu Gln Tyr Asn Ser Tyr Ser Trp Thr
 1   5

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

<220>
<223> Synthetic

<400> 97
gaggagctag tgttggaatc tgggggaggc ttggtacagc ctgggggggtc cctgagactc 60
tcctgtgcag cctctggatt catgtttagc acctatgcca tgagctgggt ccgccaggct 120
ccagggaagg ggctggagtg ggtctcactt attagtggtc gtgacggtaa cacatactat 180
gcagactccg tgaagggccg gttcaccatc tccagagaca attccaggaa cacgctctat 240
ctacaattga acagcctgcg agccgaggac acggccttat attactgtgc gaaagataca 300
gctgtggttc ctggctacgg tatggacgtc tggggccaag ggaccacggt caccgtctcc 360
tca   363

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

<220>
<223> Synthetic

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

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

<220>

<223> Synthetic

<400> 99
ggattcatgt ttagcacctа tgcc 24

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

<220>
<223> Synthetic

<400> 100
Gly Phe Met Phe Ser Thr Tyr Ala
 1 5

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

<220>
<223> Synthetic

<400> 101
attagtggtc gtgacggtaa caca 24

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

<220>
<223> Synthetic

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

<210> 103
<211> 42
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 103
gcgaaagata cagctgtggt tcctggctac ggtatggacg tc 42

<210> 104
<211> 14
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 104
Ala Lys Asp Thr Ala Val Val Pro Gly Tyr Gly Met Asp Val
 1   5   10

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

<220>
<223> Synthetic

<400> 105
gacatccaga tgacccagtc tcctgccacc ctgtctgcat ctgtaggaga cagagtcacc 60
atcacttgcc gggccagtca gactattagt aactggttgg cctggtatca gcagagacca 120
gggaaagccc ctaagctcct gatctataag gcgtctagtt tagaaactgg ggtcccatca 180
aggttcagcg gcagtggatc tgggacagaa ttcactctca ccatcagcag cctgcagcct 240
gatgattttg caagttatta ctgccaacag tataatagtt attcgtggac gttcggccaa 300
gggaccaagg tggaaatcaa a   321

<210> 106
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 106
Asp Ile Gln Met Thr Gln Ser Pro Ala Thr Leu Ser Ala Ser Val Gly
 1   5   10   15
Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Thr Ile Ser Asn Trp
            20   25   30
Leu Ala Trp Tyr Gln Gln Arg Pro Gly Lys Ala Pro Lys Leu Leu Ile
        35   40   45
Tyr Lys Ala Ser Ser Leu Glu Thr Gly Val Pro Ser Arg Phe Ser Gly
    50   55   60
Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
65   70   75   80
Asp Asp Phe Ala Ser Tyr Tyr Cys Gln Gln Tyr Asn Ser Tyr Ser Trp
                85   90   95
Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
            100   105

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

<220>
<223> Synthetic

<400> 107

cagactatta gtaactgg 18

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

<220>
<223> Synthetic

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

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

<220>
<223> Synthetic

<400> 109
aaggcgtct 9

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

<220>
<223> Synthetic

<400> 110
Lys Ala Ser
1

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

<220>
<223> Synthetic

<400> 111
caacagtata atagttattc gtggacg 27

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

<220>
<223> Synthetic

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

<210> 113
<211> 366
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 113
gaggtgcagc tggtggagtc tgggggaggc ttggtccagc ctgggggggtc cctgaaactc 60
tcctgtgcag cctctggatt cacctttagt agctttttgga tgagctgggt ccgccaggct 120
ccagggaagg ggctggagtg ggtggccaat ataaagcaaa atggaagtga gacatactat 180
gtggactctg tgaagggccg attcaccatc tccagagaca acaccaagaa ctcactgtat 240
ctgcaaatga acagcctgag agccgaggac acggctatat attactgtgc gagaggggggg 300
cggatacagc tatggtctag ctggttcgac ccctggggcc agggaaccct ggtcaccgtc 360
tcctca   366

<210> 114
<211> 122
<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 Gly
 1   5   10   15
Ser Leu Lys Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Phe
            20   25   30
Trp Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35   40   45
Ala Asn Ile Lys Gln Asp Gly Ser Glu Thr Tyr Tyr Val Asp Ser Val
    50   55   60
Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Thr Lys Asn Ser Leu Tyr
65   70   75   80
Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Ile Tyr Tyr Cys
                85   90   95
Ala Arg Gly Gly Arg Ile Gln Leu Trp Ser Ser Trp Phe Asp Pro Trp
            100   105   110
Gly Gln Gly Thr Leu Val Thr Val Ser Ser
        115   120

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

<220>
<223> Synthetic

<400> 115

ggattcacct ttagtagctt ttgg 24

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

<220>
<223> Synthetic

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

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

<220>
<223> Synthetic

<400> 117
ataaagcaaa atggaagtga gaca 24

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

<220>
<223> Synthetic

<400> 118
Ile Lys Gln Asn Gly Ser Glu Thr
1 5

<210> 119
<211> 45
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 119
gcgagaggag ggcggataca gctatggtct agctggttcg acccc 45

<210> 120
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 120
Ala Arg Gly Gly Arg Ile Gln Leu Trp Ser Ser Trp Phe Asp Pro
 1   5   10   15

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

<220>
<223> Synthetic

<400> 121
gccatccaga tgacccagtc tccatcctcc ctgtctgcat ctgtaggaga cagagtcacc 60
attacttgcc gggcaagtca gggcattagc aatgatttag gctggtatca gcagaaacca 120
gggaaagccc ctaaactcct gatctatggt gcatccagtt tacaaagtgg ggtcccatca 180
aggttcagcg gcagtggatc tggcacagat ttcactctca ccatcagcag cctgcagcct 240
gaagattttg caacttatta ctgtctacaa gatttcaatt acccgtacac ttttggccag 300
gggaccaaac tggagatcaa a   321

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

<220>
<223> Synthetic

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

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

<220>
<223> Synthetic

<400> 123
cagggcatta gcaatgat   18

<210> 124

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

<220>
<223> Synthetic

<400> 124
Gln Gly Ile Ser Asn Asp
 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
ctacaagatt tcaattaccc gtacact   27

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

<220>
<223> Synthetic

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

<210> 129
<211> 348
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 129
gaggtgcagc tgttggcgtc tgggggaggc ttggtacagc ctgggggtc cctgagactc 60
tcctgtgcag cctctggatt cacctttagt agctttgcca tgagctgggt ccgccaggct 120
ccagggaagg ggctggagtg ggtctcaggt attagtggta gtggtgttag cacatactac 180
gcagactccg tgaagggccg gttcaccatc tccagagaca attccaagaa cacgctgtat 240
ctgcaaatga acagcctgag agccgaggac acggccgcat attattgtgc gaaagaggcc 300
tataaatggc agccctgggg ccagggaatc cgggtcaccg tctcctca 348

<210> 130
<211> 116
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

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

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

<220>
<223> Synthetic

<400> 131
ggattcacct ttagtagctt tgcc 24

<210> 132
<211> 8

<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 132
Gly Phe Thr Phe Ser Ser Phe Ala
 1   5

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

<220>
<223> Synthetic

<400> 133
attagtggta gtggtgttag caca   24

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

<220>
<223> Synthetic

<400> 134
Ile Ser Gly Ser Gly Val Ser Thr
 1   5

<210> 135
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 135
gcgaaagagg cctataaatg gcagccc   27

<210> 136
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 136
Ala Lys Glu Ala Tyr Lys Trp Gln Pro
 1   5

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

<220>
<223> Synthetic

<400> 137
gacatccaga tgacccagtc tccttccacc ctgtctgcat ctgtgggaga cagagtcacc 60
atcacttgcc gggccagtca gagtattagt agctggttgg cctggtatca gcagaaacca 120
gggaaagccc ctaagctcct aatctataag gcgtctaatt tagaaagtgg ggtcccatca 180
aggttcagcg gcagtggatc tgggacagaa ttcactctca ccatcagcag cctgcagcct 240
gatgattttg caacttatta ctgccaacag tataatagtt attcgtacac ttttggccag 300
gggaccaagc tggagatcaa a 321

