SEQUENCE LISTING

<110> Regeneron Pharmaceuticals, Inc.

<120> High Affinity Human Antibodies to PCSK9

<130> 7000A-WO

<140> To be assigned
<141> Filed Herewith

<150> 61/261,776
<151> 2009-11-17

<150> 61/249,135
<151> 2009-10-06

<150> 61/218,136
<151> 2009-06-18

<150> 61/168,753
<151> 2009-04-13

<150> 61/210,566
<151> 2009-03-18

<150> 61/122,482
<151> 2008-12-15

<160> 763

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acaggaaaag gtctggagtg ggtctcagct attggttcta ccggtgacac atactatcca 180
ggctccgtga agggccgatt caccatcacc agagaaaaag ccaagaactc cgtgtatctt 240
caaatgaaca gcctgagagc cggggacacg gctgtgtatt actgtgtaag agaggggtgg 300
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Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Leu Ser Ser Tyr
            20   25   30

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Asp Met His Trp Val Arg Gln Ser Thr Gly Lys Gly Leu Glu Trp Val
        35                  40                  45
Ser Ala Ile Gly Ser Thr Gly Asp Thr Tyr Tyr Pro Gly Ser Val Lys
    50                  55                  60
Gly Arg Phe Thr Ile Thr Arg Glu Lys Ala Lys Asn Ser Val Tyr Leu
65                  70                  75                  80
Gln Met Asn Ser Leu Arg Ala Gly Asp Thr Ala Val Tyr Tyr Cys Val
                85                  90                  95
Arg Glu Gly Trp Glu Val Pro Phe Asp Tyr Trp Gly Gln Gly Thr Leu
            100                 105                 110
Val Thr Val Ser Ser
        115
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<210> 4
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<400> 4
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<210> 6
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<220>
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<400> 6
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<210> 7

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<400> 7
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<210> 8
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<220>
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<400> 8
Val Arg Glu Gly Trp Glu Val Pro Phe Asp Tyr
1 5 10

<210> 9
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<220>
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ggccaggctc ccaggctcct catctatggt gcatccacca gggccactgg tatcccagcc 180
aggttcagtg gcattgggtc tgggacagag ttcactctca ttatcagcag cctgcagtct 240
gaagattttg cattttattt ctgtcagcag tataataact ggcctccatt cactttcggc 300
cctgggacca aggtggagat caaacga 327

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

<210> 11
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<400> 11
cagagtgtta gcagcaac 18

<210> 12
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<220>
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<400> 12
Gln Ser Val Ser Ser Asn
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<210> 13
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<220>
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<400> 13
ggtgcatcc 9

<210> 14
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<220>
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<400> 14
Gly Ala Ser
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<210> 15
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<220>
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<400> 15
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<210> 16
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 1   5   10

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<212> DNA
<213> Artificial Sequence

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acaggaaaag gtctggagtg ggtctcagct attggttcta ccggtgacac atactatcca 180
ggctccgtga agggccgatt caccatcacc agagaaaaag ccaagaactc cgtgtatctt 240
caaatgaaca gcctgagagc cggggacacg gctgtgtatt actgtgtaag agaggggtgg 300
gaggtaccct ttgactactg gggccaggga accctggtca ccgtctcctc a   351

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

<220>
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<400> 18
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
 1   5   10   15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Leu Ser Ser Tyr
            20   25   30
Asp Met His Trp Val Arg Gln Ser Thr Gly Lys Gly Leu Glu Trp Val
        35   40   45
Ser Ala Ile Gly Ser Thr Gly Asp Thr Tyr Tyr Pro Gly Ser Val Lys
    50   55   60
Gly Arg Phe Thr Ile Thr Arg Glu Lys Ala Lys Asn Ser Val Tyr Leu
65   70   75   80
Gln Met Asn Ser Leu Arg Ala Gly Asp Thr Ala Val Tyr Tyr Cys Val
                85   90   95
Arg Glu Gly Trp Glu Val Pro Phe Asp Tyr Trp Gly Gln Gly Thr Leu
            100   105   110
Val Thr Val Ser Ser
        115

<210> 19
<211> 324
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 19
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ctctcctgca gggccagtca gagtgttagc agcaacttag cctggtacca ccagaaacct 120
ggccaggctc ccaggctcct catctatggt gcatccacca gggccactgg tatcccagcc 180
aggttcagtg gcattgggtc tgggacagag ttcactctca ttatcagcag cctgcagtct 240
gaagattttg cattttattt ctgtcagcag tataataact ggcctccatt cactttcggc 300
cctgggacca aagtggatat caaa 324

<210> 20
<211> 108
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

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

<210> 21
<211> 351
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 21
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tcctgtgcag cctctggatt tactctaagt agttacgaca tgcactgggt ccgccaagct 120
acaggaaaag gtctggagtg ggtctcagct attggttcta ccggtgacac atactatcca 180
ggctccgtga agggccgatt caccatctcc agagaaaatg ccaagaactc cttgtatctt 240
caaatgaaca gcctgagagc cggggacacg gctgtgtatt actgtgtaag agaggggtgg 300
gaggtaccct ttgactactg gggccaggga accctggtca ccgtctcctc a 351

<210> 22
<211> 117
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 22
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
1 5 10 15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Leu Ser Ser Tyr
20 25 30
Asp Met His Trp Val Arg Gln Ala Thr Gly Lys Gly Leu Glu Trp Val
35 40 45
Ser Ala Ile Gly Ser Thr Gly Asp Thr Tyr Tyr Pro Gly Ser Val Lys

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    50                  55                  60
Gly Arg Phe Thr Ile Ser Arg Glu Asn Ala Lys Asn Ser Leu Tyr Leu
65                  70                  75                  80
Gln Met Asn Ser Leu Arg Ala Gly Asp Thr Ala Val Tyr Tyr Cys Val
                85                  90                  95
Arg Glu Gly Trp Glu Val Pro Phe Asp Tyr Trp Gly Gln Gly Thr Leu
            100                 105                 110
Val Thr Val Ser Ser
        115
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<210> 23
<211> 324
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 23
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ctctcctgca gggccagtca gagtgttagc agcaacttag cctggtacca gcagaaacct 120
ggccaggctc ccaggctcct catctatggt gcatccacca gggccactgg tatcccagcc 180
aggttcagtg gcagtgggtc tgggacagag ttcactctca ccatcagcag cctgcagtct 240
gaagattttg cagtttatta ctgtcagcag tataataact ggcctccatt cactttcggc 300
cctgggacca aagtggatat caaa   324

<210> 24
<211> 108
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<213> Artificial Sequence

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<223> Synthetic

<400> 24
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Glu Ile Val Met Thr Gln Ser Pro Ala Thr Leu Ser Val Ser Pro Gly
 1               5                  10                  15
Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Ser Asn
            20                  25                  30
Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile
        35                  40                  45
Tyr Gly Ala Ser Thr Arg Ala Thr Gly Ile Pro Ala Arg Phe Ser Gly
    50                  55                  60
Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln Ser
65                  70                  75                  80
Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Asn Asn Trp Pro Pro
                85                  90                  95
Phe Thr Phe Gly Pro Gly Thr Lys Val Asp Ile Lys
            100                 105
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<210> 25
<211> 342
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

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tcctgtgcag cgtctggatt caccttcagt agctatggca tgcactgggt ccgccaggct 120

ccaggcaagg ggctggagtg ggtggcgttt ataggatttg atggaagtaa tatacattat 180
ggagactccg tgaggggccg aatcatcata tccagagaca attccgagaa cacgttgtat 240
ctggaaatga acagcctgag agccgaggac acggcaatgt actattgtgc gagagagaag 300
ggtttagact ggggccaggg aaccacggtc accgtctcct ca 342

<210> 26
<211> 114
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 26
Gln Val Gln Leu Val Gln Ser Gly Gly Gly Val Val Gln Pro Gly Arg
1 5 10 15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr
20 25 30
Gly Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45
Ala Phe Ile Gly Phe Asp Gly Ser Asn Ile His Tyr Gly Asp Ser Val
50 55 60
Arg Gly Arg Ile Ile Ile Ser Arg Asp Asn Ser Glu Asn Thr Leu Tyr
65 70 75 80
Leu Glu Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Met Tyr Tyr Cys
85 90 95
Ala Arg Glu Lys Gly Leu Asp Trp Gly Gln Gly Thr Thr Val Thr Val
100 105 110
Ser Ser

<210> 27
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 27
ggattcacct tcagtagcta tggc 24

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

<220>
<223> Synthetic

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

<210> 29
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 29
ataggatttg atggaagtaa tata 24

<210> 30
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 30
Ile Gly Phe Asp Gly Ser Asn Ile
1 5

<210> 31
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 31
gcgagagaga agggtttaga c 21

<210> 32
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 32
Ala Arg Glu Lys Gly Leu Asp
1 5

<210> 33
<211> 321
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 33
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atcacttgcc gggccagtca gagtattagt agctggttgg cctggtatca gcagaaacca 120
gggaaagccc ctaagctcct gatctataag gcgtctagtt tagaaagtgg ggtcccatca 180
aggttcagcg gcagtggatc tgggacagaa ttcactctca ccatcagcag cctgcagcct 240
gatgattttg caacttatta ctgccaacag tataatagtt attacacttt tggccagggg 300
accaaggtgg aaatcaaacg a 321

<210> 34
<211> 107
<212> PRT
<213> Artificial Sequence

<220>

<223> Synthetic

<400> 34
Ala Ile Gln Met Thr Gln Ser Pro Ser Thr Leu Ser Ala Ser Val Gly
 1   5   10   15
Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Ser Ser Trp
            20   25   30
Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
        35   40   45
Tyr Lys Ala Ser Ser Leu Glu Ser Gly Val Pro Ser Arg Phe Ser Gly
    50   55   60
Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
65   70   75   80
Asp Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Tyr Asn Ser Tyr Tyr Thr
                85   90   95
Phe Gly Gln Gly Thr Lys Val Glu Ile Lys Arg
            100   105

<210> 35
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<213> Artificial Sequence

<220>
<223> Synthetic

<400> 35
cagagtatta gtagctgg 18

<210> 36
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 36
Gln Ser Ile Ser Ser Trp
 1   5

<210> 37
<211> 9
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 37
aaggcgtct 9

<210> 38
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 38

Lys Ala Ser
 1

<210> 39
<211> 24
<212> DNA
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<220>
<223> Synthetic

<400> 39
caacagtata atagttatta cact 24

<210> 40
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 40
Gln Gln Tyr Asn Ser Tyr Tyr Thr
 1   5

<210> 41
<211> 342
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 41
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tcctgtgcag cgtctggatt caccttcagt agctatggca tgcactgggt ccgccaggct 120
ccaggcaagg ggctggagtg ggtggcgttt ataggatttg atggaagtaa tatacattat 180
ggagactccg tgaggggccg aatcatcata tccagagaca attccgagaa cacgttgtat 240
ctggaaatga acagcctgag agccgaggac acggcaatgt actattgtgc gagagagaag 300
ggtttagact ggggccaggg aaccctggtc accgtctcct ca 342

<210> 42
<211> 114
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 42
Gln Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Arg
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Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr
            20   25   30
Gly Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35   40   45
Ala Phe Ile Gly Phe Asp Gly Ser Asn Ile His Tyr Gly Asp Ser Val
    50   55   60
Arg Gly Arg Ile Ile Ile Ser Arg Asp Asn Ser Glu Asn Thr Leu Tyr
65   70   75   80

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Leu Glu Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Met Tyr Tyr Cys
                85                  90                  95
Ala Arg Glu Lys Gly Leu Asp Trp Gly Gln Gly Thr Leu Val Thr Val
            100                 105                 110
Ser Ser
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<210> 43
<211> 318
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 43
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atcacttgcc gggccagtca gagtattagt agctggttgg cctggtatca gcagaaacca 120
gggaaagccc ctaagctcct gatctataag gcgtctagtt tagaaagtgg ggtcccatca 180
aggttcagcg gcagtggatc tgggacagaa ttcactctca ccatcagcag cctgcagcct 240
gatgattttg caacttatta ctgccaacag tataatagtt attacacttt tggccagggg 300
accaagctgg agatcaaa 318

<210> 44
<211> 106
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 44
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 1               5                  10                  15
Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Ser Ser Trp
            20                  25                  30
Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
        35                  40                  45
Tyr Lys Ala Ser Ser Leu Glu Ser Gly Val Pro Ser Arg Phe Ser Gly
    50                  55                  60
Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
65                  70                  75                  80
Asp Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Tyr Asn Ser Tyr Tyr Thr
                85                  90                  95
Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
            100                 105
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<210> 45
<211> 342
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 45
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tcctgtgcag cctctggatt caccttcagt agctatggca tgcactgggt ccgccaggct 120
ccaggcaagg ggctggagtg ggtggcagtt ataggatttg atggaagtaa tatatactat 180
gcagactccg tgaagggccg attcaccatc tccagagaca attccaagaa cacgctgtat 240
ctgcaaatga acagcctgag agctgaggac acggctgtgt attactgtgc gagagagaag 300

ggtttagact ggggccaggg aaccctggtc accgtctcct ca 342

<210> 46
<211> 114
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 46
Gln Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Arg
1 5 10 15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr
20 25 30
Gly Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45
Ala Val Ile Gly Phe Asp Gly Ser Asn Ile Tyr Tyr Ala Asp Ser Val
50 55 60
Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
65 70 75 80
Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95
Ala Arg Glu Lys Gly Leu Asp Trp Gly Gln Gly Thr Leu Val Thr Val
100 105 110
Ser Ser

<210> 47
<211> 319
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 47
gacatccaga tgacccagtc tccttccacc ctgtctgcat ctgtaggaga cagagtcacc 60
atcacttgcc gggccagtca gagtattagt agctggttgg cctggtatca gcagaaacca 120
gggaaagccc ctaagctcct gatctataag gcgtctagtt tagaaagtgg ggtcccatca 180
aggttcagcg gcagtggatc tgggacagaa ttcactctca ccatcagcag cctgcagcct 240
gatgattttg caacttatta ctgccaacag tataatagtt attacacttt tggccagggg 300
accaagctgg agatcaaac 319

<210> 48
<211> 106
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 48
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

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65                  70                  75                  80
Asp Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Tyr Asn Ser Tyr Tyr Thr
                85                  90                  95
Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
            100                 105
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<210> 49
<211> 342
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 49
caggtgcagc tgcaggagtc tgggggaggc gtggtccagc ctgggaggtc cctgagactc 60
tcctgtgcag cgtctggatt caccttcagt agctatggca tgcactgggt ccgccaggct 120
ccaggcaagg ggctggagtg ggtggcgttt ataggatttg atggaagtaa tatatattat 180
ggagactccg tgaggggccg aatcatcata tccagagaca attccgagaa cacgttgtat 240
ctggaaatga acagcctgag agccgaggac acggcagtgt attattgtgc gagagagaag 300
ggtttagact ggggccaggg aaccctggtc actgtctcct ca 342

<210> 50
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<220>
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<400> 50
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Gln Val Gln Leu Gln Glu Ser Gly Gly Gly Val Val Gln Pro Gly Arg
 1               5                  10                  15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr
            20                  25                  30
Gly Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35                  40                  45
Ala Phe Ile Gly Phe Asp Gly Ser Asn Ile Tyr Tyr Gly Asp Ser Val
    50                  55                  60
Arg Gly Arg Ile Ile Ile Ser Arg Asp Asn Ser Glu Asn Thr Leu Tyr
65                  70                  75                  80
Leu Glu Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
                85                  90                  95
Ala Arg Glu Lys Gly Leu Asp Trp Gly Gln Gly Thr Leu Val Thr Val
            100                 105                 110
Ser Ser
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<210> 51
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
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<400> 51
ggattcacct tcagtagcta tggc 24

<210> 52
<211> 8

<212> PRT
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<220>
<223> Synthetic

<400> 52
Gly Phe Thr Phe Ser Ser Tyr Gly
 1   5

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

<220>
<223> Synthetic

<400> 53
ataggatttg atggaagtaa tata   24

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

<220>
<223> Synthetic

<400> 54
Ile Gly Phe Asp Gly Ser Asn Ile
 1   5

<210> 55
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 55
gcgagagaga agggtttaga c   21

<210> 56
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 56
Ala Arg Glu Lys Gly Leu Asp
 1   5

<210> 57
<211> 342
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 57
gccatccaga tgacccagtc tccagactcc ctggctgtgt ctctgggcga gagggccacc 60
atcaactgca agtccagcca gagtgttttt cacacctcca acaataagaa ctacttagtt 120
tggtatcagc agaaaccagg acagcctcct aagttgctcc tttactgggc ctctacccgg 180
gaatccgggg tccctgaccg attcagtggc agcgggtctg ggacagattt cactctcacc 240
atcagcagcc tgcaggctga agatgtggca aattattact gtcaccaata ttacagtatt 300
ccgtggacgt tcggccaagg gaccaaggtg gagatcaaac ga 342

<210> 58
<211> 114
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 58
Ala Ile Gln 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 Phe His Thr
            20   25   30
Ser Asn Asn Lys Asn Tyr Leu Val Trp Tyr Gln Gln Lys Pro Gly Gln
        35   40   45
Pro Pro Lys Leu Leu Leu 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 Asn Tyr Tyr Cys His Gln
                85   90   95
Tyr Tyr Ser Ile Pro Trp Thr Phe Gly Gln Gly Thr Lys Val Glu Ile
            100   105   110
Lys Arg

<210> 59
<211> 36
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 59
cagagtgttt ttcacacctc caacaataag aactac 36

<210> 60
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 60
Gln Ser Val Phe His Thr Ser Asn Asn Lys Asn Tyr
 1   5   10

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

<220>
<223> Synthetic

<400> 61
tgggcctct 9

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

<220>
<223> Synthetic

<400> 62
Trp Ala Ser
1

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

<220>
<223> Synthetic

<400> 63
caccaatatt acagtattcc gtggacg 27

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

<220>
<223> Synthetic

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

<210> 65
<211> 342
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 65
caggtgcagc tggtggagtc tgggggaggc gtggtccagc ctgggaggtc cctgagactc 60
tcctgtgcag cgtctggatt caccttcagt agctatggca tgcactgggt ccgccaggct 120
ccaggcaagg ggctggagtg ggtggcgttt ataggatttg atggaagtaa tatatattat 180
ggagactccg tgaggggccg aatcatcata tccagagaca attccgagaa cacgttgtat 240
ctggaaatga acagcctgag agccgaggac acggcagtgt attattgtgc gagagagaag 300
ggtttagact ggggccaggg aaccctggtc accgtctcct ca 342

<210> 66
<211> 114
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

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

<210> 67
<211> 339
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 67
gacatcgtga tgacccagtc tccagactcc ctggctgtgt ctctgggcga gagggccacc 60
atcaactgca agtccagcca gagtgttttt cacacctcca acaataagaa ctacttagtt 120
tggtatcagc agaaaccagg acagcctcct aagttgctcc tttactgggc ctctacccgg 180
gaatccgggg tccctgaccg attcagtggc agcgggtctg ggacagattt cactctcacc 240
atcagcagcc tgcaggctga agatgtggca aattattact gtcaccaata ttacagtatt 300
ccgtggacgt tcggccaagg gaccaaggtg gaaatcaaa   339

