SEQUENCE LISTING

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<120> METHODS FOR IMPROVING THE EFFICACY AND EXPANSION OF IMMUNE CELLS

<130> N2067-7081WO

<140>
<141>

<150> 62/195,056
<151> 2015-07-21

<160> 986

<170> PatentIn version 3.5

<210> 1
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<212> PRT
<213> Artificial Sequence

<220>
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<223> /note="Description of Artificial Sequence: Synthetic peptide"

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Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro
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<210> 2
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<220>
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<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 2
Thr Thr Thr Pro Ala Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala
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Ser Gln Pro Leu Ser Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly
            20   25   30

Gly Ala Val His Thr Arg Gly Leu Asp Phe Ala Cys Asp
        35   40   45

<210> 3
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<220>
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<223> /note="Description of Artificial Sequence: Synthetic
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<210> 4
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<220>
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<210> 5
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<212> PRT
<213> Homo sapiens

<400> 5
Met Pro Arg Ala Pro Arg Cys Arg Ala Val Arg Ser Leu Leu Arg Ser
1   5   10   15

His Tyr Arg Glu Val Leu Pro Leu Ala Thr Phe Val Arg Arg Leu Gly
            20   25   30

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Pro Gln Gly Trp Arg Leu Val Gln Arg Gly Asp Pro Ala Ala Phe Arg
        35                  40                  45

Ala Leu Val Ala Gln Cys Leu Val Cys Val Pro Trp Asp Ala Arg Pro
    50                  55                  60

Pro Pro Ala Ala Pro Ser Phe Arg Gln Val Ser Cys Leu Lys Glu Leu
65                  70                  75                  80

Val Ala Arg Val Leu Gln Arg Leu Cys Glu Arg Gly Ala Lys Asn Val
                85                  90                  95

Leu Ala Phe Gly Phe Ala Leu Leu Asp Gly Ala Arg Gly Gly Pro Pro
            100                 105                 110

Glu Ala Phe Thr Thr Ser Val Arg Ser Tyr Leu Pro Asn Thr Val Thr
        115                 120                 125

Asp Ala Leu Arg Gly Ser Gly Ala Trp Gly Leu Leu Leu Arg Arg Val
    130                 135                 140

Gly Asp Asp Val Leu Val His Leu Leu Ala Arg Cys Ala Leu Phe Val
145                 150                 155                 160

Leu Val Ala Pro Ser Cys Ala Tyr Gln Val Cys Gly Pro Pro Leu Tyr
                165                 170                 175

Gln Leu Gly Ala Ala Thr Gln Ala Arg Pro Pro Pro His Ala Ser Gly
            180                 185                 190

Pro Arg Arg Arg Leu Gly Cys Glu Arg Ala Trp Asn His Ser Val Arg
        195                 200                 205

Glu Ala Gly Val Pro Leu Gly Leu Pro Ala Pro Gly Ala Arg Arg Arg
    210                 215                 220

Gly Gly Ser Ala Ser Arg Ser Leu Pro Leu Pro Lys Arg Pro Arg Arg
225                 230                 235                 240
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Gly Ala Ala Pro Glu Pro Glu Arg Thr Pro Val Gly Gln Gly Ser Trp
                245                 250                 255

Ala His Pro Gly Arg Thr Arg Gly Pro Ser Asp Arg Gly Phe Cys Val
            260                 265                 270

Val Ser Pro Ala Arg Pro Ala Glu Glu Ala Thr Ser Leu Glu Gly Ala
        275                 280                 285

Leu Ser Gly Thr Arg His Ser His Pro Ser Val Gly Arg Gln His His
    290                 295                 300

Ala Gly Pro Pro Ser Thr Ser Arg Pro Pro Arg Pro Trp Asp Thr Pro
305                 310                 315                 320

Cys Pro Pro Val Tyr Ala Glu Thr Lys His Phe Leu Tyr Ser Ser Gly
                325                 330                 335

Asp Lys Glu Gln Leu Arg Pro Ser Phe Leu Leu Ser Ser Leu Arg Pro
            340                 345                 350

Ser Leu Thr Gly Ala Arg Arg Leu Val Glu Thr Ile Phe Leu Gly Ser
        355                 360                 365

Arg Pro Trp Met Pro Gly Thr Pro Arg Arg Leu Pro Arg Leu Pro Gln
    370                 375                 380

Arg Tyr Trp Gln Met Arg Pro Leu Phe Leu Glu Leu Leu Gly Asn His
385                 390                 395                 400

Ala Gln Cys Pro Tyr Gly Val Leu Leu Lys Thr His Cys Pro Leu Arg
                405                 410                 415

Ala Ala Val Thr Pro Ala Ala Gly Val Cys Ala Arg Glu Lys Pro Gln
            420                 425                 430

Gly Ser Val Ala Ala Pro Glu Glu Glu Asp Thr Asp Pro Arg Arg Leu
        435                 440                 445

Val Gln Leu Leu Arg Gln His Ser Ser Pro Trp Gln Val Tyr Gly Phe
    450                 455                 460
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Val Arg Ala Cys Leu Arg Arg Leu Val Pro Pro Gly Leu Trp Gly Ser
465                 470                 475                 480

Arg His Asn Glu Arg Arg Phe Leu Arg Asn Thr Lys Lys Phe Ile Ser
                485                 490                 495

Leu Gly Lys His Ala Lys Leu Ser Leu Gln Glu Leu Thr Trp Lys Met
            500                 505                 510

Ser Val Arg Gly Cys Ala Trp Leu Arg Arg Ser Pro Gly Val Gly Cys
        515                 520                 525

Val Pro Ala Ala Glu His Arg Leu Arg Glu Glu Ile Leu Ala Lys Phe
    530                 535                 540

Leu His Trp Leu Met Ser Val Tyr Val Val Glu Leu Leu Arg Ser Phe
545                 550                 555                 560

Phe Tyr Val Thr Glu Thr Thr Phe Gln Lys Asn Arg Leu Phe Phe Tyr
                565                 570                 575

Arg Lys Ser Val Trp Ser Lys Leu Gln Ser Ile Gly Ile Arg Gln His
            580                 585                 590

Leu Lys Arg Val Gln Leu Arg Glu Leu Ser Glu Ala Glu Val Arg Gln
        595                 600                 605

His Arg Glu Ala Arg Pro Ala Leu Leu Thr Ser Arg Leu Arg Phe Ile
    610                 615                 620

Pro Lys Pro Asp Gly Leu Arg Pro Ile Val Asn Met Asp Tyr Val Val
625                 630                 635                 640

Gly Ala Arg Thr Phe Arg Arg Glu Lys Arg Ala Glu Arg Leu Thr Ser
                645                 650                 655

Arg Val Lys Ala Leu Phe Ser Val Leu Asn Tyr Glu Arg Ala Arg Arg
            660                 665                 670
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Pro Gly Leu Leu Gly Ala Ser Val Leu Gly Leu Asp Asp Ile His Arg
        675                 680                 685

Ala Trp Arg Thr Phe Val Leu Arg Val Arg Ala Gln Asp Pro Pro Pro
    690                 695                 700

Glu Leu Tyr Phe Val Lys Val Asp Val Thr Gly Ala Tyr Asp Thr Ile
705                 710                 715                 720

Pro Gln Asp Arg Leu Thr Glu Val Ile Ala Ser Ile Ile Lys Pro Gln
                725                 730                 735

Asn Thr Tyr Cys Val Arg Arg Tyr Ala Val Val Gln Lys Ala Ala His
            740                 745                 750

Gly His Val Arg Lys Ala Phe Lys Ser His Val Ser Thr Leu Thr Asp
        755                 760                 765

Leu Gln Pro Tyr Met Arg Gln Phe Val Ala His Leu Gln Glu Thr Ser
    770                 775                 780

Pro Leu Arg Asp Ala Val Val Ile Glu Gln Ser Ser Ser Leu Asn Glu
785                 790                 795                 800

Ala Ser Ser Gly Leu Phe Asp Val Phe Leu Arg Phe Met Cys His His
                805                 810                 815

Ala Val Arg Ile Arg Gly Lys Ser Tyr Val Gln Cys Gln Gly Ile Pro
            820                 825                 830

Gln Gly Ser Ile Leu Ser Thr Leu Leu Cys Ser Leu Cys Tyr Gly Asp
        835                 840                 845

Met Glu Asn Lys Leu Phe Ala Gly Ile Arg Arg Asp Gly Leu Leu Leu
    850                 855                 860

Arg Leu Val Asp Asp Phe Leu Leu Val Thr Pro His Leu Thr His Ala
865                 870                 875                 880

Lys Thr Phe Leu Arg Thr Leu Val Arg Gly Val Pro Glu Tyr Gly Cys
                885                 890                 895
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Val Val Asn Leu Arg Lys Thr Val Val Asn Phe Pro Val Glu Asp Glu
            900                 905                 910

Ala Leu Gly Gly Thr Ala Phe Val Gln Met Pro Ala His Gly Leu Phe
        915                 920                 925

Pro Trp Cys Gly Leu Leu Leu Asp Thr Arg Thr Leu Glu Val Gln Ser
    930                 935                 940

Asp Tyr Ser Ser Tyr Ala Arg Thr Ser Ile Arg Ala Ser Leu Thr Phe
945                 950                 955                 960

Asn Arg Gly Phe Lys Ala Gly Arg Asn Met Arg Arg Lys Leu Phe Gly
                965                 970                 975

Val Leu Arg Leu Lys Cys His Ser Leu Phe Leu Asp Leu Gln Val Asn
            980                 985                 990

Ser Leu Gln Thr Val Cys Thr Asn  Ile Tyr Lys Ile Leu  Leu Leu Gln
        995                 1000                1005

Ala Tyr  Arg Phe His Ala Cys  Val Leu Gln Leu Pro  Phe His Gln
    1010                1015                1020

Gln Val  Trp Lys Asn Pro Thr  Phe Phe Leu Arg Val  Ile Ser Asp
    1025                1030                1035

Thr Ala  Ser Leu Cys Tyr Ser  Ile Leu Lys Ala Lys  Asn Ala Gly
    1040                1045                1050

Met Ser  Leu Gly Ala Lys Gly  Ala Ala Gly Pro Leu  Pro Ser Glu
    1055                1060                1065

Ala Val  Gln Trp Leu Cys His  Gln Ala Phe Leu Leu  Lys Leu Thr
    1070                1075                1080

Arg His  Arg Val Thr Tyr Val  Pro Leu Leu Gly Ser  Leu Arg Thr
    1085                1090                1095
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Ala Gln Thr Gln Leu Ser Arg Lys Leu Pro Gly Thr Thr Leu Thr
    1100   1105   1110

Ala Leu Glu Ala Ala Ala Asn Pro Ala Leu Pro Ser Asp Phe Lys
    1115   1120   1125

Thr Ile Leu Asp
    1130

<210> 6
<211> 24
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
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<400> 6
Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly Val Leu Leu Leu
1   5   10   15

Ser Leu Val Ile Thr Leu Tyr Cys
            20

<210> 7
<211> 42
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 7
Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met
1   5   10   15

Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe
            20   25   30

Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu
        35   40

<210> 8
<211> 4027
<212> DNA
<213> Homo sapiens

<400> 8
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cgcgcgctcc ccgctgccga gccgtgcgct ccctgctgcg cagccactac cgcgaggtgc 120

tgccgctggc cacgttcgtg cggcgcctgg ggccccaggg ctggcggctg gtgcagcgcg 180

gggacccggc ggctttccgc gcgctggtgg cccagtgcct ggtgtgcgtg ccctgggacg 240

cacggccgcc ccccgccgcc ccctccttcc gccaggtgtc ctgcctgaag gagctggtgg 300

cccgagtgct gcagaggctg tgcgagcgcg gcgcgaagaa cgtgctggcc ttcggcttcg 360

cgctgctgga cggggcccgc gggggccccc ccgaggcctt caccaccagc gtgcgcagct 420

acctgcccaa cacggtgacc gacgcactgc gggggagcgg ggcgtggggg ctgctgttgc 480

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cctggaacca tagcgtcagg gaggccgggg tccccctggg cctgccagcc ccgggtgcga 720

ggaggcgcgg gggcagtgcc agccgaagtc tgccgttgcc caagaggccc aggcgtggcg 780

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gcttcatccc caagcctgac gggctgcggc cgattgtgaa catggactac gtcgtgggag 1980

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gccctgtaca caggcgagga ccctgcacct ggatgggggt ccctgtgggt caaattgggg 3960

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aaaaaaa 4027

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

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
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<400> 9
Arg Val Lys Phe Ser Arg Ser Ala Asp Ala Pro Ala Tyr Lys Gln Gly
1 5 10 15

Gln Asn Gln Leu Tyr Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr
20 25 30

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Asp Val Leu Asp Lys Arg Arg Gly Arg Asp Pro Glu Met Gly Gly Lys
        35                  40                  45

Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys
    50                  55                  60

Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg
65                  70                  75                  80

Arg Arg Gly Lys Gly His Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala
                85                  90                  95

Thr Lys Asp Thr Tyr Asp Ala Leu His Met Gln Ala Leu Pro Pro Arg
            100                 105                 110
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<210> 10
<211> 112
<212> PRT
<213> Homo sapiens

<400> 10

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Arg Val Lys Phe Ser Arg Ser Ala Asp Ala Pro Ala Tyr Gln Gln Gly
1               5                   10                  15

Gln Asn Gln Leu Tyr Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr
            20                  25                  30

Asp Val Leu Asp Lys Arg Arg Gly Arg Asp Pro Glu Met Gly Gly Lys
        35                  40                  45

Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys
    50                  55                  60

Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg
65                  70                  75                  80

Arg Arg Gly Lys Gly His Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala
                85                  90                  95

Thr Lys Asp Thr Tyr Asp Ala Leu His Met Gln Ala Leu Pro Pro Arg
            100                 105                 110
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<210> 11
<211> 1184
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
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<400> 11
cgtgaggctc cggtgcccgt cagtgggcag agcgcacatc gcccacagtc cccgagaagt 60

tgggggggagg ggtcggcaat tgaaccggtg cctagagaag gtggcgcggg gtaaactggg 120

aaagtgatgt cgtgtactgg ctccgccttt ttcccgaggg tgggggagaa ccgtatataa 180

gtgcagtagt cgccgtgaac gttctttttc gcaacgggtt tgccgccaga acacaggtaa 240

gtgccgtgtg tggttcccgc gggcctggcc tctttacggg ttatggccct tgcgtgcctt 300

gaattacttc cacctggctg cagtacgtga ttcttgatcc cgagcttcgg gttggaagtg 360

ggtgggagag ttcgaggcct tgcgcttaag gagccccttc gcctcgtgct tgagttgagg 420

cctggcctgg gcgctggggc cgccgcgtgc gaatctggtg gcaccttcgc gcctgtctcg 480

ctgctttcga taagtctcta gccatttaaa atttttgatg acctgctgcg acgcttttt 540

tctggcaaga tagtcttgta aatgcgggcc aagatctgca cactggtatt tcggtttttg 600

gggccgcggg cggcgacggg gcccgtgcgt cccagcgcac atgttcggcg aggcggggcc 660

tgcgagcgcg gccaccgaga atcggacggg ggtagtctca agctggccgg cctgctctgg 720

tgcctggcct cgcgccgccg tgtatcgccc cgccctgggc ggcaaggctg gcccggtcgg 780

caccagttgc gtgagcggaa agatggccgc ttcccggccc tgctgcaggg agctcaaaat 840

ggaggacgcg gcgctcggga gagcgggcgg gtgagtcacc cacacaaagg aaaagggcct 900

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tgtaattctc cttggaattt gccctttttg agtttggatc ttggttcatt ctcaagcctc 1140

agacagtggt tcaaagtttt tttcttccat ttcaggtgtc gtga 1184

<210> 12
<211> 63

<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
oligonucleotide"

<400> 12
atggccctgc ctgtgacagc cctgctgctg cctctggctc tgctgctgca tgccgctaga 60

ccc 63

<210> 13
<211> 135
<212> DNA
<213> Artificial Sequence

<220>
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<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 13
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tccctgcgcc cagaggcgtg ccggccagcg gcgggggggcg cagtgcacac gagggggctg 120

gacttcgcct gtgat 135

<210> 14
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
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<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 14
Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
1 5 10

<210> 15
<211> 123
<212> DNA
<213> Artificial Sequence

<220>
<221> source

<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 15
aggagtaaga ggagcaggct cctgcacagt gactacatga acatgactcc ccgccgcccc 60

gggcccaccc gcaagcatta ccagccctat gccccaccac gcgacttcgc agcctatcgc 120

tcc 123

<210> 16
<211> 48
<212> PRT
<213> Artificial Sequence

<220>
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polypeptide"

<400> 16
Gln Arg Arg Lys Tyr Arg Ser Asn Lys Gly Glu Ser Pro Val Glu Pro
1 5 10 15

Ala Glu Pro Cys Arg Tyr Ser Cys Pro Arg Glu Glu Glu Gly Ser Thr
20 25 30

Ile Pro Ile Gln Glu Asp Tyr Arg Lys Pro Glu Pro Ala Cys Ser Pro
35 40 45

<210> 17
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<212> DNA
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<220>
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<223> /note="Description of Artificial Sequence: Synthetic
oligonucleotide"

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acccttttact gc 72

<210> 18
<211> 126
<212> DNA
<213> Artificial Sequence

<220>
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<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 18
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gaactg 126

<210> 19
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
oligonucleotide"

<400> 19
ggtggcggag gttctggagg tggaggttcc 30

<210> 20
<211> 336
<212> DNA
<213> Artificial Sequence

<220>
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<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 20
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cgggaccctg agatgggggg aaagccgaga aggaagaacc ctcaggaagg cctgtacaat 180

gaactgcaga aagataagat ggcggaggcc tacagtgaga ttgggatgaa aggcgagcgc 240

cggaggggca aggggcacga tggcctttac cagggtctca gtacagccac caaggacacc 300

tacgacgccc ttcacatgca ggccctgccc cctcgc 336

<210> 21
<211> 336

<212> DNA
<213> Homo sapiens

<400> 21
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tataacgagc tcaatctagg acgaagagag gagtacgatg ttttggacaa gagacgtggc 120

cgggaccctg agatgggggg aaagccgaga aggaagaacc ctcaggaagg cctgtacaat 180

gaactgcaga aagataagat ggcggaggcc tacagtgaga ttgggatgaa aggcgagcgc 240

cggaggggca aggggcacga tggcctttac cagggtctca gtacagccac caaggacacc 300

tacgacgccc ttcacatgca ggccctgccc cctcgc 336

<210> 22
<211> 40
<212> PRT
<213> Artificial Sequence

<220>
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<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<220>
<221> MISC_FEATURE
<222> (1)..(40)
<223> /note="This sequence may encompass 1-10 'Gly Gly Gly Ser'
repeating units"

<400> 22
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1 5 10 15

Gly Gly Gly Ser Gly Gly Gly Ser Gly Gly Gly Ser Gly Gly Gly Ser
20 25 30

Gly Gly Gly Ser Gly Gly Gly Ser
35 40

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

<220>
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<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 23
Arg Trp Pro Glu Ser Pro Lys Ala Gln Ala Ser Ser Val Pro Thr Ala
1 5 10 15

Gln Pro Gln Ala Glu Gly Ser Leu Ala Lys Ala Thr Thr Ala Pro Ala
20 25 30

Thr Thr Arg Asn Thr Gly Arg Gly Gly Glu Glu Lys Lys Lys Glu Lys
35 40 45

Glu Lys Glu Glu Gln Glu Glu Arg Glu Thr Lys Thr Pro Glu Cys Pro
50 55 60

Ser His Thr Gln Pro Leu Gly Val Tyr Leu Leu Thr Pro Ala Val Gln
65 70 75 80

Asp Leu Trp Leu Arg Asp Lys Ala Thr Phe Thr Cys Phe Val Val Gly
85 90 95

Ser Asp Leu Lys Asp Ala His Leu Thr Trp Glu Val Ala Gly Lys Val
100 105 110

Pro Thr Gly Gly Val Glu Glu Gly Leu Leu Glu Arg His Ser Asn Gly
115 120 125

Ser Gln Ser Gln His Ser Arg Leu Thr Leu Pro Arg Ser Leu Trp Asn
130 135 140

Ala Gly Thr Ser Val Thr Cys Thr Leu Asn His Pro Ser Leu Pro Pro
145 150 155 160

Gln Arg Leu Met Ala Leu Arg Glu Pro Ala Ala Gln Ala Pro Val Lys
165 170 175

Leu Ser Leu Asn Leu Leu Ala Ser Ser Asp Pro Pro Glu Ala Ala Ser
180 185 190

Trp Leu Leu Cys Glu Val Ser Gly Phe Ser Pro Pro Asn Ile Leu Leu
195 200 205

Met Trp Leu Glu Asp Gln Arg Glu Val Asn Thr Ser Gly Phe Ala Pro
210 215 220

Ala Arg Pro Pro Pro Gln Pro Gly Ser Thr Thr Phe Trp Ala Trp Ser
225 230 235 240

Val Leu Arg Val Pro Ala Pro Pro Ser Pro Gln Pro Ala Thr Tyr Thr
245 250 255

Cys Val Val Ser His Glu Asp Ser Arg Thr Leu Leu Asn Ala Ser Arg
260 265 270

Ser Leu Glu Val Ser Tyr Val Thr Asp His
275 280

<210> 24
<211> 847
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 24
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gaaggcagcc tagccaaagc tactactgca cctgccacta cgcgcaatac tggccgtggc 120

ggggaggaga agaaaaagga gaaagagaaa gaagaacagg aagagaggga gaccaagacc 180

cctgaatgtc catcccatac ccagccgctg ggcgtctatc tcttgactcc cgcagtacag 240

gacttgtggc ttagagataa ggccaccttt acatgtttcg tcgtgggctc tgacctgaag 300

gatgcccatt tgacttggga ggttgccgga aaggtaccca ggggggggt tgaggaaggg 360

ttgctggagc gccattccaa tggctctcag agccagcact caagactcac ccttccgaga 420

tccctgtgga acgccgggac ctctgtcaca tgtactctaa atcatcctag cctgccccca 480

cagcgtctga tggcccttag agagccagcc gcccaggcac cagttaagct tagcctgaat 540

ctgctcgcca gtagtgatcc cccagaggcc gccagctggc tcttatgcga agtgtccggc 600

tttagcccgc ccaacatctt gctcatgtgg ctggaggacc agcgagaagt gaacaccagc 660

ggcttcgctc cagcccggcc cccaccccag ccgggttcta ccacattctg ggcctggagt 720

gtcttaaggg tcccagcacc acctagcccc cagccagcca catacacctg tgttgtgtcc 780

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gaccatt 847

<210> 25
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 25
Gly Gly Gly Gly Ser
1 5

<210> 26
<211> 30
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<220>
<221> MISC_FEATURE
<222> (1)..(30)
<223> /note="This sequence may encompass 1-6 'Gly Gly Gly Gly Ser' repeating units"

<400> 26
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1 5 10 15

Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
20 25 30

<210> 27
<211> 20
<212> PRT

<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 27
Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly
1   5   10   15

Gly Gly Gly Ser
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<210> 28
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 28
Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
1   5   10   15

<210> 29
<211> 4
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 29
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<210> 30
<211> 5000
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic

polynucleotide"

<220>
<221> misc_feature
<222> (1)..(5000)
<223> /note="This sequence may encompass 50-5000 nucleotides"

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aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 300

aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 360

aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 420

aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 480

aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 540

aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 600

aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 660

aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 720

aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 780

aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 840

aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 900

aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 960

aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1020

aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1080

aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1140

aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1200

aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1260

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aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1440

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aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1860

aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1920

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<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

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ttttttttt ttttttttt ttttttttt ttttttttt 100

<210> 32
<211> 5000
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<220>
<221> misc_feature
<222> (1)..(5000)
<223> /note="This sequence may encompass 50-5000 nucleotides"

<400> 32
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ttttttttt ttttttttt ttttttttt ttttttttt ttttttttt ttttttttt 180

tttttttttt tttttttttt tttttttttt tttttttttt tttttttttt tttttttttt 240

tttttttttt tttttttttt tttttttttt tttttttttt tttttttttt tttttttttt 300

tttttttttt tttttttttt tttttttttt tttttttttt tttttttttt tttttttttt 360

tttttttttt tttttttttt tttttttttt tttttttttt tttttttttt tttttttttt 420

tttttttttt tttttttttt tttttttttt tttttttttt tttttttttt tttttttttt 480

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tttttttttt tttttttttt tttttttttt tttttttttt tttttttttt tttttttttt 660

tttttttttt tttttttttt tttttttttt tttttttttt tttttttttt tttttttttt 720

tttttttttt tttttttttt tttttttttt tttttttttt tttttttttt tttttttttt 780

tttttttttt tttttttttt tttttttttt tttttttttt tttttttttt tttttttttt 840

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<210> 33
<211> 5000
<212> DNA
<213> Artificial Sequence

<220>
<221> source
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polynucleotide"

<220>
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<223> /note="This sequence may encompass 100-5000 nucleotides"

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aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 2460

aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 2520

aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 2580

aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 2640

aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 2700

aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 2760

aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 2820

aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 2880

aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 2940

aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 3000

aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 3060

aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 3120

aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 3180

aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 3240

aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 3300

aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 3360

aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 3420

aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 3480

aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 3540

aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 3600

aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 3660

aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 3720

aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 3780

aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 3840

aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 3900

aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 3960

aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 4020

aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 4080

aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 4140

aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 4200

aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 4260

aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 4320

aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 4380

aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 4440

aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 4500

aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 4560

aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 4620

aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 4680

aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 4740

aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 4800

aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 4860

aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 4920

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aaaaaaaaaa aaaaaaaaaa 5000

<210> 34
<211> 400
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<220>
<221> misc_feature
<222> (1)..(400)
<223> /note="This sequence may encompass 100-400 nucleotides"

<400> 34
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 60

aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 120

aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 180

aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 240

aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 300

aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 360

aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 400

<210> 35
<211> 2000
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<220>
<221> misc_feature
<222> (1)..(2000)
<223> /note="This sequence may encompass 50-2000 nucleotides"

<400> 35
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 60

aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 120

aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 180

aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 240

aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 300

aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 360

aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 420

aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 480

aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 540

aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 600

aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 660

aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 720

aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 780

aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 840

aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 900

aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 960

aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1020

aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1080

aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1140

aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1200

aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1260

aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1320

aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1380

aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1440

aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1500

aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1560

aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1620

aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1680

aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1740

aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1800

aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1860

aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1920

aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1980

aaaaaaaaaa aaaaaaaaaa 2000

<210> 36
<211> 230
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 36
Glu Ser Lys Tyr Gly Pro Pro Cys Pro Pro Cys Pro Ala Pro Glu Phe
1 5 10 15

Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr
20 25 30

```
Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val
        35                  40                  45

Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val
    50                  55                  60

Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser
65                  70                  75                  80

Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu
                85                  90                  95

Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser
            100                 105                 110

Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro
        115                 120                 125

Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln
    130                 135                 140

Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala
145                 150                 155                 160

Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr
                165                 170                 175

Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu
            180                 185                 190

Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser
        195                 200                 205

Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser
    210                 215                 220

Leu Ser Leu Gly Lys Met
225                 230
```

<210> 37

<211> 690
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 37
gagagcaagt acggccctcc ctgcccccct tgccctgccc ccgagttcct gggcggaccc 60

agcgtgttcc tgttcccccc caagcccaag gacaccctga tgatcagccg gacccccgag 120

gtgacctgtg tggtggtgga cgtgtcccag gaggaccccg aggtccagtt caactggtac 180

gtggacggcg tggaggtgca caacgccaag accaagcccc gggaggagca gttcaatagc 240

acctaccggg tggtgtccgt gctgaccgtg ctgcaccagg actggctgaa cggcaaggaa 300

tacaagtgta aggtgtccaa caagggcctg cccagcagca tcgagaaaac catcagcaag 360

gccaagggcc agcctcggga gccccaggtg tacaccctgc cccctagcca agaggagatg 420

accaagaacc aggtgtccct gacctgcctg gtgaagggct tctaccccag cgacatcgcc 480

gtggagtggg agagcaacgg ccagcccgag aacaactaca agaccacccc ccctgtgctg 540

gacagcgacg gcagcttctt cctgtacagc cggctgaccg tggacaagag ccggtggcag 600

gagggcaacg tctttagctg ctccgtgatg cacgaggccc tgcacaacca ctacacccag 660

aagagcctga gcctgtccct gggcaagatg 690

<210> 38
<211> 40
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<220>
<221> MISC_FEATURE
<222> (1)..(40)
<223> /note="This sequence may encompass 1-10 'Gly Gly Gly Ser'
repeating units"

<400> 38
Gly Gly Gly Ser Gly Gly Gly Ser Gly Gly Gly Ser Gly Gly Gly Ser

1 5 10 15

Gly Gly Gly Ser Gly Gly Gly Ser Gly Gly Gly Ser Gly Gly Gly Ser
20 25 30

Gly Gly Gly Ser Gly Gly Gly Ser
35 40

<210> 39
<211> 242
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 39
Glu Ile Val Met Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly
1 5 10 15

Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Asp Ile Ser Lys Tyr
20 25 30

Leu Asn Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile
35 40 45

Tyr His Thr Ser Arg Leu His Ser Gly Ile Pro Ala Arg Phe Ser Gly
50 55 60

Ser Gly Ser Gly Thr Asp Tyr Thr Leu Thr Ile Ser Ser Leu Gln Pro
65 70 75 80

Glu Asp Phe Ala Val Tyr Phe Cys Gln Gln Gly Asn Thr Leu Pro Tyr
85 90 95

Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys Gly Gly Gly Gly Ser
100 105 110

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gln Val Gln Leu Gln Glu
115 120 125

```
Ser Gly Pro Gly Leu Val Lys Pro Ser Glu Thr Leu Ser Leu Thr Cys
    130                 135                 140

Thr Val Ser Gly Val Ser Leu Pro Asp Tyr Gly Val Ser Trp Ile Arg
145                 150                 155                 160

Gln Pro Pro Gly Lys Gly Leu Glu Trp Ile Gly Val Ile Trp Gly Ser
                165                 170                 175

Glu Thr Thr Tyr Tyr Ser Ser Ser Leu Lys Ser Arg Val Thr Ile Ser
            180                 185                 190

Lys Asp Asn Ser Lys Asn Gln Val Ser Leu Lys Leu Ser Ser Val Thr
        195                 200                 205

Ala Ala Asp Thr Ala Val Tyr Tyr Cys Ala Lys His Tyr Tyr Tyr Gly
    210                 215                 220

Gly Ser Tyr Ala Met Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr Val
225                 230                 235                 240

Ser Ser
```

<210> 40
<211> 242
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 40

```
Glu Ile Val Met Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly
1               5                   10                  15

Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Asp Ile Ser Lys Tyr
            20                  25                  30

Leu Asn Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile
        35                  40                  45
```

```
Tyr His Thr Ser Arg Leu His Ser Gly Ile Pro Ala Arg Phe Ser Gly
    50                  55                  60

Ser Gly Ser Gly Thr Asp Tyr Thr Leu Thr Ile Ser Ser Leu Gln Pro
65                  70                  75                  80

Glu Asp Phe Ala Val Tyr Phe Cys Gln Gln Gly Asn Thr Leu Pro Tyr
                85                  90                  95

Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys Gly Gly Gly Gly Ser
            100                 105                 110

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gln Val Gln Leu Gln Glu
        115                 120                 125

Ser Gly Pro Gly Leu Val Lys Pro Ser Glu Thr Leu Ser Leu Thr Cys
    130                 135                 140

Thr Val Ser Gly Val Ser Leu Pro Asp Tyr Gly Val Ser Trp Ile Arg
145                 150                 155                 160

Gln Pro Pro Gly Lys Gly Leu Glu Trp Ile Gly Val Ile Trp Gly Ser
                165                 170                 175

Glu Thr Thr Tyr Tyr Gln Ser Ser Leu Lys Ser Arg Val Thr Ile Ser
            180                 185                 190

Lys Asp Asn Ser Lys Asn Gln Val Ser Leu Lys Leu Ser Ser Val Thr
        195                 200                 205

Ala Ala Asp Thr Ala Val Tyr Tyr Cys Ala Lys His Tyr Tyr Tyr Gly
    210                 215                 220

Gly Ser Tyr Ala Met Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr Val
225                 230                 235                 240

Ser Ser
```

<210> 41

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

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 41
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 Val Ser Leu Pro Asp Tyr
20 25 30

Gly Val Ser Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp Ile
35 40 45

Gly Val Ile Trp Gly Ser Glu Thr Thr Tyr Tyr Ser Ser Ser Leu Lys
50 55 60

Ser Arg Val Thr Ile Ser Lys Asp Asn Ser Lys Asn Gln Val 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

Lys His Tyr Tyr Tyr Gly Gly Ser Tyr Ala Met Asp Tyr Trp Gly Gln
100 105 110

Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly
115 120 125

Gly Ser Gly Gly Gly Gly Ser Glu Ile Val Met Thr Gln Ser Pro Ala
130 135 140

Thr Leu Ser Leu Ser Pro Gly Glu Arg Ala Thr Leu Ser Cys Arg Ala
145 150 155 160

Ser Gln Asp Ile Ser Lys Tyr Leu Asn Trp Tyr Gln Gln Lys Pro Gly
165 170 175

```
Gln Ala Pro Arg Leu Leu Ile Tyr His Thr Ser Arg Leu His Ser Gly
            180                 185                 190


Ile Pro Ala Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Tyr Thr Leu
        195                 200                 205


Thr Ile Ser Ser Leu Gln Pro Glu Asp Phe Ala Val Tyr Phe Cys Gln
    210                 215                 220


Gln Gly Asn Thr Leu Pro Tyr Thr Phe Gly Gln Gly Thr Lys Leu Glu
225                 230                 235                 240


Ile Lys



<210> 42
<211> 242
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 42
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 Val Ser Leu Pro Asp Tyr
            20                  25                  30


Gly Val Ser Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp Ile
        35                  40                  45


Gly Val Ile Trp Gly Ser Glu Thr Thr Tyr Tyr Gln Ser Ser Leu Lys
    50                  55                  60


Ser Arg Val Thr Ile Ser Lys Asp Asn Ser Lys Asn Gln Val 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
```

```
Lys His Tyr Tyr Tyr Gly Gly Ser Tyr Ala Met Asp Tyr Trp Gly Gln
            100                 105                 110


Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly
        115                 120                 125


Gly Ser Gly Gly Gly Gly Ser Glu Ile Val Met Thr Gln Ser Pro Ala
    130                 135                 140


Thr Leu Ser Leu Ser Pro Gly Glu Arg Ala Thr Leu Ser Cys Arg Ala
145                 150                 155                 160


Ser Gln Asp Ile Ser Lys Tyr Leu Asn Trp Tyr Gln Gln Lys Pro Gly
                165                 170                 175


Gln Ala Pro Arg Leu Leu Ile Tyr His Thr Ser Arg Leu His Ser Gly
            180                 185                 190


Ile Pro Ala Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Tyr Thr Leu
        195                 200                 205


Thr Ile Ser Ser Leu Gln Pro Glu Asp Phe Ala Val Tyr Phe Cys Gln
    210                 215                 220


Gln Gly Asn Thr Leu Pro Tyr Thr Phe Gly Gln Gly Thr Lys Leu Glu
225                 230                 235                 240


Ile Lys



<210> 43
<211> 247
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 43
Glu Ile Val Met Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly
1               5                   10                  15
```

```
Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Asp Ile Ser Lys Tyr
            20                  25                  30

Leu Asn Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile
        35                  40                  45

Tyr His Thr Ser Arg Leu His Ser Gly Ile Pro Ala Arg Phe Ser Gly
    50                  55                  60

Ser Gly Ser Gly Thr Asp Tyr Thr Leu Thr Ile Ser Ser Leu Gln Pro
65                  70                  75                  80

Glu Asp Phe Ala Val Tyr Phe Cys Gln Gln Gly Asn Thr Leu Pro Tyr
                85                  90                  95

Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys Gly Gly Gly Gly Ser
            100                 105                 110

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gln
        115                 120                 125

Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Glu Thr
    130                 135                 140

Leu Ser Leu Thr Cys Thr Val Ser Gly Val Ser Leu Pro Asp Tyr Gly
145                 150                 155                 160

Val Ser Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp Ile Gly
                165                 170                 175

Val Ile Trp Gly Ser Glu Thr Thr Tyr Tyr Ser Ser Ser Leu Lys Ser
            180                 185                 190

Arg Val Thr Ile Ser Lys Asp Asn Ser Lys Asn Gln Val Ser Leu Lys
        195                 200                 205

Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr Cys Ala Lys
    210                 215                 220
```

```
His Tyr Tyr Tyr Gly Gly Ser Tyr Ala Met Asp Tyr Trp Gly Gln Gly
225                 230                 235                 240


Thr Leu Val Thr Val Ser Ser
                245


<210> 44
<211> 247
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 44
Glu Ile Val Met Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly
1               5                   10                  15


Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Asp Ile Ser Lys Tyr
            20                  25                  30


Leu Asn Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile
        35                  40                  45


Tyr His Thr Ser Arg Leu His Ser Gly Ile Pro Ala Arg Phe Ser Gly
    50                  55                  60


Ser Gly Ser Gly Thr Asp Tyr Thr Leu Thr Ile Ser Ser Leu Gln Pro
65                  70                  75                  80


Glu Asp Phe Ala Val Tyr Phe Cys Gln Gln Gly Asn Thr Leu Pro Tyr
                85                  90                  95


Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys Gly Gly Gly Gly Ser
            100                 105                 110


Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gln
        115                 120                 125


Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Glu Thr
    130                 135                 140
```

```
Leu Ser Leu Thr Cys Thr Val Ser Gly Val Ser Leu Pro Asp Tyr Gly
145                 150                 155                 160


Val Ser Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp Ile Gly
                165                 170                 175


Val Ile Trp Gly Ser Glu Thr Thr Tyr Tyr Gln Ser Ser Leu Lys Ser
            180                 185                 190


Arg Val Thr Ile Ser Lys Asp Asn Ser Lys Asn Gln Val Ser Leu Lys
        195                 200                 205


Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr Cys Ala Lys
    210                 215                 220


His Tyr Tyr Tyr Gly Gly Ser Tyr Ala Met Asp Tyr Trp Gly Gln Gly
225                 230                 235                 240


Thr Leu Val Thr Val Ser Ser
                245


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

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 45
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 Val Ser Leu Pro Asp Tyr
            20                  25                  30


Gly Val Ser Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp Ile
        35                  40                  45


Gly Val Ile Trp Gly Ser Glu Thr Thr Tyr Tyr Ser Ser Ser Leu Lys
    50                  55                  60
```

```
Ser Arg Val Thr Ile Ser Lys Asp Asn Ser Lys Asn Gln Val 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


Lys His Tyr Tyr Tyr Gly Gly Ser Tyr Ala Met Asp Tyr Trp Gly Gln
            100                 105                 110


Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly
        115                 120                 125


Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Ile Val Met
    130                 135                 140


Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly Glu Arg Ala Thr
145                 150                 155                 160


Leu Ser Cys Arg Ala Ser Gln Asp Ile Ser Lys Tyr Leu Asn Trp Tyr
                165                 170                 175


Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile Tyr His Thr Ser
            180                 185                 190


Arg Leu His Ser Gly Ile Pro Ala Arg Phe Ser Gly Ser Gly Ser Gly
        195                 200                 205


Thr Asp Tyr Thr Leu Thr Ile Ser Ser Leu Gln Pro Glu Asp Phe Ala
    210                 215                 220


Val Tyr Phe Cys Gln Gln Gly Asn Thr Leu Pro Tyr Thr Phe Gly Gln
225                 230                 235                 240


Gly Thr Lys Leu Glu Ile Lys
                245
```

<210> 46
<211> 247
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 46
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 Val Ser Leu Pro Asp Tyr
20 25 30

Gly Val Ser Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp Ile
35 40 45

Gly Val Ile Trp Gly Ser Glu Thr Thr Tyr Tyr Gln Ser Ser Leu Lys
50 55 60

Ser Arg Val Thr Ile Ser Lys Asp Asn Ser Lys Asn Gln Val 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

Lys His Tyr Tyr Tyr Gly Gly Ser Tyr Ala Met Asp Tyr Trp Gly Gln
100 105 110

Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly
115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Ile Val Met
130 135 140

Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly Glu Arg Ala Thr
145 150 155 160

Leu Ser Cys Arg Ala Ser Gln Asp Ile Ser Lys Tyr Leu Asn Trp Tyr
165 170 175

Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile Tyr His Thr Ser
180 185 190

```
Arg Leu His Ser Gly Ile Pro Ala Arg Phe Ser Gly Ser Gly Ser Gly
        195                 200                 205


Thr Asp Tyr Thr Leu Thr Ile Ser Ser Leu Gln Pro Glu Asp Phe Ala
    210                 215                 220


Val Tyr Phe Cys Gln Gln Gly Asn Thr Leu Pro Tyr Thr Phe Gly Gln
225                 230                 235                 240


Gly Thr Lys Leu Glu Ile Lys
                245


<210> 47
<211> 247
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 47
Glu Ile Val Met Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly
1               5                   10                  15


Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Asp Ile Ser Lys Tyr
            20                  25                  30


Leu Asn Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile
        35                  40                  45


Tyr His Thr Ser Arg Leu His Ser Gly Ile Pro Ala Arg Phe Ser Gly
    50                  55                  60


Ser Gly Ser Gly Thr Asp Tyr Thr Leu Thr Ile Ser Ser Leu Gln Pro
65                  70                  75                  80


Glu Asp Phe Ala Val Tyr Phe Cys Gln Gln Gly Asn Thr Leu Pro Tyr
                85                  90                  95


Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys Gly Gly Gly Gly Ser
            100                 105                 110
```

```
Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gln
        115                 120                 125


Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Glu Thr
    130                 135                 140


Leu Ser Leu Thr Cys Thr Val Ser Gly Val Ser Leu Pro Asp Tyr Gly
145                 150                 155                 160


Val Ser Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp Ile Gly
                165                 170                 175


Val Ile Trp Gly Ser Glu Thr Thr Tyr Tyr Asn Ser Ser Leu Lys Ser
            180                 185                 190


Arg Val Thr Ile Ser Lys Asp Asn Ser Lys Asn Gln Val Ser Leu Lys
        195                 200                 205


Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr Cys Ala Lys
    210                 215                 220


His Tyr Tyr Tyr Gly Gly Ser Tyr Ala Met Asp Tyr Trp Gly Gln Gly
225                 230                 235                 240


Thr Leu Val Thr Val Ser Ser
                245


<210> 48
<211> 247
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 48
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 Val Ser Leu Pro Asp Tyr
```

```
            20                  25                  30

Gly Val Ser Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp Ile
        35                  40                  45

Gly Val Ile Trp Gly Ser Glu Thr Thr Tyr Tyr Asn Ser Ser Leu Lys
    50                  55                  60

Ser Arg Val Thr Ile Ser Lys Asp Asn Ser Lys Asn Gln Val 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

Lys His Tyr Tyr Tyr Gly Gly Ser Tyr Ala Met Asp Tyr Trp Gly Gln
            100                 105                 110

Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly
        115                 120                 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Ile Val Met
    130                 135                 140

Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly Glu Arg Ala Thr
145                 150                 155                 160

Leu Ser Cys Arg Ala Ser Gln Asp Ile Ser Lys Tyr Leu Asn Trp Tyr
                165                 170                 175

Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile Tyr His Thr Ser
            180                 185                 190

Arg Leu His Ser Gly Ile Pro Ala Arg Phe Ser Gly Ser Gly Ser Gly
        195                 200                 205

Thr Asp Tyr Thr Leu Thr Ile Ser Ser Leu Gln Pro Glu Asp Phe Ala
    210                 215                 220

Val Tyr Phe Cys Gln Gln Gly Asn Thr Leu Pro Tyr Thr Phe Gly Gln
225                 230                 235                 240
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Gly Thr Lys Leu Glu Ile Lys
245

<210> 49
<211> 242
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 49
Glu Ile Val Met Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly
1 5 10 15

Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Asp Ile Ser Lys Tyr
20 25 30

Leu Asn Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile
35 40 45

Tyr His Thr Ser Arg Leu His Ser Gly Ile Pro Ala Arg Phe Ser Gly
50 55 60

Ser Gly Ser Gly Thr Asp Tyr Thr Leu Thr Ile Ser Ser Leu Gln Pro
65 70 75 80

Glu Asp Phe Ala Val Tyr Phe Cys Gln Gln Gly Asn Thr Leu Pro Tyr
85 90 95

Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys Gly Gly Gly Gly Ser
100 105 110

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gln Val Gln Leu Gln Glu
115 120 125

Ser Gly Pro Gly Leu Val Lys Pro Ser Glu Thr Leu Ser Leu Thr Cys
130 135 140

Thr Val Ser Gly Val Ser Leu Pro Asp Tyr Gly Val Ser Trp Ile Arg
145 150 155 160

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Gln Pro Pro Gly Lys Gly Leu Glu Trp Ile Gly Val Ile Trp Gly Ser
                165                 170                 175


Glu Thr Thr Tyr Tyr Asn Ser Ser Leu Lys Ser Arg Val Thr Ile Ser
            180                 185                 190


Lys Asp Asn Ser Lys Asn Gln Val Ser Leu Lys Leu Ser Ser Val Thr
        195                 200                 205


Ala Ala Asp Thr Ala Val Tyr Tyr Cys Ala Lys His Tyr Tyr Tyr Gly
    210                 215                 220


Gly Ser Tyr Ala Met Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr Val
225                 230                 235                 240


Ser Ser
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<210> 50
<211> 242
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 50
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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 Val Ser Leu Pro Asp Tyr
            20                  25                  30


Gly Val Ser Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp Ile
        35                  40                  45


Gly Val Ile Trp Gly Ser Glu Thr Thr Tyr Tyr Asn Ser Ser Leu Lys
    50                  55                  60


Ser Arg Val Thr Ile Ser Lys Asp Asn Ser Lys Asn Gln Val Ser Leu
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65 70 75 80

Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr Cys Ala
85 90 95

Lys His Tyr Tyr Tyr Gly Gly Ser Tyr Ala Met Asp Tyr Trp Gly Gln
100 105 110

Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly
115 120 125

Gly Ser Gly Gly Gly Gly Ser Glu Ile Val Met Thr Gln Ser Pro Ala
130 135 140

Thr Leu Ser Leu Ser Pro Gly Glu Arg Ala Thr Leu Ser Cys Arg Ala
145 150 155 160

Ser Gln Asp Ile Ser Lys Tyr Leu Asn Trp Tyr Gln Gln Lys Pro Gly
165 170 175

Gln Ala Pro Arg Leu Leu Ile Tyr His Thr Ser Arg Leu His Ser Gly
180 185 190

Ile Pro Ala Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Tyr Thr Leu
195 200 205

Thr Ile Ser Ser Leu Gln Pro Glu Asp Phe Ala Val Tyr Phe Cys Gln
210 215 220

Gln Gly Asn Thr Leu Pro Tyr Thr Phe Gly Gln Gly Thr Lys Leu Glu
225 230 235 240

Ile Lys

<210> 51
<211> 242
<212> PRT
<213> Artificial Sequence

<220>
<221> source

<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 51
Asp Ile Gln Met Thr Gln Thr Thr Ser Ser Leu Ser Ala Ser Leu Gly
1 5 10 15

Asp Arg Val Thr Ile Ser Cys Arg Ala Ser Gln Asp Ile Ser Lys Tyr
20 25 30

Leu Asn Trp Tyr Gln Gln Lys Pro Asp Gly Thr Val Lys Leu Leu Ile
35 40 45

Tyr His Thr Ser Arg Leu His Ser Gly Val Pro Ser Arg Phe Ser Gly
50 55 60

Ser Gly Ser Gly Thr Asp Tyr Ser Leu Thr Ile Ser Asn Leu Glu Gln
65 70 75 80

Glu Asp Ile Ala Thr Tyr Phe Cys Gln Gln Gly Asn Thr Leu Pro Tyr
85 90 95

Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Thr Gly Gly Gly Gly Ser
100 105 110

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Val Lys Leu Gln Glu
115 120 125

Ser Gly Pro Gly Leu Val Ala Pro Ser Gln Ser Leu Ser Val Thr Cys
130 135 140

Thr Val Ser Gly Val Ser Leu Pro Asp Tyr Gly Val Ser Trp Ile Arg
145 150 155 160

Gln Pro Pro Arg Lys Gly Leu Glu Trp Leu Gly Val Ile Trp Gly Ser
165 170 175

Glu Thr Thr Tyr Tyr Asn Ser Ala Leu Lys Ser Arg Leu Thr Ile Ile
180 185 190

Lys Asp Asn Ser Lys Ser Gln Val Phe Leu Lys Met Asn Ser Leu Gln
195 200 205

Thr Asp Asp Thr Ala Ile Tyr Tyr Cys Ala Lys His Tyr Tyr Tyr Gly
210 215 220

Gly Ser Tyr Ala Met Asp Tyr Trp Gly Gln Gly Thr Ser Val Thr Val
225 230 235 240

Ser Ser

<210> 52
<211> 813
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 52
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

cccgaaattg tgatgaccca gtcacccgcc actcttagcc tttcacccgg tgagcgcgca 120

accctgtctt gcagagcctc ccaagacatc tcaaaatacc ttaattggta tcaacagaag 180

cccggacagg ctcctcgcct tctgatctac cacaccagcc ggctccattc tggaatccct 240

gccaggttca gcggtagcgg atctgggacc gactacaccc tcactatcag ctcactgcag 300

ccagaggact tcgctgtcta tttctgtcag caagggaaca ccctgcccta cacctttgga 360

cagggcacca agctcgagat taaaggtgga ggtggcagcg gaggaggtgg gtccggcggt 420

ggaggaagcc aggtccaact ccaagaaagc ggaccgggtc ttgtgaagcc atcagaaact 480

ctttcactga cttgtactgt gagcggagtg tctctccccg attacggggt gtcttggatc 540

agacagccac cggggaaggg tctggaatgg attggagtga tttggggctc tgagactact 600

tactactctt catccctcaa gtcacgcgtc accatctcaa aggacaactc taagaatcag 660

gtgtcactga aactgtcatc tgtgaccgca gccgacaccg ccgtgtacta ttgcgctaag 720

cattactatt atggcgggag ctacgcaatg gattactggg gacagggtac tctggtcacc 780

gtgtccagcc accaccatca tcaccatcac cat 813

<210> 53
<211> 813
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 53
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

cccgaaattg tgatgaccca gtcacccgcc actcttagcc tttcacccgg tgagcgcgca 120

accctgtctt gcagagcctc ccaagacatc tcaaaatacc ttaattggta tcaacagaag 180

cccggacagg ctcctcgcct tctgatctac cacaccagcc ggctccattc tggaatccct 240

gccaggttca gcggtagcgg atctgggacc gactacaccc tcactatcag ctcactgcag 300

ccagaggact tcgctgtcta tttctgtcag caagggaaca ccctgcccta caccttgga 360

cagggcacca agctcgagat taaaggtgga ggtggcagcg gaggaggtgg gtccggcggt 420

ggaggaagcc aggtccaact ccaagaaagc ggaccgggtc ttgtgaagcc atcagaaact 480

ctttcactga cttgtactgt gagcggagtg tctctccccg attacggggt gtcttggatc 540

agacagccac cggggaaggg tctggaatgg attggagtga tttggggctc tgagactact 600

tactaccaat catccctcaa gtcacgcgtc accatctcaa aggacaactc taagaatcag 660

gtgtcactga aactgtcatc tgtgaccgca gccgacaccg ccgtgtacta ttgcgctaag 720

cattactatt atggcgggag ctacgcaatg gattactggg gacagggtac tctggtcacc 780

gtgtccagcc accaccatca tcaccatcac cat 813

<210> 54
<211> 813
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 54
atggctctgc ccgtgaccgc actcctcctg ccactggctc tgctgcttca cgccgctcgc 60

ccacaagtcc agcttcaaga atcagggcct ggtctggtga agccatctga gactctgtcc 120

ctcacttgca ccgtgagcgg agtgtccctc ccagactacg gagtgagctg gattagacag 180

cctcccggaa agggactgga gtggatcgga gtgatttggg gtagcgaaac cacttactat 240

tcatcttccc tgaagtcacg ggtcaccatt tcaaaggata actcaaagaa tcaagtgagc 300

ctcaagctct catcagtcac cgccgctgac accgccgtgt attactgtgc caagcattac 360

tactatggag ggtcctacgc catggactac tggggccagg gaactctggt cactgtgtca 420

tctggtggag gaggtagcgg aggaggcggg agcggtggag gtggctccga aatcgtgatg 480

acccagagcc ctgcaaccct gtccctttct cccggggaac gggctaccct ttcttgtcgg 540

gcatcacaag atatctcaaa atacctcaat tggtatcaac agaagccggg acaggcccct 600

aggcttctta tctaccacac ctctcgcctg catagcggga ttcccgcacg ctttagcggg 660

tctggaagcg ggaccgacta cactctgacc atctcatctc tccagcccga ggacttcgcc 720

gtctacttct gccagcaggg taacaccctg ccgtacacct tcggccaggg caccaagctt 780

gagatcaaac atcaccacca tcatcaccat cac 813

<210> 55
<211> 813
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 55
atggctctgc ccgtgaccgc actcctcctg ccactggctc tgctgcttca cgccgctcgc 60

ccacaagtcc agcttcaaga atcagggcct ggtctggtga agccatctga gactctgtcc 120

ctcacttgca ccgtgagcgg agtgtccctc ccagactacg gagtgagctg gattagacag 180

cctcccggaa agggactgga gtggatcgga gtgatttggg gtagcgaaac cacttactat 240

caatcttccc tgaagtcacg ggtcaccatt tcaaaggata actcaaagaa tcaagtgagc 300

ctcaagctct catcagtcac cgccgctgac accgccgtgt attactgtgc caagcattac 360

tactatggag ggtcctacgc catggactac tggggccagg gaactctggt cactgtgtca 420

tctggtggag gaggtagcgg aggaggcggg agcggtggag gtggctccga aatcgtgatg 480

acccagagcc ctgcaaccct gtccctttct cccggggaac gggctaccct ttcttgtcgg 540

gcatcacaag atatctcaaa atacctcaat tggtatcaac agaagccggg acaggcccct 600

aggcttctta tctaccacac ctctcgcctg catagcggga ttcccgcacg ctttagcggg 660

tctggaagcg ggaccgacta cactctgacc atctcatctc tccagcccga ggacttcgcc 720

gtctacttct gccagcaggg taacaccctg ccgtacacct tcggccaggg caccaagctt 780

gagatcaaac atcaccacca tcatcaccat cac 813

<210> 56
<211> 828
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 56
atggccctcc cagtgaccgc tctgctgctg cctctcgcac ttcttctcca tgccgctcgg 60

cctgagatcg tcatgaccca aagccccgct accctgtccc tgtcacccgg cgagagggca 120

acccttttcat gcagggccag ccaggacatt tctaagtacc tcaactggta tcagcagaag 180

ccagggcagg ctcctcgcct gctgatctac cacaccagcc gcctccacag cggtatcccc 240

gccagatttt ccgggagcgg gtctggaacc gactacaccc tcaccatctc ttctctgcag 300

cccgaggatt tcgccgtcta tttctgccag caggggaata ctctgccgta caccttcggt 360

caaggtacca agctggaaat caagggaggc ggaggatcag gcggtggcgg aagcggagga 420

ggtggctccg gaggaggagg ttcccaagtg cagcttcaag aatcaggacc cggacttgtg 480

aagccatcag aaaccctctc cctgacttgt accgtgtccg gtgtgagcct ccccgactac 540

ggagtctctt ggattcgcca gcctccgggg aagggtcttg aatggattgg ggtgatttgg 600

ggatcagaga ctacttacta ctcttcatca cttaagtcac gggtcaccat cagcaaagat 660

aatagcaaga accaagtgtc acttaagctg tcatctgtga ccgccgctga caccgccgtg 720

tactattgtg ccaaacatta ctattacgga gggtcttatg ctatggacta ctggggacag 780

gggaccctgg tgactgtctc tagccatcac catcaccacc atcatcac 828

<210> 57
<211> 828

<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 57
atggccctcc cagtgaccgc tctgctgctg cctctcgcac ttcttctcca tgccgctcgg 60

cctgagatcg tcatgaccca aagccccgct accctgtccc tgtcacccgg cgagagggca 120

acccttttcat gcagggccag ccaggacatt tctaagtacc tcaactggta tcagcagaag 180

ccagggcagg ctcctcgcct gctgatctac cacaccagcc gcctccacag cggtatcccc 240

gccagatttt ccgggagcgg gtctggaacc gactacaccc tcaccatctc ttctctgcag 300

cccgaggatt tcgccgtcta tttctgccag caggggaata ctctgccgta caccttcggt 360

caaggtacca agctggaaat caagggaggc ggaggatcag gcggtggcgg aagcggagga 420

ggtggctccg gaggaggagg ttcccaagtg cagcttcaag aatcaggacc cggacttgtg 480

aagccatcag aaaccctctc cctgacttgt accgtgtccg gtgtgagcct ccccgactac 540

ggagtctctt ggattcgcca gcctccgggg aagggtcttg aatggattgg ggtgatttgg 600

ggatcagaga ctacttacta ccagtcatca cttaagtcac gggtcaccat cagcaaagat 660

aatagcaaga accaagtgtc acttaagctg tcatctgtga ccgccgctga caccgccgtg 720

tactattgtg ccaaacatta ctattacgga gggtcttatg ctatggacta ctggggacag 780

gggaccctgg tgactgtctc tagccatcac catcaccacc atcatcac 828

<210> 58
<211> 828
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 58
atggcactgc ctgtcactgc cctcctgctg cctctggccc tccttctgca tgccgccagg 60

ccccaagtcc agctgcaaga gtcaggaccc ggactggtga agccgtctga gactctctca 120

ctgacttgta ccgtcagcgg cgtgtccctc cccgactacg gagtgtcatg gatccgccaa 180

cctcccggga aagggcttga atggattggt gtcatctggg gttctgaaac cacctactac 240

tcatcttccc tgaagtccag ggtgaccatc agcaaggata attccaagaa ccaggtcagc 300

cttaagctgt catctgtgac cgctgctgac accgccgtgt attactgcgc caagcactac 360

tattacggag gaagctacgc tatggactat tggggacagg gcactctcgt gactgtgagc 420

agcggcggtg gagggtctgg aggtggagga tccggtggtg gtgggtcagg cggaggaggg 480

agcgagattg tgatgactca gtcaccagcc acccttctc tttcacccgg cgagagagca 540

accctgagct gtagagccag ccaggacatt tctaagtacc tcaactggta tcagcaaaaa 600

ccggggcagg cccctcgcct cctgatctac catacctcac gccttcactc tggtatcccc 660

gctcggttta gcggatcagg atctggtacc gactacactc tgaccatttc cagcctgcag 720

ccagaagatt tcgcagtgta tttctgccag cagggcaata cccttcctta caccttcggt 780

cagggaacca agctcgaaat caagcaccat caccatcatc accaccat 828

<210> 59
<211> 828
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 59
atggcactgc ctgtcactgc cctcctgctg cctctggccc tccttctgca tgccgccagg 60

ccccaagtcc agctgcaaga gtcaggaccc ggactggtga agccgtctga gactctctca 120

ctgacttgta ccgtcagcgg cgtgtccctc cccgactacg gagtgtcatg gatccgccaa 180

cctcccggga aagggcttga atggattggt gtcatctggg gttctgaaac cacctactac 240

cagtcttccc tgaagtccag ggtgaccatc agcaaggata attccaagaa ccaggtcagc 300

cttaagctgt catctgtgac cgctgctgac accgccgtgt attactgcgc caagcactac 360

tattacggag gaagctacgc tatggactat tggggacagg gcactctcgt gactgtgagc 420

agcggcggtg gagggtctgg aggtggagga tccggtggtg gtgggtcagg cggaggaggg 480

agcgagattg tgatgactca gtcaccagcc acccttctc tttcacccgg cgagagagca 540

accctgagct gtagagccag ccaggacatt tctaagtacc tcaactggta tcagcaaaaa 600

ccggggcagg cccctcgcct cctgatctac catacctcac gccttcactc tggtatcccc 660

gctcggttta gcggatcagg atctggtacc gactacactc tgaccatttc cagcctgcag 720

ccagaagatt tcgcagtgta tttctgccag cagggcaata cccttcctta caccttcggt 780

cagggaacca agctcgaaat caagcaccat caccatcatc atcaccac 828

<210> 60
<211> 828
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 60
atggccctcc cagtgaccgc tctgctgctg cctctcgcac ttcttctcca tgccgctcgg 60

cctgagatcg tcatgaccca aagccccgct accctgtccc tgtcacccgg cgagagggca 120

acccтttcat gcagggccag ccaggacatt tctaagtacc tcaactggta tcagcagaag 180

ccagggcagg ctcctcgcct gctgatctac cacaccagcc gcctccacag cggtatcccc 240

gccagatttt ccgggagcgg gtctggaacc gactacaccc tcaccatctc ttctctgcag 300

cccgaggatt tcgccgtcta tttctgccag caggggaata ctctgccgta caccttcggt 360

caaggtacca agctggaaat caagggaggc ggaggatcag gcggtggcgg aagcggagga 420

ggtggctccg gaggaggagg ttcccaagtg cagcttcaag aatcaggacc cggacttgtg 480

aagccatcag aaaccctctc cctgacttgt accgtgtccg gtgtgagcct ccccgactac 540

ggagtctctt ggattcgcca gcctccgggg aagggtcttg aatggattgg ggtgatttgg 600

ggatcagaga ctacttacta caattcatca cttaagtcac gggtcaccat cagcaaagat 660

aatagcaaga accaagtgtc acttaagctg tcatctgtga ccgccgctga caccgccgtg 720

tactattgtg ccaaacatta ctattacgga gggtcttatg ctatggacta ctggggacag 780

gggaccctgg tgactgtctc tagccatcac catcaccacc atcatcac 828

<210> 61
<211> 828
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 61
atggcactgc ctgtcactgc cctcctgctg cctctggccc tccttctgca tgccgccagg 60

ccccaagtcc agctgcaaga gtcaggaccc ggactggtga agccgtctga gactctctca 120

ctgacttgta ccgtcagcgg cgtgtccctc cccgactacg gagtgtcatg gatccgccaa 180

cctcccggga aagggcttga atggattggt gtcatctggg gttctgaaac cacctactac 240

aactcttccc tgaagtccag ggtgaccatc agcaaggata attccaagaa ccaggtcagc 300

cttaagctgt catctgtgac cgctgctgac accgccgtgt attactgcgc caagcactac 360

tattacggag gaagctacgc tatggactat tggggacagg gcactctcgt gactgtgagc 420

agcggcggtg gagggtctgg aggtggagga tccggtggtg gtgggtcagg cggaggaggg 480

agcgagattg tgatgactca gtcaccagcc acccttctc tttcacccgg cgagagagca 540

accctgagct gtagagccag ccaggacatt tctaagtacc tcaactggta tcagcaaaaa 600

ccggggcagg cccctcgcct cctgatctac catacctcac gccttcactc tggtatcccc 660

gctcggttta gcggatcagg atctggtacc gactacactc tgaccatttc cagcctgcag 720

ccagaagatt tcgcagtgta tttctgccag cagggcaata cccttcctta caccttcggt 780

cagggaacca agctcgaaat caagcaccat caccatcatc accaccat 828

<210> 62
<211> 813
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 62
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cccgaaattg tgatgaccca gtcacccgcc actcttagcc tttcacccgg tgagcgcgca 120

accctgtctt gcagagcctc ccaagacatc tcaaaatacc ttaattggta tcaacagaag 180

cccggacagg ctcctcgcct tctgatctac cacaccagcc ggctccattc tggaatccct 240

gccaggttca gcggtagcgg atctgggacc gactacaccc tcactatcag ctcactgcag 300

ccagaggact tcgctgtcta tttctgtcag caagggaaca ccctgcccta cacctttgga 360

cagggcacca agctcgagat taaaggtgga ggtggcagcg gaggaggtgg gtccggcggt 420

ggaggaagcc aggtccaact ccaagaaagc ggaccgggtc ttgtgaagcc atcagaaact 480

ctttcactga cttgtactgt gagcggagtg tctctccccg attacggggt gtcttggatc 540

agacagccac cggggaaggg tctggaatgg attggagtga tttggggctc tgagactact 600

tactacaatt catccctcaa gtcacgcgtc accatctcaa aggacaactc taagaatcag 660

gtgtcactga aactgtcatc tgtgaccgca gccgacaccg ccgtgtacta ttgcgctaag 720

cattactatt atggcgggag ctacgcaatg gattactggg gacagggtac tctggtcacc 780

gtgtccagcc accaccatca tcaccatcac cat 813

<210> 63
<211> 813
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 63
atggctctgc ccgtgaccgc actcctcctg ccactggctc tgctgcttca cgccgctcgc 60

ccacaagtcc agcttcaaga atcagggcct ggtctggtga agccatctga gactctgtcc 120

ctcacttgca ccgtgagcgg agtgtccctc ccagactacg gagtgagctg gattagacag 180

cctcccggaa agggactgga gtggatcgga gtgatttggg gtagcgaaac cacttactat 240

aactcttccc tgaagtcacg ggtcaccatt tcaaaggata actcaaagaa tcaagtgagc 300

ctcaagctct catcagtcac cgccgctgac accgccgtgt attactgtgc caagcattac 360

tactatggag ggtcctacgc catggactac tggggccagg gaactctggt cactgtgtca 420

tctggtggag gaggtagcgg aggaggcggg agcggtggag gtggctccga aatcgtgatg 480

acccagagcc ctgcaaccct gtccctttct cccggggaac gggctaccct ttcttgtcgg 540

gcatcacaag atatctcaaa atacctcaat tggtatcaac agaagccggg acaggcccct 600

aggcttctta tctaccacac ctctcgcctg catagcggga ttcccgcacg ctttagcggg 660

tctggaagcg ggaccgacta cactctgacc atctcatctc tccagcccga ggacttcgcc 720

gtctacttct gccagcaggg taacaccctg ccgtacacct tcggccaggg caccaagctt 780

gagatcaaac atcaccacca tcatcaccat cac 813

<210> 64
<211> 271
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 64
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Glu Ile Val Met Thr Gln Ser Pro Ala Thr Leu
20 25 30

Ser Leu Ser Pro Gly Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln
35 40 45

Asp Ile Ser Lys Tyr Leu Asn Trp Tyr Gln Gln Lys Pro Gly Gln Ala
50 55 60

Pro Arg Leu Leu Ile Tyr His Thr Ser Arg Leu His Ser Gly Ile Pro
65 70 75 80

Ala Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Tyr Thr Leu Thr Ile
85 90 95

Ser Ser Leu Gln Pro Glu Asp Phe Ala Val Tyr Phe Cys Gln Gln Gly
100 105 110

Asn Thr Leu Pro Tyr Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
115 120 125

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gln
130 135 140