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

<220>
<223> Synthetic

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

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

<220>
<223> Synthetic

<400> 139
cagagtatta gtagctgg 18

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

<220>
<223> Synthetic

<400> 140
Glu Ser Ile Ser Ser Trp
 1   5

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

<220>
<223> Synthetic

<400> 141
aaggcgtct   9

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

<220>
<223> Synthetic

<400> 142
Lys Ala Ser
 1

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

<220>
<223> Synthetic

<400> 143
caacagtata atagttattc gtacact   27

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

<220>
<223> Synthetic

<400> 144
Gln Gln Tyr Asn Ser Tyr Ser Tyr Thr
 1   5

<210> 145
<211> 340

<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 145
gaggtgcagc tgttggcgtc tgggggaggc ttggtacagc ctggggggtc cctgagactc 60
tcctgtgcag cctctggatt cacctttagt agctttgcca tgagctgggt ccgccaggct 120
ccagggaagg ggctggagtg ggtctcaggt attagtggta gtggtgttag cacatactac 180
gcagactccg tgaagggccg gttcaccatc tccagagaca attccaagaa cacgctgtat 240
ctgcaaatga acagcctgag agccgaggac acggccgcat attattgtgc gaaagaggcc 300
tataaatggc agccctgggg ccagggaacc ctggtcaccg tctcctca 348

<210> 146
<211> 116
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

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

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

<220>
<223> Synthetic

<400> 147
ggattcacct ttagtagctt tgcc 24

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

<220>

<223> Synthetic

<400> 148
Gly Phe Thr Phe Ser Ser Phe Ala
 1   5

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

<220>
<223> Synthetic

<400> 149
attagtggta gtggtgttag caca   24

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

<220>
<223> Synthetic

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

<210> 151
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 151
gcgaaagagg cctataaatg gcagccc   27

<210> 152
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 152
Ala Lys Glu Ala Tyr Lys Trp Gln Pro
 1   5

<210> 153
<211> 321
<212> DNA

<213> Artificial Sequence

<220>
<223> Synthetic

<400> 153
gacatccaga tgacccagtc tccttccacc ctgtctgcat ctgtgggaga cagagtcacc 60
atcacttgcc gggccagtca gagtattagt agctggttgg cctggtatca gcagaaacca 120
gggaaagccc ctaagctcct aatctataag gcgtctaatt tagaaagtgg ggtcccatca 180
aggttcagcg gcagtggatc tgggacagaa ttcactctca ccatcagcag cctgcagcct 240
gatgattttg caacttatta ctgccaacag tataatagtt attcgtacac ttttggccag 300
gggaccaagc tggagatcaa a 321

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

<220>
<223> Synthetic

<400> 154
Asp Ile Gln Met Thr Gln Ser Pro Ser Thr Leu Ser Ala Ser Val Gly
1 5 10 15
Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Ser Ser Trp
20 25 30
Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
35 40 45
Tyr Lys Ala Ser Asn Leu Glu Ser Gly Val Pro Ser Arg Phe Ser Gly
50 55 60
Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
65 70 75 80
Asp Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Tyr Asn Ser Tyr Ser Tyr
85 90 95
Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
100 105

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

<220>
<223> Synthetic

<400> 155
cagagtatta gtagctgg 18

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

<220>
<223> Synthetic

<400> 156

Gln Ser Ile Ser Ser Trp
 1   5

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

<220>
<223> Synthetic

<400> 157
aaggcgtct   9

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

<220>
<223> Synthetic

<400> 158
Lys Ala Ser
 1

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

<220>
<223> Synthetic

<400> 159
caacagtata atagttattc gtacact   27

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

<220>
<223> Synthetic

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

<210> 161
<211> 363
<212> DNA
<213> Artificial Sequence

<220>

<223> Synthetic

<400> 161
gaggtgcagc tgttggagtc tgggggggtc ttggtacagc ctggggggtc cctgagactc 60
tcctgtgcag cctctggatt caattttaac aactatgaca tgagctgggt ccgccaggct 120
ccagggaagg ggctggagtg ggtctcagtc attagtgcaa gtggtcgtaa cacatactac 180
gcagactccg tgaagggccg gttcaccatc tccagagaca attccaagat cagtctgtat 240
ctgcaaatga acagcctgag acccgaggac acggccgtat attactgtgc gaaagatcac 300
ctcgtccact actactacgg tatggacgtc tggggccaag ggaccacggt caccgtctcc 360
tct 363

<210> 162
<211> 121
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 162
Glu Val Gln Leu Leu Glu Ser Gly Gly Val Leu Val Gln Pro Gly Gly
 1   5   10   15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Asn Phe Asn Asn Tyr
            20   25   30
Asp Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35   40   45
Ser Val Ile Ser Ala Ser Gly Arg Asn Thr Tyr Tyr Ala Asp Ser Val
    50   55   60
Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Ile Ser Leu Tyr
65   70   75   80
Leu Gln Met Asn Ser Leu Arg Pro Glu Asp Thr Ala Val Tyr Tyr Cys
                85   90   95
Ala Lys Asp His Leu Val His Tyr Tyr Tyr Gly Met Asp Val Trp Gly
            100   105   110
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
ggattcaatt ttaacaacta tgac 24

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

<220>
<223> Synthetic

<400> 164

Gly Phe Asn Phe Asn Asn Tyr Asp
1 5

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

<220>
<223> Synthetic

<400> 165
attagtgcaa gtggtcgtaa caca 24

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

<220>
<223> Synthetic

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

<210> 167
<211> 42
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 167
gcgaaagatc acctcgtcca ctactactac ggtatggacg tc 42

<210> 168
<211> 14
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

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

<210> 169
<211> 336
<212> DNA
<213> Artificial Sequence

<220>

<223> Synthetic

<400> 169
gatattatga tgactcagtc tccactctcc ctgtccgtca cccctggaga gccggcctcc 60
atctcctgca ggtctagtca gagcctcctg catagtaatg gatacaacta tttggattgg 120
tacctccaga agtcaggaca gtctccacac ctcctgatct atttgggttc taatcgggcc 180
tccggggtcc ctgacaggtt cagtggcagt ggatcaggca cagattttac actgaaaatc 240
agcagagtgg aggctgagga tggtggggtt tattactgca tgcaagctct acaaactcct 300
cggacgttcg gccaagggac caaggtggaa atcaaa 336

<210> 170
<211> 112
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

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

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

<220>
<223> Synthetic

<400> 171
cagagcctcc tgcatagtaa 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
ttgggttat 9

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

<220>
<223> Synthetic

<400> 174
Leu Gly Ser
1

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

<220>
<223> Synthetic

<400> 175
atgcaagctc tacaaactcc tcggacg 27

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

<220>
<223> Synthetic

<400> 176
Met Gln Ala Leu Gln Thr Pro Arg Thr
1 5

<210> 177
<211> 363
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 177

gaggaccgag tgttggaatc tggggaggc ttggtacagc ctgggggtc cctgagactc 60
tcctgtgcag cctctggatt catgtttagc agctatgcca tgagctgggt ccgccaggct 120
ccagggaagg ggctggagtg ggtctcactt attagtggtc gtgacggtaa cacatactat 180
gcagactccg tgaagggccg gttcaccatc tccagagaca attccaggaa cacgctctat 240
ctacaattga acagcctgcg agccgaggac acggccgtat attactgtgc gaaagataca 300
gctgtggttc ctggctacgg tatggacgtc tggggccaag ggaccacggt caccgtctcc 360
tca 363