<210> 68
<211> 113
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 68
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 Phe His Thr
            20   25   30
Ser Asn Asn Lys Asn Tyr Leu Val Trp Tyr Gln Gln Lys Pro Gly Gln
        35   40   45
Pro Pro Lys Leu Leu Leu 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 Asn Tyr Tyr Cys His Gln
                85                  90                  95
Tyr Tyr Ser Ile Pro Trp Thr Phe Gly Gln Gly Thr Lys Val Glu Ile
            100                 105                 110
Lys
```

<210> 69
<211> 342
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 69
caggtgcagc tggtggagtc tgggggaggc gtggtccagc ctgggaggtc cctgagactc 60
tcctgtgcag cctctggatt caccttcagt agctatggca tgcactgggt ccgccaggct 120
ccaggcaagg ggctggagtg ggtggcagtt ataggatttg atggaagtaa tatatactat 180
gcagactccg tgaagggccg attcaccatc tccagagaca attccaagaa cacgctgtat 240
ctgcaaatga acagcctgag agctgaggac acggctgtgt attactgtgc gagagagaag 300
ggtttagact ggggccaggg aaccctggtc accgtctcct ca 342

<210> 70
<211> 114
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

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

<210> 71
<211> 339
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 71
gacatcgtga tgacccagtc tccagactcc ctggctgtgt ctctgggcga gagggccacc 60
atcaactgca agtccagcca gagtgttttt cacacctcca acaataagaa ctacttagct 120
tggtaccagc agaaaccagg acagcctcct aagctgctca tttactgggc ctctacccgg 180

gaatccgggg tccctgaccg attcagtggc agcgggtctg ggacagattt cactctcacc 240
atcagcagcc tgcaggctga agatgtggca gtttattact gtcaccaata ttacagtatt 300
ccgtggacgt tcggccaagg gaccaaggtg gaaatcaaa 339

<210> 72
<211> 113
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 72
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 Phe His Thr
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 His Gln
85 90 95
Tyr Tyr Ser Ile Pro Trp Thr Phe Gly Gln Gly Thr Lys Val Glu Ile
100 105 110
Lys

<210> 73
<211> 354
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 73
gaagtgcagc tggtgcagtc tgggggaggc ttggtacagc ctgggggtc cctgagactc 60
tcctgtgcag cctctggatt cacctttaac aactatgcca tgaactgggt ccgccaggct 120
ccaggaaagg gactggactg ggtctcaact attagtggta gcggtggtac tacaaactac 180
gcagactccg tgaagggccg tttcattatt tcccgagaca gttccaaaca cacgctgtat 240
ctgcaaatga acagcctgag agccgaggac acggccgtat attactgtgc gaaagattct 300
aactggggaa atttcgatct ctggggccgt ggcaccacgg tcactgtctc ctca 354

<210> 74
<211> 118
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 74
Glu Val Gln Leu Val Gln 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 Asn Asn Tyr
20 25 30
Ala Met Asn Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Asp Trp Val
35 40 45
Ser Thr Ile Ser Gly Ser Gly Gly Thr Thr Asn Tyr Ala Asp Ser Val

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

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

<220>
<223> Synthetic

<400> 75
ggattcacct ttaacaacta tgcc 24

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

<220>
<223> Synthetic

<400> 76
```
Gly Phe Thr Phe Asn Asn Tyr Ala
 1               5
```

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

<220>
<223> Synthetic

<400> 77
attagtggta gcggtggtac taca 24

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

<220>
<223> Synthetic

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

<210> 79
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 79
gcgaaagatt ctaactgggg aaatttcgat ctc 33

<210> 80
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 80
Ala Lys Asp Ser Asn Trp Gly Asn Phe Asp Leu
1 5 10

<210> 81
<211> 342
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 81
gacatccaga tgacccagtc tccagactcc ctggctgtgt ctctgggcga gagggccacc 60
atcaactgca agtccagcca gagtgtttta tacaggtcca acaataggaa cttcttaggt 120
tggtaccagc agaaaccagg gcagcctcct aatctactca tttactgggc atctacccgg 180
gaatccgggg tccctgaccg attcagtggc agcgggtctg ggacagattt cactctcacc 240
atcagcagcc tgcaggctga agatgtggca gtttattact gtcaacaata ttatactact 300
ccgtacactt ttggccaggg gaccaaggtg gaaatcaaac ga 342

<210> 82
<211> 114
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 82
Asp Ile Gln 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 Arg
20 25 30
Ser Asn Asn Arg Asn Phe Leu Gly 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 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 Thr Thr Pro Tyr Thr Phe Gly Gln Gly Thr Lys Val Glu Ile
100 105 110
Lys Arg

<210> 83
<211> 36
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 83
cagagtgttt tatacaggtc caacaatagg aacttc 36

<210> 84
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 84
Gln Ser Val Leu Tyr Arg Ser Asn Asn Arg Asn Phe
1 5 10

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

<220>
<223> Synthetic

<400> 85
tgggcatct 9

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

<220>
<223> Synthetic

<400> 86
Trp Ala Ser
1

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

<220>
<223> Synthetic

<400> 87
caacaatatt atactactcc gtacact 27

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

<220>
<223> Synthetic

<400> 88
Gln Gln Tyr Tyr Thr Thr Pro Tyr Thr
 1   5

<210> 89
<211> 354
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 89
gaggtgcagc tggtggagtc tgggggaggc ttggtacagc ctgggggtc cctgagactc 60
tcctgtgcag cctctggatt cacctttaac aactatgcca tgaactgggt ccgccaggct 120
ccaggaaagg gactggactg ggtctcaact attagtggta gcggtggtac tacaaactac 180
gcagactccg tgaagggccg tttcattatt tcccgagaca gttccaaaca cacgctgtat 240
ctgcaaatga acagcctgag agccgaggac acggccgtat attactgtgc gaaagattct 300
aactggggaa atttcgatct ctggggccgt ggcaccctgg tcactgtctc ctca   354

<210> 90
<211> 118
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

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

<210> 91
<211> 339
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 91
gacatcgtga tgacccagtc tccagactcc ctggctgtgt ctctgggcga gagggccacc 60
atcaactgca agtccagcca gagtgtttta tacaggtcca acaataggaa cttcttaggt 120

tggtaccagc agaaaccagg gcagcctcct aatctactca tttactgggc atctacccgg 180
gaatccgggg tccctgaccg attcagtggc agcgggtctg ggacagattt cactctcacc 240
atcagcagcc tgcaggctga agatgtggca gtttattact gtcaacaata ttatactact 300
ccgtacactt ttggccaggg gaccaagctg gagatcaaa 339

<210> 92
<211> 113
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 92
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 Arg
            20   25   30
Ser Asn Asn Arg Asn Phe Leu Gly 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 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 Thr Thr Pro Tyr Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile
            100   105   110
Lys

<210> 93
<211> 354
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 93
gaggtgcagc tggtggagtc tgggggaggc ttggtacagc ctgggggtc cctgagactc 60
tcctgtgcag cctctggatt cacctttaac aactatgcca tgagctgggt ccgccaggct 120
ccagggaagg ggctggagtg ggtctcagct attagtggta gcggtggtac tacatactac 180
gcagactccg tgaagggccg gttcaccatc tccagagaca attccaagaa cacgctgtat 240
ctgcaaatga acagcctgag agccgaggac acggccgtat attactgtgc gaaagattct 300
aactggggaa atttcgatct ctggggccgt ggcaccctgg tcactgtctc ctca 354

<210> 94
<211> 118
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 94
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
 1   5   10   15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Asn 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 Ser Gly Ser Gly Gly Thr Thr Tyr Tyr Ala Asp Ser Val
    50                  55                  60
Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
65                  70                  75                  80
Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
                85                  90                  95
Ala Lys Asp Ser Asn Trp Gly Asn Phe Asp Leu Trp Gly Arg Gly Thr
            100                 105                 110
Leu Val Thr Val Ser Ser
        115
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<210> 95
<211> 339
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 95
gacatcgtga tgacccagtc tccagactcc ctggctgtgt ctctgggcga gagggccacc 60
atcaactgca agtccagcca gagtgtttta tacaggtcca acaataggaa cttcttagct 120
tggtaccagc agaaaccagg acagcctcct aagctgctca tttactgggc atctacccgg 180
gaatccgggg tccctgaccg attcagtggc agcgggtctg ggacagattt cactctcacc 240
atcagcagcc tgcaggctga agatgtggca gtttattact gtcaacaata ttatactact 300
ccgtacactt ttggccaggg gaccaagctg gagatcaaa 339

<210> 96
<211> 113
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 96
```
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 Arg
            20                  25                  30
Ser Asn Asn Arg Asn Phe 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 Thr Thr Pro Tyr Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile
            100                 105                 110
Lys
```

<210> 97
<211> 351
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 97
caggtgcagc tggtgcagtc tgggggaggc ttggtacagc ctgggggtc cctgagactc 60
tcctgtgcag tctctggatt caccctcagt agctacgata tgcactgggt ccgccaacct 120
acaggaaaag gtctggagtg ggtctcagct attggttcta ctggtgacac atactatcca 180
ggctccgtga agggccgatt caccatctcc agagaaaatg ccaagaactc cttgtatctt 240
caaatgaaca gcctgagagc cggggacacg gctgtgtatt actgtgcaag agagggatgg 300
gacgtaccct ttgacttctg gggccaggga accctggtca ccgtctcctc a 351

<210> 98
<211> 117
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

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

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

<220>
<223> Synthetic

<400> 99
ggattcaccc tcagtagcta cgat 24

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

<220>
<223> Synthetic

<400> 100
Gly Phe Thr Leu Ser Ser Tyr Asp
1 5

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

<220>
<223> Synthetic

<400> 101
attggttcta ctggtgacac a 21

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

<220>
<223> Synthetic

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

<210> 103
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 103
gcaagagagg gatgggacgt acccttttgac ttc 33

<210> 104
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 104
Ala Arg Glu Gly Trp Asp Val Pro Phe Asp Phe
1 5 10

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

<220>
<223> Synthetic

<400> 105
gccatccagt tgacccagtc tccatcctcc ctgtctgcat ctgtaggaga cagagtcacc 60
atcacttgcc gggcaagtca ggacattaga aatgatttag gctggtatca gcagaaacca 120
gggaaagccc ctaagctcct gatctatgct gcatccagtt tacaaagtgg ggtcccatca 180
cggttcagcg gcagtggatc tggcacagat ttcactctca ccatcagcag cctgcagcct 240
gaagattttg caacttatta ctgtctacaa gattacaatt acccgtggac gttcggccaa 300
gggaccaagg tggagatcaa acga 324

<210> 106
<211> 108
<212> PRT

<213> Artificial Sequence

<220>
<223> Synthetic

<400> 106
Ala Ile Gln Leu Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
 1   5   10   15
Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Asp Ile Arg Asn Asp
            20   25   30
Leu Gly Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys 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 Leu Gln Asp Tyr Asn Tyr Pro Trp
                85   90   95
Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys Arg
            100   105

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

<220>
<223> Synthetic

<400> 107
caggacatta gaaatgat 18

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

<220>
<223> Synthetic

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

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

<220>
<223> Synthetic

<400> 109
gctgcatcc 9

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

<220>

<223> Synthetic

<400> 110
Ala Ala Ser
 1

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

<220>
<223> Synthetic

<400> 111
ctacaagatt acaattaccc gtggacg 27

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

<220>
<223> Synthetic

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

<210> 113
<211> 351
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 113
gaggtgcagc tggtggagtc tgggggaggc ttggtacagc ctgggggtc cctgagactc 60
tcctgtgcag tctctggatt caccctcagt agctacgata tgcactgggt ccgccaacct 120
acaggaaaag gtctggagtg ggtctcagct attggttcta ctggtgacac atactatcca 180
ggctccgtga agggccgatt caccatctcc agagaaaatg ccaagaactc cttgtatctt 240
caaatgaaca gcctgagagc cggggacacg gctgtgtatt actgtgcaag agagggatgg 300
gacgtaccct ttgacttctg gggccaggga accctggtca ccgtctcctc a 351

<210> 114
<211> 117
<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 Arg Leu Ser Cys Ala Val Ser Gly Phe Thr Leu Ser Ser Tyr
            20   25   30
Asp Met His Trp Val Arg Gln Pro Thr Gly Lys Gly Leu Glu Trp Val
        35   40   45
Ser Ala Ile Gly Ser Thr Gly Asp Thr Tyr Tyr Pro Gly Ser Val Lys

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

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

<220>
<223> Synthetic

<400> 115
gccatccaga tgacccagtc tccatcctcc ctgtctgcat ctgtaggaga cagagtcacc 60
atcacttgcc gggcaagtca ggacattaga aatgatttag gctggtatca gcagaaacca 120
gggaaagccc ctaagctcct gatctatgct gcatccagtt tacaaagtgg ggtcccatca 180
cggttcagcg gcagtggatc tggcacagat ttcactctca ccatcagcag cctgcagcct 240
gaagattttg caacttatta ctgtctacaa gattacaatt acccgtggac gttcggccaa 300
gggaccaagg tggaaatcaa a   321

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

<220>
<223> Synthetic

<400> 116
```
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 Asp Ile Arg Asn Asp
            20                  25                  30
Leu Gly Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
        35                  40                  45
Tyr Ala 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 Leu Gln Asp Tyr Asn Tyr Pro Trp
                85                  90                  95
Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
            100                 105
```

<210> 117
<211> 351
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 117
gaggtgcagc tggtggagtc tgggggaggc ttggtacagc ctgggggtc cctgagactc 60
tcctgtgcag cctctggatt cacccctcagt agctacgata tgcactgggt ccgccaagct 120

acaggaaaag gtctggagtg ggtctcagct attggttcta ctggtgacac atactatcca 180
ggctccgtga agggccgatt caccatctcc agagaaaatg ccaagaactc cttgtatctt 240
caaatgaaca gcctgagagc cggggacacg gctgtgtatt actgtgcaag agagggatgg 300
gacgtaccct ttgacttctg gggccaggga accctggtca ccgtctcctc a 351

<210> 118
<211> 117
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

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

<210> 119
<211> 321
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 119
gccatccaga tgacccagtc tccatcctcc ctgtctgcat ctgtaggaga cagagtcacc 60
atcacttgcc gggcaagtca ggacattaga aatgatttag gctggtatca gcagaaacca 120
gggaaagccc ctaagctcct gatctatgct gcatccagtt tacaaagtgg ggtcccatca 180
aggttcagcg gcagtggatc tggcacagat ttcactctca ccatcagcag cctgcagcct 240
gaagattttg caacttatta ctgtctacaa gattacaatt acccgtggac gttcggccaa 300
gggaccaagg tggaaatcaa a 321

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

<220>
<223> Synthetic

<400> 120
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 Asp Ile Arg Asn Asp
20 25 30
Leu Gly Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
35 40 45

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

<210> 121
<211> 384
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 121
caggtgcagc tgcaggagtc ggggccagga ctggtgaagc cttcggagac cctgtccctc 60
acctgcactg tctctgggga ctccatcaat acttactact ggagctggtt ccggcagccc 120
ccagggaagg gactggagtg gattgggtat atctattata gtggaaccac caactacaac 180
ccctccctca agagtcgagt caccatatca atagacacgc ccaggaacca gttctccctg 240
aagctgatct ctgtgaccgc agcggacacg gccgtgtatt actgtgcgag agagaggatt 300
actatgattc ggggagttac cctctactat tactcctacg gtatggacgt ctggggccaa 360
gggaccacgg tcaccgtctc ctca 384

<210> 122
<211> 128
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 122
```
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 Asp Ser Ile Asn Thr Tyr
            20                  25                  30
Tyr Trp Ser Trp Phe Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp Ile
        35                  40                  45
Gly Tyr Ile Tyr Tyr Ser Gly Thr Thr Asn Tyr Asn Pro Ser Leu Lys
    50                  55                  60
Ser Arg Val Thr Ile Ser Ile Asp Thr Pro Arg Asn Gln Phe Ser Leu
65                  70                  75                  80
Lys Leu Ile Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr Cys Ala
                85                  90                  95
Arg Glu Arg Ile Thr Met Ile Arg Gly Val Thr Leu Tyr Tyr Tyr Ser
            100                 105                 110
Tyr Gly Met Asp Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser
        115                 120                 125
```

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

<220>
<223> Synthetic

<400> 123

ggggactcca tcaatactta ctac 24

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

<220>
<223> Synthetic

<400> 124
Gly Asp Ser Ile Asn Thr Tyr Tyr
1 5

<210> 125
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 125
atctattata gtggaaccac c 21

<210> 126
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 126
Ile Tyr Tyr Ser Gly Thr Thr
1 5

<210> 127
<211> 66
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 127
gcgagagaga ggattactat gattcgggga gttaccctct actattactc ctacggtatg 60
gacgtc 66

<210> 128
<211> 22
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

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

20

<210> 129
<211> 324
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 129
gacatccaga tgacccagtc tccatccttc ctgtctgcat ctgtaggaga cagagtcacc 60
atcacttgct gggccagtca ggacattagc agttatttag cctggtatca gcaaaaacca 120
gggatagccc ctaagctcct gatctatgct gcatccactt tgcaaagtgg ggtcccatca 180
aggttcggcg gcagtggatc tgggacagaa ttcactctca caatcagcag cctgcagcct 240
gaagattttg caacttatta ctgtcaacag cttaatagtt accctcggac gttcggccaa 300
gggaccaagg tggaaatcaa acga 324

<210> 130
<211> 108
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

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

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

<220>
<223> Synthetic

<400> 131
caggacatta gcagttat 18

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

<220>
<223> Synthetic

<400> 132
Gln Asp Ile Ser Ser Tyr
1 5

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

<220>
<223> Synthetic

<400> 133
gctgcatcc 9

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

<220>
<223> Synthetic

<400> 134
Ala Ala Ser
1

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

<220>
<223> Synthetic

<400> 135
caacagctta atagttaccc tcggacg 27

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

<220>
<223> Synthetic

<400> 136
Gln Gln Leu Asn Ser Tyr Pro Arg Thr
1 5

<210> 137
<211> 384
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 137
caggtgcagc tgcaggagtc ggggccagga ctggtgaagc cttcggagac cctgtccctc 60

acctgcactg tctctgggga ctccatcaat acttactact ggagctggtt ccggcagccc 120
ccagggaagg gactggagtg gattgggtat atctattata gtggaaccac caactacaac 180
ccctccctca agagtcgagt caccatatca atagacacgc ccaggaacca gttctccctg 240
aagctgatct ctgtgaccgc agcggacacg gccgtgtatt actgtgcgag agagaggatt 300
actatgattc ggggagttac cctctactat tactcctacg gtatggacgt ctggggccaa 360
gggaccacgg tcaccgtctc ctca 384

<210> 138
<211> 128
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 138
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 Asp Ser Ile Asn Thr Tyr
20 25 30
Tyr Trp Ser Trp Phe Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp Ile
35 40 45
Gly Tyr Ile Tyr Tyr Ser Gly Thr Thr Asn Tyr Asn Pro Ser Leu Lys
50 55 60
Ser Arg Val Thr Ile Ser Ile Asp Thr Pro Arg Asn Gln Phe Ser Leu
65 70 75 80
Lys Leu Ile Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr Cys Ala
85 90 95
Arg Glu Arg Ile Thr Met Ile Arg Gly Val Thr Leu Tyr Tyr Tyr Ser
100 105 110
Tyr Gly Met Asp Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser
115 120 125

<210> 139
<211> 321
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 139
gacatccaga tgacccagtc tccatccttc ctgtctgcat ctgtaggaga cagagtcacc 60
atcacttgct gggccagtca ggacattagc agttatttag cctggtatca gcaaaaacca 120
gggatagccc ctaagctcct gatctatgct gcatccactt tgcaaagtgg ggtcccatca 180
aggttcggcg gcagtggatc tgggacagaa ttcactctca caatcagcag cctgcagcct 240
gaagattttg caacttatta ctgtcaacag cttaatagtt accctcggac gttcggccaa 300
gggaccaagg tggaaatcaa a 321

<210> 140
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 140
Asp Ile Gln Met Thr Gln Ser Pro Ser Phe Leu Ser Ala Ser Val Gly
1 5 10 15
Asp Arg Val Thr Ile Thr Cys Trp Ala Ser Gln Asp Ile Ser Ser Tyr
20 25 30

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

<210> 141
<211> 384
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 141
caggtgcagc tgcaggagtc gggcccagga ctggtgaagc cttcggagac cctgtccctc 60
acctgcactg tctctgggga ctccatcaat acttactact ggagctggat ccggcagccc 120
ccagggaagg gactggagtg gattgggtat atctattata gtggaaccac caactacaac 180
ccctccctca agagtcgagt caccatatca gtagacacgt ccaagaacca gttctccctg 240
aagctgagct ctgtgaccgc tgcggacacg gccgtgtatt actgtgcgag agagaggatt 300
actatgattc ggggagttac cctctactat tactcctacg gtatggacgt ctggggccaa 360
gggaccacgg tcaccgtctc ctca 384

<210> 142
<211> 128
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 142
```
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 Asp Ser Ile Asn Thr 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 Thr Thr Asn Tyr Asn Pro Ser Leu Lys
    50                  55                  60
Ser Arg Val Thr Ile Ser Val Asp Thr Ser Lys Asn Gln Phe Ser Leu
65                  70                  75                  80
Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr Cys Ala
                85                  90                  95
Arg Glu Arg Ile Thr Met Ile Arg Gly Val Thr Leu Tyr Tyr Tyr Ser
            100                 105                 110
Tyr Gly Met Asp Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser
        115                 120                 125
```

<210> 143
<211> 321
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 143
gacatccaga tgacccagtc tccatcctcc ctgtctgcat ctgtaggaga cagagtcacc 60
atcacttgcc gggcaagtca ggacattagc agttatttag gctggtatca gcagaaacca 120
gggaaagccc ctaagcgcct gatctatgct gcatccagtt tgcaaagtgg ggtcccatca 180
aggttcagcg gcagtggatc tgggacagaa ttcactctca caatcagcag cctgcagcct 240
gaagattttg caacttatta ctgtcaacag cttaatagtt accctcggac gttcggccaa 300
gggaccaagg tggaaatcaa a 321

<210> 144
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

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

<210> 145
<211> 378
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 145
caggtgcagc tggtgcagtc tggagctgag gtgaagaagc ctggggcctc agtgaaggtc 60
tcctgcaagg cttctggtta cacctttacc aactatggta tcagctgggt gcgacaggcc 120
cctggacaag gacttgagtt aatgggatgg attagtggtt acaatggtaa cacaaactat 180
gcacaagaac tccaggccag agtcaccatg accacagaca catccacgag cacagcctac 240
atggagctga ggaacctgag atctgacgac acggccgtat attactgtgc gagagataga 300
gtcgttgtag cagctgctaa ttactacttt tattctatgg acgtctgggg ccaagggacc 360
acggtcaccg tctcctca 378

<210> 146
<211> 126
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 146
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 Asn Tyr

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

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

<220>
<223> Synthetic

<400> 147
ggttacacct ttaccaacta tggt 24

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

<220>
<223> Synthetic

<400> 148
Gly Tyr Thr Phe Thr Asn Tyr Gly
 1   5

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

<220>
<223> Synthetic

<400> 149
attagtggtt acaatggtaa caca 24

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

<220>
<223> Synthetic

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

<210> 151
<211> 57
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 151
gcgagagata gagtcgttgt agcagctgct aattactact tttattctat ggacgtc 57

<210> 152
<211> 19
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 152
Ala Arg Asp Arg Val Val Val Ala Ala Ala Asn Tyr Tyr Phe Tyr Ser
1 5 10 15
Met Asp Val

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

<220>
<223> Synthetic

<400> 153
gccatccaga tgacccagtc tccactctcc ctgtccgtca cccttggaca gccggcctcc 60
atctcctgca ggtctagtca aagcctcgta tacagtgatg gagacaccta cttgaattgg 120
tttcagcaga ggccaggcca atctccaagg cgcctaattt ataaggtttc taaccgggac 180
tctggggtcc cagacagatt cagcggcagt gggtcaggca ctgctttcac actgaaaatc 240
agcggggtgg aggccgagga tgttggggtt tactactgca tgcaagctac acactggcct 300
cggacgttcg gccaagggac caaggtggaa atcaaacga 339

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

<220>
<223> Synthetic

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

Thr His Trp Pro Arg Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
100 105 110
Arg

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

<220>
<223> Synthetic

<400> 155
caaagcctcg tatacagtga tggagacacc tac 33

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

<220>
<223> Synthetic

<400> 156
Gln Ser Leu Val Tyr Ser Asp Gly Asp Thr Tyr
1 5 10

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

<220>
<223> Synthetic

<400> 157
aaggtttct 9

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

<220>
<223> Synthetic

<400> 158
Lys Val Ser
1

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

<220>
<223> Synthetic

<400> 159

atgcaagcta cacactggcc tcggacg 27

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

<220>
<223> Synthetic

<400> 160
Met Gln Ala Thr His Trp Pro Arg Thr
1 5

<210> 161
<211> 378
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 161
caggttcagc tggtgcagtc tggagctgag gtgaagaagc ctggggcctc agtgaaggtc 60
tcctgcaagg cttctggtta cacctttacc aactatggta tcagctgggt gcgacaggcc 120
cctggacaag gacttgagtt aatgggatgg attagtggtt acaatggtaa cacaaactat 180
gcacaagaac tccaggccag agtcaccatg accacagaca catccacgag cacagcctac 240
atggagctga ggaacctgag atctgacgac acggccgtat attactgtgc gagagataga 300
gtcgttgtag cagctgctaa ttactacttt tattctatgg acgtctgggg ccaagggacc 360
acggtcaccg tctcctca 378

<210> 162
<211> 126
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 162
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 Asn Tyr
20 25 30
Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Leu Met
35 40 45
Gly Trp Ile Ser Gly Tyr Asn Gly Asn Thr Asn Tyr Ala Gln Glu Leu
50 55 60
Gln Ala Arg Val Thr Met Thr Thr Asp Thr Ser Thr Ser Thr Ala Tyr
65 70 75 80
Met Glu Leu Arg Asn Leu Arg Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95
Ala Arg Asp Arg Val Val Val Ala Ala Ala Asn Tyr Tyr Phe Tyr Ser
100 105 110
Met Asp Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser
115 120 125

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

<220>
<223> Synthetic

<400> 163
gatgttgtga tgactcagtc tccactctcc ctgtccgtca cccttggaca gccggcctcc 60
atctcctgca ggtctagtca aagcctcgta tacagtgatg gagacaccta cttgaattgg 120
tttcagcaga ggccaggcca atctccaagg cgcctaattt ataaggtttc taaccgggac 180
tctggggtcc cagacagatt cagcggcagt gggtcaggca ctgctttcac actgaaaatc 240
agcggggtgg aggccgagga tgttggggtt tactactgca tgcaagctac acactggcct 300
cggacgttcg gccaagggac caaggtggaa atcaaa 336

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

<220>
<223> Synthetic

<400> 164
Asp Val Val Met Thr Gln Ser Pro Leu Ser Leu Ser Val Thr Leu Gly
 1   5   10   15
Gln Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Val Tyr Ser
            20   25   30
Asp Gly Asp Thr Tyr Leu Asn Trp Phe Gln Gln Arg Pro Gly Gln Ser
        35   40   45
Pro Arg Arg Leu Ile Tyr Lys Val Ser Asn Arg Asp Ser Gly Val Pro
    50   55   60
Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Ala Phe Thr Leu Lys Ile
65   70   75   80
Ser Gly Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln Ala
                85   90   95
Thr His Trp Pro Arg Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
            100   105   110

<210> 165
<211> 378
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 165
caggttcagc tggtgcagtc tggagctgag gtgaagaagc ctggggcctc agtgaaggtc 60
tcctgcaagg cttctggtta cacctttacc aactatggta tcagctgggt gcgacaggcc 120
cctggacaag ggcttgagtg gatgggatgg attagtggtt acaatggtaa cacaaactat 180
gcacagaagc tccagggcag agtcaccatg accacagaca catccacgag cacagcctac 240
atggagctga ggagcctgag atctgacgac acggccgtgt attactgtgc gagagataga 300
gtcgttgtag cagctgctaa ttactacttt tattctatgg acgtctgggg ccaagggacc 360
acggtcaccg tctcctca 378

<210> 166
<211> 126
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 166

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

<210> 167
<211> 336
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 167
```
gatgttgtga tgactcagtc tccactctcc ctgcccgtca cccttggaca gccggcctcc 60
atctcctgca ggtctagtca aagcctcgta tacagtgatg gagacaccta cttgaattgg 120
tttcagcaga ggccaggcca atctccaagg cgcctaattt ataaggtttc taaccgggac 180
tctggggtcc cagacagatt cagcggcagt gggtcaggca ctgatttcac actgaaaatc 240
agcagggtgg aggctgagga tgttggggtt tattactgca tgcaagctac acactggcct 300
cggacgttcg gccaagggac caaggtggaa atcaaa                           336
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<210> 168
<211> 112
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 168
```
Asp Val Val Met Thr Gln Ser Pro Leu Ser Leu Pro Val Thr Leu Gly
 1               5                  10                  15
Gln Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Val Tyr Ser
            20                  25                  30
Asp Gly Asp Thr Tyr Leu Asn Trp Phe Gln Gln Arg Pro Gly Gln Ser
        35                  40                  45
Pro Arg Arg Leu Ile Tyr Lys Val Ser Asn Arg Asp 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
Thr His Trp Pro Arg Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
            100                 105                 110
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<210> 169
<211> 375
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 169
caggtccact tgaaggagtc tggtcctacg ctggtgaaac ccacacagac cctcacgctg 60
acctgcacct tctctggatt ctcactcatc actagtggag tgggtgtggg ctggattcgt 120
cagccccccg gaaaggccct ggagtggctt gcactcattt attggaatgg tgataagcgc 180
tacagcccat ctctgaagag caggctcacc atcaccaagg acacctccaa aaaccaggtg 240
gtccttacaa tgaccaacat ggaccctgtg gacacagcca catattactg tgcacacagg 300
ataactgaaa ctagttacta cttctactac ggtatggacg tctggggcca agggaccacg 360
gtcaccgtct cctca 375

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

<220>
<223> Synthetic

<400> 170
Gln Val His Leu Lys Glu Ser Gly Pro Thr Leu Val Lys Pro Thr Gln
 1   5   10   15
Thr Leu Thr Leu Thr Cys Thr Phe Ser Gly Phe Ser Leu Ile Thr Ser
            20   25   30
Gly Val Gly Val Gly Trp Ile Arg Gln Pro Pro Gly Lys Ala Leu Glu
        35   40   45
Trp Leu Ala Leu Ile Tyr Trp Asn Gly Asp Lys Arg Tyr Ser Pro Ser
    50   55   60
Leu Lys Ser Arg Leu Thr Ile Thr Lys Asp Thr Ser Lys Asn Gln Val
65   70   75   80
Val Leu Thr Met Thr Asn Met Asp Pro Val Asp Thr Ala Thr Tyr Tyr
                85   90   95
Cys Ala His Arg Ile Thr Glu Thr Ser Tyr Tyr Phe Tyr Tyr Gly Met
            100   105   110
Asp Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser
        115   120   125

<210> 171
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 171
ggattctcac tcatcactag tggagtgggt 30

<210> 172
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 172
Gly Phe Ser Leu Ile Thr Ser Gly Val Gly
 1   5   10

<210> 173
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 173
atttattgga atggtgataa g 21

<210> 174
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

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

<210> 175
<211> 51
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 175
gcacacagga taactgaaac tagttactac ttctactacg gtatggacgt c 51

<210> 176
<211> 17
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 176
Ala His Arg Ile Thr Glu Thr Ser Tyr Tyr Phe Tyr Tyr Gly Met Asp
1 5 10 15
Val

<210> 177
<211> 339
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 177
gacatccaga tgacccagtc tccactctcc ctgcccgtca cccctggaga gccggcctcc 60
atctcctgca ggtctagtca gagcctcctg catagtcatg gatacgacta tttggattgg 120
tacctgcaga agccagggca gtctccacag ctcctgatct atttgggttc taatcgggcc 180

tccggggtcc ctgacaggtt cagtggcagt ggatcaggca cagattttac actgaaaatc 240
agcagagtgg aggctgagga tgttggggtt tattactgca tgcaagctct acaaactccg 300
ctcactttcg gcggagggac caaggtggaa atcaaacga 339

<210> 178
<211> 113
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 178
Asp Ile Gln 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
His Gly Tyr Asp 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 Leu Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
100 105 110
Arg

<210> 179
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 179
cagagcctcc tgcatagtca tggatacgac tat 33

<210> 180
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 180
Gln Ser Leu Leu His Ser His Gly Tyr Asp Tyr
1 5 10

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

<220>
<223> Synthetic

<400> 181
ttgggttct 9

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

<220>
<223> Synthetic

<400> 182
Leu Gly Ser
1

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

<220>
<223> Synthetic

<400> 183
atgcaagctc tacaaactcc gctcact 27

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

<220>
<223> Synthetic

<400> 184
Met Gln Ala Leu Gln Thr Pro Leu Thr
1 5

<210> 185
<211> 375
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 185
cagatcacct tgaaggagtc tggtcctacg ctggtgaaac ccacacagac cctcacgctg 60
acctgcacct tctctggatt ctcactcatc actagtggag tgggtgtggg ctggattcgt 120
cagccccccg gaaaggccct ggagtggctt gcactcattt attggaatgg tgataagcgc 180
tacagcccat ctctgaagag caggctcacc atcaccaagg acacctccaa aaaccaggtg 240
gtccttacaa tgaccaacat ggaccctgtg gacacagcca catattactg tgcacacagg 300
ataactgaaa ctagttacta cttctactac ggtatggacg tctggggcca agggaccacg 360
gtcaccgtct cctca 375

<210> 186
<211> 125
<212> PRT
<213> Artificial Sequence

<220>

<223> Synthetic

<400> 186
Gln Ile Thr Leu Lys Glu Ser Gly Pro Thr Leu Val Lys Pro Thr Gln
1 5 10 15
Thr Leu Thr Leu Thr Cys Thr Phe Ser Gly Phe Ser Leu Ile Thr Ser
20 25 30
Gly Val Gly Val Gly Trp Ile Arg Gln Pro Pro Gly Lys Ala Leu Glu
35 40 45
Trp Leu Ala Leu Ile Tyr Trp Asn Gly Asp Lys Arg Tyr Ser Pro Ser
50 55 60
Leu Lys Ser Arg Leu Thr Ile Thr Lys Asp Thr Ser Lys Asn Gln Val
65 70 75 80
Val Leu Thr Met Thr Asn Met Asp Pro Val Asp Thr Ala Thr Tyr Tyr
85 90 95
Cys Ala His Arg Ile Thr Glu Thr Ser Tyr Tyr Phe Tyr Tyr Gly Met
100 105 110
Asp Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser
115 120 125

<210> 187
<211> 336
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 187
gatattgtga tgactcagtc tccactctcc ctgcccgtca cccctggaga gccggcctcc 60
atctcctgca ggtctagtca gagcctcctg catagtcatg gatacgacta tttggattgg 120
tacctgcaga agccagggca gtctccacag ctcctgatct atttgggttc taatcgggcc 180
tccggggtcc ctgacaggtt cagtggcagt ggatcaggca cagattttac actgaaaatc 240
agcagagtgg aggctgagga tgttggggtt tattactgca tgcaagctct acaaactccg 300
ctcactttcg gcggagggac caaggtggag atcaaa 336

<210> 188
<211> 112
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 188
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
His Gly Tyr Asp 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 Leu Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
100 105 110

<210> 189

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

<220>
<223> Synthetic

<400> 189
cagatcacct tgaaggagtc tggtcctacg ctggtgaaac ccacacagac cctcacgctg 60
acctgcacct tctctggatt ctcactcatc actagtggag tgggtgtggg ctggatccgt 120
cagccccag gaaaggccct ggagtggctt gcactcattt attggaatgg tgataagcgc 180
tacagcccat ctctgaagag caggctcacc atcaccaagg acacctccaa aaaccaggtg 240
gtccttacaa tgaccaacat ggaccctgtg gacacagcca catattactg tgcacacagg 300
ataactgaaa ctagttacta cttctactac ggtatggacg tctggggcca agggaccacg 360
gtcaccgtct cctca 375

<210> 190
<211> 125
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 190
Gln Ile Thr Leu Lys Glu Ser Gly Pro Thr Leu Val Lys Pro Thr Gln
 1   5   10   15
Thr Leu Thr Leu Thr Cys Thr Phe Ser Gly Phe Ser Leu Ile Thr Ser
            20   25   30
Gly Val Gly Val Gly Trp Ile Arg Gln Pro Pro Gly Lys Ala Leu Glu
        35   40   45
Trp Leu Ala Leu Ile Tyr Trp Asn Gly Asp Lys Arg Tyr Ser Pro Ser
    50   55   60
Leu Lys Ser Arg Leu Thr Ile Thr Lys Asp Thr Ser Lys Asn Gln Val
65   70   75   80
Val Leu Thr Met Thr Asn Met Asp Pro Val Asp Thr Ala Thr Tyr Tyr
                85   90   95
Cys Ala His Arg Ile Thr Glu Thr Ser Tyr Tyr Phe Tyr Tyr Gly Met
            100   105   110
Asp Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser
        115   120   125

<210> 191
<211> 336
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 191
gatattgtga tgactcagtc tccactctcc ctgcccgtca cccctggaga gccggcctcc 60
atctcctgca ggtctagtca gagcctcctg catagtcatg gatacgacta tttggattgg 120
tacctgcaga agccagggca gtctccacag ctcctgatct atttgggttc taatcgggcc 180
tccggggtcc ctgacaggtt cagtggcagt ggatcaggca cagattttac actgaaaatc 240
agcagagtgg aggctgagga tgttggggtt tattactgca tgcaagctct acaaactccg 300
ctcactttcg gcggagggac caaggtggag atcaaa 336

<210> 192
<211> 112
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 192
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
His Gly Tyr Asp 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 Leu Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
            100   105   110

<210> 193
<211> 375
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 193
cagatcacct tgaaggagtc tggtcctact ctggtgaaac cctcacagac cctcacgctg 60
acctgcacct tctctgggtt ctcactcagc actagtggag tgggtgtggg ctggatccgt 120
cagccccag gaaaggccct ggagtggctt gcactcattt attggaattc tgataagcgc 180
tacagcccat ctctgaagag caggctcacc atcaccaagg acacctccaa aaaccaggta 240
gtccttacaa tgaccaacat ggaccctgtg gacacagcca catattactg tgcacacaga 300
catgacagct cgtcctacta cttctactac ggtatggacg tctggggcca agggatcacg 360
gtcaccgtct cctca   375

<210> 194
<211> 125
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 194
Gln Ile Thr Leu Lys Glu Ser Gly Pro Thr Leu Val Lys Pro Ser Gln
 1   5   10   15
Thr Leu Thr Leu Thr Cys Thr Phe Ser Gly Phe Ser Leu Ser Thr Ser
            20   25   30
Gly Val Gly Val Gly Trp Ile Arg Gln Pro Pro Gly Lys Ala Leu Glu
        35   40   45
Trp Leu Ala Leu Ile Tyr Trp Asn Ser Asp Lys Arg Tyr Ser Pro Ser
    50   55   60
Leu Lys Ser Arg Leu Thr Ile Thr Lys Asp Thr Ser Lys Asn Gln Val
65   70   75   80
Val Leu Thr Met Thr Asn Met Asp Pro Val Asp Thr Ala Thr Tyr Tyr
                85   90   95
Cys Ala His Arg His Asp Ser Ser Ser Tyr Tyr Phe Tyr Tyr Gly Met
            100   105   110
Asp Val Trp Gly Gln Gly Ile Thr Val Thr Val Ser Ser
        115   120   125

<210> 195
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 195
gggttctcac tcagcactag tggagtgggt 30

<210> 196
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 196
Gly Phe Ser Leu Ser Thr Ser Gly Val Gly
1 5 10

<210> 197
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 197
atttattgga attctgataa g 21

<210> 198
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

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

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

<220>
<223> Synthetic

<400> 199
gcacacagac atgacagctc gtcctactac ttctactacg gtatggacgt c 51

<210> 200
<211> 17

<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 200
Ala His Arg His Asp Ser Ser Ser Tyr Tyr Phe Tyr Tyr Gly Met Asp
 1   5   10   15
Val

<210> 201
<211> 339
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 201
gacatccaga tgacccagtc tccgctctcc ctgcccgtca cccctggaga gccggcctcc 60
atctcctgca ggtctagtca gagcctcctc catagtcatg gatacaacta tttggattgg 120
tacctgcaga agccagggca gtctccacaa ctcctgatct atttgggttc taatcgggcc 180
tccggggtcc ctgacaggtt cagtggcggt ggatcaggca cagattttac actgaaaatc 240
agcagagtgg aggctgagga tgttgggatt tattactgca tgcaagctct acagactcct 300
ctcactttcg gcggagggac caaggtggag atcaaacga   339

<210> 202
<211> 113
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 202
Asp Ile Gln 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
His 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 Gly Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile
65   70   75   80
Ser Arg Val Glu Ala Glu Asp Val Gly Ile Tyr Tyr Cys Met Gln Ala
                85   90   95
Leu Gln Thr Pro Leu Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
            100   105   110
Arg

<210> 203
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 203
cagagcctcc tccatagtca tggatacaac tat 33

<210> 204
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 204
Gln Ser Leu Leu His Ser His Gly Tyr Asn Tyr
1 5 10

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

<220>
<223> Synthetic

<400> 205
ttgggttct 9

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

<220>
<223> Synthetic

<400> 206
Leu Gly Ser
1

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

<220>
<223> Synthetic

<400> 207
atgcaagctc tacagactcc tctcact 27

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

<220>
<223> Synthetic

<400> 208
Met Gln Ala Leu Gln Thr Pro Leu Thr
1 5

<210> 209
<211> 375
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 209
cagatcacct tgaaggagtc tggtcctact ctggtgaaac cctcacagac cctcacgctg 60
acctgcacct tctctgggtt ctcactcagc actagtggag tgggtgtggg ctggatccgt 120
cagccccag gaaaggccct ggagtggctt gcactcattt attggaattc tgataagcgc 180
tacagcccat ctctgaagag caggctcacc atcaccaagg acacctccaa aaaccaggta 240
gtccttacaa tgaccaacat ggaccctgtg gacacagcca catattactg tgcacacaga 300
catgacagct cgtcctacta cttctactac ggtatggacg tctggggcca agggaccacg 360
gtcaccgtct cctca 375

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

<220>
<223> Synthetic

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

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

<220>
<223> Synthetic

<400> 211
gatattgtga tgactcagtc tccgctctcc ctgcccgtca cccctggaga gccggcctcc 60
atctcctgca ggtctagtca gagcctcctc catagtcatg gatacaacta tttggattgg 120
tacctgcaga agccagggca gtctccacaa ctcctgatct atttgggttc taatcgggcc 180
tccggggtcc ctgacaggtt cagtggcggt ggatcaggca cagattttac actgaaaatc 240
agcagagtgg aggctgagga tgttgggatt tattactgca tgcaagctct acagactcct 300
ctcactttcg gcggagggac caaggtggag atcaaa 336

<210> 212

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

<220>
<223> Synthetic

<400> 212
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
His 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 Gly Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile
65   70   75   80
Ser Arg Val Glu Ala Glu Asp Val Gly Ile Tyr Tyr Cys Met Gln Ala
                85   90   95
Leu Gln Thr Pro Leu Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
            100   105   110

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

<220>
<223> Synthetic

<400> 213
cagatcacct tgaaggagtc tggtcctacg ctggtgaaac ccacacagac cctcacgctg 60
acctgcacct tctctgggtt ctcactcagc actagtggag tgggtgtggg ctggatccgt 120
cagccccag gaaaggccct ggagtggctt gcactcattt attggaattc tgataagcgc 180
tacagcccat ctctgaagag caggctcacc atcaccaagg acacctccaa aaaccaggtg 240
gtccttacaa tgaccaacat ggaccctgtg gacacagcca catattactg tgcacacaga 300
catgacagct cgtcctacta cttctactac ggtatggacg tctggggcca agggaccacg 360
gtcaccgtct cctca   375

<210> 214
<211> 125
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

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

```
            100                 105                 110
Asp Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser
        115                 120                 125


<210> 215
<211> 336
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 215
gatattgtga tgactcagtc tccactctcc ctgcccgtca cccctggaga gccggcctcc 60
atctcctgca ggtctagtca gagcctcctc catagtcatg gatacaacta tttggattgg 120
tacctgcaga agccagggca gtctccacag ctcctgatct atttgggttc taatcgggcc 180
tccggggtcc ctgacaggtt cagtggcagt ggatcaggca cagattttac actgaaaatc 240
agcagagtgg aggctgagga tgttggggtt tattactgca tgcaagctct acagactcct 300
ctcactttcg gcggagggac caaggtggag atcaaa                          336

<210> 216
<211> 112
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 216
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
His 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 Leu Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
            100                 105                 110


<210> 217
<211> 381
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 217
gagatgcaac tggtggagtc tgggggaggc ttggtccagc ctgggggtc cctgagactc 60
tcctgtgcag cctctggatt cacctttagt agtcactgga tgaagtgggt ccgccaggct 120
ccagggaagg ggctggagtg ggtggccaac ataaaccaag atggaagtga gaaatactat 180
gtggactctg tgaagggccg attcaccatc tccagagaca acgccaagaa ctcactgttt 240
ctgcaaatga acagcctgag agccgaggac acggctgtgt attactgtgc gagagatatt 300
gtactaatgg tctatgatat ggactactac tactacggta tggacgtctg gggccaaggg 360
accacggtca ccgtctcctc a                                         381
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<210> 218
<211> 127
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 218
Glu Met 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 His
            20   25   30
Trp Met Lys Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35   40   45
Ala Asn Ile Asn 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 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 Arg Asp Ile Val Leu Met Val Tyr Asp Met Asp Tyr Tyr Tyr Tyr
            100   105   110
Gly Met Asp Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser
        115   120   125

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

<220>
<223> Synthetic

<400> 219
ggattcacct ttagtagtca ctgg   24

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

<220>
<223> Synthetic

<400> 220
Gly Phe Thr Phe Ser Ser His Trp
 1   5

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

<220>
<223> Synthetic

<400> 221
ataaaccaag atggaagtga gaaa   24

<210> 222

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

<220>
<223> Synthetic

<400> 222
Ile Asn Gln Asp Gly Ser Glu Lys
 1   5

<210> 223
<211> 60
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 223
gcgagagata ttgtactaat ggtctatgat atggactact actactacgg tatggacgtc 60

<210> 224
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 224
Ala Arg Asp Ile Val Leu Met Val Tyr Asp Met Asp Tyr Tyr Tyr Tyr
 1   5   10   15
Gly Met Asp Val
            20

<210> 225
<211> 336
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 225
gatattgtga tgactcagtc tccactctcc ctgcccgtca cccctggaga gccggcctcc 60
atctcctgca ggtctagtca gagcctcctg catagtaatg gaaacaacta tttggattgg 120
tacctgcaga agccagggca gtctccacag ctcctgatct atttgggttc taatcgggcc 180
tccggggtcc ctgacaggtt cagtggcagt ggatcaggca cagattttac actgaaaatc 240
agcagagtgg aggctgagga tgttggggtt tattactgca tgcaaactct acaaactccg 300
ctcactttcg gcggagggac caaggtggag atcaaa   336

<210> 226
<211> 112
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

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

<210> 227
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 227
cagagcctcc tgcatagtaa tggaaacaac tat 33

<210> 228
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 228
Gln Ser Leu Leu His Ser Asn Gly Asn Asn Tyr
 1   5   10

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

<220>
<223> Synthetic

<400> 229
ttgggttct 9

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

<220>
<223> Synthetic

<400> 230
Leu Gly Ser
 1

<210> 231
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 231
atgcaaactc tacaaactcc gctcact 27

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

<220>
<223> Synthetic

<400> 232
Met Gln Thr Leu Gln Thr Pro Leu Thr
1 5

<210> 233
<211> 381
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 233
gaggtgcagc tggtggagtc tgggggaggc ttggtccagc ctgggggtc cctgagactc 60
tcctgtgcag cctctggatt cacctttagt agtcactgga tgaagtgggt ccgccaggct 120
ccagggaagg ggctggagtg ggtggccaac ataaaccaag atggaagtga gaaatactat 180
gtggactctg tgaagggccg attcaccatc tccagagaca acgccaagaa ctcactgttt 240
ctgcaaatga acagcctgag agccgaggac acggctgtgt attactgtgc gagagatatt 300
gtactaatgg tctatgatat ggactactac tactacggta tggacgtctg gggccaaggg 360
accacggtca ccgtctcctc a 381

<210> 234
<211> 127
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 234
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 His
20 25 30
Trp Met Lys Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45
Ala Asn Ile Asn 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 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 Arg Asp Ile Val Leu Met Val Tyr Asp Met Asp Tyr Tyr Tyr Tyr
            100                 105                 110
Gly Met Asp Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser
        115                 120                 125
```

<210> 235
<211> 336
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 235
gatattgtga tgactcagtc tccactctcc ctgcccgtca cccctggaga gccggcctcc 60
atctcctgca ggtctagtca gagcctcctg catagtaatg gaaacaacta tttggattgg 120
tacctgcaga agccagggca gtctccacag ctcctgatct atttgggttc taatcgggcc 180
tccggggtcc ctgacaggtt cagtggcagt ggatcaggca cagattttac actgaaaatc 240
agcagagtgg aggctgagga tgttggggtt tattactgca tgcaaactct acaaactccg 300
ctcactttcg gcggagggac caaggtggag atcaaa 336

<210> 236
<211> 112
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 236
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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 Asn Asn Tyr Leu Asp Trp Tyr Leu Gln Lys Pro Gly Gln Ser
        35                  40                  45
Pro Gln Leu Leu Ile Tyr Leu Gly Ser Asn Arg Ala Ser Gly Val Pro
    50                  55                  60
Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile
65                  70                  75                  80
Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln Thr
                85                  90                  95
Leu Gln Thr Pro Leu Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
            100                 105                 110
```

<210> 237
<211> 381
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 237
gaggtgcagc tggtggagtc tgggggaggc ttggtccagc ctgggggtc cctgagactc 60
tcctgtgcag cctctggatt cacctttagt agtcactgga tgagctgggt ccgccaggct 120
ccagggaagg ggctggagtg ggtggccaac ataaaccaag atggaagtga gaaatactat 180
gtggactctg tgaagggccg attcaccatc tccagagaca acgccaagaa ctcactgtat 240
ctgcaaatga acagcctgag agccgaggac acggctgtgt attactgtgc gagagatatt 300
gtactaatgg tctatgatat ggactactac tactacggta tggacgtctg ggggcaaggg 360

accacggtca ccgtctcctc a 381

<210> 238
<211> 127
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 238
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 His
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 Asn 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 Asp Ile Val Leu Met Val Tyr Asp Met Asp Tyr Tyr Tyr Tyr
100 105 110
Gly Met Asp Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser
115 120 125

<210> 239
<211> 336
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 239
gatattgtga tgactcagtc tccactctcc ctgcccgtca cccctggaga gccggcctcc 60
atctcctgca ggtctagtca gagcctcctg catagtaatg gaaacaacta tttggattgg 120
tacctgcaga agccagggca gtctccacag ctcctgatct atttgggttc taatcgggcc 180
tccggggtcc ctgacaggtt cagtggcagt ggatcaggca cagattttac actgaaaatc 240
agcagagtgg aggctgagga tgttggggtt tattactgca tgcaaactct acaaactccg 300
ctcactttcg gcggagggac caaggtggag atcaaa 336

<210> 240
<211> 112
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 240
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 Asn Asn Tyr Leu Asp Trp Tyr Leu Gln Lys Pro Gly Gln Ser
35 40 45
Pro Gln Leu Leu Ile Tyr Leu Gly Ser Asn Arg Ala Ser Gly Val Pro
50 55 60
Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile

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


<210> 241
<211> 381
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 241
caggtgcagc tggtggagtc tgggggaggc gtggtccagc ctgggaggtc cctgagactc 60
tcctgtgcag tctctggatt caccttcagt agctatggca tgcactgggt ccgccaggct 120
ccaggcaagg ggctggagtg ggtggcagct atatcatatg atggaagtaa taaatactat 180
gtagactccg tgaagggccg attcaccatc tccagagaca attccaagaa aacgctgtat 240
ctgcaaatga acagcctgag agctgaggac acggctgtgt ataattgtgc gaaaaatatt 300
gtactagtga tgtatgatat agactatcac tactatggga tggacgtctg gggccaaggg 360
accacggtca ccgtctcctc a                                           381