```
Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Glu Thr
145                 150                 155                 160


Leu Ser Leu Thr Cys Thr Val Ser Gly Val Ser Leu Pro Asp Tyr Gly
                165                 170                 175


Val Ser Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp Ile Gly
            180                 185                 190


Val Ile Trp Gly Ser Glu Thr Thr Tyr Tyr Ser Ser Ser Leu Lys Ser
        195                 200                 205


Arg Val Thr Ile Ser Lys Asp Asn Ser Lys Asn Gln Val Ser Leu Lys
    210                 215                 220


Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr Cys Ala Lys
225                 230                 235                 240


His Tyr Tyr Tyr Gly Gly Ser Tyr Ala Met Asp Tyr Trp Gly Gln Gly
                245                 250                 255


Thr Leu Val Thr Val Ser Ser His His His His His His His His
            260                 265                 270


<210> 65
<211> 271
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 65
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1               5                   10                  15


His Ala Ala Arg Pro Glu Ile Val Met Thr Gln Ser Pro Ala Thr Leu
            20                  25                  30


Ser Leu Ser Pro Gly Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln
        35                  40                  45
```

```
Asp Ile Ser Lys Tyr Leu Asn Trp Tyr Gln Gln Lys Pro Gly Gln Ala
    50                  55                  60

Pro Arg Leu Leu Ile Tyr His Thr Ser Arg Leu His Ser Gly Ile Pro
65                  70                  75                  80

Ala Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Tyr Thr Leu Thr Ile
                85                  90                  95

Ser Ser Leu Gln Pro Glu Asp Phe Ala Val Tyr Phe Cys Gln Gln Gly
            100                 105                 110

Asn Thr Leu Pro Tyr Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
        115                 120                 125

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gln
    130                 135                 140

Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Glu Thr
145                 150                 155                 160

Leu Ser Leu Thr Cys Thr Val Ser Gly Val Ser Leu Pro Asp Tyr Gly
                165                 170                 175

Val Ser Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp Ile Gly
            180                 185                 190

Val Ile Trp Gly Ser Glu Thr Thr Tyr Tyr Gln Ser Ser Leu Lys Ser
        195                 200                 205

Arg Val Thr Ile Ser Lys Asp Asn Ser Lys Asn Gln Val Ser Leu Lys
    210                 215                 220

Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr Cys Ala Lys
225                 230                 235                 240

His Tyr Tyr Tyr Gly Gly Ser Tyr Ala Met Asp Tyr Trp Gly Gln Gly
                245                 250                 255
```

Thr Leu Val Thr Val Ser Ser His His His His His His His His
260 265 270

<210> 66
<211> 271
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 66
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu
20 25 30

Val Lys Pro Ser Glu Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Val
35 40 45

Ser Leu Pro Asp Tyr Gly Val Ser Trp Ile Arg Gln Pro Pro Gly Lys
50 55 60

Gly Leu Glu Trp Ile Gly Val Ile Trp Gly Ser Glu Thr Thr Tyr Tyr
65 70 75 80

Ser Ser Ser Leu Lys Ser Arg Val Thr Ile Ser Lys Asp Asn Ser Lys
85 90 95

Asn Gln Val Ser Leu Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala
100 105 110

Val Tyr Tyr Cys Ala Lys His Tyr Tyr Tyr Gly Gly Ser Tyr Ala Met
115 120 125

Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly
130 135 140

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Ile Val Met
145 150 155 160

```
Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly Glu Arg Ala Thr
                165                 170                 175


Leu Ser Cys Arg Ala Ser Gln Asp Ile Ser Lys Tyr Leu Asn Trp Tyr
            180                 185                 190


Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile Tyr His Thr Ser
        195                 200                 205


Arg Leu His Ser Gly Ile Pro Ala Arg Phe Ser Gly Ser Gly Ser Gly
    210                 215                 220


Thr Asp Tyr Thr Leu Thr Ile Ser Ser Leu Gln Pro Glu Asp Phe Ala
225                 230                 235                 240


Val Tyr Phe Cys Gln Gln Gly Asn Thr Leu Pro Tyr Thr Phe Gly Gln
                245                 250                 255


Gly Thr Lys Leu Glu Ile Lys His His His His His His His His
            260                 265                 270


<210> 67
<211> 271
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 67
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1               5                   10                  15


His Ala Ala Arg Pro Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu
            20                  25                  30


Val Lys Pro Ser Glu Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Val
        35                  40                  45


Ser Leu Pro Asp Tyr Gly Val Ser Trp Ile Arg Gln Pro Pro Gly Lys
    50                  55                  60
```

```
Gly Leu Glu Trp Ile Gly Val Ile Trp Gly Ser Glu Thr Thr Tyr Tyr
65                  70                  75                  80

Gln Ser Ser Leu Lys Ser Arg Val Thr Ile Ser Lys Asp Asn Ser Lys
                85                  90                  95

Asn Gln Val Ser Leu Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala
            100                 105                 110

Val Tyr Tyr Cys Ala Lys His Tyr Tyr Tyr Gly Gly Ser Tyr Ala Met
        115                 120                 125

Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly
    130                 135                 140

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Ile Val Met
145                 150                 155                 160

Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly Glu Arg Ala Thr
                165                 170                 175

Leu Ser Cys Arg Ala Ser Gln Asp Ile Ser Lys Tyr Leu Asn Trp Tyr
            180                 185                 190

Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile Tyr His Thr Ser
        195                 200                 205

Arg Leu His Ser Gly Ile Pro Ala Arg Phe Ser Gly Ser Gly Ser Gly
    210                 215                 220

Thr Asp Tyr Thr Leu Thr Ile Ser Ser Leu Gln Pro Glu Asp Phe Ala
225                 230                 235                 240

Val Tyr Phe Cys Gln Gln Gly Asn Thr Leu Pro Tyr Thr Phe Gly Gln
                245                 250                 255

Gly Thr Lys Leu Glu Ile Lys His His His His His His His His
            260                 265                 270
```

<210> 68
<211> 276
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 68
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Glu Ile Val Met Thr Gln Ser Pro Ala Thr Leu
20 25 30

Ser Leu Ser Pro Gly Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln
35 40 45

Asp Ile Ser Lys Tyr Leu Asn Trp Tyr Gln Gln Lys Pro Gly Gln Ala
50 55 60

Pro Arg Leu Leu Ile Tyr His Thr Ser Arg Leu His Ser Gly Ile Pro
65 70 75 80

Ala Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Tyr Thr Leu Thr Ile
85 90 95

Ser Ser Leu Gln Pro Glu Asp Phe Ala Val Tyr Phe Cys Gln Gln Gly
100 105 110

Asn Thr Leu Pro Tyr Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
115 120 125

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly
130 135 140

Gly Gly Gly Ser Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val
145 150 155 160

Lys Pro Ser Glu Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Val Ser
165 170 175

```
Leu Pro Asp Tyr Gly Val Ser Trp Ile Arg Gln Pro Pro Gly Lys Gly
            180                 185                 190


Leu Glu Trp Ile Gly Val Ile Trp Gly Ser Glu Thr Thr Tyr Tyr Ser
        195                 200                 205


Ser Ser Leu Lys Ser Arg Val Thr Ile Ser Lys Asp Asn Ser Lys Asn
    210                 215                 220


Gln Val Ser Leu Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val
225                 230                 235                 240


Tyr Tyr Cys Ala Lys His Tyr Tyr Tyr Gly Gly Ser Tyr Ala Met Asp
                245                 250                 255


Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser His His His His
            260                 265                 270


His His His His
        275
```

<210> 69
<211> 276
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 69

```
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1               5                   10                  15


His Ala Ala Arg Pro Glu Ile Val Met Thr Gln Ser Pro Ala Thr Leu
            20                  25                  30


Ser Leu Ser Pro Gly Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln
        35                  40                  45


Asp Ile Ser Lys Tyr Leu Asn Trp Tyr Gln Gln Lys Pro Gly Gln Ala
    50                  55                  60
```

```
Pro Arg Leu Leu Ile Tyr His Thr Ser Arg Leu His Ser Gly Ile Pro
65                  70                  75                  80

Ala Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Tyr Thr Leu Thr Ile
                85                  90                  95

Ser Ser Leu Gln Pro Glu Asp Phe Ala Val Tyr Phe Cys Gln Gln Gly
            100                 105                 110

Asn Thr Leu Pro Tyr Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
        115                 120                 125

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly
    130                 135                 140

Gly Gly Gly Ser Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val
145                 150                 155                 160

Lys Pro Ser Glu Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Val Ser
                165                 170                 175

Leu Pro Asp Tyr Gly Val Ser Trp Ile Arg Gln Pro Pro Gly Lys Gly
            180                 185                 190

Leu Glu Trp Ile Gly Val Ile Trp Gly Ser Glu Thr Thr Tyr Tyr Gln
        195                 200                 205

Ser Ser Leu Lys Ser Arg Val Thr Ile Ser Lys Asp Asn Ser Lys Asn
    210                 215                 220

Gln Val Ser Leu Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val
225                 230                 235                 240

Tyr Tyr Cys Ala Lys His Tyr Tyr Tyr Gly Gly Ser Tyr Ala Met Asp
                245                 250                 255

Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser His His His His
            260                 265                 270
```

His His His His
        275

<210> 70
<211> 276
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 70
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1   5   10   15

His Ala Ala Arg Pro Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu
            20   25   30

Val Lys Pro Ser Glu Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Val
        35   40   45

Ser Leu Pro Asp Tyr Gly Val Ser Trp Ile Arg Gln Pro Pro Gly Lys
    50   55   60

Gly Leu Glu Trp Ile Gly Val Ile Trp Gly Ser Glu Thr Thr Tyr Tyr
65   70   75   80

Ser Ser Ser Leu Lys Ser Arg Val Thr Ile Ser Lys Asp Asn Ser Lys
                85   90   95

Asn Gln Val Ser Leu Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala
            100   105   110

Val Tyr Tyr Cys Ala Lys His Tyr Tyr Tyr Gly Gly Ser Tyr Ala Met
        115   120   125

Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly
    130   135   140

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly
145   150   155   160

```
Ser Glu Ile Val Met Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro
                165                 170                 175


Gly Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Asp Ile Ser Lys
            180                 185                 190


Tyr Leu Asn Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu
        195                 200                 205


Ile Tyr His Thr Ser Arg Leu His Ser Gly Ile Pro Ala Arg Phe Ser
    210                 215                 220


Gly Ser Gly Ser Gly Thr Asp Tyr Thr Leu Thr Ile Ser Ser Leu Gln
225                 230                 235                 240


Pro Glu Asp Phe Ala Val Tyr Phe Cys Gln Gln Gly Asn Thr Leu Pro
                245                 250                 255


Tyr Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys His His His His
            260                 265                 270


His His His His
        275
```

<210> 71
<211> 276
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 71

```
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1               5                   10                  15


His Ala Ala Arg Pro Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu
            20                  25                  30


Val Lys Pro Ser Glu Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Val
        35                  40                  45
```

```
Ser Leu Pro Asp Tyr Gly Val Ser Trp Ile Arg Gln Pro Pro Gly Lys
    50                  55                  60

Gly Leu Glu Trp Ile Gly Val Ile Trp Gly Ser Glu Thr Thr Tyr Tyr
65                  70                  75                  80

Gln Ser Ser Leu Lys Ser Arg Val Thr Ile Ser Lys Asp Asn Ser Lys
                85                  90                  95

Asn Gln Val Ser Leu Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala
            100                 105                 110

Val Tyr Tyr Cys Ala Lys His Tyr Tyr Tyr Gly Gly Ser Tyr Ala Met
        115                 120                 125

Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly
    130                 135                 140

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly
145                 150                 155                 160

Ser Glu Ile Val Met Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro
                165                 170                 175

Gly Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Asp Ile Ser Lys
            180                 185                 190

Tyr Leu Asn Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu
        195                 200                 205

Ile Tyr His Thr Ser Arg Leu His Ser Gly Ile Pro Ala Arg Phe Ser
    210                 215                 220

Gly Ser Gly Ser Gly Thr Asp Tyr Thr Leu Thr Ile Ser Ser Leu Gln
225                 230                 235                 240

Pro Glu Asp Phe Ala Val Tyr Phe Cys Gln Gln Gly Asn Thr Leu Pro
                245                 250                 255
```

Tyr Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys His His His His
260 265 270

His His His His
275

<210> 72
<211> 276
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 72
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Glu Ile Val Met Thr Gln Ser Pro Ala Thr Leu
20 25 30

Ser Leu Ser Pro Gly Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln
35 40 45

Asp Ile Ser Lys Tyr Leu Asn Trp Tyr Gln Gln Lys Pro Gly Gln Ala
50 55 60

Pro Arg Leu Leu Ile Tyr His Thr Ser Arg Leu His Ser Gly Ile Pro
65 70 75 80

Ala Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Tyr Thr Leu Thr Ile
85 90 95

Ser Ser Leu Gln Pro Glu Asp Phe Ala Val Tyr Phe Cys Gln Gln Gly
100 105 110

Asn Thr Leu Pro Tyr Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
115 120 125

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly
130 135 140

```
Gly Gly Gly Ser Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val
145                 150                 155                 160


Lys Pro Ser Glu Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Val Ser
                165                 170                 175


Leu Pro Asp Tyr Gly Val Ser Trp Ile Arg Gln Pro Pro Gly Lys Gly
            180                 185                 190


Leu Glu Trp Ile Gly Val Ile Trp Gly Ser Glu Thr Thr Tyr Tyr Asn
        195                 200                 205


Ser Ser Leu Lys Ser Arg Val Thr Ile Ser Lys Asp Asn Ser Lys Asn
    210                 215                 220


Gln Val Ser Leu Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val
225                 230                 235                 240


Tyr Tyr Cys Ala Lys His Tyr Tyr Tyr Gly Gly Ser Tyr Ala Met Asp
                245                 250                 255


Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser His His His His
            260                 265                 270


His His His His
        275


<210> 73
<211> 276
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 73
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1               5                   10                  15


His Ala Ala Arg Pro Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu
            20                  25                  30
```

```
Val Lys Pro Ser Glu Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Val
        35                  40                  45

Ser Leu Pro Asp Tyr Gly Val Ser Trp Ile Arg Gln Pro Pro Gly Lys
    50                  55                  60

Gly Leu Glu Trp Ile Gly Val Ile Trp Gly Ser Glu Thr Thr Tyr Tyr
65                  70                  75                  80

Asn Ser Ser Leu Lys Ser Arg Val Thr Ile Ser Lys Asp Asn Ser Lys
                85                  90                  95

Asn Gln Val Ser Leu Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala
            100                 105                 110

Val Tyr Tyr Cys Ala Lys His Tyr Tyr Tyr Gly Gly Ser Tyr Ala Met
        115                 120                 125

Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly
    130                 135                 140

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly
145                 150                 155                 160

Ser Glu Ile Val Met Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro
                165                 170                 175

Gly Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Asp Ile Ser Lys
            180                 185                 190

Tyr Leu Asn Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu
        195                 200                 205

Ile Tyr His Thr Ser Arg Leu His Ser Gly Ile Pro Ala Arg Phe Ser
    210                 215                 220

Gly Ser Gly Ser Gly Thr Asp Tyr Thr Leu Thr Ile Ser Ser Leu Gln
225                 230                 235                 240
```

Pro Glu Asp Phe Ala Val Tyr Phe Cys Gln Gln Gly Asn Thr Leu Pro
245 250 255

Tyr Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys His His His His
260 265 270

His His His His
275

<210> 74
<211> 271
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 74
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Glu Ile Val Met Thr Gln Ser Pro Ala Thr Leu
20 25 30

Ser Leu Ser Pro Gly Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln
35 40 45

Asp Ile Ser Lys Tyr Leu Asn Trp Tyr Gln Gln Lys Pro Gly Gln Ala
50 55 60

Pro Arg Leu Leu Ile Tyr His Thr Ser Arg Leu His Ser Gly Ile Pro
65 70 75 80

Ala Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Tyr Thr Leu Thr Ile
85 90 95

Ser Ser Leu Gln Pro Glu Asp Phe Ala Val Tyr Phe Cys Gln Gln Gly
100 105 110

Asn Thr Leu Pro Tyr Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
115 120 125

```
Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gln
    130                 135                 140

Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Glu Thr
145                 150                 155                 160

Leu Ser Leu Thr Cys Thr Val Ser Gly Val Ser Leu Pro Asp Tyr Gly
                165                 170                 175

Val Ser Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp Ile Gly
            180                 185                 190

Val Ile Trp Gly Ser Glu Thr Thr Tyr Tyr Asn Ser Ser Leu Lys Ser
        195                 200                 205

Arg Val Thr Ile Ser Lys Asp Asn Ser Lys Asn Gln Val Ser Leu Lys
    210                 215                 220

Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr Cys Ala Lys
225                 230                 235                 240

His Tyr Tyr Tyr Gly Gly Ser Tyr Ala Met Asp Tyr Trp Gly Gln Gly
                245                 250                 255

Thr Leu Val Thr Val Ser Ser His His His His His His His His
            260                 265                 270
```

<210> 75
<211> 271
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 75

```
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1               5                   10                  15

His Ala Ala Arg Pro Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu
            20                  25                  30
```

```
Val Lys Pro Ser Glu Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Val
        35                  40                  45

Ser Leu Pro Asp Tyr Gly Val Ser Trp Ile Arg Gln Pro Pro Gly Lys
    50                  55                  60

Gly Leu Glu Trp Ile Gly Val Ile Trp Gly Ser Glu Thr Thr Tyr Tyr
65                  70                  75                  80

Asn Ser Ser Leu Lys Ser Arg Val Thr Ile Ser Lys Asp Asn Ser Lys
                85                  90                  95

Asn Gln Val Ser Leu Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala
            100                 105                 110

Val Tyr Tyr Cys Ala Lys His Tyr Tyr Tyr Gly Gly Ser Tyr Ala Met
        115                 120                 125

Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly
    130                 135                 140

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Ile Val Met
145                 150                 155                 160

Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly Glu Arg Ala Thr
                165                 170                 175

Leu Ser Cys Arg Ala Ser Gln Asp Ile Ser Lys Tyr Leu Asn Trp Tyr
            180                 185                 190

Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile Tyr His Thr Ser
        195                 200                 205

Arg Leu His Ser Gly Ile Pro Ala Arg Phe Ser Gly Ser Gly Ser Gly
    210                 215                 220

Thr Asp Tyr Thr Leu Thr Ile Ser Ser Leu Gln Pro Glu Asp Phe Ala
225                 230                 235                 240
```

Val Tyr Phe Cys Gln Gln Gly Asn Thr Leu Pro Tyr Thr Phe Gly Gln
245 250 255

Gly Thr Lys Leu Glu Ile Lys His His His His His His His His
260 265 270

<210> 76
<211> 271
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 76
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Asp Ile Gln Met Thr Gln Thr Thr Ser Ser Leu
20 25 30

Ser Ala Ser Leu Gly Asp Arg Val Thr Ile Ser Cys Arg Ala Ser Gln
35 40 45

Asp Ile Ser Lys Tyr Leu Asn Trp Tyr Gln Gln Lys Pro Asp Gly Thr
50 55 60

Val Lys Leu Leu Ile Tyr His Thr Ser Arg Leu His Ser Gly Val Pro
65 70 75 80

Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Tyr Ser Leu Thr Ile
85 90 95

Ser Asn Leu Glu Gln Glu Asp Ile Ala Thr Tyr Phe Cys Gln Gln Gly
100 105 110

Asn Thr Leu Pro Tyr Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Thr
115 120 125

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu
130 135 140

```
Val Lys Leu Gln Glu Ser Gly Pro Gly Leu Val Ala Pro Ser Gln Ser
145                 150                 155                 160


Leu Ser Val Thr Cys Thr Val Ser Gly Val Ser Leu Pro Asp Tyr Gly
                165                 170                 175


Val Ser Trp Ile Arg Gln Pro Pro Arg Lys Gly Leu Glu Trp Leu Gly
            180                 185                 190


Val Ile Trp Gly Ser Glu Thr Thr Tyr Tyr Asn Ser Ala Leu Lys Ser
        195                 200                 205


Arg Leu Thr Ile Ile Lys Asp Asn Ser Lys Ser Gln Val Phe Leu Lys
    210                 215                 220


Met Asn Ser Leu Gln Thr Asp Asp Thr Ala Ile Tyr Tyr Cys Ala Lys
225                 230                 235                 240


His Tyr Tyr Tyr Gly Gly Ser Tyr Ala Met Asp Tyr Trp Gly Gln Gly
                245                 250                 255


Thr Ser Val Thr Val Ser Ser His His His His His His His His
            260                 265                 270


<210> 77
<211> 486
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 77
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1               5                   10                  15


His Ala Ala Arg Pro Glu Ile Val Met Thr Gln Ser Pro Ala Thr Leu
            20                  25                  30


Ser Leu Ser Pro Gly Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln
        35                  40                  45
```

```
Asp Ile Ser Lys Tyr Leu Asn Trp Tyr Gln Gln Lys Pro Gly Gln Ala
    50                  55                  60

Pro Arg Leu Leu Ile Tyr His Thr Ser Arg Leu His Ser Gly Ile Pro
65                  70                  75                  80

Ala Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Tyr Thr Leu Thr Ile
                85                  90                  95

Ser Ser Leu Gln Pro Glu Asp Phe Ala Val Tyr Phe Cys Gln Gln Gly
            100                 105                 110

Asn Thr Leu Pro Tyr Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
        115                 120                 125

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gln
    130                 135                 140

Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Glu Thr
145                 150                 155                 160

Leu Ser Leu Thr Cys Thr Val Ser Gly Val Ser Leu Pro Asp Tyr Gly
                165                 170                 175

Val Ser Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp Ile Gly
            180                 185                 190

Val Ile Trp Gly Ser Glu Thr Thr Tyr Tyr Ser Ser Ser Leu Lys Ser
        195                 200                 205

Arg Val Thr Ile Ser Lys Asp Asn Ser Lys Asn Gln Val Ser Leu Lys
    210                 215                 220

Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr Cys Ala Lys
225                 230                 235                 240

His Tyr Tyr Tyr Gly Gly Ser Tyr Ala Met Asp Tyr Trp Gly Gln Gly
                245                 250                 255
```

```
Thr Leu Val Thr Val Ser Ser Thr Thr Thr Pro Ala Pro Arg Pro Pro
            260                 265                 270

Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser Leu Arg Pro Glu
        275                 280                 285

Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr Arg Gly Leu Asp
    290                 295                 300

Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly
305                 310                 315                 320

Val Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr Cys Lys Arg Gly Arg
                325                 330                 335

Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met Arg Pro Val Gln
            340                 345                 350

Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu Glu Glu
        355                 360                 365

Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg Ser Ala Asp Ala
    370                 375                 380

Pro Ala Tyr Lys Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn Leu
385                 390                 395                 400

Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg Asp
                405                 410                 415

Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu
            420                 425                 430

Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile
        435                 440                 445

Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His Asp Gly Leu Tyr
    450                 455                 460

Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu His Met
465                 470                 475                 480
```

Gln Ala Leu Pro Pro Arg
485

<210> 78
<211> 486
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 78
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Glu Ile Val Met Thr Gln Ser Pro Ala Thr Leu
20 25 30

Ser Leu Ser Pro Gly Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln
35 40 45

Asp Ile Ser Lys Tyr Leu Asn Trp Tyr Gln Gln Lys Pro Gly Gln Ala
50 55 60

Pro Arg Leu Leu Ile Tyr His Thr Ser Arg Leu His Ser Gly Ile Pro
65 70 75 80

Ala Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Tyr Thr Leu Thr Ile
85 90 95

Ser Ser Leu Gln Pro Glu Asp Phe Ala Val Tyr Phe Cys Gln Gln Gly
100 105 110

Asn Thr Leu Pro Tyr Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
115 120 125

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gln
130 135 140

Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Glu Thr

```
145                 150                 155                 160

Leu Ser Leu Thr Cys Thr Val Ser Gly Val Ser Leu Pro Asp Tyr Gly
                165                 170                 175

Val Ser Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp Ile Gly
            180                 185                 190

Val Ile Trp Gly Ser Glu Thr Thr Tyr Tyr Gln Ser Ser Leu Lys Ser
        195                 200                 205

Arg Val Thr Ile Ser Lys Asp Asn Ser Lys Asn Gln Val Ser Leu Lys
    210                 215                 220

Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr Cys Ala Lys
225                 230                 235                 240

His Tyr Tyr Tyr Gly Gly Ser Tyr Ala Met Asp Tyr Trp Gly Gln Gly
                245                 250                 255

Thr Leu Val Thr Val Ser Ser Thr Thr Thr Pro Ala Pro Arg Pro Pro
            260                 265                 270

Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser Leu Arg Pro Glu
        275                 280                 285

Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr Arg Gly Leu Asp
    290                 295                 300

Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly
305                 310                 315                 320

Val Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr Cys Lys Arg Gly Arg
                325                 330                 335

Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met Arg Pro Val Gln
            340                 345                 350

Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu Glu Glu
        355                 360                 365
```

```
Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg Ser Ala Asp Ala
    370                 375                 380

Pro Ala Tyr Lys Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn Leu
385                 390                 395                 400

Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg Asp
                405                 410                 415

Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu
            420                 425                 430

Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile
        435                 440                 445

Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His Asp Gly Leu Tyr
    450                 455                 460

Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu His Met
465                 470                 475                 480

Gln Ala Leu Pro Pro Arg
                485
```

<210> 79
<211> 486
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 79

```
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1               5                   10                  15

His Ala Ala Arg Pro Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu
            20                  25                  30

Val Lys Pro Ser Glu Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Val
        35                  40                  45
```

```
Ser Leu Pro Asp Tyr Gly Val Ser Trp Ile Arg Gln Pro Pro Gly Lys
    50                  55                  60

Gly Leu Glu Trp Ile Gly Val Ile Trp Gly Ser Glu Thr Thr Tyr Tyr
65                  70                  75                  80

Ser Ser Ser Leu Lys Ser Arg Val Thr Ile Ser Lys Asp Asn Ser Lys
                85                  90                  95

Asn Gln Val Ser Leu Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala
            100                 105                 110

Val Tyr Tyr Cys Ala Lys His Tyr Tyr Tyr Gly Gly Ser Tyr Ala Met
        115                 120                 125

Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly
    130                 135                 140

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Ile Val Met
145                 150                 155                 160

Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly Glu Arg Ala Thr
                165                 170                 175

Leu Ser Cys Arg Ala Ser Gln Asp Ile Ser Lys Tyr Leu Asn Trp Tyr
            180                 185                 190

Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile Tyr His Thr Ser
        195                 200                 205

Arg Leu His Ser Gly Ile Pro Ala Arg Phe Ser Gly Ser Gly Ser Gly
    210                 215                 220

Thr Asp Tyr Thr Leu Thr Ile Ser Ser Leu Gln Pro Glu Asp Phe Ala
225                 230                 235                 240

Val Tyr Phe Cys Gln Gln Gly Asn Thr Leu Pro Tyr Thr Phe Gly Gln
                245                 250                 255
```

```
Gly Thr Lys Leu Glu Ile Lys Thr Thr Thr Pro Ala Pro Arg Pro Pro
            260                 265                 270

Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser Leu Arg Pro Glu
        275                 280                 285

Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr Arg Gly Leu Asp
    290                 295                 300

Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly
305                 310                 315                 320

Val Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr Cys Lys Arg Gly Arg
                325                 330                 335

Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met Arg Pro Val Gln
            340                 345                 350

Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu Glu Glu
        355                 360                 365

Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg Ser Ala Asp Ala
    370                 375                 380

Pro Ala Tyr Lys Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn Leu
385                 390                 395                 400

Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg Asp
                405                 410                 415

Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu
            420                 425                 430

Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile
        435                 440                 445

Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His Asp Gly Leu Tyr
    450                 455                 460

Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu His Met
465                 470                 475                 480
```

Gln Ala Leu Pro Pro Arg
485

<210> 80
<211> 486
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 80
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu
20 25 30

Val Lys Pro Ser Glu Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Val
35 40 45

Ser Leu Pro Asp Tyr Gly Val Ser Trp Ile Arg Gln Pro Pro Gly Lys
50 55 60

Gly Leu Glu Trp Ile Gly Val Ile Trp Gly Ser Glu Thr Thr Tyr Tyr
65 70 75 80

Gln Ser Ser Leu Lys Ser Arg Val Thr Ile Ser Lys Asp Asn Ser Lys
85 90 95

Asn Gln Val Ser Leu Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala
100 105 110

Val Tyr Tyr Cys Ala Lys His Tyr Tyr Tyr Gly Gly Ser Tyr Ala Met
115 120 125

Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly
130 135 140

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Ile Val Met

```
145                 150                 155                 160

Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly Glu Arg Ala Thr
                165                 170                 175

Leu Ser Cys Arg Ala Ser Gln Asp Ile Ser Lys Tyr Leu Asn Trp Tyr
            180                 185                 190

Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile Tyr His Thr Ser
        195                 200                 205

Arg Leu His Ser Gly Ile Pro Ala Arg Phe Ser Gly Ser Gly Ser Gly
    210                 215                 220

Thr Asp Tyr Thr Leu Thr Ile Ser Ser Leu Gln Pro Glu Asp Phe Ala
225                 230                 235                 240

Val Tyr Phe Cys Gln Gln Gly Asn Thr Leu Pro Tyr Thr Phe Gly Gln
                245                 250                 255

Gly Thr Lys Leu Glu Ile Lys Thr Thr Thr Pro Ala Pro Arg Pro Pro
            260                 265                 270

Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser Leu Arg Pro Glu
        275                 280                 285

Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr Arg Gly Leu Asp
    290                 295                 300

Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly
305                 310                 315                 320

Val Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr Cys Lys Arg Gly Arg
                325                 330                 335

Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met Arg Pro Val Gln
            340                 345                 350

Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu Glu Glu
        355                 360                 365
```

```
Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg Ser Ala Asp Ala
    370                 375                 380

Pro Ala Tyr Lys Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn Leu
385                 390                 395                 400

Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg Asp
                405                 410                 415

Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu
            420                 425                 430

Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile
        435                 440                 445

Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His Asp Gly Leu Tyr
    450                 455                 460

Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu His Met
465                 470                 475                 480

Gln Ala Leu Pro Pro Arg
                485
```

<210> 81
<211> 491
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 81

```
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1               5                   10                  15

His Ala Ala Arg Pro Glu Ile Val Met Thr Gln Ser Pro Ala Thr Leu
            20                  25                  30

Ser Leu Ser Pro Gly Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln
        35                  40                  45
```

```
Asp Ile Ser Lys Tyr Leu Asn Trp Tyr Gln Gln Lys Pro Gly Gln Ala
    50                  55                  60

Pro Arg Leu Leu Ile Tyr His Thr Ser Arg Leu His Ser Gly Ile Pro
65                  70                  75                  80

Ala Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Tyr Thr Leu Thr Ile
                85                  90                  95

Ser Ser Leu Gln Pro Glu Asp Phe Ala Val Tyr Phe Cys Gln Gln Gly
            100                 105                 110

Asn Thr Leu Pro Tyr Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
        115                 120                 125

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly
    130                 135                 140

Gly Gly Gly Ser Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val
145                 150                 155                 160

Lys Pro Ser Glu Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Val Ser
                165                 170                 175

Leu Pro Asp Tyr Gly Val Ser Trp Ile Arg Gln Pro Pro Gly Lys Gly
            180                 185                 190

Leu Glu Trp Ile Gly Val Ile Trp Gly Ser Glu Thr Thr Tyr Tyr Ser
        195                 200                 205

Ser Ser Leu Lys Ser Arg Val Thr Ile Ser Lys Asp Asn Ser Lys Asn
    210                 215                 220

Gln Val Ser Leu Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val
225                 230                 235                 240

Tyr Tyr Cys Ala Lys His Tyr Tyr Tyr Gly Gly Ser Tyr Ala Met Asp
                245                 250                 255
```

```
Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Thr Thr Thr Pro
            260                 265                 270

Ala Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu
        275                 280                 285

Ser Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His
    290                 295                 300

Thr Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu
305                 310                 315                 320

Ala Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr
                325                 330                 335

Cys Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe
            340                 345                 350

Met Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg
        355                 360                 365

Phe Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser
    370                 375                 380

Arg Ser Ala Asp Ala Pro Ala Tyr Lys Gln Gly Gln Asn Gln Leu Tyr
385                 390                 395                 400

Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys
                405                 410                 415

Arg Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn
            420                 425                 430

Pro Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu
        435                 440                 445

Ala Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly
    450                 455                 460

His Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr
465                 470                 475                 480
```

Asp Ala Leu His Met Gln Ala Leu Pro Pro Arg
485 490

<210> 82
<211> 491
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 82
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Glu Ile Val Met Thr Gln Ser Pro Ala Thr Leu
20 25 30

Ser Leu Ser Pro Gly Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln
35 40 45

Asp Ile Ser Lys Tyr Leu Asn Trp Tyr Gln Gln Lys Pro Gly Gln Ala
50 55 60

Pro Arg Leu Leu Ile Tyr His Thr Ser Arg Leu His Ser Gly Ile Pro
65 70 75 80

Ala Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Tyr Thr Leu Thr Ile
85 90 95

Ser Ser Leu Gln Pro Glu Asp Phe Ala Val Tyr Phe Cys Gln Gln Gly
100 105 110

Asn Thr Leu Pro Tyr Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
115 120 125

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly
130 135 140

Gly Gly Gly Ser Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val

```
145                 150                 155                 160

Lys Pro Ser Glu Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Val Ser
                165                 170                 175

Leu Pro Asp Tyr Gly Val Ser Trp Ile Arg Gln Pro Pro Gly Lys Gly
            180                 185                 190

Leu Glu Trp Ile Gly Val Ile Trp Gly Ser Glu Thr Thr Tyr Tyr Gln
        195                 200                 205

Ser Ser Leu Lys Ser Arg Val Thr Ile Ser Lys Asp Asn Ser Lys Asn
    210                 215                 220

Gln Val Ser Leu Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val
225                 230                 235                 240

Tyr Tyr Cys Ala Lys His Tyr Tyr Tyr Gly Gly Ser Tyr Ala Met Asp
                245                 250                 255

Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Thr Thr Thr Pro
            260                 265                 270

Ala Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu
        275                 280                 285

Ser Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His
    290                 295                 300

Thr Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu
305                 310                 315                 320

Ala Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr
                325                 330                 335

Cys Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe
            340                 345                 350

Met Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg
        355                 360                 365
```

```
Phe Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser
    370                 375                 380

Arg Ser Ala Asp Ala Pro Ala Tyr Lys Gln Gly Gln Asn Gln Leu Tyr
385                 390                 395                 400

Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys
                405                 410                 415

Arg Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn
            420                 425                 430

Pro Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu
        435                 440                 445

Ala Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly
    450                 455                 460

His Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr
465                 470                 475                 480

Asp Ala Leu His Met Gln Ala Leu Pro Pro Arg
                485                 490
```

<210> 83
<211> 491
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 83

```
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1               5                   10                  15

His Ala Ala Arg Pro Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu
            20                  25                  30

Val Lys Pro Ser Glu Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Val
        35                  40                  45
```

```
Ser Leu Pro Asp Tyr Gly Val Ser Trp Ile Arg Gln Pro Pro Gly Lys
    50                  55                  60

Gly Leu Glu Trp Ile Gly Val Ile Trp Gly Ser Glu Thr Thr Tyr Tyr
65                  70                  75                  80

Ser Ser Ser Leu Lys Ser Arg Val Thr Ile Ser Lys Asp Asn Ser Lys
                85                  90                  95

Asn Gln Val Ser Leu Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala
            100                 105                 110

Val Tyr Tyr Cys Ala Lys His Tyr Tyr Tyr Gly Gly Ser Tyr Ala Met
        115                 120                 125

Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly
    130                 135                 140

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly
145                 150                 155                 160

Ser Glu Ile Val Met Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro
                165                 170                 175

Gly Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Asp Ile Ser Lys
            180                 185                 190

Tyr Leu Asn Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu
        195                 200                 205

Ile Tyr His Thr Ser Arg Leu His Ser Gly Ile Pro Ala Arg Phe Ser
    210                 215                 220

Gly Ser Gly Ser Gly Thr Asp Tyr Thr Leu Thr Ile Ser Ser Leu Gln
225                 230                 235                 240

Pro Glu Asp Phe Ala Val Tyr Phe Cys Gln Gln Gly Asn Thr Leu Pro
                245                 250                 255
```

```
Tyr Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys Thr Thr Thr Pro
            260                 265                 270

Ala Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu
        275                 280                 285

Ser Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His
    290                 295                 300

Thr Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu
305                 310                 315                 320

Ala Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr
                325                 330                 335

Cys Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe
            340                 345                 350

Met Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg
        355                 360                 365

Phe Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser
    370                 375                 380

Arg Ser Ala Asp Ala Pro Ala Tyr Lys Gln Gly Gln Asn Gln Leu Tyr
385                 390                 395                 400

Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys
                405                 410                 415

Arg Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn
            420                 425                 430

Pro Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu
        435                 440                 445

Ala Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly
    450                 455                 460

His Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr
465                 470                 475                 480
```

Asp Ala Leu His Met Gln Ala Leu Pro Pro Arg
485 490

<210> 84
<211> 491
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 84
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu
20 25 30

Val Lys Pro Ser Glu Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Val
35 40 45

Ser Leu Pro Asp Tyr Gly Val Ser Trp Ile Arg Gln Pro Pro Gly Lys
50 55 60

Gly Leu Glu Trp Ile Gly Val Ile Trp Gly Ser Glu Thr Thr Tyr Tyr
65 70 75 80

Gln Ser Ser Leu Lys Ser Arg Val Thr Ile Ser Lys Asp Asn Ser Lys
85 90 95

Asn Gln Val Ser Leu Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala
100 105 110

Val Tyr Tyr Cys Ala Lys His Tyr Tyr Tyr Gly Gly Ser Tyr Ala Met
115 120 125

Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly
130 135 140

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly

```
145                 150                 155                 160

Ser Glu Ile Val Met Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro
                165                 170                 175

Gly Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Asp Ile Ser Lys
            180                 185                 190

Tyr Leu Asn Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu
        195                 200                 205

Ile Tyr His Thr Ser Arg Leu His Ser Gly Ile Pro Ala Arg Phe Ser
    210                 215                 220

Gly Ser Gly Ser Gly Thr Asp Tyr Thr Leu Thr Ile Ser Ser Leu Gln
225                 230                 235                 240

Pro Glu Asp Phe Ala Val Tyr Phe Cys Gln Gln Gly Asn Thr Leu Pro
                245                 250                 255

Tyr Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys Thr Thr Thr Pro
            260                 265                 270

Ala Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu
        275                 280                 285

Ser Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His
    290                 295                 300

Thr Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu
305                 310                 315                 320

Ala Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr
                325                 330                 335

Cys Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe
            340                 345                 350

Met Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg
        355                 360                 365
```

```
Phe Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser
    370                 375                 380

Arg Ser Ala Asp Ala Pro Ala Tyr Lys Gln Gly Gln Asn Gln Leu Tyr
385                 390                 395                 400

Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys
                405                 410                 415

Arg Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn
            420                 425                 430

Pro Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu
        435                 440                 445

Ala Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly
    450                 455                 460

His Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr
465                 470                 475                 480

Asp Ala Leu His Met Gln Ala Leu Pro Pro Arg
                485                 490
```

<210> 85
<211> 491
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 85

```
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1               5                   10                  15

His Ala Ala Arg Pro Glu Ile Val Met Thr Gln Ser Pro Ala Thr Leu
            20                  25                  30

Ser Leu Ser Pro Gly Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln
        35                  40                  45
```

```
Asp Ile Ser Lys Tyr Leu Asn Trp Tyr Gln Gln Lys Pro Gly Gln Ala
    50                  55                  60

Pro Arg Leu Leu Ile Tyr His Thr Ser Arg Leu His Ser Gly Ile Pro
65                  70                  75                  80

Ala Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Tyr Thr Leu Thr Ile
                85                  90                  95

Ser Ser Leu Gln Pro Glu Asp Phe Ala Val Tyr Phe Cys Gln Gln Gly
            100                 105                 110

Asn Thr Leu Pro Tyr Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
        115                 120                 125

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly
    130                 135                 140

Gly Gly Gly Ser Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val
145                 150                 155                 160

Lys Pro Ser Glu Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Val Ser
                165                 170                 175

Leu Pro Asp Tyr Gly Val Ser Trp Ile Arg Gln Pro Pro Gly Lys Gly
            180                 185                 190

Leu Glu Trp Ile Gly Val Ile Trp Gly Ser Glu Thr Thr Tyr Tyr Asn
        195                 200                 205

Ser Ser Leu Lys Ser Arg Val Thr Ile Ser Lys Asp Asn Ser Lys Asn
    210                 215                 220

Gln Val Ser Leu Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val
225                 230                 235                 240

Tyr Tyr Cys Ala Lys His Tyr Tyr Tyr Gly Gly Ser Tyr Ala Met Asp
                245                 250                 255
```

```
Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Thr Thr Thr Pro
            260                 265                 270

Ala Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu
        275                 280                 285

Ser Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His
    290                 295                 300

Thr Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu
305                 310                 315                 320

Ala Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr
                325                 330                 335

Cys Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe
            340                 345                 350

Met Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg
        355                 360                 365

Phe Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser
    370                 375                 380

Arg Ser Ala Asp Ala Pro Ala Tyr Lys Gln Gly Gln Asn Gln Leu Tyr
385                 390                 395                 400

Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys
                405                 410                 415

Arg Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn
            420                 425                 430

Pro Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu
        435                 440                 445

Ala Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly
    450                 455                 460

His Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr
465                 470                 475                 480
```

Asp Ala Leu His Met Gln Ala Leu Pro Pro Arg
485 490

<210> 86
<211> 491
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 86
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Glu Ile Val Met Thr Gln Ser Pro Ala Thr Leu
20 25 30

Ser Leu Ser Pro Gly Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln
35 40 45

Asp Ile Ser Lys Tyr Leu Asn Trp Tyr Gln Gln Lys Pro Gly Gln Ala
50 55 60

Pro Arg Leu Leu Ile Tyr His Thr Ser Arg Leu His Ser Gly Ile Pro
65 70 75 80

Ala Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Tyr Thr Leu Thr Ile
85 90 95

Ser Ser Leu Gln Pro Glu Asp Phe Ala Val Tyr Phe Cys Gln Gln Gly
100 105 110

Asn Thr Leu Pro Tyr Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
115 120 125

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly
130 135 140

Gly Gly Gly Ser Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val

```
145                 150                 155                 160

Lys Pro Ser Glu Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Val Ser
                165                 170                 175

Leu Pro Asp Tyr Gly Val Ser Trp Ile Arg Gln Pro Pro Gly Lys Gly
            180                 185                 190

Leu Glu Trp Ile Gly Val Ile Trp Gly Ser Glu Thr Thr Tyr Tyr Asn
        195                 200                 205