<210> 178
<211> 121
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

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

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

<220>
<223> Synthetic

<400> 179
ggattcatgt ttagcagcta tgcc 24

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

<220>
<223> Synthetic

<400> 180
Gly Phe Met Phe Ser Ser Tyr Ala
1 5

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

<220>
<223> Synthetic

<400> 181
attagtggtc gtgacggtaa caca 24

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

<220>
<223> Synthetic

<400> 182
Ile Ser Gly Arg Asp Gly Asn Thr
1 5

<210> 183
<211> 42
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 183
gcgaaagata cagctgtggt tcctggctac ggtatggacg tc 42

<210> 184
<211> 14
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 184
Ala Lys Asp Thr Ala Val Val Pro Gly Tyr Gly Met Asp Val
1 5 10

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

<220>
<223> Synthetic

<400> 185

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gacatccaga tgacccagtc tccttccacc ctgtctgcat ctgtaggaga cagagtcacc 60
atcacttgcc gggccagtca gagtattagt aactggttgg cctggtatca gcagagacca 120
gggaaagccc ctaagctcct gatctataag gcgtctagtt tagaaagtgg ggtcccatca 180
aggttcagcg gcagtggatc tgggacagaa ttcactctca ccatcagcag cctgcagcct 240
gatgattttg caagttatta ctgccaacag tataatagtt attcgtggac gttcggccaa 300
gggaccaagg tggaaatcaa a                                           321
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<210> 186
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 186

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Asp Ile Gln Met Thr Gln Ser Pro Ser Thr Leu Ser Ala Ser Val Gly
 1               5                  10                  15
Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Ser Asn Trp
            20                  25                  30
Leu Ala Trp Tyr Gln Gln Arg Pro Gly Lys Ala Pro Lys Leu Leu Ile
        35                  40                  45
Tyr Lys Ala Ser Ser Leu Glu Ser Gly Val Pro Ser Arg Phe Ser Gly
    50                  55                  60
Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
65                  70                  75                  80
Asp Asp Phe Ala Ser Tyr Tyr Cys Gln Gln Tyr Asn Ser Tyr Ser Trp
                85                  90                  95
Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
            100                 105
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<210> 187
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 187
cagagtatta gtaactgg 18

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

<220>
<223> Synthetic

<400> 188

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Gln Ser Ile Ser Asn Trp
 1               5
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<210> 189
<211> 9

<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 189
aaggcgtct 9

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

<220>
<223> Synthetic

<400> 190
Lys Ala Ser
1

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

<220>
<223> Synthetic

<400> 191
caacagtata atagttatte gtggacg 27

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

<220>
<223> Synthetic

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

<210> 193
<211> 348
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 193
gaggtgcagc tgttggcgtc tgggggaggc ttggtacagc ctgggggtc cctgagactc 60
tcctgtgcag cctctggatt cacctttagc agctttgcca tgagctgggt ccgccaggct 120
ccagggaagg ggctggagtg ggtctcaggt attagtggta gtggtggtag cacatactac 180

gcagactccg tgaagggccg gttcaccatc tccagagaca attccaaaaa cacgctgtat 240
ctgcaaatga acagcctgag agccgaggac acggccgcat attactgtgc gaaagaggcc 300
tataaatggc agccctgggg ccagggaatc cgggtcaccg tctcctca 348

<210> 194
<211> 116
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 194
Glu Val Gln Leu Leu Ala Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
1 5 10 15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Phe
20 25 30
Ala Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45
Ser Gly Ile Ser Gly Ser Gly Gly Ser Thr Tyr Tyr Ala Asp Ser Val
50 55 60
Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
65 70 75 80
Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Ala Tyr Tyr Cys
85 90 95
Ala Lys Glu Ala Tyr Lys Trp Gln Pro Trp Gly Gln Gly Ile Arg Val
100 105 110
Thr Val Ser Ser
115

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

<220>
<223> Synthetic

<400> 195
ggattcacct ttagcagctt tgcc 24

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

<220>
<223> Synthetic

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

<210> 197
<211> 24
<212> DNA

<213> Artificial Sequence

<220>
<223> Synthetic

<400> 197
attagtggta gtggtggtag caca 24

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

<220>
<223> Synthetic

<400> 198
Ile Ser Gly Ser Gly Gly Ser Thr
 1 5

<210> 199
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 199
gcgaaagagg cctataaatg gcagccc 27

<210> 200
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 200
Ala Lys Glu Ala Tyr Lys Trp Gln Pro
 1 5

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

<220>
<223> Synthetic

<400> 201
gacatccaga tgacccagtc tccttccacc ctgtctgcat ctgtgggaga cagagtctcc 60
atcacttgcc gggccagtca gagtattagt agctggttgg cctggtatca gcagaaacca 120
gggaaagccc ctaagctcct gatctataag gcgtctaatt tagacagtgg ggtcccatca 180
aggttcagcg gcagtggatc tgggacagat ttcactctca ccatcagcag cctgcagcct 240

gatgattttg caacttatta ctgccaacag tataatagtt attcgtacac ttttggccag 300
gggaccaagc tggagatcaa a 321

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

<220>
<223> Synthetic

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

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

<220>
<223> Synthetic

<400> 203
cagagtatta gtagctgg 18

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

<220>
<223> Synthetic

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

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

<220>

<223> Synthetic

<400> 205
aaggcgtct 9

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

<220>
<223> Synthetic

<400> 206
Lys Ala Ser
1

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

<220>
<223> Synthetic

<400> 207
caacagtata atagttattc gtacact 27

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

<220>
<223> Synthetic

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

<210> 209
<211> 387
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 209
gaggtgcagc tgttggagtc tgggggaggc ttggtacagc cgggggggtc cctgagactc 60
tcctgtgcag cctctggatt cacctttaga aactatgcca tgagctgggt ccgccaggct 120
ccaggaaagg ggctggagtg ggtctcagct attaatggtg gtggtgatag cacatactac 180
gcagactccg tgaagggccg gttcaccatc tccagagaca attccaagaa tacgctgtat 240
ctgcaaatga acagcctgag agccgaggac acggccgtat attactgtgc gaaagaggag 300
ggagactgga actacgtggg atatggttac tactactact acggtatgga cgtctggggc 360
caagggacca cggtcaccgt ctcctca 387

<210> 210
<211> 129
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 210
Glu Val Gln Leu Leu Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
 1   5   10   15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Arg Asn Tyr
            20   25   30
Ala Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35   40   45
Ser Ala Ile Asn Gly Gly Gly Asp Ser Thr Tyr Tyr Ala Asp Ser Val
    50   55   60
Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
65   70   75   80
Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
                85   90   95
Ala Lys Glu Glu Gly Asp Trp Asn Tyr Val Gly Tyr Gly Tyr Tyr Tyr
            100   105   110
Tyr Tyr Gly Met Asp Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser
        115   120   125
Ser

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

<220>
<223> Synthetic

<400> 211
ggattcacct ttagaaacta tgcc   24

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

<220>
<223> Synthetic

<400> 212
Gly Phe Thr Phe Arg Asn Tyr Ala
 1   5

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

<220>
<223> Synthetic

<400> 213
attaatggtg gtggtgatag caca 24

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

<220>
<223> Synthetic

<400> 214
Ile Asn Gly Gly Gly Asp Ser Thr
1 5

<210> 215
<211> 66
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 215
gcgaaagagg agggagactg gaactacgtg ggatatggtt actactacta ctacggtatg 60
gacgtc 66

<210> 216
<211> 22
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 216
Ala Lys Glu Glu Gly Asp Trp Asn Tyr Val Gly Tyr Gly Tyr Tyr Tyr
1 5 10 15
Tyr Tyr Gly Met Asp Val
20