<210> 242
<211> 127
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 242
Gln Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Arg
 1               5                  10                  15
Ser Leu Arg Leu Ser Cys Ala Val Ser Gly Phe Thr Phe Ser Ser Tyr
            20                  25                  30
Gly Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35                  40                  45
Ala Ala Ile Ser Tyr Asp Gly Ser Asn Lys Tyr Tyr Val Asp Ser Val
    50                  55                  60
Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Lys Thr Leu Tyr
65                  70                  75                  80
Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Asn Cys
                85                  90                  95
Ala Lys Asn Ile Val Leu Val Met Tyr Asp Ile Asp Tyr His Tyr Tyr
            100                 105                 110
Gly Met Asp Val Trp Gly Gln 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
ggattcacct tcagtagcta tggc                                        24

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

<220>
<223> Synthetic

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

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

<220>
<223> Synthetic

<400> 245
atatcatatg atggaagtaa taaa   24

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

<220>
<223> Synthetic

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

<210> 247
<211> 60
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 247
gcgaaaaata ttgtactagt gatgtatgat atagactatc actactatgg gatggacgtc 60

<210> 248
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 248
Ala Lys Asn Ile Val Leu Val Met Tyr Asp Ile Asp Tyr His Tyr Tyr
 1   5   10   15
Gly Met 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 gtctccacaa ctcctgatct atttgggttt taatcgggcc 180
tccggggtcc ctgacaggtt cagtggcagt ggatcaggca cagattttac actgaaaatc 240
agcagagtgg aggctgagga tgttggggtt tattactgca tgcaagctct acaaactcct 300
ctcactttcg gcggagggac caaggtggag atcaga 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 Phe 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 Leu Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Arg
            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
ttgggtttt 9

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

<220>
<223> Synthetic

<400> 254
Leu Gly Phe
1

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

<220>
<223> Synthetic

<400> 255
atgcaagctc tacaaactcc tctcact 27

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

<220>
<223> Synthetic

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

<210> 257
<211> 381
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 257
caggtgcagc tggtggagtc tgggggaggc gtggtccagc ctgggaggtc cctgagactc 60
tcctgtgcag tctctggatt caccttcagt agctatggca tgcactgggt ccgccaggct 120
ccaggcaagg ggctggagtg ggtggcagct atatcatatg atggaagtaa taaatactat 180
gtagactccg tgaagggccg attcaccatc tccagagaca attccaagaa aacgctgtat 240

ctgcaaatga acagcctgag agctgaggac acggctgtgt ataattgtgc gaaaaatatt 300
gtactagtga tgtatgatat agactatcac tactatggga tggacgtctg gggccaaggg 360
accacggtca ccgtctcctc a 381

<210> 258
<211> 127
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 258
Gln Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Arg
1 5 10 15
Ser Leu Arg Leu Ser Cys Ala Val Ser Gly Phe Thr Phe Ser Ser Tyr
20 25 30
Gly Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45
Ala Ala Ile Ser Tyr Asp Gly Ser Asn Lys Tyr Tyr Val Asp Ser Val
50 55 60
Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Lys Thr Leu Tyr
65 70 75 80
Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Asn Cys
85 90 95
Ala Lys Asn Ile Val Leu Val Met Tyr Asp Ile Asp Tyr His Tyr Tyr
100 105 110
Gly Met Asp Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser
115 120 125

<210> 259
<211> 336
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 259
gatattgtga tgactcagtc tccactctcc ctgcccgtca cccctggaga gccggcctcc 60
atctcctgca ggtctagtca gagcctcctg catagtaatg gatacaacta tttggattgg 120
tacctgcaga agccagggca gtctccacaa ctcctgatct atttgggttt taatcgggcc 180
tccggggtcc ctgacaggtt cagtggcagt ggatcaggca cagattttac actgaaaatc 240
agcagagtgg aggctgagga tgttggggtt tattactgca tgcaagctct acaaactcct 300
ctcactttcg gcggagggac caaggtggag atcaaa 336

<210> 260
<211> 112
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 260
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 Phe 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 Leu Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
            100                 105                 110
```

<210> 261
<211> 381
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 261
caggtgcagc tggtggagtc tgggggaggc gtggtccagc ctgggaggtc cctgagactc 60
tcctgtgcag cctctggatt caccttcagt agctatggca tgcactgggt ccgccaggct 120
ccaggcaagg ggctggagtg ggtggcagtt atatcatatg atggaagtaa taaatactat 180
gcagactccg tgaagggccg attcaccatc tccagagaca attccaagaa cacgctgtat 240
ctgcaaatga acagcctgag agctgaggac acggctgtgt attactgtgc gaaaaatatt 300
gtactagtga tgtatgatat agactatcac tactatggga tggacgtctg gggcaaggg 360
accacggtca ccgtctcctc a 381

<210> 262
<211> 127
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 262
```
Gln Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Arg
 1               5                  10                  15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr
            20                  25                  30
Gly Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35                  40                  45
Ala Val Ile Ser Tyr Asp Gly Ser Asn Lys Tyr Tyr Ala Asp Ser Val
    50                  55                  60
Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
65                  70                  75                  80
Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
                85                  90                  95
Ala Lys Asn Ile Val Leu Val Met Tyr Asp Ile Asp Tyr His Tyr Tyr
            100                 105                 110
Gly Met Asp Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser
        115                 120                 125
```

<210> 263
<211> 336
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 263
gatattgtga tgactcagtc tccactctcc ctgcccgtca cccctggaga gccggcctcc 60

atctcctgca ggtctagtca gagcctcctg catagtaatg gatacaacta tttggattgg 120
tacctgcaga agccagggca gtctccacag ctcctgatct atttgggttt taatcgggcc 180
tccggggtcc ctgacaggtt cagtggcagt ggatcaggca cagattttac actgaaaatc 240
agcagagtgg aggctgagga tgttggggtt tattactgca tgcaagctct acaaactcct 300
ctcactttcg gcggagggac caaggtggag atcaaa 336

<210> 264
<211> 112
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 264
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 Phe 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 Leu Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
100 105 110

<210> 265
<211> 381
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 265
caggtgcagc tggtggagtc tgggggaggc gtggtccagc ctgggaggtc cctgagactc 60
tcctgtgcag tctctggatt caccttcagt agctatggca tgcactgggt ccgccaggct 120
ccaggcaagg ggctggagtg ggtggcagct atatcatatg atggaagtaa taaatactat 180
gtagactccg tgaagggccg attcaccatc tccagagaca attccaagaa aacgctgtat 240
ctgcaaatga acagcctgag agctgaggac acggctgtgt ataattgtgc gaaaaatatt 300
gtactagtga tgtatgatat agactatcac tactatggga tggacgtctg gggccaaggg 360
accacggtca ccgtctcctc a 381

<210> 266
<211> 127
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 266
Gln Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Arg
1 5 10 15
Ser Leu Arg Leu Ser Cys Ala Val Ser Gly Phe Thr Phe Ser Ser Tyr
20 25 30
Gly Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45

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

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

<220>
<223> Synthetic

<400> 267
ggattcacct tcagtagcta tggc 24

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

<220>
<223> Synthetic

<400> 268
```
Gly Phe Thr Phe Ser Ser Tyr Gly
 1               5
```

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

<220>
<223> Synthetic

<400> 269
atatcatatg atggaagtaa taaa 24

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

<220>
<223> Synthetic

<400> 270
```
Ile Ser Tyr Asp Gly Ser Asn Lys
 1               5
```

<210> 271
<211> 60
<212> DNA

<213> Artificial Sequence

<220>
<223> Synthetic

<400> 271
gcgaaaaata ttgtactagt gatgtatgat atagactatc actactatgg gatggacgtc 60

<210> 272
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 272
Ala Lys Asn Ile Val Leu Val Met Tyr Asp Ile Asp Tyr His Tyr Tyr
 1   5   10   15
Gly Met Asp Val
            20

<210> 273
<211> 336
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 273
gatattgtga tgactcagtc tccactctcc ctgcccgtca cccctggaga gccggcctcc 60
atctcctgca ggtctagtca gagcctcctg catagtaatg gatacaacta tttggattgg 120
tacctgcaga agccagggca gtctccacaa ctcctgatct atttgggttt taatcgggcc 180
tccggggtcc ctgacaggtt cagtggcagt ggatcaggca cagattttac actgaaaatc 240
agcagagtgg aggctgagga tgttggggtt tattactgca tgcaagctct acaaactcct 300
ctcactttcg gcggagggac caaggtggag atcaga   336

<210> 274
<211> 112
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 274
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 Phe 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 Leu Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Arg
            100   105   110

<210> 275
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 275
cagagcctcc tgcatagtaa tggatacaac tat 33

<210> 276
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 276
Gln Ser Leu Leu His Ser Asn Gly Tyr Asn Tyr
 1   5   10

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

<220>
<223> Synthetic

<400> 277
ttgggtttt 9

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

<220>
<223> Synthetic

<400> 278
Leu Gly Phe
 1

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

<220>
<223> Synthetic

<400> 279
atgcaagctc tacaaactcc tctcact 27

<210> 280
<211> 9

<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 280
Met Gln Ala Leu Gln Thr Pro Leu Thr
 1   5

<210> 281
<211> 381
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 281
caggtgcagc tggtggagtc tgggggaggc gtggtccagc ctgggaggtc cctgagactc 60
tcctgtgcag tctctggatt caccttcagt agctatggca tgcactgggt ccgccaggct 120
ccaggcaagg ggctggagtg ggtggcagct atatcatatg atggaagtaa taaatactat 180
gtagactccg tgaagggccg attcaccatc tccagagaca attccaagaa aacgctgtat 240
ctgcaaatga acagcctgag agctgaggac acggctgtgt ataattgtgc gaaaaatatt 300
gtactagtga tgtatgatat agactatcac tactatggga tggacgtctg gggccaaggg 360
accacggtca ccgtctcctc a   381

<210> 282
<211> 127
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 282
Gln Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Arg
 1   5   10   15
Ser Leu Arg Leu Ser Cys Ala Val Ser Gly Phe Thr Phe Ser Ser Tyr
            20   25   30
Gly Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35   40   45
Ala Ala Ile Ser Tyr Asp Gly Ser Asn Lys Tyr Tyr Val Asp Ser Val
    50   55   60
Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Lys Thr Leu Tyr
65   70   75   80
Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Asn Cys
                85   90   95
Ala Lys Asn Ile Val Leu Val Met Tyr Asp Ile Asp Tyr His Tyr Tyr
            100   105   110
Gly Met Asp Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser
        115   120   125

<210> 283
<211> 336
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 283
gatattgtga tgactcagtc tccactctcc ctgcccgtca cccctggaga gccggcctcc 60
atctcctgca ggtctagtca gagcctcctg catagtaatg gatacaacta tttggattgg 120
tacctgcaga agccagggca gtctccacaa ctcctgatct atttgggttt taatcgggcc 180
tccggggtcc ctgacaggtt cagtggcagt ggatcaggca cagattttac actgaaaatc 240
agcagagtgg aggctgagga tgttggggtt tattactgca tgcaagctct acaaactcct 300
ctcactttcg gcggagggac caaggtggag atcaaa 336

<210> 284
<211> 112
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 284
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 Phe 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 Leu Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
            100   105   110

<210> 285
<211> 381
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 285
caggtgcagc tggtggagtc tgggggaggc gtggtccagc ctgggaggtc cctgagactc 60
tcctgtgcag cctctggatt caccttcagt agctatggca tgcactgggt ccgccaggct 120
ccaggcaagg ggctggagtg ggtggcagtt atatcatatg atggaagtaa taaatactat 180
gcagactccg tgaagggccg attcaccatc tccagagaca attccaagaa cacgctgtat 240
ctgcaaatga acagcctgag agctgaggac acggctgtgt attactgtgc gaaaaatatt 300
gtactagtga tgtatgatat agactatcac tactatggga tggacgtctg gggcaaggg 360
accacggtca ccgtctcctc a 381

<210> 286
<211> 127
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

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

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

<210> 287
<211> 336
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 287
gatattgtga tgactcagtc tccactctcc ctgcccgtca cccctggaga gccggcctcc 60
atctcctgca ggtctagtca gagcctcctg catagtaatg gatacaacta tttggattgg 120
tacctgcaga agccagggca gtctccacag ctcctgatct atttgggttt taatcgggcc 180
tccggggtcc ctgacaggtt cagtggcagt ggatcaggca cagattttac actgaaaatc 240
agcagagtgg aggctgagga tgttggggtt tattactgca tgcaagctct acaaactcct 300
ctcactttcg gcggagggac caaggtggag atcaaa 336

<210> 288
<211> 112
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 288
```
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 Phe 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 Leu Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
            100                 105                 110
```

<210> 289
<211> 372
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 289
cagatcacct tgaaggagtc tggtcctacg ctggtaaaac ccacacagac cctcacgctg 60
acctgcacct tctctgggtt ctcactcagc gctagtggag tgggtgtggg ctggttccgt 120
cagcccccag gaaaggccct ggagtggctt gcactcattt attggaatga tgataagcgt 180
tacagcccat ctctaaagaa cagcctcacc atcaccaagg acacctccaa aaaccaggtg 240
gtccttacaa tgaccaacat ggaccctgtg gacacagcca catattactg tgcacacaga 300
atacatctat ggtcctactt ctactacggt atggacgtct ggggccaagg gaccacggtc 360
accgtctcct ca 372

<210> 290
<211> 124
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

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

<210> 291
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 291
gggttctcac tcagcgctag tggagtgggt 30

<210> 292
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 292
Gly Phe Ser Leu Ser Ala Ser Gly Val Gly
1 5 10

<210> 293
<211> 21
<212> DNA

<213> Artificial Sequence

<220>
<223> Synthetic

<400> 293
atttattgga atgatgataa g 21

<210> 294
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 294
Ile Tyr Trp Asn Asp Asp Lys
1 5

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

<220>
<223> Synthetic

<400> 295
gcacacagaa tacatctatg gtcctacttc tactacggta tggacgtc 48

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

<220>
<223> Synthetic

<400> 296
Ala His Arg Ile His Leu Trp Ser Tyr Phe Tyr Tyr Gly Met Asp Val
1 5 10 15

<210> 297
<211> 336
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 297
gatattgtga tgactcagtc tccactctcc ctgcccgtca cccctggaga gccggcctcc 60
atctcctgca ggtctagtca gactctcctg catagtaatg gatacaacta tttcgattgg 120
tacctgcaga agccagggca gtctccacag ctcctgatct atttgggttc taatcgggcc 180
tccggggtcc ctgacagatt cagtggcagt ggatcaggca cagattttac actgaaaatc 240
agcagagtgg aggctgagga tgttggaatt tattactgca tgcaagctct acaaactcct 300
ctcactttcg gcggagggac caaggtggag atcaga 336

<210> 298
<211> 112

<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 298
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 Thr Leu Leu His Ser
            20   25   30
Asn Gly Tyr Asn Tyr Phe 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 Ile Tyr Tyr Cys Met Gln Ala
                85   90   95
Leu Gln Thr Pro Leu Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Arg
            100   105   110

<210> 299
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 299
cagactctcc tgcatagtaa tggatacaac tat   33

<210> 300
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 300
Gln Thr Leu Leu His Ser Asn Gly Tyr Asn Tyr
 1   5   10

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

<220>
<223> Synthetic

<400> 301
ttgggttct   9

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

<220>
<223> Synthetic

<400> 302
Leu Gly Ser
 1

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

<220>
<223> Synthetic

<400> 303
atgcaagctc tacaaactcc tctcact 27

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

<220>
<223> Synthetic

<400> 304
Met Gln Ala Leu Gln Thr Pro Leu Thr
 1   5

<210> 305
<211> 372
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 305
cagatcacct tgaaggagtc tggtcctacg ctggtaaaac ccacacagac cctcacgctg 60
acctgcacct tctctgggtt ctcactcagc gctagtggag tgggtgtggg ctggttccgt 120
cagccccag gaaaggccct ggagtggctt gcactcattt attggaatga tgataagcgt 180
tacagcccat ctctaaagaa cagcctcacc atcaccaagg acacctccaa aaaccaggtg 240
gtccttacaa tgaccaacat ggaccctgtg gacacagcca catattactg tgcacacaga 300
atacatctat ggtcctactt ctactacggt atggacgtct ggggccaagg gaccacggtc 360
accgtctcct ca 372

<210> 306
<211> 124
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 306
Gln Ile Thr Leu Lys Glu Ser Gly Pro Thr Leu Val Lys Pro Thr Gln
 1   5   10   15
Thr Leu Thr Leu Thr Cys Thr Phe Ser Gly Phe Ser Leu Ser Ala Ser
            20   25   30
Gly Val Gly Val Gly Trp Phe Arg Gln Pro Pro Gly Lys Ala Leu Glu

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

<210> 307
<211> 336
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 307
gatattgtga tgactcagtc tccactctcc ctgcccgtca cccctggaga gccggcctcc 60
atctcctgca ggtctagtca gactctcctg catagtaatg gatacaacta tttcgattgg 120
tacctgcaga agccagggca gtctccacag ctcctgatct atttgggttc taatcgggcc 180
tccggggtcc ctgacagatt cagtggcagt ggatcaggca cagattttac actgaaaatc 240
agcagagtgg aggctgagga tgttggaatt tattactgca tgcaagctct acaaactcct 300
ctcactttcg gcggagggac caaggtggag atcaaa 336

<210> 308
<211> 112
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 308
```
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 Thr Leu Leu His Ser
            20                  25                  30
Asn Gly Tyr Asn Tyr Phe 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 Ile Tyr Tyr Cys Met Gln Ala
                85                  90                  95
Leu Gln Thr Pro Leu Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
            100                 105                 110
```

<210> 309
<211> 372
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 309

cagatcacct tgaaggagtc tggtcctacg ctggtgaaac ccacacagac cctcacgctg 60
acctgcacct tctctgggtt ctcactcagc gctagtggag tgggtgtggg ctggatccgt 120
cagcccccag gaaaggccct ggagtggctt gcactcattt attggaatga tgataagcgc 180
tacagcccat ctctgaagag caggctcacc atcaccaagg acacctccaa aaaccaggtg 240
gtccttacaa tgaccaacat ggaccctgtg gacacagcca catattactg tgcacacaga 300
atacatctat ggtcctactt ctactacggt atggacgtct gggggcaagg gaccacggtc 360
accgtctcct ca 372

<210> 310
<211> 124
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 310
Gln Ile Thr Leu Lys Glu Ser Gly Pro Thr Leu Val Lys Pro Thr Gln
1 5 10 15
Thr Leu Thr Leu Thr Cys Thr Phe Ser Gly Phe Ser Leu Ser Ala Ser
20 25 30
Gly Val Gly Val Gly Trp Ile Arg Gln Pro Pro Gly Lys Ala Leu Glu
35 40 45
Trp Leu Ala Leu Ile Tyr Trp Asn Asp Asp Lys Arg Tyr Ser Pro Ser
50 55 60
Leu Lys Ser Arg Leu Thr Ile Thr Lys Asp Thr Ser Lys Asn Gln Val
65 70 75 80
Val Leu Thr Met Thr Asn Met Asp Pro Val Asp Thr Ala Thr Tyr Tyr
85 90 95
Cys Ala His Arg Ile His Leu Trp Ser Tyr Phe Tyr Tyr Gly Met Asp
100 105 110
Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser
115 120

<210> 311
<211> 336
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 311
gatattgtga tgactcagtc tccactctcc ctgcccgtca cccctggaga gccggcctcc 60
atctcctgca ggtctagtca gactctcctg catagtaatg gatacaacta tttggattgg 120
tacctgcaga agccagggca gtctccacag ctcctgatct atttgggttc taatcgggcc 180
tccggggtcc ctgacaggtt cagtggcagt ggatcaggca cagattttac actgaaaatc 240
agcagagtgg aggctgagga tgttggggtt tattactgca tgcaagctct acaaactcct 300
ctcactttcg gcggagggac caaggtggag atcaaa 336

<210> 312
<211> 112
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 312
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 Thr 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 Leu Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
            100                 105                 110
```

<210> 313
<211> 381
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 313
caggttcagc tggtgcagtc tggacctgag gtgaagaacc ctggggcctc agtgaaggtc 60
tcctgcaagg cttctggtta cacctttacc acctatggta tcagttgggt acgacaggcc 120
cctggacaag ggcttgagtg gatgggatgg atcagcggtt acaatggtaa aacaaacgat 180
gcacagaagt tccaggacag agtcgccatg accacagaca catccacgag cacagcctac 240
atggagctga ggagcctgag atctgacgac acggccattt attactgttc gagagatcgt 300
ttagtagtac cacctgccct taattattcc tactacgtta tggacgtctg gggccaaggg 360
accacggtca ccgtctcctc a 381

<210> 314
<211> 127
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 314
```
Gln Val Gln Leu Val Gln Ser Gly Pro Glu Val Lys Asn Pro Gly Ala
 1               5                  10                  15
Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Thr Tyr
            20                  25                  30
Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
        35                  40                  45
Gly Trp Ile Ser Gly Tyr Asn Gly Lys Thr Asn Asp Ala Gln Lys Phe
    50                  55                  60
Gln Asp Arg Val Ala 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 Ile Tyr Tyr Cys
                85                  90                  95
Ser Arg Asp Arg Leu Val Val Pro Pro Ala Leu Asn Tyr Ser Tyr Tyr
            100                 105                 110
Val Met Asp Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser
        115                 120                 125
```

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

<220>

<223> Synthetic

<400> 315
ggttacacct ttaccaccta tggt 24

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

<220>
<223> Synthetic

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

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

<220>
<223> Synthetic

<400> 317
atcagcggtt acaatggtaa aaca 24

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

<220>
<223> Synthetic

<400> 318
Ile Ser Gly Tyr Asn Gly Lys Thr
1 5

<210> 319
<211> 60
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 319
tcgagagatc gtttagtagt accacctgcc cttaattatt cctactacgt tatggacgtc 60

<210> 320
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 320

```
Ser Arg Asp Arg Leu Val Val Pro Pro Ala Leu Asn Tyr Ser Tyr Tyr
 1               5                  10                  15
Val Met Asp Val
            20
```

<210> 321
<211> 336
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 321
gatgttgtga tgactcagtc tccactctcc ctgcccgtca cccttggaca gccggcctcc 60
atctcctgca ggtctagtca aagcctcgta tacagtgatg gaaacaccta cttgaattgg 120
tctcagcaga ggccaggtca atctccaagg cgcctaattt ataaggtttc taaccgggac 180
tctggggtcc cagacagatt cagcggcagt gggtcaggca ctgatttcac actgaaaatc 240
agcagggtgg aggctgagga tgttggggtt tattactgca tgcaaggtac acactggccg 300
tacacttttg gccaggggac caagctggag atcaaa 336

<210> 322
<211> 112
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 322
```
Asp Val Val Met Thr Gln Ser Pro Leu Ser Leu Pro Val Thr Leu Gly
 1               5                  10                  15
Gln Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Val Tyr Ser
            20                  25                  30
Asp Gly Asn Thr Tyr Leu Asn Trp Ser Gln Gln Arg Pro Gly Gln Ser
        35                  40                  45
Pro Arg Arg Leu Ile Tyr Lys Val Ser Asn Arg Asp 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 Gly
                85                  90                  95
Thr His Trp Pro Tyr Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
            100                 105                 110
```

<210> 323
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 323
caaagcctcg tatacagtga tggaaacacc tac 33

<210> 324
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 324
Gln Ser Leu Val Tyr Ser Asp Gly Asn Thr Tyr
 1   5   10

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

<220>
<223> Synthetic

<400> 325
aaggtttct   9

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

<220>
<223> Synthetic

<400> 326
Lys Val Ser
 1

<210> 327
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 327
atgcaaggta cacactggcc gtacact   27

<210> 328
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 328
Met Gln Gly Thr His Trp Pro Tyr Thr
 1   5

<210> 329
<211> 381
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 329
caggttcagc tggtgcagtc tggacctgag gtgaagaacc ctggggcctc agtgaaggtc 60
tcctgcaagg cttctggtta cacctttacc acctatggta tcagttgggt acgacaggcc 120
cctggacaag ggcttgagtg gatgggatgg atcagcggtt acaatggtaa aacaaacgat 180
gcacagaagt tccaggacag agtcgccatg accacagaca catccacgag cacagcctac 240
atggagctga ggagcctgag atctgacgac acggccattt attactgttc gagagatcgt 300
ttagtagtac cacctgccct taattattcc tactacgtta tggacgtctg gggccaaggg 360
accacggtca ccgtctcctc a 381

<210> 330
<211> 127
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 330
Gln Val Gln Leu Val Gln Ser Gly Pro Glu Val Lys Asn Pro Gly Ala
 1   5   10   15
Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Thr Tyr
            20   25   30
Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
        35   40   45
Gly Trp Ile Ser Gly Tyr Asn Gly Lys Thr Asn Asp Ala Gln Lys Phe
    50   55   60
Gln Asp Arg Val Ala 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 Ile Tyr Tyr Cys
                85   90   95
Ser Arg Asp Arg Leu Val Val Pro Pro Ala Leu Asn Tyr Ser Tyr Tyr
            100   105   110
Val Met Asp Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser
        115   120   125

<210> 331
<211> 336
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 331
gatgttgtga tgactcagtc tccactctcc ctgcccgtca cccttggaca gccggcctcc 60
atctcctgca ggtctagtca aagcctcgta tacagtgatg gaaacaccta cttgaattgg 120
tctcagcaga ggccaggtca atctccaagg cgcctaattt ataaggtttc taaccgggac 180
tctggggtcc cagacagatt cagcggcagt gggtcaggca ctgatttcac actgaaaatc 240
agcagggtgg aggctgagga tgttggggtt tattactgca tgcaaggtac acactggccg 300
tacacttttg gccaggggac caagctggag atcaaa 336

<210> 332
<211> 112
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 332
Asp Val Val Met Thr Gln Ser Pro Leu Ser Leu Pro Val Thr Leu Gly

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

<210> 333
<211> 381
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 333
caggttcagc tggtgcagtc tggagctgag gtgaagaagc ctggggcctc agtgaaggtc 60
tcctgcaagg cttctggtta cacctttacc acctatggta tcagctgggt gcgacaggcc 120
cctggacaag ggcttgagtg gatgggatgg atcagcggtt acaatggtaa aacaaactat 180
gcacagaagc tccagggcag agtcaccatg accacagaca catccacgag cacagcctac 240
atggagctga ggagcctgag atctgacgac acggccgtgt attactgttc gagagatcgt 300
ttagtagtac cacctgccct taattattcc tactacgtta tggacgtctg ggggcaaggg 360
accacggtca ccgtctcctc a 381

<210> 334
<211> 127
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 334
```
Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
 1               5                  10                  15
Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Thr Tyr
            20                  25                  30
Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
        35                  40                  45
Gly Trp Ile Ser Gly Tyr Asn Gly Lys 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
Ser Arg Asp Arg Leu Val Val Pro Pro Ala Leu Asn Tyr Ser Tyr Tyr
            100                 105                 110
Val Met Asp Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser
        115                 120                 125
```

<210> 335
<211> 336
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 335
gatgttgtga tgactcagtc tccactctcc ctgcccgtca cccttggaca gccggcctcc 60
atctcctgca ggtctagtca aagcctcgta tacagtgatg gaaacaccta cttgaattgg 120
tttcagcaga ggccaggcca atctccaagg cgcctaattt ataaggtttc taaccgggac 180
tctggggtcc cagacagatt cagcggcagt gggtcaggca ctgatttcac actgaaaatc 240
agcagggtgg aggctgagga tgttggggtt tattactgca tgcaaggtac acactggccg 300
tacacttttg gccaggggac caagctggag atcaaa 336

<210> 336
<211> 112
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 336
Asp Val Val Met Thr Gln Ser Pro Leu Ser Leu Pro Val Thr Leu Gly
 1   5   10   15
Gln Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Val Tyr Ser
            20   25   30
Asp Gly Asn Thr Tyr Leu Asn Trp Phe Gln Gln Arg Pro Gly Gln Ser
        35   40   45
Pro Arg Arg Leu Ile Tyr Lys Val Ser Asn Arg Asp 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 Gly
                85   90   95
Thr His Trp Pro Tyr Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
            100   105   110

<210> 337
<211> 354
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 337
gaggtgcagc tggtggagtc tgggggaggc ctggtcaagc ctgggggtc cctgagactc 60
tcctgtgcag cctctggatt caccttcagt agctatagca tggactgggt ccgccaggct 120
ccagggaagg ggctggagtg ggtctcatcc attagtagta gtagtagtta catatactac 180
gcagactctg tgaagggccg attcaccatc tccagagaca ccgccaagaa ctcactgtat 240
ctgcaaatga acagcctgag agacgaggac acggctgttt attactgtgc gagagagggc 300
agtagcagac tttttgacta ctggggccag ggaaccctgg tcaccgtctc ctca 354

<210> 338
<211> 118
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 338
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Lys Pro Gly Gly

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

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

<220>
<223> Synthetic

<400> 339
ggattcacct tcagtagcta tagc 24

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

<220>
<223> Synthetic

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

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

<220>
<223> Synthetic

<400> 341
attagtagta gtagtagtta cata 24

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

<220>
<223> Synthetic

<400> 342
```
Ile Ser Ser Ser Ser Ser Tyr Ile
 1               5
```

<210> 343
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 343
gcgagagagg gcagtagcag acttttttgac tac 33

<210> 344
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 344
Ala Arg Glu Gly Ser Ser Arg Leu Phe Asp Tyr
1 5 10

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

<220>
<223> Synthetic

<400> 345
gacatccaga tgacccagtc tccttccacc ctgtctgcat ctgtaggaga cagagtcacc 60
atcacttgcc gggccagtca gagtattagt agctggttgg cctggtatca gcagagacca 120
gggaaagccc ctaagctcct gatctataag gcgtctagtt tagaaggtgg agtcccatca 180
aggttcagcg gcagtggatc tgggacagaa ttcactctca ccatcagcag cctgcagcct 240
gaggattttg caacttatta ctgccaacag tataatagtt attggtacac ttttggccag 300
gggaccaagc tggagatcaa a 321

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

<220>
<223> Synthetic

<400> 346
Asp Ile Gln Met Thr Gln Ser Pro Ser 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 Arg Pro Gly Lys Ala Pro Lys Leu Leu Ile
35 40 45
Tyr Lys Ala Ser Ser Leu Glu Gly Gly Val Pro Ser Arg Phe Ser Gly
50 55 60
Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
65 70 75 80
Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Tyr Asn Ser Tyr Trp Tyr
85 90 95

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

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

<220>
<223> Synthetic

<400> 347
cagagtatta gtagctgg 18

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

<220>
<223> Synthetic

<400> 348
Gln Ser Ile Ser Ser Trp
1 5

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

<220>
<223> Synthetic

<400> 349
aaggcgtct 9

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

<220>
<223> Synthetic

<400> 350
Lys Ala Ser
1

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

<220>
<223> Synthetic

<400> 351
caacagtata atagttattg gtacact 27

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

<220>
<223> Synthetic

<400> 352
Gln Gln Tyr Asn Ser Tyr Trp Tyr Thr
 1   5

<210> 353
<211> 354
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 353
gaggtgcagc tggtggagtc tgggggaggc ctggtcaagc ctgggggGtc cctgagactc 60
tcctgtgcag cctctggatt caccttcagt agctatagca tggactgggt ccgccaggct 120
ccagggaagg ggctggagtg ggtctcatcc attagtagta gtagtagtta catatactac 180
gcagactctg tgaagggccg attcaccatc tccagagaca ccgccaagaa ctcactgtat 240
ctgcaaatga acagcctgag agacgaggac acggctgttt attactgtgc gagagagggc 300
agtagcagac tttttgacta ctggggccag ggaaccctgg tcaccgtctc ctca   354

<210> 354
<211> 118
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

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

<210> 355
<211> 321
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 355
gacatccaga tgacccagtc tccttccacc ctgtctgcat ctgtaggaga cagagtcacc 60
atcacttgcc gggccagtca gagtattagt agctggttgg cctggtatca gcagagacca 120
gggaaagccc ctaagctcct gatctataag gcgtctagtt tagaaggtgg agtcccatca 180
aggttcagcg gcagtggatc tgggacagaa ttcactctca ccatcagcag cctgcagcct 240
gaggattttg caacttatta ctgccaacag tataatagtt attggtacac ttttggccag 300
gggaccaagc tggagatcaa a 321

<210> 356
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 356
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 Arg Pro Gly Lys Ala Pro Lys Leu Leu Ile
        35   40   45
Tyr Lys Ala Ser Ser Leu Glu Gly Gly Val Pro Ser Arg Phe Ser Gly
    50   55   60
Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
65   70   75   80
Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Tyr Asn Ser Tyr Trp Tyr
                85   90   95
Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
            100   105

<210> 357
<211> 354
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 357
gaggtgcagc tggtggagtc tgggggaggc ctggtcaagc ctgggggtc cctgagactc 60
tcctgtgcag cctctggatt caccttcagt agctatagca tgaactgggt ccgccaggct 120
ccagggaagg ggctggagtg ggtctcatcc attagtagta gtagtagtta catatactac 180
gcagactcag tgaagggccg attcaccatc tccagagaca acgccaagaa ctcactgtat 240
ctgcaaatga acagcctgag agccgaggac acggctgtgt attactgtgc gagagagggc 300
agtagcagac tttttgacta ctggggccaa ggaaccctgg tcaccgtctc ctca 354

<210> 358
<211> 118
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 358
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Lys Pro Gly Gly
 1   5   10   15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr
            20   25   30

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

<210> 359
<211> 321
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 359
gacatccaga tgacccagtc tccttccacc ctgtctgcat ctgtaggaga cagagtcacc 60
atcacttgcc gggccagtca gagtattagt agctggttgg cctggtatca gcagaaacca 120
gggaaagccc ctaagctcct gatctataag gcgtctagtt tagaaagtgg ggtcccatca 180
aggttcagcg gcagtggatc tgggacagaa ttcactctca ccatcagcag cctgcagcct 240
gatgattttg caacttatta ctgccaacag tataatagtt attggtacac ttttggccag 300
gggaccaagc tggagatcaa a   321

<210> 360
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 360
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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 Ser Trp
            20                  25                  30
Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
        35                  40                  45
Tyr Lys Ala Ser Ser Leu Glu Ser Gly Val Pro Ser Arg Phe Ser Gly
    50                  55                  60
Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
65                  70                  75                  80
Asp Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Tyr Asn Ser Tyr Trp Tyr
                85                  90                  95
Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
            100                 105
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<210> 361
<211> 384
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 361
caggtgcacc tggtggagtc tgggggaggc ttggtcaagc ctggagggtc cctgagactc 60
tcctgtgcag cctctggatt caccttcagt gaccactaca tgagctggat ccgccaggct 120
ccagggaagg ggctggagtg gatttcatac attagtaatg atggtggtac caaatactat 180
gtggactctg tggagggccg attcatcatt tccagggaca acgccaagaa ctcattgtat 240
ctacatatga acagcctcag agccgacgac acggccgtgt attactgtgc gagagatcag 300
ggatatattg gctacgactc gtattattac tattcctacg gtatggacgt ctggggccaa 360
gggaccacgg tcaccgtcgc ctca 384

<210> 362
<211> 128
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 362
Gln Val His Leu Val Glu Ser Gly Gly Gly Leu Val Lys Pro Gly Gly
 1   5   10   15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Asp His
            20   25   30
Tyr Met Ser Trp Ile Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Ile
        35   40   45
Ser Tyr Ile Ser Asn Asp Gly Gly Thr Lys Tyr Tyr Val Asp Ser Val
    50   55   60
Glu Gly Arg Phe Ile Ile Ser Arg Asp Asn Ala Lys Asn Ser Leu Tyr
65   70   75   80
Leu His Met Asn Ser Leu Arg Ala Asp Asp Thr Ala Val Tyr Tyr Cys
                85   90   95
Ala Arg Asp Gln Gly Tyr Ile Gly Tyr Asp Ser Tyr Tyr Tyr Tyr Ser
            100   105   110
Tyr Gly Met Asp Val Trp Gly Gln Gly Thr Thr Val Thr Val Ala Ser
        115   120   125