Ser Ser Leu Lys Ser Arg Val Thr Ile Ser Lys Asp Asn Ser Lys Asn
    210                 215                 220

Gln Val Ser Leu Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val
225                 230                 235                 240

Tyr Tyr Cys Ala Lys His Tyr Tyr Tyr Gly Gly Ser Tyr Ala Met Asp
                245                 250                 255

Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Thr Thr Thr Pro
            260                 265                 270

Ala Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu
        275                 280                 285

Ser Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His
    290                 295                 300

Thr Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu
305                 310                 315                 320

Ala Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr
                325                 330                 335

Cys Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe
            340                 345                 350

Met Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg
        355                 360                 365
```

```
Phe Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser
    370                 375                 380

Arg Ser Ala Asp Ala Pro Ala Tyr Lys Gln Gly Gln Asn Gln Leu Tyr
385                 390                 395                 400

Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys
                405                 410                 415

Arg Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn
            420                 425                 430

Pro Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu
        435                 440                 445

Ala Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly
    450                 455                 460

His Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr
465                 470                 475                 480

Asp Ala Leu His Met Gln Ala Leu Pro Pro Arg
                485                 490
```

<210> 87
<211> 491
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 87

```
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1               5                   10                  15

His Ala Ala Arg Pro Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu
            20                  25                  30

Val Lys Pro Ser Glu Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Val
        35                  40                  45
```

```
Ser Leu Pro Asp Tyr Gly Val Ser Trp Ile Arg Gln Pro Pro Gly Lys
    50                  55                  60

Gly Leu Glu Trp Ile Gly Val Ile Trp Gly Ser Glu Thr Thr Tyr Tyr
65                  70                  75                  80

Asn Ser Ser Leu Lys Ser Arg Val Thr Ile Ser Lys Asp Asn Ser Lys
                85                  90                  95

Asn Gln Val Ser Leu Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala
            100                 105                 110

Val Tyr Tyr Cys Ala Lys His Tyr Tyr Tyr Gly Gly Ser Tyr Ala Met
        115                 120                 125

Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly
    130                 135                 140

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly
145                 150                 155                 160

Ser Glu Ile Val Met Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro
                165                 170                 175

Gly Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Asp Ile Ser Lys
            180                 185                 190

Tyr Leu Asn Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu
        195                 200                 205

Ile Tyr His Thr Ser Arg Leu His Ser Gly Ile Pro Ala Arg Phe Ser
    210                 215                 220

Gly Ser Gly Ser Gly Thr Asp Tyr Thr Leu Thr Ile Ser Ser Leu Gln
225                 230                 235                 240

Pro Glu Asp Phe Ala Val Tyr Phe Cys Gln Gln Gly Asn Thr Leu Pro
                245                 250                 255
```

```
Tyr Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys Thr Thr Thr Pro
            260                 265                 270

Ala Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu
        275                 280                 285

Ser Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His
    290                 295                 300

Thr Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu
305                 310                 315                 320

Ala Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr
                325                 330                 335

Cys Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe
            340                 345                 350

Met Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg
        355                 360                 365

Phe Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser
    370                 375                 380

Arg Ser Ala Asp Ala Pro Ala Tyr Lys Gln Gly Gln Asn Gln Leu Tyr
385                 390                 395                 400

Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys
                405                 410                 415

Arg Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn
            420                 425                 430

Pro Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu
        435                 440                 445

Ala Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly
    450                 455                 460

His Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr
465                 470                 475                 480
```

Asp Ala Leu His Met Gln Ala Leu Pro Pro Arg
485 490

<210> 88
<211> 486
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 88
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Glu Ile Val Met Thr Gln Ser Pro Ala Thr Leu
20 25 30

Ser Leu Ser Pro Gly Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln
35 40 45

Asp Ile Ser Lys Tyr Leu Asn Trp Tyr Gln Gln Lys Pro Gly Gln Ala
50 55 60

Pro Arg Leu Leu Ile Tyr His Thr Ser Arg Leu His Ser Gly Ile Pro
65 70 75 80

Ala Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Tyr Thr Leu Thr Ile
85 90 95

Ser Ser Leu Gln Pro Glu Asp Phe Ala Val Tyr Phe Cys Gln Gln Gly
100 105 110

Asn Thr Leu Pro Tyr Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
115 120 125

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gln
130 135 140

Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Glu Thr

```
145                 150                 155                 160

Leu Ser Leu Thr Cys Thr Val Ser Gly Val Ser Leu Pro Asp Tyr Gly
                165                 170                 175

Val Ser Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp Ile Gly
            180                 185                 190

Val Ile Trp Gly Ser Glu Thr Thr Tyr Tyr Asn Ser Ser Leu Lys Ser
        195                 200                 205

Arg Val Thr Ile Ser Lys Asp Asn Ser Lys Asn Gln Val Ser Leu Lys
    210                 215                 220

Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr Cys Ala Lys
225                 230                 235                 240

His Tyr Tyr Tyr Gly Gly Ser Tyr Ala Met Asp Tyr Trp Gly Gln Gly
                245                 250                 255

Thr Leu Val Thr Val Ser Ser Thr Thr Thr Pro Ala Pro Arg Pro Pro
            260                 265                 270

Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser Leu Arg Pro Glu
        275                 280                 285

Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr Arg Gly Leu Asp
    290                 295                 300

Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly
305                 310                 315                 320

Val Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr Cys Lys Arg Gly Arg
                325                 330                 335

Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met Arg Pro Val Gln
            340                 345                 350

Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu Glu Glu
        355                 360                 365
```

```
Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg Ser Ala Asp Ala
    370                 375                 380

Pro Ala Tyr Lys Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn Leu
385                 390                 395                 400

Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg Asp
                405                 410                 415

Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu
            420                 425                 430

Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile
        435                 440                 445

Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His Asp Gly Leu Tyr
    450                 455                 460

Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu His Met
465                 470                 475                 480

Gln Ala Leu Pro Pro Arg
                485
```

<210> 89
<211> 486
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 89

```
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1               5                   10                  15

His Ala Ala Arg Pro Asp Ile Gln Met Thr Gln Thr Thr Ser Ser Leu
            20                  25                  30

Ser Ala Ser Leu Gly Asp Arg Val Thr Ile Ser Cys Arg Ala Ser Gln
        35                  40                  45
```

```
Asp Ile Ser Lys Tyr Leu Asn Trp Tyr Gln Gln Lys Pro Asp Gly Thr
    50                  55                  60

Val Lys Leu Leu Ile Tyr His Thr Ser Arg Leu His Ser Gly Val Pro
65                  70                  75                  80

Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Tyr Ser Leu Thr Ile
                85                  90                  95

Ser Asn Leu Glu Gln Glu Asp Ile Ala Thr Tyr Phe Cys Gln Gln Gly
            100                 105                 110

Asn Thr Leu Pro Tyr Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Thr
        115                 120                 125

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu
    130                 135                 140

Val Lys Leu Gln Glu Ser Gly Pro Gly Leu Val Ala Pro Ser Gln Ser
145                 150                 155                 160

Leu Ser Val Thr Cys Thr Val Ser Gly Val Ser Leu Pro Asp Tyr Gly
                165                 170                 175

Val Ser Trp Ile Arg Gln Pro Pro Arg Lys Gly Leu Glu Trp Leu Gly
            180                 185                 190

Val Ile Trp Gly Ser Glu Thr Thr Tyr Tyr Asn Ser Ala Leu Lys Ser
        195                 200                 205

Arg Leu Thr Ile Ile Lys Asp Asn Ser Lys Ser Gln Val Phe Leu Lys
    210                 215                 220

Met Asn Ser Leu Gln Thr Asp Asp Thr Ala Ile Tyr Tyr Cys Ala Lys
225                 230                 235                 240

His Tyr Tyr Tyr Gly Gly Ser Tyr Ala Met Asp Tyr Trp Gly Gln Gly
                245                 250                 255
```

```
Thr Ser Val Thr Val Ser Ser Thr Thr Thr Pro Ala Pro Arg Pro Pro
            260                 265                 270

Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser Leu Arg Pro Glu
        275                 280                 285

Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr Arg Gly Leu Asp
    290                 295                 300

Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly
305                 310                 315                 320

Val Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr Cys Lys Arg Gly Arg
                325                 330                 335

Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met Arg Pro Val Gln
            340                 345                 350

Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu Glu Glu
        355                 360                 365

Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg Ser Ala Asp Ala
    370                 375                 380

Pro Ala Tyr Lys Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn Leu
385                 390                 395                 400

Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg Asp
                405                 410                 415

Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu
            420                 425                 430

Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile
        435                 440                 445

Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His Asp Gly Leu Tyr
    450                 455                 460

Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu His Met
465                 470                 475                 480
```

Gln Ala Leu Pro Pro Arg
485

<210> 90
<211> 1458
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 90
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

cccgaaattg tgatgaccca gtcacccgcc actcttagcc tttcacccgg tgagcgcgca 120

accctgtctt gcagagcctc ccaagacatc tcaaaatacc ttaattggta tcaacagaag 180

cccggacagg ctcctcgcct tctgatctac cacaccagcc ggctccattc tggaatccct 240

gccaggttca gcggtagcgg atctgggacc gactacaccc tcactatcag ctcactgcag 300

ccagaggact tcgctgtcta tttctgtcag caagggaaca ccctgcccta caccttgga 360

cagggcacca agctcgagat taaaggtgga ggtggcagcg gaggaggtgg gtccggcggt 420

ggaggaagcc aggtccaact ccaagaaagc ggaccgggtc ttgtgaagcc atcagaaact 480

ctttcactga cttgtactgt gagcggagtg tctctccccg attacggggt gtcttggatc 540

agacagccac cggggaaggg tctggaatgg attggagtga tttggggctc tgagactact 600

tactactctt catccctcaa gtcacgcgtc accatctcaa aggacaactc taagaatcag 660

gtgtcactga aactgtcatc tgtgaccgca gccgacaccg ccgtgtacta ttgcgctaag 720

cattactatt atggcgggag ctacgcaatg gattactggg gacagggtac tctggtcacc 780

gtgtccagca ccactacccc agcaccgagg ccacccaccc cggctcctac catcgcctcc 840

cagcctctgt ccctgcgtcc ggaggcatgt agacccgcag ctggtggggc cgtgcatacc 900

cggggtcttg acttcgcctg cgatatctac atttgggccc ctctggctgg tacttgcggg 960

gtcctgctgc tttcactcgt gatcactctt tactgtaagc gcggtcggaa gaagctgctg 1020

tacatcttta agcaaccctt catgaggcct gtgcagacta ctcaagagga ggacggctgt 1080

tcatgccggt tcccagagga ggaggaaggc ggctgcgaac tgcgcgtgaa attcagccgc 1140

agcgcagatg ctccagccta caagcagggg cagaaccagc tctacaacga actcaatctt 1200

ggtcggagag aggagtacga cgtgctggac aagcggagag gacgggaccc agaaatgggc 1260

gggaagccgc gcagaaagaa tccccaagag ggcctgtaca acgagctcca aaaggataag 1320

atggcagaag cctatagcga gattggtatg aaaggggaac gcagaagagg caaaggccac 1380

gacggactgt accagggact cagcaccgcc accaaggaca cctatgacgc tcttcacatg 1440

caggccctgc cgcctcgg 1458

<210> 91
<211> 1458
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 91
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

cccgaaattg tgatgaccca gtcacccgcc actcttagcc tttcacccgg tgagcgcgca 120

accctgtctt gcagagcctc ccaagacatc tcaaaatacc ttaattggta tcaacagaag 180

cccggacagg ctcctcgcct tctgatctac cacaccagcc ggctccattc tggaatccct 240

gccaggttca gcggtagcgg atctgggacc gactacaccc tcactatcag ctcactgcag 300

ccagaggact tcgctgtcta tttctgtcag caagggaaca ccctgcccta caccttgga 360

cagggcacca agctcgagat taaaggtgga ggtggcagcg gaggaggtgg gtccggcggt 420

ggaggaagcc aggtccaact ccaagaaagc ggaccgggtc ttgtgaagcc atcagaaact 480

ctttcactga cttgtactgt gagcggagtg tctctccccg attacggggt gtcttggatc 540

agacagccac cggggaaggg tctggaatgg attggagtga tttggggctc tgagactact 600

tactaccaat catccctcaa gtcacgcgtc accatctcaa aggacaactc taagaatcag 660

gtgtcactga aactgtcatc tgtgaccgca gccgacaccg ccgtgtacta ttgcgctaag 720

cattactatt atggcgggag ctacgcaatg gattactggg gacagggtac tctggtcacc 780

gtgtccagca ccactacccc agcaccgagg ccacccaccc cggctcctac catcgcctcc 840

cagcctctgt ccctgcgtcc ggaggcatgt agacccgcag ctggtggggc cgtgcatacc 900

cggggtcttg acttcgcctg cgatatctac atttgggccc ctctggctgg tacttgcggg 960

gtcctgctgc tttcactcgt gatcactctt tactgtaagc gcggtcggaa gaagctgctg 1020

tacatcttta agcaaccctt catgaggcct gtgcagacta ctcaagagga ggacggctgt 1080

tcatgccggt tcccagagga ggaggaaggc ggctgcgaac tgcgcgtgaa attcagccgc 1140

agcgcagatg ctccagccta caagcagggg cagaaccagc tctacaacga actcaatctt 1200

ggtcggagag aggagtacga cgtgctggac aagcggagag gacgggaccc agaaatgggc 1260

gggaagccgc gcagaaagaa tccccaagag ggcctgtaca acgagctcca aaaggataag 1320

atggcagaag cctatagcga gattggtatg aaaggggaac gcagaagagg caaaggccac 1380

gacggactgt accagggact cagcaccgcc accaaggaca cctatgacgc tcttcacatg 1440

caggccctgc cgcctcgg 1458

<210> 92
<211> 1458
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 92
atggctctgc ccgtgaccgc actcctcctg ccactggctc tgctgcttca cgccgctcgc 60

ccacaagtcc agcttcaaga atcagggcct ggtctggtga agccatctga gactctgtcc 120

ctcacttgca ccgtgagcgg agtgtccctc ccagactacg gagtgagctg gattagacag 180

cctcccggaa agggactgga gtggatcgga gtgatttggg gtagcgaaac cacttactat 240

tcatcttccc tgaagtcacg ggtcaccatt tcaaaggata actcaaagaa tcaagtgagc 300

ctcaagctct catcagtcac cgccgctgac accgccgtgt attactgtgc caagcattac 360

tactatggag ggtcctacgc catggactac tggggccagg gaactctggt cactgtgtca 420

tctggtggag gaggtagcgg aggaggcggg agcggtggag gtggctccga aatcgtgatg 480

acccagagcc ctgcaaccct gtccctttct cccggggaac gggctaccct ttcttgtcgg 540

gcatcacaag atatctcaaa atacctcaat tggtatcaac agaagccggg acaggccct 600

aggcttctta tctaccacac ctctcgcctg catagcggga ttcccgcacg ctttagcggg 660

tctggaagcg ggaccgacta cactctgacc atctcatctc tccagcccga ggacttcgcc 720

gtctacttct gccagcaggg taacaccctg ccgtacacct tcggccaggg caccaagctt 780

gagatcaaaa ccactactcc cgctccaagg ccacccaccc ctgccccgac catcgcctct 840

cagccgcttt ccctgcgtcc ggaggcatgt agacccgcag ctggtggggc cgtgcatacc 900

cggggtcttg acttcgcctg cgatatctac atttgggccc ctctggctgg tacttgcggg 960

gtcctgctgc tttcactcgt gatcactctt tactgtaagc gcggtcggaa gaagctgctg 1020

tacatcttta agcaaccctt catgaggcct gtgcagacta ctcaagagga ggacggctgt 1080

tcatgccggt tcccagagga ggaggaaggc ggctgcgaac tgcgcgtgaa attcagccgc 1140

agcgcagatg ctccagccta caagcagggg cagaaccagc tctacaacga actcaatctt 1200

ggtcggagag aggagtacga cgtgctggac aagcggagag gacgggaccc agaaatgggc 1260

gggaagccgc gcagaaagaa tccccaagag ggcctgtaca acgagctcca aaaggataag 1320

atggcagaag cctatagcga gattggtatg aaaggggaac gcagaagagg caaaggccac 1380

gacggactgt accagggact cagcaccgcc accaaggaca cctatgacgc tcttcacatg 1440

caggccctgc cgcctcgg 1458

<210> 93
<211> 1458
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 93
atggctctgc ccgtgaccgc actcctcctg ccactggctc tgctgcttca cgccgctcgc 60

ccacaagtcc agcttcaaga atcagggcct ggtctggtga agccatctga gactctgtcc 120

ctcacttgca ccgtgagcgg agtgtccctc ccagactacg gagtgagctg gattagacag 180

cctcccggaa agggactgga gtggatcgga gtgatttggg gtagcgaaac cacttactat 240

caatcttccc tgaagtcacg ggtcaccatt tcaaaggata actcaaagaa tcaagtgagc 300

ctcaagctct catcagtcac cgccgctgac accgccgtgt attactgtgc caagcattac 360

tactatggag ggtcctacgc catggactac tggggccagg gaactctggt cactgtgtca 420

tctggtggag gaggtagcgg aggaggcggg agcggtggag gtggctccga aatcgtgatg 480

acccagagcc ctgcaaccct gtccctttct cccggggaac gggctaccct ttcttgtcgg 540

gcatcacaag atatctcaaa atacctcaat tggtatcaac agaagccggg acaggccct 600

aggcttctta tctaccacac ctctcgcctg catagcggga ttcccgcacg ctttagcggg 660

tctggaagcg ggaccgacta cactctgacc atctcatctc tccagcccga ggacttcgcc 720

gtctacttct gccagcaggg taacaccctg ccgtacacct tcggccaggg caccaagctt 780

gagatcaaaa ccactactcc cgctccaagg ccacccaccc ctgccccgac catcgcctct 840

cagccgcttt ccctgcgtcc ggaggcatgt agacccgcag ctggtggggc cgtgcatacc 900

cggggtcttg acttcgcctg cgatatctac atttgggccc ctctggctgg tacttgcggg 960

gtcctgctgc tttcactcgt gatcactctt tactgtaagc gcggtcggaa gaagctgctg 1020

tacatcttta agcaaccctt catgaggcct gtgcagacta ctcaagagga ggacggctgt 1080

tcatgccggt tcccagagga ggaggaaggc ggctgcgaac tgcgcgtgaa attcagccgc 1140

agcgcagatg ctccagccta caagcagggg cagaaccagc tctacaacga actcaatctt 1200

ggtcggagag aggagtacga cgtgctggac aagcggagag gacgggaccc agaaatgggc 1260

gggaagccgc gcagaaagaa tccccaagag ggcctgtaca acgagctcca aaaggataag 1320

atggcagaag cctatagcga gattggtatg aaaggggaac gcagaagagg caaaggccac 1380

gacggactgt accagggact cagcaccgcc accaaggaca cctatgacgc tcttcacatg 1440

caggccctgc cgcctcgg 1458

<210> 94
<211> 1473
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 94
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

cccgaaattg tgatgaccca gtcacccgcc actcttagcc tttcacccgg tgagcgcgca 120

accctgtctt gcagagcctc ccaagacatc tcaaaatacc ttaattggta tcaacagaag 180

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aagccatcag aaactctttc actgacttgt actgtgagcg gagtgtctct ccccgattac 540

ggggtgtctt ggatcagaca gccaccgggg aagggtctgg aatggattgg agtgatttgg 600

ggctctgaga ctacttacta ctcttcatcc ctcaagtcac gcgtcaccat ctcaaaggac 660

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gctggtactt gcggggtcct gctgctttca ctcgtgatca ctctttactg taagcgcggt 1020

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gaggaggacg gctgttcatg ccggttccca gaggaggagg aaggcggctg cgaactgcgc 1140

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aacgaactca atcttggtcg gagagaggag tacgacgtgc tggacaagcg gagaggacgg 1260

gacccagaaa tgggcgggaa gccgcgcaga aagaatcccc aagagggcct gtacaacgag 1320

ctccaaaagg ataagatggc agaagcctat agcgagattg gtatgaaagg ggaacgcaga 1380

agaggcaaag gccacgacgg actgtaccag ggactcagca ccgccaccaa ggacacctat 1440

gacgctcttc acatgcaggc cctgccgcct cgg 1473

<210> 95
<211> 1473
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic

polynucleotide"

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accctgtctt gcagagcctc ccaagacatc tcaaaatacc ttaattggta tcaacagaag 180

cccggacagg ctcctcgcct tctgatctac cacaccagcc ggctccattc tggaatccct 240

gccaggttca gcggtagcgg atctgggacc gactacaccc tcactatcag ctcactgcag 300

ccagaggact tcgctgtcta tttctgtcag caagggaaca ccctgcccta cacctttgga 360

cagggcacca agctcgagat taaaggtgga ggtggcagcg gaggaggtgg gtccggcggt 420

ggaggaagcg gaggcggagg gagccaggtc caactccaag aaagcggacc gggtcttgtg 480

aagccatcag aaactctttc actgacttgt actgtgagcg gagtgtctct ccccgattac 540

ggggtgtctt ggatcagaca gccaccgggg aagggtctgg aatggattgg agtgatttgg 600

ggctctgaga ctacttacta ccaatcatcc ctcaagtcac gcgtcaccat ctcaaaggac 660

aactctaaga atcaggtgtc actgaaactg tcatctgtga ccgcagccga caccgccgtg 720

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gctggtactt gcggggtcct gctgctttca ctcgtgatca ctctttactg taagcgcggt 1020

cggaagaagc tgctgtacat ctttaagcaa cccttcatga ggcctgtgca gactactcaa 1080

gaggaggacg gctgttcatg ccggttccca gaggaggagg aaggcggctg cgaactgcgc 1140

gtgaaattca gccgcagcgc agatgctcca gcctacaagc aggggcagaa ccagctctac 1200

aacgaactca atcttggtcg gagagaggag tacgacgtgc tggacaagcg gagaggacgg 1260

gacccagaaa tgggcgggaa gccgcgcaga aagaatcccc aagagggcct gtacaacgag 1320

ctccaaaagg ataagatggc agaagcctat agcgagattg gtatgaaagg ggaacgcaga 1380

agaggcaaag gccacgacgg actgtaccag ggactcagca ccgccaccaa ggacacctat 1440

gacgctcttc acatgcaggc cctgccgcct cgg 1473

<210> 96
<211> 1473
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

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agcgaaatcg tgatgaccca gagccctgca accctgtccc tttctcccgg ggaacgggct 540

acccttttctt gtcgggcatc acaagatatc tcaaaatacc tcaattggta tcaacagaag 600

ccgggacagg cccctaggct tcttatctac cacacctctc gcctgcatag cgggattccc 660

gcacgcttta gcgggtctgg aagcgggacc gactacactc tgaccatctc atctctccag 720

cccgaggact tcgccgtcta cttctgccag cagggtaaca ccctgccgta caccttcggc 780

cagggcacca agcttgagat caaaaccact actcccgctc caaggccacc cacccctgcc 840

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gctggtactt gcggggtcct gctgctttca ctcgtgatca ctctttactg taagcgcggt 1020

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gaggaggacg gctgttcatg ccggttccca gaggaggagg aaggcggctg cgaactgcgc 1140

gtgaaattca gccgcagcgc agatgctcca gcctacaagc aggggcagaa ccagctctac 1200

aacgaactca atcttggtcg gagagaggag tacgacgtgc tggacaagcg gagaggacgg 1260

gacccagaaa tgggcgggaa gccgcgcaga aagaatcccc aagagggcct gtacaacgag 1320

ctccaaaagg ataagatggc agaagcctat agcgagattg gtatgaaagg ggaacgcaga 1380

agaggcaaag gccacgacgg actgtaccag ggactcagca ccgccaccaa ggacacctat 1440

gacgctcttc acatgcaggc cctgccgcct cgg 1473

<210> 97
<211> 1473
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

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acccttttctt gtcgggcatc acaagatatc tcaaaatacc tcaattggta tcaacagaag 600

ccgggacagg cccctaggct tcttatctac cacacctctc gcctgcatag cgggattccc 660

gcacgcttta gcgggtctgg aagcgggacc gactacactc tgaccatctc atctctccag 720

cccgaggact tcgccgtcta cttctgccag cagggtaaca ccctgccgta caccttcggc 780

cagggcacca agcttgagat caaaaccact actcccgctc caaggccacc caccctgcc 840

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gaggaggacg gctgttcatg ccggttccca gaggaggagg aaggcggctg cgaactgcgc 1140

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aacgaactca atcttggtcg gagagaggag tacgacgtgc tggacaagcg gagaggacgg 1260

gacccagaaa tgggcgggaa gccgcgcaga aagaatcccc aagagggcct gtacaacgag 1320

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agaggcaaag gccacgacgg actgtaccag ggactcagca ccgccaccaa ggacacctat 1440

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<210> 98
<211> 1473
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

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accctgtctt gcagagcctc ccaagacatc tcaaaatacc ttaattggta tcaacagaag 180

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ccagaggact tcgctgtcta tttctgtcag caagggaaca ccctgcccta caccttgga 360

cagggcacca agctcgagat taaaggtgga ggtggcagcg gaggaggtgg gtccggcggt 420

ggaggaagcg gaggcggtgg gagccaggtc caactccaag aaagcggacc gggtcttgtg 480

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ggggtgtctt ggatcagaca gccaccgggg aagggtctgg aatggattgg agtgatttgg 600

ggctctgaga ctacttacta caactcatcc ctcaagtcac gcgtcaccat ctcaaaggac 660

aactctaaga atcaggtgtc actgaaactg tcatctgtga ccgcagccga caccgccgtg 720

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aacgaactca atcttggtcg gagagaggag tacgacgtgc tggacaagcg gagaggacgg 1260

gacccagaaa tgggcgggaa gccgcgcaga aagaatcccc aagagggcct gtacaacgag 1320

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agaggcaaag gccacgacgg actgtaccag ggactcagca ccgccaccaa ggacacctat 1440

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<211> 1473
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

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ggctctgaga ctacttacta caactcatcc ctcaagtcac gcgtcaccat ctcaaaggac 660

aactctaaga atcaggtgtc actgaaactg tcatctgtga ccgcagccga caccgccgtg 720

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agaggcaaag gccacgacgg actgtaccag ggactcagca ccgccaccaa ggacacctat 1440

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<211> 1473
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

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ctcacttgca ccgtgagcgg agtgtccctc ccagactacg gagtgagctg gattagacag 180

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acccтttctt gtcgggcatc acaagatatc tcaaaatacc tcaattggta tcaacagaag 600

ccgggacagg cccctaggct tcttatctac cacacctctc gcctgcatag cgggattccc 660

gcacgcttta gcgggtctgg aagcgggacc gactacactc tgaccatctc atctctccag 720

cccgaggact tcgccgtcta cttctgccag cagggtaaca ccctgccgta caccttcggc 780

cagggcacca agcttgagat caaaaccact actcccgctc caaggccacc caccctgcc 840

ccgaccatcg cctctcagcc gctttccctg cgtccggagg catgtagacc cgcagctggt 900

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aacgaactca atcttggtcg gagagaggag tacgacgtgc tggacaagcg gagaggacgg 1260

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agaggcaaag gccacgacgg actgtaccag ggactcagca ccgccaccaa ggacacctat 1440

gacgctcttc acatgcaggc cctgccgcct cgg 1473

<210> 101
<211> 1458
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

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cccgaaattg tgatgaccca gtcacccgcc actcttagcc tttcacccgg tgagcgcgca 120

accctgtctt gcagagcctc ccaagacatc tcaaaatacc ttaattggta tcaacagaag 180

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tactacaact catccctcaa gtcacgcgtc accatctcaa aggacaactc taagaatcag 660

gtgtcactga aactgtcatc tgtgaccgca gccgacaccg ccgtgtacta ttgcgctaag 720

cattactatt atggcgggag ctacgcaatg gattactggg gacagggtac tctggtcacc 780

gtgtccagca ccactacccc agcaccgagg ccacccaccc cggctcctac catcgcctcc 840

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<210> 102
<211> 1458
<212> DNA
<213> Artificial Sequence

<220>

<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

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tactataatt cagctctcaa atccagactg accatcatca aggacaactc caagagccaa 660

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cattattact acggtggtag ctatgctatg gactactggg gccaaggaac ctcagtcacc 780

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agcgcagacg cccccgcgta caagcagggc cagaaccagc tctataacga gctcaatcta 1200

ggacgaagag aggagtacga tgttttggac aagagacgtg gccgggaccc tgagatgggg 1260

ggaaagccga gaaggaagaa ccctcaggaa ggcctgtaca atgaactgca gaaagataag 1320

atggcggagg cctacagtga gattgggatg aaaggcgagc gccggagggg caaggggcac 1380

gatggccttt accagggtct cagtacagcc accaaggaca cctacgacgc ccttcacatg 1440

caggccctgc cccctcgc 1458

<210> 103
<211> 1182
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 103
atggccctcc ctgtcactgc cctgcttctc cccctcgcac tcctgctcca cgccgctaga 60

ccacccggat ggtttctgga ctctccggat cgcccgtgga atcccccaac cttctcaccg 120

gcactcttgg ttgtgactga gggcgataat gcgaccttca cgtgctcgtt ctccaacacc 180

tccgaatcat tcgtgctgaa ctggtaccgc atgagcccgt caaaccagac cgacaagctc 240

gccgcgtttc cggaagatcg gtcgcaaccg ggacaggatt gtcggttccg cgtgactcaa 300

ctgccgaatg gcagagactt ccacatgagc gtggtccgcg ctaggcgaaa cgactccggg 360

acctacctgt gcggagccat ctcgctggcg cctaaggccc aaatcaaaga gagcttgagg 420

gccgaactga gagtgaccga gcgcagagct gaggtgccaa ctgcacatcc atccccatcg 480

cctcggcctg cggggcagtt tcagaccctg gtcacgacca ctccggcgcc gcgcccaccg 540

actccggccc caactatcgc gagccagccc ctgtcgctga ggccggaagc atgccgccct 600

gccgccggag gtgctgtgca tacccgggga ttggacttcg catgcgacat ctacatttgg 660

gctcctctcg ccggaacttg tggcgtgctc cttctgtccc tggtcatcac cctgtactgc 720

aagcggggtc ggaaaaagct tctgtacatt ttcaagcagc ccttcatgag gcccgtgcaa 780

accacccagg aggaggacgg ttgctcctgc cggttccccg aagaggaaga aggaggttgc 840

gagctgcgcg tgaagttctc ccggagcgcc gacgcccccg cctataagca gggccagaac 900

cagctgtaca acgaactgaa cctgggacgg cgggaagagt acgatgtgct ggacaagcgg 960

cgcggccggg accccgaaat gggcgggaag cctagaagaa agaaccctca ggaaggcctg 1020

tataacgagc tgcagaagga caagatggcc gaggcctact ccgaaattgg gatgaaggga 1080

gagcggcgga ggggaaaggg gcacgacggc ctgtaccaag gactgtccac cgccaccaag 1140

gacacatacg atgccctgca catgcaggcc cttccccctc gc 1182

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

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 104
Gly Ser Thr Ser Gly Ser Gly Lys Pro Gly Ser Gly Glu Gly Ser Thr
1 5 10 15

Lys Gly

<210> 105
<211> 394
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 105
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Pro Gly Trp Phe Leu Asp Ser Pro Asp Arg Pro
20 25 30

Trp Asn Pro Pro Thr Phe Ser Pro Ala Leu Leu Val Val Thr Glu Gly
35 40 45

Asp Asn Ala Thr Phe Thr Cys Ser Phe Ser Asn Thr Ser Glu Ser Phe
50 55 60

Val Leu Asn Trp Tyr Arg Met Ser Pro Ser Asn Gln Thr Asp Lys Leu
65 70 75 80

Ala Ala Phe Pro Glu Asp Arg Ser Gln Pro Gly Gln Asp Cys Arg Phe
85 90 95

```
Arg Val Thr Gln Leu Pro Asn Gly Arg Asp Phe His Met Ser Val Val
            100                 105                 110

Arg Ala Arg Arg Asn Asp Ser Gly Thr Tyr Leu Cys Gly Ala Ile Ser
        115                 120                 125

Leu Ala Pro Lys Ala Gln Ile Lys Glu Ser Leu Arg Ala Glu Leu Arg
    130                 135                 140

Val Thr Glu Arg Arg Ala Glu Val Pro Thr Ala His Pro Ser Pro Ser
145                 150                 155                 160

Pro Arg Pro Ala Gly Gln Phe Gln Thr Leu Val Thr Thr Thr Pro Ala
                165                 170                 175

Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser
            180                 185                 190

Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr
        195                 200                 205

Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala
    210                 215                 220

Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr Cys
225                 230                 235                 240

Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met
                245                 250                 255

Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe
            260                 265                 270

Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg
        275                 280                 285

Ser Ala Asp Ala Pro Ala Tyr Lys Gln Gly Gln Asn Gln Leu Tyr Asn
    290                 295                 300

Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg
305                 310                 315                 320
```

Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro
325 330 335

Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala
340 345 350

Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His
355 360 365

Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp
370 375 380

Ala Leu His Met Gln Ala Leu Pro Pro Arg
385 390

<210> 106
<211> 373
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 106
Pro Gly Trp Phe Leu Asp Ser Pro Asp Arg Pro Trp Asn Pro Pro Thr
1 5 10 15

Phe Ser Pro Ala Leu Leu Val Val Thr Glu Gly Asp Asn Ala Thr Phe
20 25 30

Thr Cys Ser Phe Ser Asn Thr Ser Glu Ser Phe Val Leu Asn Trp Tyr
35 40 45

Arg Met Ser Pro Ser Asn Gln Thr Asp Lys Leu Ala Ala Phe Pro Glu
50 55 60

Asp Arg Ser Gln Pro Gly Gln Asp Cys Arg Phe Arg Val Thr Gln Leu
65 70 75 80

Pro Asn Gly Arg Asp Phe His Met Ser Val Val Arg Ala Arg Arg Asn

```
                85                  90                  95

Asp Ser Gly Thr Tyr Leu Cys Gly Ala Ile Ser Leu Ala Pro Lys Ala
            100                 105                 110

Gln Ile Lys Glu Ser Leu Arg Ala Glu Leu Arg Val Thr Glu Arg Arg
        115                 120                 125

Ala Glu Val Pro Thr Ala His Pro Ser Pro Ser Pro Arg Pro Ala Gly
    130                 135                 140

Gln Phe Gln Thr Leu Val Thr Thr Thr Pro Ala Pro Arg Pro Pro Thr
145                 150                 155                 160

Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser Leu Arg Pro Glu Ala
                165                 170                 175

Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr Arg Gly Leu Asp Phe
            180                 185                 190

Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly Val
        195                 200                 205

Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr Cys Lys Arg Gly Arg Lys
    210                 215                 220

Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met Arg Pro Val Gln Thr
225                 230                 235                 240

Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu Glu Glu Glu
                245                 250                 255

Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg Ser Ala Asp Ala Pro
            260                 265                 270

Ala Tyr Lys Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn Leu Gly
        275                 280                 285

Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg Asp Pro
    290                 295                 300
```

Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu Tyr
305 310 315 320

Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile Gly
325 330 335

Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His Asp Gly Leu Tyr Gln
340 345 350

Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu His Met Gln
355 360 365

Ala Leu Pro Pro Arg
370

<210> 107
<211> 242
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 107
Glu Ile Val Met Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly
1 5 10 15

Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Asp Ile Ser Lys Tyr
20 25 30

Leu Asn Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile
35 40 45

Tyr His Thr Ser Arg Leu His Ser Gly Ile Pro Ala Arg Phe Ser Gly
50 55 60

Ser Gly Ser Gly Thr Asp Tyr Thr Leu Thr Ile Ser Ser Leu Gln Pro
65 70 75 80

Glu Asp Phe Ala Val Tyr Phe Cys Gln Gln Gly Asn Thr Leu Pro Tyr
85 90 95

```
Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys Gly Gly Gly Gly Ser
            100                 105                 110

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gln Val Gln Leu Gln Glu
        115                 120                 125

Ser Gly Pro Gly Leu Val Lys Pro Ser Glu Thr Leu Ser Leu Thr Cys
    130                 135                 140

Thr Val Ser Gly Val Ser Leu Pro Asp Tyr Gly Val Ser Trp Ile Arg
145                 150                 155                 160

Gln Pro Pro Gly Lys Gly Leu Glu Trp Ile Gly Val Ile Trp Gly Ser
                165                 170                 175

Glu Thr Thr Tyr Tyr Ser Ser Ser Leu Lys Ser Arg Val Thr Ile Ser
            180                 185                 190

Lys Asp Asn Ser Lys Asn Gln Val Ser Leu Lys Leu Ser Ser Val Thr
        195                 200                 205

Ala Ala Asp Thr Ala Val Tyr Tyr Cys Ala Lys His Tyr Tyr Tyr Gly
    210                 215                 220

Gly Ser Tyr Ala Met Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr Val
225                 230                 235                 240

Ser Ser
```

<210> 108
<211> 242
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 108
```
Glu Ile Val Met Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly
```

```
1               5                   10                  15

Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Asp Ile Ser Lys Tyr
            20                  25                  30

Leu Asn Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile
        35                  40                  45

Tyr His Thr Ser Arg Leu His Ser Gly Ile Pro Ala Arg Phe Ser Gly
    50                  55                  60

Ser Gly Ser Gly Thr Asp Tyr Thr Leu Thr Ile Ser Ser Leu Gln Pro
65                  70                  75                  80

Glu Asp Phe Ala Val Tyr Phe Cys Gln Gln Gly Asn Thr Leu Pro Tyr
                85                  90                  95

Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys Gly Gly Gly Gly Ser
            100                 105                 110

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gln Val Gln Leu Gln Glu
        115                 120                 125

Ser Gly Pro Gly Leu Val Lys Pro Ser Glu Thr Leu Ser Leu Thr Cys
    130                 135                 140

Thr Val Ser Gly Val Ser Leu Pro Asp Tyr Gly Val Ser Trp Ile Arg
145                 150                 155                 160

Gln Pro Pro Gly Lys Gly Leu Glu Trp Ile Gly Val Ile Trp Gly Ser
                165                 170                 175

Glu Thr Thr Tyr Tyr Gln Ser Ser Leu Lys Ser Arg Val Thr Ile Ser
            180                 185                 190

Lys Asp Asn Ser Lys Asn Gln Val Ser Leu Lys Leu Ser Ser Val Thr
        195                 200                 205

Ala Ala Asp Thr Ala Val Tyr Tyr Cys Ala Lys His Tyr Tyr Tyr Gly
    210                 215                 220
```

Gly Ser Tyr Ala Met Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr Val
225 230 235 240

Ser Ser

<210> 109
<211> 242
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 109
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 Val Ser Leu Pro Asp Tyr
20 25 30

Gly Val Ser Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp Ile
35 40 45

Gly Val Ile Trp Gly Ser Glu Thr Thr Tyr Tyr Ser Ser Ser Leu Lys
50 55 60

Ser Arg Val Thr Ile Ser Lys Asp Asn Ser Lys Asn Gln Val 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

Lys His Tyr Tyr Tyr Gly Gly Ser Tyr Ala Met Asp Tyr Trp Gly Gln
100 105 110

Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly
115 120 125

Gly Ser Gly Gly Gly Gly Ser Glu Ile Val Met Thr Gln Ser Pro Ala
130 135 140

```
Thr Leu Ser Leu Ser Pro Gly Glu Arg Ala Thr Leu Ser Cys Arg Ala
145                 150                 155                 160


Ser Gln Asp Ile Ser Lys Tyr Leu Asn Trp Tyr Gln Gln Lys Pro Gly
                165                 170                 175


Gln Ala Pro Arg Leu Leu Ile Tyr His Thr Ser Arg Leu His Ser Gly
            180                 185                 190


Ile Pro Ala Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Tyr Thr Leu
        195                 200                 205


Thr Ile Ser Ser Leu Gln Pro Glu Asp Phe Ala Val Tyr Phe Cys Gln
    210                 215                 220


Gln Gly Asn Thr Leu Pro Tyr Thr Phe Gly Gln Gly Thr Lys Leu Glu
225                 230                 235                 240


Ile Lys



<210> 110
<211> 242
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 110
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 Val Ser Leu Pro Asp Tyr
            20                  25                  30


Gly Val Ser Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp Ile
        35                  40                  45


Gly Val Ile Trp Gly Ser Glu Thr Thr Tyr Tyr Gln Ser Ser Leu Lys
```

```
    50                  55                  60

Ser Arg Val Thr Ile Ser Lys Asp Asn Ser Lys Asn Gln Val 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

Lys His Tyr Tyr Tyr Gly Gly Ser Tyr Ala Met Asp Tyr Trp Gly Gln
            100                 105                 110

Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly
        115                 120                 125

Gly Ser Gly Gly Gly Gly Ser Glu Ile Val Met Thr Gln Ser Pro Ala
    130                 135                 140

Thr Leu Ser Leu Ser Pro Gly Glu Arg Ala Thr Leu Ser Cys Arg Ala
145                 150                 155                 160

Ser Gln Asp Ile Ser Lys Tyr Leu Asn Trp Tyr Gln Gln Lys Pro Gly
                165                 170                 175

Gln Ala Pro Arg Leu Leu Ile Tyr His Thr Ser Arg Leu His Ser Gly
            180                 185                 190

Ile Pro Ala Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Tyr Thr Leu
        195                 200                 205

Thr Ile Ser Ser Leu Gln Pro Glu Asp Phe Ala Val Tyr Phe Cys Gln
    210                 215                 220

Gln Gly Asn Thr Leu Pro Tyr Thr Phe Gly Gln Gly Thr Lys Leu Glu
225                 230                 235                 240

Ile Lys
```

<210> 111
<211> 247
<212> PRT

<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 111
Glu Ile Val Met Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly
1 5 10 15

Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Asp Ile Ser Lys Tyr
20 25 30

Leu Asn Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile
35 40 45

Tyr His Thr Ser Arg Leu His Ser Gly Ile Pro Ala Arg Phe Ser Gly
50 55 60

Ser Gly Ser Gly Thr Asp Tyr Thr Leu Thr Ile Ser Ser Leu Gln Pro
65 70 75 80

Glu Asp Phe Ala Val Tyr Phe Cys Gln Gln Gly Asn Thr Leu Pro Tyr
85 90 95

Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys Gly Gly Gly Gly Ser
100 105 110

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gln
115 120 125

Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Glu Thr
130 135 140

Leu Ser Leu Thr Cys Thr Val Ser Gly Val Ser Leu Pro Asp Tyr Gly
145 150 155 160

Val Ser Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp Ile Gly
165 170 175

Val Ile Trp Gly Ser Glu Thr Thr Tyr Tyr Ser Ser Ser Leu Lys Ser
180 185 190

Arg Val Thr Ile Ser Lys Asp Asn Ser Lys Asn Gln Val Ser Leu Lys
        195   200   205

Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr Cys Ala Lys
    210   215   220

His Tyr Tyr Tyr Gly Gly Ser Tyr Ala Met Asp Tyr Trp Gly Gln Gly
225   230   235   240

Thr Leu Val Thr Val Ser Ser
                245

<210> 112
<211> 247
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 112
Glu Ile Val Met Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly
1   5   10   15

Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Asp Ile Ser Lys Tyr
            20   25   30

Leu Asn Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile
        35   40   45

Tyr His Thr Ser Arg Leu His Ser Gly Ile Pro Ala Arg Phe Ser Gly
    50   55   60

Ser Gly Ser Gly Thr Asp Tyr Thr Leu Thr Ile Ser Ser Leu Gln Pro
65   70   75   80

Glu Asp Phe Ala Val Tyr Phe Cys Gln Gln Gly Asn Thr Leu Pro Tyr
                85   90   95

Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys Gly Gly Gly Gly Ser

```
            100                 105                 110

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gln
        115                 120                 125

Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Glu Thr
    130                 135                 140

Leu Ser Leu Thr Cys Thr Val Ser Gly Val Ser Leu Pro Asp Tyr Gly
145                 150                 155                 160

Val Ser Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp Ile Gly
                165                 170                 175

Val Ile Trp Gly Ser Glu Thr Thr Tyr Tyr Gln Ser Ser Leu Lys Ser
            180                 185                 190

Arg Val Thr Ile Ser Lys Asp Asn Ser Lys Asn Gln Val Ser Leu Lys
        195                 200                 205

Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr Cys Ala Lys
    210                 215                 220

His Tyr Tyr Tyr Gly Gly Ser Tyr Ala Met Asp Tyr Trp Gly Gln Gly
225                 230                 235                 240

Thr Leu Val Thr Val Ser Ser
                245
```

<210> 113
<211> 247
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 113

```
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 Val Ser Leu Pro Asp Tyr
            20                  25                  30

Gly Val Ser Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp Ile
        35                  40                  45

Gly Val Ile Trp Gly Ser Glu Thr Thr Tyr Tyr Ser Ser Ser Leu Lys
    50                  55                  60

Ser Arg Val Thr Ile Ser Lys Asp Asn Ser Lys Asn Gln Val 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

Lys His Tyr Tyr Tyr Gly Gly Ser Tyr Ala Met Asp Tyr Trp Gly Gln
            100                 105                 110

Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly
        115                 120                 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Ile Val Met
    130                 135                 140

Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly Glu Arg Ala Thr
145                 150                 155                 160

Leu Ser Cys Arg Ala Ser Gln Asp Ile Ser Lys Tyr Leu Asn Trp Tyr
                165                 170                 175

Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile Tyr His Thr Ser
            180                 185                 190

Arg Leu His Ser Gly Ile Pro Ala Arg Phe Ser Gly Ser Gly Ser Gly
        195                 200                 205

Thr Asp Tyr Thr Leu Thr Ile Ser Ser Leu Gln Pro Glu Asp Phe Ala
    210                 215                 220

Val Tyr Phe Cys Gln Gln Gly Asn Thr Leu Pro Tyr Thr Phe Gly Gln
225                 230                 235                 240
```

Gly Thr Lys Leu Glu Ile Lys
245

<210> 114
<211> 247
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 114
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 Val Ser Leu Pro Asp Tyr
20 25 30

Gly Val Ser Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp Ile
35 40 45

Gly Val Ile Trp Gly Ser Glu Thr Thr Tyr Tyr Gln Ser Ser Leu Lys
50 55 60

Ser Arg Val Thr Ile Ser Lys Asp Asn Ser Lys Asn Gln Val 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

Lys His Tyr Tyr Tyr Gly Gly Ser Tyr Ala Met Asp Tyr Trp Gly Gln
100 105 110

Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly
115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Ile Val Met
130 135 140

Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly Glu Arg Ala Thr

145 150 155 160

Leu Ser Cys Arg Ala Ser Gln Asp Ile Ser Lys Tyr Leu Asn Trp Tyr
165 170 175

Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile Tyr His Thr Ser
180 185 190

Arg Leu His Ser Gly Ile Pro Ala Arg Phe Ser Gly Ser Gly Ser Gly
195 200 205

Thr Asp Tyr Thr Leu Thr Ile Ser Ser Leu Gln Pro Glu Asp Phe Ala
210 215 220

Val Tyr Phe Cys Gln Gln Gly Asn Thr Leu Pro Tyr Thr Phe Gly Gln
225 230 235 240

Gly Thr Lys Leu Glu Ile Lys
245

<210> 115
<211> 247
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 115
Glu Ile Val Met Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly
1 5 10 15

Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Asp Ile Ser Lys Tyr
20 25 30

Leu Asn Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile
35 40 45

Tyr His Thr Ser Arg Leu His Ser Gly Ile Pro Ala Arg Phe Ser Gly
50 55 60

```
Ser Gly Ser Gly Thr Asp Tyr Thr Leu Thr Ile Ser Ser Leu Gln Pro
65                  70                  75                  80

Glu Asp Phe Ala Val Tyr Phe Cys Gln Gln Gly Asn Thr Leu Pro Tyr
                85                  90                  95

Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys Gly Gly Gly Gly Ser
            100                 105                 110

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gln
        115                 120                 125

Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Glu Thr
    130                 135                 140

Leu Ser Leu Thr Cys Thr Val Ser Gly Val Ser Leu Pro Asp Tyr Gly
145                 150                 155                 160

Val Ser Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp Ile Gly
                165                 170                 175

Val Ile Trp Gly Ser Glu Thr Thr Tyr Tyr Asn Ser Ser Leu Lys Ser
            180                 185                 190

Arg Val Thr Ile Ser Lys Asp Asn Ser Lys Asn Gln Val Ser Leu Lys
        195                 200                 205

Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr Cys Ala Lys
    210                 215                 220

His Tyr Tyr Tyr Gly Gly Ser Tyr Ala Met Asp Tyr Trp Gly Gln Gly
225                 230                 235                 240

Thr Leu Val Thr Val Ser Ser
                245
```

<210> 116
<211> 247
<212> PRT
<213> Artificial Sequence

<220>

<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 116
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 Val Ser Leu Pro Asp Tyr
20 25 30

Gly Val Ser Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp Ile
35 40 45

Gly Val Ile Trp Gly Ser Glu Thr Thr Tyr Tyr Asn Ser Ser Leu Lys
50 55 60

Ser Arg Val Thr Ile Ser Lys Asp Asn Ser Lys Asn Gln Val 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

Lys His Tyr Tyr Tyr Gly Gly Ser Tyr Ala Met Asp Tyr Trp Gly Gln
100 105 110

Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly
115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Ile Val Met
130 135 140

Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly Glu Arg Ala Thr
145 150 155 160

Leu Ser Cys Arg Ala Ser Gln Asp Ile Ser Lys Tyr Leu Asn Trp Tyr
165 170 175

Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile Tyr His Thr Ser
180 185 190

Arg Leu His Ser Gly Ile Pro Ala Arg Phe Ser Gly Ser Gly Ser Gly

195 200 205

Thr Asp Tyr Thr Leu Thr Ile Ser Ser Leu Gln Pro Glu Asp Phe Ala
210 215 220

Val Tyr Phe Cys Gln Gln Gly Asn Thr Leu Pro Tyr Thr Phe Gly Gln
225 230 235 240

Gly Thr Lys Leu Glu Ile Lys
245

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

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 117
Glu Ile Val Met Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly
1 5 10 15

Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Asp Ile Ser Lys Tyr
20 25 30

Leu Asn Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile
35 40 45

Tyr His Thr Ser Arg Leu His Ser Gly Ile Pro Ala Arg Phe Ser Gly
50 55 60

Ser Gly Ser Gly Thr Asp Tyr Thr Leu Thr Ile Ser Ser Leu Gln Pro
65 70 75 80

Glu Asp Phe Ala Val Tyr Phe Cys Gln Gln Gly Asn Thr Leu Pro Tyr
85 90 95

Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys Gly Gly Gly Gly Ser
100 105 110

```
Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gln Val Gln Leu Gln Glu
        115                 120                 125


Ser Gly Pro Gly Leu Val Lys Pro Ser Glu Thr Leu Ser Leu Thr Cys
    130                 135                 140


Thr Val Ser Gly Val Ser Leu Pro Asp Tyr Gly Val Ser Trp Ile Arg
145                 150                 155                 160


Gln Pro Pro Gly Lys Gly Leu Glu Trp Ile Gly Val Ile Trp Gly Ser
                165                 170                 175


Glu Thr Thr Tyr Tyr Asn Ser Ser Leu Lys Ser Arg Val Thr Ile Ser
            180                 185                 190


Lys Asp Asn Ser Lys Asn Gln Val Ser Leu Lys Leu Ser Ser Val Thr
        195                 200                 205


Ala Ala Asp Thr Ala Val Tyr Tyr Cys Ala Lys His Tyr Tyr Tyr Gly
    210                 215                 220


Gly Ser Tyr Ala Met Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr Val
225                 230                 235                 240


Ser Ser
```

<210> 118
<211> 242
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 118

```
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 Val Ser Leu Pro Asp Tyr
            20                  25                  30
```

```
Gly Val Ser Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp Ile
        35                  40                  45

Gly Val Ile Trp Gly Ser Glu Thr Thr Tyr Tyr Asn Ser Ser Leu Lys
    50                  55                  60

Ser Arg Val Thr Ile Ser Lys Asp Asn Ser Lys Asn Gln Val 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

Lys His Tyr Tyr Tyr Gly Gly Ser Tyr Ala Met Asp Tyr Trp Gly Gln
            100                 105                 110

Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly
        115                 120                 125

Gly Ser Gly Gly Gly Gly Ser Glu Ile Val Met Thr Gln Ser Pro Ala
    130                 135                 140

Thr Leu Ser Leu Ser Pro Gly Glu Arg Ala Thr Leu Ser Cys Arg Ala
145                 150                 155                 160

Ser Gln Asp Ile Ser Lys Tyr Leu Asn Trp Tyr Gln Gln Lys Pro Gly
                165                 170                 175

Gln Ala Pro Arg Leu Leu Ile Tyr His Thr Ser Arg Leu His Ser Gly
            180                 185                 190

Ile Pro Ala Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Tyr Thr Leu
        195                 200                 205

Thr Ile Ser Ser Leu Gln Pro Glu Asp Phe Ala Val Tyr Phe Cys Gln
    210                 215                 220

Gln Gly Asn Thr Leu Pro Tyr Thr Phe Gly Gln Gly Thr Lys Leu Glu
225                 230                 235                 240

Ile Lys
```

<210> 119
<211> 242
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 119
Asp Ile Gln Met Thr Gln Thr Thr Ser Ser Leu Ser Ala Ser Leu Gly
1 5 10 15

Asp Arg Val Thr Ile Ser Cys Arg Ala Ser Gln Asp Ile Ser Lys Tyr
20 25 30

Leu Asn Trp Tyr Gln Gln Lys Pro Asp Gly Thr Val Lys Leu Leu Ile
35 40 45

Tyr His Thr Ser Arg Leu His Ser Gly Val Pro Ser Arg Phe Ser Gly
50 55 60

Ser Gly Ser Gly Thr Asp Tyr Ser Leu Thr Ile Ser Asn Leu Glu Gln
65 70 75 80

Glu Asp Ile Ala Thr Tyr Phe Cys Gln Gln Gly Asn Thr Leu Pro Tyr
85 90 95

Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Thr Gly Gly Gly Gly Ser
100 105 110

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Val Lys Leu Gln Glu
115 120 125

Ser Gly Pro Gly Leu Val Ala Pro Ser Gln Ser Leu Ser Val Thr Cys
130 135 140

Thr Val Ser Gly Val Ser Leu Pro Asp Tyr Gly Val Ser Trp Ile Arg
145 150 155 160

```
Gln Pro Pro Arg Lys Gly Leu Glu Trp Leu Gly Val Ile Trp Gly Ser
                165                 170                 175


Glu Thr Thr Tyr Tyr Asn Ser Ala Leu Lys Ser Arg Leu Thr Ile Ile
            180                 185                 190


Lys Asp Asn Ser Lys Ser Gln Val Phe Leu Lys Met Asn Ser Leu Gln
        195                 200                 205