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

<220>
<223> Synthetic

<400> 217
gacatccaga tgacccagtc tccatcttcc atgtctgcat ctgtaggaga cagagtcacc 60
atcacttgtc gggcgagtca gggtattagc agctggttag cctggtatca gcagaaacca 120

gggaaagccc ctaagctcct gatctatgct gcatccagtt tgcaaagtgg ggtcccatca 180
aggttcagcg gcagtggatc tgggacagat ttcactctca ccatcaggag cctgcagcct 240
gaagattttg caacttacta ttgtcaacag gctaacagtt tccccgtacac ttttggccag 300
gggaccaagc tggagatcaa a 321

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

<220>
<223> Synthetic

<400> 218
Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Met 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 Arg Ser Leu Gln Pro
65 70 75 80
Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Ala Asn Ser Phe Pro Tyr
 85 90 95
Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
 100 105

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

<220>
<223> Synthetic

<400> 219
cagggtatta gcagctgg 18

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

<220>
<223> Synthetic

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

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

<220>
<223> Synthetic

<400> 221
gctgcatcc 9

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

<220>
<223> Synthetic

<400> 222
Ala Ala Ser
1

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

<220>
<223> Synthetic

<400> 223
caacaggcta acagtttccc gtacact 27

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

<220>
<223> Synthetic

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

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

<220>
<223> Synthetic

<400> 225
caggtgcagc tggtggagtc tgggggaggc gtggtccagc ctgggaggtc cctgagactc 60
tcctgtgaag cctctggttt caccttcgga agctatggca tgcactgggt ccgccaggct 120
ccaggcaagg ggctggagtg gatggcagtt atatcatatg atggaaatag tagatactct 180
gcagactccg tgaagggccg attcaccatc tccagagaca attccaagaa tacgctgtat 240
ctgcagatga acagcctgag agctgaggac acggctctgt attactgtgc gaaagaaaat 300

catatagcag ctcgtcgtcc cggaggtctg gacgtctggg gccaagggac cacggtcacc 360
gtctcctca 369

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

<220>
<223> Synthetic

<400> 226
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 Glu Ala Ser Gly Phe Thr Phe Gly Ser Tyr
            20   25   30
Gly Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Met
        35   40   45
Ala Val Ile Ser Tyr Asp Gly Asn Ser Arg Tyr Ser 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 Leu Tyr Tyr Cys
                85   90   95
Ala Lys Glu Asn His Ile Ala Ala Arg Arg Pro Gly Gly Leu Asp Val
            100   105   110
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
ggtttcacct tcggaagcta tggc 24

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

<220>
<223> Synthetic

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

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

<220>
<223> Synthetic

<400> 229
atatcatatg atggaaatag taga 24

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

<220>
<223> Synthetic

<400> 230
Ile Ser Tyr Asp Gly Asn Ser Arg
1 5

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

<220>
<223> Synthetic

<400> 231
gcgaaagaaa atcatatagc agctcgtcgt cccggaggtc tggacgtc 48

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

<220>
<223> Synthetic

<400> 232
Ala Lys Glu Asn His Ile Ala Ala Arg Arg Pro Gly Gly Leu Asp Val
1 5 10 15

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

<220>
<223> Synthetic

<400> 233
gacatccaga tgacccagtc tccatcctcc ctgtctgcat ctgtaggaga cagagtcacc 60
atcacttgcc gggcgagtca gggcattagc atttatttag cctggtatca acagaaacca 120
gggaaagttc ctaagctcct gatctatgct gcatccagtt tgcaatcagg ggtcccatct 180
cggttcagtg gcagtggatc tgggacagat ttcactctca ccatcagcag cctgcagcct 240
gaagatgttg caacttattt ctgtcaaaac tataacattg cccccgtggac gctcggccaa 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 Leu Ser Ala Ser Val Gly
1 5 10 15
Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Gly Ile Ser Ile Tyr
20 25 30
Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Val Pro Lys Leu Leu Ile
35 40 45
Tyr Ala Ala Ser 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 Val Ala Thr Tyr Phe Cys Gln Asn Tyr Asn Ile Ala Pro Trp
85 90 95
Thr Leu 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
cagggcatta gcatttat 18

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

<220>
<223> Synthetic

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

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

<220>
<223> Synthetic

<400> 237
gctgcatcc 9

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

<220>
<223> Synthetic

<400> 238
Ala Ala Ser
1

<210> 239
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 239
caaaactata acattgcccc gtgg 24

<210> 240
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 240
Gln Asn Tyr Asn Ile Ala Pro Trp
1 5

<210> 241
<211> 384
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 241
gaggtgcagc tgttggagtc tgggggaggc ttggtgcagc ctgggggggtc cctgagactc 60
tcctgtgcag cctctggatt catctttacc aattatgcca tgacctggct ccgccaggct 120
ccagggaagg ggctggagtg ggtctcagct cttagtggtt ctggtggtac cacatactac 180
gcagactccg tgaagggccg gttcaccacc tccagagaca attccaagaa cactctgtat 240
ctgcaaatga acagcctgag agccgaggac acggccgtct attactgtgc gaaagatccc 300
cattactatg ggtcggggaa tgattactte tactactacg gtttggacgt ctggggccga 360
gggaccacgg tcaccgtctc ctca 384

<210> 242
<211> 128
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 242
Glu Val Gln Leu Leu Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
 1   5   10   15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Ile Phe Thr Asn Tyr
            20   25   30
Ala Met Thr Trp Leu Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35   40   45
Ser Ala Leu Ser Gly Ser Gly Gly Thr Thr Tyr Tyr Ala Asp Ser Val
    50   55   60
Lys 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 Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
                85   90   95
Ala Lys Asp Pro His Tyr Tyr Gly Ser Gly Asn Asp Tyr Phe Tyr Tyr
            100   105   110
Tyr Gly Leu Asp Val Trp Gly Arg Gly Thr Thr Val Thr Val Ser Ser
        115   120   125

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

<220>
<223> Synthetic

<400> 243
ggattcatct ttaccaatta tgcc 24

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

<220>
<223> Synthetic

<400> 244
Gly Phe Ile Phe Thr Asn Tyr Ala
 1   5

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

<220>
<223> Synthetic

<400> 245
cttagtggtt ctggtggtac caca 24

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

<220>
<223> Synthetic

<400> 246
Leu Ser Gly Ser Gly Gly Thr Thr
1 5

<210> 247
<211> 63
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 247
gcgaaagatc cccattacta tgggtcgggg aatgattact tctactacta cggtttggac 60
gtc 63

<210> 248
<211> 21
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 248
Ala Lys Asp Pro His Tyr Tyr Gly Ser Gly Asn Asp Tyr Phe Tyr Tyr
1 5 10 15
Tyr Gly Leu Asp Val
20

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

<220>
<223> Synthetic

<400> 249
gatattgtga tgactcagtc tccactctcc ctgcccgtca cccctggaga gccggcctcc 60
atctcctgca ggtctagtca gagcctcctg catagtaatg gatacaacta tttggattgg 120
tacctgcaga agccagggca gtctccacag ctcctgatct atttgggttc taatcgggcc 180
tccggggtcc ctgacaggtt cagtggcagt ggatcaggca cagattttac actgaaaatc 240
agcagagtgg aggctgagga tgttggggtt tattactgca tgcaggctct 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 Pro Val Thr Pro Gly
 1   5   10   15
Glu Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Leu His Ser
            20   25   30
Asn Gly Tyr Asn Tyr Leu Asp Trp Tyr Leu Gln Lys Pro Gly Gln Ser
        35   40   45
Pro Gln Leu Leu Ile Tyr Leu Gly Ser Asn Arg Ala Ser Gly Val Pro
    50   55   60
Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile
65   70   75   80
Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln Ala
                85   90   95
Leu Gln Thr Pro 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
cagagcctcc tgcatagtaa tggatacaac tat 33

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

<220>
<223> Synthetic

<400> 252
Gln Ser Leu Leu His Ser Asn Gly Tyr Asn Tyr
 1   5   10

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

<220>
<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
atgcaggctc tacaaactcc gtacact 27