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

<220>
<223> Synthetic

<400> 363
ggattcacct tcagtgacca ctac 24

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

<220>
<223> Synthetic

<400> 364
Gly Phe Thr Phe Ser Asp His Tyr
 1   5

<210> 365
<211> 24
<212> DNA

<213> Artificial Sequence

<220>
<223> Synthetic

<400> 365
attagtaatg atggtggtac caaa 24

<210> 366
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 366
Ile Ser Asn Asp Gly Gly Thr Lys
1 5

<210> 367
<211> 63
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 367
gcgagagatc agggatatat tggctacgac tcgtattatt actattccta cggtatggac 60
gtc 63

<210> 368
<211> 21
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 368
Ala Arg Asp Gln Gly Tyr Ile Gly Tyr Asp Ser Tyr Tyr Tyr Tyr Ser
1 5 10 15
Tyr Gly Met Asp Val
20

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

<220>
<223> Synthetic

<400> 369
aaaattgtgt tgacgcagtc tccaggcacc ctgcctttgt ttccagggga aagagccacc 60
ctctcctgta gggccagtca gagtgttaac aacaaattct tagcctggta ccagcagaaa 120
tctggccagg ctcccaggct cctcatctat ggtgcatcca gcagggccac tggcatccca 180
gacaggttca gtggcagtgg gtctgggacc gacttcactc tcaccatcag cggactggag 240
cctgaagatt ttgaagtgta ttattgtcaa gtatatggta actcactcac tctcggcgga 300
gggaccaagg tggagatcaa g 321

<210> 370
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 370
Lys Ile Val Leu Thr Gln Ser Pro Gly Thr Leu Pro Leu Phe Pro Gly
 1   5   10   15
Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Asn Asn Lys
            20   25   30
Phe Leu Ala Trp Tyr Gln Gln Lys Ser Gly Gln Ala Pro Arg Leu Leu
        35   40   45
Ile Tyr Gly Ala Ser Ser Arg Ala Thr Gly Ile Pro Asp Arg Phe Ser
    50   55   60
Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Gly Leu Glu
65   70   75   80
Pro Glu Asp Phe Glu Val Tyr Tyr Cys Gln Val Tyr Gly Asn Ser Leu
                85   90   95
Thr Leu Gly Gly Gly Thr Lys Val Glu Ile Lys
            100   105

<210> 371
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 371
cagagtgtta acaacaaatt c   21

<210> 372
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 372
Gln Ser Val Asn Asn Lys Phe
 1   5

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

<220>
<223> Synthetic

<400> 373
ggtgcatcc   9

<210> 374
<211> 3

<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 374
Gly Ala Ser
 1

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

<220>
<223> Synthetic

<400> 375
caagtatatg gtaactcact cact 24

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

<220>
<223> Synthetic

<400> 376
Gln Val Tyr Gly Asn Ser Leu Thr
 1   5

<210> 377
<211> 384
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 377
caggtgcagc tggtggagtc tgggggaggc ttggtcaagc ctggagggtc cctgagactc 60
tcctgtgcag cctctggatt caccttcagt gaccactaca tgagctggat ccgccaggct 120
ccagggaagg ggctggagtg gatttcatac attagtaatg atggtggtac caaatactat 180
gtggactctg tggagggccg attcatcatt tccagggaca acgccaagaa ctcattgtat 240
ctacatatga acagcctcag agccgacgac acggccgtgt attactgtgc gagagatcag 300
ggatatattg gctacgactc gtattattac tattcctacg gtatggacgt ctggggccaa 360
gggaccacgg tcaccgtctc ctca 384

<210> 378
<211> 128
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 378
Gln Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Lys Pro Gly Gly
 1   5   10   15

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


<210> 379
<211> 321
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 379
gaaattgtgt tgacgcagtc tccaggcacc ctgcctttgt ttccagggga aagagccacc 60
ctctcctgta gggccagtca gagtgttaac aacaaattct tagcctggta ccagcagaaa 120
tctggccagg ctcccaggct cctcatctat ggtgcatcca gcagggccac tggcatccca 180
gacaggttca gtggcagtgg gtctgggacc gacttcactc tcaccatcag cggactggag 240
cctgaagatt ttgaagtgta ttattgtcaa gtatatggta actcactcac tctcggcgga 300
gggaccaagg tggagatcaa a                                           321

<210> 380
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 380
Glu Ile Val Leu Thr Gln Ser Pro Gly Thr Leu Pro Leu Phe Pro Gly
 1               5                  10                  15
Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Asn Asn Lys
            20                  25                  30
Phe Leu Ala Trp Tyr Gln Gln Lys Ser Gly Gln Ala Pro Arg Leu Leu
        35                  40                  45
Ile Tyr Gly Ala Ser Ser Arg Ala Thr Gly Ile Pro Asp Arg Phe Ser
    50                  55                  60
Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Gly Leu Glu
65                  70                  75                  80
Pro Glu Asp Phe Glu Val Tyr Tyr Cys Gln Val Tyr Gly Asn Ser Leu
                85                  90                  95
Thr Leu Gly Gly Gly Thr Lys Val Glu Ile Lys
            100                 105


<210> 381
<211> 384
<212> DNA
<213> Artificial Sequence

<220>
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<223> Synthetic

<400> 381
caggtgcagc tggtggagtc tgggggaggc ttggtcaagc ctggagggtc cctgagactc 60
tcctgtgcag cctctggatt caccttcagt gaccactaca tgagctggat ccgccaggct 120
ccagggaagg ggctggagtg ggtttcatac attagtaatg atggtggtac caaatactac 180
gcagactctg tgaagggccg attcaccatc tccagggaca acgccaagaa ctcactgtat 240
ctgcaaatga acagcctgag agccgaggac acggccgtgt attactgtgc gagagatcag 300
ggatatattg gctacgactc gtattattac tattcctacg gtatggacgt ctgggggcaa 360
gggaccacgg tcaccgtctc ctca 384

<210> 382
<211> 128
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 382
Gln Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Lys Pro Gly Gly
 1   5   10   15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Asp His
            20   25   30
Tyr Met Ser Trp Ile Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35   40   45
Ser Tyr Ile Ser Asn Asp Gly Gly Thr Lys Tyr Tyr Ala Asp Ser Val
    50   55   60
Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Ser Leu Tyr
65   70   75   80
Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
                85   90   95
Ala Arg Asp Gln Gly Tyr Ile Gly Tyr Asp Ser Tyr Tyr Tyr Tyr Ser
            100   105   110
Tyr Gly Met Asp Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser
        115   120   125

<210> 383
<211> 321
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 383
gaaattgtgt tgacgcagtc tccaggcacc ctgtctttgt ctccagggga aagagccacc 60
ctctcctgca gggccagtca gagtgttaac aacaaattct tagcctggta ccagcagaaa 120
cctggccagg ctcccaggct cctcatctat ggtgcatcca gcagggccac tggcatccca 180
gacaggttca gtggcagtgg gtctgggaca gacttcactc tcaccatcag cagactggag 240
cctgaagatt ttgcagtgta ttactgtcaa gtatatggta actcactcac tttcggcgga 300
gggaccaagg tggagatcaa a 321

<210> 384
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 384

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

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

<220>
<223> Synthetic

<400> 385
gaggtgcaga aggtggagtc tgggggaggc ctggtcaagc cgggggggtc cctgagactc 60
tcctgtacag cctctggatt caccttcagt acttataaca tgaattgggt ccgccaggct 120
ccagggaagg gactggagtg ggtctcatcc attaggagta gtagtaatta catatactac 180
gcagactcag tgaagggccg attcaccatc tccagagaca acgccaagaa ttcactgtat 240
ctgcaaatga acagcctgag agccgatgac acggctgtgt attactgtgc gagagatggc 300
agcagttggt acgactactc tgactactgg ggccagggaa ccctggtcac cgtctcctca 360

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

<220>
<223> Synthetic

<400> 386
```
Glu Val Gln Lys Val Glu Ser Gly Gly Gly Leu Val Lys Pro Gly Gly
 1               5                  10                  15
Ser Leu Arg Leu Ser Cys Thr Ala Ser Gly Phe Thr Phe Ser Thr Tyr
            20                  25                  30
Asn Met Asn Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35                  40                  45
Ser Ser Ile Arg Ser Ser Ser Asn Tyr Ile Tyr Tyr Ala Asp Ser Val
    50                  55                  60
Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Ser Leu Tyr
65                  70                  75                  80
Leu Gln Met Asn Ser Leu Arg Ala Asp Asp Thr Ala Val Tyr Tyr Cys
                85                  90                  95
Ala Arg Asp Gly Ser Ser Trp Tyr Asp Tyr Ser Asp Tyr Trp Gly Gln
            100                 105                 110
Gly Thr Leu Val Thr Val Ser Ser
        115                 120
```

<210> 387
<211> 24
<212> DNA

<213> Artificial Sequence

<220>
<223> Synthetic

<400> 387
ggattcacct tcagtactta taac 24

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

<220>
<223> Synthetic

<400> 388
Gly Phe Thr Phe Ser Thr Tyr Asn
1 5

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

<220>
<223> Synthetic

<400> 389
attaggagta gtagtaatta cata 24

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

<220>
<223> Synthetic

<400> 390
Ile Arg Ser Ser Ser Asn Tyr Ile
1 5

<210> 391
<211> 39
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 391
gcgagagatg gcagcagttg gtacgactac tctgactac 39

<210> 392
<211> 13
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 392
Ala Arg Asp Gly Ser Ser Trp Tyr Asp Tyr Ser Asp Tyr
 1   5   10

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

<220>
<223> Synthetic

<400> 393
gacatccaga tgacccagtc tccttccacc ctgtctgcat ctgtaggaga cagagtcacc 60
atcacttgcc gggccagtca gagtattagt agctggttgg cctggtatca acagatacca 120
gggaaagccc ctaaactcct gatctataag gcgtctagtt tagaaaatgg ggtcccatca 180
aggttcagcg gcagtggatc tgggacagaa ttcactctca tcatcagcag cctgcagcct 240
gatgattttg caacttatta ctgccaacag tatattagtt attctcggac gttcggccaa 300
gggaccaagg tggaaatcaa 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 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 Ile Pro Gly Lys Ala Pro Lys Leu Leu Ile
        35   40   45
Tyr Lys Ala Ser Ser Leu Glu Asn Gly Val Pro Ser Arg Phe Ser Gly
    50   55   60
Ser Gly Ser Gly Thr Glu Phe Thr Leu Ile Ile Ser Ser Leu Gln Pro
65   70   75   80
Asp Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Tyr Ile Ser Tyr Ser Arg
                85   90   95
Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
            100   105

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

<220>
<223> Synthetic

<400> 395
cagagtatta gtagctgg   18

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

<220>
<223> Synthetic

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

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

<220>
<223> Synthetic

<400> 397
aaggcgtct   9

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

<220>
<223> Synthetic

<400> 398
Lys Ala Ser
 1

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

<220>
<223> Synthetic

<400> 399
caacagtata ttagttattc tcggacg   27

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

<220>
<223> Synthetic

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

<210> 401
<211> 360
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 401
gaggtgcagc tggtggagtc tgggggaggc ctggtcaagc cgggggggtc cctgagactc 60
tcctgtacag cctctggatt caccttcagt acttataaca tgaattgggt ccgccaggct 120
ccagggaagg gactggagtg ggtctcatcc attaggagta gtagtaatta catatactac 180
gcagactcag tgaagggccg attcaccatc tccagagaca acgccaagaa ttcactgtat 240
ctgcaaatga acagcctgag agccgatgac acggctgtgt attactgtgc gagagatggc 300
agcagttggt acgactactc tgactactgg ggccagggaa ccctggtcac cgtctcctca 360

<210> 402
<211> 120
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 402
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Lys Pro Gly Gly
 1   5   10   15
Ser Leu Arg Leu Ser Cys Thr Ala Ser Gly Phe Thr Phe Ser Thr Tyr
            20   25   30
Asn Met Asn Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35   40   45
Ser Ser Ile Arg Ser Ser Ser Asn Tyr Ile Tyr Tyr Ala Asp Ser Val
    50   55   60
Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Ser Leu Tyr
65   70   75   80
Leu Gln Met Asn Ser Leu Arg Ala Asp Asp Thr Ala Val Tyr Tyr Cys
                85   90   95
Ala Arg Asp Gly Ser Ser Trp Tyr Asp Tyr Ser Asp Tyr Trp Gly Gln
            100   105   110
Gly Thr Leu Val Thr Val Ser Ser
        115   120

<210> 403
<211> 321
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 403
gacatccaga tgacccagtc tccttccacc ctgtctgcat ctgtaggaga cagagtcacc 60
atcacttgcc gggccagtca gagtattagt agctggttgg cctggtatca acagatacca 120
gggaaagccc ctaaactcct gatctataag gcgtctagtt tagaaaatgg ggtcccatca 180
aggttcagcg gcagtggatc tgggacagaa ttcactctca tcatcagcag cctgcagcct 240
gatgattttg caacttatta ctgccaacag tatattagtt attctcggac gttcggccaa 300
gggaccaagg tggaaatcaa a   321

<210> 404
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 404
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 Ile Pro Gly Lys Ala Pro Lys Leu Leu Ile
        35                  40                  45
Tyr Lys Ala Ser Ser Leu Glu Asn Gly Val Pro Ser Arg Phe Ser Gly
    50                  55                  60
Ser Gly Ser Gly Thr Glu Phe Thr Leu Ile Ile Ser Ser Leu Gln Pro
65                  70                  75                  80
Asp Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Tyr Ile Ser Tyr Ser Arg
                85                  90                  95
Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
            100                 105
```

<210> 405
<211> 360
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 405
gaggtgcagc tggtggagtc tgggggaggc ctggtcaagc ctgggggtc cctgagactc 60
tcctgtgcag cctctggatt caccttcagt acttataaca tgaactgggt ccgccaggct 120
ccagggaagg ggctggagtg ggtctcatcc attaggagta gtagtaatta catatactac 180
gcagactcag tgaagggccg attcaccatc tccagagaca acgccaagaa ctcactgtat 240
ctgcaaatga acagcctgag agccgaggac acggctgtgt attactgtgc gagagatggc 300
agcagttggt acgactactc tgactactgg ggccaaggaa ccctggtcac cgtctcctca 360

<210> 406
<211> 120
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 406
```
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Lys Pro Gly Gly
 1               5                  10                  15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Thr Tyr
            20                  25                  30
Asn Met Asn Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35                  40                  45
Ser Ser Ile Arg Ser Ser Ser Asn Tyr Ile Tyr Tyr Ala Asp Ser Val
    50                  55                  60
Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Ser Leu Tyr
65                  70                  75                  80
Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
                85                  90                  95
Ala Arg Asp Gly Ser Ser Trp Tyr Asp Tyr Ser Asp Tyr Trp Gly Gln
            100                 105                 110
Gly Thr Leu Val Thr Val Ser Ser
        115                 120
```

<210> 407
<211> 321
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 407
gacatccaga tgacccagtc tccttccacc ctgtctgcat ctgtaggaga cagagtcacc 60
atcacttgcc gggccagtca gagtattagt agctggttgg cctggtatca gcagaaacca 120
gggaaagccc ctaagctcct gatctataag gcgtctagtt tagaaagtgg ggtcccatca 180
aggttcagcg gcagtggatc tgggacagaa ttcactctca ccatcagcag cctgcagcct 240
gatgattttg caacttatta ctgccaacag tatattagtt attctcggac gttcggccaa 300
gggaccaagg tggaaatcaa a 321

<210> 408
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

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

<210> 409
<211> 360
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 409
gaggtgcagc tggtggagtc tgggggaggc ctggtcaagc cgggggggtc cctgagactc 60
tcctgtacag cctctggatt caccttcagt acttataaca tgaattgggt ccgccaggct 120
ccagggaagg gactggagtg ggtctcatcc attaggagta gtagtaatta catatactac 180
gcagactcag tgaagggccg attcaccatc tccagagaca acgccaagaa ttcactgtat 240
ctgcaaatga acagcctgag agccgatgac acggctgtgt attactgtgc gagagatggc 300
agcagttggt acgactactc tgactactgg ggccagggaa ccctggtcac cgtctcctca 360

<210> 410
<211> 120
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 410

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

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

<220>
<223> Synthetic

<400> 411
ggattcacct tcagtactta taac 24

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

<220>
<223> Synthetic

<400> 412
```
Gly Phe Thr Phe Ser Thr Tyr Asn
 1               5
```

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

<220>
<223> Synthetic

<400> 413
attaggagta gtagtaatta cata 24

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

<220>
<223> Synthetic

<400> 414
```
Ile Arg Ser Ser Ser Asn Tyr Ile
```

1 5

<210> 415
<211> 39
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 415
gcgagagatg gcagcagttg gtacgactac tctgactac 39

<210> 416
<211> 13
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 416
Ala Arg Asp Gly Ser Ser Trp Tyr Asp Tyr Ser Asp Tyr
1 5 10

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

<220>
<223> Synthetic

<400> 417
gacatccaga tgacccagtc tccttccacc ctgtctgcat ctgtaggaga cagagtcacc 60
atcacttgcc gggccagtca gagtattagt agctggttgg cctggtatca acagatacca 120
gggaaagccc ctaaactcct gatctataag gcgtctagtt tagaaaatgg ggtcccatca 180
aggttcagcg gcagtggatc tgggacagaa ttcactctca tcatcagcag cctgcagcct 240
gatgattttg caacttatta ctgccaacag tatattagtt attctcggac gttcggccaa 300
gggaccaagg tggaaatcaa a 321

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

<220>
<223> Synthetic

<400> 418
Asp Ile Gln Met Thr Gln Ser Pro Ser 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 Ile Pro Gly Lys Ala Pro Lys Leu Leu Ile
35 40 45
Tyr Lys Ala Ser Ser Leu Glu Asn Gly Val Pro Ser Arg Phe Ser Gly
50 55 60
Ser Gly Ser Gly Thr Glu Phe Thr Leu Ile Ile Ser Ser Leu Gln Pro
65 70 75 80
Asp Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Tyr Ile Ser Tyr Ser Arg

85 90 95

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

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

<220>
<223> Synthetic

<400> 419
cagagtatta gtagctgg 18

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

<220>
<223> Synthetic

<400> 420
Gln Ser Ile Ser Ser Trp
1 5

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

<220>
<223> Synthetic

<400> 421
aaggcgtct 9

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

<220>
<223> Synthetic

<400> 422
Lys Ala Ser
1

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

<220>
<223> Synthetic

<400> 423
caacagtata ttagttattc tcggacg 27

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

<220>
<223> Synthetic

<400> 424
Gln Gln Tyr Ile Ser Tyr Ser Arg Thr
 1   5

<210> 425
<211> 360
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 425
gaggtgcagc tggtggagtc tgggggaggc ctggtcaagc cgggggggtc cctgagactc 60
tcctgtacag cctctggatt caccttcagt acttataaca tgaattgggt ccgccaggct 120
ccagggaagg gactggagtg ggtctcatcc attaggagta gtagtaatta catatactac 180
gcagactcag tgaagggccg attcaccatc tccagagaca acgccaagaa ttcactgtat 240
ctgcaaatga acagcctgag agccgatgac acggctgtgt attactgtgc gagagatggc 300
agcagttggt acgactactc tgactactgg ggccagggaa ccctggtcac cgtctcctca 360

<210> 426
<211> 120
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 426
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Lys Pro Gly Gly
 1   5   10   15
Ser Leu Arg Leu Ser Cys Thr Ala Ser Gly Phe Thr Phe Ser Thr Tyr
            20   25   30
Asn Met Asn Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35   40   45
Ser Ser Ile Arg Ser Ser Ser Asn Tyr Ile Tyr Tyr Ala Asp Ser Val
    50   55   60
Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Ser Leu Tyr
65   70   75   80
Leu Gln Met Asn Ser Leu Arg Ala Asp Asp Thr Ala Val Tyr Tyr Cys
                85   90   95
Ala Arg Asp Gly Ser Ser Trp Tyr Asp Tyr Ser Asp Tyr Trp Gly Gln
            100   105   110
Gly Thr Leu Val Thr Val Ser Ser
        115   120

<210> 427
<211> 321
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 427
gacatccaga tgacccagtc tccttccacc ctgtctgcat ctgtaggaga cagagtcacc 60
atcacttgcc gggccagtca gagtattagt agctggttgg cctggtatca acagatacca 120
gggaaagccc ctaaactcct gatctataag gcgtctagtt tagaaaatgg ggtcccatca 180
aggttcagcg gcagtggatc tgggacagaa ttcactctca tcatcagcag cctgcagcct 240
gatgattttg caacttatta ctgccaacag tatattagtt attctcggac gttcggccaa 300
gggaccaagg tggaaatcaa a 321

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

<220>
<223> Synthetic

<400> 428
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 Ile Pro Gly Lys Ala Pro Lys Leu Leu Ile
        35   40   45
Tyr Lys Ala Ser Ser Leu Glu Asn Gly Val Pro Ser Arg Phe Ser Gly
    50   55   60
Ser Gly Ser Gly Thr Glu Phe Thr Leu Ile Ile Ser Ser Leu Gln Pro
65   70   75   80
Asp Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Tyr Ile Ser Tyr Ser Arg
                85   90   95
Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
            100   105

<210> 429
<211> 360
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 429
gaggtgcagc tggtggagtc tgggggaggc ctggtcaagc ctgggggtc cctgagactc 60
tcctgtgcag cctctggatt caccttcagt acttataaca tgaactgggt ccgccaggct 120
ccagggaagg ggctggagtg ggtctcatcc attaggagta gtagtaatta catatactac 180
gcagactcag tgaagggccg attcaccatc tccagagaca acgccaagaa ctcactgtat 240
ctgcaaatga acagcctgag agccgaggac acggctgtgt attactgtgc gagagatggc 300
agcagttggt acgactactc tgactactgg ggccaaggaa ccctggtcac cgtctcctca 360

<210> 430
<211> 120
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 430
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Lys Pro Gly Gly

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

<210> 431
<211> 321
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 431
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gacatccaga tgacccagtc tccttccacc ctgtctgcat ctgtaggaga cagagtcacc 60
atcacttgcc gggccagtca gagtattagt agctggttgg cctggtatca gcagaaacca 120
gggaaagccc ctaagctcct gatctataag gcgtctagtt tagaaagtgg ggtcccatca 180
aggttcagcg gcagtggatc tgggacagaa ttcactctca ccatcagcag cctgcagcct 240
gatgattttg caacttatta ctgccaacag tatattagtt attctcggac gttcggccaa 300
gggaccaagg tggaaatcaa a                                           321
```

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

<220>
<223> Synthetic

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

<210> 433
<211> 360
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 433
gaggtgcagc tggtggagtc tgggggaggc ctggtcaagc cgggggggtc cctgagactc 60
tcctgtacag cctctggatt caccttcagt acttataaca tgaattgggt ccgccaggct 120
ccagggaagg gactggagtg ggtctcatcc attaggagta gtagtaatta catatactac 180
gcagactcag tgaagggccg attcaccatc tccagagaca acgccaagag ttcactgtat 240
ctgcaaatga acagcctgag agccgaggac acggctgtgt attactgtgc gagagatggc 300
agcagttggt acgactactc tgactactgg ggccagggaa ccctggtcac cgtctcctca 360

<210> 434
<211> 120
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 434
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Lys Pro Gly Gly
 1   5   10   15
Ser Leu Arg Leu Ser Cys Thr Ala Ser Gly Phe Thr Phe Ser Thr Tyr
            20   25   30
Asn Met Asn Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35   40   45
Ser Ser Ile Arg Ser Ser Ser Asn Tyr Ile Tyr Tyr Ala Asp Ser Val
    50   55   60
Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Ser Ser Leu Tyr
65   70   75   80
Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
                85   90   95
Ala Arg Asp Gly Ser Ser Trp Tyr Asp Tyr Ser Asp Tyr Trp Gly Gln
            100   105   110
Gly Thr Leu Val Thr Val Ser Ser
        115   120

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

<220>
<223> Synthetic

<400> 435
ggattcacct tcagtactta taac 24

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

<220>
<223> Synthetic

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

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

<220>
<223> Synthetic

<400> 437
attaggagta gtagtaatta cata 24

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

<220>
<223> Synthetic

<400> 438
Ile Arg Ser Ser Ser Asn Tyr Ile
1 5

<210> 439
<211> 39
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 439
gcgagagatg gcagcagttg gtacgactac tctgactac 39

<210> 440
<211> 13
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 440
Ala Arg Asp Gly Ser Ser Trp Tyr Asp Tyr Ser Asp Tyr
1 5 10

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

<220>
<223> Synthetic

<400> 441
gacatccaga tgacccagtc tccttccacc ctgtctgcat ctgtaggaga cagagtcacc 60
atcacttgcc gggccagtca gagtattagt agctggttgg cctggtatca acaggtacca 120
gggaaagccc ctaaactcct gatctataag gcgtctagtt tagaaaatgg ggtcccatca 180
aggttcagcg gcagtggatc tgggacagaa ttcactctca tcatcagcag cctgcagcct 240
gatgattttg caacttatta ctgccaacag tatattagtt attctcggac gttcggccaa 300
gggaccaagg tggaaatcaa a 321

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

<220>
<223> Synthetic

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

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

<220>
<223> Synthetic

<400> 443
cagagtatta gtagctgg 18

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

<220>
<223> Synthetic

<400> 444
Gln Ser Ile Ser Ser Trp
 1   5

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

<220>
<223> Synthetic

<400> 445
aaggcgtct 9

<210> 446
<211> 3

<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 446
Lys Ala Ser
 1

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

<220>
<223> Synthetic

<400> 447
caacagtata ttagttattc tcggacg 27

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

<220>
<223> Synthetic

<400> 448
Gln Gln Tyr Ile Ser Tyr Ser Arg Thr
 1   5

<210> 449
<211> 360
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 449
gaggtgcagc tggtggagtc tgggggaggc ctggtcaagc cgggggggtc cctgagactc 60
tcctgtacag cctctggatt caccttcagt acttataaca tgaattgggt ccgccaggct 120
ccagggaagg gactggagtg ggtctcatcc attaggagta gtagtaatta catatactac 180
gcagactcag tgaagggccg attcaccatc tccagagaca acgccaagag ttcactgtat 240
ctgcaaatga acagcctgag agccgaggac acggctgtgt attactgtgc gagagatggc 300
agcagttggt acgactactc tgactactgg ggccagggaa ccctggtcac cgtctcctca 360

<210> 450
<211> 120
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 450
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Lys Pro Gly Gly
 1   5   10   15

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

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

<220>
<223> Synthetic

<400> 451
gacatccaga tgacccagtc tccttccacc ctgtctgcat ctgtaggaga cagagtcacc 60
atcacttgcc gggccagtca gagtattagt agctggttgg cctggtatca acaggtacca 120
gggaaagccc ctaaactcct gatctataag gcgtctagtt tagaaaatgg ggtcccatca 180
aggttcagcg gcagtggatc tgggacagaa ttcactctca tcatcagcag cctgcagcct 240
gatgattttg caacttatta ctgccaacag tatattagtt attctcggac gttcggccaa 300
gggaccaagg tggaaatcaa a   321

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

<220>
<223> Synthetic

<400> 452
```
Asp Ile Gln Met Thr Gln Ser Pro Ser 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 Val Pro Gly Lys Ala Pro Lys Leu Leu Ile
        35                  40                  45
Tyr Lys Ala Ser Ser Leu Glu Asn Gly Val Pro Ser Arg Phe Ser Gly
    50                  55                  60
Ser Gly Ser Gly Thr Glu Phe Thr Leu Ile Ile Ser Ser Leu Gln Pro
65                  70                  75                  80
Asp Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Tyr Ile Ser Tyr Ser Arg
                85                  90                  95
Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
            100                 105
```

<210> 453
<211> 360
<212> DNA
<213> Artificial Sequence

<220>

<223> Synthetic

<400> 453
gaggtgcagc tggtggagtc tgggggaggc ctggtcaagc ctgggggtc cctgagactc 60
tcctgtgcag cctctggatt caccttcagt acttataaca tgaactgggt ccgccaggct 120
ccagggaagg ggctggagtg ggtctcatcc attaggagta gtagtaatta catatactac 180
gcagactcag tgaagggccg attcaccatc tccagagaca acgccaagaa ctcactgtat 240
ctgcaaatga acagcctgag agccgaggac acggctgtgt attactgtgc gagagatggc 300
agcagttggt acgactactc tgactactgg ggccagggaa ccctggtcac cgtctcctca 360

<210> 454
<211> 120
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 454
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Lys Pro Gly Gly
 1   5   10   15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Thr Tyr
            20   25   30
Asn Met Asn Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35   40   45
Ser Ser Ile Arg Ser Ser Ser Asn Tyr Ile Tyr Tyr Ala Asp Ser Val
    50   55   60
Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Ser Leu Tyr
65   70   75   80
Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
                85   90   95
Ala Arg Asp Gly Ser Ser Trp Tyr Asp Tyr Ser Asp Tyr Trp Gly Gln
            100   105   110
Gly Thr Leu Val Thr Val Ser Ser
        115   120

<210> 455
<211> 321
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 455
gacatccaga tgacccagtc tccttccacc ctgtctgcat ctgtaggaga cagagtcacc 60
atcacttgcc gggccagtca gagtattagt agctggttgg cctggtatca gcagaaacca 120
gggaaagccc ctaagctcct gatctataag gcgtctagtt tagaaagtgg ggtcccatca 180
aggttcagcg gcagtggatc tgggacagaa ttcactctca ccatcagcag cctgcagcct 240
gatgattttg caacttatta ctgccaacag tatattagtt attctcggac gttcggccaa 300
gggaccaagg tggaaatcaa a   321

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

<220>
<223> Synthetic

<400> 456

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

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

<220>
<223> Synthetic

<400> 457
gaggtgcagc tggtggagtc tgggggaggc ctggtcaagc cgggggggtc cctgagactc 60
tcctgtacag cctctggatt caccttcagt acttataaca tgaattgggt ccgccaggct 120
ccagggaagg gactggagtg ggtctcatcc attaggagta gtagtaatta catatactac 180
gcagactcag tgaagggccg attcaccatc tccagagaca acgccaagaa ttcactgtat 240
ctgcaaatga acagcctgag agccgatgac acggctgtgt attactgtgc gagagatggc 300
agcagttggt acgactactc tgactactgg ggccagggaa ccctggtcac cgtctcctca 360

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

<220>
<223> Synthetic

<400> 458
```
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Lys Pro Gly Gly
 1               5                  10                  15
Ser Leu Arg Leu Ser Cys Thr Ala Ser Gly Phe Thr Phe Ser Thr Tyr
            20                  25                  30
Asn Met Asn Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35                  40                  45
Ser Ser Ile Arg Ser Ser Ser Asn Tyr Ile Tyr Tyr Ala Asp Ser Val
    50                  55                  60
Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Ser Leu Tyr
65                  70                  75                  80
Leu Gln Met Asn Ser Leu Arg Ala Asp Asp Thr Ala Val Tyr Tyr Cys
                85                  90                  95
Ala Arg Asp Gly Ser Ser Trp Tyr Asp Tyr Ser Asp Tyr Trp Gly Gln
            100                 105                 110
Gly Thr Leu Val Thr Val Ser Ser
        115                 120
```

<210> 459
<211> 24
<212> DNA

<213> Artificial Sequence

<220>
<223> Synthetic

<400> 459
ggattcacct tcagtactta taac 24

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

<220>
<223> Synthetic

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

<210> 461
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 461
attaggagta gtagtaatta cata 24

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

<220>
<223> Synthetic

<400> 462
Ile Arg Ser Ser Ser Asn Tyr Ile
1 5

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

<220>
<223> Synthetic

<400> 463
gcgagagatg gcagcagttg gtacgactac tctgactac 39

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

<220>
<223> Synthetic

<400> 464
Ala Arg Asp Gly Ser Ser Trp Tyr Asp Tyr Ser Asp Tyr
 1   5   10

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

<220>
<223> Synthetic

<400> 465
gacatccaga tgacccagtc tccttccacc ctgtctgcat ctgtaggaga cagagtcacc 60
atcacttgcc gggccagtca gagtattagt agctggttgg cctggtatca acagatacca 120
gggaaagccc ctaaactcct gatctataag gcgtctagtt tagaaaatgg ggtcccatca 180
aggttcagcg gcagtggatc tgggacagaa ttcactctca tcatcagcag cctgcagcct 240
gatgattttg caacttatta ctgccaacag tatattagtt attctcggac gttcggccaa 300
gggaccaagg tggaaatcaa a   321

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

<220>
<223> Synthetic

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

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

<220>
<223> Synthetic

<400> 467
cagagtatta gtagctgg   18

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

<220>
<223> Synthetic

<400> 468
Gln Ser Ile Ser Ser Trp
1 5

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

<220>
<223> Synthetic

<400> 469
aaggcgtct 9

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

<220>
<223> Synthetic

<400> 470
Lys Ala Ser
1

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

<220>
<223> Synthetic

<400> 471
caacagtata ttagttattc tcggacg 27

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

<220>
<223> Synthetic

<400> 472
Gln Gln Tyr Ile Ser Tyr Ser Arg Thr
1 5

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

<220>
<223> Synthetic

<400> 473
gaggtgcagc tggtggagtc tgggggaggc ctggtcaagc cgggggggtc cctgagactc 60
tcctgtacag cctctggatt caccttcagt acttataaca tgaattgggt ccgccaggct 120
ccagggaagg gactggagtg ggtctcatcc attaggagta gtagtaatta catatactac 180
gcagactcag tgaagggccg attcaccatc tccagagaca acgccaagaa ttcactgtat 240
ctgcaaatga acagcctgag agccgatgac acggctgtgt attactgtgc gagagatggc 300
agcagttggt acgactactc tgactactgg ggccagggaa ccctggtcac cgtctcctca 360

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

<220>
<223> Synthetic

<400> 474
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Lys Pro Gly Gly
 1   5   10   15
Ser Leu Arg Leu Ser Cys Thr Ala Ser Gly Phe Thr Phe Ser Thr Tyr
            20   25   30
Asn Met Asn Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35   40   45
Ser Ser Ile Arg Ser Ser Ser Asn Tyr Ile Tyr Tyr Ala Asp Ser Val
    50   55   60
Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Ser Leu Tyr
65   70   75   80
Leu Gln Met Asn Ser Leu Arg Ala Asp Asp Thr Ala Val Tyr Tyr Cys
                85   90   95
Ala Arg Asp Gly Ser Ser Trp Tyr Asp Tyr Ser Asp Tyr Trp Gly Gln
            100   105   110
Gly Thr Leu Val Thr Val Ser Ser
        115   120

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

<220>
<223> Synthetic

<400> 475
gacatccaga tgacccagtc tccttccacc ctgtctgcat ctgtaggaga cagagtcacc 60
atcacttgcc gggccagtca gagtattagt agctggttgg cctggtatca acagatacca 120
gggaaagccc ctaaactcct gatctataag gcgtctagtt tagaaaatgg ggtcccatca 180
aggttcagcg gcagtggatc tgggacagaa ttcactctca tcatcagcag cctgcagcct 240
gatgattttg caacttatta ctgccaacag tatattagtt attctcggac gttcggccaa 300
gggaccaagg tggaaatcaa a   321