Thr Asp Asp Thr Ala Ile Tyr Tyr Cys Ala Lys His Tyr Tyr Tyr Gly
    210                 215                 220


Gly Ser Tyr Ala Met Asp Tyr Trp Gly Gln Gly Thr Ser Val Thr Val
225                 230                 235                 240


Ser Ser
```

<210> 120
<211> 119
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 120

```
Gln Val Gln Leu Leu Glu Ser Gly Ala Glu Leu Val Arg Pro Gly Ser
1               5                   10                  15


Ser Val Lys Ile Ser Cys Lys Ala Ser Gly Tyr Ala Phe Ser Ser Tyr
            20                  25                  30


Trp Met Asn Trp Val Lys Gln Arg Pro Gly Gln Gly Leu Glu Trp Ile
        35                  40                  45


Gly Gln Ile Tyr Pro Gly Asp Gly Asp Thr Asn Tyr Asn Gly Lys Phe
    50                  55                  60


Lys Gly Gln Ala Thr Leu Thr Ala Asp Lys Ser Ser Ser Thr Ala Tyr
65                  70                  75                  80
```

Met Gln Leu Ser Gly Leu Thr Ser Glu Asp Ser Ala Val Tyr Ser Cys
85 90 95

Ala Arg Lys Thr Ile Ser Ser Val Val Asp Phe Tyr Phe Asp Tyr Trp
100 105 110

Gly Gln Gly Thr Thr Val Thr
115

<210> 121
<211> 111
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 121
Glu Leu Val Leu Thr Gln Ser Pro Lys Phe Met Ser Thr Ser Val Gly
1 5 10 15

Asp Arg Val Ser Val Thr Cys Lys Ala Ser Gln Asn Val Gly Thr Asn
20 25 30

Val Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ser Pro Lys Pro Leu Ile
35 40 45

Tyr Ser Ala Thr Tyr Arg Asn Ser Gly Val Pro Asp Arg Phe Thr Gly
50 55 60

Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Thr Asn Val Gln Ser
65 70 75 80

Lys Asp Leu Ala Asp Tyr Phe Tyr Phe Cys Gln Tyr Asn Arg Tyr Pro
85 90 95

Tyr Thr Ser Gly Gly Gly Thr Lys Leu Glu Ile Lys Arg Arg Ser
100 105 110

<210> 122
<211> 5

<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 122
Asp Tyr Gly Val Ser
1 5

<210> 123
<211> 16
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 123
Val Ile Trp Gly Ser Glu Thr Thr Tyr Tyr Asn Ser Ala Leu Lys Ser
1 5 10 15

<210> 124
<211> 16
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 124
Val Ile Trp Gly Ser Glu Thr Thr Tyr Tyr Ser Ser Ser Leu Lys Ser
1 5 10 15

<210> 125
<211> 16
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 125

Val Ile Trp Gly Ser Glu Thr Thr Tyr Tyr Gln Ser Ser Leu Lys Ser
1 5 10 15

<210> 126
<211> 16
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 126
Val Ile Trp Gly Ser Glu Thr Thr Tyr Tyr Asn Ser Ser Leu Lys Ser
1 5 10 15

<210> 127
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 127
His Tyr Tyr Tyr Gly Gly Ser Tyr Ala Met Asp Tyr
1 5 10

<210> 128
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 128
Arg Ala Ser Gln Asp Ile Ser Lys Tyr Leu Asn
1 5 10

<210> 129
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 129
His Thr Ser Arg Leu His Ser
1 5

<210> 130
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 130
Gln Gln Gly Asn Thr Leu Pro Tyr Thr
1 5

<210> 131
<211> 132
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 131
Asp Val Pro Asp Tyr Ala Ser Leu Gly Gly Pro Ser Ser Pro Lys Lys
1 5 10 15

Lys Arg Lys Val Ser Arg Gly Val Gln Val Glu Thr Ile Ser Pro Gly
20 25 30

Asp Gly Arg Thr Phe Pro Lys Arg Gly Gln Thr Cys Val Val His Tyr
35 40 45

Thr Gly Met Leu Glu Asp Gly Lys Lys Phe Asp Ser Ser Arg Asp Arg
50 55 60

Asn Lys Pro Phe Lys Phe Met Leu Gly Lys Gln Glu Val Ile Arg Gly
65 70 75 80

```
Trp Glu Glu Gly Val Ala Gln Met Ser Val Gly Gln Arg Ala Lys Leu
                85                  90                  95


Thr Ile Ser Pro Asp Tyr Ala Tyr Gly Ala Thr Gly His Pro Gly Ile
            100                 105                 110


Ile Pro Pro His Ala Thr Leu Val Phe Asp Val Glu Leu Leu Lys Leu
        115                 120                 125


Glu Thr Ser Tyr
    130


<210> 132
<211> 108
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 132
Val Gln Val Glu Thr Ile Ser Pro Gly Asp Gly Arg Thr Phe Pro Lys
1               5                   10                  15


Arg Gly Gln Thr Cys Val Val His Tyr Thr Gly Met Leu Glu Asp Gly
            20                  25                  30


Lys Lys Phe Asp Ser Ser Arg Asp Arg Asn Lys Pro Phe Lys Phe Met
        35                  40                  45


Leu Gly Lys Gln Glu Val Ile Arg Gly Trp Glu Glu Gly Val Ala Gln
    50                  55                  60


Met Ser Val Gly Gln Arg Ala Lys Leu Thr Ile Ser Pro Asp Tyr Ala
65                  70                  75                  80


Tyr Gly Ala Thr Gly His Pro Gly Ile Ile Pro Pro His Ala Thr Leu
                85                  90                  95


Val Phe Asp Val Glu Leu Leu Lys Leu Glu Thr Ser
```

100 105

<210> 133
<211> 93
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 133
Ile Leu Trp His Glu Met Trp His Glu Gly Leu Glu Glu Ala Ser Arg
1 5 10 15

Leu Tyr Phe Gly Glu Arg Asn Val Lys Gly Met Phe Glu Val Leu Glu
20 25 30

Pro Leu His Ala Met Met Glu Arg Gly Pro Gln Thr Leu Lys Glu Thr
35 40 45

Ser Phe Asn Gln Ala Tyr Gly Arg Asp Leu Met Glu Ala Gln Glu Trp
50 55 60

Cys Arg Lys Tyr Met Lys Ser Gly Asn Val Lys Asp Leu Thr Gln Ala
65 70 75 80

Trp Asp Leu Tyr Tyr His Val Phe Arg Arg Ile Ser Lys
85 90

<210> 134
<211> 95
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 134
Ile Leu Trp His Glu Met Trp His Glu Gly Leu Ile Glu Ala Ser Arg
1 5 10 15

Leu Tyr Phe Gly Glu Arg Asn Val Lys Gly Met Phe Glu Val Leu Glu

```
            20                  25                  30

Pro Leu His Ala Met Met Glu Arg Gly Pro Gln Thr Leu Lys Glu Thr
        35                  40                  45

Ser Phe Asn Gln Ala Tyr Gly Arg Asp Leu Met Glu Ala Gln Glu Trp
    50                  55                  60

Cys Arg Lys Tyr Met Lys Ser Gly Asn Val Lys Asp Leu Thr Gln Ala
65                  70                  75                  80

Trp Asp Leu Tyr Tyr His Val Phe Arg Arg Ile Ser Lys Thr Ser
                85                  90                  95
```

<210> 135
<211> 95
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 135

```
Ile Leu Trp His Glu Met Trp His Glu Gly Leu Leu Glu Ala Ser Arg
1               5                   10                  15

Leu Tyr Phe Gly Glu Arg Asn Val Lys Gly Met Phe Glu Val Leu Glu
            20                  25                  30

Pro Leu His Ala Met Met Glu Arg Gly Pro Gln Thr Leu Lys Glu Thr
        35                  40                  45

Ser Phe Asn Gln Ala Tyr Gly Arg Asp Leu Met Glu Ala Gln Glu Trp
    50                  55                  60

Cys Arg Lys Tyr Met Lys Ser Gly Asn Val Lys Asp Leu Thr Gln Ala
65                  70                  75                  80

Trp Asp Leu Tyr Tyr His Val Phe Arg Arg Ile Ser Lys Thr Ser
                85                  90                  95
```

<210> 136
<211> 95
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 136
Ile Leu Trp His Glu Met Trp His Glu Gly Leu Glu Glu Ala Ser Arg
1 5 10 15

Leu Tyr Phe Gly Glu Arg Asn Val Lys Gly Met Phe Glu Val Leu Glu
20 25 30

Pro Leu His Ala Met Met Glu Arg Gly Pro Gln Thr Leu Lys Glu Thr
35 40 45

Ser Phe Asn Gln Ala Tyr Gly Arg Asp Leu Met Glu Ala Gln Glu Trp
50 55 60

Cys Arg Lys Tyr Met Lys Ser Gly Asn Val Lys Asp Leu Leu Gln Ala
65 70 75 80

Trp Asp Leu Tyr Tyr His Val Phe Arg Arg Ile Ser Lys Thr Ser
85 90 95

<210> 137
<211> 95
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<220>
<221> MOD_RES
<222> (12)..(12)
<223> Any amino acid

<220>
<221> MOD_RES
<222> (78)..(78)

<223> Any amino acid

<400> 137
Ile Leu Trp His Glu Met Trp His Glu Gly Leu Xaa Glu Ala Ser Arg
1   5   10   15

Leu Tyr Phe Gly Glu Arg Asn Val Lys Gly Met Phe Glu Val Leu Glu
            20   25   30

Pro Leu His Ala Met Met Glu Arg Gly Pro Gln Thr Leu Lys Glu Thr
        35   40   45

Ser Phe Asn Gln Ala Tyr Gly Arg Asp Leu Met Glu Ala Gln Glu Trp
    50   55   60

Cys Arg Lys Tyr Met Lys Ser Gly Asn Val Lys Asp Leu Xaa Gln Ala
65   70   75   80

Trp Asp Leu Tyr Tyr His Val Phe Arg Arg Ile Ser Lys Thr Ser
                85   90   95

<210> 138
<211> 95
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 138
Ile Leu Trp His Glu Met Trp His Glu Gly Leu Ile Glu Ala Ser Arg
1   5   10   15

Leu Tyr Phe Gly Glu Arg Asn Val Lys Gly Met Phe Glu Val Leu Glu
            20   25   30

Pro Leu His Ala Met Met Glu Arg Gly Pro Gln Thr Leu Lys Glu Thr
        35   40   45

Ser Phe Asn Gln Ala Tyr Gly Arg Asp Leu Met Glu Ala Gln Glu Trp
    50   55   60

Cys Arg Lys Tyr Met Lys Ser Gly Asn Val Lys Asp Leu Leu Gln Ala
65 70 75 80

Trp Asp Leu Tyr Tyr His Val Phe Arg Arg Ile Ser Lys Thr Ser
85 90 95

<210> 139
<211> 95
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 139
Ile Leu Trp His Glu Met Trp His Glu Gly Leu Leu Glu Ala Ser Arg
1 5 10 15

Leu Tyr Phe Gly Glu Arg Asn Val Lys Gly Met Phe Glu Val Leu Glu
20 25 30

Pro Leu His Ala Met Met Glu Arg Gly Pro Gln Thr Leu Lys Glu Thr
35 40 45

Ser Phe Asn Gln Ala Tyr Gly Arg Asp Leu Met Glu Ala Gln Glu Trp
50 55 60

Cys Arg Lys Tyr Met Lys Ser Gly Asn Val Lys Asp Leu Leu Gln Ala
65 70 75 80

Trp Asp Leu Tyr Tyr His Val Phe Arg Arg Ile Ser Lys Thr Ser
85 90 95

<210> 140
<211> 4
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 140

Arg Gly Asp Ser
1

<210> 141
<211> 813
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 141
atggccctgc ccgtcaccgc tctgctgctg ccccttgctc tgcttcttca tgcagcaagg 60

ccggacatcc agatgaccca aaccacctca tccctctctg cctctcttgg agacagggtg 120

accatttctt gtcgcgccag ccaggacatc agcaagtatc tgaactggta tcagcagaag 180

ccggacggaa ccgtgaagct cctgatctac catacctctc gcctgcatag cggcgtgccc 240

tcacgcttct ctggaagcgg atcaggaacc gattattctc tcactatttc aaatcttgag 300

caggaagata ttgccaccta tttctgccag cagggtaata ccctgcccta caccttcgga 360

ggagggacca agctcgaaat caccggtgga ggaggcagcg gcggtggagg gtctggtgga 420

ggtggttctg aggtgaagct gcaagaatca ggccctggac ttgtggcccc ttcacagtcc 480

ctgagcgtga cttgcaccgt gtccggagtc tccctgcccg actacggagt gtcatggatc 540

agacaacctc cacggaaagg actggaatgg ctcggtgtca tctggggtag cgaaactact 600

tactacaatt cagccctcaa aagcaggctg actattatca aggacaacag caagtcccaa 660

gtctttctta agatgaactc actccagact gacgacaccg caatctacta ttgtgctaag 720

cactactact acggaggatc ctacgctatg gattactggg gacaaggtac ttccgtcact 780

gtctcttcac accatcatca ccatcaccat cac 813

<210> 142
<211> 249
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 142

```
Asp Ile Val Leu Thr Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly
1               5                  10                  15

Glu Arg Ala Thr Ile Asn Cys Arg Ala Ser Glu Ser Val Asp Asn Tyr
            20                  25                  30

Gly Asn Thr Phe Met His Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro
        35                  40                  45

Lys Leu Leu Ile Tyr Arg Ala Ser Asn Leu Glu Ser Gly Val Pro Asp
    50                  55                  60

Arg Phe Ser Gly Ser Gly Ser Arg Thr Asp Phe Thr Leu Thr Ile Ser
65                  70                  75                  80

Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln Gln Ser Asn
                85                  90                  95

Glu Asp Pro Pro Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys Gly
            100                 105                 110

Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly
        115                 120                 125

Gly Gly Ser Gln Ile Gln Leu Val Gln Ser Gly Ser Glu Leu Lys Lys
    130                 135                 140

Pro Gly Ala Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Ile Phe
145                 150                 155                 160

Thr Asn Tyr Gly Met Asn Trp Val Arg Gln Ala Pro Gly Gln Gly Leu
                165                 170                 175

Glu Trp Met Gly Trp Ile Asn Thr Tyr Thr Gly Glu Ser Thr Tyr Ser
            180                 185                 190

Ala Asp Phe Lys Gly Arg Phe Val Phe Ser Leu Asp Thr Ser Val Ser
        195                 200                 205

Thr Ala Tyr Leu Gln Ile Asn Ala Leu Lys Ala Glu Asp Thr Ala Val
    210                 215                 220
```

Tyr Tyr Cys Ala Arg Ser Gly Gly Tyr Asp Pro Met Asp Tyr Trp Gly
225 230 235 240

Gln Gly Thr Thr Val Thr Val Ser Ser
245

<210> 143
<211> 747
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 143
gacatcgtgc tgacccaatc cccggacagc ctcgcagtct cactcggaga acgcgccact 60

atcaattgta gggcgtcgga gtccgtggac aattacggaa acaccttcat gcactggtac 120

caacaaaaac ctggtcagcc acctaagctg ctgatctacc gcgcctcgaa tctggaatca 180

ggagtgccgg acagattctc ggggtccggc tcccggacgg atttcacttt gaccatctcg 240

tcacttcaag ctgaggacgt cgcggtgtac tactgccagc agagcaacga agatccaccc 300

acgttcggac aaggcaccaa gctggagatt aaaggaggcg gaggctccgg tggaggagga 360

tcgggaggag gcggctccgg cggaggtgga tcgcagattc agctggtgca gtcgggttca 420

gaattgaaga aaccaggagc ctcggtgaag gtcagctgca aggcatcagg gtacatcttc 480

actaactacg gcatgaactg ggtgcgccag gctccgggac aggggctgga gtggatggga 540

tggatcaaca cttacaccgg ggagtcaact tactcggctg actttaaggg ccggtttgtg 600

ttctccctcg acactagcgt gagcaccgcc tatcttcaaa tcaacgccct caaggcggaa 660

gataccgccg tctactactg cgcaagatcc ggtgggtacg atccgatgga ttattgggga 720

cagggaacca ctgtcaccgt gagcagc 747

<210> 144
<211> 843
<212> DNA
<213> Artificial Sequence

<220>

<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 144
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

cccgacatcg tgctgaccca atccccggac agcctcgcag tctcactcgg agaacgcgcc 120

actatcaatt gtagggcgtc ggagtccgtg gacaattacg gaaacacctt catgcactgg 180

taccaacaaa aacctggtca gccacctaag ctgctgatct accgcgcctc gaatctggaa 240

tcaggagtgc cggacagatt ctcggggtcc ggctcccgga cggatttcac tttgaccatc 300

tcgtcacttc aagctgagga cgtcgcggtg tactactgcc agcagagcaa cgaagatcca 360

cccacgttcg gacaaggcac caagctggag attaaaggag gcggaggctc cggtggagga 420

ggatcgggag gaggcggctc cggcggaggt ggatcgcaga ttcagctggt gcagtcgggt 480

tcagaattga agaaaccagg agcctcggtg aaggtcagct gcaaggcatc agggtacatc 540

ttcactaact acggcatgaa ctgggtgcgc caggctccgg gacaggggct ggagtggatg 600

ggatggatca acacttacac cggggagtca acttactcgg ctgactttaa gggccggttt 660

gtgttctccc tcgacactag cgtgagcacc gcctatcttc aaatcaacgc cctcaaggcg 720

gaagataccg ccgtctacta ctgcgcaaga tccggtgggt acgatccgat ggattattgg 780

ggacagggaa ccactgtcac cgtgagcagc ggctcgcacc accatcacca tcatcatcac 840

cac 843

<210> 145
<211> 281
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 145
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Asp Ile Val Leu Thr Gln Ser Pro Asp Ser Leu
20 25 30

```
Ala Val Ser Leu Gly Glu Arg Ala Thr Ile Asn Cys Arg Ala Ser Glu
        35                  40                  45

Ser Val Asp Asn Tyr Gly Asn Thr Phe Met His Trp Tyr Gln Gln Lys
    50                  55                  60

Pro Gly Gln Pro Pro Lys Leu Leu Ile Tyr Arg Ala Ser Asn Leu Glu
65                  70                  75                  80

Ser Gly Val Pro Asp Arg Phe Ser Gly Ser Gly Ser Arg Thr Asp Phe
                85                  90                  95

Thr Leu Thr Ile Ser Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr
            100                 105                 110

Cys Gln Gln Ser Asn Glu Asp Pro Pro Thr Phe Gly Gln Gly Thr Lys
        115                 120                 125

Leu Glu Ile Lys Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly
    130                 135                 140

Gly Gly Ser Gly Gly Gly Gly Ser Gln Ile Gln Leu Val Gln Ser Gly
145                 150                 155                 160

Ser Glu Leu Lys Lys Pro Gly Ala Ser Val Lys Val Ser Cys Lys Ala
                165                 170                 175

Ser Gly Tyr Ile Phe Thr Asn Tyr Gly Met Asn Trp Val Arg Gln Ala
            180                 185                 190

Pro Gly Gln Gly Leu Glu Trp Met Gly Trp Ile Asn Thr Tyr Thr Gly
        195                 200                 205

Glu Ser Thr Tyr Ser Ala Asp Phe Lys Gly Arg Phe Val Phe Ser Leu
    210                 215                 220

Asp Thr Ser Val Ser Thr Ala Tyr Leu Gln Ile Asn Ala Leu Lys Ala
225                 230                 235                 240

Glu Asp Thr Ala Val Tyr Tyr Cys Ala Arg Ser Gly Gly Tyr Asp Pro
```

245 250 255

Met Asp Tyr Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser Gly Ser
260 265 270

His His His His His His His His His
275 280

<210> 146
<211> 1479
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 146
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

cccgacatcg tgctgaccca atccccggac agcctcgcag tctcactcgg agaacgcgcc 120

actatcaatt gtagggcgtc ggagtccgtg gacaattacg gaaacacctt catgcactgg 180

taccaacaaa aacctggtca gccacctaag ctgctgatct accgcgcctc gaatctggaa 240

tcaggagtgc cggacagatt ctcggggtcc ggctcccgga cggatttcac tttgaccatc 300

tcgtcacttc aagctgagga cgtcgcggtg tactactgcc agcagagcaa cgaagatcca 360

cccacgttcg gacaaggcac caagctggag attaaaggag gcggaggctc cggtggagga 420

ggatcgggag gaggcggctc cggcggaggt ggatcgcaga ttcagctggt gcagtcgggt 480

tcagaattga agaaaccagg agcctcggtg aaggtcagct gcaaggcatc agggtacatc 540

ttcactaact acggcatgaa ctgggtgcgc caggctccgg gacaggggct ggagtggatg 600

ggatggatca acacttacac cggggagtca acttactcgg ctgactttaa gggccggttt 660

gtgttctccc tcgacactag cgtgagcacc gcctatcttc aaatcaacgc cctcaaggcg 720

gaagataccg ccgtctacta ctgcgcaaga tccggtgggt acgatccgat ggattattgg 780

ggacagggaa ccactgtcac cgtgagcagc accactaccc cagcaccgag gccacccacc 840

ccggctccta ccatcgcctc ccagcctctg tccctgcgtc cggaggcatg tagacccgca 900

gctggtgggg ccgtgcatac ccggggtctt gacttcgcct gcgatatcta catttgggcc 960

cctctggctg gtacttgcgg ggtcctgctg ctttcactcg tgatcactct ttactgtaag 1020

cgcggtcgga agaagctgct gtacatcttt aagcaaccct tcatgaggcc tgtgcagact 1080

actcaagagg aggacggctg ttcatgccgg ttcccagagg aggaggaagg cggctgcgaa 1140

ctgcgcgtga aattcagccg cagcgcagat gctccagcct acaagcaggg gcagaaccag 1200

ctctacaacg aactcaatct tggtcggaga gaggagtacg acgtgctgga caagcggaga 1260

ggacgggacc cagaaatggg cgggaagccg cgcagaaaga atccccaaga gggcctgtac 1320

aacgagctcc aaaaggataa gatggcagaa gcctatagcg agattggtat gaaaggggaa 1380

cgcagaagag gcaaaggcca cgacggactg taccagggac tcagcaccgc caccaaggac 1440

acctatgacg ctcttcacat gcaggccctg ccgcctcgg 1479

<210> 147
<211> 493
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 147
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Asp Ile Val Leu Thr Gln Ser Pro Asp Ser Leu
20 25 30

Ala Val Ser Leu Gly Glu Arg Ala Thr Ile Asn Cys Arg Ala Ser Glu
35 40 45

Ser Val Asp Asn Tyr Gly Asn Thr Phe Met His Trp Tyr Gln Gln Lys
50 55 60

Pro Gly Gln Pro Pro Lys Leu Leu Ile Tyr Arg Ala Ser Asn Leu Glu
65 70 75 80

Ser Gly Val Pro Asp Arg Phe Ser Gly Ser Gly Ser Arg Thr Asp Phe
85 90 95

```
Thr Leu Thr Ile Ser Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr
            100                 105                 110

Cys Gln Gln Ser Asn Glu Asp Pro Pro Thr Phe Gly Gln Gly Thr Lys
        115                 120                 125

Leu Glu Ile Lys Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly
    130                 135                 140

Gly Gly Ser Gly Gly Gly Gly Ser Gln Ile Gln Leu Val Gln Ser Gly
145                 150                 155                 160

Ser Glu Leu Lys Lys Pro Gly Ala Ser Val Lys Val Ser Cys Lys Ala
                165                 170                 175

Ser Gly Tyr Ile Phe Thr Asn Tyr Gly Met Asn Trp Val Arg Gln Ala
            180                 185                 190

Pro Gly Gln Gly Leu Glu Trp Met Gly Trp Ile Asn Thr Tyr Thr Gly
        195                 200                 205

Glu Ser Thr Tyr Ser Ala Asp Phe Lys Gly Arg Phe Val Phe Ser Leu
    210                 215                 220

Asp Thr Ser Val Ser Thr Ala Tyr Leu Gln Ile Asn Ala Leu Lys Ala
225                 230                 235                 240

Glu Asp Thr Ala Val Tyr Tyr Cys Ala Arg Ser Gly Gly Tyr Asp Pro
                245                 250                 255

Met Asp Tyr Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser Thr Thr
            260                 265                 270

Thr Pro Ala Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln
        275                 280                 285

Pro Leu Ser Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala
    290                 295                 300

Val His Thr Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala
305                 310                 315                 320
```

```
Pro Leu Ala Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr
                325                 330                 335

Leu Tyr Cys Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln
            340                 345                 350

Pro Phe Met Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser
        355                 360                 365

Cys Arg Phe Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg Val Lys
    370                 375                 380

Phe Ser Arg Ser Ala Asp Ala Pro Ala Tyr Lys Gln Gly Gln Asn Gln
385                 390                 395                 400

Leu Tyr Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu
                405                 410                 415

Asp Lys Arg Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg
            420                 425                 430

Lys Asn Pro Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met
        435                 440                 445

Ala Glu Ala Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly
    450                 455                 460

Lys Gly His Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp
465                 470                 475                 480

Thr Tyr Asp Ala Leu His Met Gln Ala Leu Pro Pro Arg
                485                 490
```

<210> 148
<211> 249
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic

polypeptide"

<400> 148

```
Asp Ile Val Leu Thr Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly
1               5                  10                  15

Glu Arg Ala Thr Ile Asn Cys Arg Ala Ser Glu Ser Val Asp Asn Tyr
            20                  25                  30

Gly Asn Thr Phe Met His Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro
        35                  40                  45

Lys Leu Leu Ile Tyr Arg Ala Ser Asn Leu Glu Ser Gly Val Pro Asp
    50                  55                  60

Arg Phe Ser Gly Ser Gly Ser Arg Thr Asp Phe Thr Leu Thr Ile Ser
65                  70                  75                  80

Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln Gln Ser Asn
                85                  90                  95

Glu Asp Pro Pro Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys Gly
            100                 105                 110

Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly
        115                 120                 125

Gly Gly Ser Gln Ile Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys
    130                 135                 140

Pro Gly Ala Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Ile Phe
145                 150                 155                 160

Thr Asn Tyr Gly Met Asn Trp Val Arg Gln Ala Pro Gly Gln Arg Leu
                165                 170                 175

Glu Trp Met Gly Trp Ile Asn Thr Tyr Thr Gly Glu Ser Thr Tyr Ser
            180                 185                 190

Ala Asp Phe Lys Gly Arg Val Thr Ile Thr Leu Asp Thr Ser Ala Ser
        195                 200                 205
```

Thr Ala Tyr Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val
210 215 220

Tyr Tyr Cys Ala Arg Ser Gly Gly Tyr Asp Pro Met Asp Tyr Trp Gly
225 230 235 240

Gln Gly Thr Thr Val Thr Val Ser Ser
245

<210> 149
<211> 747
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 149
gatattgtcc tcactcaatc gccggactca ctggcggtgt ccctcggaga gagggcgacg 60

atcaattgcc gggcttccga atccgtcgat aactacggaa acacctttat gcactggtac 120

caacagaagc caggacagcc accaaagctg ttgatctacc gcgcttcaaa ccttgagtcg 180

ggtgtgccgg accgcttcag cggcagcggt tccagaaccg actttaccct caccatcagc 240

tcgctgcagg ccgaagatgt cgccgtctat tactgccaac agagcaacga agatccgcct 300

actttcggac aggggactaa actggaaatc aagggcggag gaggctcggg tggaggagga 360

tcgggaggag gcgggtccgg tggtggcgga tcgcaaatcc agctggtgca gtccggcgca 420

gaagtgaaga agccgggagc gtccgtgaaa gtgagctgca aggcctcagg gtacatcttc 480

accaattacg gcatgaattg ggtgcggcag gcacccggac agcgcctgga gtggatgggc 540

tggatcaaca cttacaccgg ggaaagcacg tactcggccg acttcaaagg acgggtgacc 600

attaccctgg atacctcggc ctcaaccgct tacatggagc tctcatcact tagatccgag 660

gacactgccg tctactactg tgcaaggagc ggaggctacg accctatgga ctattgggga 720

caaggcacta ctgtgactgt gtcgtcc 747

<210> 150
<211> 843
<212> DNA

<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 150
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

cccgatattg tcctcactca atcgccggac tcactggcgg tgtccctcgg agagagggcg 120

acgatcaatt gccgggcttc cgaatccgtc gataactacg gaaacacctt tatgcactgg 180

taccaacaga agccaggaca gccaccaaag ctgttgatct accgcgcttc aaaccttgag 240

tcgggtgtgc cggaccgctt cagcggcagc ggttccagaa ccgactttac cctcaccatc 300

agctcgctgc aggccgaaga tgtcgccgtc tattactgcc aacagagcaa cgaagatccg 360

cctactttcg gacaggggac taaactggaa atcaagggcg gaggaggctc gggtggagga 420

ggatcgggag gaggcgggtc cggtggtggc ggatcgcaaa tccagctggt gcagtccggc 480

gcagaagtga agaagccggg agcgtccgtg aaagtgagct gcaaggcctc agggtacatc 540

ttcaccaatt acggcatgaa ttgggtgcgg caggcacccg gacagcgcct ggagtggatg 600

ggctggatca acacttacac cggggaaagc acgtactcgg ccgacttcaa aggacgggtg 660

accattaccc tggatacctc ggcctcaacc gcttacatgg agctctcatc acttagatcc 720

gaggacactg ccgtctacta ctgtgcaagg agcggaggct acgaccctat ggactattgg 780

ggacaaggca ctactgtgac tgtgtcgtcc ggctcgcacc accatcacca tcatcatcac 840

cac 843

<210> 151
<211> 281
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 151
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

```
His Ala Ala Arg Pro Asp Ile Val Leu Thr Gln Ser Pro Asp Ser Leu
            20                  25                  30

Ala Val Ser Leu Gly Glu Arg Ala Thr Ile Asn Cys Arg Ala Ser Glu
        35                  40                  45

Ser Val Asp Asn Tyr Gly Asn Thr Phe Met His Trp Tyr Gln Gln Lys
    50                  55                  60

Pro Gly Gln Pro Pro Lys Leu Leu Ile Tyr Arg Ala Ser Asn Leu Glu
65                  70                  75                  80

Ser Gly Val Pro Asp Arg Phe Ser Gly Ser Gly Ser Arg Thr Asp Phe
                85                  90                  95

Thr Leu Thr Ile Ser Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr
            100                 105                 110

Cys Gln Gln Ser Asn Glu Asp Pro Pro Thr Phe Gly Gln Gly Thr Lys
        115                 120                 125

Leu Glu Ile Lys Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly
    130                 135                 140

Gly Gly Ser Gly Gly Gly Gly Ser Gln Ile Gln Leu Val Gln Ser Gly
145                 150                 155                 160

Ala Glu Val Lys Lys Pro Gly Ala Ser Val Lys Val Ser Cys Lys Ala
                165                 170                 175

Ser Gly Tyr Ile Phe Thr Asn Tyr Gly Met Asn Trp Val Arg Gln Ala
            180                 185                 190

Pro Gly Gln Arg Leu Glu Trp Met Gly Trp Ile Asn Thr Tyr Thr Gly
        195                 200                 205

Glu Ser Thr Tyr Ser Ala Asp Phe Lys Gly Arg Val Thr Ile Thr Leu
    210                 215                 220

Asp Thr Ser Ala Ser Thr Ala Tyr Met Glu Leu Ser Ser Leu Arg Ser
225                 230                 235                 240
```

Glu Asp Thr Ala Val Tyr Tyr Cys Ala Arg Ser Gly Gly Tyr Asp Pro
245 250 255

Met Asp Tyr Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser Gly Ser
260 265 270

His His His His His His His His His
275 280

<210> 152
<211> 1479
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 152
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

cccgatattg tcctcactca atcgccggac tcactggcgg tgtccctcgg agagagggcg 120

acgatcaatt gccgggcttc cgaatccgtc gataactacg gaaacacctt tatgcactgg 180

taccaacaga agccaggaca gccaccaaag ctgttgatct accgcgcttc aaaccttgag 240

tcgggtgtgc cggaccgctt cagcggcagc ggttccagaa ccgactttac cctcaccatc 300

agctcgctgc aggccgaaga tgtcgccgtc tattactgcc aacagagcaa cgaagatccg 360

cctactttcg gacaggggac taaactggaa atcaagggcg gaggaggctc gggtggagga 420

ggatcgggag gaggcgggtc cggtggtggc ggatcgcaaa tccagctggt gcagtccggc 480

gcagaagtga agaagccggg agcgtccgtg aaagtgagct gcaaggcctc agggtacatc 540

ttcaccaatt acggcatgaa ttgggtgcgg caggcacccg gacagcgcct ggagtggatg 600

ggctggatca acacttacac cggggaaagc acgtactcgg ccgacttcaa aggacgggtg 660

accattaccc tggatacctc ggcctcaacc gcttacatgg agctctcatc acttagatcc 720

gaggacactg ccgtctacta ctgtgcaagg agcggaggct acgaccctat ggactattgg 780

ggacaaggca ctactgtgac tgtgtcgtcc accactaccc cagcaccgag gccacccacc 840

ccggctccta ccatcgcctc ccagcctctg tccctgcgtc cggaggcatg tagacccgca 900

gctggtgggg ccgtgcatac ccggggtctt gacttcgcct gcgatatcta catttgggcc 960

cctctggctg gtacttgcgg ggtcctgctg ctttcactcg tgatcactct ttactgtaag 1020

cgcggtcgga agaagctgct gtacatcttt aagcaaccct tcatgaggcc tgtgcagact 1080

actcaagagg aggacggctg ttcatgccgg ttcccagagg aggaggaagg cggctgcgaa 1140

ctgcgcgtga aattcagccg cagcgcagat gctccagcct acaagcaggg gcagaaccag 1200

ctctacaacg aactcaatct tggtcggaga gaggagtacg acgtgctgga caagcggaga 1260

ggacgggacc cagaaatggg cgggaagccg cgcagaaaga atccccaaga gggcctgtac 1320

aacgagctcc aaaaggataa gatggcagaa gcctatagcg agattggtat gaaaggggaa 1380

cgcagaagag gcaaaggcca cgacggactg taccagggac tcagcaccgc caccaaggac 1440

acctatgacg ctcttcacat gcaggccctg ccgcctcgg 1479

<210> 153
<211> 493
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 153
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Asp Ile Val Leu Thr Gln Ser Pro Asp Ser Leu
20 25 30

Ala Val Ser Leu Gly Glu Arg Ala Thr Ile Asn Cys Arg Ala Ser Glu
35 40 45

Ser Val Asp Asn Tyr Gly Asn Thr Phe Met His Trp Tyr Gln Gln Lys
50 55 60

Pro Gly Gln Pro Pro Lys Leu Leu Ile Tyr Arg Ala Ser Asn Leu Glu
65 70 75 80

Ser Gly Val Pro Asp Arg Phe Ser Gly Ser Gly Ser Arg Thr Asp Phe

```
                85                  90                  95

Thr Leu Thr Ile Ser Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr
            100                 105                 110

Cys Gln Gln Ser Asn Glu Asp Pro Pro Thr Phe Gly Gln Gly Thr Lys
        115                 120                 125

Leu Glu Ile Lys Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly
    130                 135                 140

Gly Gly Ser Gly Gly Gly Gly Ser Gln Ile Gln Leu Val Gln Ser Gly
145                 150                 155                 160

Ala Glu Val Lys Lys Pro Gly Ala Ser Val Lys Val Ser Cys Lys Ala
                165                 170                 175

Ser Gly Tyr Ile Phe Thr Asn Tyr Gly Met Asn Trp Val Arg Gln Ala
            180                 185                 190

Pro Gly Gln Arg Leu Glu Trp Met Gly Trp Ile Asn Thr Tyr Thr Gly
        195                 200                 205

Glu Ser Thr Tyr Ser Ala Asp Phe Lys Gly Arg Val Thr Ile Thr Leu
    210                 215                 220

Asp Thr Ser Ala Ser Thr Ala Tyr Met Glu Leu Ser Ser Leu Arg Ser
225                 230                 235                 240

Glu Asp Thr Ala Val Tyr Tyr Cys Ala Arg Ser Gly Gly Tyr Asp Pro
                245                 250                 255

Met Asp Tyr Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser Thr Thr
            260                 265                 270

Thr Pro Ala Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln
        275                 280                 285

Pro Leu Ser Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala
    290                 295                 300
```

```
Val His Thr Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala
305                 310                 315                 320

Pro Leu Ala Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr
                325                 330                 335

Leu Tyr Cys Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln
            340                 345                 350

Pro Phe Met Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser
        355                 360                 365

Cys Arg Phe Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg Val Lys
    370                 375                 380

Phe Ser Arg Ser Ala Asp Ala Pro Ala Tyr Lys Gln Gly Gln Asn Gln
385                 390                 395                 400

Leu Tyr Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu
                405                 410                 415

Asp Lys Arg Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg
            420                 425                 430

Lys Asn Pro Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met
        435                 440                 445

Ala Glu Ala Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly
    450                 455                 460

Lys Gly His Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp
465                 470                 475                 480

Thr Tyr Asp Ala Leu His Met Gln Ala Leu Pro Pro Arg
                485                 490
```

<210> 154
<211> 249
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 154
Glu Ile Val Leu Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly
1 5 10 15

Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Glu Ser Val Asp Asn Tyr
20 25 30

Gly Asn Thr Phe Met His Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro
35 40 45

Arg Leu Leu Ile Tyr Arg Ala Ser Asn Leu Glu Ser Gly Ile Pro Ala
50 55 60

Arg Phe Ser Gly Ser Gly Ser Arg Thr Asp Phe Thr Leu Thr Ile Ser
65 70 75 80

Ser Leu Glu Pro Glu Asp Val Ala Val Tyr Tyr Cys Gln Gln Ser Asn
85 90 95

Glu Asp Pro Pro Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys Gly
100 105 110

Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly
115 120 125

Gly Gly Ser Gln Ile Gln Leu Val Gln Ser Gly Ser Glu Leu Lys Lys
130 135 140

Pro Gly Ala Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Ile Phe
145 150 155 160

Thr Asn Tyr Gly Met Asn Trp Val Arg Gln Ala Pro Gly Gln Gly Leu
165 170 175

Glu Trp Met Gly Trp Ile Asn Thr Tyr Thr Gly Glu Ser Thr Tyr Ser
180 185 190

```
Ala Asp Phe Lys Gly Arg Phe Val Phe Ser Leu Asp Thr Ser Val Ser
        195                 200                 205


Thr Ala Tyr Leu Gln Ile Asn Ala Leu Lys Ala Glu Asp Thr Ala Val
    210                 215                 220


Tyr Tyr Cys Ala Arg Ser Gly Gly Tyr Asp Pro Met Asp Tyr Trp Gly
225                 230                 235                 240


Gln Gly Thr Thr Val Thr Val Ser Ser
                245


<210> 155
<211> 747
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polynucleotide"

<400> 155
gaaattgtgc tcacgcaatc acccgccact ctgtcgcttt ccccgggaga gcgggccacc       60

ctctcctgcc gcgcttcgga atcggtcgac aattacggaa atacttttat gcactggtac      120

caacagaagc cagggcaggc gccaaggctg ctgatctaca gagcctcgaa cctcgaaagc      180

ggcatccctg cgcggttcag cggtagcgga agccgcaccg atttcaccct gaccatctca      240

tcactggagc cggaggatgt ggcagtgtac tattgtcagc agtcgaacga ggacccgccg      300

actttcgggc agggaaccaa gctggaaatc aagggtggag gagggagcgg cggaggagga      360

tcgggaggag gaggcagcgg aggcggagga tcgcaaatcc aacttgtcca gtcgggctcc      420

gaactcaaaa agcctggcgc gtccgtgaag gtcagctgca aagcatcagg atacatcttc      480

actaactacg gtatgaattg ggtcagacag gctccgggtc agggtctgga gtggatggga      540

tggattaaca cctacactgg ggaatcgact tactccgcgg acttcaaagg gcggttcgtg      600

ttttcactgg acaccagcgt gtccaccgct tacttgcaaa tcaacgccct caaggccgag      660

gacaccgccg tgtactactg cgcacgctca ggcggatacg atccaatgga ctactgggga      720

cagggcacta cggtgactgt gtcctcc                                          747
```

<210> 156
<211> 843
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 156
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

cccgaaattg tgctcacgca atcacccgcc actctgtcgc tttccccggg agagcgggcc 120

accctctcct gccgcgcttc ggaatcggtc gacaattacg gaaatacttt tatgcactgg 180

taccaacaga agccagggca ggcgccaagg ctgctgatct acagagcctc gaacctcgaa 240

agcggcatcc ctgcgcggtt cagcggtagc ggaagccgca ccgatttcac cctgaccatc 300

tcatcactgg agccggagga tgtggcagtg tactattgtc agcagtcgaa cgaggacccg 360

ccgactttcg ggcagggaac caagctggaa atcaagggtg gaggagggag cggcggagga 420

ggatcgggag gaggaggcag cggaggcgga ggatcgcaaa tccaacttgt ccagtcgggc 480

tccgaactca aaaagcctgg cgcgtccgtg aaggtcagct gcaaagcatc aggatacatc 540

ttcactaact acggtatgaa ttgggtcaga caggctccgg gtcagggtct ggagtggatg 600

ggatggatta acacctacac tggggaatcg acttactccg cggacttcaa agggcggttc 660

gtgttttcac tggacaccag cgtgtccacc gcttacttgc aaatcaacgc cctcaaggcc 720

gaggacaccg ccgtgtacta ctgcgcacgc tcaggcggat acgatccaat ggactactgg 780

ggacagggca ctacggtgac tgtgtcctcc ggctcgcacc accatcacca tcatcatcac 840

cac 843

<210> 157
<211> 281
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 157
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu

```
1               5                   10                  15

His Ala Ala Arg Pro Glu Ile Val Leu Thr Gln Ser Pro Ala Thr Leu
            20                  25                  30

Ser Leu Ser Pro Gly Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Glu
        35                  40                  45

Ser Val Asp Asn Tyr Gly Asn Thr Phe Met His Trp Tyr Gln Gln Lys
    50                  55                  60

Pro Gly Gln Ala Pro Arg Leu Leu Ile Tyr Arg Ala Ser Asn Leu Glu
65                  70                  75                  80

Ser Gly Ile Pro Ala Arg Phe Ser Gly Ser Gly Ser Arg Thr Asp Phe
                85                  90                  95

Thr Leu Thr Ile Ser Ser Leu Glu Pro Glu Asp Val Ala Val Tyr Tyr
            100                 105                 110

Cys Gln Gln Ser Asn Glu Asp Pro Pro Thr Phe Gly Gln Gly Thr Lys
        115                 120                 125

Leu Glu Ile Lys Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly
    130                 135                 140

Gly Gly Ser Gly Gly Gly Gly Ser Gln Ile Gln Leu Val Gln Ser Gly
145                 150                 155                 160

Ser Glu Leu Lys Lys Pro Gly Ala Ser Val Lys Val Ser Cys Lys Ala
                165                 170                 175

Ser Gly Tyr Ile Phe Thr Asn Tyr Gly Met Asn Trp Val Arg Gln Ala
            180                 185                 190

Pro Gly Gln Gly Leu Glu Trp Met Gly Trp Ile Asn Thr Tyr Thr Gly
        195                 200                 205

Glu Ser Thr Tyr Ser Ala Asp Phe Lys Gly Arg Phe Val Phe Ser Leu
    210                 215                 220
```

```
Asp Thr Ser Val Ser Thr Ala Tyr Leu Gln Ile Asn Ala Leu Lys Ala
225                 230                 235                 240


Glu Asp Thr Ala Val Tyr Tyr Cys Ala Arg Ser Gly Gly Tyr Asp Pro
                245                 250                 255


Met Asp Tyr Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser Gly Ser
            260                 265                 270


His His His His His His His His His
        275                 280
```

<210> 158
<211> 1479
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 158

```
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg       60

cccgaaattg tgctcacgca atcacccgcc actctgtcgc tttccccggg agagcgggcc      120

accctctcct gccgcgcttc ggaatcggtc gacaattacg gaaatacttt tatgcactgg      180

taccaacaga agccagggca ggcgccaagg ctgctgatct acagagcctc gaacctcgaa      240

agcggcatcc ctgcgcggtt cagcggtagc ggaagccgca ccgatttcac cctgaccatc      300

tcatcactgg agccggagga tgtggcagtg tactattgtc agcagtcgaa cgaggacccg      360

ccgactttcg ggcagggaac caagctggaa atcaagggtg gaggagggag cggcggagga      420

ggatcgggag gaggaggcag cggaggcgga ggatcgcaaa tccaacttgt ccagtcgggc      480

tccgaactca aaaagcctgg cgcgtccgtg aaggtcagct gcaaagcatc aggatacatc      540

ttcactaact acggtatgaa ttgggtcaga caggctccgg gtcagggtct ggagtggatg      600

ggatggatta acacctacac tggggaatcg acttactccg cggacttcaa agggcggttc      660

gtgttttcac tggacaccag cgtgtccacc gcttacttgc aaatcaacgc cctcaaggcc      720

gaggacaccg ccgtgtacta ctgcgcacgc tcaggcggat acgatccaat ggactactgg      780
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ggacagggca ctacggtgac tgtgtcctcc accactaccc cagcaccgag gccacccacc 840

ccggctccta ccatcgcctc ccagcctctg tccctgcgtc cggaggcatg tagacccgca 900

gctggtgggg ccgtgcatac ccggggtctt gacttcgcct gcgatatcta catttgggcc 960

cctctggctg gtacttgcgg ggtcctgctg ctttcactcg tgatcactct ttactgtaag 1020

cgcggtcgga agaagctgct gtacatcttt aagcaaccct tcatgaggcc tgtgcagact 1080

actcaagagg aggacggctg ttcatgccgg ttcccagagg aggaggaagg cggctgcgaa 1140

ctgcgcgtga aattcagccg cagcgcagat gctccagcct acaagcaggg gcagaaccag 1200

ctctacaacg aactcaatct tggtcggaga gaggagtacg acgtgctgga caagcggaga 1260

ggacgggacc cagaaatggg cgggaagccg cgcagaaaga atccccaaga gggcctgtac 1320

aacgagctcc aaaaggataa gatggcagaa gcctatagcg agattggtat gaaaggggaa 1380

cgcagaagag gcaaaggcca cgacggactg taccagggac tcagcaccgc caccaaggac 1440

acctatgacg ctcttcacat gcaggccctg ccgcctcgg 1479

<210> 159
<211> 493
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 159
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Glu Ile Val Leu Thr Gln Ser Pro Ala Thr Leu
20 25 30

Ser Leu Ser Pro Gly Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Glu
35 40 45

Ser Val Asp Asn Tyr Gly Asn Thr Phe Met His Trp Tyr Gln Gln Lys
50 55 60

Pro Gly Gln Ala Pro Arg Leu Leu Ile Tyr Arg Ala Ser Asn Leu Glu
65 70 75 80

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Ser Gly Ile Pro Ala Arg Phe Ser Gly Ser Gly Ser Arg Thr Asp Phe
                85                  90                  95

Thr Leu Thr Ile Ser Ser Leu Glu Pro Glu Asp Val Ala Val Tyr Tyr
            100                 105                 110

Cys Gln Gln Ser Asn Glu Asp Pro Pro Thr Phe Gly Gln Gly Thr Lys
        115                 120                 125

Leu Glu Ile Lys Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly
    130                 135                 140

Gly Gly Ser Gly Gly Gly Gly Ser Gln Ile Gln Leu Val Gln Ser Gly
145                 150                 155                 160

Ser Glu Leu Lys Lys Pro Gly Ala Ser Val Lys Val Ser Cys Lys Ala
                165                 170                 175

Ser Gly Tyr Ile Phe Thr Asn Tyr Gly Met Asn Trp Val Arg Gln Ala
            180                 185                 190

Pro Gly Gln Gly Leu Glu Trp Met Gly Trp Ile Asn Thr Tyr Thr Gly
        195                 200                 205

Glu Ser Thr Tyr Ser Ala Asp Phe Lys Gly Arg Phe Val Phe Ser Leu
    210                 215                 220

Asp Thr Ser Val Ser Thr Ala Tyr Leu Gln Ile Asn Ala Leu Lys Ala
225                 230                 235                 240

Glu Asp Thr Ala Val Tyr Tyr Cys Ala Arg Ser Gly Gly Tyr Asp Pro
                245                 250                 255

Met Asp Tyr Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser Thr Thr
            260                 265                 270

Thr Pro Ala Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln
        275                 280                 285
```

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Pro Leu Ser Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala
    290                 295                 300

Val His Thr Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala
305                 310                 315                 320

Pro Leu Ala Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr
                325                 330                 335

Leu Tyr Cys Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln
            340                 345                 350

Pro Phe Met Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser
        355                 360                 365

Cys Arg Phe Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg Val Lys
    370                 375                 380

Phe Ser Arg Ser Ala Asp Ala Pro Ala Tyr Lys Gln Gly Gln Asn Gln
385                 390                 395                 400

Leu Tyr Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu
                405                 410                 415

Asp Lys Arg Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg
            420                 425                 430

Lys Asn Pro Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met
        435                 440                 445

Ala Glu Ala Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly
    450                 455                 460

Lys Gly His Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp
465                 470                 475                 480

Thr Tyr Asp Ala Leu His Met Gln Ala Leu Pro Pro Arg
                485                 490
```

<210> 160
<211> 249

<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 160
Glu Ile Val Leu Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly
1 5 10 15

Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Glu Ser Val Asp Asn Tyr
20 25 30

Gly Asn Thr Phe Met His Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro
35 40 45

Arg Leu Leu Ile Tyr Arg Ala Ser Asn Leu Glu Ser Gly Ile Pro Ala
50 55 60

Arg Phe Ser Gly Ser Gly Ser Arg Thr Asp Phe Thr Leu Thr Ile Ser
65 70 75 80

Ser Leu Glu Pro Glu Asp Val Ala Val Tyr Tyr Cys Gln Gln Ser Asn
85 90 95

Glu Asp Pro Pro Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys Gly
100 105 110

Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly
115 120 125

Gly Gly Ser Gln Ile Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys
130 135 140

Pro Gly Ala Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Ile Phe
145 150 155 160

Thr Asn Tyr Gly Met Asn Trp Val Arg Gln Ala Pro Gly Gln Arg Leu
165 170 175

Glu Trp Met Gly Trp Ile Asn Thr Tyr Thr Gly Glu Ser Thr Tyr Ser

180 185 190

Ala Asp Phe Lys Gly Arg Val Thr Ile Thr Leu Asp Thr Ser Ala Ser
195 200 205

Thr Ala Tyr Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val
210 215 220

Tyr Tyr Cys Ala Arg Ser Gly Gly Tyr Asp Pro Met Asp Tyr Trp Gly
225 230 235 240

Gln Gly Thr Thr Val Thr Val Ser Ser
245

<210> 161
<211> 747
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 161
gagatcgtct tgacgcaatc gccagccacc ctgtccctga gcccaggcga gcgcgccacc 60

ctcagctgtc gggcgagcga aagcgtggac aattacggaa acacctttat gcactggtac 120

caacagaaac cggggcaggc tccgcgcctc ctcatctacc gcgcatccaa tctggaatca 180

ggaatccccg cgaggttctc cggtagcgga tcgcggactg actttactct gaccatctcg 240

tcccttgaac cggaggatgt ggctgtgtat tactgccagc agtcaaacga ggaccctcca 300

actttcgggc agggaaccaa gctcgaaatc aagggcggtg gcggaagcgg aggaggagga 360

tcaggcggag gcggctcagg cggtggaggt tcacaaattc aactggtgca gtcgggagcg 420

gaggtcaaga agccgggagc ctcagtgaaa gtgagctgca aggcttcggg ttacattttc 480

actaattacg gcatgaactg ggtgaggcag gcccctggcc aacggttgga atggatggga 540

tggatcaaca cctacaccgg ggagtcgact tactccgcgg acttcaaggg gagagtcacg 600

atcaccctgg atacgtccgc aagcactgcc tacatggaac tgtcctccct gcgctcggaa 660

gataccgcag tctactactg cgccagatcg ggcggatatg acccgatgga ctactgggga 720

cagggaacta ctgtcaccgt gtcctcg 747

<210> 162
<211> 843
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 162
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

cccgagatcg tcttgacgca atcgccagcc accctgtccc tgagcccagg cgagcgcgcc 120

accctcagct gtcgggcgag cgaaagcgtg gacaattacg gaaacacctt tatgcactgg 180

taccaacaga aaccggggca ggctccgcgc ctcctcatct accgcgcatc caatctggaa 240

tcaggaatcc ccgcgaggtt ctccggtagc ggatcgcgga ctgactttac tctgaccatc 300

tcgtcccttg aaccggagga tgtggctgtg tattactgcc agcagtcaaa cgaggaccct 360

ccaactttcg ggcagggaac caagctcgaa atcaagggcg gtggcggaag cggaggagga 420

ggatcaggcg gaggcggctc aggcggtgga ggttcacaaa ttcaactggt gcagtcggga 480

gcggaggtca agaagccggg agcctcagtg aaagtgagct gcaaggcttc gggttacatt 540

ttcactaatt acggcatgaa ctgggtgagg caggcccctg gccaacggtt ggaatggatg 600

ggatggatca acacctacac cggggagtcg acttactccg cggacttcaa ggggagagtc 660

acgatcaccc tggatacgtc cgcaagcact gcctacatgg aactgtcctc cctgcgctcg 720

gaagataccg cagtctacta ctgcgccaga tcgggcggat atgacccgat ggactactgg 780

ggacagggaa ctactgtcac cgtgtcctcg ggctcgcacc accatcacca tcatcatcac 840

cac 843

<210> 163
<211> 281
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 163
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1   5   10   15

His Ala Ala Arg Pro Glu Ile Val Leu Thr Gln Ser Pro Ala Thr Leu
            20   25   30

Ser Leu Ser Pro Gly Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Glu
        35   40   45

Ser Val Asp Asn Tyr Gly Asn Thr Phe Met His Trp Tyr Gln Gln Lys
    50   55   60

Pro Gly Gln Ala Pro Arg Leu Leu Ile Tyr Arg Ala Ser Asn Leu Glu
65   70   75   80

Ser Gly Ile Pro Ala Arg Phe Ser Gly Ser Gly Ser Arg Thr Asp Phe
                85   90   95

Thr Leu Thr Ile Ser Ser Leu Glu Pro Glu Asp Val Ala Val Tyr Tyr
            100   105   110

Cys Gln Gln Ser Asn Glu Asp Pro Pro Thr Phe Gly Gln Gly Thr Lys
        115   120   125

Leu Glu Ile Lys Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly
    130   135   140

Gly Gly Ser Gly Gly Gly Gly Ser Gln Ile Gln Leu Val Gln Ser Gly
145   150   155   160