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

<220>
<223> Synthetic

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

<210> 257
<211> 357
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 257
gaggtgcagc tggtggagtc tgggggaggt ttggtccagt ctgggggggtc cctgagactc 60
tcttgtgcag cctctggatt cacctttagt agatattgga tgagctgggt ccgccaggct 120
ccagggaagg ggctggagtg ggtggccaac ataaaacaag atggaagtga gaaagattat 180
gtggactctg tgaagggccg attcaccatt tccagagaca acaccaagag ctcactgttt 240
ctgcaaatga atagcctgag agccgaggac acggctgtgt attactgtgc gaaggagaga 300
tggaactgga acttctttga ctactggggc cagggaaccc tggtcactgt ctcctca 357

<210> 258

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

<220>
<223> Synthetic

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

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

<220>
<223> Synthetic

<400> 259
ggattcacct ttagtagata ttgg   24

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

<220>
<223> Synthetic

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

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

<220>
<223> Synthetic

<400> 261
ataaaacaag atggaagtga gaaa 24

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

<220>
<223> Synthetic

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

<210> 263
<211> 36
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 263
gcgaaggaga gatggaactg gaacttcttt gactac 36

<210> 264
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 264
Ala Lys Glu Arg Trp Asn Trp Asn Phe Phe Asp Tyr
1 5 10

<210> 265
<211> 318
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 265
gacatccaga tgacccagtc tccttccacc ctgtctgcat ctgtaggaga cagagtcacc 60
atcacttgcc gggccagtca gagtattagt agctggttgg cctggtatca gcagaaacca 120
gggaaagccc ctaagctcct gatctataag gcatctagtt tagaaagtgg ggtcccatca 180
aggttcagcg gcagtggatc tgggacagaa ttcactctca ccatcagcag cctgcagcct 240
gatgattttg caacttatta ctgccagcag tttaatagtt attccacttt tggccagggg 300
accaagctgg agatcaaa 318

<210> 266
<211> 106

<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

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

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

<220>
<223> Synthetic

<400> 267
cagagtatta gtagctgg   18

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

<220>
<223> Synthetic

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

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

<220>
<223> Synthetic

<400> 269
aaggcatct   9

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

<220>
<223> Synthetic

<400> 270
Lys Ala Ser
 1

<210> 271
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 271
cagcagtttt attagttattc cact 24

<210> 272
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

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

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

<220>
<223> Synthetic

<400> 273
gaggtgcagc tggtggagtc tgggggagac ttaatacagc cgggggggtc cctgagactc 60
tcctgtatag cctctggatt cacctttaga ggctatgcca tgagttgggt ccgccaggct 120
ccagggaagg ggctggactg ggtctcaggt attagttctg gtggcgggaa cacatattac 180
gcagactccg tgaagggccg gttcaccatc tccagagaca attccaagaa cacgctgtat 240
ttgcaaatga acagtctgag agtcgaggac acggccgtat attactgtgc gaaagacaga 300
ggggggtgtaa gggacttttta ctacggtttg gacgtctggg gccaggggac 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 Ile Gln Pro Gly Gly
 1   5   10   15
Ser Leu Arg Leu Ser Cys Ile Ala Ser Gly Phe Thr Phe Arg Gly Tyr
            20   25   30
Ala Met Ser Trp Val Arg Gln Ala Pro Gly Glu Gly Leu Asp Trp Val
        35   40   45
Ser Gly Ile Ser Ser Gly Gly Gly Asn Thr Tyr Tyr Ala Asp Ser Val
    50   55   60
Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
65   70   75   80
Leu Gln Met Asn Ser Leu Arg Val Glu Asp Thr Ala Val Tyr Tyr Cys
                85   90   95
Ala Lys Asp Arg Gly Gly Val Arg Asp Phe 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 ttagaggcta tgcc   24

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

<220>
<223> Synthetic

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

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

<220>
<223> Synthetic

<400> 277
attagttctg gtggcgggaa caca   24

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

<220>
<223> Synthetic

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

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

<220>
<223> Synthetic

<400> 279
gcgaaagaca gaggggtgt aagggacttt tactacggtt tggacgtc   48

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

<220>
<223> Synthetic

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

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

<220>
<223> Synthetic

<400> 281
gacatccaga tgacccagtc tccttccacc ctgtctgcat ctgtaggaga cagagtcacc 60
atcacttgcc gggccagtca gagtatttat agttggttgg cctggtatca gcagaaacca 120
gggaaagccc ctaaactcct gatctataag gcgtctagtt tagaaagtgg ggtcccgtca 180
aggttcagcg gcagtggatc tgggacagat ttcactctca ccatcagcag cctgcagcct 240
gatgatttta caacttatta ctgccaacaa tatcttagtt attctcggac gttcggccaa 300
gggaccaagg tggaaatcaa a   321

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

<220>
<223> Synthetic

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

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

<220>
<223> Synthetic

<400> 283
cagagtattt atagttgg   18

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

<220>
<223> Synthetic

<400> 284
Gln Ser Ile Tyr Ser Trp
 1   5

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

<220>
<223> Synthetic

<400> 285
aaggcgtct   9

<210> 286
<211> 3
<212> PRT

<213> Artificial Sequence

<220>
<223> Synthetic

<400> 286
Lys Ala Ser
 1

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

<220>
<223> Synthetic

<400> 287
caacaatatc ttagttattc tcggacg 27

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

<220>
<223> Synthetic

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

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

<220>
<223> Synthetic

<400> 289
gaggtgcagc tggtggagtc tgggggaggc ttggtacagc ctggcaggtc cctgagactc 60
tcctttgcag cctctggatt cacctttgat gattatgcca tgcactgggt ccggcaagct 120
ccagggaagg gcctggagtg ggtctcaggt attagttgga atagtggtag cataggctat 180
gcggactctg tgaagggccg attcaccatc tccagagaca acgccaagaa ctccctgtat 240
ctgcaaatga acagtctgag agctgaggac acggccttgt attactgtgc aaaagcccgt 300
ggatacagct atggttacgg ggagtactac tacggtatgg acgtctgggg ccaagggacc 360
acggtcaccg tctcctca 378

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

<220>
<223> Synthetic

<400> 290
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Arg
 1   5   10   15
Ser Leu Arg Leu Ser Phe Ala Ala Ser Gly Phe Thr Phe Asp Asp Tyr
            20   25   30
Ala Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35   40   45
Ser Gly Ile Ser Trp Asn Ser Gly Ser Ile Gly Tyr Ala Asp Ser Val
    50   55   60
Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Ser Leu Tyr
65   70   75   80
Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Leu Tyr Tyr Cys
                85   90   95
Ala Lys Ala Arg Gly Tyr Ser Tyr Gly Tyr Gly Glu Tyr Tyr Tyr Gly
            100   105   110
Met Asp Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser
        115   120   125

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

<220>
<223> Synthetic

<400> 291
ggattcacct ttgatgatta tgcc   24

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

<220>
<223> Synthetic

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

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

<220>
<223> Synthetic

<400> 293
attagttgga atagtggtag cata   24

<210> 294
<211> 8
<212> PRT

<213> Artificial Sequence

<220>
<223> Synthetic

<400> 294
Ile Ser Trp Asn Ser Gly Ser Ile
 1   5

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

<220>
<223> Synthetic

<400> 295
gcaaaagccc gtggatacag ctatggttac ggggagtact actacggtat ggacgtc   57

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

<220>
<223> Synthetic

<400> 296
Ala Lys Ala Arg Gly Tyr Ser Tyr Gly Tyr Gly Glu Tyr Tyr Tyr Gly
 1   5   10   15
Met Asp Val