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

<220>
<223> Synthetic

<400> 476
Asp Ile Gln Met Thr Gln Ser Pro Ser 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 Ile Pro Gly Lys Ala Pro Lys Leu Leu Ile
        35                  40                  45
Tyr Lys Ala Ser Ser Leu Glu Asn Gly Val Pro Ser Arg Phe Ser Gly
    50                  55                  60
Ser Gly Ser Gly Thr Glu Phe Thr Leu Ile Ile Ser Ser Leu Gln Pro
65                  70                  75                  80
Asp Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Tyr Ile Ser Tyr Ser Arg
                85                  90                  95
Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
            100                 105
```

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

<220>
<223> Synthetic

<400> 477
gaggtgcagc tggtggagtc tgggggaggc ctggtcaagc ctgggggtc cctgagactc 60
tcctgtgcag cctctggatt caccttcagt acttataaca tgaactgggt ccgccaggct 120
ccagggaagg ggctggagtg ggtctcatcc attaggagta gtagtaatta catatactac 180
gcagactcag tgaagggccg attcaccatc tccagagaca acgccaagaa ctcactgtat 240
ctgcaaatga acagcctgag agccgaggac acggctgtgt attactgtgc gagagatggc 300
agcagttggt acgactactc tgactactgg ggccaaggaa ccctggtcac cgtctcctca 360

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

<220>
<223> Synthetic

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

<210> 479
<211> 321
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 479
gacatccaga tgacccagtc tccttccacc ctgtctgcat ctgtaggaga cagagtcacc 60
atcacttgcc gggccagtca gagtattagt agctggttgg cctggtatca gcagaaacca 120
gggaaagccc ctaagctcct gatctataag gcgtctagtt tagaaagtgg ggtcccatca 180
aggttcagcg gcagtggatc tgggacagaa ttcactctca ccatcagcag cctgcagcct 240
gatgattttg caacttatta ctgccaacag tatattagtt attctcggac gttcggccaa 300
gggaccaagg tggaaatcaa a 321

<210> 480
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 480
Asp Ile Gln Met Thr Gln Ser Pro Ser Thr Leu Ser Ala Ser Val Gly
1 5 10 15
Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Ser Ser Trp
20 25 30
Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
35 40 45
Tyr Lys Ala Ser Ser Leu Glu Ser Gly Val Pro Ser Arg Phe Ser Gly
50 55 60
Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
65 70 75 80
Asp Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Tyr Ile Ser Tyr Ser Arg
85 90 95
Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
100 105

<210> 481
<211> 354
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 481
gaggtgcaac tagtggagtc tgggggaggc ttggtacagc ctgggggtc cctgagactc 60
tcctgtgtag tctctggatt caccttcggt gactacgaca tgcactgggt ccgtcaagct 120
acaggaagag gtctggagtg ggtctcaggt attgctcctg ctggtgacac atcctataca 180
ggctccgtga agggccgatt caccatctcc agagagaatg ccaagaactc cttgcatctt 240
caaatgaaca gcctgacaac cggggacacg gctatatatt attgtgctag agaggatata 300
gcagtgcctg gttttgatta ctggggccag ggaaccctgg tcaccgtctc ctca 354

<210> 482
<211> 118
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 482
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly

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

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

<220>
<223> Synthetic

<400> 483
ggattcacct tcggtgacta cgac 24

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

<220>
<223> Synthetic

<400> 484
```
Gly Phe Thr Phe Gly Asp Tyr Asp
 1               5
```

<210> 485
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 485
attgctcctg ctggtgacac a 21

<210> 486
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 486
```
Ile Ala Pro Ala Gly Asp Thr
 1               5
```

<210> 487
<211> 36
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 487
gctagagagg atatagcagt gcctggtttt gattac 36

<210> 488
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

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

<210> 489
<211> 324
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 489
gaaatagtga tgacgcagtc tccagccacc ctgtctgtgt ctccagggga acgaggcacc 60
ctctcctgca gggccagtca gagtgttagc agcaacttag cctggtacca gcagaaacct 120
ggccaggctc ccagactcct catctatggt gcatccacga gggccactgg cttcccagcc 180
aggttcagtg gcagtgggtc tgggacagag ttcactctca ccatcagcag cctgcagtct 240
gaagattttg cagtttatta ctgtcagcag tataataagt ggcctccgtt cactttcggc 300
cctgggacca aagtggattt caaa 324

<210> 490
<211> 108
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

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

Phe Thr Phe Gly Pro Gly Thr Lys Val Asp Phe Lys
100 105

<210> 491
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 491
cagagtgtta gcagcaac 18

<210> 492
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 492
Gln Ser Val Ser Ser Asn
1 5

<210> 493
<211> 9
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 493
ggtgcatcc 9

<210> 494
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 494
Gly Ala Ser
1

<210> 495
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 495
cagcagtata ataagtggcc tccgttcact 30

<210> 496
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 496
Gln Gln Tyr Asn Lys Trp Pro Pro Phe Thr
 1   5   10

<210> 497
<211> 354
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 497
gaggtgcaac tagtggagtc tgggggaggc ttggtacagc ctgggggtc cctgagactc 60
tcctgtgtag tctctggatt caccttcggt gactacgaca tgcactgggt ccgtcaagct 120
acaggaagag gtctggagtg ggtctcaggt attgctcctg ctggtgacac atcctataca 180
ggctccgtga agggccgatt caccatctcc agagagaatg ccaagaactc cttgcatctt 240
caaatgaaca gcctgacaac cggggacacg gctatatatt attgtgctag agaggatata 300
gcagtgcctg gttttgatta ctggggccag ggaaccctgg tcaccgtctc ctca   354

<210> 498
<211> 118
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 498
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
 1   5   10   15
Ser Leu Arg Leu Ser Cys Val Val Ser Gly Phe Thr Phe Gly Asp Tyr
            20   25   30
Asp Met His Trp Val Arg Gln Ala Thr Gly Arg Gly Leu Glu Trp Val
        35   40   45
Ser Gly Ile Ala Pro Ala Gly Asp Thr Ser Tyr Thr Gly Ser Val Lys
    50   55   60
Gly Arg Phe Thr Ile Ser Arg Glu Asn Ala Lys Asn Ser Leu His Leu
65   70   75   80
Gln Met Asn Ser Leu Thr Thr Gly Asp Thr Ala Ile Tyr Tyr Cys Ala
                85   90   95
Arg Glu Asp Ile Ala Val Pro Gly Phe Asp Tyr Trp Gly Gln Gly Thr
            100   105   110
Leu Val Thr Val Ser Ser
        115

<210> 499
<211> 324
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 499
gaaatagtga tgacgcagtc tccagccacc ctgtctgtgt ctccagggga acgaggcacc 60
ctctcctgca gggccagtca gagtgttagc agcaacttag cctggtacca gcagaaacct 120
ggccaggctc ccagactcct catctatggt gcatccacga gggccactgg cttcccagcc 180
aggttcagtg gcagtgggtc tgggacagag ttcactctca ccatcagcag cctgcagtct 240
gaagattttg cagtttatta ctgtcagcag tataataagt ggcctccgtt cactttcggc 300
cctgggacca aagtggatat caaa 324

<210> 500
<211> 108
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 500
Glu Ile Val Met Thr Gln Ser Pro Ala Thr Leu Ser Val Ser Pro Gly
 1   5   10   15
Glu Arg Gly Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Ser Asn
            20   25   30
Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile
        35   40   45
Tyr Gly Ala Ser Thr Arg Ala Thr Gly Phe Pro Ala Arg Phe Ser Gly
    50   55   60
Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln Ser
65   70   75   80
Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Asn Lys Trp Pro Pro
                85   90   95
Phe Thr Phe Gly Pro Gly Thr Lys Val Asp Ile Lys
            100   105

<210> 501
<211> 354
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 501
gaggtgcagc tggtggagtc tgggggaggc ttggtacagc ctgggggtc cctgagactc 60
tcctgtgcag cctctggatt caccttcggt gactacgaca tgcactgggt ccgccaagct 120
acaggaaaag gtctggagtg ggtctcagct attgctcctg ctggtgacac atactatcca 180
ggctccgtga agggccgatt caccatctcc agagaaaatg ccaagaactc cttgtatctt 240
caaatgaaca gcctgagagc cggggacacg gctgtgtatt actgtgctag agaggatata 300
gcagtgcctg gttttgatta ctggggccaa ggaaccctgg tcaccgtctc ctca 354

<210> 502
<211> 118
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 502
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 Gly Asp Tyr
            20   25   30

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

<210> 503
<211> 324
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 503
gaaatagtga tgacgcagtc tccagccacc ctgtctgtgt ctccagggga aagagccacc 60
ctctcctgca gggccagtca gagtgttagc agcaacttag cctggtacca gcagaaacct 120
ggccaggctc ccaggctcct catctatggt gcatccacca gggccactgg tatcccagcc 180
aggttcagtg gcagtgggtc tgggacagag ttcactctca ccatcagcag cctgcagtct 240
gaagattttg cagtttatta ctgtcagcag tataataagt ggcctccgtt cactttcggc 300
cctgggacca aagtggatat caaa 324

<210> 504
<211> 108
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 504
```
Glu Ile Val Met Thr Gln Ser Pro Ala Thr Leu Ser Val Ser Pro Gly
 1               5                  10                  15
Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Ser Asn
            20                  25                  30
Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile
        35                  40                  45
Tyr Gly Ala Ser Thr Arg Ala Thr Gly Ile Pro Ala Arg Phe Ser Gly
    50                  55                  60
Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln Ser
65                  70                  75                  80
Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Asn Lys Trp Pro Pro
                85                  90                  95
Phe Thr Phe Gly Pro Gly Thr Lys Val Asp Ile Lys
            100                 105
```

<210> 505
<211> 378
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 505
caaattctgc tggtgcaatc tggacctgag gtgaaggagc ctggggcctc agtgaaggtc 60
tcctgcaagg cttctggtta cacctttacc aactacgcta tcagctgggt gcgacaggtc 120
cctggacaag ggcttgagtg gatgggatgg gtcagcgctt acaatggtca cacaaactat 180
gcacatgaag tccagggcag agtcaccatg accacagaca catccacgac cacagcctac 240
atggagctga ggagcctgag atctgacgac acggccatgt attactgtgc gagaggggat 300
gtagtcgtgc cagttgctcc ccacttctac aacggtatgg acgtctgggg ccaagggacc 360
acggtcaccg tctcctca 378

<210> 506
<211> 126
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 506
Gln Ile Leu Leu Val Gln Ser Gly Pro Glu Val Lys Glu Pro Gly Ala
 1   5   10   15
Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asn Tyr
            20   25   30
Ala Ile Ser Trp Val Arg Gln Val Pro Gly Gln Gly Leu Glu Trp Met
        35   40   45
Gly Trp Val Ser Ala Tyr Asn Gly His Thr Asn Tyr Ala His Glu Val
    50   55   60
Gln Gly Arg Val Thr Met Thr Thr Asp Thr Ser Thr Thr Thr Ala Tyr
65   70   75   80
Met Glu Leu Arg Ser Leu Arg Ser Asp Asp Thr Ala Met Tyr Tyr Cys
                85   90   95
Ala Arg Gly Gly Val Val Val Pro Val Ala Pro His Phe Tyr Asn Gly
            100   105   110
Met Asp Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser
        115   120   125

<210> 507
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 507
ggttacacct ttaccaacta cgct 24

<210> 508
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 508
Gly Tyr Thr Phe Thr Asn Tyr Ala
 1   5

<210> 509
<211> 24
<212> DNA

<213> Artificial Sequence

<220>
<223> Synthetic

<400> 509
gtcagcgctt acaatggtca caca 24

<210> 510
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 510
Val Ser Ala Tyr Asn Gly His Thr
1 5

<210> 511
<211> 57
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 511
gcgagagggg gtgtagtcgt gccagttgct ccccacttct acaacggtat ggacgtc 57

<210> 512
<211> 19
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 512
Ala Arg Gly Gly Val Val Val Pro Val Ala Pro His Phe Tyr Asn Gly
1 5 10 15
Met Asp Val

<210> 513
<211> 336
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 513
gatattgtga tgactcagtt tccactctcc ctgcccgtca cccctggaga gccggcctcc 60
atctcctgca ggtctagtca gagcctcctg catattaatg aatacaacta tttggattgg 120
tacctaaaga agccagggca gtctccacag ctcctgatct atttgggttt taatcgggcc 180
tccggggtcc ctgacaggtt cagtggcagt ggatcaggca cagattttac actgaaaatc 240
agcagagtgg aggctgagga tgttggggtc tattactgca tgcaagctct tcaaactccg 300
tggacgttag gccaagggac caaggtggaa atcaaa 336

<210> 514
<211> 112
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 514
Asp Ile Val Met Thr Gln Phe 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 Ile
            20   25   30
Asn Glu Tyr Asn Tyr Leu Asp Trp Tyr Leu Lys Lys Pro Gly Gln Ser
        35   40   45
Pro Gln Leu Leu Ile Tyr Leu Gly Phe 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 Trp Thr Leu Gly Gln Gly Thr Lys Val Glu Ile Lys
            100   105   110

<210> 515
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 515
cagagcctcc tgcatattaa tgaatacaac tat   33

<210> 516
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 516
Gln Ser Leu Leu His Ile Asn Glu Tyr Asn Tyr
 1   5   10

<210> 517
<211> 9
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 517
ttgggtttt   9

<210> 518
<211> 3
<212> PRT

<213> Artificial Sequence

<220>
<223> Synthetic

<400> 518
Leu Gly Phe
 1

<210> 519
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 519
atgcaagctc ttcaaactcc gtggacg 27

<210> 520
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 520
Met Gln Ala Leu Gln Thr Pro Trp Thr
 1   5

<210> 521
<211> 378
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 521
caggttcagc tggtgcagtc tggacctgag gtgaaggagc ctggggcctc agtgaaggtc 60
tcctgcaagg cttctggtta cacctttacc aactacgcta tcagctgggt gcgacaggtc 120
cctggacaag ggcttgagtg gatgggatgg gtcagcgctt acaatggtca cacaaactat 180
gcacatgaag tccagggcag agtcaccatg accacagaca catccacgac cacagcctac 240
atggagctga ggagcctgag atctgacgac acggccatgt attactgtgc gagagggggt 300
gtagtcgtgc cagttgctcc ccacttctac aacggtatgg acgtctgggg ccaagggacc 360
acggtcaccg tctcctca 378

<210> 522
<211> 126
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 522
Gln Val Gln Leu Val Gln Ser Gly Pro Glu Val Lys Glu Pro Gly Ala
 1   5   10   15
Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asn Tyr

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

<210> 523
<211> 336
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 523
gatattgtga tgactcagtc tccactctcc ctgcccgtca cccctggaga gccggcctcc 60
atctcctgca ggtctagtca gagcctcctg catattaatg aatacaacta tttggattgg 120
tacctaaaga agccagggca gtctccacag ctcctgatct atttgggttt taatcgggcc 180
tccggggtcc ctgacaggtt cagtggcagt ggatcaggca cagattttac actgaaaatc 240
agcagagtgg aggctgagga tgttggggtc tattactgca tgcaagctct tcaaactccg 300
tggacgttag gccaagggac caaggtggaa atcaaa 336

<210> 524
<211> 112
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 524
```
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 Ile
            20                  25                  30
Asn Glu Tyr Asn Tyr Leu Asp Trp Tyr Leu Lys Lys Pro Gly Gln Ser
        35                  40                  45
Pro Gln Leu Leu Ile Tyr Leu Gly Phe 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 Trp Thr Leu Gly Gln Gly Thr Lys Val Glu Ile Lys
            100                 105                 110
```

<210> 525
<211> 378
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 525
caggttcagc tggtgcagtc tggagctgag gtgaagaagc ctggggcctc agtgaaggtc 60
tcctgcaagg cttctggtta cacctttacc aactacgcta tcagctgggt gcgacaggcc 120
cctggacaag ggcttgagtg gatgggatgg gtcagcgctt acaatggtca cacaaactat 180
gcacagaagc tccagggcag agtcaccatg accacagaca catccacgag cacagcctac 240
atggagctga ggagcctgag atctgacgac acggccgtgt attactgtgc gagaggggat 300
gtagtcgtgc cagttgctcc ccacttctac aacggtatgg acgtctgggg gcaagggacc 360
acggtcaccg tctcctca 378

<210> 526
<211> 126
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 526
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 Asn Tyr
            20   25   30
Ala Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
        35   40   45
Gly Trp Val Ser Ala Tyr Asn Gly His Thr Asn Tyr Ala Gln Lys Leu
    50   55   60
Gln Gly Arg Val Thr Met Thr Thr Asp Thr Ser Thr Ser Thr Ala Tyr
65   70   75   80
Met Glu Leu Arg Ser Leu Arg Ser Asp Asp Thr Ala Val Tyr Tyr Cys
                85   90   95
Ala Arg Gly Gly Val Val Val Pro Val Ala Pro His Phe Tyr Asn Gly
            100   105   110
Met Asp Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser
        115   120   125

<210> 527
<211> 336
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 527
gatattgtga tgactcagtc tccactctcc ctgcccgtca cccctggaga gccggcctcc 60
atctcctgca ggtctagtca gagcctcctg catattaatg aatacaacta tttggattgg 120
tacctgcaga agccagggca gtctccacag ctcctgatct atttgggttc taatcgggcc 180
tccggggtcc ctgacaggtt cagtggcagt ggatcaggca cagattttac actgaaaatc 240
agcagagtgg aggctgagga tgttggggtt tattactgca tgcaagctct tcaaactccg 300
tggacgttcg gccaagggac caaggtggaa atcaaa 336

<210> 528
<211> 112
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 528
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 Ile
            20                  25                  30
Asn Glu 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 Trp Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
            100                 105                 110
```

<210> 529
<211> 351
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 529
gaggtgcagc tggtggagtc tgggggaggc ttggtacagc ctgggggtc cctgagactc 60
tcctgtgcag cctctggatt caccctaagt agctacgaca tgcactgggt ccgccaagca 120
acaggaaaag gtctggagtg ggtctcagct attggcagta ctggtgacac atactataca 180
ggctccgtga tgggccgatt caccatctcc agagacgctg ccaaaaactc cttctatctt 240
gaaatgaaca gcctgagagt cggggacacg gctgtatatt actgtgcaag agagggaata 300
agaacaccct atgattattg gggccaggga gcccgggtca ccgtctcctc a 351

<210> 530
<211> 117
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 530
```
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
 1               5                  10                  15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Leu Ser Ser Tyr
            20                  25                  30
Asp Met His Trp Val Arg Gln Ala Thr Gly Lys Gly Leu Glu Trp Val
        35                  40                  45
Ser Ala Ile Gly Ser Thr Gly Asp Thr Tyr Tyr Thr Gly Ser Val Met
    50                  55                  60
Gly Arg Phe Thr Ile Ser Arg Asp Ala Ala Lys Asn Ser Phe Tyr Leu
65                  70                  75                  80
Glu Met Asn Ser Leu Arg Val Gly Asp Thr Ala Val Tyr Tyr Cys Ala
                85                  90                  95
Arg Glu Gly Ile Arg Thr Pro Tyr Asp Tyr Trp Gly Gln Gly Ala Arg
            100                 105                 110
Val Thr Val Ser Ser
        115
```

<210> 531
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 531
ggattcaccc taagtagcta cgac 24

<210> 532
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 532
Gly Phe Thr Leu Ser Ser Tyr Asp
1 5

<210> 533
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 533
attggcagta ctggtgacac a 21

<210> 534
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 534
Ile Gly Ser Thr Gly Asp Thr
1 5

<210> 535
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 535
gcaagagagg gaataagaac accctatgat tat 33

<210> 536
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 536

Ala Arg Glu Gly Ile Arg Thr Pro Tyr Asp Tyr
1 5 10

<210> 537
<211> 324
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 537
gaaatagtga tgacgcagtc tccagccacc ctgtctgtgt ctccagggga aagagccacc 60
ctctcctgca gggccagtca gagtgttagc agcaatgtag cctggtacca gcagaaacct 120
ggccaggctc ccaggctcct catctatggt gcatccacca gggccactgg tatcccagcc 180
aggttcagtg gcagtgggtc tgggacagaa ttcactctca ccatcagcag cctgcagtct 240
gaagattttg cagtttatta ctgtcagcag tataataatt ggcctccatt cactttcggc 300
cctgggacca aagtggatat caaa 324

<210> 538
<211> 108
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 538
Glu Ile Val Met Thr Gln Ser Pro Ala Thr Leu Ser Val Ser Pro Gly
1 5 10 15
Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Ser Asn
20 25 30
Val Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile
35 40 45
Tyr Gly Ala Ser Thr Arg Ala Thr Gly Ile Pro Ala Arg Phe Ser Gly
50 55 60
Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln Ser
65 70 75 80
Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Asn Asn Trp Pro Pro
85 90 95
Phe Thr Phe Gly Pro Gly Thr Lys Val Asp Ile Lys
100 105

<210> 539
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 539
cagagtgtta gcagcaat 18

<210> 540
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 540
Gln Ser Val Ser Ser Asn
1 5

<210> 541
<211> 9
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 541
ggtgcatcc 9

<210> 542
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 542
Gly Ala Ser
1

<210> 543
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 543
cagcagtata ataattggcc tccattcact 30

<210> 544
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 544
Gln Gln Tyr Asn Asn Trp Pro Pro Phe Thr
1 5 10

<210> 545
<211> 351
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 545

gaggtgcagc tggtggagtc tgggggaggc ttggtacagc ctgggggtc cctgagactc 60
tcctgtgcag cctctggatt cacctaagt agctacgaca tgcactgggt ccgccaagca 120
acaggaaaag gtctggagtg ggtctcagct attggcagta ctggtgacac atactataca 180
ggctccgtga tgggccgatt caccatctcc agagacgctg ccaaaaactc cttctatctt 240
gaaatgaaca gcctgagagt cggggacacg gctgtatatt actgtgcaag agagggaata 300
agaacaccct atgattattg gggccaggga accctggtca ccgtctcctc a 351

<210> 546
<211> 117
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 546
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
 1   5   10   15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Leu Ser Ser Tyr
            20   25   30
Asp Met His Trp Val Arg Gln Ala Thr Gly Lys Gly Leu Glu Trp Val
        35   40   45
Ser Ala Ile Gly Ser Thr Gly Asp Thr Tyr Tyr Thr Gly Ser Val Met
    50   55   60
Gly Arg Phe Thr Ile Ser Arg Asp Ala Ala Lys Asn Ser Phe Tyr Leu
65   70   75   80
Glu Met Asn Ser Leu Arg Val Gly Asp Thr Ala Val Tyr Tyr Cys Ala
                85   90   95
Arg Glu Gly Ile Arg Thr Pro Tyr Asp Tyr Trp Gly Gln Gly Thr Leu
            100   105   110
Val Thr Val Ser Ser
        115

<210> 547
<211> 324
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 547
gaaatagtga tgacgcagtc tccagccacc ctgtctgtgt ctccagggga aagagccacc 60
ctctcctgca gggccagtca gagtgttagc agcaatgtag cctggtacca gcagaaacct 120
ggccaggctc ccaggctcct catctatggt gcatccacca gggccactgg tatcccagcc 180
aggttcagtg gcagtgggtc tgggacagaa ttcactctca ccatcagcag cctgcagtct 240
gaagattttg cagtttatta ctgtcagcag tataataatt ggcctccatt cactttcggc 300
cctgggacca aagtggatat caaa 324

<210> 548
<211> 108
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 548
Glu Ile Val Met Thr Gln Ser Pro Ala Thr Leu Ser Val Ser Pro Gly
 1   5   10   15
Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Ser Asn
            20   25   30

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

<210> 549
<211> 351
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 549
gaggtgcagc tggtggagtc tgggggaggc ttggtacagc ctgggggtc cctgagactc 60
tcctgtgcag cctctggatt caccctaagt agctacgaca tgcactgggt ccgccaagct 120
acaggaaaag gtctggagtg ggtctcagct attggcagta ctggtgacac atactatcca 180
ggctccgtga agggccgatt caccatctcc agagaaaatg ccaagaactc cttgtatctt 240
caaatgaaca gcctgagagc cggggacacg gctgtgtatt actgtgcaag agagggaata 300
agaacaccct atgattattg gggccaagga accctggtca ccgtctcctc a 351

<210> 550
<211> 117
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 550
```
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
 1               5                  10                  15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Leu Ser Ser Tyr
            20                  25                  30
Asp Met His Trp Val Arg Gln Ala Thr Gly Lys Gly Leu Glu Trp Val
        35                  40                  45
Ser Ala Ile Gly Ser Thr Gly Asp Thr Tyr Tyr Pro Gly Ser Val Lys
    50                  55                  60
Gly Arg Phe Thr Ile Ser Arg Glu Asn Ala Lys Asn Ser Leu Tyr Leu
65                  70                  75                  80
Gln Met Asn Ser Leu Arg Ala Gly Asp Thr Ala Val Tyr Tyr Cys Ala
                85                  90                  95
Arg Glu Gly Ile Arg Thr Pro Tyr Asp Tyr Trp Gly Gln Gly Thr Leu
            100                 105                 110
Val Thr Val Ser Ser
        115
```

<210> 551
<211> 324
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 551
gaaatagtga tgacgcagtc tccagccacc ctgtctgtgt ctccagggga aagagccacc 60
ctctcctgca gggccagtca gagtgttagc agcaatttag cctggtacca gcagaaacct 120
ggccaggctc ccaggctcct catctatggt gcatccacca gggccactgg tatcccagcc 180
aggttcagtg gcagtgggtc tgggacagag ttcactctca ccatcagcag cctgcagtct 240
gaagattttg cagtttatta ctgtcagcag tataataatt ggcctccatt cactttcggc 300
cctgggacca aagtggatat caaa 324

<210> 552
<211> 108
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 552
Glu Ile Val Met Thr Gln Ser Pro Ala Thr Leu Ser Val Ser Pro Gly
 1   5   10   15
Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Ser Asn
            20   25   30
Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile
        35   40   45
Tyr Gly Ala Ser Thr Arg Ala Thr Gly Ile Pro Ala Arg Phe Ser Gly
    50   55   60
Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln Ser
65   70   75   80
Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Asn Asn Trp Pro Pro
                85   90   95
Phe Thr Phe Gly Pro Gly Thr Lys Val Asp Ile Lys
            100   105

<210> 553
<211> 351
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 553
gaggtgcagc tggtggagtc tgggggaggc ttggtacagc ctgggggtc cctgagactc 60
tcctgtgcag cctctggatt caccctaagt agctacgaca tgcactgggt ccgccaagca 120
acaggaaaag gtctggagtg ggtctcagct attggcagta ctggtgacac atactataca 180
ggctccgtga tgggccgatt caccatctcc agagacgctg ccaaaaactc cttctatctt 240
gaaatgaaca gcctgagagt cggggacacg gctgtatatt actgtgcaag agagggaata 300
agaacaccct atgattattg gggccaggga gcccgggtca ccgtctcctc a 351

<210> 554
<211> 117
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 554
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
 1   5   10   15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Leu Ser Ser Tyr
            20   25   30
Asp Met His Trp Val Arg Gln Ala Thr Gly Lys Gly Leu Glu Trp Val

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

<210> 555
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 555
ggattcaccc taagtagcta cgac 24

<210> 556
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 556
```
Gly Phe Thr Leu Ser Ser Tyr Asp
 1               5
```

<210> 557
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 557
attggcagta ctggtgacac a 21

<210> 558
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 558
```
Ile Gly Ser Thr Gly Asp Thr
 1               5
```

<210> 559
<211> 33

<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 559
gcaagagagg gaataagaac accctatgat tat 33

<210> 560
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 560
Ala Arg Glu Gly Ile Arg Thr Pro Tyr Asp Tyr
1 5 10

<210> 561
<211> 324
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 561
gaaatagtga tgacgcagtc tccagccacc ctgtctgtgt ctccagggga aagagccacc 60
ctctcctgca gggccagtca gagtgttagc agcaatgtag cctggtacca gcagaaacct 120
ggccaggctc ccaggctcct catctatggt gcatccacca gggccactgg tatcccagcc 180
aggttcagtg gcagtgggtc tgggacagaa ttcactctca ccatcagcag cctgcagtct 240
gaagattttg cagtttatta ctgtcagcag tataataatt ggcctccatt cactttcggc 300
cctgggacca aagtggatat caaa 324

<210> 562
<211> 108
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 562
Glu Ile Val Met Thr Gln Ser Pro Ala Thr Leu Ser Val Ser Pro Gly
1 5 10 15
Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Ser Asn
20 25 30
Val Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile
35 40 45
Tyr Gly Ala Ser Thr Arg Ala Thr Gly Ile Pro Ala Arg Phe Ser Gly
50 55 60
Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln Ser
65 70 75 80
Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Asn Asn Trp Pro Pro
85 90 95
Phe Thr Phe Gly Pro Gly Thr Lys Val Asp Ile Lys
100 105

<210> 563
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 563
cagagtgtta gcagcaat 18

<210> 564
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 564
Gln Ser Val Ser Ser Asn
1 5

<210> 565
<211> 9
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 565
ggtgcatcc 9

<210> 566
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 566
Gly Ala Ser
1

<210> 567
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 567
cagcagtata ataattggcc tccattcact 30

<210> 568
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 568
Gln Gln Tyr Asn Asn Trp Pro Pro Phe Thr
 1   5   10

<210> 569
<211> 351
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 569
gaggtgcagc tggtggagtc tgggggaggc ttggtacagc ctgggggtc cctgagactc 60
tcctgtgcag cctctggatt caccctaagt agctacgaca tgcactgggt ccgccaagca 120
acaggaaaag gtctggagtg ggtctcagct attggcagta ctggtgacac atactataca 180
ggctccgtga tgggccgatt caccatctcc agagacgctg ccaaaaactc cttctatctt 240
gaaatgaaca gcctgagagt cggggacacg gctgtatatt actgtgcaag agagggaata 300
agaacaccct atgattattg gggccaggga accctggtca ccgtctcctc a   351

<210> 570
<211> 117
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 570
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
 1   5   10   15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Leu Ser Ser Tyr
            20   25   30
Asp Met His Trp Val Arg Gln Ala Thr Gly Lys Gly Leu Glu Trp Val
        35   40   45
Ser Ala Ile Gly Ser Thr Gly Asp Thr Tyr Tyr Thr Gly Ser Val Met
    50   55   60
Gly Arg Phe Thr Ile Ser Arg Asp Ala Ala Lys Asn Ser Phe Tyr Leu
65   70   75   80
Glu Met Asn Ser Leu Arg Val Gly Asp Thr Ala Val Tyr Tyr Cys Ala
                85   90   95
Arg Glu Gly Ile Arg Thr Pro Tyr Asp Tyr Trp Gly Gln Gly Thr Leu
            100   105   110
Val Thr Val Ser Ser
        115

<210> 571
<211> 324
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 571
gaaatagtga tgacgcagtc tccagccacc ctgtctgtgt ctccagggga aagagccacc 60
ctctcctgca gggccagtca gagtgttagc agcaatgtag cctggtacca gcagaaacct 120

ggccaggctc ccaggctcct catctatggt gcatccacca gggccactgg tatcccagcc 180
aggttcagtg gcagtgggtc tgggacagaa ttcactctca ccatcagcag cctgcagtct 240
gaagattttg cagtttatta ctgtcagcag tataataatt ggcctccatt cactttcggc 300
cctgggacca aagtggatat caaa 324

<210> 572
<211> 108
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 572
Glu Ile Val Met Thr Gln Ser Pro Ala Thr Leu Ser Val Ser Pro Gly
1 5 10 15
Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Ser Asn
20 25 30
Val Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile
35 40 45
Tyr Gly Ala Ser Thr Arg Ala Thr Gly Ile Pro Ala Arg Phe Ser Gly
50 55 60
Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln Ser
65 70 75 80
Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Asn Asn Trp Pro Pro
85 90 95
Phe Thr Phe Gly Pro Gly Thr Lys Val Asp Ile Lys
100 105

<210> 573
<211> 351
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 573
gaggtgcagc tggtggagtc tgggggaggc ttggtacagc ctgggggtc cctgagactc 60
tcctgtgcag cctctggatt caccctaagt agctacgaca tgcactgggt ccgccaagct 120
acaggaaaag gtctggagtg ggtctcagct attggcagta ctggtgacac atactatcca 180
ggctccgtga agggccgatt caccatctcc agagaaaatg ccaagaactc cttgtatctt 240
caaatgaaca gcctgagagc cggggacacg gctgtgtatt actgtgcaag agagggaata 300
agaacaccct atgattattg gggccaagga accctggtca ccgtctcctc a 351

<210> 574
<211> 117
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 574
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
1 5 10 15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Leu Ser Ser Tyr
20 25 30
Asp Met His Trp Val Arg Gln Ala Thr Gly Lys Gly Leu Glu Trp Val
35 40 45
Ser Ala Ile Gly Ser Thr Gly Asp Thr Tyr Tyr Pro Gly Ser Val Lys
50 55 60

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

<210> 575
<211> 324
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 575
gaaatagtga tgacgcagtc tccagccacc ctgtctgtgt ctccagggga aagagccacc 60
ctctcctgca gggccagtca gagtgttagc agcaatttag cctggtacca gcagaaacct 120
ggccaggctc ccaggctcct catctatggt gcatccacca gggccactgg tatcccagcc 180
aggttcagtg gcagtgggtc tgggacagag ttcactctca ccatcagcag cctgcagtct 240
gaagattttg cagtttatta ctgtcagcag tataataatt ggcctccatt cactttcggc 300
cctgggacca aagtggatat caaa 324

<210> 576
<211> 108
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 576
```
Glu Ile Val Met Thr Gln Ser Pro Ala Thr Leu Ser Val Ser Pro Gly
 1               5                  10                  15
Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Ser Asn
            20                  25                  30
Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile
        35                  40                  45
Tyr Gly Ala Ser Thr Arg Ala Thr Gly Ile Pro Ala Arg Phe Ser Gly
    50                  55                  60
Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln Ser
65                  70                  75                  80
Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Asn Asn Trp Pro Pro
                85                  90                  95
Phe Thr Phe Gly Pro Gly Thr Lys Val Asp Ile Lys
            100                 105
```

<210> 577
<211> 363
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 577
gaagtgcagc tggtggagtc tgggggaggc ttggtacagc ctggcaggtc cctgagactc 60
tcctgtgcag cctctggatt cacctttgat gattatgcca tgcactgggt ccggcaagct 120
ccagggaagg gcctggagtg ggtctcaggt attaattgga acagtggtag cataggctat 180

gcggactctg tgaagggccg attcaccatc tccagagaca acgccaagca ctccctgtat 240
ctgcaaatga acagtctgag acctgaggac acggccttgt attactgtgt aaaagaggtg 300
actacgggat actactacgg tatggacgtc tggggccaag ggaccacggt caccgtctcc 360
tca 363

<210> 578
<211> 121
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 578
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Arg
 1   5   10   15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Asp Asp Tyr
            20   25   30
Ala Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35   40   45
Ser Gly Ile Asn 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 His Ser Leu Tyr
65   70   75   80
Leu Gln Met Asn Ser Leu Arg Pro Glu Asp Thr Ala Leu Tyr Tyr Cys
                85   90   95
Val Lys Glu Val Thr Thr Gly Tyr Tyr Tyr Gly Met Asp Val Trp Gly
            100   105   110
Gln Gly Thr Thr Val Thr Val Ser Ser
        115   120

<210> 579
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 579
ggattcacct ttgatgatta tgcc 24

<210> 580
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 580
Gly Phe Thr Phe Asp Asp Tyr Ala
 1   5

<210> 581
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 581
attaattgga acagtggtag cata 24

<210> 582
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 582
Ile Asn Trp Asn Ser Gly Ser Ile
1 5

<210> 583
<211> 42
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 583
gtaaaagagg tgactacggg atactactac ggtatggacg tc 42

<210> 584
<211> 14
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 584
Val Lys Glu Val Thr Thr Gly Tyr Tyr Tyr Gly Met Asp Val
1 5 10