Ala Glu Val Lys Lys Pro Gly Ala Ser Val Lys Val Ser Cys Lys Ala
                165   170   175

Ser Gly Tyr Ile Phe Thr Asn Tyr Gly Met Asn Trp Val Arg Gln Ala
            180   185   190

Pro Gly Gln Arg Leu Glu Trp Met Gly Trp Ile Asn Thr Tyr Thr Gly
        195   200   205

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Glu Ser Thr Tyr Ser Ala Asp Phe Lys Gly Arg Val Thr Ile Thr Leu
    210                 215                 220


Asp Thr Ser Ala Ser Thr Ala Tyr Met Glu Leu Ser Ser Leu Arg Ser
225                 230                 235                 240


Glu Asp Thr Ala Val Tyr Tyr Cys Ala Arg Ser Gly Gly Tyr Asp Pro
                245                 250                 255


Met Asp Tyr Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser Gly Ser
            260                 265                 270


His His His His His His His His His
        275                 280
```

<210> 164
<211> 1479
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 164

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atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg       60

cccgagatcg tcttgacgca atcgccagcc accctgtccc tgagcccagg cgagcgcgcc      120

accctcagct gtcgggcgag cgaaagcgtg gacaattacg gaaacacctt tatgcactgg      180

taccaacaga aaccggggca ggctccgcgc ctcctcatct accgcgcatc caatctggaa      240

tcaggaatcc ccgcgaggtt ctccggtagc ggatcgcgga ctgactttac tctgaccatc      300

tcgtcccttg aaccggagga tgtggctgtg tattactgcc agcagtcaaa cgaggaccct      360

ccaactttcg ggcagggaac caagctcgaa atcaagggcg gtggcggaag cggaggagga      420

ggatcaggcg gaggcggctc aggcggtgga ggttcacaaa ttcaactggt gcagtcggga      480

gcggaggtca agaagccggg agcctcagtg aaagtgagct gcaaggcttc gggttacatt      540

ttcactaatt acggcatgaa ctgggtgagg caggcccctg gccaacggtt ggaatggatg      600

ggatggatca acacctacac cggggagtcg acttactccg cggacttcaa ggggagagtc      660

acgatcaccc tggatacgtc cgcaagcact gcctacatgg aactgtcctc cctgcgctcg      720
```

gaagataccg cagtctacta ctgcgccaga tcgggcggat atgacccgat ggactactgg 780

ggacagggaa ctactgtcac cgtgtcctcg accactaccc cagcaccgag gccacccacc 840

ccggctccta ccatcgcctc ccagcctctg tccctgcgtc cggaggcatg tagacccgca 900

gctggtgggg ccgtgcatac ccggggtctt gacttcgcct gcgatatcta catttgggcc 960

cctctggctg gtacttgcgg ggtcctgctg ctttcactcg tgatcactct ttactgtaag 1020

cgcggtcgga agaagctgct gtacatcttt aagcaaccct tcatgaggcc tgtgcagact 1080

actcaagagg aggacggctg ttcatgccgg ttcccagagg aggaggaagg cggctgcgaa 1140

ctgcgcgtga aattcagccg cagcgcagat gctccagcct acaagcaggg gcagaaccag 1200

ctctacaacg aactcaatct tggtcggaga gaggagtacg acgtgctgga caagcggaga 1260

ggacgggacc cagaaatggg cgggaagccg cgcagaaaga atccccaaga gggcctgtac 1320

aacgagctcc aaaaggataa gatggcagaa gcctatagcg agattggtat gaaaggggaa 1380

cgcagaagag gcaaaggcca cgacggactg taccagggac tcagcaccgc caccaaggac 1440

acctatgacg ctcttcacat gcaggccctg ccgcctcgg 1479

<210> 165
<211> 493
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 165
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Glu Ile Val Leu Thr Gln Ser Pro Ala Thr Leu
20 25 30

Ser Leu Ser Pro Gly Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Glu
35 40 45

Ser Val Asp Asn Tyr Gly Asn Thr Phe Met His Trp Tyr Gln Gln Lys
50 55 60

```
Pro Gly Gln Ala Pro Arg Leu Leu Ile Tyr Arg Ala Ser Asn Leu Glu
65                  70                  75                  80

Ser Gly Ile Pro Ala Arg Phe Ser Gly Ser Gly Ser Arg Thr Asp Phe
                85                  90                  95

Thr Leu Thr Ile Ser Ser Leu Glu Pro Glu Asp Val Ala Val Tyr Tyr
            100                 105                 110

Cys Gln Gln Ser Asn Glu Asp Pro Pro Thr Phe Gly Gln Gly Thr Lys
        115                 120                 125

Leu Glu Ile Lys Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly
    130                 135                 140

Gly Gly Ser Gly Gly Gly Gly Ser Gln Ile Gln Leu Val Gln Ser Gly
145                 150                 155                 160

Ala Glu Val Lys Lys Pro Gly Ala Ser Val Lys Val Ser Cys Lys Ala
                165                 170                 175

Ser Gly Tyr Ile Phe Thr Asn Tyr Gly Met Asn Trp Val Arg Gln Ala
            180                 185                 190

Pro Gly Gln Arg Leu Glu Trp Met Gly Trp Ile Asn Thr Tyr Thr Gly
        195                 200                 205

Glu Ser Thr Tyr Ser Ala Asp Phe Lys Gly Arg Val Thr Ile Thr Leu
    210                 215                 220

Asp Thr Ser Ala Ser Thr Ala Tyr Met Glu Leu Ser Ser Leu Arg Ser
225                 230                 235                 240

Glu Asp Thr Ala Val Tyr Tyr Cys Ala Arg Ser Gly Gly Tyr Asp Pro
                245                 250                 255

Met Asp Tyr Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser Thr Thr
            260                 265                 270

Thr Pro Ala Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln
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        275                 280                 285

Pro Leu Ser Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala
    290                 295                 300

Val His Thr Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala
305                 310                 315                 320

Pro Leu Ala Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr
                325                 330                 335

Leu Tyr Cys Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln
            340                 345                 350

Pro Phe Met Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser
        355                 360                 365

Cys Arg Phe Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg Val Lys
    370                 375                 380

Phe Ser Arg Ser Ala Asp Ala Pro Ala Tyr Lys Gln Gly Gln Asn Gln
385                 390                 395                 400

Leu Tyr Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu
                405                 410                 415

Asp Lys Arg Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg
            420                 425                 430

Lys Asn Pro Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met
        435                 440                 445

Ala Glu Ala Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly
    450                 455                 460

Lys Gly His Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp
465                 470                 475                 480

Thr Tyr Asp Ala Leu His Met Gln Ala Leu Pro Pro Arg
                485                 490
```

<210> 166
<211> 249
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 166
Gln Ile Gln Leu Val Gln Ser Gly Ser Glu Leu Lys Lys Pro Gly Ala
1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Ile Phe Thr Asn Tyr
20 25 30

Gly Met Asn Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45

Gly Trp Ile Asn Thr Tyr Thr Gly Glu Ser Thr Tyr Ser Ala Asp Phe
50 55 60

Lys Gly Arg Phe Val Phe Ser Leu Asp Thr Ser Val Ser Thr Ala Tyr
65 70 75 80

Leu Gln Ile Asn Ala Leu Lys Ala Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Ser Gly Gly Tyr Asp Pro Met Asp Tyr Trp Gly Gln Gly Thr
100 105 110

Thr Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
115 120 125

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Val Leu Thr Gln
130 135 140

Ser Pro Asp Ser Leu Ala Val Ser Leu Gly Glu Arg Ala Thr Ile Asn
145 150 155 160

Cys Arg Ala Ser Glu Ser Val Asp Asn Tyr Gly Asn Thr Phe Met His
165 170 175

```
Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro Lys Leu Leu Ile Tyr Arg
            180                 185                 190


Ala Ser Asn Leu Glu Ser Gly Val Pro Asp Arg Phe Ser Gly Ser Gly
        195                 200                 205


Ser Arg Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Ala Glu Asp
    210                 215                 220


Val Ala Val Tyr Tyr Cys Gln Gln Ser Asn Glu Asp Pro Pro Thr Phe
225                 230                 235                 240


Gly Gln Gly Thr Lys Leu Glu Ile Lys
                245


<210> 167
<211> 747
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polynucleotide"

<400> 167
cagatccagt tggtccagtc aggctccgaa ctgaaaaagc cgggtgcatc cgtcaaggtg       60

tcgtgcaaag cctccggtta cattttcacc aactacggca tgaactgggt ccgccaggcc      120

cctgggcagg gactcgaatg gatggggtgg atcaacactt acaccggaga gtcgacttac      180

tcggccgatt tcaagggacg gttcgtgttt tccctggaca cttcagtctc gaccgcatat      240

ctccaaatca acgcgcttaa ggcggaagat actgctgtct actactgcgc cagatcagga      300

ggttacgatc caatggacta ctggggacag ggcaccactg tgacggtgtc gtcgggagga      360

ggaggatcgg gcggaggcgg gtccggcggt ggagggagcg gaggaggcgg aagcgacatc      420

gtgctgaccc agtcgccaga tagcctggcg gtgtccttgg gtgagagggc taccatcaat      480

tgtcgcgcgt cagagtccgt ggacaattac gggaatacct tcatgcactg gtaccaacaa      540

aagcccggac aaccgccgaa gctgctgatc tacagagcaa gcaacctcga atcaggagtg      600

ccggaccgct ttagcgggtc aggaagccgg actgacttca ccctgactat ctcctcgctc      660
```

caggccgagg acgtggccgt gtattactgc cagcagagca acgaagatcc tccaacgttc 720

ggccaaggaa ccaaactgga gattaag 747

<210> 168
<211> 843
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 168
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

ccccagatcc agttggtcca gtcaggctcc gaactgaaaa agccgggtgc atccgtcaag 120

gtgtcgtgca aagcctccgg ttacattttc accaactacg gcatgaactg ggtccgccag 180

gcccctgggc agggactcga atggatgggg tggatcaaca cttacaccgg agagtcgact 240

tactcggccg atttcaaggg acggttcgtg ttttccctgg acacttcagt ctcgaccgca 300

tatctccaaa tcaacgcgct taaggcggaa gatactgctg tctactactg cgccagatca 360

ggaggttacg atccaatgga ctactgggga cagggcacca ctgtgacggt gtcgtcggga 420

ggaggaggat cgggcggagg cgggtccggc ggtggaggga gcggaggagg cggaagcgac 480

atcgtgctga cccagtcgcc agatagcctg gcggtgtcct tgggtgagag ggctaccatc 540

aattgtcgcg cgtcagagtc cgtggacaat tacgggaata ccttcatgca ctggtaccaa 600

caaaagcccg gacaaccgcc gaagctgctg atctacagag caagcaacct cgaatcagga 660

gtgccggacc gctttagcgg gtcaggaagc cggactgact tcaccctgac tatctcctcg 720

ctccaggccg aggacgtggc cgtgtattac tgccagcaga gcaacgaaga tcctccaacg 780

ttcggccaag gaaccaaact ggagattaag ggctcgcacc accatcacca tcatcatcac 840

cac 843

<210> 169
<211> 281
<212> PRT
<213> Artificial Sequence

<220>

<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 169
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Gln Ile Gln Leu Val Gln Ser Gly Ser Glu Leu
20 25 30

Lys Lys Pro Gly Ala Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr
35 40 45

Ile Phe Thr Asn Tyr Gly Met Asn Trp Val Arg Gln Ala Pro Gly Gln
50 55 60

Gly Leu Glu Trp Met Gly Trp Ile Asn Thr Tyr Thr Gly Glu Ser Thr
65 70 75 80

Tyr Ser Ala Asp Phe Lys Gly Arg Phe Val Phe Ser Leu Asp Thr Ser
85 90 95

Val Ser Thr Ala Tyr Leu Gln Ile Asn Ala Leu Lys Ala Glu Asp Thr
100 105 110

Ala Val Tyr Tyr Cys Ala Arg Ser Gly Gly Tyr Asp Pro Met Asp Tyr
115 120 125

Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser Gly Gly Gly Gly Ser
130 135 140

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp
145 150 155 160

Ile Val Leu Thr Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly Glu
165 170 175

Arg Ala Thr Ile Asn Cys Arg Ala Ser Glu Ser Val Asp Asn Tyr Gly
180 185 190

Asn Thr Phe Met His Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro Lys

195 200 205

Leu Leu Ile Tyr Arg Ala Ser Asn Leu Glu Ser Gly Val Pro Asp Arg
210 215 220

Phe Ser Gly Ser Gly Ser Arg Thr Asp Phe Thr Leu Thr Ile Ser Ser
225 230 235 240

Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln Gln Ser Asn Glu
245 250 255

Asp Pro Pro Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys Gly Ser
260 265 270

His His His His His His His His His
275 280

<210> 170
<211> 1479
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 170
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

ccccagatcc agttggtcca gtcaggctcc gaactgaaaa agccgggtgc atccgtcaag 120

gtgtcgtgca aagcctccgg ttacattttc accaactacg gcatgaactg ggtccgccag 180

gcccctgggc agggactcga atggatgggg tggatcaaca cttacaccgg agagtcgact 240

tactcggccg atttcaaggg acggttcgtg ttttccctgg acacttcagt ctcgaccgca 300

tatctccaaa tcaacgcgct taaggcggaa gatactgctg tctactactg cgccagatca 360

ggaggttacg atccaatgga ctactgggga cagggcacca ctgtgacggt gtcgtcggga 420

ggaggaggat cgggcggagg cgggtccggc ggtggaggga gcggaggagg cggaagcgac 480

atcgtgctga cccagtcgcc agatagcctg gcggtgtcct tgggtgagag ggctaccatc 540

aattgtcgcg cgtcagagtc cgtggacaat tacgggaata ccttcatgca ctggtaccaa 600

caaaagcccg gacaaccgcc gaagctgctg atctacagag caagcaacct cgaatcagga 660

gtgccggacc gctttagcgg gtcaggaagc cggactgact tcaccctgac tatctcctcg 720

ctccaggccg aggacgtggc cgtgtattac tgccagcaga gcaacgaaga tcctccaacg 780

ttcggccaag gaaccaaact ggagattaag accactaccc cagcaccgag gccacccacc 840

ccggctccta ccatcgcctc ccagcctctg tccctgcgtc cggaggcatg tagacccgca 900

gctggtgggg ccgtgcatac ccggggtctt gacttcgcct gcgatatcta catttgggcc 960

cctctggctg gtacttgcgg ggtcctgctg ctttcactcg tgatcactct ttactgtaag 1020

cgcggtcgga agaagctgct gtacatcttt aagcaaccct tcatgaggcc tgtgcagact 1080

actcaagagg aggacggctg ttcatgccgg ttcccagagg aggaggaagg cggctgcgaa 1140

ctgcgcgtga aattcagccg cagcgcagat gctccagcct acaagcaggg gcagaaccag 1200

ctctacaacg aactcaatct tggtcggaga gaggagtacg acgtgctgga caagcggaga 1260

ggacgggacc cagaaatggg cgggaagccg cgcagaaaga atccccaaga gggcctgtac 1320

aacgagctcc aaaaggataa gatggcagaa gcctatagcg agattggtat gaaaggggaa 1380

cgcagaagag gcaaaggcca cgacggactg taccagggac tcagcaccgc caccaaggac 1440

acctatgacg ctcttcacat gcaggccctg ccgcctcgg 1479

<210> 171
<211> 493
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 171
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Gln Ile Gln Leu Val Gln Ser Gly Ser Glu Leu
20 25 30

Lys Lys Pro Gly Ala Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr
35 40 45

```
Ile Phe Thr Asn Tyr Gly Met Asn Trp Val Arg Gln Ala Pro Gly Gln
    50                  55                  60

Gly Leu Glu Trp Met Gly Trp Ile Asn Thr Tyr Thr Gly Glu Ser Thr
65                  70                  75                  80

Tyr Ser Ala Asp Phe Lys Gly Arg Phe Val Phe Ser Leu Asp Thr Ser
                85                  90                  95

Val Ser Thr Ala Tyr Leu Gln Ile Asn Ala Leu Lys Ala Glu Asp Thr
            100                 105                 110

Ala Val Tyr Tyr Cys Ala Arg Ser Gly Gly Tyr Asp Pro Met Asp Tyr
        115                 120                 125

Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser Gly Gly Gly Gly Ser
    130                 135                 140

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp
145                 150                 155                 160

Ile Val Leu Thr Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly Glu
                165                 170                 175

Arg Ala Thr Ile Asn Cys Arg Ala Ser Glu Ser Val Asp Asn Tyr Gly
            180                 185                 190

Asn Thr Phe Met His Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro Lys
        195                 200                 205

Leu Leu Ile Tyr Arg Ala Ser Asn Leu Glu Ser Gly Val Pro Asp Arg
    210                 215                 220

Phe Ser Gly Ser Gly Ser Arg Thr Asp Phe Thr Leu Thr Ile Ser Ser
225                 230                 235                 240

Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln Gln Ser Asn Glu
                245                 250                 255

Asp Pro Pro Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys Thr Thr
            260                 265                 270
```

```
Thr Pro Ala Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln
        275                 280                 285

Pro Leu Ser Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala
    290                 295                 300

Val His Thr Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala
305                 310                 315                 320

Pro Leu Ala Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr
                325                 330                 335

Leu Tyr Cys Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln
            340                 345                 350

Pro Phe Met Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser
        355                 360                 365

Cys Arg Phe Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg Val Lys
    370                 375                 380

Phe Ser Arg Ser Ala Asp Ala Pro Ala Tyr Lys Gln Gly Gln Asn Gln
385                 390                 395                 400

Leu Tyr Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu
                405                 410                 415

Asp Lys Arg Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg
            420                 425                 430

Lys Asn Pro Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met
        435                 440                 445

Ala Glu Ala Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly
    450                 455                 460

Lys Gly His Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp
465                 470                 475                 480
```

Thr Tyr Asp Ala Leu His Met Gln Ala Leu Pro Pro Arg
485 490

<210> 172
<211> 249
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 172
Gln Ile Gln Leu Val Gln Ser Gly Ser Glu Leu Lys Lys Pro Gly Ala
1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Ile Phe Thr Asn Tyr
20 25 30

Gly Met Asn Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45

Gly Trp Ile Asn Thr Tyr Thr Gly Glu Ser Thr Tyr Ser Ala Asp Phe
50 55 60

Lys Gly Arg Phe Val Phe Ser Leu Asp Thr Ser Val Ser Thr Ala Tyr
65 70 75 80

Leu Gln Ile Asn Ala Leu Lys Ala Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Ser Gly Gly Tyr Asp Pro Met Asp Tyr Trp Gly Gln Gly Thr
100 105 110

Thr Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
115 120 125

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Ile Val Leu Thr Gln
130 135 140

Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly Glu Arg Ala Thr Leu Ser
145 150 155 160

```
Cys Arg Ala Ser Glu Ser Val Asp Asn Tyr Gly Asn Thr Phe Met His
                165                 170                 175

Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile Tyr Arg
            180                 185                 190

Ala Ser Asn Leu Glu Ser Gly Ile Pro Ala Arg Phe Ser Gly Ser Gly
        195                 200                 205

Ser Arg Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Glu Pro Glu Asp
    210                 215                 220

Val Ala Val Tyr Tyr Cys Gln Gln Ser Asn Glu Asp Pro Pro Thr Phe
225                 230                 235                 240

Gly Gln Gly Thr Lys Leu Glu Ile Lys
                245
```

<210> 173
<211> 747
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 173

```
cagatccaac tggtgcaatc aggatcggag ctgaagaagc ctggggcttc agtgaaagtc       60

agctgcaaag cctccggtta catcttcacc aactacggca tgaactgggt gcgccaggcc      120

cctggacagg gactcgaatg gatggggtgg atcaacacct ataccgggga atccacgtac      180

tcagcagatt tcaagggacg cttcgtcttt tcgctggata cctccgtgtc cactgcgtac      240

ctccaaatca atgccctcaa agccgaagat actgcggtct actactgcgc acggagcgga      300

ggctacgacc cgatggacta ctggggacag ggaaccacgg tgaccgtgtc cagcggagga      360

ggcggatcgg gaggcggtgg ttcaggcggt ggaggcagcg gcggaggtgg aagcgaaatc      420

gtcttgactc agagcccagc gactttgtcc ctgtcgcccg gagagcgggc aactctgtca      480

tgccgcgctt cggaatcggt ggacaactat ggaaacacct ttatgcactg gtaccaacag      540
```

aagccgggac aagccccgag acttctgatc taccgggcct cgaatctcga aagcggcatc 600

ccggctagat tctcggggtc gggatcaagg accgacttca ctcttactat ttcctcactg 660

gagccagaag atgtggcggt gtactactgt cagcagtcca atgaggaccc gccaactttc 720

gggcagggca ccaagctgga gattaag 747

<210> 174
<211> 843
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 174
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

ccccagatcc aactggtgca atcaggatcg gagctgaaga agcctggggc ttcagtgaaa 120

gtcagctgca aagcctccgg ttacatcttc accaactacg gcatgaactg ggtgcgccag 180

gcccctggac agggactcga atggatgggg tggatcaaca cctataccgg ggaatccacg 240

tactcagcag atttcaaggg acgcttcgtc ttttcgctgg atacctccgt gtccactgcg 300

tacctccaaa tcaatgccct caaagccgaa gatactgcgg tctactactg cgcacggagc 360

ggaggctacg acccgatgga ctactgggga cagggaacca cggtgaccgt gtccagcgga 420

ggaggcggat cgggaggcgg tggttcaggc ggtggaggca gcggcggagg tggaagcgaa 480

atcgtcttga ctcagagccc agcgactttg tccctgtcgc ccggagagcg ggcaactctg 540

tcatgccgcg cttcggaatc ggtggacaac tatggaaaca cctttatgca ctggtaccaa 600

cagaagccgg gacaagcccc gagacttctg atctaccggg cctcgaatct cgaaagcggc 660

atcccggcta gattctcggg gtcgggatca aggaccgact tcactcttac tatttcctca 720

ctggagccag aagatgtggc ggtgtactac tgtcagcagt ccaatgagga cccgccaact 780

ttcgggcagg gcaccaagct ggagattaag ggctcgcacc accatcacca tcatcatcac 840

cac 843

<210> 175
<211> 281
<212> PRT

<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 175
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Gln Ile Gln Leu Val Gln Ser Gly Ser Glu Leu
20 25 30

Lys Lys Pro Gly Ala Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr
35 40 45

Ile Phe Thr Asn Tyr Gly Met Asn Trp Val Arg Gln Ala Pro Gly Gln
50 55 60

Gly Leu Glu Trp Met Gly Trp Ile Asn Thr Tyr Thr Gly Glu Ser Thr
65 70 75 80

Tyr Ser Ala Asp Phe Lys Gly Arg Phe Val Phe Ser Leu Asp Thr Ser
85 90 95

Val Ser Thr Ala Tyr Leu Gln Ile Asn Ala Leu Lys Ala Glu Asp Thr
100 105 110

Ala Val Tyr Tyr Cys Ala Arg Ser Gly Gly Tyr Asp Pro Met Asp Tyr
115 120 125

Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser Gly Gly Gly Gly Ser
130 135 140

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu
145 150 155 160

Ile Val Leu Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly Glu
165 170 175

Arg Ala Thr Leu Ser Cys Arg Ala Ser Glu Ser Val Asp Asn Tyr Gly
180 185 190

```
Asn Thr Phe Met His Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg
        195                 200                 205

Leu Leu Ile Tyr Arg Ala Ser Asn Leu Glu Ser Gly Ile Pro Ala Arg
    210                 215                 220

Phe Ser Gly Ser Gly Ser Arg Thr Asp Phe Thr Leu Thr Ile Ser Ser
225                 230                 235                 240

Leu Glu Pro Glu Asp Val Ala Val Tyr Tyr Cys Gln Gln Ser Asn Glu
                245                 250                 255

Asp Pro Pro Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys Gly Ser
            260                 265                 270

His His His His His His His His His
        275                 280
```

<210> 176
<211> 1479
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 176
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

ccccagatcc aactggtgca atcaggatcg gagctgaaga agcctggggc ttcagtgaaa 120

gtcagctgca aagcctccgg ttacatcttc accaactacg gcatgaactg ggtgcgccag 180

gcccctggac agggactcga atggatgggg tggatcaaca cctataccgg ggaatccacg 240

tactcagcag atttcaaggg acgcttcgtc ttttcgctgg atacctccgt gtccactgcg 300

tacctccaaa tcaatgccct caaagccgaa gatactgcgg tctactactg cgcacggagc 360

ggaggctacg acccgatgga ctactgggga cagggaacca cggtgaccgt gtccagcgga 420

ggaggcggat cgggaggcgg tggttcaggc ggtggaggca gcggcggagg tggaagcgaa 480

atcgtcttga ctcagagccc agcgactttg tccctgtcgc ccggagagcg ggcaactctg 540

tcatgccgcg cttcggaatc ggtggacaac tatggaaaca cctttatgca ctggtaccaa 600

cagaagccgg gacaagcccc gagacttctg atctaccggg cctcgaatct cgaaagcggc 660

atcccggcta gattctcggg gtcgggatca aggaccgact tcactcttac tatttcctca 720

ctggagccag aagatgtggc ggtgtactac tgtcagcagt ccaatgagga cccgccaact 780

ttcgggcagg gcaccaagct ggagattaag accactaccc cagcaccgag gccacccacc 840

ccggctccta ccatcgcctc ccagcctctg tccctgcgtc cggaggcatg tagacccgca 900

gctggtgggg ccgtgcatac ccggggtctt gacttcgcct gcgatatcta catttgggcc 960

cctctggctg gtacttgcgg ggtcctgctg ctttcactcg tgatcactct ttactgtaag 1020

cgcggtcgga agaagctgct gtacatcttt aagcaaccct tcatgaggcc tgtgcagact 1080

actcaagagg aggacggctg ttcatgccgg ttcccagagg aggaggaagg cggctgcgaa 1140

ctgcgcgtga aattcagccg cagcgcagat gctccagcct acaagcaggg gcagaaccag 1200

ctctacaacg aactcaatct tggtcggaga gaggagtacg acgtgctgga caagcggaga 1260

ggacgggacc cagaaatggg cgggaagccg cgcagaaaga atccccaaga gggcctgtac 1320

aacgagctcc aaaaggataa gatggcagaa gcctatagcg agattggtat gaaaggggaa 1380

cgcagaagag gcaaaggcca cgacggactg taccagggac tcagcaccgc caccaaggac 1440

acctatgacg ctcttcacat gcaggccctg ccgcctcgg 1479

<210> 177
<211> 493
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 177
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Gln Ile Gln Leu Val Gln Ser Gly Ser Glu Leu
20 25 30

Lys Lys Pro Gly Ala Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr

```
        35                  40                  45

Ile Phe Thr Asn Tyr Gly Met Asn Trp Val Arg Gln Ala Pro Gly Gln
    50                  55                  60

Gly Leu Glu Trp Met Gly Trp Ile Asn Thr Tyr Thr Gly Glu Ser Thr
65                  70                  75                  80

Tyr Ser Ala Asp Phe Lys Gly Arg Phe Val Phe Ser Leu Asp Thr Ser
                85                  90                  95

Val Ser Thr Ala Tyr Leu Gln Ile Asn Ala Leu Lys Ala Glu Asp Thr
            100                 105                 110

Ala Val Tyr Tyr Cys Ala Arg Ser Gly Gly Tyr Asp Pro Met Asp Tyr
        115                 120                 125

Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser Gly Gly Gly Gly Ser
    130                 135                 140

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu
145                 150                 155                 160

Ile Val Leu Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly Glu
                165                 170                 175

Arg Ala Thr Leu Ser Cys Arg Ala Ser Glu Ser Val Asp Asn Tyr Gly
            180                 185                 190

Asn Thr Phe Met His Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg
        195                 200                 205

Leu Leu Ile Tyr Arg Ala Ser Asn Leu Glu Ser Gly Ile Pro Ala Arg
    210                 215                 220

Phe Ser Gly Ser Gly Ser Arg Thr Asp Phe Thr Leu Thr Ile Ser Ser
225                 230                 235                 240

Leu Glu Pro Glu Asp Val Ala Val Tyr Tyr Cys Gln Gln Ser Asn Glu
                245                 250                 255
```

```
Asp Pro Pro Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys Thr Thr
            260                 265                 270

Thr Pro Ala Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln
        275                 280                 285

Pro Leu Ser Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala
    290                 295                 300

Val His Thr Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala
305                 310                 315                 320

Pro Leu Ala Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr
                325                 330                 335

Leu Tyr Cys Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln
            340                 345                 350

Pro Phe Met Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser
        355                 360                 365

Cys Arg Phe Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg Val Lys
    370                 375                 380

Phe Ser Arg Ser Ala Asp Ala Pro Ala Tyr Lys Gln Gly Gln Asn Gln
385                 390                 395                 400

Leu Tyr Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu
                405                 410                 415

Asp Lys Arg Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg
            420                 425                 430

Lys Asn Pro Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met
        435                 440                 445

Ala Glu Ala Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly
    450                 455                 460

Lys Gly His Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp
```

```
465                 470                 475                 480


Thr Tyr Asp Ala Leu His Met Gln Ala Leu Pro Pro Arg
                485                 490


<210> 178
<211> 249
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 178
Gln Ile 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 Ile Phe Thr Asn Tyr
            20                  25                  30


Gly Met Asn Trp Val Arg Gln Ala Pro Gly Gln Arg Leu Glu Trp Met
        35                  40                  45


Gly Trp Ile Asn Thr Tyr Thr Gly Glu Ser Thr Tyr Ser Ala Asp Phe
    50                  55                  60


Lys Gly Arg Val Thr Ile Thr Leu Asp Thr Ser Ala Ser Thr Ala Tyr
65                  70                  75                  80


Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
                85                  90                  95


Ala Arg Ser Gly Gly Tyr Asp Pro Met Asp Tyr Trp Gly Gln Gly Thr
            100                 105                 110


Thr Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
        115                 120                 125


Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Val Leu Thr Gln
    130                 135                 140
```

```
Ser Pro Asp Ser Leu Ala Val Ser Leu Gly Glu Arg Ala Thr Ile Asn
145                 150                 155                 160


Cys Arg Ala Ser Glu Ser Val Asp Asn Tyr Gly Asn Thr Phe Met His
                165                 170                 175


Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro Lys Leu Leu Ile Tyr Arg
            180                 185                 190


Ala Ser Asn Leu Glu Ser Gly Val Pro Asp Arg Phe Ser Gly Ser Gly
        195                 200                 205


Ser Arg Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Ala Glu Asp
    210                 215                 220


Val Ala Val Tyr Tyr Cys Gln Gln Ser Asn Glu Asp Pro Pro Thr Phe
225                 230                 235                 240


Gly Gln Gly Thr Lys Leu Glu Ile Lys
                245


<210> 179
<211> 747
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polynucleotide"

<400> 179
cagatccagc tggtgcagtc gggagctgaa gtgaaaaagc cgggagcatc ggtgaaggtg       60

tcatgcaaag ccagcggtta catcttcact aactacggta tgaactgggt gagacaagcg      120

cctggccaga gattggaatg gatgggatgg atcaatacct acaccgggga atcaacttac      180

agcgccgact tcaagggacg cgtgaccatc acgctggaca cctccgcgtc cactgcctac      240

atggagctct cgtcattgcg gagcgaggac accgccgtct actactgcgc acggtcagga      300

gggtacgatc cgatggacta ctggggacag ggcactaccg tcaccgtgag ctccggtgga      360

ggcggcagcg gcggtggcgg atcaggtgga ggaggatcag gaggaggagg gtccgatatc      420

gtgcttactc agtcacccga ttcgctggca gtctccctcg gagaacgcgc caccatcaat      480
```

tgtcgcgcgt ccgaatccgt cgacaactac ggcaacacct ttatgcactg gtaccaacag 540

aagcctggac aaccgccaaa actgctgatc taccgcgcta gcaacctcga atcgggcgtg 600

ccagataggt tctcgggctc ggggagccgg acggatttta ctctgactat ttcgtccctc 660

caagcagagg acgtcgccgt gtattactgc cagcaatcga atgaggaccc gccaactttc 720

ggacagggga ccaagctgga gattaag 747

<210> 180
<211> 843
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 180
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

ccccagatcc agctggtgca gtcgggagct gaagtgaaaa agccgggagc atcggtgaag 120

gtgtcatgca aagccagcgg ttacatcttc actaactacg gtatgaactg ggtgagacaa 180

gcgcctggcc agagattgga atggatggga tggatcaata cctacaccgg ggaatcaact 240

tacagcgccg acttcaaggg acgcgtgacc atcacgctgg acacctccgc gtccactgcc 300

tacatggagc tctcgtcatt gcggagcgag gacaccgccg tctactactg cgcacggtca 360

ggagggtacg atccgatgga ctactgggga cagggcacta ccgtcaccgt gagctccggt 420

ggaggcggca gcggcggtgg cggatcaggt ggaggaggat caggaggagg agggtccgat 480

atcgtgctta ctcagtcacc cgattcgctg gcagtctccc tcggagaacg cgccaccatc 540

aattgtcgcg cgtccgaatc cgtcgacaac tacggcaaca cctttatgca ctggtaccaa 600

cagaagcctg gacaaccgcc aaaactgctg atctaccgcg ctagcaacct cgaatcgggc 660

gtgccagata ggttctcggg ctcggggagc cggacggatt ttactctgac tatttcgtcc 720

ctccaagcag aggacgtcgc cgtgtattac tgccagcaat cgaatgagga cccgccaact 780

ttcggacagg ggaccaagct ggagattaag ggctcgcacc accatcacca tcatcatcac 840

cac 843

<210> 181
<211> 281
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 181
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Gln Ile Gln Leu Val Gln Ser Gly Ala Glu Val
20 25 30

Lys Lys Pro Gly Ala Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr
35 40 45

Ile Phe Thr Asn Tyr Gly Met Asn Trp Val Arg Gln Ala Pro Gly Gln
50 55 60

Arg Leu Glu Trp Met Gly Trp Ile Asn Thr Tyr Thr Gly Glu Ser Thr
65 70 75 80

Tyr Ser Ala Asp Phe Lys Gly Arg Val Thr Ile Thr Leu Asp Thr Ser
85 90 95

Ala Ser Thr Ala Tyr Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr
100 105 110

Ala Val Tyr Tyr Cys Ala Arg Ser Gly Gly Tyr Asp Pro Met Asp Tyr
115 120 125

Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser Gly Gly Gly Gly Ser
130 135 140

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp
145 150 155 160

Ile Val Leu Thr Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly Glu
165 170 175

```
Arg Ala Thr Ile Asn Cys Arg Ala Ser Glu Ser Val Asp Asn Tyr Gly
            180                 185                 190

Asn Thr Phe Met His Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro Lys
        195                 200                 205

Leu Leu Ile Tyr Arg Ala Ser Asn Leu Glu Ser Gly Val Pro Asp Arg
    210                 215                 220

Phe Ser Gly Ser Gly Ser Arg Thr Asp Phe Thr Leu Thr Ile Ser Ser
225                 230                 235                 240

Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln Gln Ser Asn Glu
                245                 250                 255

Asp Pro Pro Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys Gly Ser
            260                 265                 270

His His His His His His His His His
        275                 280
```

<210> 182
<211> 1479
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 182
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

ccccagatcc agctggtgca gtcgggagct gaagtgaaaa agccgggagc atcggtgaag 120

gtgtcatgca aagccagcgg ttacatcttc actaactacg gtatgaactg ggtgagacaa 180

gcgcctggcc agagattgga atggatggga tggatcaata cctacaccgg ggaatcaact 240

tacagcgccg acttcaaggg acgcgtgacc atcacgctgg acacctccgc gtccactgcc 300

tacatggagc tctcgtcatt gcggagcgag gacaccgccg tctactactg cgcacggtca 360

ggagggtacg atccgatgga ctactgggga cagggcacta ccgtcaccgt gagctccggt 420

ggaggcggca gcggcggtgg cggatcaggt ggaggaggat caggaggagg agggtccgat 480

atcgtgctta ctcagtcacc cgattcgctg gcagtctccc tcggagaacg cgccaccatc 540

aattgtcgcg cgtccgaatc cgtcgacaac tacggcaaca cctttatgca ctggtaccaa 600

cagaagcctg gacaaccgcc aaaactgctg atctaccgcg ctagcaacct cgaatcgggc 660

gtgccagata ggttctcggg ctcggggagc cggacggatt ttactctgac tatttcgtcc 720

ctccaagcag aggacgtcgc cgtgtattac tgccagcaat cgaatgagga cccgccaact 780

ttcggacagg ggaccaagct ggagattaag accactaccc cagcaccgag gccacccacc 840

ccggctccta ccatcgcctc ccagcctctg tccctgcgtc cggaggcatg tagacccgca 900

gctggtgggg ccgtgcatac ccggggtctt gacttcgcct gcgatatcta catttgggcc 960

cctctggctg gtacttgcgg ggtcctgctg ctttcactcg tgatcactct ttactgtaag 1020

cgcggtcgga agaagctgct gtacatcttt aagcaaccct tcatgaggcc tgtgcagact 1080

actcaagagg aggacggctg ttcatgccgg ttcccagagg aggaggaagg cggctgcgaa 1140

ctgcgcgtga aattcagccg cagcgcagat gctccagcct acaagcaggg gcagaaccag 1200

ctctacaacg aactcaatct tggtcggaga gaggagtacg acgtgctgga caagcggaga 1260

ggacgggacc cagaaatggg cgggaagccg cgcagaaaga atccccaaga gggcctgtac 1320

aacgagctcc aaaaggataa gatggcagaa gcctatagcg agattggtat gaaaggggaa 1380

cgcagaagag gcaaaggcca cgacggactg taccagggac tcagcaccgc caccaaggac 1440

acctatgacg ctcttcacat gcaggccctg ccgcctcgg 1479

<210> 183
<211> 493
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 183
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Gln Ile Gln Leu Val Gln Ser Gly Ala Glu Val
20 25 30

```
Lys Lys Pro Gly Ala Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr
        35                  40                  45

Ile Phe Thr Asn Tyr Gly Met Asn Trp Val Arg Gln Ala Pro Gly Gln
    50                  55                  60

Arg Leu Glu Trp Met Gly Trp Ile Asn Thr Tyr Thr Gly Glu Ser Thr
65                  70                  75                  80

Tyr Ser Ala Asp Phe Lys Gly Arg Val Thr Ile Thr Leu Asp Thr Ser
                85                  90                  95

Ala Ser Thr Ala Tyr Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr
            100                 105                 110

Ala Val Tyr Tyr Cys Ala Arg Ser Gly Gly Tyr Asp Pro Met Asp Tyr
        115                 120                 125

Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser Gly Gly Gly Gly Ser
    130                 135                 140

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp
145                 150                 155                 160

Ile Val Leu Thr Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly Glu
                165                 170                 175

Arg Ala Thr Ile Asn Cys Arg Ala Ser Glu Ser Val Asp Asn Tyr Gly
            180                 185                 190

Asn Thr Phe Met His Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro Lys
        195                 200                 205

Leu Leu Ile Tyr Arg Ala Ser Asn Leu Glu Ser Gly Val Pro Asp Arg
    210                 215                 220

Phe Ser Gly Ser Gly Ser Arg Thr Asp Phe Thr Leu Thr Ile Ser Ser
225                 230                 235                 240
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Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln Gln Ser Asn Glu
                245                 250                 255

Asp Pro Pro Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys Thr Thr
            260                 265                 270

Thr Pro Ala Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln
        275                 280                 285

Pro Leu Ser Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala
    290                 295                 300

Val His Thr Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala
305                 310                 315                 320

Pro Leu Ala Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr
                325                 330                 335

Leu Tyr Cys Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln
            340                 345                 350

Pro Phe Met Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser
        355                 360                 365

Cys Arg Phe Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg Val Lys
    370                 375                 380

Phe Ser Arg Ser Ala Asp Ala Pro Ala Tyr Lys Gln Gly Gln Asn Gln
385                 390                 395                 400

Leu Tyr Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu
                405                 410                 415

Asp Lys Arg Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg
            420                 425                 430

Lys Asn Pro Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met
        435                 440                 445

Ala Glu Ala Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly
    450                 455                 460
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Lys Gly His Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp
465 470 475 480

Thr Tyr Asp Ala Leu His Met Gln Ala Leu Pro Pro Arg
485 490

<210> 184
<211> 249
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 184
Gln Ile 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 Ile Phe Thr Asn Tyr
20 25 30

Gly Met Asn Trp Val Arg Gln Ala Pro Gly Gln Arg Leu Glu Trp Met
35 40 45

Gly Trp Ile Asn Thr Tyr Thr Gly Glu Ser Thr Tyr Ser Ala Asp Phe
50 55 60

Lys Gly Arg Val Thr Ile Thr Leu Asp Thr Ser Ala Ser Thr Ala Tyr
65 70 75 80

Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Ser Gly Gly Tyr Asp Pro Met Asp Tyr Trp Gly Gln Gly Thr
100 105 110

Thr Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
115 120 125

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Ile Val Leu Thr Gln

130 135 140

Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly Glu Arg Ala Thr Leu Ser
145 150 155 160

Cys Arg Ala Ser Glu Ser Val Asp Asn Tyr Gly Asn Thr Phe Met His
165 170 175

Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile Tyr Arg
180 185 190

Ala Ser Asn Leu Glu Ser Gly Ile Pro Ala Arg Phe Ser Gly Ser Gly
195 200 205

Ser Arg Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Glu Pro Glu Asp
210 215 220

Val Ala Val Tyr Tyr Cys Gln Gln Ser Asn Glu Asp Pro Pro Thr Phe
225 230 235 240

Gly Gln Gly Thr Lys Leu Glu Ile Lys
245

<210> 185
<211> 747
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 185
cagatccagc tggtgcaatc gggagctgaa gtgaagaagc ccggagcttc agtcaaagtc 60

agctgcaagg cgtcgggcta tatcttcacc aactacggga tgaactgggt gcggcaggcc 120

cctggacaaa gactggaatg gatgggatgg atcaacactt atactggcga gagcacgtac 180

tcagccgact ttaagggacg ggtgactatc accctcgata cctccgcctc cactgcgtac 240

atggaactct cgtccttgcg ctccgaggac actgccgtgt actactgcgc caggtcgggt 300

ggctacgatc cgatggatta ctggggtcaa ggaaccaccg tcactgtgtc gtccggcgga 360

ggcgggagcg gaggtggtgg ttcgggagga ggagggtcag gcggaggagg cagcgaaatc 420

gtgctgaccc aaagcccggc aactctgtca ctcagcccag gggagagggc aaccctgtca 480

tgtcgggcta gcgaatccgt ggacaattac ggaaacacgt ttatgcactg gtaccaacag 540

aaaccaggac aggcgcctag acttctcatc taccgcgcga gcaatttgga atccggcatc 600

ccagcccgct tctccgggtc ggggtcacgc accgatttca ctctgaccat ttcctccctg 660

gaacccgagg acgtggcagt ctactactgc cagcagtcga atgaggaccc gccgaccttc 720

ggacagggca ccaagctgga gattaag 747

<210> 186
<211> 843
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 186
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

ccccagatcc agctggtgca atcgggagct gaagtgaaga agcccggagc ttcagtcaaa 120

gtcagctgca aggcgtcggg ctatatcttc accaactacg ggatgaactg ggtgcggcag 180

gcccctggac aaagactgga atggatggga tggatcaaca cttatactgg cgagagcacg 240

tactcagccg actttaaggg acgggtgact atcaccctcg atacctccgc ctccactgcg 300

tacatggaac tctcgtcctt gcgctccgag gacactgccg tgtactactg cgccaggtcg 360

ggtggctacg atccgatgga ttactggggt caaggaacca ccgtcactgt gtcgtccggc 420

ggaggcggga gcggaggtgg tggttcggga ggaggagggt caggcggagg aggcagcgaa 480

atcgtgctga cccaaagccc ggcaactctg tcactcagcc caggggagag ggcaaccctg 540

tcatgtcggg ctagcgaatc cgtggacaat tacggaaaca cgtttatgca ctggtaccaa 600

cagaaaccag gacaggcgcc tagacttctc atctaccgcg cgagcaattt ggaatccggc 660

atcccagccc gcttctccgg gtcggggtca cgcaccgatt tcactctgac catttcctcc 720

ctggaacccg aggacgtggc agtctactac tgccagcagt cgaatgagga cccgccgacc 780

ttcggacagg gcaccaagct ggagattaag ggctcgcacc accatcacca tcatcatcac 840

<210> 187
<211> 281
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 187
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Gln Ile Gln Leu Val Gln Ser Gly Ala Glu Val
20 25 30

Lys Lys Pro Gly Ala Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr
35 40 45

Ile Phe Thr Asn Tyr Gly Met Asn Trp Val Arg Gln Ala Pro Gly Gln
50 55 60

Arg Leu Glu Trp Met Gly Trp Ile Asn Thr Tyr Thr Gly Glu Ser Thr
65 70 75 80

Tyr Ser Ala Asp Phe Lys Gly Arg Val Thr Ile Thr Leu Asp Thr Ser
85 90 95

Ala Ser Thr Ala Tyr Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr
100 105 110

Ala Val Tyr Tyr Cys Ala Arg Ser Gly Gly Tyr Asp Pro Met Asp Tyr
115 120 125

Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser Gly Gly Gly Gly Ser
130 135 140

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu
145 150 155 160

```
Ile Val Leu Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly Glu
                165                 170                 175

Arg Ala Thr Leu Ser Cys Arg Ala Ser Glu Ser Val Asp Asn Tyr Gly
            180                 185                 190

Asn Thr Phe Met His Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg
        195                 200                 205

Leu Leu Ile Tyr Arg Ala Ser Asn Leu Glu Ser Gly Ile Pro Ala Arg
    210                 215                 220

Phe Ser Gly Ser Gly Ser Arg Thr Asp Phe Thr Leu Thr Ile Ser Ser
225                 230                 235                 240

Leu Glu Pro Glu Asp Val Ala Val Tyr Tyr Cys Gln Gln Ser Asn Glu
                245                 250                 255

Asp Pro Pro Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys Gly Ser
            260                 265                 270

His His His His His His His His His
        275                 280
```

<210> 188
<211> 1479
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 188
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

ccccagatcc agctggtgca atcgggagct gaagtgaaga agcccggagc ttcagtcaaa 120

gtcagctgca aggcgtcggg ctatatcttc accaactacg ggatgaactg ggtgcggcag 180

gcccctggac aaagactgga atggatggga tggatcaaca cttatactgg cgagagcacg 240

tactcagccg actttaaggg acgggtgact atcaccctcg atacctccgc ctccactgcg 300

tacatggaac tctcgtcctt gcgctccgag gacactgccg tgtactactg cgccaggtcg 360

ggtggctacg atccgatgga ttactggggt caaggaacca ccgtcactgt gtcgtccggc 420

ggaggcggga gcggaggtgg tggttcggga ggaggagggt caggcggagg aggcagcgaa 480

atcgtgctga cccaaagccc ggcaactctg tcactcagcc caggggagag ggcaaccctg 540

tcatgtcggg ctagcgaatc cgtggacaat tacggaaaca cgtttatgca ctggtaccaa 600

cagaaaccag gacaggcgcc tagacttctc atctaccgcg cgagcaattt ggaatccggc 660

atcccagccc gcttctccgg gtcggggtca cgcaccgatt tcactctgac catttcctcc 720

ctggaacccg aggacgtggc agtctactac tgccagcagt cgaatgagga cccgccgacc 780

ttcggacagg gcaccaagct ggagattaag accactaccc cagcaccgag gccacccacc 840

ccggctccta ccatcgcctc ccagcctctg tccctgcgtc cggaggcatg tagacccgca 900

gctggtgggg ccgtgcatac ccggggtctt gacttcgcct gcgatatcta catttgggcc 960

cctctggctg gtacttgcgg ggtcctgctg ctttcactcg tgatcactct ttactgtaag 1020

cgcggtcgga agaagctgct gtacatcttt aagcaaccct tcatgaggcc tgtgcagact 1080

actcaagagg aggacggctg ttcatgccgg ttcccagagg aggaggaagg cggctgcgaa 1140

ctgcgcgtga aattcagccg cagcgcagat gctccagcct acaagcaggg gcagaaccag 1200

ctctacaacg aactcaatct tggtcggaga gaggagtacg acgtgctgga caagcggaga 1260

ggacgggacc cagaaatggg cgggaagccg cgcagaaaga atccccaaga gggcctgtac 1320

aacgagctcc aaaaggataa gatggcagaa gcctatagcg agattggtat gaaaggggaa 1380

cgcagaagag gcaaaggcca cgacggactg taccagggac tcagcaccgc caccaaggac 1440

acctatgacg ctcttcacat gcaggccctg ccgcctcgg 1479

<210> 189
<211> 493
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 189
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

```
His Ala Ala Arg Pro Gln Ile Gln Leu Val Gln Ser Gly Ala Glu Val
            20                  25                  30

Lys Lys Pro Gly Ala Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr
        35                  40                  45

Ile Phe Thr Asn Tyr Gly Met Asn Trp Val Arg Gln Ala Pro Gly Gln
    50                  55                  60

Arg Leu Glu Trp Met Gly Trp Ile Asn Thr Tyr Thr Gly Glu Ser Thr
65                  70                  75                  80

Tyr Ser Ala Asp Phe Lys Gly Arg Val Thr Ile Thr Leu Asp Thr Ser
                85                  90                  95

Ala Ser Thr Ala Tyr Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr
            100                 105                 110

Ala Val Tyr Tyr Cys Ala Arg Ser Gly Gly Tyr Asp Pro Met Asp Tyr
        115                 120                 125

Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser Gly Gly Gly Gly Ser
    130                 135                 140

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu
145                 150                 155                 160

Ile Val Leu Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly Glu
                165                 170                 175

Arg Ala Thr Leu Ser Cys Arg Ala Ser Glu Ser Val Asp Asn Tyr Gly
            180                 185                 190

Asn Thr Phe Met His Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg
        195                 200                 205

Leu Leu Ile Tyr Arg Ala Ser Asn Leu Glu Ser Gly Ile Pro Ala Arg
    210                 215                 220

Phe Ser Gly Ser Gly Ser Arg Thr Asp Phe Thr Leu Thr Ile Ser Ser
```

```
225                 230                 235                 240

Leu Glu Pro Glu Asp Val Ala Val Tyr Tyr Cys Gln Gln Ser Asn Glu
                245                 250                 255

Asp Pro Pro Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys Thr Thr
            260                 265                 270

Thr Pro Ala Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln
        275                 280                 285

Pro Leu Ser Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala
    290                 295                 300

Val His Thr Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala
305                 310                 315                 320

Pro Leu Ala Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr
                325                 330                 335

Leu Tyr Cys Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln
            340                 345                 350

Pro Phe Met Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser
        355                 360                 365

Cys Arg Phe Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg Val Lys
    370                 375                 380

Phe Ser Arg Ser Ala Asp Ala Pro Ala Tyr Lys Gln Gly Gln Asn Gln
385                 390                 395                 400

Leu Tyr Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu
                405                 410                 415

Asp Lys Arg Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg
            420                 425                 430

Lys Asn Pro Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met
        435                 440                 445
```

Ala Glu Ala Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly
450 455 460

Lys Gly His Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp
465 470 475 480

Thr Tyr Asp Ala Leu His Met Gln Ala Leu Pro Pro Arg
485 490

<210> 190
<211> 2003
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 190
ggcagcggag agggcagagg aagtcttcta acatgcggtg acgtggagga gaatcccggc 60

cctagagcca ccatggccct gcctgtgaca gccctgctgc tgcctctggc tctgctgctg 120

catgccgcta gacccggatc cgacatcgtg ctgacacaga gccctgcttc cctggccgtg 180

tccctgggac agagagccac aatcagctgc agggccagcg agagcgtgga caactacggc 240

aacaccttca tgcactggta tcagcagaag cccggccagc cccccaagct gctgatctac 300

agagccagca acctggaaag cggcatcccc gccagatttt ccggcagcgg cagcagaacc 360

gacttcaccc tgaccatcaa ccccgtggaa gccgacgacg tggccaccta ctactgccag 420

cagagcaacg aggacccccc cacatttgga gccggcacca agctggaact gaagggcgga 480

ggcggatctg gcggcggagg atcttctggg ggaggctctc agattcagct ggtgcagagc 540

ggcccagagc tgaagaaacc cggcgagaca gtgaagatct cctgcaaggc ctccggctac 600

atcttcacca attacggcat gaactgggtc aagcaggccc ctggcaagag cttcaagtgg 660

atgggctgga tcaacaccta caccggcgag agcacctaca gcgccgactt caagggcaga 720

ttcgccttca gcctggaaac cagcgccagc accgcctacc tgcacatcaa cgacctgaag 780

aacgaggaca ccgccaccta tttctgcgcc agaagcggcg gctacgaccc catggattat 840

tggggccagg gcaccagcgt gaccgtgtcc tctgctagct ccggaaccac gacgccagcg 900

ccgcgaccac caacaccggc gcccaccatc gcgtcgcagc ccctgtccct gcgcccagag 960

gcgtgccggc cagcggcggg gggcgcagtg cacacgaggg ggctggactt cgcctgtgat 1020

atctacatct gggcgccctt ggccgggact tgtggggtcc ttctcctgtc actggttatc 1080

acccttttact gcaaacgggg cagaaagaaa ctcctgtata tattcaaaca accatttatg 1140

agaccagtac aaactactca agaggaagat ggctgtagct gccgatttcc agaagaagaa 1200

gaaggaggat gtgaactgag agtgaagttc agcaggagcg cagacgcccc cgcgtacaag 1260

cagggccaga accagctcta taacgagctc aatctaggac gaagagagga gtacgatgtt 1320

ttggacaaga gacgtggccg ggaccctgag atgggggggaa agccgagaag gaagaaccct 1380

caggaaggcc tgtacaatga actgcagaaa gataagatgg cggaggccta cagtgagatt 1440

gggatgaaag gcgagcgccg gaggggcaag gggcacgatg gcctttacca gggtctcagt 1500

acagccacca aggacaccta cgacgccctt cacatgcagg ccctgccccc tcgctaagtc 1560

gacagctcgc tttcttgctg tccaatttct attaaaggtt cctttgttcc ctaagtccaa 1620

ctactaaact gggggatatt atgaagggcc ttgagcatct ggattctgcc taataaaaaa 1680

catttatttt cattgctgcg tcgagagctc gctttcttgc tgtccaattt ctattaaagg 1740

ttcctttgtt ccctaagtcc aactactaaa ctgggggata ttatgaaggg ccttgagcat 1800

ctggattctg cctaataaaa aacatttatt ttcattgctg cctcgacgaa ttcaaaaaaa 1860

aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1920

aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1980

aaaaaaaaaa aaaaaaaaaa aaa 2003

<210> 191
<211> 494
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 191
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