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

<220>
<223> Synthetic

<400> 297
gacatccaga tgacccagtc tccatcctcc ctgtctgcat ctgtaggaga cagagtcacc 60
atcacttgcc gggcaagtca gagcattagc agctatttaa attggtatca gcagaaacca 120
gggaaagccc ctaagctcct gatctatgct gcatccagtt tgcaaagtgg ggtcccatca 180
aggttcagtg gcagtggatc tgggacagat ttcactctca ccatcagcag tctgcaacct 240
gaagattttg caacttacta ctgtcaacag agttacagta ccccgtacac ttttggccag 300
gggaccaagc 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 Ser Ile Ser Ser Tyr
            20   25   30
Leu Asn Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
        35   40   45
Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
    50   55   60
Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
65   70   75   80
Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Ser Tyr Ser Thr Pro Tyr
                85   90   95
Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
            100   105

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

<220>
<223> Synthetic

<400> 299
cagagcatta gcagctat 18

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

<220>
<223> Synthetic

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

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

<220>
<223> Synthetic

<400> 301
gctgcatcc 9

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

<220>
<223> Synthetic

<400> 302
Ala Ala Ser
 1

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

<220>
<223> Synthetic

<400> 303
caacagagtt acagtacccc gtacact 27

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

<220>
<223> Synthetic

<400> 304
Gln Gln Ser Tyr Ser Thr Pro Tyr Thr
 1   5

<210> 305
<211> 351
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 305
caggtgcagc tggtggagtc tgggggaggc gtggtccagc ctgggaggtc cctgagactc 60
tcctgtgcag cgtctggatt caccttcagt aactatggca tgcactgggt ccgccaggct 120
ccaggcaagg ggctggagtg ggtggcagtt atattgtatg atggaagtaa taaatactat 180
acagactccg tgaagggccg attcaccatc tccagagaca attccaagaa cacgctgtat 240
ctgcaaatga acagcctgag agccgaggac acggctgtgt attactgtgc gagagataac 300
tggaactctt ttgactactg gggccaggga accctggtca ccgtctcctc a 351

<210> 306
<211> 117
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 306

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

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

<220>
<223> Synthetic

<400> 307
ggattcacct tcagtaacta tggc 24

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

<220>
<223> Synthetic

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

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

<220>
<223> Synthetic

<400> 309
atattgtatg atggaagtaa taaa 24

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

<220>
<223> Synthetic

<400> 310
Ile Leu Tyr Asp Gly Ser Asn Lys
 1   5

<210> 311
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 311
gcgagagata actggaactc ttttgactac   30

<210> 312
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 312
Ala Arg Asp Asn Trp Asn Ser Phe Asp Tyr
 1   5   10

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

<220>
<223> Synthetic

<400> 313
gacatccaga tgacccagtc tccatcctcc ctgtctgcat ctgtaggaga cagagtcacc 60
atcacttgcc gggcaagtca gagcattagc agctatttaa attggtatca gcagaaacca 120
gggaaagccc ctaagctcct gatctatact gcatccagtt tacaaagtgg ggtcccatca 180
aggttcagtg gcagtggatc tgggacagat ttcactctca ccatcagcag tctgcaacct 240
gaagattttg caacttacta ctgtcaacag agttacacta ccccattcac tttcggccct 300
gggaccaaag tggatatcaa a   321

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

<220>
<223> Synthetic

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

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

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

<220>
<223> Synthetic

<400> 315
cagagcatta gcagctat 18

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

<220>
<223> Synthetic

<400> 316
```
Gln Ser Ile Ser Ser Tyr
 1               5
```

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

<220>
<223> Synthetic

<400> 317
actgcatcc 9

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

<220>
<223> Synthetic

<400> 318
Thr Ala Ser
 1

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

<220>
<223> Synthetic

<400> 319
caacagagtt acactaccca attcact 27

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

<220>
<223> Synthetic

<400> 320
Gln Gln Ser Tyr Thr Thr Pro Phe Thr
 1   5

<210> 321
<211> 375
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 321
gaggtgcagc tggtggagtc tgggggaggc ttggtccagc ctgggggggtc cctgagactc 60
tcctgtgcag cctctggatt cacctttagt agctattgga tgagctgggt ccgccaggct 120
ccagggaagg ggctggagtg ggtggccaac ataaagcaag atggaagtga gaaatactat 180
gtggactctg tgaagggccg attcaccatc tccagagaca acgccaagaa ctcactgtat 240
ctgcaaatga acagcctgag agccgaggac acggctgtgt attactgtgc gagagagagg 300
gtagtagtac cagctgctat accccactgg tacttcgatc tctgggggccg tggcaccctg 360
gtcaccgtct cctca 375

<210> 322
<211> 125
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

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

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


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

<220>
<223> Synthetic

<400> 323
ggattcacct ttagtagcta ttgg                                          24

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

<220>
<223> Synthetic

<400> 324
Gly Phe Thr Phe Ser Ser Tyr Trp
 1               5


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

<220>
<223> Synthetic

<400> 325
ataaagcaag atggaagtga gaaa                                          24

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

<220>
<223> Synthetic
```

<400> 326
Ile Lys Gln Asp Gly Ser Glu Lys
 1   5

<210> 327
<211> 54
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 327
gcgagagaga gggtagtagt accagctgct ataccccact ggtacttcga tctc   54

<210> 328
<211> 18
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 328
Ala Arg Glu Arg Val Val Val Pro Ala Ala Ile Pro His Trp Tyr Phe
 1   5   10   15
Asp Leu

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

<220>
<223> Synthetic

<400> 329
gacatcgtga tgacccagtc tccagactcc ctggctgtgt ctctgggcga gagggccacc 60
atcaactgca agtccagcca gagtgtttta tacagctcca acaataagaa ctacttagct 120
tggtaccagc agaaaccagg acagcctcct aagctgctca tttactgggc atctacccgg 180
gaatccgggg tccctgaccg attcagtggc agcgggtctg ggacagattt cactctcacc 240
atcagcagcc tgcaggctga agatgtggca gtttattact gtcagcaata ttatagtact 300
cctcggacgt tcggccaagg gaccaaggtg gaaatcaaa   339

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

<220>
<223> Synthetic

<400> 330
Asp Ile Val Met Thr Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly
 1   5   10   15

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

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

<220>
<223> Synthetic

<400> 331
cagagtgttt tatacagctc caacaataag aactac 36

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

<220>
<223> Synthetic

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

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

<220>
<223> Synthetic

<400> 333
tgggcatct 9

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

<220>
<223> Synthetic

<400> 334
Trp Ala Ser
 1

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

<220>
<223> Synthetic

<400> 335
cagcaatatt atagtactcc tcggacg 27

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

<220>
<223> Synthetic

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

<210> 337
<211> 375
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 337
caggttcagc tggtgcagtc tggagctgag gtgaagaagc ctggggcctc agtgaaggtc 60
tcctgcaagg cttctggtta caccttttacc agctatggta tcagctgggt gcgacaggcc 120
cctggacaag ggcttgagtg gatgggatgg atcagcgctt acaatggtaa cacaaactat 180
gcacagaagc tccagggcag agtcaccatg accacagaca catccacgag cacagcctac 240
atggagctga ggagcctgag atctgacgac acggccgtgt attactgtgc gagagcgtat 300
tacgatattt tgactggtta ttactactac ggtatggacg tctggggcca agggaccacg 360
gtcaccgtct cctca 375

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

<220>
<223> Synthetic

<400> 338
Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
 1   5   10   15

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


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

<220>
<223> Synthetic

<400> 339
ggttacacct ttaccagcta tggt                                          24

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

<220>
<223> Synthetic

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


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

<220>
<223> Synthetic

<400> 341
atcagcgctt acaatggtaa caca                                          24

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

<220>
<223> Synthetic
```

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

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

<220>
<223> Synthetic

<400> 343
gcgagagcgt attacgatat tttgactggt tattactact acggtatgga cgtc   54

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

<220>
<223> Synthetic

<400> 344
Ala Arg Ala Tyr Tyr Asp Ile Leu Thr Gly Tyr Tyr Tyr Tyr Gly Met
 1   5   10   15
Asp Val