<210> 585
<211> 321
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 585
gacatccagt tgacccagtc tccatccttc ctgtctgcat ctgtaggaga cagagtcacc 60
atcacttgct gggccagtca gggcattagc agttatttag cctggtatca gaaaaaacca 120
gggaaagccc ctaacctcct gatctatgat gcatccactt tgcaaagtgg ggtcccatca 180
aggttcagcg gcagtggatc tgggacagaa ttcactctca cactcagcag cctgcagcct 240
gaagattttg caacttatta ctgtcaacag cttaatattt acccattcac tttcggccct 300
gggaccaaag tggatatcaa a 321

<210> 586
<211> 107
<212> PRT
<213> Artificial Sequence

<220>

<223> Synthetic

<400> 586
Asp Ile Gln Leu Thr Gln Ser Pro Ser Phe Leu Ser Ala Ser Val Gly
 1   5   10   15
Asp Arg Val Thr Ile Thr Cys Trp Ala Ser Gln Gly Ile Ser Ser Tyr
            20   25   30
Leu Ala Trp Tyr Gln Lys Lys Pro Gly Lys Ala Pro Asn Leu Leu Ile
        35   40   45
Tyr Asp Ala Ser Thr Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
    50   55   60
Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Leu Ser Ser Leu Gln Pro
65   70   75   80
Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Leu Asn Ile Tyr Pro Phe
                85   90   95
Thr Phe Gly Pro Gly Thr Lys Val Asp Ile Lys
            100   105

<210> 587
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 587
cagggcatta gcagttat 18

<210> 588
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 588
Gln Gly Ile Ser Ser Tyr
 1   5

<210> 589
<211> 9
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 589
gatgcatcc 9

<210> 590
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 590

Asp Ala Ser
 1

<210> 591
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 591
caacagctta atatttaccc attcact 27

<210> 592
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 592
Gln Gln Leu Asn Ile Tyr Pro Phe Thr
 1   5

<210> 593
<211> 363
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 593
gaagtgcagc tggtggagtc tgggggaggc ttggtacagc ctggcaggtc cctgagactc 60
tcctgtgcag cctctggatt cacctttgat gattatgcca tgcactgggt ccggcaagct 120
ccagggaagg gcctggagtg ggtctcaggt attaattgga acagtggtag cataggctat 180
gcggactctg tgaagggccg attcaccatc tccagagaca acgccaagca ctccctgtat 240
ctgcaaatga acagtctgag acctgaggac acggccttgt attactgtgt aaaagaggtg 300
actacgggat actactacgg tatggacgtc tggggccaag ggaccacggt caccgtctcc 360
tca 363

<210> 594
<211> 121
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 594
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Arg
 1   5   10   15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Asp Asp Tyr
            20   25   30
Ala Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35   40   45
Ser Gly Ile Asn 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 His Ser Leu Tyr

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

<210> 595
<211> 321
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 595
gacatccagt tgacccagtc tccatccttc ctgtctgcat ctgtaggaga cagagtcacc 60
atcacttgct gggccagtca gggcattagc agttatttag cctggtatca gaaaaaacca 120
gggaaagccc ctaacctcct gatctatgat gcatccactt tgcaaagtgg ggtcccatca 180
aggttcagcg gcagtggatc tgggacagaa ttcactctca cactcagcag cctgcagcct 240
gaagattttg caacttatta ctgtcaacag cttaatattt acccattcac tttcggccct 300
gggaccaaag tggatatcaa a 321

<210> 596
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 596
```
Asp Ile Gln Leu Thr Gln Ser Pro Ser Phe Leu Ser Ala Ser Val Gly
 1               5                  10                  15
Asp Arg Val Thr Ile Thr Cys Trp Ala Ser Gln Gly Ile Ser Ser Tyr
            20                  25                  30
Leu Ala Trp Tyr Gln Lys Lys Pro Gly Lys Ala Pro Asn Leu Leu Ile
        35                  40                  45
Tyr Asp Ala Ser Thr Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
    50                  55                  60
Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Leu Ser Ser Leu Gln Pro
65                  70                  75                  80
Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Leu Asn Ile Tyr Pro Phe
                85                  90                  95
Thr Phe Gly Pro Gly Thr Lys Val Asp Ile Lys
            100                 105
```

<210> 597
<211> 363
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 597
gaagtgcagc tggtggagtc tgggggaggc ttggtacagc ctggcaggtc cctgagactc 60
tcctgtgcag cctctggatt cacctttgat gattatgcca tgcactgggt ccggcaagct 120
ccagggaagg gcctggagtg ggtctcaggt attaattgga acagtggtag cataggctat 180
gcggactctg tgaagggccg attcaccatc tccagagaca acgccaagaa ctccctgtat 240

ctgcaaatga acagtctgag agctgaggac acggccttgt attactgtgt aaaagaggtg 300
actacgggat actactacgg tatggacgtc tgggggcaag ggaccacggt caccgtctcc 360
tca 363

<210> 598
<211> 121
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 598
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Arg
1 5 10 15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Asp Asp Tyr
20 25 30
Ala Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45
Ser Gly Ile Asn 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
Val Lys Glu Val Thr Thr Gly Tyr Tyr Tyr Gly Met Asp Val Trp Gly
100 105 110
Gln Gly Thr Thr Val Thr Val Ser Ser
115 120

<210> 599
<211> 321
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 599
gacatccagt tgacccagtc tccatccttc ctgtctgcat ctgtaggaga cagagtcacc 60
atcacttgcc gggccagtca gggcattagc agttatttag cctggtatca gcaaaaacca 120
gggaaagccc ctaagctcct gatctatgat gcatccactt tgcaaagtgg ggtcccatca 180
aggttcagcg gcagtggatc tgggacagaa ttcactctca caatcagcag cctgcagcct 240
gaagattttg caacttatta ctgtcaacag cttaatattt acccattcac tttcggccct 300
gggaccaaag tggatatcaa a 321

<210> 600
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 600
Asp Ile Gln Leu Thr Gln Ser Pro Ser Phe Leu Ser Ala Ser Val Gly
1 5 10 15
Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Gly Ile Ser Ser Tyr
20 25 30
Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
35 40 45
Tyr Asp Ala Ser Thr Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly

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

<210> 601
<211> 366
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 601
gaggtgcagt tgttggagtc tgggggaggc ttggtacagc ctgggggtc cctgagactc 60
tcctgtgcag cctctggatt cacgtttagt agctatgcca tgaactgggt ccgccaggct 120
ccagggaagg ggctggattg ggtctcaggt atcagtggta atggtggtag cacctactac 180
gcagactccg tgaagggccg gttcaccatc tccagagaca tttccaagaa cacgctgtat 240
gtgcaaatgc acagcctgag agtcgaggac acggccgttt actactgtgc gaaagcccgt 300
tattacgatt tttgggggggg gaatttcgat ctctggggcc gtggcaccca ggtcactgtc 360
tcctca 366

<210> 602
<211> 122
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 602
```
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 Ser Ser Tyr
            20                  25                  30
Ala Met Asn Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Asp Trp Val
        35                  40                  45
Ser Gly Ile Ser Gly Asn Gly Gly Ser Thr Tyr Tyr Ala Asp Ser Val
    50                  55                  60
Lys Gly Arg Phe Thr Ile Ser Arg Asp Ile Ser Lys Asn Thr Leu Tyr
65                  70                  75                  80
Val Gln Met His Ser Leu Arg Val Glu Asp Thr Ala Val Tyr Tyr Cys
                85                  90                  95
Ala Lys Ala Arg Tyr Tyr Asp Phe Trp Gly Gly Asn Phe Asp Leu Trp
            100                 105                 110
Gly Arg Gly Thr Gln Val Thr Val Ser Ser
        115                 120
```

<210> 603
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 603
ggattcacgt ttagtagcta tgcc 24

<210> 604
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 604
Gly Phe Thr Phe Ser Ser Tyr Ala
 1   5

<210> 605
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 605
atcagtggta atggtggtag cacc   24

<210> 606
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 606
Ile Ser Gly Asn Gly Gly Ser Thr
 1   5

<210> 607
<211> 45
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 607
gcgaaagccc gttattacga tttttggggg gggaatttcg atctc   45

<210> 608
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 608
Ala Lys Ala Arg Tyr Tyr Asp Phe Trp Gly Gly Asn Phe Asp Leu
 1   5   10   15

<210> 609

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

<220>
<223> Synthetic

<400> 609
gaaattgtgt tgacgcagtc tccaggcacc ctgtctttgt ctccagggga aagagccacc 60
ctctcctgca gggccagtca gagtgttagc atcaggtact tagcctggta tcagcagaaa 120
cctggccagg ctcccaggct cctcatctat ggtgcatcca gcagggccac tggcatccca 180
gacaggttca gtgtcagtgt gtctgggaca gacttcactc tcaccatcac tagactggag 240
cctgaagatt ttgcagtcta ttactgtcag caatatggta gttcaccgct cactttcggc 300
ggagggacca aggtggagat caaa 324

<210> 610
<211> 108
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 610
Glu Ile Val Leu Thr Gln Ser Pro Gly Thr Leu Ser Leu Ser Pro Gly
 1   5   10   15
Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Ile Arg
            20   25   30
Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu
        35   40   45
Ile Tyr Gly Ala Ser Ser Arg Ala Thr Gly Ile Pro Asp Arg Phe Ser
    50   55   60
Val Ser Val Ser Gly Thr Asp Phe Thr Leu Thr Ile Thr Arg Leu Glu
65   70   75   80
Pro Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Gly Ser Ser Pro
                85   90   95
Leu Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
            100   105

<210> 611
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 611
cagagtgtta gcatcaggta c 21

<210> 612
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 612
Gln Ser Val Ser Ile Arg Tyr
 1   5

<210> 613
<211> 9
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 613
ggtgcatcc 9

<210> 614
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 614
Gly Ala Ser
1

<210> 615
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 615
cagcaatatg gtagttcacc gctcact 27

<210> 616
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 616
Gln Gln Tyr Gly Ser Ser Pro Leu Thr
1 5

<210> 617
<211> 366
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 617
gaggtgcagt tgttggagtc tgggggaggc ttggtacagc ctgggggtc cctgagactc 60
tcctgtgcag cctctggatt cacgtttagt agctatgcca tgaactgggt ccgccaggct 120
ccagggaagg ggctggattg ggtctcaggt atcagtggta atggtggtag cacctactac 180
gcagactccg tgaagggccg gttcaccatc tccagagaca tttccaagaa cacgctgtat 240
gtgcaaatgc acagcctgag agtcgaggac acggccgttt actactgtgc gaaagcccgt 300

tattacgatt tttgggggg gaatttcgat ctctggggcc gtggcaccct ggtcactgtc 360
tcctca 366

<210> 618
<211> 122
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 618
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 Ser Ser Tyr
            20   25   30
Ala Met Asn Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Asp Trp Val
        35   40   45
Ser Gly Ile Ser Gly Asn Gly Gly Ser Thr Tyr Tyr Ala Asp Ser Val
    50   55   60
Lys Gly Arg Phe Thr Ile Ser Arg Asp Ile Ser Lys Asn Thr Leu Tyr
65   70   75   80
Val Gln Met His Ser Leu Arg Val Glu Asp Thr Ala Val Tyr Tyr Cys
                85   90   95
Ala Lys Ala Arg Tyr Tyr Asp Phe Trp Gly Gly Asn Phe Asp Leu Trp
            100   105   110
Gly Arg Gly Thr Leu Val Thr Val Ser Ser
        115   120

<210> 619
<211> 324
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 619
gaaattgtgt tgacgcagtc tccaggcacc ctgtctttgt ctccagggga aagagccacc 60
ctctcctgca gggccagtca gagtgttagc atcaggtact tagcctggta tcagcagaaa 120
cctggccagg ctcccaggct cctcatctat ggtgcatcca gcagggccac tggcatccca 180
gacaggttca gtgtcagtgt gtctgggaca gacttcactc tcaccatcac tagactggag 240
cctgaagatt ttgcagtcta ttactgtcag caatatggta gttcaccgct cactttcggc 300
ggagggacca aggtggagat caaa 324

<210> 620
<211> 108
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 620
Glu Ile Val Leu Thr Gln Ser Pro Gly Thr Leu Ser Leu Ser Pro Gly
 1   5   10   15
Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Ile Arg
            20   25   30
Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu
        35   40   45
Ile Tyr Gly Ala Ser Ser Arg Ala Thr Gly Ile Pro Asp Arg Phe Ser
    50   55   60

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

<210> 621
<211> 366
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 621
gaggtgcagc tgttggagtc tgggggaggc ttggtacagc ctgggggtc cctgagactc 60
tcctgtgcag cctctggatt cacgtttagt agctatgcca tgagctgggt ccgccaggct 120
ccagggaagg ggctggagtg ggtctcagct atcagtggta atggtggtag cacctactac 180
gcagactccg tgaagggccg gttcaccatc tccagagaca attccaagaa cacgctgtat 240
ctgcaaatga acagcctgag agccgaggac acggccgtat attactgtgc gaaagcccgt 300
tattacgatt tttgggggggg gaatttcgat ctctggggcc gtggcaccct ggtcactgtc 360
tcctca 366

<210> 622
<211> 122
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 622
```
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 Ser Ser Tyr
            20                  25                  30
Ala Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35                  40                  45
Ser Ala Ile Ser Gly Asn 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 Ala Arg Tyr Tyr Asp Phe Trp Gly Gly Asn Phe Asp Leu Trp
            100                 105                 110
Gly Arg Gly Thr Leu Val Thr Val Ser Ser
        115                 120
```

<210> 623
<211> 324
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 623
gaaattgtgt tgacgcagtc tccaggcacc ctgtctttgt ctccagggga aagagccacc 60
ctctcctgca gggccagtca gagtgttagc atcaggtact tagcctggta ccagcagaaa 120

cctggccagg ctcccaggct cctcatctat ggtgcatcca gcagggccac tggcatccca 180
gacaggttca gtggcagtgg gtctgggaca gacttcactc tcaccatcag cagactggag 240
cctgaagatt ttgcagtgta ttactgtcag caatatggta gttcaccgct cactttcggc 300
ggagggacca aggtggagat caaa 324

<210> 624
<211> 108
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 624
Glu Ile Val Leu Thr Gln Ser Pro Gly Thr Leu Ser Leu Ser Pro Gly
1 5 10 15
Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Ile Arg
20 25 30
Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu
35 40 45
Ile Tyr Gly Ala Ser Ser Arg Ala Thr Gly Ile Pro Asp Arg Phe Ser
50 55 60
Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu
65 70 75 80
Pro Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Gly Ser Ser Pro
85 90 95
Leu Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
100 105

<210> 625
<211> 381
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 625
caggttcagc tggtgcagtc tggacctgag gtgaagaacc ctggggcctc agtgaaggtc 60
tcctgcaagg cttctggtta cacctttacc acctatggta tcagttgggt acgacaggcc 120
cctggacaag ggcttgagtg gatgggatgg atcagcggtt acaatggtaa aacaaacgat 180
gcacagaagt tccaggacag agtcgccatg accacagaca catccacgag cacagcctac 240
atggagctga ggagcctgag atctgacgac acggccattt attactgttc gagagatcgt 300
ttagtagtac cacctgccct ttattattcc tactacgtta tggacgtctg gggccaaggg 360
accacggtca ccgtctcctc a 381

<210> 626
<211> 127
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 626
Gln Val Gln Leu Val Gln Ser Gly Pro Glu Val Lys Asn Pro Gly Ala
1 5 10 15
Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Thr Tyr
20 25 30
Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45
Gly Trp Ile Ser Gly Tyr Asn Gly Lys Thr Asn Asp Ala Gln Lys Phe

```
    50                  55                  60
Gln Asp Arg Val Ala 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 Ile Tyr Tyr Cys
                85                  90                  95
Ser Arg Asp Arg Leu Val Val Pro Pro Ala Leu Tyr Tyr Ser Tyr Tyr
            100                 105                 110
Val Met Asp Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser
        115                 120                 125


<210> 627
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 627
ggttacacct ttaccaccta tggt                                          24

<210> 628
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 628
Gly Tyr Thr Phe Thr Thr Tyr Gly
 1               5


<210> 629
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 629
atcagcggtt acaatggtaa aaca                                          24

<210> 630
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 630
Ile Ser Gly Tyr Asn Gly Lys Thr
 1               5


<210> 631
<211> 60
<212> DNA
<213> Artificial Sequence
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<220>
<223> Synthetic

<400> 631
tcgagagatc gtttagtagt accacctgcc ctttattatt cctactacgt tatggacgtc 60

<210> 632
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 632
Ser Arg Asp Arg Leu Val Val Pro Pro Ala Leu Tyr Tyr Ser Tyr Tyr
 1   5   10   15
Val Met Asp Val
            20

<210> 633
<211> 336
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 633
gatgttgtga tgactcagtc tccactctcc ctgcccgtca cccttggaca gccggcctcc 60
atctcctgca ggtctagtca aagcctcgta tacagtgatg gaaacaccta cttgaattgg 120
tttcagcaga ggccaggtca atctccaagg cgcctaattt ataaggtttc taaccgggac 180
tctggggtcc cagacagatt cagcggcagt gggtcaggca ctgatttcac actgaaaatc 240
agcagggtgg aggctgagga tgttggggtt tattactgca tgcaaggtac acactggccg 300
tacacttttg gccaggggac caagctggag atcaaa   336

<210> 634
<211> 112
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 634
Asp Val Val Met Thr Gln Ser Pro Leu Ser Leu Pro Val Thr Leu Gly
 1   5   10   15
Gln Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Val Tyr Ser
            20   25   30
Asp Gly Asn Thr Tyr Leu Asn Trp Phe Gln Gln Arg Pro Gly Gln Ser
        35   40   45
Pro Arg Arg Leu Ile Tyr Lys Val Ser Asn Arg Asp 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 Gly
                85   90   95
Thr His Trp Pro Tyr Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
            100   105   110

<210> 635
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 635
caaagcctcg tatacagtga tggaaacacc tac 33

<210> 636
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 636
Gln Ser Leu Val Tyr Ser Asp Gly Asn Thr Tyr
1 5 10

<210> 637
<211> 9
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 637
aaggtttct 9

<210> 638
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 638
Lys Val Ser
1

<210> 639
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 639
atgcaaggta cacactggcc gtacact 27

<210> 640
<211> 9
<212> PRT

<213> Artificial Sequence

<220>
<223> Synthetic

<400> 640
Met Gln Gly Thr His Trp Pro Tyr Thr
 1   5

<210> 641
<211> 381
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 641
caggttcagc tggtgcagtc tggacctgag gtgaagaacc ctggggcctc agtgaaggtc 60
tcctgcaagg cttctggtta cacctttacc acctatggta tcagttgggt acgacaggcc 120
cctggacaag ggcttgagtg gatgggatgg atcagcggtt acaatggtaa aacaaacgat 180
gcacagaagt tccaggacag agtcgccatg accacagaca catccacgag cacagcctac 240
atggagctga ggagcctgag atctgacgac acggccattt attactgttc gagagatcgt 300
ttagtagtac cacctgccct ttattattcc tactacgtta tggacgtctg gggccaaggg 360
accacggtca ccgtctcctc a   381

<210> 642
<211> 127
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 642
Gln Val Gln Leu Val Gln Ser Gly Pro Glu Val Lys Asn Pro Gly Ala
 1   5   10   15
Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Thr Tyr
            20   25   30
Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
        35   40   45
Gly Trp Ile Ser Gly Tyr Asn Gly Lys Thr Asn Asp Ala Gln Lys Phe
    50   55   60
Gln Asp Arg Val Ala 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 Ile Tyr Tyr Cys
                85   90   95
Ser Arg Asp Arg Leu Val Val Pro Pro Ala Leu Tyr Tyr Ser Tyr Tyr
            100   105   110
Val Met Asp Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser
        115   120   125

<210> 643
<211> 336
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 643

gatgttgtga tgactcagtc tccactctcc ctgcccgtca cccttggaca gccggcctcc 60
atctcctgca ggtctagtca aagcctcgta tacagtgatg gaaacaccta cttgaattgg 120
tttcagcaga ggccaggtca atctccaagg cgcctaattt ataaggtttc taaccgggac 180
tctggggtcc cagacagatt cagcggcagt gggtcaggca ctgatttcac actgaaaatc 240
agcagggtgg aggctgagga tgttggggtt tattactgca tgcaaggtac acactggccg 300
tacacttttg gccaggggac caagctggag atcaaa 336

<210> 644
<211> 112
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 644
Asp Val Val Met Thr Gln Ser Pro Leu Ser Leu Pro Val Thr Leu Gly
 1   5   10   15
Gln Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Val Tyr Ser
            20   25   30
Asp Gly Asn Thr Tyr Leu Asn Trp Phe Gln Gln Arg Pro Gly Gln Ser
        35   40   45
Pro Arg Arg Leu Ile Tyr Lys Val Ser Asn Arg Asp 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 Gly
                85   90   95
Thr His Trp Pro Tyr Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
            100   105   110

<210> 645
<211> 381
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 645
caggttcagc tggtgcagtc tggagctgag gtgaagaagc ctggggcctc agtgaaggtc 60
tcctgcaagg cttctggtta cacctttacc acctatggta tcagctgggt gcgacaggcc 120
cctggacaag ggcttgagtg gatgggatgg atcagcggtt acaatggtaa aacaaactat 180
gcacagaagc tccagggcag agtcaccatg accacagaca catccacgag cacagcctac 240
atggagctga ggagcctgag atctgacgac acggccgtgt attactgttc gagagatcgt 300
ttagtagtac cacctgccct ttattattcc tactacgtta tggacgtctg ggggcaaggg 360
accacggtca ccgtctcctc a 381

<210> 646
<211> 127
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 646
Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
 1   5   10   15
Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Thr Tyr
            20   25   30
Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met

```
        35                  40                  45
Gly Trp Ile Ser Gly Tyr Asn Gly Lys 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
Ser Arg Asp Arg Leu Val Val Pro Pro Ala Leu Tyr Tyr Ser Tyr Tyr
            100                 105                 110
Val Met Asp Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser
        115                 120                 125


<210> 647
<211> 336
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 647
gatgttgtga tgactcagtc tccactctcc ctgcccgtca cccttggaca gccggcctcc 60
atctcctgca ggtctagtca aagcctcgta tacagtgatg gaaacaccta cttgaattgg 120
tttcagcaga ggccaggcca atctccaagg cgcctaattt ataaggtttc taaccgggac 180
tctggggtcc cagacagatt cagcggcagt gggtcaggca ctgatttcac actgaaaatc 240
agcagggtgg aggctgagga tgttggggtt tattactgca tgcaaggtac acactggccg 300
tacacttttg gccaggggac caagctggag atcaaa                          336

<210> 648
<211> 112
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 648
Asp Val Val Met Thr Gln Ser Pro Leu Ser Leu Pro Val Thr Leu Gly
 1               5                  10                  15
Gln Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Val Tyr Ser
            20                  25                  30
Asp Gly Asn Thr Tyr Leu Asn Trp Phe Gln Gln Arg Pro Gly Gln Ser
        35                  40                  45
Pro Arg Arg Leu Ile Tyr Lys Val Ser Asn Arg Asp 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 Gly
                85                  90                  95
Thr His Trp Pro Tyr Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
            100                 105                 110


<210> 649
<211> 381
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 649
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caggttcagc tggtgcagtc tggacctgag gtgaagaacc ctggggcctc agtgaaggtc 60
tcctgcaagg cttctggtta cacctttacc acctatggta tcagttgggt acgacaggcc 120
cctggacaag ggcttgagtg gatgggatgg atcagcggtt acaatggtaa aacaaacgat 180
gcacagaagt tccaggacag agtcgccatg accacagaca catccacgag cacagcctac 240
atggagctga ggagcctgag atctgacgac acggccattt attactgttc gagagatcgt 300
ttagtagtac cacctgccct taattattac tactacgtta tggacgtctg gggccaaggg 360
accacggtca ccgtctcctc a 381

<210> 650
<211> 127
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 650
Gln Val Gln Leu Val Gln Ser Gly Pro Glu Val Lys Asn Pro Gly Ala
1 5 10 15
Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Thr Tyr
20 25 30
Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45
Gly Trp Ile Ser Gly Tyr Asn Gly Lys Thr Asn Asp Ala Gln Lys Phe
50 55 60
Gln Asp Arg Val Ala 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 Ile Tyr Tyr Cys
85 90 95
Ser Arg Asp Arg Leu Val Val Pro Pro Ala Leu Asn Tyr Tyr Tyr Tyr
100 105 110
Val Met Asp Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser
115 120 125

<210> 651
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 651
ggttacacct ttaccaccta tggt 24

<210> 652
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 652
Gly Tyr Thr Phe Thr Thr Tyr Gly
1 5

<210> 653
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 653
atcagcggtt acaatggtaa aaca 24

<210> 654
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 654
Ile Ser Gly Tyr Asn Gly Lys Thr
1 5

<210> 655
<211> 60
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 655
tcgagagatc gtttagtagt accacctgcc cttaattatt actactacgt tatggacgtc 60

<210> 656
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 656
Ser Arg Asp Arg Leu Val Val Pro Pro Ala Leu Asn Tyr Tyr Tyr Tyr
1 5 10 15
Val Met Asp Val
20

<210> 657
<211> 336
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 657
gatgttgtga tgactcagtc tccactctcc ctgcccgtca cccttggaca gccggcctcc 60
atctcctgca ggtctagtca aagcctcgta tacagtgatg gaaacaccta cttgaattgg 120
tttcagcaga ggccaggtca atctccaagg cgcctaattt ataaggtttc taaccgggac 180
tctggggtcc cagacagatt cagcggcagt gggtcaggca ctgatttcac actgaaaatc 240
agcagggtgg aggctgagga tgttggggtt tattactgca tgcaaggtac acactggccg 300
tacacttttg gccaggggac caagctggag atcaaa 336

<210> 658
<211> 112
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 658
Asp Val Val Met Thr Gln Ser Pro Leu Ser Leu Pro Val Thr Leu Gly
 1   5   10   15
Gln Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Val Tyr Ser
            20   25   30
Asp Gly Asn Thr Tyr Leu Asn Trp Phe Gln Gln Arg Pro Gly Gln Ser
        35   40   45
Pro Arg Arg Leu Ile Tyr Lys Val Ser Asn Arg Asp 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 Gly
                85   90   95
Thr His Trp Pro Tyr Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
            100   105   110

<210> 659
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 659
caaagcctcg tatacagtga tggaaacacc tac   33

<210> 660
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 660
Gln Ser Leu Val Tyr Ser Asp Gly Asn Thr Tyr
 1   5   10

<210> 661
<211> 9
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 661
aaggtttct   9

<210> 662
<211> 3
<212> PRT

<213> Artificial Sequence

<220>
<223> Synthetic

<400> 662
Lys Val Ser
 1

<210> 663
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 663
atgcaaggta cacactggcc gtacact 27

<210> 664
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 664
Met Gln Gly Thr His Trp Pro Tyr Thr
 1   5

<210> 665
<211> 381
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 665
caggttcagc tggtgcagtc tggacctgag gtgaagaacc ctggggcctc agtgaaggtc 60
tcctgcaagg cttctggtta cacctttacc acctatggta tcagttgggt acgacaggcc 120
cctggacaag ggcttgagtg gatgggatgg atcagcggtt acaatggtaa aacaaacgat 180
gcacagaagt tccaggacag agtcgccatg accacagaca catccacgag cacagcctac 240
atggagctga ggagcctgag atctgacgac acggccattt attactgttc gagagatcgt 300
ttagtagtac cacctgccct taattattac tactacgtta tggacgtctg gggccaaggg 360
accacggtca ccgtctcctc a 381

<210> 666
<211> 127
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 666
Gln Val Gln Leu Val Gln Ser Gly Pro Glu Val Lys Asn Pro Gly Ala
 1   5   10   15
Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Thr Tyr

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


<210> 667
<211> 336
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 667
gatgttgtga tgactcagtc tccactctcc ctgcccgtca cccttggaca gccggcctcc 60
atctcctgca ggtctagtca aagcctcgta tacagtgatg gaaacaccta cttgaattgg 120
tttcagcaga ggccaggtca atctccaagg cgcctaattt ataaggtttc taaccgggac 180
tctggggtcc cagacagatt cagcggcagt gggtcaggca ctgatttcac actgaaaatc 240
agcagggtgg aggctgagga tgttggggtt tattactgca tgcaaggtac acactggccg 300
tacacttttg gccaggggac caagctggag atcaaa                          336

<210> 668
<211> 112
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 668
Asp Val Val Met Thr Gln Ser Pro Leu Ser Leu Pro Val Thr Leu Gly
 1               5                  10                  15
Gln Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Val Tyr Ser
            20                  25                  30
Asp Gly Asn Thr Tyr Leu Asn Trp Phe Gln Gln Arg Pro Gly Gln Ser
        35                  40                  45
Pro Arg Arg Leu Ile Tyr Lys Val Ser Asn Arg Asp 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 Gly
                85                  90                  95
Thr His Trp Pro Tyr Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
            100                 105                 110


<210> 669
<211> 381
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic
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<400> 669
caggttcagc tggtgcagtc tggagctgag gtgaagaagc ctggggcctc agtgaaggtc 60
tcctgcaagg cttctggtta cacctttacc acctatggta tcagctgggt gcgacaggcc 120
cctggacaag ggcttgagtg gatgggatgg atcagcggtt acaatggtaa aacaaactat 180
gcacagaagc tccagggcag agtcaccatg accacagaca catccacgag cacagcctac 240
atggagctga ggagcctgag atctgacgac acggccgtgt attactgttc gagagatcgt 300
ttagtagtac cacctgccct taattattac tactacgtta tggacgtctg ggggcaaggg 360
accacggtca ccgtctcctc a 381

<210> 670
<211> 127
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 670
Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
 1   5   10   15
Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Thr Tyr
            20   25   30
Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
        35   40   45
Gly Trp Ile Ser Gly Tyr Asn Gly Lys 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
Ser Arg Asp Arg Leu Val Val Pro Pro Ala Leu Asn Tyr Tyr Tyr Tyr
            100   105   110
Val Met Asp Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser
        115   120   125

<210> 671
<211> 336
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 671
gatgttgtga tgactcagtc tccactctcc ctgcccgtca cccttggaca gccggcctcc 60
atctcctgca ggtctagtca aagcctcgta tacagtgatg gaaacaccta cttgaattgg 120
tttcagcaga ggccaggcca atctccaagg cgcctaattt ataaggtttc taaccgggac 180
tctggggtcc cagacagatt cagcggcagt gggtcaggca ctgatttcac actgaaaatc 240
agcagggtgg aggctgagga tgttggggtt tattactgca tgcaaggtac acactggccg 300
tacacttttg gccaggggac caagctggag atcaaa 336

<210> 672
<211> 112
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 672
Asp Val Val Met Thr Gln Ser Pro Leu Ser Leu Pro Val Thr Leu Gly

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 1               5                  10                  15
Gln Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Val Tyr Ser
            20                  25                  30
Asp Gly Asn Thr Tyr Leu Asn Trp Phe Gln Gln Arg Pro Gly Gln Ser
        35                  40                  45
Pro Arg Arg Leu Ile Tyr Lys Val Ser Asn Arg Asp 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 Gly
                85                  90                  95
Thr His Trp Pro Tyr Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
            100                 105                 110
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<210> 673
<211> 381
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 673
caggttcagc tggtgcagtc tggacctgag gtgaagaacc ctggggcctc agtgaaggtc 60
tcctgcaagg cttctggtta cacctttacc acctatggta tcagttgggt acgacaggcc 120
cctggacaag ggcttgagtg gatgggatgg atcagcggtt acaatggtaa aacaaacgat 180
gcacagaagt tccaggacag agtcgccatg accacagaca catccacgag cacagcctac 240
atggagctga ggagcctgag atctgacgac acggccattt attactgttc gagagatcgt 300
ttagtagtac cacctgccct ttattattac tactacgtta tggacgtctg gggccaaggg 360
accacggtca ccgtctcctc a 381

<210> 674
<211> 127
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 674
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Gln Val Gln Leu Val Gln Ser Gly Pro Glu Val Lys Asn Pro Gly Ala
 1               5                  10                  15
Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Thr Tyr
            20                  25                  30
Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
        35                  40                  45
Gly Trp Ile Ser Gly Tyr Asn Gly Lys Thr Asn Asp Ala Gln Lys Phe
    50                  55                  60
Gln Asp Arg Val Ala 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 Ile Tyr Tyr Cys
                85                  90                  95
Ser Arg Asp Arg Leu Val Val Pro Pro Ala Leu Tyr Tyr Tyr Tyr Tyr
            100                 105                 110
Val Met Asp Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser
        115                 120                 125
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<210> 675
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 675
ggttacacct ttaccaccta tggt 24

<210> 676
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 676
Gly Tyr Thr Phe Thr Thr Tyr Gly
1 5

<210> 677
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 677
atcagcggtt acaatggtaa aaca 24

<210> 678
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 678
Ile Ser Gly Tyr Asn Gly Lys Thr
1 5

<210> 679
<211> 60
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 679
tcgagagatc gtttagtagt accacctgcc ctttattatt actactacgt tatggacgtc 60

<210> 680
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 680
Ser Arg Asp Arg Leu Val Val Pro Pro Ala Leu Tyr Tyr Tyr Tyr Tyr
 1   5   10   15
Val Met Asp Val
            20

<210> 681
<211> 336
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 681
gatgttgtga tgactcagtc tccactctcc ctgcccgtca cccttggaca gccggcctcc 60
atctcctgca ggtctagtca aagcctcgta tacagtgatg gaaacaccta cttgaattgg 120
tttcagcaga ggccaggtca atctccaagg cgcctaattt ataaggtttc taaccgggac 180
tctggggtcc cagacagatt cagcggcagt gggtcaggca ctgatttcac actgaaaatc 240
agcagggtgg aggctgagga tgttggggtt tattactgca tgcaaggtac acactggccg 300
tacacttttg gccaggggac caagctggag atcaaa   336

<210> 682
<211> 112
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 682
Asp Val Val Met Thr Gln Ser Pro Leu Ser Leu Pro Val Thr Leu Gly
 1   5   10   15
Gln Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Val Tyr Ser
            20   25   30
Asp Gly Asn Thr Tyr Leu Asn Trp Phe Gln Gln Arg Pro Gly Gln Ser
        35   40   45
Pro Arg Arg Leu Ile Tyr Lys Val Ser Asn Arg Asp 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 Gly
                85   90   95
Thr His Trp Pro Tyr Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
            100   105   110

<210> 683
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 683
caaagcctcg tatacagtga tggaaacacc tac   33

<210> 684
<211> 11
<212> PRT

<213> Artificial Sequence

<220>
<223> Synthetic

<400> 684
Gln Ser Leu Val Tyr Ser Asp Gly Asn Thr Tyr
 1   5   10

<210> 685
<211> 9
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 685
aaggtttct   9

<210> 686
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 686
Lys Val Ser
 1

<210> 687
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 687
atgcaaggta cacactggcc gtacact   27

<210> 688
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 688
Met Gln Gly Thr His Trp Pro Tyr Thr
 1   5

<210> 689
<211> 381
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 689
caggttcagc tggtgcagtc tggacctgag gtgaagaacc ctggggcctc agtgaaggtc 60
tcctgcaagg cttctggtta cacctttacc acctatggta tcagttgggt acgacaggcc 120
cctggacaag ggcttgagtg gatgggatgg atcagcggtt acaatggtaa aacaaacgat 180
gcacagaagt tccaggacag agtcgccatg accacagaca catccacgag cacagcctac 240
atggagctga ggagcctgag atctgacgac acggccattt attactgttc gagagatcgt 300
ttagtagtac cacctgccct ttattattac tactacgtta tggacgtctg gggccaaggg 360
accacggtca ccgtctcctc a 381