```
His Ala Ala Arg Pro Gly Ser Asp Ile Val Leu Thr Gln Ser Pro Ala
            20                  25                  30

Ser Leu Ala Val Ser Leu Gly Gln Arg Ala Thr Ile Ser Cys Arg Ala
        35                  40                  45

Ser Glu Ser Val Asp Asn Tyr Gly Asn Thr Phe Met His Trp Tyr Gln
    50                  55                  60

Gln Lys Pro Gly Gln Pro Pro Lys Leu Leu Ile Tyr Arg Ala Ser Asn
65                  70                  75                  80

Leu Glu Ser Gly Ile Pro Ala Arg Phe Ser Gly Ser Gly Ser Arg Thr
                85                  90                  95

Asp Phe Thr Leu Thr Ile Asn Pro Val Glu Ala Asp Asp Val Ala Thr
            100                 105                 110

Tyr Tyr Cys Gln Gln Ser Asn Glu Asp Pro Pro Thr Phe Gly Ala Gly
        115                 120                 125

Thr Lys Leu Glu Leu Lys Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
    130                 135                 140

Ser Gly Gly Gly Ser Gln Ile Gln Leu Val Gln Ser Gly Pro Glu Leu
145                 150                 155                 160

Lys Lys Pro Gly Glu Thr Val Lys Ile Ser Cys Lys Ala Ser Gly Tyr
                165                 170                 175

Ile Phe Thr Asn Tyr Gly Met Asn Trp Val Lys Gln Ala Pro Gly Lys
            180                 185                 190

Ser Phe Lys Trp Met Gly Trp Ile Asn Thr Tyr Thr Gly Glu Ser Thr
        195                 200                 205

Tyr Ser Ala Asp Phe Lys Gly Arg Phe Ala Phe Ser Leu Glu Thr Ser
    210                 215                 220

Ala Ser Thr Ala Tyr Leu His Ile Asn Asp Leu Lys Asn Glu Asp Thr
225                 230                 235                 240
```

```
Ala Thr Tyr Phe Cys Ala Arg Ser Gly Gly Tyr Asp Pro Met Asp Tyr
                245                 250                 255

Trp Gly Gln Gly Thr Ser Val Thr Val Ser Ser Ala Ser Ser Gly Thr
            260                 265                 270

Thr Thr Pro Ala Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser
        275                 280                 285

Gln Pro Leu Ser Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly
    290                 295                 300

Ala Val His Thr Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp
305                 310                 315                 320

Ala Pro Leu Ala Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile
                325                 330                 335

Thr Leu Tyr Cys Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys
            340                 345                 350

Gln Pro Phe Met Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys
        355                 360                 365

Ser Cys Arg Phe Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg Val
    370                 375                 380

Lys Phe Ser Arg Ser Ala Asp Ala Pro Ala Tyr Lys Gln Gly Gln Asn
385                 390                 395                 400

Gln Leu Tyr Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val
                405                 410                 415

Leu Asp Lys Arg Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg
            420                 425                 430

Arg Lys Asn Pro Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys
        435                 440                 445
```

```
Met Ala Glu Ala Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg
    450                 455                 460


Gly Lys Gly His Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys
465                 470                 475                 480


Asp Thr Tyr Asp Ala Leu His Met Gln Ala Leu Pro Pro Arg
                485                 490


<210> 192
<211> 2019
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polynucleotide"

<400> 192
atggccctgc ctgtgacagc cctgctgctg cctctggctc tgctgctgca cgccgctaga       60

cctggatccc aggtgcagct gcagcagcct ggcgctgaac tcgtgcggcc aggcgcttct      120

gtgaagctga gctgtaaagc cagcggctac accttcacca gctactggat gaactgggtc      180

aagcagcggc ccgaccaggg cctggagtgg atcggcagaa tcgaccccta cgacagcgag      240

acacactaca accagaagtt caaggacaag gccatcctga ccgtggacaa gagcagcagc      300

accgcctaca tgcagctgtc cagcctgacc agcgaggaca gcgccgtgta ctactgcgcc      360

aggggcaact gggacgacta ttggggccag ggcaccaccc tgacagtgtc tagcggaggc      420

ggaggatctg gcggcggagg aagttctggc ggaggctccg acgtgcagat cacccagagc      480

cctagctacc tggccgcctc tcctggcgag acaatcacca tcaactgccg ggccagcaag      540

agcatctcca aggacctggc ctggtatcag gaaaagcccg gcaagaccaa caagctgctg      600

atctacagcg gcagcaccct gcagagcggc atccccagca gattttccgg cagcggctcc      660

ggcaccgact tcaccctgac catcagctcc ctggaacccg aggactttgc catgtactat      720

tgccagcagc acaacaagta cccttacacc ttcggcggag gcaccaagct ggaaatcaag      780

gccagctccg gagagagcaa gtacggccct ccctgccccc cttgccctgc ccccgagttc      840

ctgggcggac ccagcgtgtt cctgttcccc cccaagccca aggacaccct gatgatcagc      900

cggacccccg aggtgacctg tgtggtggtg gacgtgtccc aggaggaccc cgaggtccag      960
```

ttcaactggt acgtggacgg cgtggaggtg cacaacgcca agaccaagcc ccgggaggag 1020

cagttcaata gcacctaccg ggtggtgtcc gtgctgaccg tgctgcacca ggactggctg 1080

aacggcaagg aatacaagtg taaggtgtcc aacaagggcc tgcccagcag catcgagaaa 1140

accatcagca aggccaaggg ccagcctcgg gagccccagg tgtacaccct gccccctagc 1200

caagaggaga tgaccaagaa ccaggtgtcc ctgacctgcc tggtgaaggg cttctacccc 1260

agcgacatcg ccgtggagtg ggagagcaac ggccagcccg agaacaacta caagaccacc 1320

ccccctgtgc tggacagcga cggcagcttc ttcctgtaca gccggctgac cgtggacaag 1380

agccggtggc aggagggcaa cgtctttagc tgctccgtga tgcacgaggc cctgcacaac 1440

cactacaccc agaagagcct gagcctgtcc ctgggcaaga tggatatcta catctgggcg 1500

cccttggccg ggacttgtgg ggtccttctc ctgtcactgg ttatcaccct ttactgcaaa 1560

cggggcagaa agaaactcct gtatatattc aaacaaccat ttatgagacc agtacaaact 1620

actcaagagg aagatggctg tagctgccga tttccagaag aagaagaagg aggatgtgaa 1680

ctgagagtga agttcagcag gagcgcagac gcccccgcgt acaagcaggg ccagaaccag 1740

ctctataacg agctcaatct aggacgaaga gaggagtacg atgttttgga caagagacgt 1800

ggccgggacc ctgagatggg gggaaagccg agaaggaaga accctcagga aggcctgtac 1860

aatgaactgc agaaagataa gatggcggag gcctacagtg agattgggat gaaaggcgag 1920

cgccggaggg gcaaggggca cgatggcctt taccagggtc tcagtacagc caccaaggac 1980

acctacgacg cccttcacat gcaggccctg cccccctcgc 2019

<210> 193
<211> 673
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 193
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Gly Ser Gln Val Gln Leu Gln Gln Pro Gly Ala

```
            20                  25                  30

Glu Leu Val Arg Pro Gly Ala Ser Val Lys Leu Ser Cys Lys Ala Ser
        35                  40                  45

Gly Tyr Thr Phe Thr Ser Tyr Trp Met Asn Trp Val Lys Gln Arg Pro
    50                  55                  60

Asp Gln Gly Leu Glu Trp Ile Gly Arg Ile Asp Pro Tyr Asp Ser Glu
65                  70                  75                  80

Thr His Tyr Asn Gln Lys Phe Lys Asp Lys Ala Ile Leu Thr Val Asp
                85                  90                  95

Lys Ser Ser Ser Thr Ala Tyr Met Gln Leu Ser Ser Leu Thr Ser Glu
            100                 105                 110

Asp Ser Ala Val Tyr Tyr Cys Ala Arg Gly Asn Trp Asp Asp Tyr Trp
        115                 120                 125

Gly Gln Gly Thr Thr Leu Thr Val Ser Ser Gly Gly Gly Gly Ser Gly
    130                 135                 140

Gly Gly Gly Ser Ser Gly Gly Gly Ser Asp Val Gln Ile Thr Gln Ser
145                 150                 155                 160

Pro Ser Tyr Leu Ala Ala Ser Pro Gly Glu Thr Ile Thr Ile Asn Cys
                165                 170                 175

Arg Ala Ser Lys Ser Ile Ser Lys Asp Leu Ala Trp Tyr Gln Glu Lys
            180                 185                 190

Pro Gly Lys Thr Asn Lys Leu Leu Ile Tyr Ser Gly Ser Thr Leu Gln
        195                 200                 205

Ser Gly Ile Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe
    210                 215                 220

Thr Leu Thr Ile Ser Ser Leu Glu Pro Glu Asp Phe Ala Met Tyr Tyr
225                 230                 235                 240
```

```
Cys Gln Gln His Asn Lys Tyr Pro Tyr Thr Phe Gly Gly Gly Thr Lys
                245                 250                 255

Leu Glu Ile Lys Ala Ser Ser Gly Glu Ser Lys Tyr Gly Pro Pro Cys
            260                 265                 270

Pro Pro Cys Pro Ala Pro Glu Phe Leu Gly Gly Pro Ser Val Phe Leu
        275                 280                 285

Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu
    290                 295                 300

Val Thr Cys Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln
305                 310                 315                 320

Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys
                325                 330                 335

Pro Arg Glu Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu
            340                 345                 350

Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys
        355                 360                 365

Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys
    370                 375                 380

Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser
385                 390                 395                 400

Gln Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys
                405                 410                 415

Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln
            420                 425                 430

Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly
        435                 440                 445

Ser Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln
```

```
    450                 455                 460

Glu Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn
465                 470                 475                 480

His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys Met Asp Ile
                485                 490                 495

Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly Val Leu Leu Leu Ser
            500                 505                 510

Leu Val Ile Thr Leu Tyr Cys Lys Arg Gly Arg Lys Lys Leu Leu Tyr
        515                 520                 525

Ile Phe Lys Gln Pro Phe Met Arg Pro Val Gln Thr Thr Gln Glu Glu
    530                 535                 540

Asp Gly Cys Ser Cys Arg Phe Pro Glu Glu Glu Glu Gly Gly Cys Glu
545                 550                 555                 560

Leu Arg Val Lys Phe Ser Arg Ser Ala Asp Ala Pro Ala Tyr Lys Gln
                565                 570                 575

Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu
            580                 585                 590

Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg Asp Pro Glu Met Gly Gly
        595                 600                 605

Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu Tyr Asn Glu Leu Gln
    610                 615                 620

Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile Gly Met Lys Gly Glu
625                 630                 635                 640

Arg Arg Arg Gly Lys Gly His Asp Gly Leu Tyr Gln Gly Leu Ser Thr
                645                 650                 655

Ala Thr Lys Asp Thr Tyr Asp Ala Leu His Met Gln Ala Leu Pro Pro
            660                 665                 670
```

Arg

<210> 194
<211> 1461
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 194
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

ccccaagtgc aactcgtcca aagcggagcg gaagtcaaga aacccggagc gagcgtgaaa 120

gtgtcctgca aagcctccgg ctacaccttt acgggctact acatgcactg ggtgcgccag 180

gcaccaggac agggtcttga atggatggga tggatcaacc ctaattcggg cggaactaac 240

tacgcacaga agttccaggg gagagtgact ctgactcggg atacctccat ctcaactgtc 300

tacatggaac tctcccgctt gcggtcagat gatacggcag tgtactactg cgcccgcgac 360

atgaatatcc tggctaccgt gccgttcgac atctggggac aggggactat ggttactgtc 420

tcatcgggcg gtggaggttc aggaggaggc ggctcgggag gcggaggttc ggacattcag 480

atgacccagt ccccatcctc tctgtcggcc agcgtcggag atagggtgac cattacctgt 540

cgggcctcgc aaagcatctc ctcgtacctc aactggtatc agcaaaagcc gggaaaggcg 600

cctaagctgc tgatctacgc cgcttcgagc ttgcaaagcg gggtgccatc cagattctcg 660

ggatcaggct caggaaccga cttcaccctg accgtgaaca gcctccagcc ggaggacttt 720

gccacttact actgccagca gggagactcc gtgccgctta ctttcggggg gggtacccgc 780

ctggagatca agaccactac cccagcaccg aggccaccca ccccggctcc taccatcgcc 840

tcccagcctc tgtccctgcg tccggaggca tgtagacccg cagctggtgg ggccgtgcat 900

acccggggtc ttgacttcgc ctgcgatatc tacatttggg cccctctggc tggtacttgc 960

ggggtcctgc tgctttcact cgtgatcact ctttactgta agcgcggtcg gaagaagctg 1020

ctgtacatct ttaagcaacc cttcatgagg cctgtgcaga ctactcaaga ggaggacggc 1080

tgttcatgcc ggttcccaga ggaggaggaa ggcggctgcg aactgcgcgt gaaattcagc 1140

cgcagcgcag atgctccagc ctacaagcag gggcagaacc agctctacaa cgaactcaat 1200

cttggtcgga gagaggagta cgacgtgctg gacaagcgga gaggacggga cccagaaatg 1260

ggcgggaagc cgcgcagaaa gaatccccaa gagggcctgt acaacgagct ccaaaaggat 1320

aagatggcag aagcctatag cgagattggt atgaaagggg aacgcagaag aggcaaaggc 1380

cacgacggac tgtaccaggg actcagcacc gccaccaagg acacctatga cgctcttcac 1440

atgcaggccc tgccgcctcg g 1461

<210> 195
<211> 487
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 195
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val
20 25 30

Lys Lys Pro Gly Ala Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr
35 40 45

Thr Phe Thr Gly Tyr Tyr Met His Trp Val Arg Gln Ala Pro Gly Gln
50 55 60

Gly Leu Glu Trp Met Gly Trp Ile Asn Pro Asn Ser Gly Gly Thr Asn
65 70 75 80

Tyr Ala Gln Lys Phe Gln Gly Arg Val Thr Leu Thr Arg Asp Thr Ser
85 90 95

Ile Ser Thr Val Tyr Met Glu Leu Ser Arg Leu Arg Ser Asp Asp Thr
100 105 110

Ala Val Tyr Tyr Cys Ala Arg Asp Met Asn Ile Leu Ala Thr Val Pro
115 120 125

```
Phe Asp Ile Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly
    130                 135                 140

Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Gln
145                 150                 155                 160

Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly Asp Arg Val
                165                 170                 175

Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Ser Ser Tyr Leu Asn Trp
            180                 185                 190

Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile Tyr Ala Ala
        195                 200                 205

Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser
    210                 215                 220

Gly Thr Asp Phe Thr Leu Thr Val Asn Ser Leu Gln Pro Glu Asp Phe
225                 230                 235                 240

Ala Thr Tyr Tyr Cys Gln Gln Gly Asp Ser Val Pro Leu Thr Phe Gly
                245                 250                 255

Gly Gly Thr Arg Leu Glu Ile Lys Thr Thr Thr Pro Ala Pro Arg Pro
            260                 265                 270

Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser Leu Arg Pro
        275                 280                 285

Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr Arg Gly Leu
    290                 295                 300

Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys
305                 310                 315                 320

Gly Val Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr Cys Lys Arg Gly
                325                 330                 335
```

```
Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met Arg Pro Val
            340                 345                 350

Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu Glu
        355                 360                 365

Glu Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg Ser Ala Asp
    370                 375                 380

Ala Pro Ala Tyr Lys Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn
385                 390                 395                 400

Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg
                405                 410                 415

Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly
            420                 425                 430

Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu
        435                 440                 445

Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His Asp Gly Leu
    450                 455                 460

Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu His
465                 470                 475                 480

Met Gln Ala Leu Pro Pro Arg
                485
```

<210> 196
<211> 264
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 196

```
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1               5                   10                  15
```

```
His Ala Ala Arg Pro Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val
            20                  25                  30

Lys Lys Pro Gly Ala Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr
        35                  40                  45

Thr Phe Thr Gly Tyr Tyr Met His Trp Val Arg Gln Ala Pro Gly Gln
    50                  55                  60

Gly Leu Glu Trp Met Gly Trp Ile Asn Pro Asn Ser Gly Gly Thr Asn
65                  70                  75                  80

Tyr Ala Gln Lys Phe Gln Gly Arg Val Thr Leu Thr Arg Asp Thr Ser
                85                  90                  95

Ile Ser Thr Val Tyr Met Glu Leu Ser Arg Leu Arg Ser Asp Asp Thr
            100                 105                 110

Ala Val Tyr Tyr Cys Ala Arg Asp Met Asn Ile Leu Ala Thr Val Pro
        115                 120                 125

Phe Asp Ile Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly
    130                 135                 140

Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Gln
145                 150                 155                 160

Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly Asp Arg Val
                165                 170                 175

Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Ser Ser Tyr Leu Asn Trp
            180                 185                 190

Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile Tyr Ala Ala
        195                 200                 205

Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser
    210                 215                 220

Gly Thr Asp Phe Thr Leu Thr Val Asn Ser Leu Gln Pro Glu Asp Phe
```

225 230 235 240

Ala Thr Tyr Tyr Cys Gln Gln Gly Asp Ser Val Pro Leu Thr Phe Gly
245 250 255

Gly Gly Thr Arg Leu Glu Ile Lys
260

<210> 197
<211> 121
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 197
Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Gly Tyr
20 25 30

Tyr Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45

Gly Trp Ile Asn Pro Asn Ser Gly Gly Thr Asn Tyr Ala Gln Lys Phe
50 55 60

Gln Gly Arg Val Thr Leu Thr Arg Asp Thr Ser Ile Ser Thr Val Tyr
65 70 75 80

Met Glu Leu Ser Arg Leu Arg Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Asp Met Asn Ile Leu Ala Thr Val Pro Phe Asp Ile Trp Gly
100 105 110

Gln Gly Thr Met Val Thr Val Ser Ser
115 120

<210> 198
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 198
Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
1 5 10 15

Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Ser Ser Tyr
20 25 30

Leu Asn Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
35 40 45

Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
50 55 60

Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Val Asn Ser Leu Gln Pro
65 70 75 80

Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Gly Asp Ser Val Pro Leu
85 90 95

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

<210> 199
<211> 1461
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 199
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

ccccaagtcc aactcgttca atccggcgca gaagtcaaga agccaggagc atcagtgaaa 120

gtgtcctgca aagcctcagg ctacatcttc acgggatact acatccactg ggtgcgccag 180

gctccgggcc agggccttga gtggatgggc tggatcaacc ctaactctgg gggaaccaac 240

tacgctcaga agttccaggg gagggtcact atgactcgcg atacctccat ctccactgcg 300

tacatggaac tctcgggact gagatccgac gatcctgccg tgtactactg cgcccgggac 360

atgaacatct tggcgaccgt gccgtttgac atttggggac agggcaccct cgtcactgtg 420

tcgagcggtg gaggaggctc ggggggtggc ggatcaggag ggggaggaag cgacatccag 480

ctgactcaga gcccatcgtc gttgtccgcg tcggtggggg atagagtgac cattacttgc 540

cgcgccagcc agagcatctc atcatatctg aattggtacc agcagaagcc cggaaaggcc 600

ccaaaactgc tgatctacgc tgcaagcagc ctccaatcgg gagtgccgtc acggttctcc 660

gggtccggtt cgggaactga ctttaccctg accgtgaatt cgctgcaacc ggaggatttc 720

gccacgtact actgtcagca aggagactcc gtgccgctga ccttcggtgg aggcaccaag 780

gtcgaaatca agaccactac cccagcaccg aggccaccca ccccggctcc taccatcgcc 840

tcccagcctc tgtccctgcg tccggaggca tgtagacccg cagctggtgg ggccgtgcat 900

acccggggtc ttgacttcgc ctgcgatatc tacatttggg cccctctggc tggtacttgc 960

ggggtcctgc tgctttcact cgtgatcact ctttactgta agcgcggtcg gaagaagctg 1020

ctgtacatct ttaagcaacc cttcatgagg cctgtgcaga ctactcaaga ggaggacggc 1080

tgttcatgcc ggttcccaga ggaggaggaa ggcggctgcg aactgcgcgt gaaattcagc 1140

cgcagcgcag atgctccagc ctacaagcag gggcagaacc agctctacaa cgaactcaat 1200

cttggtcgga gagaggagta cgacgtgctg gacaagcgga gaggacggga cccagaaatg 1260

ggcgggaagc cgcgcagaaa gaatccccaa gagggcctgt acaacgagct ccaaaaggat 1320

aagatggcag aagcctatag cgagattggt atgaaagggg aacgcagaag aggcaaaggc 1380

cacgacggac tgtaccaggg actcagcacc gccaccaagg acacctatga cgctcttcac 1440

atgcaggccc tgccgcctcg g 1461

<210> 200
<211> 487
<212> PRT
<213> Artificial Sequence

<220>
<221> source

<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 200

```
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1               5                  10                  15

His Ala Ala Arg Pro Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val
            20                  25                  30

Lys Lys Pro Gly Ala Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr
        35                  40                  45

Ile Phe Thr Gly Tyr Tyr Ile His Trp Val Arg Gln Ala Pro Gly Gln
    50                  55                  60

Gly Leu Glu Trp Met Gly Trp Ile Asn Pro Asn Ser Gly Gly Thr Asn
65                  70                  75                  80

Tyr Ala Gln Lys Phe Gln Gly Arg Val Thr Met Thr Arg Asp Thr Ser
                85                  90                  95

Ile Ser Thr Ala Tyr Met Glu Leu Ser Gly Leu Arg Ser Asp Asp Pro
            100                 105                 110

Ala Val Tyr Tyr Cys Ala Arg Asp Met Asn Ile Leu Ala Thr Val Pro
        115                 120                 125

Phe Asp Ile Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly
    130                 135                 140

Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Gln
145                 150                 155                 160

Leu Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly Asp Arg Val
                165                 170                 175

Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Ser Ser Tyr Leu Asn Trp
            180                 185                 190

Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile Tyr Ala Ala
        195                 200                 205
```

```
Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser
    210                 215                 220

Gly Thr Asp Phe Thr Leu Thr Val Asn Ser Leu Gln Pro Glu Asp Phe
225                 230                 235                 240

Ala Thr Tyr Tyr Cys Gln Gln Gly Asp Ser Val Pro Leu Thr Phe Gly
                245                 250                 255

Gly Gly Thr Lys Val Glu Ile Lys Thr Thr Thr Pro Ala Pro Arg Pro
            260                 265                 270

Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser Leu Arg Pro
        275                 280                 285

Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr Arg Gly Leu
    290                 295                 300

Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys
305                 310                 315                 320

Gly Val Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr Cys Lys Arg Gly
                325                 330                 335

Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met Arg Pro Val
            340                 345                 350

Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu Glu
        355                 360                 365

Glu Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg Ser Ala Asp
    370                 375                 380

Ala Pro Ala Tyr Lys Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn
385                 390                 395                 400

Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg
                405                 410                 415
```

Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly
420 425 430

Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu
435 440 445

Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His Asp Gly Leu
450 455 460

Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu His
465 470 475 480

Met Gln Ala Leu Pro Pro Arg
485

<210> 201
<211> 264
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 201
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val
20 25 30

Lys Lys Pro Gly Ala Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr
35 40 45

Ile Phe Thr Gly Tyr Tyr Ile His Trp Val Arg Gln Ala Pro Gly Gln
50 55 60

Gly Leu Glu Trp Met Gly Trp Ile Asn Pro Asn Ser Gly Gly Thr Asn
65 70 75 80

Tyr Ala Gln Lys Phe Gln Gly Arg Val Thr Met Thr Arg Asp Thr Ser
85 90 95

```
Ile Ser Thr Ala Tyr Met Glu Leu Ser Gly Leu Arg Ser Asp Asp Pro
            100                 105                 110

Ala Val Tyr Tyr Cys Ala Arg Asp Met Asn Ile Leu Ala Thr Val Pro
        115                 120                 125

Phe Asp Ile Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly
    130                 135                 140

Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Gln
145                 150                 155                 160

Leu Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly Asp Arg Val
                165                 170                 175

Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Ser Ser Tyr Leu Asn Trp
            180                 185                 190

Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile Tyr Ala Ala
        195                 200                 205

Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser
    210                 215                 220

Gly Thr Asp Phe Thr Leu Thr Val Asn Ser Leu Gln Pro Glu Asp Phe
225                 230                 235                 240

Ala Thr Tyr Tyr Cys Gln Gln Gly Asp Ser Val Pro Leu Thr Phe Gly
                245                 250                 255

Gly Gly Thr Lys Val Glu Ile Lys
            260
```

<210> 202
<211> 121
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 202
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 Ile Phe Thr Gly Tyr
            20   25   30

Tyr Ile His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
        35   40   45

Gly Trp Ile Asn Pro Asn Ser Gly Gly Thr Asn Tyr Ala Gln Lys Phe
    50   55   60

Gln Gly Arg Val Thr Met Thr Arg Asp Thr Ser Ile Ser Thr Ala Tyr
65   70   75   80

Met Glu Leu Ser Gly Leu Arg Ser Asp Asp Pro Ala Val Tyr Tyr Cys
                85   90   95

Ala Arg Asp Met Asn Ile Leu Ala Thr Val Pro Phe Asp Ile Trp Gly
            100   105   110

Gln Gly Thr Leu Val Thr Val Ser Ser
        115   120

<210> 203
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 203
Asp 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 Ser Ile Ser Ser Tyr
            20   25   30

Leu Asn Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile

```
        35                  40                  45

Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
    50                  55                  60

Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Val Asn Ser Leu Gln Pro
65                  70                  75                  80

Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Gly Asp Ser Val Pro Leu
                85                  90                  95

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

<210> 204
<211> 1467
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 204
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

ccccaagtcc aactccaaca gtcaggcgca gaagtgaaaa agagcggtgc atcggtgaaa 120

gtgtcatgca aagcctcggg ctacaccttc actgactact atatgcactg gctgcggcag 180

gcaccgggac agggacttga gtggatggga tggatcaacc cgaattcagg ggacactaac 240

tacgcgcaga agttccaggg gagagtgacc ctgacgaggg acacctcaat ttcgaccgtc 300

tacatggaat tgtcgcgcct gagatcggac gatactgctg tgtactactg tgcccgcgac 360

atgaacatcc tcgcgactgt gccttttgat atctggggac aggggactat ggtcaccgtt 420

tcctccgctt ccggtggcgg aggctcggga ggccgggcct ccggtggagg aggcagcgac 480

atccagatga ctcagagccc ttcctcgctg agcgcctcag tgggagatcg cgtgaccatc 540

acttgccggg ccagccagtc catttcgtcc tacctcaatt ggtaccagca gaagccggga 600

aaggcgccca agctcttgat ctacgctgcg agctccctgc aaagcggggt gccgagccga 660

ttctcgggtt ccggctcggg aaccgacttc actctgacca tctcatccct gcaaccagag 720

gactttgcca cctactactg ccaacaagga gattctgtcc cactgacgtt cggcggagga 780

accaaggtcg aaatcaagac cactacccca gcaccgaggc cacccacccc ggctcctacc 840

atcgcctccc agcctctgtc cctgcgtccg gaggcatgta gacccgcagc tggtggggcc 900

gtgcataccc ggggtcttga cttcgcctgc gatatctaca tttgggcccc tctggctggt 960

acttgcgggg tcctgctgct ttcactcgtg atcactcttt actgtaagcg cggtcggaag 1020

aagctgctgt acatctttaa gcaacccttc atgaggcctg tgcagactac tcaagaggag 1080

gacggctgtt catgccggtt cccagaggag gaggaaggcg gctgcgaact gcgcgtgaaa 1140

ttcagccgca gcgcagatgc tccagcctac aagcaggggc agaaccagct ctacaacgaa 1200

ctcaatcttg gtcggagaga ggagtacgac gtgctggaca agcggagagg acgggaccca 1260

gaaatgggcg ggaagccgcg cagaaagaat ccccaagagg gcctgtacaa cgagctccaa 1320

aaggataaga tggcagaagc ctatagcgag attggtatga aaggggaacg cagaagaggc 1380

aaaggccacg acggactgta ccagggactc agcaccgcca ccaaggacac ctatgacgct 1440

cttcacatgc aggccctgcc gcctcgg 1467

<210> 205
<211> 336
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 205
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Gln Val Gln Leu Gln Gln Ser Gly Ala Glu Val
20 25 30

Lys Lys Ser Gly Ala Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr
35 40 45

Thr Phe Thr Asp Tyr Tyr Met His Trp Leu Arg Gln Ala Pro Gly Gln
50 55 60

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Gly Leu Glu Trp Met Gly Trp Ile Asn Pro Asn Ser Gly Asp Thr Asn
65                  70                  75                  80


Tyr Ala Gln Lys Phe Gln Gly Arg Val Thr Leu Thr Arg Asp Thr Ser
                85                  90                  95


Ile Ser Thr Val Tyr Met Glu Leu Ser Arg Leu Arg Ser Asp Asp Thr
            100                 105                 110


Ala Val Tyr Tyr Cys Ala Arg Asp Met Asn Ile Leu Ala Thr Val Pro
        115                 120                 125


Phe Asp Ile Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Ala Ser
    130                 135                 140


Gly Gly Gly Gly Ser Gly Gly Arg Ala Ser Gly Gly Gly Gly Ser Asp
145                 150                 155                 160


Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly Asp
                165                 170                 175


Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Ser Ser Tyr Leu
            180                 185                 190


Asn Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile Tyr
        195                 200                 205


Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly Ser
    210                 215                 220


Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro Glu
225                 230                 235                 240


Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Gly Asp Ser Val Pro Leu Thr
                245                 250                 255


Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Thr Thr Thr Pro Ala Pro
            260                 265                 270


Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser Leu
        275                 280                 285
```

Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr Arg
290 295 300

Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala Gly
305 310 315 320

Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr Cys Lys
325 330 335

<210> 206
<211> 266
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 206
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Gln Val Gln Leu Gln Gln Ser Gly Ala Glu Val
20 25 30

Lys Lys Ser Gly Ala Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr
35 40 45

Thr Phe Thr Asp Tyr Tyr Met His Trp Leu Arg Gln Ala Pro Gly Gln
50 55 60

Gly Leu Glu Trp Met Gly Trp Ile Asn Pro Asn Ser Gly Asp Thr Asn
65 70 75 80

Tyr Ala Gln Lys Phe Gln Gly Arg Val Thr Leu Thr Arg Asp Thr Ser
85 90 95

Ile Ser Thr Val Tyr Met Glu Leu Ser Arg Leu Arg Ser Asp Asp Thr
100 105 110

Ala Val Tyr Tyr Cys Ala Arg Asp Met Asn Ile Leu Ala Thr Val Pro

```
        115                 120                 125

Phe Asp Ile Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Ala Ser
    130                 135                 140

Gly Gly Gly Gly Ser Gly Gly Arg Ala Ser Gly Gly Gly Gly Ser Asp
145                 150                 155                 160

Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly Asp
                165                 170                 175

Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Ser Ser Tyr Leu
            180                 185                 190

Asn Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile Tyr
        195                 200                 205

Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly Ser
    210                 215                 220

Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro Glu
225                 230                 235                 240

Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Gly Asp Ser Val Pro Leu Thr
                245                 250                 255

Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
            260                 265


<210> 207
<211> 121
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 207
Gln Val Gln Leu Gln Gln Ser Gly Ala Glu Val Lys Lys Ser Gly Ala
1               5                   10                  15
```

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asp Tyr
            20   25   30

Tyr Met His Trp Leu Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
        35   40   45

Gly Trp Ile Asn Pro Asn Ser Gly Asp Thr Asn Tyr Ala Gln Lys Phe
    50   55   60

Gln Gly Arg Val Thr Leu Thr Arg Asp Thr Ser Ile Ser Thr Val Tyr
65   70   75   80

Met Glu Leu Ser Arg Leu Arg Ser Asp Asp Thr Ala Val Tyr Tyr Cys
                85   90   95

Ala Arg Asp Met Asn Ile Leu Ala Thr Val Pro Phe Asp Ile Trp Gly
            100   105   110

Gln Gly Thr Met Val Thr Val Ser Ser
        115   120

<210> 208
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 208
Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
1   5   10   15

Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Ser Ser Tyr
            20   25   30

Leu Asn Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
        35   40   45

Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
    50   55   60

Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
65 70 75 80

Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Gly Asp Ser Val Pro Leu
85 90 95

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

<210> 209
<211> 1461
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 209
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

ccccaagtcc aactcgtcca gtcaggagcg gaagtcaaga agcccggagc gtcagtcaaa 120

gtgtcatgca aagcctcggg ctacactttc actgggtact acatgcactg ggtgcgccag 180

gctccaggac agggactgga atggatggga tggatcaacc cgaactccgg tggcaccaat 240

tacgcccaga agttccaggg gagggtgacc atgactcgcg acacgtcgat cagcaccgca 300

tacatggagc tgtcaagact ccggtccgac gatactgccg tgtactactg cgcacgggac 360

atgaacattc tggccaccgt gccttttgac atctggggtc agggaactat ggttaccgtg 420

tcctctggtg gaggcggctc cggcgggggg ggaagcggag gcggtggaag cgacattcag 480

atgacccagt cgccttcatc cctttcggcg agcgtgggag atcgcgtcac tatcacttgt 540

cgggcctcgc agtccatctc cacctacctc aattggtacc agcagaagcc aggaaaagca 600

ccgaatctgc tgatctacgc cgcgttttcc ttgcaatcgg gagtgccaag cagattcagc 660

ggatcgggat caggcactga tttcaccctc accatcaact cgctgcaacc ggaggatttc 720

gctacgtact attgccaaca aggagacagc gtgccgctca ccttcggcgg agggactaag 780

ctggaaatca agaccactac cccagcaccg aggccaccca ccccggctcc taccatcgcc 840

tcccagcctc tgtccctgcg tccggaggca tgtagacccg cagctggtgg ggccgtgcat 900

acccggggtc ttgacttcgc ctgcgatatc tacatttggg cccctctggc tggtacttgc 960

ggggtcctgc tgctttcact cgtgatcact ctttactgta agcgcggtcg gaagaagctg 1020

ctgtacatct ttaagcaacc cttcatgagg cctgtgcaga ctactcaaga ggaggacggc 1080

tgttcatgcc ggttcccaga ggaggaggaa ggcggctgcg aactgcgcgt gaaattcagc 1140

cgcagcgcag atgctccagc ctacaagcag gggcagaacc agctctacaa cgaactcaat 1200

cttggtcgga gagaggagta cgacgtgctg gacaagcgga gaggacggga cccagaaatg 1260

ggcgggaagc cgcgcagaaa gaatccccaa gagggcctgt acaacgagct ccaaaaggat 1320

aagatggcag aagcctatag cgagattggt atgaaagggg aacgcagaag aggcaaaggc 1380

cacgacggac tgtaccaggg actcagcacc gccaccaagg acacctatga cgctcttcac 1440

atgcaggccc tgccgcctcg g 1461

<210> 210
<211> 487
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 210
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val
20 25 30

Lys Lys Pro Gly Ala Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr
35 40 45

Thr Phe Thr Gly Tyr Tyr Met His Trp Val Arg Gln Ala Pro Gly Gln
50 55 60

Gly Leu Glu Trp Met Gly Trp Ile Asn Pro Asn Ser Gly Gly Thr Asn
65 70 75 80

Tyr Ala Gln Lys Phe Gln Gly Arg Val Thr Met Thr Arg Asp Thr Ser
85 90 95

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Ile Ser Thr Ala Tyr Met Glu Leu Ser Arg Leu Arg Ser Asp Asp Thr
            100                 105                 110

Ala Val Tyr Tyr Cys Ala Arg Asp Met Asn Ile Leu Ala Thr Val Pro
        115                 120                 125

Phe Asp Ile Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly
    130                 135                 140

Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Gln
145                 150                 155                 160

Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly Asp Arg Val
                165                 170                 175

Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Ser Thr Tyr Leu Asn Trp
            180                 185                 190

Tyr Gln Gln Lys Pro Gly Lys Ala Pro Asn Leu Leu Ile Tyr Ala Ala
        195                 200                 205

Phe Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser
    210                 215                 220

Gly Thr Asp Phe Thr Leu Thr Ile Asn Ser Leu Gln Pro Glu Asp Phe
225                 230                 235                 240

Ala Thr Tyr Tyr Cys Gln Gln Gly Asp Ser Val Pro Leu Thr Phe Gly
                245                 250                 255

Gly Gly Thr Lys Leu Glu Ile Lys Thr Thr Thr Pro Ala Pro Arg Pro
            260                 265                 270

Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser Leu Arg Pro
        275                 280                 285

Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr Arg Gly Leu
    290                 295                 300
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Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys
305                 310                 315                 320

Gly Val Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr Cys Lys Arg Gly
                325                 330                 335

Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met Arg Pro Val
            340                 345                 350

Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu Glu
        355                 360                 365

Glu Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg Ser Ala Asp
    370                 375                 380

Ala Pro Ala Tyr Lys Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn
385                 390                 395                 400

Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg
                405                 410                 415

Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly
            420                 425                 430

Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu
        435                 440                 445

Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His Asp Gly Leu
    450                 455                 460

Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu His
465                 470                 475                 480

Met Gln Ala Leu Pro Pro Arg
                485
```

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

<220>

<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 211
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val
20 25 30

Lys Lys Pro Gly Ala Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr
35 40 45

Thr Phe Thr Gly Tyr Tyr Met His Trp Val Arg Gln Ala Pro Gly Gln
50 55 60

Gly Leu Glu Trp Met Gly Trp Ile Asn Pro Asn Ser Gly Gly Thr Asn
65 70 75 80

Tyr Ala Gln Lys Phe Gln Gly Arg Val Thr Met Thr Arg Asp Thr Ser
85 90 95

Ile Ser Thr Ala Tyr Met Glu Leu Ser Arg Leu Arg Ser Asp Asp Thr
100 105 110

Ala Val Tyr Tyr Cys Ala Arg Asp Met Asn Ile Leu Ala Thr Val Pro
115 120 125

Phe Asp Ile Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly
130 135 140

Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Gln
145 150 155 160

Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly Asp Arg Val
165 170 175

Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Ser Thr Tyr Leu Asn Trp
180 185 190

Tyr Gln Gln Lys Pro Gly Lys Ala Pro Asn Leu Leu Ile Tyr Ala Ala

195 200 205

Phe Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser
210 215 220

Gly Thr Asp Phe Thr Leu Thr Ile Asn Ser Leu Gln Pro Glu Asp Phe
225 230 235 240

Ala Thr Tyr Tyr Cys Gln Gln Gly Asp Ser Val Pro Leu Thr Phe Gly
245 250 255

Gly Gly Thr Lys Leu Glu Ile Lys
260

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

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 212
Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Gly Tyr
20 25 30

Tyr Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45

Gly Trp Ile Asn Pro Asn Ser Gly Gly Thr Asn Tyr Ala Gln Lys Phe
50 55 60

Gln Gly Arg Val Thr Met Thr Arg Asp Thr Ser Ile Ser Thr Ala Tyr
65 70 75 80

Met Glu Leu Ser Arg Leu Arg Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Asp Met Asn Ile Leu Ala Thr Val Pro Phe Asp Ile Trp Gly
100 105 110

Gln Gly Thr Met Val Thr Val Ser Ser
115 120

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

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 213
Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
1 5 10 15

Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Ser Thr Tyr
20 25 30

Leu Asn Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Asn Leu Leu Ile
35 40 45

Tyr Ala Ala Phe 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 Asn Ser Leu Gln Pro
65 70 75 80

Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Gly Asp Ser Val Pro Leu
85 90 95

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

<210> 214
<211> 1458
<212> DNA
<213> Artificial Sequence

<220>
<221> source

<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 214
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

ccccaagtgc agctggtcca gtcgggagcc gaagtcaaga agcccggcgc tagcgtgaaa 120

gtgtcctgca aagcctccgg gtacacattc acctcctact ggatgaattg ggtcagacag 180

gcgcccggcc agggactcga gtggatggga aggattgatc cttacgactc cgaaacccat 240

tacaaccaga agttcaagga ccgcgtgacc atgactgtgg ataagtccac ttccaccgct 300

tacatggagc tgtccagcct gcgctccgag gataccgcag tgtactactg cgcccgggga 360

aactgggacg actattgggg acagggaact accgtgaccg tgtcaagcgg gggtggcggt 420

agcggaggag ggggctccgg cggcggcggc tcaggggggcg gaggaagcga cgtgcagctc 480

acccagtcgc cctcatttct gtcggcctca gtgggagaca gagtgaccat tacttgtcgg 540

gcctccaaga gcatctccaa ggacctggcc tggtatcagc agaagccagg aaaggcgcct 600

aagttgctca tctactcggg gtcgaccctg caatctggcg tgccgtcccg gttctccggt 660

tcgggaagcg gtaccgaatt cacccttact atctcctccc tgcaaccgga ggacttcgcc 720

acctactact gccaacagca caacaagtac ccgtacactt tcgggggtgg cacgaaggtc 780

gaaatcaaga ccactacccc agcaccgagg ccacccaccc cggctcctac catcgcctcc 840

cagcctctgt ccctgcgtcc ggaggcatgt agacccgcag ctggtggggc cgtgcatacc 900

cggggtcttg acttcgcctg cgatatctac atttgggccc ctctggctgg tacttgcggg 960

gtcctgctgc tttcactcgt gatcactctt tactgtaagc gcggtcggaa gaagctgctg 1020

tacatcttta agcaaccctt catgaggcct gtgcagacta ctcaagagga ggacggctgt 1080

tcatgccggt tcccagagga ggaggaaggc ggctgcgaac tgcgcgtgaa attcagccgc 1140

agcgcagatg ctccagccta caagcagggg cagaaccagc tctacaacga actcaatctt 1200

ggtcggagag aggagtacga cgtgctggac aagcggagag gacgggaccc agaaatgggc 1260

gggaagccgc gcagaaagaa tccccaagag ggcctgtaca acgagctcca aaaggataag 1320

atggcagaag cctatagcga gattggtatg aaaggggaac gcagaagagg caaaggccac 1380

gacggactgt accagggact cagcaccgcc accaaggaca cctatgacgc tcttcacatg 1440

caggccctgc cgcctcgg 1458

<210> 215
<211> 486
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 215
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val
20 25 30

Lys Lys Pro Gly Ala Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr
35 40 45

Thr Phe Thr Ser Tyr Trp Met Asn Trp Val Arg Gln Ala Pro Gly Gln
50 55 60

Gly Leu Glu Trp Met Gly Arg Ile Asp Pro Tyr Asp Ser Glu Thr His
65 70 75 80

Tyr Asn Gln Lys Phe Lys Asp Arg Val Thr Met Thr Val Asp Lys Ser
85 90 95

Thr Ser Thr Ala Tyr Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr
100 105 110

Ala Val Tyr Tyr Cys Ala Arg Gly Asn Trp Asp Asp Tyr Trp Gly Gln
115 120 125

Gly Thr Thr Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly
130 135 140

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Val Gln Leu
145 150 155 160

Thr Gln Ser Pro Ser Phe Leu Ser Ala Ser Val Gly Asp Arg Val Thr
165 170 175

```
Ile Thr Cys Arg Ala Ser Lys Ser Ile Ser Lys Asp Leu Ala Trp Tyr
            180                 185                 190

Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile Tyr Ser Gly Ser
        195                 200                 205

Thr Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly
    210                 215                 220

Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro Glu Asp Phe Ala
225                 230                 235                 240

Thr Tyr Tyr Cys Gln Gln His Asn Lys Tyr Pro Tyr Thr Phe Gly Gly
                245                 250                 255

Gly Thr Lys Val Glu Ile Lys Thr Thr Thr Pro Ala Pro Arg Pro Pro
            260                 265                 270

Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser Leu Arg Pro Glu
        275                 280                 285

Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr Arg Gly Leu Asp
    290                 295                 300

Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly
305                 310                 315                 320

Val Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr Cys Lys Arg Gly Arg
                325                 330                 335

Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met Arg Pro Val Gln
            340                 345                 350

Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu Glu Glu
        355                 360                 365

Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg Ser Ala Asp Ala
    370                 375                 380
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Pro Ala Tyr Lys Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn Leu
385                 390                 395                 400


Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg Asp
                405                 410                 415


Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu
            420                 425                 430


Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile
        435                 440                 445


Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His Asp Gly Leu Tyr
    450                 455                 460


Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu His Met
465                 470                 475                 480


Gln Ala Leu Pro Pro Arg
                485


<210> 216
<211> 263
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 216
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1               5                   10                  15


His Ala Ala Arg Pro Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val
            20                  25                  30


Lys Lys Pro Gly Ala Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr
        35                  40                  45


Thr Phe Thr Ser Tyr Trp Met Asn Trp Val Arg Gln Ala Pro Gly Gln
    50                  55                  60
```

```
Gly Leu Glu Trp Met Gly Arg Ile Asp Pro Tyr Asp Ser Glu Thr His
65                  70                  75                  80

Tyr Asn Gln Lys Phe Lys Asp Arg Val Thr Met Thr Val Asp Lys Ser
                85                  90                  95

Thr Ser Thr Ala Tyr Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr
            100                 105                 110

Ala Val Tyr Tyr Cys Ala Arg Gly Asn Trp Asp Asp Tyr Trp Gly Gln
        115                 120                 125

Gly Thr Thr Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly
    130                 135                 140

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Val Gln Leu
145                 150                 155                 160

Thr Gln Ser Pro Ser Phe Leu Ser Ala Ser Val Gly Asp Arg Val Thr
                165                 170                 175

Ile Thr Cys Arg Ala Ser Lys Ser Ile Ser Lys Asp Leu Ala Trp Tyr
            180                 185                 190

Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile Tyr Ser Gly Ser
        195                 200                 205

Thr Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly
    210                 215                 220

Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro Glu Asp Phe Ala
225                 230                 235                 240

Thr Tyr Tyr Cys Gln Gln His Asn Lys Tyr Pro Tyr Thr Phe Gly Gly
                245                 250                 255

Gly Thr Lys Val Glu Ile Lys
            260
```

<210> 217

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

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 217
Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Ser Tyr
20 25 30

Trp Met Asn Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45

Gly Arg Ile Asp Pro Tyr Asp Ser Glu Thr His Tyr Asn Gln Lys Phe
50 55 60

Lys Asp Arg Val Thr Met Thr Val Asp Lys Ser Thr Ser Thr Ala Tyr
65 70 75 80

Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Gly Asn Trp Asp Asp Tyr Trp Gly Gln Gly Thr Thr Val Thr
100 105 110

Val Ser Ser
115

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

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 218
Asp Val 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 Lys Ser Ile Ser Lys Asp
            20                  25                  30

Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
        35                  40                  45

Tyr Ser Gly 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 His Asn Lys Tyr Pro Tyr
                85                  90                  95

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

<210> 219
<211> 1458
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 219
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

ccccaagtgc agctggtcca gtcgggagcc gaagtcaaga agcccggcgc tagcgtgaaa 120

gtgtcctgca aagcctccgg gtacacattc acctcctact ggatgaattg ggtcagacag 180

gcgcccggcc agggactcga gtggatggga aggattgatc cttacgactc cgaaacccat 240

tacaaccaga agttcaagga ccgcgtgacc atgactgtgg ataagtccac ttccaccgct 300

tacatggagc tgtccagcct gcgctccgag gataccgcag tgtactactg cgcccgggga 360

aactgggacg actattgggg acagggaact accgtgaccg tgtcaagcgg gggtggcggt 420

agcggaggag ggggctccgg cggcggcggc tcagggggcg gaggaagcga agtggtgctg 480

acccagtcgc ccgcaaccct ctctctgtcg ccgggagaac gcgccactct ttcctgtcgg 540

gcgtccaaga gcatctcaaa ggacctcgcc tggtaccagc agaagcctgg tcaagccccg 600

cggctgctga tctactccgg ctccacgctg caatcaggaa tcccagccag attttccggt 660

tcggggtcgg ggactgactt caccttgacc attagctcgc tggaacctga ggacttcgcc 720

gtgtattact gccagcagca caacaagtac ccgtacacct tcggaggcgg tactaaggtc 780

gagatcaaga ccactacccc agcaccgagg ccacccaccc cggctcctac catcgcctcc 840

cagcctctgt ccctgcgtcc ggaggcatgt agacccgcag ctggtggggc cgtgcatacc 900

cggggtcttg acttcgcctg cgatatctac atttgggccc ctctggctgg tacttgcggg 960

gtcctgctgc tttcactcgt gatcactctt tactgtaagc gcggtcggaa gaagctgctg 1020

tacatcttta agcaaccctt catgaggcct gtgcagacta ctcaagagga ggacggctgt 1080

tcatgccggt tcccagagga ggaggaaggc ggctgcgaac tgcgcgtgaa attcagccgc 1140

agcgcagatg ctccagccta caagcagggg cagaaccagc tctacaacga actcaatctt 1200

ggtcggagag aggagtacga cgtgctggac aagcggagag gacgggaccc agaaatgggc 1260

gggaagccgc gcagaaagaa tccccaagag ggcctgtaca acgagctcca aaaggataag 1320

atggcagaag cctatagcga gattggtatg aaaggggaac gcagaagagg caaaggccac 1380

gacggactgt accagggact cagcaccgcc accaaggaca cctatgacgc tcttcacatg 1440

caggccctgc cgcctcgg 1458

<210> 220
<211> 486
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 220
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val
20 25 30

```
Lys Lys Pro Gly Ala Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr
        35                  40                  45

Thr Phe Thr Ser Tyr Trp Met Asn Trp Val Arg Gln Ala Pro Gly Gln
    50                  55                  60

Gly Leu Glu Trp Met Gly Arg Ile Asp Pro Tyr Asp Ser Glu Thr His
65                  70                  75                  80

Tyr Asn Gln Lys Phe Lys Asp Arg Val Thr Met Thr Val Asp Lys Ser
                85                  90                  95

Thr Ser Thr Ala Tyr Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr
            100                 105                 110

Ala Val Tyr Tyr Cys Ala Arg Gly Asn Trp Asp Asp Tyr Trp Gly Gln
        115                 120                 125

Gly Thr Thr Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly
    130                 135                 140

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Val Val Leu
145                 150                 155                 160

Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly Glu Arg Ala Thr
                165                 170                 175

Leu Ser Cys Arg Ala Ser Lys Ser Ile Ser Lys Asp Leu Ala Trp Tyr
            180                 185                 190

Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile Tyr Ser Gly Ser
        195                 200                 205

Thr Leu Gln Ser Gly Ile Pro Ala Arg Phe Ser Gly Ser Gly Ser Gly
    210                 215                 220

Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Glu Pro Glu Asp Phe Ala
225                 230                 235                 240

Val Tyr Tyr Cys Gln Gln His Asn Lys Tyr Pro Tyr Thr Phe Gly Gly
                245                 250                 255
```

```
Gly Thr Lys Val Glu Ile Lys Thr Thr Thr Pro Ala Pro Arg Pro Pro
            260                 265                 270

Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser Leu Arg Pro Glu
        275                 280                 285

Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr Arg Gly Leu Asp
    290                 295                 300

Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly
305                 310                 315                 320

Val Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr Cys Lys Arg Gly Arg
                325                 330                 335

Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met Arg Pro Val Gln
            340                 345                 350

Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu Glu Glu
        355                 360                 365

Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg Ser Ala Asp Ala
    370                 375                 380

Pro Ala Tyr Lys Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn Leu
385                 390                 395                 400

Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg Asp
                405                 410                 415

Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu
            420                 425                 430

Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile
        435                 440                 445

Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His Asp Gly Leu Tyr
    450                 455                 460
```

Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu His Met
465 470 475 480

Gln Ala Leu Pro Pro Arg
485

<210> 221
<211> 263
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 221
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val
20 25 30

Lys Lys Pro Gly Ala Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr
35 40 45

Thr Phe Thr Ser Tyr Trp Met Asn Trp Val Arg Gln Ala Pro Gly Gln
50 55 60

Gly Leu Glu Trp Met Gly Arg Ile Asp Pro Tyr Asp Ser Glu Thr His
65 70 75 80

Tyr Asn Gln Lys Phe Lys Asp Arg Val Thr Met Thr Val Asp Lys Ser
85 90 95

Thr Ser Thr Ala Tyr Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr
100 105 110

Ala Val Tyr Tyr Cys Ala Arg Gly Asn Trp Asp Asp Tyr Trp Gly Gln
115 120 125

Gly Thr Thr Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly
130 135 140

```
Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Val Val Leu
145                 150                 155                 160


Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly Glu Arg Ala Thr
                165                 170                 175


Leu Ser Cys Arg Ala Ser Lys Ser Ile Ser Lys Asp Leu Ala Trp Tyr
            180                 185                 190


Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile Tyr Ser Gly Ser
        195                 200                 205


Thr Leu Gln Ser Gly Ile Pro Ala Arg Phe Ser Gly Ser Gly Ser Gly
    210                 215                 220


Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Glu Pro Glu Asp Phe Ala
225                 230                 235                 240


Val Tyr Tyr Cys Gln Gln His Asn Lys Tyr Pro Tyr Thr Phe Gly Gly
                245                 250                 255


Gly Thr Lys Val Glu Ile Lys
            260


<210> 222
<211> 115
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 222
Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
1               5                   10                  15


Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Ser Tyr
            20                  25                  30


Trp Met Asn Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
        35                  40                  45
```

```
Gly Arg Ile Asp Pro Tyr Asp Ser Glu Thr His Tyr Asn Gln Lys Phe
    50                  55                  60


Lys Asp Arg Val Thr Met Thr Val Asp Lys Ser Thr Ser Thr Ala Tyr
65                  70                  75                  80


Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
                85                  90                  95


Ala Arg Gly Asn Trp Asp Asp Tyr Trp Gly Gln Gly Thr Thr Val Thr
            100                 105                 110


Val Ser Ser
        115


<210> 223
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 223
Glu Val Val Leu Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly
1               5                   10                  15


Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Lys Ser Ile Ser Lys Asp
            20                  25                  30


Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile
        35                  40                  45


Tyr Ser Gly Ser Thr Leu Gln Ser Gly Ile Pro Ala Arg Phe Ser Gly
    50                  55                  60


Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Glu Pro
65                  70                  75                  80


Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln His Asn Lys Tyr Pro Tyr
```