<210> 345
<211> 333
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 345
gacatccaga tgacccagtc tccatcctcc ctgtctgcat ctgtaggaga cagagtcacc 60
atcacttgcc aggcgagtca ggacattagc aactatttaa attggtatca gcagaaacca 120
gggaaagccc ctaagctcct gatctacgat gcatccaatt tggaaacagg ggtcccatca 180
aggttcagtg gaagtggatc tgggacagat tttactttca ccatcagcag cctgcagcct 240
gaagatattg caacatatta ctgtcaacag tatgataatc tccctccggg aggttcattc 300
actttcggcc ctgggaccaa agtggatatc aaa   333

<210> 346
<211> 111
<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 Val Thr Ile Thr Cys Gln Ala Ser Gln Asp Ile Ser Asn Tyr
            20                  25                  30
Leu Asn Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
        35                  40                  45
Tyr Asp Ala Ser Asn Leu Glu Thr Gly Val Pro Ser Arg Phe Ser Gly
    50                  55                  60
Ser Gly Ser Gly Thr Asp Phe Thr Phe Thr Ile Ser Ser Leu Gln Pro
65                  70                  75                  80
Glu Asp Ile Ala Thr Tyr Tyr Cys Gln Gln Tyr Asp Asn Leu Pro Pro
                85                  90                  95
Gly Gly Ser Phe Thr Phe Gly Pro Gly Thr Lys Val Asp Ile Lys
            100                 105                 110
```

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

<220>
<223> Synthetic

<400> 347
caggacatta gcaactat 18

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

<220>
<223> Synthetic

<400> 348
Gln Asp Ile Ser Asn Tyr
 1   5

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

<220>
<223> Synthetic

<400> 349
gatgcatcc 9

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

<220>
<223> Synthetic

<400> 350
Asp Ala Ser
 1

<210> 351
<211> 39
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 351
caacagtatg ataatctccc tccggggggt tcattcact 39

<210> 352
<211> 13
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 352
Gln Gln Tyr Asp Asn Leu Pro Pro Gly Gly Ser Phe Thr
 1   5   10

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

<220>
<223> Synthetic

<400> 353
gaggtgcagc tggtggagtc tgggggaggc ttggtacagc ctgggggggtc cctgagactc 60
tcctgtgcag cctctggatt cacctttagc agttatgcca tgagctgggt ccgccaggct 120
ccagggaagg ggctggaatg ggtctcaggt cttagtggta gtggtggtag cacatactac 180
gcagactccg tgaagggccg gttcaccatc tccagagaca attccaagaa cacgctgtat 240
ctgcaaatga acagcctgag agccgaggac acggccgtat attattgtgc gaaagagaaa 300
tataattgga aatttcactt tgactactgg ggccagggaa ccctggtcac cgtctcctca 360

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

<220>
<223> Synthetic

<400> 354
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
 1   5   10   15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr

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

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

<220>
<223> Synthetic

<400> 355
ggattcacct ttagcagtta tgcc 24

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

<220>
<223> Synthetic

<400> 356
Gly Phe Thr Phe Ser Ser Tyr Ala
 1   5

<210> 357
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 357
cttagtggta gtggtggtag caca 24

<210> 358
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 358
Leu Ser Gly Ser Gly Gly Ser Thr
 1   5

<210> 359
<211> 39
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 359
gcgaaagaga aatataattg gaaatttcac tttgactac   39

<210> 360
<211> 13
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 360
Ala Lys Glu Lys Tyr Asn Trp Lys Phe His Phe Asp Tyr
 1   5   10

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

<220>
<223> Synthetic

<400> 361
gacatccaga tgacccagtc tccatcctcc ctgtctgcat ctgtaggaga cagagtcacc 60
atcacttgcc agggcgagtca ggacattagc aactatttaa attggtatca gcagaaacca 120
gggaaagccc ctaagctcct gatctacgat gcatccaatt tggaaacagg ggtcccatca 180
aggttcagtg gaagtggatc tgggacagat tttactttca ccatcagcag cctgcagcct 240
gaagatattg caacatatta ctgtcaacag tatgataatc tcccgctcac tttcggcgga 300
gggaccaagg tggagatcaa a   321

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

<220>
<223> Synthetic

<400> 362
Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
 1   5   10   15
Asp Arg Val Thr Ile Thr Cys Gln Ala Ser Gln Asp Ile Ser Asn Tyr
            20   25   30

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

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

<220>
<223> Synthetic

<400> 363
caggacatta gcaactat 18

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

<220>
<223> Synthetic

<400> 364
Gln Asp Ile Ser Asn Tyr
 1   5

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

<220>
<223> Synthetic

<400> 365
gatgcatcc 9

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

<220>
<223> Synthetic

<400> 366
Asp Ala Ser
 1

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

<220>
<223> Synthetic

<400> 367
caacagtatg ataatctccc gctcact 27

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

<220>
<223> Synthetic

<400> 368
Gln Gln Tyr Asp Asn Leu Pro Leu Thr
1 5

<210> 369
<211> 354
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 369
caggttcagc tggtgcagtc tggagctgag gtgaagaagc ctggggcctc agtgaaggtc 60
tcctgcaagg cttctggtta caccttacc agctatggta tcagctgggt gcgacaggcc 120
cctggacaag ggcttgagtg gatgggatgg atcagcgctt acaatggtaa cacaaactat 180
gcacagaagc tccagggcag agtcaccatg accacagaca catccacgag cacagcctac 240
atggagctga ggagcctgag atctgacgac acggccgtgt attactgtgc gagagatggg 300
agctactcct ggttcgaccc ctggggccag ggaaccctgg tcaccgtctc ctca 354

<210> 370
<211> 118
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 370
Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
1 5 10 15
Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Ser Tyr
20 25 30
Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45
Gly Trp Ile Ser Ala Tyr Asn Gly Asn Thr Asn Tyr Ala Gln Lys Leu

```
    50                  55                  60
Gln Gly Arg Val Thr Met Thr Thr Asp Thr Ser Thr Ser Thr Ala Tyr
65                  70                  75                  80
Met Glu Leu Arg Ser Leu Arg Ser Asp Asp Thr Ala Val Tyr Tyr Cys
                85                  90                  95
Ala Arg Asp Gly Ser Tyr Ser Trp Phe Asp Pro Trp Gly Gln Gly Thr
            100                 105                 110
Leu Val Thr Val Ser Ser
        115
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<210> 371
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 371
ggttacacct ttaccagcta tggt 24

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

<220>
<223> Synthetic

<400> 372
Gly Tyr Thr Phe Thr Ser Tyr Gly
 1   5

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

<220>
<223> Synthetic

<400> 373
atcagcgctt acaatggtaa caca 24

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

<220>
<223> Synthetic

<400> 374
Ile Ser Ala Tyr Asn Gly Asn Thr
 1   5

<210> 375
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 375
gcgagagatg ggagctactc ctggttcgac ccc 33

<210> 376
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

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

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

<220>
<223> Synthetic

<400> 377
gacatccaga tgacccagtc tccatcctcc ctgtctgcat ctgtaggaga cagagtcacc 60
atcacttgcc gggcaagtca gagcattagc agctatttaa attggtatca gcagaaacca 120
gggaaagccc ctaagctcct gatctatgct gcatccagtt tgcaaagtgg ggtcccatca 180
aggttcagtg gcagtggatc tgggacagat ttcactctca ccatcagcag tctgcaacct 240
gaagattttg caacttacta ctgtcaacag agttacagta cccccgctcac tttcggcgga 300
gggaccaagg tggagatcaa a 321

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

<220>
<223> Synthetic

<400> 378
Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
1 5 10 15
Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Ser Ser Tyr
20 25 30
Leu Asn Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
35 40 45
Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
50 55 60