<210> 690
<211> 127
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 690
Gln Val Gln Leu Val Gln Ser Gly Pro Glu Val Lys Asn Pro Gly Ala
 1   5   10   15
Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Thr Tyr
            20   25   30
Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
        35   40   45
Gly Trp Ile Ser Gly Tyr Asn Gly Lys Thr Asn Asp Ala Gln Lys Phe
    50   55   60
Gln Asp Arg Val Ala 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 Ile Tyr Tyr Cys
                85   90   95
Ser Arg Asp Arg Leu Val Val Pro Pro Ala Leu Tyr Tyr Tyr Tyr Tyr
            100   105   110
Val Met Asp Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser
        115   120   125

<210> 691
<211> 336
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 691
gatgttgtga tgactcagtc tccactctcc ctgcccgtca cccttggaca gccggcctcc 60
atctcctgca ggtctagtca aagcctcgta tacagtgatg gaaacaccta cttgaattgg 120
tttcagcaga ggccaggtca atctccaagg cgcctaattt ataaggtttc taaccgggac 180
tctggggtcc cagacagatt cagcggcagt gggtcaggca ctgatttcac actgaaaatc 240
agcagggtgg aggctgagga tgttggggtt tattactgca tgcaaggtac acactggccg 300
tacacttttg gccaggggac caagctggag atcaaa 336

<210> 692
<211> 112
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 692
Asp Val Val Met Thr Gln Ser Pro Leu Ser Leu Pro Val Thr Leu Gly
 1   5   10   15
Gln Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Val Tyr Ser
            20   25   30
Asp Gly Asn Thr Tyr Leu Asn Trp Phe Gln Gln Arg Pro Gly Gln Ser
        35   40   45
Pro Arg Arg Leu Ile Tyr Lys Val Ser Asn Arg Asp 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 Gly
                85   90   95
Thr His Trp Pro Tyr Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
            100   105   110

<210> 693
<211> 381
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 693
caggttcagc tggtgcagtc tggagctgag gtgaagaagc ctggggcctc agtgaaggtc 60
tcctgcaagg cttctggtta cacctttacc acctatggta tcagctgggt gcgacaggcc 120
cctggacaag ggcttgagtg gatgggatgg atcagcggtt acaatggtaa aacaaactat 180
gcacagaagc tccagggcag agtcaccatg accacagaca catccacgag cacagcctac 240
atggagctga ggagcctgag atctgacgac acggccgtgt attactgttc gagagatcgt 300
ttagtagtac cacctgccct ttattattac tactacgtta tggacgtctg ggggcaaggg 360
accacggtca ccgtctcctc a   381

<210> 694
<211> 127
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 694
Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
 1   5   10   15
Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Thr Tyr
            20   25   30
Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
        35   40   45
Gly Trp Ile Ser Gly Tyr Asn Gly Lys 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
Ser Arg Asp Arg Leu Val Val Pro Pro Ala Leu Tyr Tyr Tyr Tyr Tyr
            100   105   110
Val Met Asp Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser
        115   120   125

<210> 695
<211> 336

<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 695
gatgttgtga tgactcagtc tccactctcc ctgcccgtca cccttggaca gccggcctcc 60
atctcctgca ggtctagtca aagcctcgta tacagtgatg gaaacaccta cttgaattgg 120
tttcagcaga ggccaggcca atctccaagg cgcctaattt ataaggtttc taaccgggac 180
tctggggtcc cagacagatt cagcggcagt gggtcaggca ctgatttcac actgaaaatc 240
agcagggtgg aggctgagga tgttggggtt tattactgca tgcaaggtac acactggccg 300
tacacttttg gccaggggac caagctggag atcaaa 336

<210> 696
<211> 112
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 696
Asp Val Val Met Thr Gln Ser Pro Leu Ser Leu Pro Val Thr Leu Gly
 1   5   10   15
Gln Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Val Tyr Ser
            20   25   30
Asp Gly Asn Thr Tyr Leu Asn Trp Phe Gln Gln Arg Pro Gly Gln Ser
        35   40   45
Pro Arg Arg Leu Ile Tyr Lys Val Ser Asn Arg Asp 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 Gly
                85   90   95
Thr His Trp Pro Tyr Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
            100   105   110

<210> 697
<211> 384
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 697
caggtgcacc tggtggagtc tgggggaggc ttggtcaagc ctggagggtc cctgagactc 60
tcctgtgcag cctctggatt caccttcagt gaccactaca tgagctggat ccgccaggct 120
ccagggaagg ggctggagtg gatttcatac attagtaatg atggtggtac caaatactat 180
gtggactctg tggagggccg attcatcatt tccagggaca acgccaagaa ctcattgtat 240
ctacatatga acagcctcag agccgacgac acggccgtgt attactgtgc gagagatcag 300
ggatatattg gctacgactc gtattattac tattcctacg gtatggacgt ctggggccaa 360
gggaccacgg tcaccgtcgc ctca 384

<210> 698
<211> 128
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 698
Gln Val His Leu Val Glu Ser Gly Gly Gly Leu Val Lys Pro Gly Gly
 1   5   10   15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Asp His
            20   25   30
Tyr Met Ser Trp Ile Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Ile
        35   40   45
Ser Tyr Ile Ser Asn Asp Gly Gly Thr Lys Tyr Tyr Val Asp Ser Val
    50   55   60
Glu Gly Arg Phe Ile Ile Ser Arg Asp Asn Ala Lys Asn Ser Leu Tyr
65   70   75   80
Leu His Met Asn Ser Leu Arg Ala Asp Asp Thr Ala Val Tyr Tyr Cys
                85   90   95
Ala Arg Asp Gln Gly Tyr Ile Gly Tyr Asp Ser Tyr Tyr Tyr Tyr Ser
            100   105   110
Tyr Gly Met Asp Val Trp Gly Gln Gly Thr Thr Val Thr Val Ala Ser
        115   120   125

<210> 699
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 699
ggattcacct tcagtgacca ctac   24

<210> 700
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 700
Gly Phe Thr Phe Ser Asp His Tyr
 1   5

<210> 701
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 701
attagtaatg atggtggtac caaa   24

<210> 702
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 702
Ile Ser Asn Asp Gly Gly Thr Lys
 1   5

<210> 703
<211> 63
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 703
gcgagagatc agggatatat tggctacgac tcgtattatt actattccta cggtatggac 60
gtc   63

<210> 704
<211> 21
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 704
Ala Arg Asp Gln Gly Tyr Ile Gly Tyr Asp Ser Tyr Tyr Tyr Tyr Ser
 1   5   10   15
Tyr Gly Met Asp Val
            20

<210> 705
<211> 321
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 705
aaaattgtgt tgacgcagtc tccaggcacc ctgcctttgt ttccagggga aagagccacc 60
ctctcctgta gggccagtca gagtgttaac aacaaattct tagcctggta ccagcagaaa 120
tctggccagg ctcccaggct cctcatctat ggtgcatcca gcagggccac tggcatccca 180
gacaggttca gtggcagtgg gtctgggacc gacttcactc tcaccatcag cggactggag 240
cctgaagatt ttgaagtgta ttattgtcaa gtatatggta actcactcac tttcggcgga 300
gggaccaagg tggagatcaa g   321

<210> 706
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 706
Lys Ile Val Leu Thr Gln Ser Pro Gly Thr Leu Pro Leu Phe Pro Gly
 1   5   10   15
Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Asn Asn Lys
            20   25   30
Phe Leu Ala Trp Tyr Gln Gln Lys Ser Gly Gln Ala Pro Arg Leu Leu
        35   40   45

```
Ile Tyr Gly Ala Ser Ser Arg Ala Thr Gly Ile Pro Asp Arg Phe Ser
    50                  55                  60
Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Gly Leu Glu
65                  70                  75                  80
Pro Glu Asp Phe Glu Val Tyr Tyr Cys Gln Val Tyr Gly Asn Ser Leu
                85                  90                  95
Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
            100                 105
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<210> 707
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 707
cagagtgtta acaacaaatt c 21

<210> 708
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 708
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Gln Ser Val Asn Asn Lys Phe
 1               5
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<210> 709
<211> 9
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 709
ggtgcatcc 9

<210> 710
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 710
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Gly Ala Ser
 1
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<210> 711
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 711
caagtatatg gtaactcact cact 24

<210> 712
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 712
Gln Val Tyr Gly Asn Ser Leu Thr
1 5

<210> 713
<211> 384
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 713
caggtgcagc tggtggagtc tgggggaggc ttggtcaagc ctggagggtc cctgagactc 60
tcctgtgcag cctctggatt caccttcagt gaccactaca tgagctggat ccgccaggct 120
ccagggaagg ggctggagtg gatttcatac attagtaatg atggtggtac caaatactat 180
gtggactctg tggagggccg attcatcatt tccagggaca acgccaagaa ctcattgtat 240
ctacatatga acagcctcag agccgacgac acggccgtgt attactgtgc gagagatcag 300
ggatatattg gctacgactc gtattattac tattcctacg gtatggacgt ctggggccaa 360
gggaccacgg tcaccgtctc ctca 384

<210> 714
<211> 128
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 714
Gln Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Lys Pro Gly Gly
1 5 10 15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Asp His
20 25 30
Tyr Met Ser Trp Ile Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Ile
35 40 45
Ser Tyr Ile Ser Asn Asp Gly Gly Thr Lys Tyr Tyr Val Asp Ser Val
50 55 60
Glu Gly Arg Phe Ile Ile Ser Arg Asp Asn Ala Lys Asn Ser Leu Tyr
65 70 75 80
Leu His Met Asn Ser Leu Arg Ala Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95
Ala Arg Asp Gln Gly Tyr Ile Gly Tyr Asp Ser Tyr Tyr Tyr Tyr Ser
100 105 110
Tyr Gly Met Asp Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser
115 120 125

<210> 715
<211> 321
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 715
gaaattgtgt tgacgcagtc tccaggcacc ctgcctttgt ttccagggga aagagccacc 60
ctctcctgta gggccagtca gagtgttaac aacaaattct tagcctggta ccagcagaaa 120
tctggccagg ctcccaggct cctcatctat ggtgcatcca gcagggccac tggcatccca 180
gacaggttca gtggcagtgg gtctgggacc gacttcactc tcaccatcag cggactggag 240
cctgaagatt ttgaagtgta ttattgtcaa gtatatggta actcactcac tttcggcgga 300
gggaccaagg tggagatcaa a 321

<210> 716
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 716
Glu Ile Val Leu Thr Gln Ser Pro Gly Thr Leu Pro Leu Phe Pro Gly
 1   5   10   15
Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Asn Asn Lys
            20   25   30
Phe Leu Ala Trp Tyr Gln Gln Lys Ser Gly Gln Ala Pro Arg Leu Leu
        35   40   45
Ile Tyr Gly Ala Ser Ser Arg Ala Thr Gly Ile Pro Asp Arg Phe Ser
    50   55   60
Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Gly Leu Glu
65   70   75   80
Pro Glu Asp Phe Glu Val Tyr Tyr Cys Gln Val Tyr Gly Asn Ser Leu
                85   90   95
Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
            100   105

<210> 717
<211> 384
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 717
caggtgcagc tggtggagtc tgggggaggc ttggtcaagc ctggagggtc cctgagactc 60
tcctgtgcag cctctggatt caccttcagt gaccactaca tgagctggat ccgccaggct 120
ccagggaagg ggctggagtg ggtttcatac attagtaatg atggtggtac caaatactac 180
gcagactctg tgaagggccg attcaccatc tccagggaca acgccaagaa ctcactgtat 240
ctgcaaatga acagcctgag agccgaggac acggccgtgt attactgtgc gagagatcag 300
ggatatattg gctacgactc gtattattac tattcctacg gtatggacgt ctgggggcaa 360
gggaccacgg tcaccgtctc ctca 384

<210> 718
<211> 128
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 718
Gln Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Lys Pro Gly Gly
 1   5   10   15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Asp His
            20   25   30
Tyr Met Ser Trp Ile Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35   40   45
Ser Tyr Ile Ser Asn Asp Gly Gly Thr Lys Tyr Tyr Ala Asp Ser Val
    50   55   60
Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Ser Leu Tyr
65   70   75   80
Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
                85   90   95
Ala Arg Asp Gln Gly Tyr Ile Gly Tyr Asp Ser Tyr Tyr Tyr Tyr Ser
            100   105   110
Tyr Gly Met Asp Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser
        115   120   125

<210> 719
<211> 321
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 719
gaaattgtgt tgacgcagtc tccaggcacc ctgtctttgt ctccagggga aagagccacc 60
ctctcctgca gggccagtca gagtgttaac aacaaattct tagcctggta ccagcagaaa 120
cctggccagg ctcccaggct cctcatctat ggtgcatcca gcagggccac tggcatccca 180
gacaggttca gtggcagtgg gtctgggaca gacttcactc tcaccatcag cagactggag 240
cctgaagatt ttgcagtgta ttactgtcaa gtatatggta actcactcac tttcggcgga 300
gggaccaagg tggagatcaa a   321

<210> 720
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 720
Glu Ile Val Leu Thr Gln Ser Pro Gly Thr Leu Ser Leu Ser Pro Gly
 1   5   10   15
Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Asn Asn Lys
            20   25   30
Phe Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu
        35   40   45
Ile Tyr Gly Ala Ser Ser Arg Ala Thr Gly Ile Pro Asp Arg Phe Ser
    50   55   60
Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu
65   70   75   80
Pro Glu Asp Phe Ala Val Tyr Tyr Cys Gln Val Tyr Gly Asn Ser Leu
                85   90   95
Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
            100   105

<210> 721
<211> 378
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 721
caaattctgc tggtgcaatc tggacctgag gtgaaggagc ctggggcctc agtgaaggtc 60
tcctgcaagg cttctggtta cacctttacc aactacgcta tcagctgggt gcgacaggtc 120
cctggacaag ggcttgagtg gatgggatgg gtcagcgctt acaatggtca cacaaactat 180
gcacatgaag tccagggcag agtcaccatg accacagaca catccacgac cacagcctac 240
atggagctga ggagcctgag atctgacgac acggccatgt attactgtgc gagaggggat 300
gtagtcgtgc cagttgctcc ccacttctac aacggtatgg acgtctgggg ccaagggacc 360
acggtcaccg tctcctca 378

<210> 722
<211> 126
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 722
Gln Ile Leu Leu Val Gln Ser Gly Pro Glu Val Lys Glu Pro Gly Ala
 1   5   10   15
Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asn Tyr
            20   25   30
Ala Ile Ser Trp Val Arg Gln Val Pro Gly Gln Gly Leu Glu Trp Met
        35   40   45
Gly Trp Val Ser Ala Tyr Asn Gly His Thr Asn Tyr Ala His Glu Val
    50   55   60
Gln Gly Arg Val Thr Met Thr Thr Asp Thr Ser Thr Thr Thr Ala Tyr
65   70   75   80
Met Glu Leu Arg Ser Leu Arg Ser Asp Asp Thr Ala Met Tyr Tyr Cys
                85   90   95
Ala Arg Gly Gly Val Val Val Pro Val Ala Pro His Phe Tyr Asn Gly
            100   105   110
Met Asp Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser
        115   120   125

<210> 723
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 723
ggttacacct ttaccaacta cgct 24

<210> 724
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 724
Gly Tyr Thr Phe Thr Asn Tyr Ala
 1   5

<210> 725
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 725
gtcagcgctt acaatggtca caca   24

<210> 726
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 726
Val Ser Ala Tyr Asn Gly His Thr
 1   5

<210> 727
<211> 57
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 727
gcgagagggg gtgtagtcgt gccagttgct ccccacttct acaacggtat ggacgtc   57

<210> 728
<211> 19
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 728
Ala Arg Gly Gly Val Val Val Pro Val Ala Pro His Phe Tyr Asn Gly
 1   5   10   15
Met Asp Val

<210> 729
<211> 336
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 729
gatattgtga tgactcagtt tccactctcc ctgcccgtca cccctggaga gccggcctcc 60
atctcctgca ggtctagtca gagcctcctg catattaatg aatacaacta tttggattgg 120
tacctaaaga agccagggca gtctccacag ctcctgatct atttgggttt taatcgggcc 180
tccggggtcc ctgacaggtt cagtggcagt ggatcaggca cagattttac actgaaaatc 240
agcagagtgg aggctgagga tgttggggtc tattactgca tgcaagctct tcaaactccg 300
tggacgttcg gccaagggac caaggtggaa atcaaa 336

<210> 730
<211> 112
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 730
Asp Ile Val Met Thr Gln Phe 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 Ile
            20   25   30
Asn Glu Tyr Asn Tyr Leu Asp Trp Tyr Leu Lys Lys Pro Gly Gln Ser
        35   40   45
Pro Gln Leu Leu Ile Tyr Leu Gly Phe 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 Trp Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
            100   105   110

<210> 731
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 731
cagagcctcc tgcatattaa tgaatacaac tat 33

<210> 732
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 732
Gln Ser Leu Leu His Ile Asn Glu Tyr Asn Tyr
 1   5   10

<210> 733
<211> 9
<212> DNA
<213> Artificial Sequence

<220>

<223> Synthetic

<400> 733
ttgggtttt 9

<210> 734
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 734
Leu Gly Phe
1

<210> 735
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 735
atgcaagctc ttcaaactcc gtggacg 27

<210> 736
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 736
Met Gln Ala Leu Gln Thr Pro Trp Thr
1 5

<210> 737
<211> 378
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 737
caggttcagc tggtgcagtc tggacctgag gtgaaggagc ctggggcctc agtgaaggtc 60
tcctgcaagg cttctggtta cacctttacc aactacgcta tcagctgggt gcgacaggtc 120
cctggacaag ggcttgagtg gatgggatgg gtcagcgctt acaatggtca cacaaactat 180
gcacatgaag tccagggcag agtcaccatg accacagaca catccacgac cacagcctac 240
atggagctga ggagcctgag atctgacgac acggccatgt attactgtgc gagaggggat 300
gtagtcgtgc cagttgctcc ccacttctac aacggtatgg acgtctgggg ccaagggacc 360
acggtcaccg tctcctca 378

<210> 738
<211> 126
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 738
Gln Val Gln Leu Val Gln Ser Gly Pro Glu Val Lys Glu Pro Gly Ala
 1   5   10   15
Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asn Tyr
            20   25   30
Ala Ile Ser Trp Val Arg Gln Val Pro Gly Gln Gly Leu Glu Trp Met
        35   40   45
Gly Trp Val Ser Ala Tyr Asn Gly His Thr Asn Tyr Ala His Glu Val
    50   55   60
Gln Gly Arg Val Thr Met Thr Thr Asp Thr Ser Thr Thr Thr Ala Tyr
65   70   75   80
Met Glu Leu Arg Ser Leu Arg Ser Asp Asp Thr Ala Met Tyr Tyr Cys
                85   90   95
Ala Arg Gly Gly Val Val Val Pro Val Ala Pro His Phe Tyr Asn Gly
            100   105   110
Met Asp Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser
        115   120   125

<210> 739
<211> 336
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 739
gatattgtga tgactcagtc tccactctcc ctgcccgtca cccctggaga gccggcctcc 60
atctcctgca ggtctagtca gagcctcctg catattaatg aatacaacta tttggattgg 120
tacctaaaga agccagggca gtctccacag ctcctgatct atttgggttt taatcgggcc 180
tccggggtcc ctgacaggtt cagtggcagt ggatcaggca cagattttac actgaaaatc 240
agcagagtgg aggctgagga tgttggggtc tattactgca tgcaagctct tcaaactccg 300
tggacgttcg gccaagggac caaggtggaa atcaaa   336

<210> 740
<211> 112
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 740
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 Ile
            20   25   30
Asn Glu Tyr Asn Tyr Leu Asp Trp Tyr Leu Lys Lys Pro Gly Gln Ser
        35   40   45
Pro Gln Leu Leu Ile Tyr Leu Gly Phe 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 Trp Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
            100   105   110

<210> 741
<211> 378
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 741
caggttcagc tggtgcagtc tggagctgag gtgaagaagc ctggggcctc agtgaaggtc 60
tcctgcaagg cttctggtta cacctttacc aactacgcta tcagctgggt gcgacaggcc 120
cctggacaag ggcttgagtg gatgggatgg gtcagcgctt acaatggtca cacaaactat 180
gcacagaagc tccagggcag agtcaccatg accacagaca catccacgag cacagcctac 240
atggagctga ggagcctgag atctgacgac acggccgtgt attactgtgc gagagggggt 300
gtagtcgtgc cagttgctcc ccacttctac aacggtatgg acgtctgggg gcaagggacc 360
acggtcaccg tctcctca 378

<210> 742
<211> 126
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 742
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 Asn Tyr
            20   25   30
Ala Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
        35   40   45
Gly Trp Val Ser Ala Tyr Asn Gly His Thr Asn Tyr Ala Gln Lys Leu
    50   55   60
Gln Gly Arg Val Thr Met Thr Thr Asp Thr Ser Thr Ser Thr Ala Tyr
65   70   75   80
Met Glu Leu Arg Ser Leu Arg Ser Asp Asp Thr Ala Val Tyr Tyr Cys
                85   90   95
Ala Arg Gly Gly Val Val Val Pro Val Ala Pro His Phe Tyr Asn Gly
            100   105   110
Met Asp Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser
        115   120   125

<210> 743
<211> 336
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 743
gatattgtga tgactcagtc tccactctcc ctgcccgtca cccctggaga gccggcctcc 60
atctcctgca ggtctagtca gagcctcctg catattaatg aatacaacta tttggattgg 120
tacctgcaga agccagggca gtctccacag ctcctgatct atttgggttc taatcgggcc 180
tccggggtcc ctgacaggtt cagtggcagt ggatcaggca cagattttac actgaaaatc 240
agcagagtgg aggctgagga tgttggggtt tattactgca tgcaagctct tcaaactccg 300
tggacgttcg gccaagggac caaggtggaa atcaaa 336

<210> 744
<211> 112

<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 744
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 Ile
            20   25   30
Asn Glu 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 Trp Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
            100   105   110

<210> 745
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

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

<400> 745
Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
 1   5

<210> 746
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

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

<400> 746
Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
 1   5

<210> 747
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<220>
<221> VARIANT
<222> (1)...(20)
<223> Xaa = Any amino acid

<400> 747
Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
 1   5   10   15
Xaa Xaa Xaa Xaa
            20

<210> 748
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<220>
<221> VARIANT
<222> (1)...(12)
<223> Xaa = Any amino acid

<400> 748
Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
 1   5   10

<210> 749
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

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

<400> 749
Xaa Xaa Xaa
 1

<210> 750
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<220>
<221> VARIANT
<222> (1)...(9)

<223> Xaa = Any amino acid

<400> 750
Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
1 5

<210> 751
<211> 330
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 751
Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Ser Ser Lys
1 5 10 15
Ser Thr Ser Gly Gly Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr
20 25 30
Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser
35 40 45
Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser
50 55 60
Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Gln Thr
65 70 75 80
Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn Thr Lys Val Asp Lys
85 90 95
Lys Val Glu Pro Lys Ser Cys Asp Lys Thr His Thr Cys Pro Pro Cys
100 105 110
Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro
115 120 125
Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
130 135 140
Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp
145 150 155 160
Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
165 170 175
Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
180 185 190
His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
195 200 205
Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
210 215 220
Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Asp Glu
225 230 235 240
Leu Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
245 250 255
Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
260 265 270
Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
275 280 285
Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn
290 295 300
Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
305 310 315 320
Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys
325 330

<210> 752
<211> 327
<212> PRT

<213> Artificial Sequence

<220>
<223> Synthetic

<400> 752
Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Cys Ser Arg
 1   5   10   15
Ser Thr Ser Glu Ser Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr
            20   25   30
Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser
        35   40   45
Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser
    50   55   60
Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Lys Thr
65   70   75   80
Tyr Thr Cys Asn Val Asp His Lys Pro Ser Asn Thr Lys Val Asp Lys
                85   90   95
Arg Val Glu Ser Lys Tyr Gly Pro Pro Cys Pro Ser Cys Pro Ala Pro
            100   105   110
Glu Phe Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys
        115   120   125
Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val
    130   135   140
Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp
145   150   155   160
Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe
                165   170   175
Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp
            180   185   190
Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu
        195   200   205
Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg
    210   215   220
Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys
225   230   235   240
Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp
                245   250   255
Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys
            260   265   270
Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser
        275   280   285
Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser
    290   295   300
Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser
305   310   315   320
Leu Ser Leu Ser Leu Gly Lys
                325

<210> 753
<211> 327
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 753
Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Cys Ser Arg
 1   5   10   15
Ser Thr Ser Glu Ser Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr
            20   25   30

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Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser
        35                  40                  45
Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser
    50                  55                  60
Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Lys Thr
65                  70                  75                  80
Tyr Thr Cys Asn Val Asp His Lys Pro Ser Asn Thr Lys Val Asp Lys
                85                  90                  95
Arg Val Glu Ser Lys Tyr Gly Pro Pro Cys Pro Pro Cys Pro Ala Pro
            100                 105                 110
Glu Phe Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys
        115                 120                 125
Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val
    130                 135                 140
Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp
145                 150                 155                 160
Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe
                165                 170                 175
Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp
            180                 185                 190
Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu
        195                 200                 205
Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg
    210                 215                 220
Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys
225                 230                 235                 240
Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp
                245                 250                 255
Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys
            260                 265                 270
Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser
        275                 280                 285
Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser
    290                 295                 300
Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser
305                 310                 315                 320
Leu Ser Leu Ser Leu Gly Lys
                325
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<210> 754
<211> 2076
<212> DNA
<213> Homo sapiens

<400> 754
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ctgctcctgg gtcccgcggg cgcccgtgcg caggaggacg aggacggcga ctacgaggag 120
ctggtgctag ccttgcgttc cgaggaggac ggcctggccg aagcacccga gcacggaacc 180
acagccacct tccaccgctg cgccaaggat ccgtggaggt tgcctggcac ctacgtggtg 240
gtgctgaagg aggagaccca cctctcgcag tcagagcgca ctgcccgccg cctgcaggcc 300
caggctgccc gccggggata cctcaccaag atcctgcatg tcttccatgg ccttcttcct 360
ggcttcctgg tgaagatgag tggcgacctg ctggagctgg ccttgaagtt gccccatgtc 420
gactacatcg aggaggactc ctctgtcttt gcccagagca tcccgtggaa cctggagcgg 480
attaccccctc cacggtaccg ggcggatgaa taccagcccc ccgacggagg cagcctggtg 540
gaggtgtatc tcctagacac cagcatacag agtgaccacc gggaaatcga gggcagggtc 600
atggtcaccg acttcgagaa tgtgcccgag gaggacggga cccgcttcca cagacaggcc 660
agcaagtgtg acagtcatgg cacccacctg gcaggggtgg tcagcggccg ggatgccggc 720
gtggccaagg gtgccagcat gcgcagcctg cgcgtgctca actgccaagg gaagggcacg 780
gttagcggca ccctcatagg cctggagttt attcggaaaa gccagctggt ccagcctgtg 840
gggccactgg tggtgctgct gcccctggcg ggtgggtaca gccgcgtcct caacgccgcc 900
tgccagcgcc tggcgagggc tggggtcgtg ctggtcaccg ctgccggcaa cttccgggac 960
gatgcctgcc tctactcccc agcctcagct cccgaggtca tcacagttgg ggccaccaat 1020

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gcccaggacc agccggtgac cctggggact ttggggacca actttggccg ctgtgtggac 1080
ctctttgccc caggggagga catcattggt gcctccagcg actgcagcac ctgctttgtg 1140
tcacagagtg ggacatcaca ggctgctgcc cacgtggctg gcattgcagc catgatgctg 1200
tctgccgagc cggagctcac cctggccgag ttgaggcaga gactgatcca cttctctgcc 1260
aaagatgtca tcaatgaggc ctggttccct gaggaccagc gggtactgac ccccaacctg 1320
gtggccgccc tgccccccag cacccatggg gcaggttggc agctgttttg caggactgtg 1380
tggtcagcac actcggggcc tacacggatg gccacagcca tcgcccgctg cgccccagat 1440
gaggagctgc tgagctgctc cagtttctcc aggagtggga agcggcgggg cgagcgcatg 1500
gaggcccaag ggggcaagct ggtctgccgg gcccacaacg cttttggggg tgagggtgtc 1560
tacgccattg ccaggtgctg cctgctaccc caggccaact gcagcgtcca cacagctcca 1620
ccagctgagg ccagcatggg gacccgtgtc cactgccacc aacagggcca cgtcctcaca 1680
ggctgcagct cccactggga ggtggaggac cttggcaccc acaagccgcc tgtgctgagg 1740
ccacgaggtc agcccaacca gtgcgtgggc cacagggagg ccagcatcca cgcttcctgc 1800
tgccatgccc caggtctgga atgcaaagtc aaggagcatg gaatcccggc ccctcaggag 1860
caggtgaccg tggcctgcga ggagggctgg accctgactg gctgcagtgc cctccctggg 1920
acctcccacg tcctgggggc ctacgccgta gacaacacgt gtgtagtcag gagccgggac 1980
gtcagcacta caggcagcac cagcgaagag gccgtgacag ccgttgccat ctgctgccgg 2040
agccggcacc tggcgcaggc ctcccaggag ctccag                           2076
```

<210> 755
<211> 692
<212> PRT
<213> Homo sapiens

<400> 755

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

```
    290                 295                 300
Ala Arg Ala Gly Val Val Leu Val Thr Ala Ala Gly Asn Phe Arg Asp
305                 310                 315                 320
Asp Ala Cys Leu Tyr Ser Pro Ala Ser Ala Pro Glu Val Ile Thr Val
                325                 330                 335
Gly Ala Thr Asn Ala Gln Asp Gln Pro Val Thr Leu Gly Thr Leu Gly
            340                 345                 350
Thr Asn Phe Gly Arg Cys Val Asp Leu Phe Ala Pro Gly Glu Asp Ile
        355                 360                 365
Ile Gly Ala Ser Ser Asp Cys Ser Thr Cys Phe Val Ser Gln Ser Gly
    370                 375                 380
Thr Ser Gln Ala Ala Ala His Val Ala Gly Ile Ala Ala Met Met Leu
385                 390                 395                 400
Ser Ala Glu Pro Glu Leu Thr Leu Ala Glu Leu Arg Gln Arg Leu Ile
                405                 410                 415
His Phe Ser Ala Lys Asp Val Ile Asn Glu Ala Trp Phe Pro Glu Asp
            420                 425                 430
Gln Arg Val Leu Thr Pro Asn Leu Val Ala Ala Leu Pro Pro Ser Thr
        435                 440                 445
His Gly Ala Gly Trp Gln Leu Phe Cys Arg Thr Val Trp Ser Ala His
    450                 455                 460
Ser Gly Pro Thr Arg Met Ala Thr Ala Ile Ala Arg Cys Ala Pro Asp
465                 470                 475                 480
Glu Glu Leu Leu Ser Cys Ser Ser Phe Ser Arg Ser Gly Lys Arg Arg
                485                 490                 495
Gly Glu Arg Met Glu Ala Gln Gly Gly Lys Leu Val Cys Arg Ala His
            500                 505                 510
Asn Ala Phe Gly Gly Glu Gly Val Tyr Ala Ile Ala Arg Cys Cys Leu
        515                 520                 525
Leu Pro Gln Ala Asn Cys Ser Val His Thr Ala Pro Pro Ala Glu Ala
    530                 535                 540
Ser Met Gly Thr Arg Val His Cys His Gln Gln Gly His Val Leu Thr
545                 550                 555                 560
Gly Cys Ser Ser His Trp Glu Val Glu Asp Leu Gly Thr His Lys Pro
                565                 570                 575
Pro Val Leu Arg Pro Arg Gly Gln Pro Asn Gln Cys Val Gly His Arg
            580                 585                 590
Glu Ala Ser Ile His Ala Ser Cys Cys His Ala Pro Gly Leu Glu Cys
        595                 600                 605
Lys Val Lys Glu His Gly Ile Pro Ala Pro Gln Glu Gln Val Thr Val
    610                 615                 620
Ala Cys Glu Glu Gly Trp Thr Leu Thr Gly Cys Ser Ala Leu Pro Gly
625                 630                 635                 640
Thr Ser His Val Leu Gly Ala Tyr Ala Val Asp Asn Thr Cys Val Val
                645                 650                 655
Arg Ser Arg Asp Val Ser Thr Thr Gly Ser Thr Ser Glu Glu Ala Val
            660                 665                 670
Thr Ala Val Ala Ile Cys Cys Arg Ser Arg His Leu Ala Gln Ala Ser
        675                 680                 685
Gln Glu Leu Gln
    690
```

<210> 756
<211> 692
<212> PRT
<213> Macaca mulata

<400> 756

```
Met Gly Thr Val Ser Ser Arg Arg Ser Trp Trp Pro Leu Pro Leu Pro
 1               5                  10                  15
Leu Leu Leu Leu Leu Leu Leu Gly Pro Ala Gly Ala Arg Ala Gln Glu
```

```
            20                  25                  30
Asp Glu Asp Gly Asp Tyr Glu Glu Leu Val Leu Ala Leu Arg Ser Glu
        35                  40                  45
Glu Asp Gly Leu Ala Asp Ala Pro Glu His Gly Ala Thr Ala Thr Phe
    50                  55                  60
His Arg Cys Ala Lys Asp Pro Trp Arg Leu Pro Gly Thr Tyr Val Val
65                  70                  75                  80
Val Leu Lys Glu Glu Thr His Arg Ser Gln Ser Glu Arg Thr Ala Arg
                85                  90                  95
Arg Leu Gln Ala Gln Ala Ala Arg Arg Gly Tyr Leu Thr Lys Ile Leu
            100                 105                 110
His Val Phe His His Leu Leu Pro Gly Phe Leu Val Lys Met Ser Gly
        115                 120                 125
Asp Leu Leu Glu Leu Ala Leu Lys Leu Pro His Val Asp Tyr Ile Glu
    130                 135                 140
Glu Asp Ser Ser Val Phe Ala Gln Ser Ile Pro Trp Asn Leu Glu Arg
145                 150                 155                 160
Ile Thr Pro Ala Arg Tyr Arg Ala Asp Glu Tyr Gln Pro Pro Lys Gly
                165                 170                 175
Gly Ser Leu Val Glu Val Tyr Leu Leu Asp Thr Ser Ile Gln Ser Asp
            180                 185                 190
His Arg Glu Ile Glu Gly Arg Val Met Val Thr Asp Phe Glu Ser Val
        195                 200                 205
Pro Glu Glu Asp Gly Thr Arg Phe His Arg Gln Ala Ser Lys Cys Asp
    210                 215                 220
Ser His Gly Thr His Leu Ala Gly Val Val Ser Gly Arg Asp Ala Gly
225                 230                 235                 240
Val Ala Lys Gly Ala Gly Leu Arg Ser Leu Arg Val Leu Asn Cys Gln
                245                 250                 255
Gly Lys Gly Thr Val Ser Gly Thr Leu Ile Gly Leu Glu Phe Ile Arg
            260                 265                 270
Lys Ser Gln Leu Val Gln Pro Val Gly Pro Leu Val Val Leu Leu Pro
        275                 280                 285
Leu Ala Gly Gly Tyr Ser Arg Val Phe Asn Ala Ala Cys Gln Arg Leu
    290                 295                 300
Ala Arg Ala Gly Val Val Leu Val Thr Ala Ala Gly Asn Phe Arg Asp
305                 310                 315                 320
Asp Ala Cys Leu Tyr Ser Pro Ala Ser Ala Pro Glu Val Ile Thr Val
                325                 330                 335
Gly Ala Thr Asn Ala Gln Asp Gln Pro Val Thr Leu Gly Thr Leu Gly
            340                 345                 350
Thr Asn Phe Gly Arg Cys Val Asp Leu Phe Ala Pro Gly Glu Asp Ile
        355                 360                 365
Ile Gly Ala Ser Ser Asp Cys Ser Thr Cys Phe Val Ser Arg Ser Gly
    370                 375                 380
Thr Ser Gln Ala Ala Ala His Val Ala Gly Ile Ala Ala Met Met Leu
385                 390                 395                 400
Ser Ala Glu Pro Glu Leu Thr Leu Ala Glu Leu Arg Gln Arg Leu Ile
                405                 410                 415
His Phe Ser Ala Lys Asp Val Ile Asn Glu Ala Trp Phe Pro Glu Asp
            420                 425                 430
Gln Arg Val Leu Thr Pro Asn Leu Val Ala Ala Leu Pro Pro Ser Thr
        435                 440                 445
His Arg Ala Gly Trp Gln Leu Phe Cys Arg Thr Val Trp Ser Ala His
    450                 455                 460
Ser Gly Pro Thr Arg Met Ala Thr Ala Val Ala Arg Cys Ala Gln Asp
465                 470                 475                 480
Glu Glu Leu Leu Ser Cys Ser Ser Phe Ser Arg Ser Gly Lys Arg Arg
                485                 490                 495
Gly Glu Arg Ile Glu Ala Gln Gly Gly Lys Arg Val Cys Arg Ala His
            500                 505                 510
Asn Ala Phe Gly Gly Glu Gly Val Tyr Ala Ile Ala Arg Cys Cys Leu
        515                 520                 525
```

```
Leu Pro Gln Val Asn Cys Ser Val His Thr Ala Pro Pro Ala Gly Ala
    530                 535                 540
Ser Met Gly Thr Arg Val His Cys His Gln Gln Gly His Val Leu Thr
545                 550                 555                 560
Gly Cys Ser Ser His Trp Glu Val Glu Asp Leu Gly Thr His Lys Pro
                565                 570                 575
Pro Val Leu Arg Pro Arg Gly Gln Pro Asn Gln Cys Val Gly His Arg
            580                 585                 590
Glu Ala Ser Ile His Ala Ser Cys Cys His Ala Pro Gly Leu Glu Cys
        595                 600                 605
Lys Val Lys Glu His Gly Ile Pro Ala Pro Gln Glu Gln Val Ile Val
    610                 615                 620
Ala Cys Glu Asp Gly Trp Thr Leu Thr Gly Cys Ser Pro Leu Pro Gly
625                 630                 635                 640
Thr Ser His Val Leu Gly Ala Tyr Ala Val Asp Asn Thr Cys Val Val
                645                 650                 655
Arg Ser Arg Asp Val Ser Thr Thr Gly Ser Thr Ser Lys Glu Ala Val
            660                 665                 670
Ala Ala Val Ala Ile Cys Cys Arg Ser Arg His Leu Val Gln Ala Ser
        675                 680                 685
Gln Glu Leu Gln
    690
```