85 90 95

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

<210> 224
<211> 1458
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 224
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

ccccaagtgc agctggtcca gtcgggagcc gaagtcaaga agcccggcgc tagcgtgaaa 120

gtgtcctgca aagcctccgg gtacacattc acctcctact ggatgaattg ggtcagacag 180

gcgcccggcc agggactcga gtggatggga aggattgatc cttacgactc cgaaacccat 240

tacaaccaga agttcaagga ccgcgtgacc atgactgtgg ataagtccac ttccaccgct 300

tacatggagc tgtccagcct gcgctccgag gataccgcag tgtactactg cgcccgggga 360

aactgggacg actattgggg acagggaact accgtgaccg tgtcaagcgg gggtggcggt 420

agcggaggag ggggctccgg cggcggcggc tcaggggggcg gaggaagcga cgtcgtgatg 480

acccagtcac cggcattcct gtccgtgact cccggagaaa aggtcacgat tacttgccgg 540

gcgtccaaga gcatctccaa ggacctcgcc tggtaccaac agaagccgga ccaggcccct 600

aagctgttga tctactcggg gtccaccctt caatcgggag tgccatcgcg gtttagcggt 660

tcgggttctg ggaccgactt cactttcacc atctcctcac tggaagccga ggatgccgcc 720

acttactact gtcagcagca caacaagtat ccgtacacct tcggaggcgg taccaaagtg 780

gagatcaaga ccactacccc agcaccgagg ccacccaccc cggctcctac catcgcctcc 840

cagcctctgt ccctgcgtcc ggaggcatgt agacccgcag ctggtggggc cgtgcatacc 900

cggggtcttg acttcgcctg cgatatctac atttgggccc ctctggctgg tacttgcggg 960

gtcctgctgc tttcactcgt gatcactctt tactgtaagc gcggtcggaa gaagctgctg 1020

tacatcttta agcaaccctt catgaggcct gtgcagacta ctcaagagga ggacggctgt 1080

tcatgccggt tcccagagga ggaggaaggc ggctgcgaac tgcgcgtgaa attcagccgc 1140

agcgcagatg ctccagccta caagcagggg cagaaccagc tctacaacga actcaatctt 1200

ggtcggagag aggagtacga cgtgctggac aagcggagag gacgggaccc agaaatgggc 1260

gggaagccgc gcagaaagaa tccccaagag ggcctgtaca acgagctcca aaaggataag 1320

atggcagaag cctatagcga gattggtatg aaaggggaac gcagaagagg caaaggccac 1380

gacggactgt accagggact cagcaccgcc accaaggaca cctatgacgc tcttcacatg 1440

caggccctgc cgcctcgg 1458

<210> 225
<211> 486
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 225
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val
20 25 30

Lys Lys Pro Gly Ala Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr
35 40 45

Thr Phe Thr Ser Tyr Trp Met Asn Trp Val Arg Gln Ala Pro Gly Gln
50 55 60

Gly Leu Glu Trp Met Gly Arg Ile Asp Pro Tyr Asp Ser Glu Thr His
65 70 75 80

Tyr Asn Gln Lys Phe Lys Asp Arg Val Thr Met Thr Val Asp Lys Ser
85 90 95

Thr Ser Thr Ala Tyr Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr
100 105 110

```
Ala Val Tyr Tyr Cys Ala Arg Gly Asn Trp Asp Asp Tyr Trp Gly Gln
        115                 120                 125

Gly Thr Thr Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly
    130                 135                 140

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Val Val Met
145                 150                 155                 160

Thr Gln Ser Pro Ala Phe Leu Ser Val Thr Pro Gly Glu Lys Val Thr
                165                 170                 175

Ile Thr Cys Arg Ala Ser Lys Ser Ile Ser Lys Asp Leu Ala Trp Tyr
            180                 185                 190

Gln Gln Lys Pro Asp Gln Ala Pro Lys Leu Leu Ile Tyr Ser Gly Ser
        195                 200                 205

Thr Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly
    210                 215                 220

Thr Asp Phe Thr Phe Thr Ile Ser Ser Leu Glu Ala Glu Asp Ala Ala
225                 230                 235                 240

Thr Tyr Tyr Cys Gln Gln His Asn Lys Tyr Pro Tyr Thr Phe Gly Gly
                245                 250                 255

Gly Thr Lys Val Glu Ile Lys Thr Thr Thr Pro Ala Pro Arg Pro Pro
            260                 265                 270

Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser Leu Arg Pro Glu
        275                 280                 285

Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr Arg Gly Leu Asp
    290                 295                 300

Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly
305                 310                 315                 320

Val Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr Cys Lys Arg Gly Arg
                325                 330                 335
```

```
Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met Arg Pro Val Gln
            340                 345                 350

Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu Glu Glu
        355                 360                 365

Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg Ser Ala Asp Ala
    370                 375                 380

Pro Ala Tyr Lys Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn Leu
385                 390                 395                 400

Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg Asp
                405                 410                 415

Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu
            420                 425                 430

Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile
        435                 440                 445

Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His Asp Gly Leu Tyr
    450                 455                 460

Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu His Met
465                 470                 475                 480

Gln Ala Leu Pro Pro Arg
                485
```

<210> 226
<211> 263
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 226
```
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
```

```
1               5                   10                  15

His Ala Ala Arg Pro Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val
            20                  25                  30

Lys Lys Pro Gly Ala Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr
        35                  40                  45

Thr Phe Thr Ser Tyr Trp Met Asn Trp Val Arg Gln Ala Pro Gly Gln
    50                  55                  60

Gly Leu Glu Trp Met Gly Arg Ile Asp Pro Tyr Asp Ser Glu Thr His
65                  70                  75                  80

Tyr Asn Gln Lys Phe Lys Asp Arg Val Thr Met Thr Val Asp Lys Ser
                85                  90                  95

Thr Ser Thr Ala Tyr Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr
            100                 105                 110

Ala Val Tyr Tyr Cys Ala Arg Gly Asn Trp Asp Asp Tyr Trp Gly Gln
        115                 120                 125

Gly Thr Thr Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly
    130                 135                 140

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Val Val Met
145                 150                 155                 160

Thr Gln Ser Pro Ala Phe Leu Ser Val Thr Pro Gly Glu Lys Val Thr
                165                 170                 175

Ile Thr Cys Arg Ala Ser Lys Ser Ile Ser Lys Asp Leu Ala Trp Tyr
            180                 185                 190

Gln Gln Lys Pro Asp Gln Ala Pro Lys Leu Leu Ile Tyr Ser Gly Ser
        195                 200                 205

Thr Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly
    210                 215                 220
```

```
Thr Asp Phe Thr Phe Thr Ile Ser Ser Leu Glu Ala Glu Asp Ala Ala
225                 230                 235                 240


Thr Tyr Tyr Cys Gln Gln His Asn Lys Tyr Pro Tyr Thr Phe Gly Gly
                245                 250                 255


Gly Thr Lys Val Glu Ile Lys
            260


<210> 227
<211> 115
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 227
Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
1               5                   10                  15


Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Ser Tyr
            20                  25                  30


Trp Met Asn Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
        35                  40                  45


Gly Arg Ile Asp Pro Tyr Asp Ser Glu Thr His Tyr Asn Gln Lys Phe
    50                  55                  60


Lys Asp Arg Val Thr Met Thr Val Asp Lys Ser Thr Ser Thr Ala Tyr
65                  70                  75                  80


Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
                85                  90                  95


Ala Arg Gly Asn Trp Asp Asp Tyr Trp Gly Gln Gly Thr Thr Val Thr
            100                 105                 110


Val Ser Ser
        115
```

<210> 228
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 228
Asp Val Val Met Thr Gln Ser Pro Ala Phe Leu Ser Val Thr Pro Gly
1 5 10 15

Glu Lys Val Thr Ile Thr Cys Arg Ala Ser Lys Ser Ile Ser Lys Asp
20 25 30

Leu Ala Trp Tyr Gln Gln Lys Pro Asp Gln Ala Pro Lys Leu Leu Ile
35 40 45

Tyr Ser Gly Ser Thr Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
50 55 60

Ser Gly Ser Gly Thr Asp Phe Thr Phe Thr Ile Ser Ser Leu Glu Ala
65 70 75 80

Glu Asp Ala Ala Thr Tyr Tyr Cys Gln Gln His Asn Lys Tyr Pro Tyr
85 90 95

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

<210> 229
<211> 1458
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 229
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

ccccaagtgc agctggtcca gtcgggagcc gaagtcaaga agcccggcgc tagcgtgaaa 120

gtgtcctgca aagcctccgg gtacacattc acctcctact ggatgaattg ggtcagacag 180

gcgcccggcc agggactcga gtggatggga aggattgatc cttacgactc cgaaacccat 240

tacaaccaga agttcaagga ccgcgtgacc atgactgtgg ataagtccac ttccaccgct 300

tacatggagc tgtccagcct gcgctccgag gataccgcag tgtactactg cgcccgggga 360

aactgggacg actattgggg acagggaact accgtgaccg tgtcaagcgg gggtggcggt 420

agcggaggag ggggctccgg cggcggcggc tcagggggcg gaggaagcga cgtggtcatg 480

actcagtccc cggactcact cgcggtgtcg cttggagaga gagcgaccat caactgtcgg 540

gcctcaaaga gcatcagcaa ggacctggcc tggtaccagc agaagccggg acagccgcca 600

aagctgctga tctactccgg gtccaccttg caatctggtg tccctgaccg gttctccggt 660

tccgggtcgg gtaccgactt cacgctcact atttcgtcgc tgcaagccga agatgtggcc 720

gtgtactatt gccaacagca caacaagtac ccctacactt ttggcggagg caccaaggtg 780

gaaatcaaga ccactacccc agcaccgagg ccacccaccc cggctcctac catcgcctcc 840

cagcctctgt ccctgcgtcc ggaggcatgt agacccgcag ctggtggggc cgtgcatacc 900

cggggtcttg acttcgcctg cgatatctac atttgggccc ctctggctgg tacttgcggg 960

gtcctgctgc tttcactcgt gatcactctt tactgtaagc gcggtcggaa gaagctgctg 1020

tacatcttta agcaaccctt catgaggcct gtgcagacta ctcaagagga ggacggctgt 1080

tcatgccggt tcccagagga ggaggaaggc ggctgcgaac tgcgcgtgaa attcagccgc 1140

agcgcagatg ctccagccta caagcagggg cagaaccagc tctacaacga actcaatctt 1200

ggtcggagag aggagtacga cgtgctggac aagcggagag gacgggaccc agaaatgggc 1260

gggaagccgc gcagaaagaa tccccaagag ggcctgtaca acgagctcca aaaggataag 1320

atggcagaag cctatagcga gattggtatg aaaggggaac gcagaagagg caaaggccac 1380

gacggactgt accagggact cagcaccgcc accaaggaca cctatgacgc tcttcacatg 1440

caggccctgc cgcctcgg 1458

<210> 230
<211> 486
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 230
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val
20 25 30

Lys Lys Pro Gly Ala Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr
35 40 45

Thr Phe Thr Ser Tyr Trp Met Asn Trp Val Arg Gln Ala Pro Gly Gln
50 55 60

Gly Leu Glu Trp Met Gly Arg Ile Asp Pro Tyr Asp Ser Glu Thr His
65 70 75 80

Tyr Asn Gln Lys Phe Lys Asp Arg Val Thr Met Thr Val Asp Lys Ser
85 90 95

Thr Ser Thr Ala Tyr Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr
100 105 110

Ala Val Tyr Tyr Cys Ala Arg Gly Asn Trp Asp Asp Tyr Trp Gly Gln
115 120 125

Gly Thr Thr Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly
130 135 140

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Val Val Met
145 150 155 160

Thr Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly Glu Arg Ala Thr
165 170 175

Ile Asn Cys Arg Ala Ser Lys Ser Ile Ser Lys Asp Leu Ala Trp Tyr
180 185 190

```
Gln Gln Lys Pro Gly Gln Pro Pro Lys Leu Leu Ile Tyr Ser Gly Ser
        195                 200                 205

Thr Leu Gln Ser Gly Val Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly
    210                 215                 220

Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Ala Glu Asp Val Ala
225                 230                 235                 240

Val Tyr Tyr Cys Gln Gln His Asn Lys Tyr Pro Tyr Thr Phe Gly Gly
                245                 250                 255

Gly Thr Lys Val Glu Ile Lys Thr Thr Thr Pro Ala Pro Arg Pro Pro
            260                 265                 270

Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser Leu Arg Pro Glu
        275                 280                 285

Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr Arg Gly Leu Asp
    290                 295                 300

Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly
305                 310                 315                 320

Val Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr Cys Lys Arg Gly Arg
                325                 330                 335

Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met Arg Pro Val Gln
            340                 345                 350

Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu Glu Glu
        355                 360                 365

Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg Ser Ala Asp Ala
    370                 375                 380

Pro Ala Tyr Lys Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn Leu
385                 390                 395                 400

Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg Asp
                405                 410                 415
```

Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu
            420   425   430

Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile
        435   440   445

Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His Asp Gly Leu Tyr
    450   455   460

Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu His Met
465   470   475   480

Gln Ala Leu Pro Pro Arg
                485

<210> 231
<211> 263
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 231
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1   5   10   15

His Ala Ala Arg Pro Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val
            20   25   30

Lys Lys Pro Gly Ala Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr
        35   40   45

Thr Phe Thr Ser Tyr Trp Met Asn Trp Val Arg Gln Ala Pro Gly Gln
    50   55   60

Gly Leu Glu Trp Met Gly Arg Ile Asp Pro Tyr Asp Ser Glu Thr His
65   70   75   80

Tyr Asn Gln Lys Phe Lys Asp Arg Val Thr Met Thr Val Asp Lys Ser

```
                85                  90                  95

Thr Ser Thr Ala Tyr Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr
            100                 105                 110

Ala Val Tyr Tyr Cys Ala Arg Gly Asn Trp Asp Asp Tyr Trp Gly Gln
        115                 120                 125

Gly Thr Thr Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly
    130                 135                 140

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Val Val Met
145                 150                 155                 160

Thr Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly Glu Arg Ala Thr
                165                 170                 175

Ile Asn Cys Arg Ala Ser Lys Ser Ile Ser Lys Asp Leu Ala Trp Tyr
            180                 185                 190

Gln Gln Lys Pro Gly Gln Pro Pro Lys Leu Leu Ile Tyr Ser Gly Ser
        195                 200                 205

Thr Leu Gln Ser Gly Val Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly
    210                 215                 220

Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Ala Glu Asp Val Ala
225                 230                 235                 240

Val Tyr Tyr Cys Gln Gln His Asn Lys Tyr Pro Tyr Thr Phe Gly Gly
                245                 250                 255

Gly Thr Lys Val Glu Ile Lys
            260
```

<210> 232
<211> 115
<212> PRT
<213> Artificial Sequence

<220>
<221> source

<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 232
Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Ser Tyr
20 25 30

Trp Met Asn Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45

Gly Arg Ile Asp Pro Tyr Asp Ser Glu Thr His Tyr Asn Gln Lys Phe
50 55 60

Lys Asp Arg Val Thr Met Thr Val Asp Lys Ser Thr Ser Thr Ala Tyr
65 70 75 80

Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Gly Asn Trp Asp Asp Tyr Trp Gly Gln Gly Thr Thr Val Thr
100 105 110

Val Ser Ser
115

<210> 233
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 233
Asp Val 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 Arg Ala Ser Lys Ser Ile Ser Lys Asp
20 25 30

Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro Lys Leu Leu Ile
        35   40   45

Tyr Ser Gly Ser Thr Leu Gln Ser Gly Val Pro Asp Arg Phe Ser Gly
    50   55   60

Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Ala
65   70   75   80

Glu Asp Val Ala Val Tyr Tyr Cys Gln Gln His Asn Lys Tyr Pro Tyr
                85   90   95

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

<210> 234
<211> 1458
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polynucleotide"

<400> 234
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

cccgacgtgc agctcaccca gtcgccctca tttctgtcgg cctcagtggg agacagagtg 120

accattactt gtcgggcctc caagagcatc tccaaggacc tggcctggta tcagcagaag 180

ccaggaaagg cgcctaagtt gctcatctac tcggggtcga ccctgcaatc tggcgtgccg 240

tcccggttct ccggttcggg aagcggtacc gaattcaccc ttactatctc ctccctgcaa 300

ccggaggact tcgccaccta ctactgccaa cagcacaaca agtacccgta cactttcggg 360

ggtggcacga aggtcgaaat caaggggggt ggcggtagcg gaggaggggg ctccggcggc 420

ggcggctcag ggggcggagg aagccaagtg cagctggtcc agtcgggagc cgaagtcaag 480

aagcccggcg ctagcgtgaa agtgtcctgc aaagcctccg ggtacacatt cacctcctac 540

tggatgaatt gggtcagaca ggcgcccggc cagggactcg agtggatggg aaggattgat 600

ccttacgact ccgaaaccca ttacaaccag aagttcaagg accgcgtgac catgactgtg 660

gataagtcca cttccaccgc ttacatggag ctgtccagcc tgcgctccga ggataccgca 720

gtgtactact gcgcccgggg aaactgggac gactattggg gacagggaac taccgtgacc 780

gtgtcaagca ccactacccc agcaccgagg ccacccaccc cggctcctac catcgcctcc 840

cagcctctgt ccctgcgtcc ggaggcatgt agacccgcag ctggtggggc cgtgcatacc 900

cggggtcttg acttcgcctg cgatatctac atttgggccc ctctggctgg tacttgcggg 960

gtcctgctgc tttcactcgt gatcactctt tactgtaagc gcggtcggaa gaagctgctg 1020

tacatcttta agcaaccctt catgaggcct gtgcagacta ctcaagagga ggacggctgt 1080

tcatgccggt tcccagagga ggaggaaggc ggctgcgaac tgcgcgtgaa attcagccgc 1140

agcgcagatg ctccagccta caagcagggg cagaaccagc tctacaacga actcaatctt 1200

ggtcggagag aggagtacga cgtgctggac aagcggagag gacgggaccc agaaatgggc 1260

gggaagccgc gcagaaagaa tccccaagag ggcctgtaca acgagctcca aaaggataag 1320

atggcagaag cctatagcga gattggtatg aaaggggaac gcagaagagg caaaggccac 1380

gacggactgt accagggact cagcaccgcc accaaggaca cctatgacgc tcttcacatg 1440

caggccctgc cgcctcgg 1458

<210> 235
<211> 486
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 235
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Asp Val Gln Leu Thr Gln Ser Pro Ser Phe Leu
20 25 30

Ser Ala Ser Val Gly Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Lys
35 40 45

Ser Ile Ser Lys Asp Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala
50 55 60

```
Pro Lys Leu Leu Ile Tyr Ser Gly Ser Thr Leu Gln Ser Gly Val Pro
65                  70                  75                  80

Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile
                85                  90                  95

Ser Ser Leu Gln Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln His
            100                 105                 110

Asn Lys Tyr Pro Tyr Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
        115                 120                 125

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly
    130                 135                 140

Gly Gly Gly Ser Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys
145                 150                 155                 160

Lys Pro Gly Ala Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr
                165                 170                 175

Phe Thr Ser Tyr Trp Met Asn Trp Val Arg Gln Ala Pro Gly Gln Gly
            180                 185                 190

Leu Glu Trp Met Gly Arg Ile Asp Pro Tyr Asp Ser Glu Thr His Tyr
        195                 200                 205

Asn Gln Lys Phe Lys Asp Arg Val Thr Met Thr Val Asp Lys Ser Thr
    210                 215                 220

Ser Thr Ala Tyr Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala
225                 230                 235                 240

Val Tyr Tyr Cys Ala Arg Gly Asn Trp Asp Asp Tyr Trp Gly Gln Gly
                245                 250                 255

Thr Thr Val Thr Val Ser Ser Thr Thr Thr Pro Ala Pro Arg Pro Pro
            260                 265                 270
```

```
Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser Leu Arg Pro Glu
        275                 280                 285

Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr Arg Gly Leu Asp
    290                 295                 300

Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly
305                 310                 315                 320

Val Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr Cys Lys Arg Gly Arg
                325                 330                 335

Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met Arg Pro Val Gln
            340                 345                 350

Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu Glu Glu
        355                 360                 365

Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg Ser Ala Asp Ala
    370                 375                 380

Pro Ala Tyr Lys Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn Leu
385                 390                 395                 400

Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg Asp
                405                 410                 415

Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu
            420                 425                 430

Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile
        435                 440                 445

Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His Asp Gly Leu Tyr
    450                 455                 460

Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu His Met
465                 470                 475                 480

Gln Ala Leu Pro Pro Arg
                485
```

<210> 236
<211> 263
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 236
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Asp Val Gln Leu Thr Gln Ser Pro Ser Phe Leu
20 25 30

Ser Ala Ser Val Gly Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Lys
35 40 45

Ser Ile Ser Lys Asp Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala
50 55 60

Pro Lys Leu Leu Ile Tyr Ser Gly Ser Thr Leu Gln Ser Gly Val Pro
65 70 75 80

Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile
85 90 95

Ser Ser Leu Gln Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln His
100 105 110

Asn Lys Tyr Pro Tyr Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
115 120 125

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly
130 135 140

Gly Gly Gly Ser Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys
145 150 155 160

Lys Pro Gly Ala Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr

```
                165                 170                 175

Phe Thr Ser Tyr Trp Met Asn Trp Val Arg Gln Ala Pro Gly Gln Gly
            180                 185                 190

Leu Glu Trp Met Gly Arg Ile Asp Pro Tyr Asp Ser Glu Thr His Tyr
        195                 200                 205

Asn Gln Lys Phe Lys Asp Arg Val Thr Met Thr Val Asp Lys Ser Thr
    210                 215                 220

Ser Thr Ala Tyr Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala
225                 230                 235                 240

Val Tyr Tyr Cys Ala Arg Gly Asn Trp Asp Asp Tyr Trp Gly Gln Gly
                245                 250                 255

Thr Thr Val Thr Val Ser Ser
            260


<210> 237
<211> 115
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 237
Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
1               5                   10                  15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Ser Tyr
            20                  25                  30

Trp Met Asn Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
        35                  40                  45

Gly Arg Ile Asp Pro Tyr Asp Ser Glu Thr His Tyr Asn Gln Lys Phe
    50                  55                  60
```

```
Lys Asp Arg Val Thr Met Thr Val Asp Lys Ser Thr Ser Thr Ala Tyr
65                  70                  75                  80


Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
                85                  90                  95


Ala Arg Gly Asn Trp Asp Asp Tyr Trp Gly Gln Gly Thr Thr Val Thr
            100                 105                 110


Val Ser Ser
        115


<210> 238
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 238
Asp Val 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 Lys Ser Ile Ser Lys Asp
            20                  25                  30


Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
        35                  40                  45


Tyr Ser Gly 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 His Asn Lys Tyr Pro Tyr
                85                  90                  95


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

<210> 239
<211> 1458
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 239
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

cccgaagtgg tgctgaccca gtcgcccgca accctctctc tgtcgccggg agaacgcgcc 120

actctttcct gtcgggcgtc caagagcatc tcaaaggacc tcgcctggta ccagcagaag 180

cctggtcaag ccccgcggct gctgatctac tccggctcca cgctgcaatc aggaatccca 240

gccagatttt ccggttcggg gtcggggact gacttcacct tgaccattag ctcgctggaa 300

cctgaggact tcgccgtgta ttactgccag cagcacaaca agtacccgta caccttcgga 360

ggcggtacta aggtcgagat caaggggggt ggcggtagcg gaggaggggg ctccggcggc 420

ggcggctcag ggggcggagg aagccaagtg cagctggtcc agtcgggagc cgaagtcaag 480

aagcccggcg ctagcgtgaa agtgtcctgc aaagcctccg ggtacacatt cacctcctac 540

tggatgaatt gggtcagaca ggcgcccggc cagggactcg agtggatggg aaggattgat 600

ccttacgact ccgaaaccca ttacaaccag aagttcaagg accgcgtgac catgactgtg 660

gataagtcca cttccaccgc ttacatggag ctgtccagcc tgcgctccga ggataccgca 720

gtgtactact gcgcccgggg aaactgggac gactattggg gacagggaac taccgtgacc 780

gtgtcaagca ccactacccc agcaccgagg ccacccaccc cggctcctac catcgcctcc 840

cagcctctgt ccctgcgtcc ggaggcatgt agacccgcag ctggtggggc cgtgcatacc 900

cggggtcttg acttcgcctg cgatatctac atttgggccc ctctggctgg tacttgcggg 960

gtcctgctgc tttcactcgt gatcactctt tactgtaagc gcggtcggaa gaagctgctg 1020

tacatcttta agcaaccctt catgaggcct gtgcagacta ctcaagagga ggacggctgt 1080

tcatgccggt tcccagagga ggaggaaggc ggctgcgaac tgcgcgtgaa attcagccgc 1140

agcgcagatg ctccagccta caagcagggg cagaaccagc tctacaacga actcaatctt 1200

ggtcggagag aggagtacga cgtgctggac aagcggagag gacgggaccc agaaatgggc 1260

gggaagccgc gcagaaagaa tccccaagag ggcctgtaca acgagctcca aaaggataag 1320

atggcagaag cctatagcga gattggtatg aaaggggaac gcagaagagg caaaggccac 1380

gacggactgt accagggact cagcaccgcc accaaggaca cctatgacgc tcttcacatg 1440

caggccctgc cgcctcgg 1458

<210> 240
<211> 486
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 240
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Glu Val Val Leu Thr Gln Ser Pro Ala Thr Leu
20 25 30

Ser Leu Ser Pro Gly Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Lys
35 40 45

Ser Ile Ser Lys Asp Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala
50 55 60

Pro Arg Leu Leu Ile Tyr Ser Gly Ser Thr Leu Gln Ser Gly Ile Pro
65 70 75 80

Ala Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile
85 90 95

Ser Ser Leu Glu Pro Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln His
100 105 110

Asn Lys Tyr Pro Tyr Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
115 120 125

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly
130 135 140

```
Gly Gly Gly Ser Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys
145                 150                 155                 160

Lys Pro Gly Ala Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr
                165                 170                 175

Phe Thr Ser Tyr Trp Met Asn Trp Val Arg Gln Ala Pro Gly Gln Gly
            180                 185                 190

Leu Glu Trp Met Gly Arg Ile Asp Pro Tyr Asp Ser Glu Thr His Tyr
        195                 200                 205

Asn Gln Lys Phe Lys Asp Arg Val Thr Met Thr Val Asp Lys Ser Thr
    210                 215                 220

Ser Thr Ala Tyr Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala
225                 230                 235                 240

Val Tyr Tyr Cys Ala Arg Gly Asn Trp Asp Asp Tyr Trp Gly Gln Gly
                245                 250                 255

Thr Thr Val Thr Val Ser Ser Thr Thr Thr Pro Ala Pro Arg Pro Pro
            260                 265                 270

Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser Leu Arg Pro Glu
        275                 280                 285

Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr Arg Gly Leu Asp
    290                 295                 300

Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly
305                 310                 315                 320

Val Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr Cys Lys Arg Gly Arg
                325                 330                 335

Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met Arg Pro Val Gln
            340                 345                 350
```

```
Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu Glu Glu
        355                 360                 365

Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg Ser Ala Asp Ala
    370                 375                 380

Pro Ala Tyr Lys Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn Leu
385                 390                 395                 400

Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg Asp
                405                 410                 415

Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu
            420                 425                 430

Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile
        435                 440                 445

Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His Asp Gly Leu Tyr
    450                 455                 460

Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu His Met
465                 470                 475                 480

Gln Ala Leu Pro Pro Arg
                485
```

<210> 241
<211> 263
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 241

```
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1               5                   10                  15

His Ala Ala Arg Pro Glu Val Val Leu Thr Gln Ser Pro Ala Thr Leu
            20                  25                  30
```

```
Ser Leu Ser Pro Gly Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Lys
        35                  40                  45

Ser Ile Ser Lys Asp Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala
    50                  55                  60

Pro Arg Leu Leu Ile Tyr Ser Gly Ser Thr Leu Gln Ser Gly Ile Pro
65                  70                  75                  80

Ala Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile
                85                  90                  95

Ser Ser Leu Glu Pro Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln His
            100                 105                 110

Asn Lys Tyr Pro Tyr Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
        115                 120                 125

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly
    130                 135                 140

Gly Gly Gly Ser Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys
145                 150                 155                 160

Lys Pro Gly Ala Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr
                165                 170                 175

Phe Thr Ser Tyr Trp Met Asn Trp Val Arg Gln Ala Pro Gly Gln Gly
            180                 185                 190

Leu Glu Trp Met Gly Arg Ile Asp Pro Tyr Asp Ser Glu Thr His Tyr
        195                 200                 205

Asn Gln Lys Phe Lys Asp Arg Val Thr Met Thr Val Asp Lys Ser Thr
    210                 215                 220

Ser Thr Ala Tyr Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala
225                 230                 235                 240

Val Tyr Tyr Cys Ala Arg Gly Asn Trp Asp Asp Tyr Trp Gly Gln Gly
```

245 250 255

Thr Thr Val Thr Val Ser Ser
260

<210> 242
<211> 115
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 242
Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Ser Tyr
20 25 30

Trp Met Asn Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45

Gly Arg Ile Asp Pro Tyr Asp Ser Glu Thr His Tyr Asn Gln Lys Phe
50 55 60

Lys Asp Arg Val Thr Met Thr Val Asp Lys Ser Thr Ser Thr Ala Tyr
65 70 75 80

Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Gly Asn Trp Asp Asp Tyr Trp Gly Gln Gly Thr Thr Val Thr
100 105 110

Val Ser Ser
115

<210> 243
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 243
Glu Val Val Leu Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly
1 5 10 15

Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Lys Ser Ile Ser Lys Asp
20 25 30

Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile
35 40 45

Tyr Ser Gly Ser Thr Leu Gln Ser Gly Ile Pro Ala Arg Phe Ser Gly
50 55 60

Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Glu Pro
65 70 75 80

Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln His Asn Lys Tyr Pro Tyr
85 90 95

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

<210> 244
<211> 1458
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 244
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

cccgacgtcg tgatgaccca gtcaccggca ttcctgtccg tgactcccgg agaaaaggtc 120

acgattactt gccgggcgtc caagagcatc tccaaggacc tcgcctggta ccaacagaag 180

ccggaccagg cccctaagct gttgatctac tcggggtcca cccttcaatc gggagtgcca 240

tcgcggttta gcggttcggg ttctgggacc gacttcactt tcaccatctc ctcactggaa 300

gccgaggatg ccgccactta ctactgtcag cagcacaaca agtatccgta caccttcgga 360

ggcggtacca aagtggagat caaggggggt ggcggtagcg gaggaggggg ctccggcggc 420

ggcggctcag ggggcggagg aagccaagtg cagctggtcc agtcgggagc cgaagtcaag 480

aagcccggcg ctagcgtgaa agtgtcctgc aaagcctccg ggtacacatt cacctcctac 540

tggatgaatt gggtcagaca ggcgcccggc cagggactcg agtggatggg aaggattgat 600

ccttacgact ccgaaaccca ttacaaccag aagttcaagg accgcgtgac catgactgtg 660

gataagtcca cttccaccgc ttacatggag ctgtccagcc tgcgctccga ggataccgca 720

gtgtactact gcgcccgggg aaactgggac gactattggg gacagggaac taccgtgacc 780

gtgtcaagca ccactacccc agcaccgagg ccacccaccc cggctcctac catcgcctcc 840

cagcctctgt ccctgcgtcc ggaggcatgt agacccgcag ctggtggggc cgtgcatacc 900

cggggtcttg acttcgcctg cgatatctac atttgggccc ctctggctgg tacttgcggg 960

gtcctgctgc tttcactcgt gatcactctt tactgtaagc gcggtcggaa gaagctgctg 1020

tacatcttta agcaaccctt catgaggcct gtgcagacta ctcaagagga ggacggctgt 1080

tcatgccggt tcccagagga ggaggaaggc ggctgcgaac tgcgcgtgaa attcagccgc 1140

agcgcagatg ctccagccta caagcagggg cagaaccagc tctacaacga actcaatctt 1200

ggtcggagag aggagtacga cgtgctggac aagcggagag gacgggaccc agaaatgggc 1260

gggaagccgc gcagaaagaa tccccaagag ggcctgtaca acgagctcca aaaggataag 1320

atggcagaag cctatagcga gattggtatg aaaggggaac gcagaagagg caaaggccac 1380

gacggactgt accagggact cagcaccgcc accaaggaca cctatgacgc tcttcacatg 1440

caggccctgc cgcctcgg 1458

<210> 245
<211> 486
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 245

```
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1               5                  10                  15

His Ala Ala Arg Pro Asp Val Val Met Thr Gln Ser Pro Ala Phe Leu
            20                  25                  30

Ser Val Thr Pro Gly Glu Lys Val Thr Ile Thr Cys Arg Ala Ser Lys
        35                  40                  45

Ser Ile Ser Lys Asp Leu Ala Trp Tyr Gln Gln Lys Pro Asp Gln Ala
    50                  55                  60

Pro Lys Leu Leu Ile Tyr Ser Gly Ser Thr Leu Gln Ser Gly Val Pro
65                  70                  75                  80

Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Phe Thr Ile
                85                  90                  95

Ser Ser Leu Glu Ala Glu Asp Ala Ala Thr Tyr Tyr Cys Gln Gln His
            100                 105                 110

Asn Lys Tyr Pro Tyr Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
        115                 120                 125

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly
    130                 135                 140

Gly Gly Gly Ser Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys
145                 150                 155                 160

Lys Pro Gly Ala Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr
                165                 170                 175

Phe Thr Ser Tyr Trp Met Asn Trp Val Arg Gln Ala Pro Gly Gln Gly
            180                 185                 190

Leu Glu Trp Met Gly Arg Ile Asp Pro Tyr Asp Ser Glu Thr His Tyr
        195                 200                 205

Asn Gln Lys Phe Lys Asp Arg Val Thr Met Thr Val Asp Lys Ser Thr
    210                 215                 220
```

```
Ser Thr Ala Tyr Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala
225                 230                 235                 240

Val Tyr Tyr Cys Ala Arg Gly Asn Trp Asp Asp Tyr Trp Gly Gln Gly
                245                 250                 255

Thr Thr Val Thr Val Ser Ser Thr Thr Thr Pro Ala Pro Arg Pro Pro
            260                 265                 270

Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser Leu Arg Pro Glu
        275                 280                 285

Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr Arg Gly Leu Asp
    290                 295                 300

Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly
305                 310                 315                 320

Val Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr Cys Lys Arg Gly Arg
                325                 330                 335

Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met Arg Pro Val Gln
            340                 345                 350

Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu Glu Glu
        355                 360                 365

Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg Ser Ala Asp Ala
    370                 375                 380

Pro Ala Tyr Lys Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn Leu
385                 390                 395                 400

Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg Asp
                405                 410                 415

Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu
            420                 425                 430
```

```
Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile
        435                 440                 445


Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His Asp Gly Leu Tyr
    450                 455                 460


Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu His Met
465                 470                 475                 480


Gln Ala Leu Pro Pro Arg
                485


<210> 246
<211> 263
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 246
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1               5                   10                  15


His Ala Ala Arg Pro Asp Val Val Met Thr Gln Ser Pro Ala Phe Leu
            20                  25                  30


Ser Val Thr Pro Gly Glu Lys Val Thr Ile Thr Cys Arg Ala Ser Lys
        35                  40                  45


Ser Ile Ser Lys Asp Leu Ala Trp Tyr Gln Gln Lys Pro Asp Gln Ala
    50                  55                  60


Pro Lys Leu Leu Ile Tyr Ser Gly Ser Thr Leu Gln Ser Gly Val Pro
65                  70                  75                  80


Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Phe Thr Ile
                85                  90                  95


Ser Ser Leu Glu Ala Glu Asp Ala Ala Thr Tyr Tyr Cys Gln Gln His
            100                 105                 110
```

```
Asn Lys Tyr Pro Tyr Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
        115                 120                 125


Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly
    130                 135                 140


Gly Gly Gly Ser Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys
145                 150                 155                 160


Lys Pro Gly Ala Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr
                165                 170                 175


Phe Thr Ser Tyr Trp Met Asn Trp Val Arg Gln Ala Pro Gly Gln Gly
            180                 185                 190


Leu Glu Trp Met Gly Arg Ile Asp Pro Tyr Asp Ser Glu Thr His Tyr
        195                 200                 205


Asn Gln Lys Phe Lys Asp Arg Val Thr Met Thr Val Asp Lys Ser Thr
    210                 215                 220


Ser Thr Ala Tyr Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala
225                 230                 235                 240


Val Tyr Tyr Cys Ala Arg Gly Asn Trp Asp Asp Tyr Trp Gly Gln Gly
                245                 250                 255


Thr Thr Val Thr Val Ser Ser
            260


<210> 247
<211> 115
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 247
Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
1               5                   10                  15
```

```
Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Ser Tyr
            20                  25                  30

Trp Met Asn Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
        35                  40                  45

Gly Arg Ile Asp Pro Tyr Asp Ser Glu Thr His Tyr Asn Gln Lys Phe
    50                  55                  60

Lys Asp Arg Val Thr Met Thr Val Asp Lys Ser Thr Ser Thr Ala Tyr
65                  70                  75                  80

Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
                85                  90                  95

Ala Arg Gly Asn Trp Asp Asp Tyr Trp Gly Gln Gly Thr Thr Val Thr
            100                 105                 110

Val Ser Ser
        115


<210> 248
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 248
Asp Val Val Met Thr Gln Ser Pro Ala Phe Leu Ser Val Thr Pro Gly
1               5                   10                  15

Glu Lys Val Thr Ile Thr Cys Arg Ala Ser Lys Ser Ile Ser Lys Asp
            20                  25                  30

Leu Ala Trp Tyr Gln Gln Lys Pro Asp Gln Ala Pro Lys Leu Leu Ile
        35                  40                  45

Tyr Ser Gly Ser Thr Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
```

50 55 60

Ser Gly Ser Gly Thr Asp Phe Thr Phe Thr Ile Ser Ser Leu Glu Ala
65 70 75 80

Glu Asp Ala Ala Thr Tyr Tyr Cys Gln Gln His Asn Lys Tyr Pro Tyr
85 90 95

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

<210> 249
<211> 1458
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 249
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

cccgacgtgg tcatgactca gtccccggac tcactcgcgg tgtcgcttgg agagagagcg 120

accatcaact gtcgggcctc aaagagcatc agcaaggacc tggcctggta ccagcagaag 180

ccgggacagc cgccaaagct gctgatctac tccgggtcca ccttgcaatc tggtgtccct 240

gaccggttct ccggttccgg gtcgggtacc gacttcacgc tcactatttc gtcgctgcaa 300

gccgaagatg tggccgtgta ctattgccaa cagcacaaca agtaccccta cacttttggc 360

ggaggcacca aggtggaaat caaggggggt ggcggtagcg gaggaggggg ctccggcggc 420

ggcggctcag ggggcggagg aagccaagtg cagctggtcc agtcgggagc cgaagtcaag 480

aagcccggcg ctagcgtgaa agtgtcctgc aaagcctccg ggtacacatt cacctcctac 540

tggatgaatt gggtcagaca ggcgcccggc cagggactcg agtggatggg aaggattgat 600

ccttacgact ccgaaaccca ttacaaccag aagttcaagg accgcgtgac catgactgtg 660

gataagtcca cttccaccgc ttacatggag ctgtccagcc tgcgctccga ggataccgca 720

gtgtactact gcgcccgggg aaactgggac gactattggg gacagggaac taccgtgacc 780

gtgtcaagca ccactacccc agcaccgagg ccacccaccc cggctcctac catcgcctcc 840

cagcctctgt ccctgcgtcc ggaggcatgt agacccgcag ctggtggggc cgtgcatacc 900

cggggtcttg acttcgcctg cgatatctac atttgggccc ctctggctgg tacttgcggg 960

gtcctgctgc tttcactcgt gatcactctt tactgtaagc gcggtcggaa gaagctgctg 1020

tacatcttta agcaaccctt catgaggcct gtgcagacta ctcaagagga ggacggctgt 1080

tcatgccggt tcccagagga ggaggaaggc ggctgcgaac tgcgcgtgaa attcagccgc 1140

agcgcagatg ctccagccta caagcagggg cagaaccagc tctacaacga actcaatctt 1200

ggtcggagag aggagtacga cgtgctggac aagcggagag gacgggaccc agaaatgggc 1260

gggaagccgc gcagaaagaa tccccaagag ggcctgtaca acgagctcca aaaggataag 1320

atggcagaag cctatagcga gattggtatg aaaggggaac gcagaagagg caaaggccac 1380

gacggactgt accagggact cagcaccgcc accaaggaca cctatgacgc tcttcacatg 1440

caggccctgc cgcctcgg 1458

<210> 250
<211> 486
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 250
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Asp Val Val Met Thr Gln Ser Pro Asp Ser Leu
20 25 30

Ala Val Ser Leu Gly Glu Arg Ala Thr Ile Asn Cys Arg Ala Ser Lys
35 40 45

Ser Ile Ser Lys Asp Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Pro
50 55 60

Pro Lys Leu Leu Ile Tyr Ser Gly Ser Thr Leu Gln Ser Gly Val Pro
65 70 75 80

```
Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile
                85                  90                  95

Ser Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln Gln His
            100                 105                 110

Asn Lys Tyr Pro Tyr Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
        115                 120                 125

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly
    130                 135                 140

Gly Gly Gly Ser Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys
145                 150                 155                 160

Lys Pro Gly Ala Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr
                165                 170                 175

Phe Thr Ser Tyr Trp Met Asn Trp Val Arg Gln Ala Pro Gly Gln Gly
            180                 185                 190

Leu Glu Trp Met Gly Arg Ile Asp Pro Tyr Asp Ser Glu Thr His Tyr
        195                 200                 205

Asn Gln Lys Phe Lys Asp Arg Val Thr Met Thr Val Asp Lys Ser Thr
    210                 215                 220

Ser Thr Ala Tyr Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala
225                 230                 235                 240

Val Tyr Tyr Cys Ala Arg Gly Asn Trp Asp Asp Tyr Trp Gly Gln Gly
                245                 250                 255

Thr Thr Val Thr Val Ser Ser Thr Thr Thr Pro Ala Pro Arg Pro Pro
            260                 265                 270

Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser Leu Arg Pro Glu
        275                 280                 285

Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr Arg Gly Leu Asp
    290                 295                 300
```

```
Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly
305                 310                 315                 320

Val Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr Cys Lys Arg Gly Arg
                325                 330                 335

Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met Arg Pro Val Gln
            340                 345                 350

Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu Glu Glu
        355                 360                 365

Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg Ser Ala Asp Ala
    370                 375                 380

Pro Ala Tyr Lys Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn Leu
385                 390                 395                 400

Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg Asp
                405                 410                 415

Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu
            420                 425                 430

Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile
        435                 440                 445

Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His Asp Gly Leu Tyr
    450                 455                 460

Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu His Met
465                 470                 475                 480

Gln Ala Leu Pro Pro Arg
                485
```

<210> 251
<211> 263
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 251
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Asp Val Val Met Thr Gln Ser Pro Asp Ser Leu
20 25 30

Ala Val Ser Leu Gly Glu Arg Ala Thr Ile Asn Cys Arg Ala Ser Lys
35 40 45

Ser Ile Ser Lys Asp Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Pro
50 55 60

Pro Lys Leu Leu Ile Tyr Ser Gly Ser Thr Leu Gln Ser Gly Val Pro
65 70 75 80

Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile
85 90 95

Ser Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln Gln His
100 105 110

Asn Lys Tyr Pro Tyr Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
115 120 125

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly
130 135 140

Gly Gly Gly Ser Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys
145 150 155 160

Lys Pro Gly Ala Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr
165 170 175

Phe Thr Ser Tyr Trp Met Asn Trp Val Arg Gln Ala Pro Gly Gln Gly
180 185 190

```
Leu Glu Trp Met Gly Arg Ile Asp Pro Tyr Asp Ser Glu Thr His Tyr
        195                 200                 205


Asn Gln Lys Phe Lys Asp Arg Val Thr Met Thr Val Asp Lys Ser Thr
    210                 215                 220


Ser Thr Ala Tyr Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala
225                 230                 235                 240


Val Tyr Tyr Cys Ala Arg Gly Asn Trp Asp Asp Tyr Trp Gly Gln Gly
                245                 250                 255


Thr Thr Val Thr Val Ser Ser
            260


<210> 252
<211> 115
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 252
Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
1               5                   10                  15


Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Ser Tyr
            20                  25                  30


Trp Met Asn Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
        35                  40                  45


Gly Arg Ile Asp Pro Tyr Asp Ser Glu Thr His Tyr Asn Gln Lys Phe
    50                  55                  60


Lys Asp Arg Val Thr Met Thr Val Asp Lys Ser Thr Ser Thr Ala Tyr
65                  70                  75                  80


Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
                85                  90                  95
```

```
Ala Arg Gly Asn Trp Asp Asp Tyr Trp Gly Gln Gly Thr Thr Val Thr
            100                 105                 110


Val Ser Ser
        115


<210> 253
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 253
Asp Val 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 Arg Ala Ser Lys Ser Ile Ser Lys Asp
            20                  25                  30


Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro Lys Leu Leu Ile
        35                  40                  45


Tyr Ser Gly Ser Thr Leu Gln Ser Gly Val Pro Asp Arg Phe Ser Gly
    50                  55                  60


Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Ala
65                  70                  75                  80


Glu Asp Val Ala Val Tyr Tyr Cys Gln Gln His Asn Lys Tyr Pro Tyr
                85                  90                  95


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


<210> 254
<211> 1458
<212> DNA
<213> Artificial Sequence
```

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 254
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

ccccaagtgc agctggtgca gtcaggcagc gaactgaaga agcccggagc ctccgtcaaa 120

gtgtcctgca aagcctcggg atacaccttc acctcctact ggatgaactg ggtccgccag 180

gcacctggac aggggctgga gtggatggga aggatcgatc cctacgattc cgaaacccat 240

tacaatcaga agttcaagga ccggtttgtg ttctccgtgg acaagtccgt gtccaccgcc 300

tacctccaaa ttagcagcct gaaggcggag gatacagctg tctactactg cgctcgcgga 360

aactgggatg actattgggg ccagggaact accgtgactg tgtcctccgg gggtggcggt 420

agcggaggag ggggctccgg cggcggcggc tcaggggggcg gaggaagcga cgtgcagctc 480

acccagtcgc cctcatttct gtcggcctca gtgggagaca gagtgaccat tacttgtcgg 540

gcctccaaga gcatctccaa ggacctggcc tggtatcagc agaagccagg aaaggcgcct 600

aagttgctca tctactcggg gtcgaccctg caatctggcg tgccgtcccg gttctccggt 660

tcgggaagcg gtaccgaatt cacccttact atctcctccc tgcaaccgga ggacttcgcc 720

acctactact gccaacagca caacaagtac ccgtacactt tcgggggtgg cacgaaggtc 780

gaaatcaaga ccactacccc agcaccgagg ccacccaccc cggctcctac catcgcctcc 840

cagcctctgt ccctgcgtcc ggaggcatgt agacccgcag ctggtggggc cgtgcatacc 900

cggggtcttg acttcgcctg cgatatctac atttgggccc ctctggctgg tacttgcggg 960

gtcctgctgc tttcactcgt gatcactctt tactgtaagc gcggtcggaa gaagctgctg 1020

tacatcttta agcaaccctt catgaggcct gtgcagacta ctcaagagga ggacggctgt 1080

tcatgccggt tcccagagga ggaggaaggc ggctgcgaac tgcgcgtgaa attcagccgc 1140

agcgcagatg ctccagccta caagcagggg cagaaccagc tctacaacga actcaatctt 1200

ggtcggagag aggagtacga cgtgctggac aagcggagag gacgggaccc agaaatgggc 1260

gggaagccgc gcagaaagaa tccccaagag ggcctgtaca acgagctcca aaaggataag 1320

atggcagaag cctatagcga gattggtatg aaaggggaac gcagaagagg caaaggccac 1380

gacggactgt accagggact cagcaccgcc accaaggaca cctatgacgc tcttcacatg 1440

caggccctgc cgcctcgg 1458

<210> 255
<211> 486
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 255
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Gln Val Gln Leu Val Gln Ser Gly Ser Glu Leu
20 25 30

Lys Lys Pro Gly Ala Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr
35 40 45

Thr Phe Thr Ser Tyr Trp Met Asn Trp Val Arg Gln Ala Pro Gly Gln
50 55 60

Gly Leu Glu Trp Met Gly Arg Ile Asp Pro Tyr Asp Ser Glu Thr His
65 70 75 80

Tyr Asn Gln Lys Phe Lys Asp Arg Phe Val Phe Ser Val Asp Lys Ser
85 90 95

Val Ser Thr Ala Tyr Leu Gln Ile Ser Ser Leu Lys Ala Glu Asp Thr
100 105 110

Ala Val Tyr Tyr Cys Ala Arg Gly Asn Trp Asp Asp Tyr Trp Gly Gln
115 120 125

Gly Thr Thr Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly
130 135 140

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Val Gln Leu
145 150 155 160

```
Thr Gln Ser Pro Ser Phe Leu Ser Ala Ser Val Gly Asp Arg Val Thr
                165                 170                 175

Ile Thr Cys Arg Ala Ser Lys Ser Ile Ser Lys Asp Leu Ala Trp Tyr
            180                 185                 190

Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile Tyr Ser Gly Ser
        195                 200                 205

Thr Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly
    210                 215                 220

Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro Glu Asp Phe Ala
225                 230                 235                 240

Thr Tyr Tyr Cys Gln Gln His Asn Lys Tyr Pro Tyr Thr Phe Gly Gly
                245                 250                 255

Gly Thr Lys Val Glu Ile Lys Thr Thr Thr Pro Ala Pro Arg Pro Pro
            260                 265                 270

Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser Leu Arg Pro Glu
        275                 280                 285

Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr Arg Gly Leu Asp
    290                 295                 300

Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly
305                 310                 315                 320

Val Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr Cys Lys Arg Gly Arg
                325                 330                 335

Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met Arg Pro Val Gln
            340                 345                 350

Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu Glu Glu
        355                 360                 365

Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg Ser Ala Asp Ala
    370                 375                 380
```

```
Pro Ala Tyr Lys Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn Leu
385                 390                 395                 400


Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg Asp
                405                 410                 415


Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu
            420                 425                 430


Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile
        435                 440                 445


Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His Asp Gly Leu Tyr
    450                 455                 460


Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu His Met
465                 470                 475                 480


Gln Ala Leu Pro Pro Arg
                485


<210> 256
<211> 263
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 256
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1               5                   10                  15


His Ala Ala Arg Pro Gln Val Gln Leu Val Gln Ser Gly Ser Glu Leu
            20                  25                  30


Lys Lys Pro Gly Ala Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr
        35                  40                  45


Thr Phe Thr Ser Tyr Trp Met Asn Trp Val Arg Gln Ala Pro Gly Gln
```

```
    50                  55                  60

Gly Leu Glu Trp Met Gly Arg Ile Asp Pro Tyr Asp Ser Glu Thr His
65                  70                  75                  80

Tyr Asn Gln Lys Phe Lys Asp Arg Phe Val Phe Ser Val Asp Lys Ser
                85                  90                  95

Val Ser Thr Ala Tyr Leu Gln Ile Ser Ser Leu Lys Ala Glu Asp Thr
            100                 105                 110

Ala Val Tyr Tyr Cys Ala Arg Gly Asn Trp Asp Asp Tyr Trp Gly Gln
        115                 120                 125

Gly Thr Thr Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly
    130                 135                 140

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Val Gln Leu
145                 150                 155                 160

Thr Gln Ser Pro Ser Phe Leu Ser Ala Ser Val Gly Asp Arg Val Thr
                165                 170                 175

Ile Thr Cys Arg Ala Ser Lys Ser Ile Ser Lys Asp Leu Ala Trp Tyr
            180                 185                 190

Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile Tyr Ser Gly Ser
        195                 200                 205

Thr Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly
    210                 215                 220

Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro Glu Asp Phe Ala
225                 230                 235                 240

Thr Tyr Tyr Cys Gln Gln His Asn Lys Tyr Pro Tyr Thr Phe Gly Gly
                245                 250                 255

Gly Thr Lys Val Glu Ile Lys
            260
```

<210> 257
<211> 115
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 257
Gln Val Gln Leu Val Gln Ser Gly Ser Glu Leu Lys Lys Pro Gly Ala
1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Ser Tyr
20 25 30

Trp Met Asn Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45

Gly Arg Ile Asp Pro Tyr Asp Ser Glu Thr His Tyr Asn Gln Lys Phe
50 55 60

Lys Asp Arg Phe Val Phe Ser Val Asp Lys Ser Val Ser Thr Ala Tyr
65 70 75 80

Leu Gln Ile Ser Ser Leu Lys Ala Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Gly Asn Trp Asp Asp Tyr Trp Gly Gln Gly Thr Thr Val Thr
100 105 110

Val Ser Ser
115

<210> 258
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 258
Asp Val 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 Lys Ser Ile Ser Lys Asp
            20   25   30

Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
        35   40   45

Tyr Ser Gly 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 His Asn Lys Tyr Pro Tyr
                85   90   95

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

<210> 259
<211> 1458
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polynucleotide"

<400> 259
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg   60

ccccaagtgc agctggtgca gtcaggcagc gaactgaaga agcccggagc ctccgtcaaa   120

gtgtcctgca aagcctcggg atacaccttc acctcctact ggatgaactg ggtccgccag   180

gcacctggac aggggctgga gtggatggga aggatcgatc cctacgattc cgaaacccat   240

tacaatcaga agttcaagga ccggtttgtg ttctccgtgg acaagtccgt gtccaccgcc   300

tacctccaaa ttagcagcct gaaggcggag gatacagctg tctactactg cgctcgcgga   360

aactgggatg actattgggg ccagggaact accgtgactg tgtcctccgg gggtggcggt   420

agcggaggag ggggctccgg cggcggcggc tcaggggcg gaggaagcga agtggtgctg 480

acccagtcgc ccgcaaccct ctctctgtcg ccgggagaac gcgccactct ttcctgtcgg 540

gcgtccaaga gcatctcaaa ggacctcgcc tggtaccagc agaagcctgg tcaagccccg 600

cggctgctga tctactccgg ctccacgctg caatcaggaa tcccagccag attttccggt 660

tcggggtcgg ggactgactt caccttgacc attagctcgc tggaacctga ggacttcgcc 720

gtgtattact gccagcagca caacaagtac ccgtacacct tcggaggcgg tactaaggtc 780

gagatcaaga ccactacccc agcaccgagg ccacccaccc cggctcctac catcgcctcc 840

cagcctctgt ccctgcgtcc ggaggcatgt agacccgcag ctggtggggc cgtgcatacc 900

cggggtcttg acttcgcctg cgatatctac atttgggccc ctctggctgg tacttgcggg 960

gtcctgctgc tttcactcgt gatcactctt tactgtaagc gcggtcggaa gaagctgctg 1020

tacatcttta agcaaccctt catgaggcct gtgcagacta ctcaagagga ggacggctgt 1080

tcatgccggt tcccagagga ggaggaaggc ggctgcgaac tgcgcgtgaa attcagccgc 1140

agcgcagatg ctccagccta caagcagggg cagaaccagc tctacaacga actcaatctt 1200

ggtcggagag aggagtacga cgtgctggac aagcggagag gacgggaccc agaaatgggc 1260

gggaagccgc gcagaaagaa tccccaagag ggcctgtaca acgagctcca aaaggataag 1320

atggcagaag cctatagcga gattggtatg aaaggggaac gcagaagagg caaaggccac 1380

gacggactgt accagggact cagcaccgcc accaaggaca cctatgacgc tcttcacatg 1440

caggccctgc cgcctcgg 1458

<210> 260
<211> 486
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 260
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Gln Val Gln Leu Val Gln Ser Gly Ser Glu Leu
20 25 30