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

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

<220>
<223> Synthetic

<400> 379
cagagcatta gcagctat 18

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

<220>
<223> Synthetic

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

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

<220>
<223> Synthetic

<400> 381
gctgcatcc 9

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

<220>
<223> Synthetic

<400> 382
Ala Ala Ser
1

<210> 383
<211> 27

<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 383
caacagagtt acagtaccoc gctcact 27

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

<220>
<223> Synthetic

<400> 384
Gln Gln Ser Tyr Ser Thr Pro Leu Thr
1 5

<210> 385
<211> 360
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 385
caggtgcagc tgcaggagtc gggcccagga ctggtgaagc cttcggagac cctgtccctc 60
acctgcactg tctctggtgg ctccatcagt agttactact ggagctggat ccggcagccc 120
ccagggaagg gactggagtg gattgggtat atctattaca gtgggagcac caagtacaac 180
ccctccctca agagtcgagt caccatatca gtagacacgt ccaagaacca gttctccctg 240
aagctgagct ctgtgaccgc cgaagacacg gccgtgtatt actgtgggag acaaagtggg 300
agctactact actacggtat ggacgtctgg ggccaaggga ccacggtcac cgtctcctca 360

<210> 386
<211> 120
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 386
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 Ser 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 Thr Ala Glu Asp Thr Ala Val Tyr Tyr Cys Gly
                85                  90                  95
Arg Gln Ser Gly Ser Tyr Tyr Tyr Tyr Gly Met Asp Val Trp Gly Gln
            100                 105                 110
Gly Thr Thr Val Thr Val Ser Ser
        115                 120


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

<220>
<223> Synthetic

<400> 387
ggtggctcca tcagtagtta ctac                                          24

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

<220>
<223> Synthetic

<400> 388
Gly Gly Ser Ile Ser Ser Tyr Tyr
 1               5


<210> 389
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 389
atctattaca gtgggagcac c                                             21

<210> 390
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

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


<210> 391
<211> 42
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<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 391
gggagacaaa gtgggagcta ctactactac ggtatggacg tc 42

<210> 392
<211> 14
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 392
Gly Arg Gln Ser Gly Ser Tyr Tyr Tyr Tyr Gly Met Asp Val
 1   5   10

<210> 393
<211> 321
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 393
gacatccaga tgacccagtc tccatcctcc ctgtctgcat ctgtaggaga cagagtcacc 60
atcacttgcc gggcaagtca aagcattagc agctatttaa attggtatca gcagaaacca 120
gggaaagccc ctaagctcct gatctatgct gcatccagtt tgcaaagtgg agtcccatca 180
aggttcagtg gcagtggatc tgggacagat ttcactctca ccatcagcag tctgcaacct 240
gaagattttg caacttacta ctgtcaacag agttacagta ccccgtacac ttttggccag 300
gggaccaagc tggagatcaa a 321

<210> 394
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

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

```
                85                  90                  95
Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
            100                 105


<210> 395
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 395
caaagcatta gcagctat                                                  18

<210> 396
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 396
Gln Ser Ile Ser Ser Tyr
 1               5


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

<220>
<223> Synthetic

<400> 397
gctgcatcc                                                             9

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

<220>
<223> Synthetic

<400> 398
Ala Ala Ser
 1


<210> 399
<211> 27
<212> DNA
<213> Artificial Sequence
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<220>
<223> Synthetic

<400> 399
caacagagtt acagtacccc gtacact 27

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

<220>
<223> Synthetic

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

<210> 401
<211> 528
<212> PRT
<213> Homo sapiens

<400> 401
Met Glu Leu Lys Ala Glu Glu Glu Glu Val Gly Gly Val Gln Pro Val
1 5 10 15
Ser Ile Gln Ala Phe Ala Ser Ser Ser Thr Leu His Gly Leu Ala His
20 25 30
Ile Phe Ser Tyr Glu Arg Leu Ser Leu Lys Arg Ala Leu Trp Ala Leu
35 40 45
Cys Phe Leu Gly Ser Leu Ala Val Leu Leu Cys Val Cys Thr Glu Arg
50 55 60
Val Gln Tyr Tyr Phe His Tyr His His Val Thr Lys Leu Asp Glu Val
65 70 75 80
Ala Ala Ser Gln Leu Thr Phe Pro Ala Val Thr Leu Cys Asn Leu Asn
85 90 95
Glu Phe Arg Phe Ser Gln Val Ser Lys Asn Asp Leu Tyr His Ala Gly
100 105 110
Glu Leu Leu Ala Leu Leu Asn Asn Arg Tyr Glu Ile Pro Asp Thr Gln
115 120 125
Met Ala Asp Glu Lys Gln Leu Glu Ile Leu Gln Asp Lys Ala Asn Phe
130 135 140
Arg Ser Phe Lys Pro Lys Pro Phe Asn Met Arg Glu Phe Tyr Asp Arg
145 150 155 160
Ala Gly His Asp Ile Arg Asp Met Leu Leu Ser Cys His Phe Arg Gly
165 170 175
Glu Val Cys Ser Ala Glu Asp Phe Lys Val Val Phe Thr Arg Tyr Gly
180 185 190
Lys Cys Tyr Thr Phe Asn Ser Gly Arg Asp Gly Arg Pro Arg Leu Lys
195 200 205
Thr Met Lys Gly Gly Thr Gly Asn Gly Leu Glu Ile Met Leu Asp Ile
210 215 220
Gln Gln Asp Glu Tyr Leu Pro Val Trp Gly Glu Thr Asp Glu Thr Ser
225 230 235 240
Phe Glu Ala Gly Ile Lys Val Gln Ile His Ser Gln Asp Glu Pro Pro
245 250 255
Phe Ile Asp Glu Leu Gly Phe Gly Val Ala Pro Gly Phe Gln Thr Phe

260 265 270

Val Ala Cys Gln Glu Gln Arg Leu Ile Tyr Leu Pro Pro Pro Trp Gly
275 280 285

Thr Cys Lys Ala Val Thr Met Asp Ser Asp Leu Asp Phe Phe Asp Ser
290 295 300

Tyr Ser Ile Thr Ala Cys Arg Ile Asp Cys Glu Thr Arg Tyr Leu Val
305 310 315 320

Glu Asn Cys Asn Cys Arg Met Val His Met Pro Gly Asp Ala Pro Tyr
325 330 335

Cys Thr Pro Glu Gln Tyr Lys Glu Cys Ala Asp Pro Ala Leu Asp Phe
340 345 350

Leu Val Glu Lys Asp Gln Glu Tyr Cys Val Cys Glu Met Pro Cys Asn
355 360 365

Leu Thr Arg Tyr Gly Lys Glu Leu Ser Met Val Lys Ile Pro Ser Lys
370 375 380

Ala Ser Ala Lys Tyr Leu Ala Lys Lys Phe Asn Lys Ser Glu Gln Tyr
385 390 395 400

Ile Gly Glu Asn Ile Leu Val Leu Asp Ile Phe Phe Glu Val Leu Asn
405 410 415

Tyr Glu Thr Ile Glu Gln Lys Lys Ala Tyr Glu Ile Ala Gly Leu Leu
420 425 430

Gly Asp Ile Gly Gly Gln Met Gly Leu Phe Ile Gly Ala Ser Ile Leu
435 440 445

Thr Val Leu Glu Leu Phe Asp Tyr Ala Tyr Glu Val Ile Lys His Lys
450 455 460

Leu Cys Arg Arg Gly Lys Cys Gln Lys Glu Ala Lys Arg Ser Ser Ala
465 470 475 480

Asp Lys Gly Val Ala Leu Ser Leu Asp Asp Val Lys Arg His Asn Pro
485 490 495

Cys Glu Ser Leu Arg Gly His Pro Ala Gly Met Thr Tyr Ala Ala Asn
500 505 510

Ile Leu Pro His His Pro Ala Arg Gly Thr Phe Glu Asp Phe Thr Cys
515 520 525