<210> 757
<211> 694
<212> PRT
<213> Mus muscular

<400> 757

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

```
            260                 265                 270
Phe Ile Arg Lys Ser Gln Leu Ile Gln Pro Ser Gly Pro Leu Val Val
        275                 280                 285
Leu Leu Pro Leu Ala Gly Gly Tyr Ser Arg Ile Leu Asn Ala Ala Cys
    290                 295                 300
Arg His Leu Ala Arg Thr Gly Val Val Leu Val Ala Ala Ala Gly Asn
305                 310                 315                 320
Phe Arg Asp Asp Ala Cys Leu Tyr Ser Pro Ala Ser Ala Pro Glu Val
                325                 330                 335
Ile Thr Val Gly Ala Thr Asn Ala Gln Asp Gln Pro Val Thr Leu Gly
            340                 345                 350
Thr Leu Gly Thr Asn Phe Gly Arg Cys Val Asp Leu Phe Ala Pro Gly
        355                 360                 365
Lys Asp Ile Ile Gly Ala Ser Ser Asp Cys Ser Thr Cys Phe Met Ser
    370                 375                 380
Gln Ser Gly Thr Ser Gln Ala Ala Ala His Val Ala Gly Ile Val Ala
385                 390                 395                 400
Arg Met Leu Ser Arg Glu Pro Thr Leu Thr Leu Ala Glu Leu Arg Gln
                405                 410                 415
Arg Leu Ile His Phe Ser Thr Lys Asp Val Ile Asn Met Ala Trp Phe
            420                 425                 430
Pro Glu Asp Gln Gln Val Leu Thr Pro Asn Leu Val Ala Thr Leu Pro
        435                 440                 445
Pro Ser Thr His Glu Thr Gly Gly Gln Leu Leu Cys Arg Thr Val Trp
    450                 455                 460
Ser Ala His Ser Gly Pro Thr Arg Thr Ala Thr Ala Thr Ala Arg Cys
465                 470                 475                 480
Ala Pro Glu Glu Glu Leu Leu Ser Cys Ser Ser Phe Ser Arg Ser Gly
                485                 490                 495
Arg Arg Arg Gly Asp Trp Ile Glu Ala Ile Gly Gly Gln Gln Val Cys
            500                 505                 510
Lys Ala Leu Asn Ala Phe Gly Gly Glu Gly Val Tyr Ala Val Ala Arg
        515                 520                 525
Cys Cys Leu Val Pro Arg Ala Asn Cys Ser Ile His Asn Thr Pro Ala
    530                 535                 540
Ala Arg Ala Gly Leu Glu Thr His Val His Cys His Gln Lys Asp His
545                 550                 555                 560
Val Leu Thr Gly Cys Ser Phe His Trp Glu Val Glu Asp Leu Ser Val
                565                 570                 575
Arg Arg Gln Pro Ala Leu Arg Ser Arg Arg Gln Pro Gly Gln Cys Val
            580                 585                 590
Gly His Gln Ala Ala Ser Val Tyr Ala Ser Cys Cys His Ala Pro Gly
        595                 600                 605
Leu Glu Cys Lys Ile Lys Glu His Gly Ile Ser Gly Pro Ser Glu Gln
    610                 615                 620
Val Thr Val Ala Cys Glu Ala Gly Trp Thr Leu Thr Gly Cys Asn Val
625                 630                 635                 640
Leu Pro Gly Ala Ser Leu Thr Leu Gly Ala Tyr Ser Val Asp Asn Leu
                645                 650                 655
Cys Val Ala Arg Val His Asp Thr Ala Arg Ala Asp Arg Thr Ser Gly
            660                 665                 670
Glu Ala Thr Val Ala Ala Ala Ile Cys Cys Arg Ser Arg Pro Ser Ala
        675                 680                 685
Lys Ala Ser Trp Val Gln
    690
```

<210> 758
<211> 653
<212> PRT
<213> Homo sapiens

<400> 758

```
Glu Phe Arg Cys His Asp Gly Lys Cys Ile Ser Arg Gln Phe Val Cys
 1               5                  10                  15
Asp Ser Asp Arg Asp Cys Leu Asp Gly Ser Asp Glu Ala Ser Cys Pro
            20                  25                  30
Val Leu Thr Cys Gly Pro Ala Ser Phe Gln Cys Asn Ser Ser Thr Cys
        35                  40                  45
Ile Pro Gln Leu Trp Ala Cys Asp Asn Asp Pro Asp Cys Glu Asp Gly
    50                  55                  60
Ser Asp Glu Trp Pro Gln Arg Cys Arg Gly Leu Tyr Val Phe Gln Gly
65                  70                  75                  80
Asp Ser Ser Pro Cys Ser Ala Phe Glu Phe His Cys Leu Ser Gly Glu
                85                  90                  95
Cys Ile His Ser Ser Trp Arg Cys Asp Gly Gly Pro Asp Cys Lys Asp
            100                 105                 110
Lys Ser Asp Glu Glu Asn Cys Ala Val Ala Thr Cys Arg Pro Asp Glu
        115                 120                 125
Phe Gln Cys Ser Asp Gly Asn Cys Ile His Gly Ser Arg Gln Cys Asp
    130                 135                 140
Arg Glu Tyr Asp Cys Lys Asp Met Ser Asp Glu Val Gly Cys Val Asn
145                 150                 155                 160
Val Thr Leu Cys Glu Gly Pro Asn Lys Phe Lys Cys His Ser Gly Glu
                165                 170                 175
Cys Ile Thr Leu Asp Lys Val Cys Asn Met Ala Arg Asp Cys Arg Asp
            180                 185                 190
Trp Ser Asp Glu Pro Ile Lys Glu Cys Gly Thr Asn Glu Cys Leu Asp
        195                 200                 205
Asn Asn Gly Gly Cys Ser His Val Cys Asn Asp Leu Lys Ile Gly Tyr
    210                 215                 220
Glu Cys Leu Cys Pro Asp Gly Phe Gln Leu Val Ala Gln Arg Arg Cys
225                 230                 235                 240
Glu Asp Ile Asp Glu Cys Gln Asp Pro Asp Thr Cys Ser Gln Leu Cys
                245                 250                 255
Val Asn Leu Glu Gly Gly Tyr Lys Cys Gln Cys Glu Glu Gly Phe Gln
            260                 265                 270
Leu Asp Pro His Thr Lys Ala Cys Lys Ala Val Gly Ser Ile Ala Tyr
        275                 280                 285
Leu Phe Phe Thr Asn Arg His Glu Val Arg Lys Met Thr Leu Asp Arg
    290                 295                 300
Ser Glu Tyr Thr Ser Leu Ile Pro Asn Leu Arg Asn Val Val Ala Leu
305                 310                 315                 320
Asp Thr Glu Val Ala Ser Asn Arg Ile Tyr Trp Ser Asp Leu Ser Gln
                325                 330                 335
Arg Met Ile Cys Ser Thr Gln Leu Asp Arg Ala His Gly Val Ser Ser
            340                 345                 350
Tyr Asp Thr Val Ile Ser Arg Asp Ile Gln Ala Pro Asp Gly Leu Ala
        355                 360                 365
Val Asp Trp Ile His Ser Asn Ile Tyr Trp Thr Asp Ser Val Leu Gly
    370                 375                 380
Thr Val Ser Val Ala Asp Thr Lys Gly Val Lys Arg Lys Thr Leu Phe
385                 390                 395                 400
Arg Glu Asn Gly Ser Lys Pro Arg Ala Ile Val Val Asp Pro Val His
                405                 410                 415
Gly Phe Met Tyr Trp Thr Asp Trp Gly Thr Pro Ala Lys Ile Lys Lys
            420                 425                 430
Gly Gly Leu Asn Gly Val Asp Ile Tyr Ser Leu Val Thr Glu Asn Ile
        435                 440                 445
Gln Trp Pro Asn Gly Ile Thr Leu Asp Leu Leu Ser Gly Arg Leu Tyr
    450                 455                 460
Trp Val Asp Ser Lys Leu His Ser Ile Ser Ser Ile Asp Val Asn Gly
465                 470                 475                 480
Gly Asn Arg Lys Thr Ile Leu Glu Asp Glu Lys Arg Leu Ala His Pro
                485                 490                 495
Phe Ser Leu Ala Val Phe Glu Asp Lys Val Phe Trp Thr Asp Ile Ile
```

```
            500                 505                 510
Asn Glu Ala Ile Phe Ser Ala Asn Arg Leu Thr Gly Ser Asp Val Asn
        515                 520                 525
Leu Leu Ala Glu Asn Leu Leu Ser Pro Glu Asp Met Val Leu Phe His
    530                 535                 540
Asn Leu Thr Gln Pro Arg Gly Val Asn Trp Cys Glu Arg Thr Thr Leu
545                 550                 555                 560
Ser Asn Gly Gly Cys Gln Tyr Leu Cys Leu Pro Ala Pro Gln Ile Asn
                565                 570                 575
Pro His Ser Pro Lys Phe Thr Cys Ala Cys Pro Asp Gly Met Leu Leu
            580                 585                 590
Ala Arg Asp Met Arg Ser Cys Leu Thr Glu Ala Glu Ala Ala Val Ala
        595                 600                 605
Thr Gln Glu Thr Ser Thr Val Arg Leu Lys Val Ser Ser Thr Ala Val
    610                 615                 620
Arg Thr Gln His Thr Thr Thr Arg Pro Val Pro Asp Thr Ser Arg Leu
625                 630                 635                 640
Pro Gly Ala Thr Pro Gly Leu Thr Thr Val Glu Ile Val
                645                 650
```

<210> 759
<211> 753
<212> PRT
<213> Homo sapiens

<400> 759

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

```
Glu Tyr Gly Val Lys Gln Gly Arg Gln Gly Lys Gly Ser Ile Phe Val
    290                 295                 300
Trp Ala Ser Gly Asn Gly Gly Arg Gln Gly Asp Asn Cys Asp Cys Asp
305                 310                 315                 320
Gly Tyr Thr Asp Ser Ile Tyr Thr Ile Ser Ile Ser Ser Ala Ser Gln
                325                 330                 335
Gln Gly Leu Ser Pro Trp Tyr Ala Glu Lys Cys Ser Ser Thr Leu Ala
            340                 345                 350
Thr Ser Tyr Ser Ser Gly Asp Tyr Thr Asp Gln Arg Ile Thr Ser Ala
        355                 360                 365
Asp Leu His Asn Asp Cys Thr Glu Thr His Thr Gly Thr Ser Ala Ser
    370                 375                 380
Ala Pro Leu Ala Ala Gly Ile Phe Ala Leu Ala Leu Glu Ala Asn Pro
385                 390                 395                 400
Asn Leu Thr Trp Arg Asp Met Gln His Leu Val Val Trp Thr Ser Glu
                405                 410                 415
Tyr Asp Pro Leu Ala Asn Asn Pro Gly Trp Lys Lys Asn Gly Ala Gly
            420                 425                 430
Leu Met Val Asn Ser Arg Phe Gly Phe Gly Leu Leu Asn Ala Lys Ala
        435                 440                 445
Leu Val Asp Leu Ala Asp Pro Arg Thr Trp Arg Ser Val Pro Glu Lys
    450                 455                 460
Lys Glu Cys Val Val Lys Asp Asn Asp Phe Glu Pro Arg Ala Leu Lys
465                 470                 475                 480
Ala Asn Gly Glu Val Ile Ile Glu Ile Pro Thr Arg Ala Cys Glu Gly
                485                 490                 495
Gln Glu Asn Ala Ile Lys Ser Leu Glu His Val Gln Phe Glu Ala Thr
            500                 505                 510
Ile Glu Tyr Ser Arg Arg Gly Asp Leu His Val Thr Leu Thr Ser Ala
        515                 520                 525
Ala Gly Thr Ser Thr Val Leu Leu Ala Glu Arg Glu Arg Asp Thr Ser
    530                 535                 540
Pro Asn Gly Phe Lys Asn Trp Asp Phe Met Ser Val His Thr Trp Gly
545                 550                 555                 560
Glu Asn Pro Ile Gly Thr Trp Thr Leu Arg Ile Thr Asp Met Ser Gly
                565                 570                 575
Arg Ile Gln Asn Glu Gly Arg Ile Val Asn Trp Lys Leu Ile Leu His
            580                 585                 590
Gly Thr Ser Ser Gln Pro Glu His Met Lys Gln Pro Arg Val Tyr Thr
        595                 600                 605
Ser Tyr Asn Thr Val Gln Asn Asp Arg Arg Gly Val Glu Lys Met Val
    610                 615                 620
Asp Pro Gly Glu Glu Gln Pro Thr Gln Glu Asn Pro Lys Glu Asn Thr
625                 630                 635                 640
Leu Val Ser Lys Ser Pro Ser Ser Ser Ser Val Gly Gly Arg Arg Asp
                645                 650                 655
Glu Leu Glu Glu Gly Ala Pro Ser Gln Ala Met Leu Arg Leu Leu Gln
            660                 665                 670
Ser Ala Phe Ser Lys Asn Ser Pro Pro Lys Gln Ser Pro Lys Lys Ser
        675                 680                 685
Pro Ser Ala Lys Leu Asn Ile Pro Tyr Glu Asn Phe Tyr Glu Ala Leu
    690                 695                 700
Glu Lys Leu Asn Lys Pro Ser Gln Leu Lys Asp Ser Glu Asp Ser Leu
705                 710                 715                 720
Tyr Asn Asp Tyr Val Asp Val Phe Tyr Asn Thr Lys Pro Tyr Lys His
                725                 730                 735
Arg Asp Asp Arg Leu Leu Gln Ala Leu Val Asp Ile Leu Asn Glu Glu
            740                 745                 750
Asn
```

<210> 760

<211> 785
<212> PRT
<213> Homo sapiens

<400> 760
Met Pro Lys Gly Arg Gln Lys Val Pro His Leu Asp Ala Pro Leu Gly
 1   5   10   15
Leu Pro Thr Cys Leu Trp Leu Glu Leu Ala Gly Leu Phe Leu Leu Val
            20   25   30
Pro Trp Val Met Gly Leu Ala Gly Thr Gly Gly Pro Asp Gly Gln Gly
        35   40   45
Thr Gly Gly Pro Ser Trp Ala Val His Leu Glu Ser Leu Glu Gly Asp
    50   55   60
Gly Glu Glu Glu Thr Leu Glu Gln Gln Ala Asp Ala Leu Ala Gln Ala
65   70   75   80
Ala Gly Leu Val Asn Ala Gly Arg Ile Gly Glu Leu Gln Gly His Tyr
                85   90   95
Leu Phe Val Gln Pro Ala Gly His Arg Pro Ala Leu Glu Val Glu Ala
            100   105   110
Ile Arg Gln Gln Val Glu Ala Val Leu Ala Gly His Glu Ala Val Arg
        115   120   125
Trp His Ser Glu Gln Arg Leu Leu Arg Arg Ala Lys Arg Ser Val His
    130   135   140
Phe Asn Asp Pro Lys Tyr Pro Gln Gln Trp His Leu Asn Asn Arg Arg
145   150   155   160
Ser Pro Gly Arg Asp Ile Asn Val Thr Gly Val Trp Glu Arg Asn Val
                165   170   175
Thr Gly Arg Gly Val Thr Val Val Val Val Asp Asp Gly Val Glu His
            180   185   190
Thr Ile Gln Asp Ile Ala Pro Asn Tyr Ser Pro Glu Gly Ser Tyr Asp
        195   200   205
Leu Asn Ser Asn Asp Pro Asp Pro Met Pro His Pro Asp Val Glu Asn
    210   215   220
Gly Asn His His Gly Thr Arg Cys Ala Gly Glu Ile Ala Ala Val Pro
225   230   235   240
Asn Asn Ser Phe Cys Ala Val Gly Val Ala Tyr Gly Ser Arg Ile Ala
                245   250   255
Gly Ile Arg Val Leu Asp Gly Pro Leu Thr Asp Ser Met Glu Ala Val
            260   265   270
Ala Phe Asn Lys His Tyr Gln Ile Asn Asp Ile Tyr Ser Cys Ser Trp
        275   280   285
Gly Pro Asp Asp Asp Gly Lys Thr Val Asp Gly Pro His Gln Leu Gly
    290   295   300
Lys Ala Ala Leu Gln His Gly Val Ile Ala Gly Arg Gln Gly Phe Gly
305   310   315   320
Ser Ile Phe Val Val Ala Ser Gly Asn Gly Gly Gln His Asn Asp Asn
                325   330   335
Cys Asn Tyr Asp Gly Tyr Ala Asn Ser Ile Tyr Thr Val Thr Ile Gly
            340   345   350
Ala Val Asp Glu Glu Gly Arg Met Pro Phe Tyr Ala Glu Glu Cys Ala
        355   360   365
Ser Met Leu Ala Val Thr Phe Ser Gly Gly Asp Lys Met Leu Arg Ser
    370   375   380
Ile Val Thr Thr Asp Trp Asp Leu Gln Lys Gly Thr Gly Cys Thr Glu
385   390   395   400
Gly His Thr Gly Thr Ser Ala Ala Ala Pro Leu Ala Ala Gly Met Ile
                405   410   415
Ala Leu Met Leu Gln Val Arg Pro Cys Leu Thr Trp Arg Asp Val Gln
            420   425   430
His Ile Ile Val Phe Thr Ala Thr Arg Tyr Glu Asp Arg Arg Ala Glu
        435   440   445
Trp Val Thr Asn Glu Ala Gly Phe Ser His Ser His Gln His Gly Phe
    450   455   460

```
Gly Leu Leu Asn Ala Trp Arg Leu Val Asn Ala Ala Lys Ile Trp Thr
465                 470                 475                 480
Ser Val Pro Tyr Leu Ala Ser Tyr Val Ser Pro Val Leu Lys Glu Asn
                485                 490                 495
Lys Ala Ile Pro Gln Ser Pro Arg Ser Leu Glu Val Leu Trp Asn Val
            500                 505                 510
Ser Arg Met Asp Leu Glu Met Ser Gly Leu Lys Thr Leu Glu His Val
        515                 520                 525
Ala Val Thr Val Ser Ile Thr His Pro Arg Arg Gly Ser Leu Glu Leu
    530                 535                 540
Lys Leu Phe Cys Pro Ser Gly Met Met Ser Leu Ile Gly Ala Pro Arg
545                 550                 555                 560
Ser Met Asp Ser Asp Pro Asn Gly Phe Asn Asp Trp Thr Phe Ser Thr
                565                 570                 575
Val Arg Cys Trp Gly Glu Arg Ala Arg Gly Thr Tyr Arg Leu Val Ile
            580                 585                 590
Arg Asp Val Gly Asp Glu Ser Phe Gln Val Gly Ile Leu Arg Gln Trp
        595                 600                 605
Gln Leu Thr Leu Tyr Gly Ser Val Trp Ser Ala Val Asp Ile Arg Asp
    610                 615                 620
Arg Gln Arg Leu Leu Glu Ser Ala Met Ser Gly Lys Tyr Leu His Asp
625                 630                 635                 640
Asp Phe Ala Leu Pro Cys Pro Pro Gly Leu Lys Ile Pro Glu Glu Asp
                645                 650                 655
Gly Tyr Thr Ile Thr Pro Asn Thr Leu Lys Thr Leu Val Leu Val Gly
            660                 665                 670
Cys Phe Thr Val Phe Trp Thr Val Tyr Tyr Met Leu Glu Val Tyr Leu
        675                 680                 685
Ser Gln Arg Asn Val Ala Ser Asn Gln Val Cys Arg Ser Gly Pro Cys
    690                 695                 700
His Trp Pro His Arg Ser Arg Lys Ala Lys Glu Glu Gly Thr Glu Leu
705                 710                 715                 720
Glu Ser Val Pro Leu Cys Ser Ser Lys Asp Pro Asp Glu Val Glu Thr
                725                 730                 735
Glu Ser Arg Gly Pro Pro Thr Thr Ser Asp Leu Leu Ala Pro Asp Leu
            740                 745                 750
Leu Glu Gln Gly Asp Trp Ser Leu Ser Gln Asn Lys Ser Ala Leu Asp
        755                 760                 765
Cys Pro His Gln His Leu Asp Val Pro His Gly Lys Glu Glu Gln Ile
    770                 775                 780
Cys
785
```

<210> 761
<211> 692
<212> PRT
<213> Macaca fascicularis

<400> 761

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

```
            100                 105                 110
His Val Phe His His Leu Leu Pro Gly Phe Leu Val Lys Met Ser Gly
        115                 120                 125
Asp Leu Leu Glu Leu Ala Leu Lys Leu Pro His Val Asp Tyr Ile Glu
    130                 135                 140
Glu Asp Ser Ser Val Phe Ala Gln Ser Ile Pro Trp Asn Leu Glu Arg
145                 150                 155                 160
Ile Thr Pro Ala Arg Tyr Arg Ala Asp Glu Tyr Gln Pro Pro Lys Gly
                165                 170                 175
Gly Ser Leu Val Glu Val Tyr Leu Leu Asp Thr Ser Ile Gln Ser Asp
            180                 185                 190
His Arg Glu Ile Glu Gly Arg Val Met Val Thr Asp Phe Glu Ser Val
        195                 200                 205
Pro Glu Glu Asp Gly Thr Arg Phe His Arg Gln Ala Ser Lys Cys Asp
    210                 215                 220
Ser His Gly Thr His Leu Ala Gly Val Val Ser Gly Arg Asp Ala Gly
225                 230                 235                 240
Val Ala Lys Gly Ala Gly Leu Arg Ser Leu Arg Val Leu Asn Cys Gln
                245                 250                 255
Gly Lys Gly Thr Val Ser Gly Thr Leu Ile Gly Leu Glu Phe Ile Arg
            260                 265                 270
Lys Ser Gln Leu Val Gln Pro Val Gly Pro Leu Val Val Leu Leu Pro
        275                 280                 285
Leu Ala Gly Gly Tyr Ser Arg Val Phe Asn Ala Ala Cys Gln Arg Leu
    290                 295                 300
Ala Arg Ala Gly Val Val Leu Val Thr Ala Ala Gly Asn Phe Arg Asp
305                 310                 315                 320
Asp Ala Cys Leu Tyr Ser Pro Ala Ser Ala Pro Glu Val Ile Thr Val
                325                 330                 335
Gly Ala Thr Asn Ala Gln Asp Gln Pro Val Thr Leu Gly Thr Leu Gly
            340                 345                 350
Thr Asn Phe Gly Arg Cys Val Asp Leu Phe Ala Pro Gly Glu Asp Ile
        355                 360                 365
Ile Gly Ala Ser Ser Asp Cys Ser Thr Cys Phe Val Ser Arg Ser Gly
    370                 375                 380
Thr Ser Gln Ala Ala Ala His Val Ala Gly Ile Ala Ala Met Met Leu
385                 390                 395                 400
Ser Ala Glu Pro Glu Leu Thr Leu Ala Glu Leu Arg Gln Arg Leu Ile
                405                 410                 415
His Phe Ser Ala Lys Asp Val Ile Asn Glu Ala Trp Phe Pro Glu Asp
            420                 425                 430
Gln Arg Val Leu Thr Pro Asn Leu Val Ala Ala Leu Pro Pro Ser Thr
        435                 440                 445
His Arg Ala Gly Trp Gln Leu Phe Cys Arg Thr Val Trp Ser Ala His
    450                 455                 460
Ser Gly Pro Thr Arg Met Ala Thr Ala Val Ala Arg Cys Ala Gln Asp
465                 470                 475                 480
Glu Glu Leu Leu Ser Cys Ser Ser Phe Ser Arg Ser Gly Lys Arg Arg
                485                 490                 495
Gly Glu Arg Ile Glu Ala Gln Gly Gly Lys Arg Val Cys Arg Ala His
            500                 505                 510
Asn Ala Phe Gly Gly Glu Gly Val Tyr Ala Ile Ala Arg Cys Cys Leu
        515                 520                 525
Leu Pro Gln Val Asn Cys Ser Val His Thr Ala Pro Pro Ala Gly Ala
    530                 535                 540
Ser Met Gly Thr Arg Val His Cys His Gln Gln Gly His Val Leu Thr
545                 550                 555                 560
Gly Cys Ser Ser His Trp Glu Val Glu Asp Leu Gly Thr His Lys Pro
                565                 570                 575
Pro Val Leu Arg Pro Arg Gly Gln Pro Asn Gln Cys Val Gly His Arg
            580                 585                 590
Glu Ala Ser Ile His Ala Ser Cys Cys His Ala Pro Gly Leu Glu Cys
        595                 600                 605
```

```
Lys Val Lys Glu His Gly Ile Pro Ala Pro Gln Glu Gln Val Ile Val
    610                 615                 620
Ala Cys Glu Asp Gly Trp Thr Leu Thr Gly Cys Ser Ala Leu Pro Gly
625                 630                 635                 640
Thr Ser His Val Leu Gly Ala Tyr Ala Val Asp Asn Thr Cys Val Val
                645                 650                 655
Arg Ser Arg Asp Val Ser Thr Thr Gly Ser Thr Ser Glu Glu Ala Val
            660                 665                 670
Ala Ala Val Ala Ile Cys Cys Arg Ser Arg His Leu Val Gln Ala Ser
        675                 680                 685
Gln Glu Leu Gln
    690
```

<210> 762
<211> 698
<212> PRT
<213> Mesocricetus auratus

<400> 762

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

```
            340                 345                 350
Thr Leu Gly Thr Leu Gly Thr Asn Phe Gly Arg Cys Val Asp Leu Phe
        355                 360                 365
Ala Pro Gly Lys Asp Ile Ile Gly Ala Ser Ser Asp Cys Ser Ala Cys
    370                 375                 380
Phe Met Ser Gln Ser Gly Thr Ser Gln Ala Ala Ala His Val Ala Gly
385                 390                 395                 400
Ile Val Ala Met Met Leu Thr Leu Glu Pro Glu Leu Thr Leu Thr Glu
                405                 410                 415
Leu Arg Gln Arg Leu Ile His Phe Ser Thr Lys Asp Ala Ile Asn Met
            420                 425                 430
Ala Trp Phe Pro Glu Asp Gln Arg Val Leu Thr Pro Asn Leu Val Ala
        435                 440                 445
Thr Leu Pro Pro Ser Thr His Gly Thr Gly Gly Gln Leu Leu Cys Arg
    450                 455                 460
Thr Val Trp Ser Ala His Ser Gly Pro Thr Arg Ala Ala Thr Ala Thr
465                 470                 475                 480
Ala Arg Cys Ala Pro Gly Glu Glu Leu Leu Ser Cys Ser Ser Phe Ser
                485                 490                 495
Arg Ser Gly Arg Arg Arg Gly Asp Arg Ile Glu Ala Ala Gly Thr Gln
            500                 505                 510
Gln Val Cys Lys Ala Leu Asn Ala Phe Gly Gly Glu Gly Val Tyr Ala
        515                 520                 525
Val Ala Arg Cys Cys Leu Leu Pro Arg Ala Asn Cys Ser Ile His Thr
    530                 535                 540
Thr Pro Ala Ala Arg Thr Ser Leu Glu Thr His Ala His Cys His Gln
545                 550                 555                 560
Lys Asp His Val Leu Thr Gly Cys Ser Leu His Trp Glu Val Glu Gly
                565                 570                 575
Ile Gly Val Gln Pro Leu Ala Val Leu Arg Ser Arg His Gln Pro Gly
            580                 585                 590
Gln Cys Thr Gly His Arg Glu Ala Ser Val His Ala Ser Cys Cys His
        595                 600                 605
Ala Pro Gly Leu Glu Cys Lys Ile Lys Glu His Gly Ile Ser Gly Pro
    610                 615                 620
Ala Glu Gln Val Thr Val Ala Cys Glu Ala Gly Trp Thr Leu Thr Gly
625                 630                 635                 640
Cys Asn Val Leu Pro Gly Ala Phe Ile Thr Leu Gly Ala Tyr Ala Val
                645                 650                 655
Asp Asn Thr Cys Val Ala Arg Ser Arg Val Thr Asp Thr Ala Gly Arg
            660                 665                 670
Thr Gly Glu Glu Ala Thr Val Ala Ala Ala Ile Cys Cys Arg Asn Arg
        675                 680                 685
Pro Ser Ala Lys Ala Ser Trp Val His Gln
    690                 695
```

<210> 763
<211> 691
<212> PRT
<213> Rattus norvegicus

<400> 763

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

```
                85                  90                  95
Leu Gln Thr Trp Ala Ala Arg Arg Gly Tyr Val Ile Lys Val Leu His
            100                 105                 110
Val Phe Tyr Asp Leu Phe Pro Gly Phe Leu Val Lys Met Ser Ser Asp
        115                 120                 125
Leu Leu Gly Leu Ala Leu Lys Leu Pro His Val Glu Tyr Ile Glu Glu
    130                 135                 140
Asp Ser Leu Val Phe Ala Gln Ser Ile Pro Trp Asn Leu Glu Arg Ile
145                 150                 155                 160
Ile Pro Ala Trp Gln Gln Thr Glu Glu Asp Ser Ser Pro Asp Gly Ser
                165                 170                 175
Ser Gln Val Glu Val Tyr Leu Leu Asp Thr Ser Ile Gln Ser Gly His
            180                 185                 190
Arg Glu Ile Glu Gly Arg Val Thr Ile Thr Asp Phe Asn Ser Val Pro
        195                 200                 205
Glu Glu Asp Gly Thr Arg Phe His Arg Gln Ala Ser Lys Cys Asp Ser
    210                 215                 220
His Gly Thr His Leu Ala Gly Val Val Ser Gly Arg Asp Ala Gly Val
225                 230                 235                 240
Ala Lys Gly Thr Ser Leu His Ser Leu Arg Val Leu Asn Cys Gln Gly
                245                 250                 255
Lys Gly Thr Val Ser Gly Thr Leu Ile Gly Leu Glu Phe Ile Arg Lys
            260                 265                 270
Ser Gln Leu Ile Gln Pro Ser Gly Pro Leu Val Val Leu Leu Pro Leu
        275                 280                 285
Ala Gly Gly Tyr Ser Arg Ile Leu Asn Thr Ala Cys Gln Arg Leu Ala
    290                 295                 300
Arg Thr Gly Val Val Leu Val Ala Ala Ala Gly Asn Phe Arg Asp Asp
305                 310                 315                 320
Ala Cys Leu Tyr Ser Pro Ala Ser Ala Pro Glu Val Ile Thr Val Gly
                325                 330                 335
Ala Thr Asn Ala Gln Asp Gln Pro Val Thr Leu Gly Thr Leu Gly Thr
            340                 345                 350
Asn Phe Gly Arg Cys Val Asp Leu Phe Ala Pro Gly Lys Asp Ile Ile
        355                 360                 365
Gly Ala Ser Ser Asp Cys Ser Thr Cys Tyr Met Ser Gln Ser Gly Thr
    370                 375                 380
Ser Gln Ala Ala Ala His Val Ala Gly Ile Val Ala Met Met Leu Asn
385                 390                 395                 400
Arg Asp Pro Ala Leu Thr Leu Ala Glu Leu Arg Gln Arg Leu Ile Leu
                405                 410                 415
Phe Ser Thr Lys Asp Val Ile Asn Met Ala Trp Phe Pro Glu Asp Gln
            420                 425                 430
Arg Val Leu Thr Pro Asn Arg Val Ala Thr Leu Pro Pro Ser Thr Gln
        435                 440                 445
Glu Thr Gly Gly Gln Leu Leu Cys Arg Thr Val Trp Ser Ala His Ser
    450                 455                 460
Gly Pro Thr Arg Thr Ala Thr Ala Thr Ala Arg Cys Ala Pro Glu Glu
465                 470                 475                 480
Glu Leu Leu Ser Cys Ser Ser Phe Ser Arg Ser Gly Arg Arg Arg Gly
                485                 490                 495
Asp Arg Ile Glu Ala Ile Gly Gly Gln Gln Val Cys Lys Ala Leu Asn
            500                 505                 510
Ala Phe Gly Gly Glu Gly Val Tyr Ala Val Ala Arg Cys Cys Leu Leu
        515                 520                 525
Pro Arg Val Asn Cys Ser Ile His Asn Thr Pro Ala Ala Arg Ala Gly
    530                 535                 540
Pro Gln Thr Pro Val His Cys His Gln Lys Asp His Val Leu Thr Gly
545                 550                 555                 560
Cys Ser Phe His Trp Glu Val Glu Asn Leu Arg Ala Gln Gln Gln Pro
                565                 570                 575
Leu Leu Arg Ser Arg His Gln Pro Gly Gln Cys Val Gly His Gln Glu
            580                 585                 590
```

```
Ala Ser Val His Ala Ser Cys Cys His Ala Pro Gly Leu Glu Cys Lys
        595                 600                 605
Ile Lys Glu His Gly Ile Ala Gly Pro Ala Glu Gln Val Thr Val Ala
    610                 615                 620
Cys Glu Ala Gly Trp Thr Leu Thr Gly Cys Asn Val Leu Pro Gly Ala
625                 630                 635                 640
Ser Leu Pro Leu Gly Ala Tyr Ser Val Asp Asn Val Cys Val Ala Arg
                645                 650                 655
Ile Arg Asp Ala Gly Arg Ala Asp Arg Thr Ser Glu Glu Ala Thr Val
            660                 665                 670
Ala Ala Ala Ile Cys Cys Arg Ser Arg Pro Ser Ala Lys Ala Ser Trp
        675                 680                 685
Val His Gln
    690
```