```
Lys Lys Pro Gly Ala Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr
        35                  40                  45

Thr Phe Thr Ser Tyr Trp Met Asn Trp Val Arg Gln Ala Pro Gly Gln
    50                  55                  60

Gly Leu Glu Trp Met Gly Arg Ile Asp Pro Tyr Asp Ser Glu Thr His
65                  70                  75                  80

Tyr Asn Gln Lys Phe Lys Asp Arg Phe Val Phe Ser Val Asp Lys Ser
                85                  90                  95

Val Ser Thr Ala Tyr Leu Gln Ile Ser Ser Leu Lys Ala Glu Asp Thr
            100                 105                 110

Ala Val Tyr Tyr Cys Ala Arg Gly Asn Trp Asp Asp Tyr Trp Gly Gln
        115                 120                 125

Gly Thr Thr Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly
    130                 135                 140

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Val Val Leu
145                 150                 155                 160

Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly Glu Arg Ala Thr
                165                 170                 175

Leu Ser Cys Arg Ala Ser Lys Ser Ile Ser Lys Asp Leu Ala Trp Tyr
            180                 185                 190

Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile Tyr Ser Gly Ser
        195                 200                 205

Thr Leu Gln Ser Gly Ile Pro Ala Arg Phe Ser Gly Ser Gly Ser Gly
    210                 215                 220

Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Glu Pro Glu Asp Phe Ala
225                 230                 235                 240
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Val Tyr Tyr Cys Gln Gln His Asn Lys Tyr Pro Tyr Thr Phe Gly Gly
                245                 250                 255

Gly Thr Lys Val Glu Ile Lys Thr Thr Thr Pro Ala Pro Arg Pro Pro
            260                 265                 270

Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser Leu Arg Pro Glu
        275                 280                 285

Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr Arg Gly Leu Asp
    290                 295                 300

Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly
305                 310                 315                 320

Val Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr Cys Lys Arg Gly Arg
                325                 330                 335

Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met Arg Pro Val Gln
            340                 345                 350

Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu Glu Glu
        355                 360                 365

Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg Ser Ala Asp Ala
    370                 375                 380

Pro Ala Tyr Lys Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn Leu
385                 390                 395                 400

Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg Asp
                405                 410                 415

Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu
            420                 425                 430

Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile
        435                 440                 445

Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His Asp Gly Leu Tyr
    450                 455                 460
```

Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu His Met
465 470 475 480

Gln Ala Leu Pro Pro Arg
485

<210> 261
<211> 263
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 261
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Gln Val Gln Leu Val Gln Ser Gly Ser Glu Leu
20 25 30

Lys Lys Pro Gly Ala Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr
35 40 45

Thr Phe Thr Ser Tyr Trp Met Asn Trp Val Arg Gln Ala Pro Gly Gln
50 55 60

Gly Leu Glu Trp Met Gly Arg Ile Asp Pro Tyr Asp Ser Glu Thr His
65 70 75 80

Tyr Asn Gln Lys Phe Lys Asp Arg Phe Val Phe Ser Val Asp Lys Ser
85 90 95

Val Ser Thr Ala Tyr Leu Gln Ile Ser Ser Leu Lys Ala Glu Asp Thr
100 105 110

Ala Val Tyr Tyr Cys Ala Arg Gly Asn Trp Asp Asp Tyr Trp Gly Gln
115 120 125

Gly Thr Thr Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly

```
    130                 135                 140

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Val Val Leu
145                 150                 155                 160

Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly Glu Arg Ala Thr
                165                 170                 175

Leu Ser Cys Arg Ala Ser Lys Ser Ile Ser Lys Asp Leu Ala Trp Tyr
            180                 185                 190

Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile Tyr Ser Gly Ser
        195                 200                 205

Thr Leu Gln Ser Gly Ile Pro Ala Arg Phe Ser Gly Ser Gly Ser Gly
    210                 215                 220

Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Glu Pro Glu Asp Phe Ala
225                 230                 235                 240

Val Tyr Tyr Cys Gln Gln His Asn Lys Tyr Pro Tyr Thr Phe Gly Gly
                245                 250                 255

Gly Thr Lys Val Glu Ile Lys
            260


<210> 262
<211> 115
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 262
Gln Val Gln Leu Val Gln Ser Gly Ser Glu Leu Lys Lys Pro Gly Ala
1               5                   10                  15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Ser Tyr
            20                  25                  30
```

Trp Met Asn Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45

Gly Arg Ile Asp Pro Tyr Asp Ser Glu Thr His Tyr Asn Gln Lys Phe
50 55 60

Lys Asp Arg Phe Val Phe Ser Val Asp Lys Ser Val Ser Thr Ala Tyr
65 70 75 80

Leu Gln Ile Ser Ser Leu Lys Ala Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Gly Asn Trp Asp Asp Tyr Trp Gly Gln Gly Thr Thr Val Thr
100 105 110

Val Ser Ser
115

<210> 263
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 263
Glu Val Val Leu Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly
1 5 10 15

Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Lys Ser Ile Ser Lys Asp
20 25 30

Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile
35 40 45

Tyr Ser Gly Ser Thr Leu Gln Ser Gly Ile Pro Ala Arg Phe Ser Gly
50 55 60

Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Glu Pro
65 70 75 80

Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln His Asn Lys Tyr Pro Tyr
85 90 95

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

<210> 264
<211> 1458
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 264
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

ccccaagtgc agctggtgca gtcaggcagc gaactgaaga agcccggagc ctccgtcaaa 120

gtgtcctgca aagcctcggg atacaccttc acctcctact ggatgaactg ggtccgccag 180

gcacctggac aggggctgga gtggatggga aggatcgatc cctacgattc cgaaacccat 240

tacaatcaga agttcaagga ccggtttgtg ttctccgtgg acaagtccgt gtccaccgcc 300

tacctccaaa ttagcagcct gaaggcggag gatacagctg tctactactg cgctcgcgga 360

aactgggatg actattgggg ccagggaact accgtgactg tgtcctccgg gggtggcggt 420

agcggaggag ggggctccgg cggcggcggc tcaggggggcg gaggaagcga cgtcgtgatg 480

acccagtcac cggcattcct gtccgtgact cccggagaaa aggtcacgat tacttgccgg 540

gcgtccaaga gcatctccaa ggacctcgcc tggtaccaac agaagccgga ccaggcccct 600

aagctgttga tctactcggg gtccaccctt caatcgggag tgccatcgcg gtttagcggt 660

tcgggttctg ggaccgactt cactttcacc atctcctcac tggaagccga ggatgccgcc 720

acttactact gtcagcagca caacaagtat ccgtacacct tcggaggcgg taccaaagtg 780

gagatcaaga ccactacccc agcaccgagg ccacccaccc cggctcctac catcgcctcc 840

cagcctctgt ccctgcgtcc ggaggcatgt agacccgcag ctggtggggc cgtgcatacc 900

cggggtcttg acttcgcctg cgatatctac atttgggccc ctctggctgg tacttgcggg 960

gtcctgctgc tttcactcgt gatcactctt tactgtaagc gcggtcggaa gaagctgctg 1020

tacatcttta agcaaccctt catgaggcct gtgcagacta ctcaagagga ggacggctgt 1080

tcatgccggt tcccagagga ggaggaaggc ggctgcgaac tgcgcgtgaa attcagccgc 1140

agcgcagatg ctccagccta caagcagggg cagaaccagc tctacaacga actcaatctt 1200

ggtcggagag aggagtacga cgtgctggac aagcggagag gacgggaccc agaaatgggc 1260

gggaagccgc gcagaaagaa tccccaagag ggcctgtaca acgagctcca aaaggataag 1320

atggcagaag cctatagcga gattggtatg aaaggggaac gcagaagagg caaaggccac 1380

gacggactgt accagggact cagcaccgcc accaaggaca cctatgacgc tcttcacatg 1440

caggccctgc cgcctcgg 1458

<210> 265
<211> 486
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 265
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Gln Val Gln Leu Val Gln Ser Gly Ser Glu Leu
20 25 30

Lys Lys Pro Gly Ala Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr
35 40 45

Thr Phe Thr Ser Tyr Trp Met Asn Trp Val Arg Gln Ala Pro Gly Gln
50 55 60

Gly Leu Glu Trp Met Gly Arg Ile Asp Pro Tyr Asp Ser Glu Thr His
65 70 75 80

Tyr Asn Gln Lys Phe Lys Asp Arg Phe Val Phe Ser Val Asp Lys Ser
85 90 95

Val Ser Thr Ala Tyr Leu Gln Ile Ser Ser Leu Lys Ala Glu Asp Thr
100 105 110

```
Ala Val Tyr Tyr Cys Ala Arg Gly Asn Trp Asp Asp Tyr Trp Gly Gln
        115                 120                 125

Gly Thr Thr Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly
    130                 135                 140

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Val Val Met
145                 150                 155                 160

Thr Gln Ser Pro Ala Phe Leu Ser Val Thr Pro Gly Glu Lys Val Thr
                165                 170                 175

Ile Thr Cys Arg Ala Ser Lys Ser Ile Ser Lys Asp Leu Ala Trp Tyr
            180                 185                 190

Gln Gln Lys Pro Asp Gln Ala Pro Lys Leu Leu Ile Tyr Ser Gly Ser
        195                 200                 205

Thr Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly
    210                 215                 220

Thr Asp Phe Thr Phe Thr Ile Ser Ser Leu Glu Ala Glu Asp Ala Ala
225                 230                 235                 240

Thr Tyr Tyr Cys Gln Gln His Asn Lys Tyr Pro Tyr Thr Phe Gly Gly
                245                 250                 255

Gly Thr Lys Val Glu Ile Lys Thr Thr Thr Pro Ala Pro Arg Pro Pro
            260                 265                 270

Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser Leu Arg Pro Glu
        275                 280                 285

Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr Arg Gly Leu Asp
    290                 295                 300

Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly
305                 310                 315                 320
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Val Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr Cys Lys Arg Gly Arg
                325                 330                 335

Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met Arg Pro Val Gln
            340                 345                 350

Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu Glu Glu
        355                 360                 365

Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg Ser Ala Asp Ala
    370                 375                 380

Pro Ala Tyr Lys Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn Leu
385                 390                 395                 400

Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg Asp
                405                 410                 415

Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu
            420                 425                 430

Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile
        435                 440                 445

Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His Asp Gly Leu Tyr
    450                 455                 460

Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu His Met
465                 470                 475                 480

Gln Ala Leu Pro Pro Arg
                485
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<210> 266
<211> 263
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 266
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1   5   10   15

His Ala Ala Arg Pro Gln Val Gln Leu Val Gln Ser Gly Ser Glu Leu
            20   25   30

Lys Lys Pro Gly Ala Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr
        35   40   45

Thr Phe Thr Ser Tyr Trp Met Asn Trp Val Arg Gln Ala Pro Gly Gln
    50   55   60

Gly Leu Glu Trp Met Gly Arg Ile Asp Pro Tyr Asp Ser Glu Thr His
65   70   75   80

Tyr Asn Gln Lys Phe Lys Asp Arg Phe Val Phe Ser Val Asp Lys Ser
                85   90   95

Val Ser Thr Ala Tyr Leu Gln Ile Ser Ser Leu Lys Ala Glu Asp Thr
            100   105   110

Ala Val Tyr Tyr Cys Ala Arg Gly Asn Trp Asp Asp Tyr Trp Gly Gln
        115   120   125

Gly Thr Thr Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly
    130   135   140

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Val Val Met
145   150   155   160

Thr Gln Ser Pro Ala Phe Leu Ser Val Thr Pro Gly Glu Lys Val Thr
                165   170   175

Ile Thr Cys Arg Ala Ser Lys Ser Ile Ser Lys Asp Leu Ala Trp Tyr
            180   185   190

Gln Gln Lys Pro Asp Gln Ala Pro Lys Leu Leu Ile Tyr Ser Gly Ser
        195   200   205

Thr Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly

210 215 220

Thr Asp Phe Thr Phe Thr Ile Ser Ser Leu Glu Ala Glu Asp Ala Ala
225 230 235 240

Thr Tyr Tyr Cys Gln Gln His Asn Lys Tyr Pro Tyr Thr Phe Gly Gly
245 250 255

Gly Thr Lys Val Glu Ile Lys
260

<210> 267
<211> 115
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 267
Gln Val Gln Leu Val Gln Ser Gly Ser Glu Leu Lys Lys Pro Gly Ala
1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Ser Tyr
20 25 30

Trp Met Asn Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45

Gly Arg Ile Asp Pro Tyr Asp Ser Glu Thr His Tyr Asn Gln Lys Phe
50 55 60

Lys Asp Arg Phe Val Phe Ser Val Asp Lys Ser Val Ser Thr Ala Tyr
65 70 75 80

Leu Gln Ile Ser Ser Leu Lys Ala Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Gly Asn Trp Asp Asp Tyr Trp Gly Gln Gly Thr Thr Val Thr
100 105 110

Val Ser Ser
        115

<210> 268
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 268
Asp Val Val Met Thr Gln Ser Pro Ala Phe Leu Ser Val Thr Pro Gly
1   5   10   15

Glu Lys Val Thr Ile Thr Cys Arg Ala Ser Lys Ser Ile Ser Lys Asp
            20   25   30

Leu Ala Trp Tyr Gln Gln Lys Pro Asp Gln Ala Pro Lys Leu Leu Ile
        35   40   45

Tyr Ser Gly Ser Thr Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
    50   55   60

Ser Gly Ser Gly Thr Asp Phe Thr Phe Thr Ile Ser Ser Leu Glu Ala
65   70   75   80

Glu Asp Ala Ala Thr Tyr Tyr Cys Gln Gln His Asn Lys Tyr Pro Tyr
                85   90   95

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

<210> 269
<211> 1458
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polynucleotide"

<400> 269

atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

ccccaagtgc agctggtgca gtcaggcagc gaactgaaga agcccggagc ctccgtcaaa 120

gtgtcctgca aagcctcggg atacaccttc acctcctact ggatgaactg ggtccgccag 180

gcacctggac aggggctgga gtggatggga aggatcgatc cctacgattc cgaaacccat 240

tacaatcaga agttcaagga ccggtttgtg ttctccgtgg acaagtccgt gtccaccgcc 300

tacctccaaa ttagcagcct gaaggcggag gatacagctg tctactactg cgctcgcgga 360

aactgggatg actattgggg ccagggaact accgtgactg tgtcctccgg gggtggcggt 420

agcggaggag ggggctccgg cggcggcggc tcaggggggcg gaggaagcga cgtggtcatg 480

actcagtccc cggactcact cgcggtgtcg cttggagaga gagcgaccat caactgtcgg 540

gcctcaaaga gcatcagcaa ggacctggcc tggtaccagc agaagccggg acagccgcca 600

aagctgctga tctactccgg gtccaccttg caatctggtg tccctgaccg gttctccggt 660

tccgggtcgg gtaccgactt cacgctcact atttcgtcgc tgcaagccga agatgtggcc 720

gtgtactatt gccaacagca caacaagtac ccctacactt ttggcggagg caccaaggtg 780

gaaatcaaga ccactacccc agcaccgagg ccacccaccc cggctcctac catcgcctcc 840

cagcctctgt ccctgcgtcc ggaggcatgt agacccgcag ctggtggggc cgtgcatacc 900

cggggtcttg acttcgcctg cgatatctac atttgggccc ctctggctgg tacttgcggg 960

gtcctgctgc tttcactcgt gatcactctt tactgtaagc gcggtcggaa gaagctgctg 1020

tacatcttta agcaaccctt catgaggcct gtgcagacta ctcaagagga ggacggctgt 1080

tcatgccggt tcccagagga ggaggaaggc ggctgcgaac tgcgcgtgaa attcagccgc 1140

agcgcagatg ctccagccta caagcagggg cagaaccagc tctacaacga actcaatctt 1200

ggtcggagag aggagtacga cgtgctggac aagcggagag gacgggaccc agaaatgggc 1260

gggaagccgc gcagaaagaa tccccaagag ggcctgtaca acgagctcca aaaggataag 1320

atggcagaag cctatagcga gattggtatg aaaggggaac gcagaagagg caaaggccac 1380

gacggactgt accagggact cagcaccgcc accaaggaca cctatgacgc tcttcacatg 1440

caggccctgc cgcctcgg 1458

<210> 270
<211> 486
<212> PRT

<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 270
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Gln Val Gln Leu Val Gln Ser Gly Ser Glu Leu
20 25 30

Lys Lys Pro Gly Ala Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr
35 40 45

Thr Phe Thr Ser Tyr Trp Met Asn Trp Val Arg Gln Ala Pro Gly Gln
50 55 60

Gly Leu Glu Trp Met Gly Arg Ile Asp Pro Tyr Asp Ser Glu Thr His
65 70 75 80

Tyr Asn Gln Lys Phe Lys Asp Arg Phe Val Phe Ser Val Asp Lys Ser
85 90 95

Val Ser Thr Ala Tyr Leu Gln Ile Ser Ser Leu Lys Ala Glu Asp Thr
100 105 110

Ala Val Tyr Tyr Cys Ala Arg Gly Asn Trp Asp Asp Tyr Trp Gly Gln
115 120 125

Gly Thr Thr Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly
130 135 140

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Val Val Met
145 150 155 160

Thr Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly Glu Arg Ala Thr
165 170 175

Ile Asn Cys Arg Ala Ser Lys Ser Ile Ser Lys Asp Leu Ala Trp Tyr
180 185 190

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Gln Gln Lys Pro Gly Gln Pro Pro Lys Leu Leu Ile Tyr Ser Gly Ser
        195                 200                 205

Thr Leu Gln Ser Gly Val Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly
    210                 215                 220

Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Ala Glu Asp Val Ala
225                 230                 235                 240

Val Tyr Tyr Cys Gln Gln His Asn Lys Tyr Pro Tyr Thr Phe Gly Gly
                245                 250                 255

Gly Thr Lys Val Glu Ile Lys Thr Thr Thr Pro Ala Pro Arg Pro Pro
            260                 265                 270

Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser Leu Arg Pro Glu
        275                 280                 285

Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr Arg Gly Leu Asp
    290                 295                 300

Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly
305                 310                 315                 320

Val Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr Cys Lys Arg Gly Arg
                325                 330                 335

Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met Arg Pro Val Gln
            340                 345                 350

Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu Glu Glu
        355                 360                 365

Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg Ser Ala Asp Ala
    370                 375                 380

Pro Ala Tyr Lys Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn Leu
385                 390                 395                 400
```

Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg Asp
405 410 415

Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu
420 425 430

Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile
435 440 445

Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His Asp Gly Leu Tyr
450 455 460

Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu His Met
465 470 475 480

Gln Ala Leu Pro Pro Arg
485

<210> 271
<211> 263
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 271
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Gln Val Gln Leu Val Gln Ser Gly Ser Glu Leu
20 25 30

Lys Lys Pro Gly Ala Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr
35 40 45

Thr Phe Thr Ser Tyr Trp Met Asn Trp Val Arg Gln Ala Pro Gly Gln
50 55 60

Gly Leu Glu Trp Met Gly Arg Ile Asp Pro Tyr Asp Ser Glu Thr His
65 70 75 80

```
Tyr Asn Gln Lys Phe Lys Asp Arg Phe Val Phe Ser Val Asp Lys Ser
                85                  90                  95

Val Ser Thr Ala Tyr Leu Gln Ile Ser Ser Leu Lys Ala Glu Asp Thr
            100                 105                 110

Ala Val Tyr Tyr Cys Ala Arg Gly Asn Trp Asp Asp Tyr Trp Gly Gln
        115                 120                 125

Gly Thr Thr Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly
    130                 135                 140

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Val Val Met
145                 150                 155                 160

Thr Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly Glu Arg Ala Thr
                165                 170                 175

Ile Asn Cys Arg Ala Ser Lys Ser Ile Ser Lys Asp Leu Ala Trp Tyr
            180                 185                 190

Gln Gln Lys Pro Gly Gln Pro Pro Lys Leu Leu Ile Tyr Ser Gly Ser
        195                 200                 205

Thr Leu Gln Ser Gly Val Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly
    210                 215                 220

Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Ala Glu Asp Val Ala
225                 230                 235                 240

Val Tyr Tyr Cys Gln Gln His Asn Lys Tyr Pro Tyr Thr Phe Gly Gly
                245                 250                 255

Gly Thr Lys Val Glu Ile Lys
            260
```

<210> 272
<211> 115
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 272
Gln Val Gln Leu Val Gln Ser Gly Ser Glu Leu Lys Lys Pro Gly Ala
1   5   10   15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Ser Tyr
            20   25   30

Trp Met Asn Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
        35   40   45

Gly Arg Ile Asp Pro Tyr Asp Ser Glu Thr His Tyr Asn Gln Lys Phe
    50   55   60

Lys Asp Arg Phe Val Phe Ser Val Asp Lys Ser Val Ser Thr Ala Tyr
65   70   75   80

Leu Gln Ile Ser Ser Leu Lys Ala Glu Asp Thr Ala Val Tyr Tyr Cys
                85   90   95

Ala Arg Gly Asn Trp Asp Asp Tyr Trp Gly Gln Gly Thr Thr Val Thr
            100   105   110

Val Ser Ser
        115

<210> 273
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 273
Asp Val 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 Arg Ala Ser Lys Ser Ile Ser Lys Asp

```
            20                  25                  30

Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro Lys Leu Leu Ile
        35                  40                  45

Tyr Ser Gly Ser Thr Leu Gln Ser Gly Val Pro Asp Arg Phe Ser Gly
    50                  55                  60

Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Ala
65                  70                  75                  80

Glu Asp Val Ala Val Tyr Tyr Cys Gln Gln His Asn Lys Tyr Pro Tyr
                85                  90                  95

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

<210> 274
<211> 1458
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 274
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

cccgacgtgc agctcaccca gtcgccctca tttctgtcgg cctcagtggg agacagagtg 120

accattactt gtcgggcctc caagagcatc tccaaggacc tggcctggta tcagcagaag 180

ccaggaaagg cgcctaagtt gctcatctac tcggggtcga ccctgcaatc tggcgtgccg 240

tcccggttct ccggttcggg aagcggtacc gaattcaccc ttactatctc ctccctgcaa 300

ccggaggact tcgccaccta ctactgccaa cagcacaaca agtacccgta cactttcggg 360

ggtggcacga aggtcgaaat caaggggggt ggcggtagcg gaggaggggg ctccggcggc 420

ggcggctcag ggggcggagg aagccaagtg cagctggtgc agtcaggcag cgaactgaag 480

aagcccggag cctccgtcaa agtgtcctgc aaagcctcgg gatacacctt cacctcctac 540

tggatgaact gggtccgcca ggcacctgga caggggctgg agtggatggg aaggatcgat 600

ccctacgatt ccgaaaccca ttacaatcag aagttcaagg accggtttgt gttctccgtg 660

gacaagtccg tgtccaccgc ctacctccaa attagcagcc tgaaggcgga ggatacagct 720

gtctactact gcgctcgcgg aaactgggat gactattggg gccagggaac taccgtgact 780

gtgtcctcca ccactacccc agcaccgagg ccacccaccc cggctcctac catcgcctcc 840

cagcctctgt ccctgcgtcc ggaggcatgt agacccgcag ctggtggggc cgtgcatacc 900

cggggtcttg acttcgcctg cgatatctac atttgggccc ctctggctgg tacttgcggg 960

gtcctgctgc tttcactcgt gatcactctt tactgtaagc gcggtcggaa gaagctgctg 1020

tacatcttta agcaaccctt catgaggcct gtgcagacta ctcaagagga ggacggctgt 1080

tcatgccggt tcccagagga ggaggaaggc ggctgcgaac tgcgcgtgaa attcagccgc 1140

agcgcagatg ctccagccta caagcagggg cagaaccagc tctacaacga actcaatctt 1200

ggtcggagag aggagtacga cgtgctggac aagcggagag gacgggaccc agaaatgggc 1260

gggaagccgc gcagaaagaa tccccaagag ggcctgtaca acgagctcca aaaggataag 1320

atggcagaag cctatagcga gattggtatg aaaggggaac gcagaagagg caaaggccac 1380

gacggactgt accagggact cagcaccgcc accaaggaca cctatgacgc tcttcacatg 1440

caggccctgc cgcctcgg 1458

<210> 275
<211> 486
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 275
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Asp Val Gln Leu Thr Gln Ser Pro Ser Phe Leu
20 25 30

Ser Ala Ser Val Gly Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Lys
35 40 45

```
Ser Ile Ser Lys Asp Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala
    50                  55                  60

Pro Lys Leu Leu Ile Tyr Ser Gly Ser Thr Leu Gln Ser Gly Val Pro
65                  70                  75                  80

Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile
                85                  90                  95

Ser Ser Leu Gln Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln His
            100                 105                 110

Asn Lys Tyr Pro Tyr Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
        115                 120                 125

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly
    130                 135                 140

Gly Gly Gly Ser Gln Val Gln Leu Val Gln Ser Gly Ser Glu Leu Lys
145                 150                 155                 160

Lys Pro Gly Ala Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr
                165                 170                 175

Phe Thr Ser Tyr Trp Met Asn Trp Val Arg Gln Ala Pro Gly Gln Gly
            180                 185                 190

Leu Glu Trp Met Gly Arg Ile Asp Pro Tyr Asp Ser Glu Thr His Tyr
        195                 200                 205

Asn Gln Lys Phe Lys Asp Arg Phe Val Phe Ser Val Asp Lys Ser Val
    210                 215                 220

Ser Thr Ala Tyr Leu Gln Ile Ser Ser Leu Lys Ala Glu Asp Thr Ala
225                 230                 235                 240

Val Tyr Tyr Cys Ala Arg Gly Asn Trp Asp Asp Tyr Trp Gly Gln Gly
                245                 250                 255

Thr Thr Val Thr Val Ser Ser Thr Thr Thr Pro Ala Pro Arg Pro Pro
            260                 265                 270
```

```
Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser Leu Arg Pro Glu
        275                 280                 285

Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr Arg Gly Leu Asp
    290                 295                 300

Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly
305                 310                 315                 320

Val Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr Cys Lys Arg Gly Arg
                325                 330                 335

Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met Arg Pro Val Gln
            340                 345                 350

Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu Glu Glu
        355                 360                 365

Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg Ser Ala Asp Ala
    370                 375                 380

Pro Ala Tyr Lys Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn Leu
385                 390                 395                 400

Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg Asp
                405                 410                 415

Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu
            420                 425                 430

Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile
        435                 440                 445

Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His Asp Gly Leu Tyr
    450                 455                 460

Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu His Met
465                 470                 475                 480
```

Gln Ala Leu Pro Pro Arg
485

<210> 276
<211> 263
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 276
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Asp Val Gln Leu Thr Gln Ser Pro Ser Phe Leu
20 25 30

Ser Ala Ser Val Gly Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Lys
35 40 45

Ser Ile Ser Lys Asp Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala
50 55 60

Pro Lys Leu Leu Ile Tyr Ser Gly Ser Thr Leu Gln Ser Gly Val Pro
65 70 75 80

Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile
85 90 95

Ser Ser Leu Gln Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln His
100 105 110

Asn Lys Tyr Pro Tyr Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
115 120 125

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly
130 135 140

Gly Gly Gly Ser Gln Val Gln Leu Val Gln Ser Gly Ser Glu Leu Lys
145 150 155 160

```
Lys Pro Gly Ala Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr
                165                 170                 175


Phe Thr Ser Tyr Trp Met Asn Trp Val Arg Gln Ala Pro Gly Gln Gly
            180                 185                 190


Leu Glu Trp Met Gly Arg Ile Asp Pro Tyr Asp Ser Glu Thr His Tyr
        195                 200                 205


Asn Gln Lys Phe Lys Asp Arg Phe Val Phe Ser Val Asp Lys Ser Val
    210                 215                 220


Ser Thr Ala Tyr Leu Gln Ile Ser Ser Leu Lys Ala Glu Asp Thr Ala
225                 230                 235                 240


Val Tyr Tyr Cys Ala Arg Gly Asn Trp Asp Asp Tyr Trp Gly Gln Gly
                245                 250                 255


Thr Thr Val Thr Val Ser Ser
            260


<210> 277
<211> 115
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 277
Gln Val Gln Leu Val Gln Ser Gly Ser Glu Leu Lys Lys Pro Gly Ala
1               5                   10                  15


Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Ser Tyr
            20                  25                  30


Trp Met Asn Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
        35                  40                  45


Gly Arg Ile Asp Pro Tyr Asp Ser Glu Thr His Tyr Asn Gln Lys Phe
    50                  55                  60
```

```
Lys Asp Arg Phe Val Phe Ser Val Asp Lys Ser Val Ser Thr Ala Tyr
65                  70                  75                  80


Leu Gln Ile Ser Ser Leu Lys Ala Glu Asp Thr Ala Val Tyr Tyr Cys
                85                  90                  95


Ala Arg Gly Asn Trp Asp Asp Tyr Trp Gly Gln Gly Thr Thr Val Thr
            100                 105                 110


Val Ser Ser
        115


<210> 278
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 278
Asp Val 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 Lys Ser Ile Ser Lys Asp
            20                  25                  30


Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
        35                  40                  45


Tyr Ser Gly 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 His Asn Lys Tyr Pro Tyr
                85                  90                  95


Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
```

100 105

<210> 279
<211> 1458
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 279
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

cccgaagtgg tgctgaccca gtcgcccgca accctctctc tgtcgccggg agaacgcgcc 120

actctttcct gtcgggcgtc caagagcatc tcaaaggacc tcgcctggta ccagcagaag 180

cctggtcaag ccccgcggct gctgatctac tccggctcca cgctgcaatc aggaatccca 240

gccagatttt ccggttcggg gtcggggact gacttcacct tgaccattag ctcgctggaa 300

cctgaggact tcgccgtgta ttactgccag cagcacaaca agtacccgta caccttcgga 360

ggcggtacta aggtcgagat caaggggggt ggcggtagcg gaggaggggg ctccggcggc 420

ggcggctcag ggggcggagg aagccaagtg cagctggtgc agtcaggcag cgaactgaag 480

aagcccggag cctccgtcaa agtgtcctgc aaagcctcgg gatacacctt cacctcctac 540

tggatgaact gggtccgcca ggcacctgga caggggctgg agtggatggg aaggatcgat 600

ccctacgatt ccgaaaccca ttacaatcag aagttcaagg accggtttgt gttctccgtg 660

gacaagtccg tgtccaccgc ctacctccaa attagcagcc tgaaggcgga ggatacagct 720

gtctactact gcgctcgcgg aaactgggat gactattggg gccagggaac taccgtgact 780

gtgtcctcca ccactacccc agcaccgagg ccacccaccc cggctcctac catcgcctcc 840

cagcctctgt ccctgcgtcc ggaggcatgt agacccgcag ctggtggggc cgtgcatacc 900

cggggtcttg acttcgcctg cgatatctac atttgggccc ctctggctgg tacttgcggg 960

gtcctgctgc tttcactcgt gatcactctt tactgtaagc gcggtcggaa gaagctgctg 1020

tacatcttta agcaaccctt catgaggcct gtgcagacta ctcaagagga ggacggctgt 1080

tcatgccggt tcccagagga ggaggaaggc ggctgcgaac tgcgcgtgaa attcagccgc 1140

agcgcagatg ctccagccta caagcagggg cagaaccagc tctacaacga actcaatctt 1200

ggtcggagag aggagtacga cgtgctggac aagcggagag gacgggaccc agaaatgggc 1260

gggaagccgc gcagaaagaa tccccaagag ggcctgtaca acgagctcca aaaggataag 1320

atggcagaag cctatagcga gattggtatg aaaggggaac gcagaagagg caaaggccac 1380

gacggactgt accagggact cagcaccgcc accaaggaca cctatgacgc tcttcacatg 1440

caggccctgc cgcctcgg 1458

<210> 280
<211> 486
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 280
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Glu Val Val Leu Thr Gln Ser Pro Ala Thr Leu
20 25 30

Ser Leu Ser Pro Gly Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Lys
35 40 45

Ser Ile Ser Lys Asp Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala
50 55 60

Pro Arg Leu Leu Ile Tyr Ser Gly Ser Thr Leu Gln Ser Gly Ile Pro
65 70 75 80

Ala Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile
85 90 95

Ser Ser Leu Glu Pro Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln His
100 105 110

Asn Lys Tyr Pro Tyr Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
115 120 125

```
Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly
    130                 135                 140

Gly Gly Gly Ser Gln Val Gln Leu Val Gln Ser Gly Ser Glu Leu Lys
145                 150                 155                 160

Lys Pro Gly Ala Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr
                165                 170                 175

Phe Thr Ser Tyr Trp Met Asn Trp Val Arg Gln Ala Pro Gly Gln Gly
            180                 185                 190

Leu Glu Trp Met Gly Arg Ile Asp Pro Tyr Asp Ser Glu Thr His Tyr
        195                 200                 205

Asn Gln Lys Phe Lys Asp Arg Phe Val Phe Ser Val Asp Lys Ser Val
    210                 215                 220

Ser Thr Ala Tyr Leu Gln Ile Ser Ser Leu Lys Ala Glu Asp Thr Ala
225                 230                 235                 240

Val Tyr Tyr Cys Ala Arg Gly Asn Trp Asp Asp Tyr Trp Gly Gln Gly
                245                 250                 255

Thr Thr Val Thr Val Ser Ser Thr Thr Thr Pro Ala Pro Arg Pro Pro
            260                 265                 270

Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser Leu Arg Pro Glu
        275                 280                 285

Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr Arg Gly Leu Asp
    290                 295                 300

Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly
305                 310                 315                 320

Val Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr Cys Lys Arg Gly Arg
                325                 330                 335

Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met Arg Pro Val Gln
            340                 345                 350
```

```
Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu Glu Glu
        355                 360                 365

Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg Ser Ala Asp Ala
    370                 375                 380

Pro Ala Tyr Lys Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn Leu
385                 390                 395                 400

Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg Asp
                405                 410                 415

Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu
            420                 425                 430

Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile
        435                 440                 445

Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His Asp Gly Leu Tyr
    450                 455                 460

Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu His Met
465                 470                 475                 480

Gln Ala Leu Pro Pro Arg
                485
```

<210> 281
<211> 263
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 281

```
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1               5                   10                  15

His Ala Ala Arg Pro Glu Val Val Leu Thr Gln Ser Pro Ala Thr Leu
```

```
            20                  25                  30

Ser Leu Ser Pro Gly Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Lys
        35                  40                  45

Ser Ile Ser Lys Asp Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala
    50                  55                  60

Pro Arg Leu Leu Ile Tyr Ser Gly Ser Thr Leu Gln Ser Gly Ile Pro
65                  70                  75                  80

Ala Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile
                85                  90                  95

Ser Ser Leu Glu Pro Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln His
            100                 105                 110

Asn Lys Tyr Pro Tyr Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
        115                 120                 125

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly
    130                 135                 140

Gly Gly Gly Ser Gln Val Gln Leu Val Gln Ser Gly Ser Glu Leu Lys
145                 150                 155                 160

Lys Pro Gly Ala Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr
                165                 170                 175

Phe Thr Ser Tyr Trp Met Asn Trp Val Arg Gln Ala Pro Gly Gln Gly
            180                 185                 190

Leu Glu Trp Met Gly Arg Ile Asp Pro Tyr Asp Ser Glu Thr His Tyr
        195                 200                 205

Asn Gln Lys Phe Lys Asp Arg Phe Val Phe Ser Val Asp Lys Ser Val
    210                 215                 220

Ser Thr Ala Tyr Leu Gln Ile Ser Ser Leu Lys Ala Glu Asp Thr Ala
225                 230                 235                 240
```

Val Tyr Tyr Cys Ala Arg Gly Asn Trp Asp Asp Tyr Trp Gly Gln Gly
245 250 255

Thr Thr Val Thr Val Ser Ser
260

<210> 282
<211> 115
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 282
Gln Val Gln Leu Val Gln Ser Gly Ser Glu Leu Lys Lys Pro Gly Ala
1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Ser Tyr
20 25 30

Trp Met Asn Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45

Gly Arg Ile Asp Pro Tyr Asp Ser Glu Thr His Tyr Asn Gln Lys Phe
50 55 60

Lys Asp Arg Phe Val Phe Ser Val Asp Lys Ser Val Ser Thr Ala Tyr
65 70 75 80

Leu Gln Ile Ser Ser Leu Lys Ala Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Gly Asn Trp Asp Asp Tyr Trp Gly Gln Gly Thr Thr Val Thr
100 105 110

Val Ser Ser
115

<210> 283
<211> 107

<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 283
Glu Val Val Leu Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly
1 5 10 15

Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Lys Ser Ile Ser Lys Asp
20 25 30

Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile
35 40 45

Tyr Ser Gly Ser Thr Leu Gln Ser Gly Ile Pro Ala Arg Phe Ser Gly
50 55 60

Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Glu Pro
65 70 75 80

Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln His Asn Lys Tyr Pro Tyr
85 90 95

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

<210> 284
<211> 1458
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 284
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

cccgacgtcg tgatgaccca gtcaccggca ttcctgtccg tgactcccgg agaaaaggtc 120

acgattactt gccgggcgtc caagagcatc tccaaggacc tcgcctggta ccaacagaag 180

ccggaccagg cccctaagct gttgatctac tcggggtcca cccttcaatc gggagtgcca 240

tcgcggttta gcggttcggg ttctgggacc gacttcactt tcaccatctc ctcactggaa 300

gccgaggatg ccgccactta ctactgtcag cagcacaaca agtatccgta caccttcgga 360

ggcggtacca aagtggagat caaggggggt ggcggtagcg gaggaggggg ctccggcggc 420

ggcggctcag ggggcggagg aagccaagtg cagctggtgc agtcaggcag cgaactgaag 480

aagcccggag cctccgtcaa agtgtcctgc aaagcctcgg gatacacctt cacctcctac 540

tggatgaact gggtccgcca ggcacctgga caggggctgg agtggatggg aaggatcgat 600

ccctacgatt ccgaaaccca ttacaatcag aagttcaagg accggtttgt gttctccgtg 660

gacaagtccg tgtccaccgc ctacctccaa attagcagcc tgaaggcgga ggatacagct 720

gtctactact gcgctcgcgg aaactgggat gactattggg gccagggaac taccgtgact 780

gtgtcctcca ccactacccc agcaccgagg ccacccaccc cggctcctac catcgcctcc 840

cagcctctgt ccctgcgtcc ggaggcatgt agacccgcag ctggtggggc cgtgcatacc 900

cggggtcttg acttcgcctg cgatatctac atttgggccc ctctggctgg tacttgcggg 960

gtcctgctgc tttcactcgt gatcactctt tactgtaagc gcggtcggaa gaagctgctg 1020

tacatcttta agcaaccctt catgaggcct gtgcagacta ctcaagagga ggacggctgt 1080

tcatgccggt tcccagagga ggaggaaggc ggctgcgaac tgcgcgtgaa attcagccgc 1140

agcgcagatg ctccagccta caagcagggg cagaaccagc tctacaacga actcaatctt 1200

ggtcggagag aggagtacga cgtgctggac aagcggagag gacgggaccc agaaatgggc 1260

gggaagccgc gcagaaagaa tccccaagag ggcctgtaca acgagctcca aaaggataag 1320

atggcagaag cctatagcga gattggtatg aaaggggaac gcagaagagg caaaggccac 1380

gacggactgt accagggact cagcaccgcc accaaggaca cctatgacgc tcttcacatg 1440

caggccctgc cgcctcgg 1458

<210> 285
<211> 486
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 285

```
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1               5                  10                  15

His Ala Ala Arg Pro Asp Val Val Met Thr Gln Ser Pro Ala Phe Leu
            20                  25                  30

Ser Val Thr Pro Gly Glu Lys Val Thr Ile Thr Cys Arg Ala Ser Lys
        35                  40                  45

Ser Ile Ser Lys Asp Leu Ala Trp Tyr Gln Gln Lys Pro Asp Gln Ala
    50                  55                  60

Pro Lys Leu Leu Ile Tyr Ser Gly Ser Thr Leu Gln Ser Gly Val Pro
65                  70                  75                  80

Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Phe Thr Ile
                85                  90                  95

Ser Ser Leu Glu Ala Glu Asp Ala Ala Thr Tyr Tyr Cys Gln Gln His
            100                 105                 110

Asn Lys Tyr Pro Tyr Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
        115                 120                 125

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly
    130                 135                 140

Gly Gly Gly Ser Gln Val Gln Leu Val Gln Ser Gly Ser Glu Leu Lys
145                 150                 155                 160

Lys Pro Gly Ala Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr
                165                 170                 175

Phe Thr Ser Tyr Trp Met Asn Trp Val Arg Gln Ala Pro Gly Gln Gly
            180                 185                 190

Leu Glu Trp Met Gly Arg Ile Asp Pro Tyr Asp Ser Glu Thr His Tyr
        195                 200                 205
```

```
Asn Gln Lys Phe Lys Asp Arg Phe Val Phe Ser Val Asp Lys Ser Val
    210                 215                 220

Ser Thr Ala Tyr Leu Gln Ile Ser Ser Leu Lys Ala Glu Asp Thr Ala
225                 230                 235                 240

Val Tyr Tyr Cys Ala Arg Gly Asn Trp Asp Asp Tyr Trp Gly Gln Gly
                245                 250                 255

Thr Thr Val Thr Val Ser Ser Thr Thr Thr Pro Ala Pro Arg Pro Pro
            260                 265                 270

Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser Leu Arg Pro Glu
        275                 280                 285

Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr Arg Gly Leu Asp
    290                 295                 300

Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly
305                 310                 315                 320

Val Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr Cys Lys Arg Gly Arg
                325                 330                 335

Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met Arg Pro Val Gln
            340                 345                 350

Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu Glu Glu
        355                 360                 365

Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg Ser Ala Asp Ala
    370                 375                 380

Pro Ala Tyr Lys Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn Leu
385                 390                 395                 400

Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg Asp
                405                 410                 415

Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu
            420                 425                 430
```

Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile
435 440 445

Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His Asp Gly Leu Tyr
450 455 460

Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu His Met
465 470 475 480

Gln Ala Leu Pro Pro Arg
485

<210> 286
<211> 263
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 286
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Asp Val Val Met Thr Gln Ser Pro Ala Phe Leu
20 25 30

Ser Val Thr Pro Gly Glu Lys Val Thr Ile Thr Cys Arg Ala Ser Lys
35 40 45

Ser Ile Ser Lys Asp Leu Ala Trp Tyr Gln Gln Lys Pro Asp Gln Ala
50 55 60

Pro Lys Leu Leu Ile Tyr Ser Gly Ser Thr Leu Gln Ser Gly Val Pro
65 70 75 80

Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Phe Thr Ile
85 90 95

Ser Ser Leu Glu Ala Glu Asp Ala Ala Thr Tyr Tyr Cys Gln Gln His

```
            100                 105                 110

Asn Lys Tyr Pro Tyr Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
        115                 120                 125

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly
    130                 135                 140

Gly Gly Gly Ser Gln Val Gln Leu Val Gln Ser Gly Ser Glu Leu Lys
145                 150                 155                 160

Lys Pro Gly Ala Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr
                165                 170                 175

Phe Thr Ser Tyr Trp Met Asn Trp Val Arg Gln Ala Pro Gly Gln Gly
            180                 185                 190

Leu Glu Trp Met Gly Arg Ile Asp Pro Tyr Asp Ser Glu Thr His Tyr
        195                 200                 205

Asn Gln Lys Phe Lys Asp Arg Phe Val Phe Ser Val Asp Lys Ser Val
    210                 215                 220

Ser Thr Ala Tyr Leu Gln Ile Ser Ser Leu Lys Ala Glu Asp Thr Ala
225                 230                 235                 240

Val Tyr Tyr Cys Ala Arg Gly Asn Trp Asp Asp Tyr Trp Gly Gln Gly
                245                 250                 255

Thr Thr Val Thr Val Ser Ser
            260
```

<210> 287
<211> 115
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 287

```
Gln Val Gln Leu Val Gln Ser Gly Ser Glu Leu Lys Lys Pro Gly Ala
1               5                   10                  15


Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Ser Tyr
            20                  25                  30


Trp Met Asn Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
        35                  40                  45


Gly Arg Ile Asp Pro Tyr Asp Ser Glu Thr His Tyr Asn Gln Lys Phe
    50                  55                  60


Lys Asp Arg Phe Val Phe Ser Val Asp Lys Ser Val Ser Thr Ala Tyr
65                  70                  75                  80


Leu Gln Ile Ser Ser Leu Lys Ala Glu Asp Thr Ala Val Tyr Tyr Cys
                85                  90                  95


Ala Arg Gly Asn Trp Asp Asp Tyr Trp Gly Gln Gly Thr Thr Val Thr
            100                 105                 110


Val Ser Ser
        115


<210> 288
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 288
Asp Val Val Met Thr Gln Ser Pro Ala Phe Leu Ser Val Thr Pro Gly
1               5                   10                  15


Glu Lys Val Thr Ile Thr Cys Arg Ala Ser Lys Ser Ile Ser Lys Asp
            20                  25                  30


Leu Ala Trp Tyr Gln Gln Lys Pro Asp Gln Ala Pro Lys Leu Leu Ile
        35                  40                  45
```

Tyr Ser Gly Ser Thr Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
    50   55   60

Ser Gly Ser Gly Thr Asp Phe Thr Phe Thr Ile Ser Ser Leu Glu Ala
65   70   75   80

Glu Asp Ala Ala Thr Tyr Tyr Cys Gln Gln His Asn Lys Tyr Pro Tyr
                85   90   95

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

<210> 289
<211> 1458
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polynucleotide"

<400> 289
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

cccgacgtgg tcatgactca gtccccggac tcactcgcgg tgtcgcttgg agagagagcg 120

accatcaact gtcgggcctc aaagagcatc agcaaggacc tggcctggta ccagcagaag 180

ccgggacagc cgccaaagct gctgatctac tccgggtcca ccttgcaatc tggtgtccct 240

gaccggttct ccggttccgg gtcgggtacc gacttcacgc tcactatttc gtcgctgcaa 300

gccgaagatg tggccgtgta ctattgccaa cagcacaaca agtaccccta cacttttggc 360

ggaggcacca aggtggaaat caaggggggt ggcggtagcg gaggaggggg ctccggcggc 420

ggcggctcag ggggcggagg aagccaagtg cagctggtgc agtcaggcag cgaactgaag 480

aagcccggag cctccgtcaa agtgtcctgc aaagcctcgg gatacacctt cacctcctac 540

tggatgaact gggtccgcca ggcacctgga caggggctgg agtggatggg aaggatcgat 600

ccctacgatt ccgaaaccca ttacaatcag aagttcaagg accggtttgt gttctccgtg 660

gacaagtccg tgtccaccgc ctacctccaa attagcagcc tgaaggcgga ggatacagct 720

gtctactact gcgctcgcgg aaactgggat gactattggg gccagggaac taccgtgact 780

gtgtcctcca ccactacccc agcaccgagg ccacccaccc cggctcctac catcgcctcc 840

cagcctctgt ccctgcgtcc ggaggcatgt agacccgcag ctggtggggc cgtgcatacc 900

cggggtcttg acttcgcctg cgatatctac atttgggccc ctctggctgg tacttgcggg 960

gtcctgctgc tttcactcgt gatcactctt tactgtaagc gcggtcggaa gaagctgctg 1020

tacatcttta agcaaccctt catgaggcct gtgcagacta ctcaagagga ggacggctgt 1080

tcatgccggt tcccagagga ggaggaaggc ggctgcgaac tgcgcgtgaa attcagccgc 1140

agcgcagatg ctccagccta caagcagggg cagaaccagc tctacaacga actcaatctt 1200

ggtcggagag aggagtacga cgtgctggac aagcggagag gacgggaccc agaaatgggc 1260

gggaagccgc gcagaaagaa tccccaagag ggcctgtaca acgagctcca aaaggataag 1320

atggcagaag cctatagcga gattggtatg aaaggggaac gcagaagagg caaaggccac 1380

gacggactgt accagggact cagcaccgcc accaaggaca cctatgacgc tcttcacatg 1440

caggccctgc cgcctcgg 1458

<210> 290
<211> 486
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 290
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Asp Val Val Met Thr Gln Ser Pro Asp Ser Leu
20 25 30

Ala Val Ser Leu Gly Glu Arg Ala Thr Ile Asn Cys Arg Ala Ser Lys
35 40 45

Ser Ile Ser Lys Asp Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Pro
50 55 60

Pro Lys Leu Leu Ile Tyr Ser Gly Ser Thr Leu Gln Ser Gly Val Pro
65 70 75 80

```
Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile
                85                  90                  95

Ser Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln Gln His
            100                 105                 110

Asn Lys Tyr Pro Tyr Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
        115                 120                 125

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly
    130                 135                 140

Gly Gly Gly Ser Gln Val Gln Leu Val Gln Ser Gly Ser Glu Leu Lys
145                 150                 155                 160

Lys Pro Gly Ala Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr
                165                 170                 175

Phe Thr Ser Tyr Trp Met Asn Trp Val Arg Gln Ala Pro Gly Gln Gly
            180                 185                 190

Leu Glu Trp Met Gly Arg Ile Asp Pro Tyr Asp Ser Glu Thr His Tyr
        195                 200                 205

Asn Gln Lys Phe Lys Asp Arg Phe Val Phe Ser Val Asp Lys Ser Val
    210                 215                 220

Ser Thr Ala Tyr Leu Gln Ile Ser Ser Leu Lys Ala Glu Asp Thr Ala
225                 230                 235                 240

Val Tyr Tyr Cys Ala Arg Gly Asn Trp Asp Asp Tyr Trp Gly Gln Gly
                245                 250                 255

Thr Thr Val Thr Val Ser Ser Thr Thr Thr Pro Ala Pro Arg Pro Pro
            260                 265                 270

Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser Leu Arg Pro Glu
        275                 280                 285
```

```
Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr Arg Gly Leu Asp
    290                 295                 300

Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly
305                 310                 315                 320

Val Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr Cys Lys Arg Gly Arg
                325                 330                 335

Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met Arg Pro Val Gln
            340                 345                 350

Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu Glu Glu
        355                 360                 365

Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg Ser Ala Asp Ala
    370                 375                 380

Pro Ala Tyr Lys Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn Leu
385                 390                 395                 400

Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg Asp
                405                 410                 415

Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu
            420                 425                 430

Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile
        435                 440                 445

Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His Asp Gly Leu Tyr
    450                 455                 460

Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu His Met
465                 470                 475                 480

Gln Ala Leu Pro Pro Arg
                485
```

<210> 291
<211> 263

<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 291
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Asp Val Val Met Thr Gln Ser Pro Asp Ser Leu
20 25 30

Ala Val Ser Leu Gly Glu Arg Ala Thr Ile Asn Cys Arg Ala Ser Lys
35 40 45

Ser Ile Ser Lys Asp Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Pro
50 55 60

Pro Lys Leu Leu Ile Tyr Ser Gly Ser Thr Leu Gln Ser Gly Val Pro
65 70 75 80

Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile
85 90 95

Ser Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln Gln His
100 105 110

Asn Lys Tyr Pro Tyr Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
115 120 125

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly
130 135 140

Gly Gly Gly Ser Gln Val Gln Leu Val Gln Ser Gly Ser Glu Leu Lys
145 150 155 160

Lys Pro Gly Ala Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr
165 170 175

Phe Thr Ser Tyr Trp Met Asn Trp Val Arg Gln Ala Pro Gly Gln Gly

```
            180                 185                 190

Leu Glu Trp Met Gly Arg Ile Asp Pro Tyr Asp Ser Glu Thr His Tyr
        195                 200                 205

Asn Gln Lys Phe Lys Asp Arg Phe Val Phe Ser Val Asp Lys Ser Val
    210                 215                 220

Ser Thr Ala Tyr Leu Gln Ile Ser Ser Leu Lys Ala Glu Asp Thr Ala
225                 230                 235                 240

Val Tyr Tyr Cys Ala Arg Gly Asn Trp Asp Asp Tyr Trp Gly Gln Gly
                245                 250                 255

Thr Thr Val Thr Val Ser Ser
            260


<210> 292
<211> 115
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 292
Gln Val Gln Leu Val Gln Ser Gly Ser Glu Leu Lys Lys Pro Gly Ala
1               5                   10                  15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Ser Tyr
            20                  25                  30

Trp Met Asn Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
        35                  40                  45

Gly Arg Ile Asp Pro Tyr Asp Ser Glu Thr His Tyr Asn Gln Lys Phe
    50                  55                  60

Lys Asp Arg Phe Val Phe Ser Val Asp Lys Ser Val Ser Thr Ala Tyr
65                  70                  75                  80
```

```
Leu Gln Ile Ser Ser Leu Lys Ala Glu Asp Thr Ala Val Tyr Tyr Cys
                85                  90                  95


Ala Arg Gly Asn Trp Asp Asp Tyr Trp Gly Gln Gly Thr Thr Val Thr
            100                 105                 110


Val Ser Ser
        115


<210> 293
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 293
Asp Val 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 Arg Ala Ser Lys Ser Ile Ser Lys Asp
            20                  25                  30


Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro Lys Leu Leu Ile
        35                  40                  45


Tyr Ser Gly Ser Thr Leu Gln Ser Gly Val Pro Asp Arg Phe Ser Gly
    50                  55                  60


Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Ala
65                  70                  75                  80


Glu Asp Val Ala Val Tyr Tyr Cys Gln Gln His Asn Lys Tyr Pro Tyr
                85                  90                  95


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


<210> 294
<211> 1458
<212> DNA
```

<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 294
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

cccgaggtgc agctggtgca gagcggagcc gaggtcaaga agcctggaga atccctgagg 120

atcagctgca aaggcagcgg gtataccttc acctcctact ggatgaattg ggtccgccag 180

atgcccggaa aaggcctgga gtggatggga cggattgacc cctacgactc ggaaacccat 240

tacaaccaga agttcaagga tcacgtgacc atctccgtgg acaagtccat ttccactgcg 300

tacctccagt ggtcaagcct gaaggcctcc gacactgcta tgtactactg cgcacgcgga 360

aactgggatg attactgggg acagggaaca accgtgactg tgtcctccgg gggtggcggt 420

agcggaggag ggggctccgg cggcggcggc tcagggggcg gaggaagcga cgtgcagctc 480

acccagtcgc cctcatttct gtcggcctca gtgggagaca gagtgaccat tacttgtcgg 540

gcctccaaga gcatctccaa ggacctggcc tggtatcagc agaagccagg aaaggcgcct 600

aagttgctca tctactcggg gtcgaccctg caatctggcg tgccgtcccg gttctccggt 660

tcgggaagcg gtaccgaatt cacccttact atctcctccc tgcaaccgga ggacttcgcc 720

acctactact gccaacagca caacaagtac ccgtacactt tcgggggtgg cacgaaggtc 780

gaaatcaaga ccactacccc agcaccgagg ccacccaccc cggctcctac catcgcctcc 840

cagcctctgt ccctgcgtcc ggaggcatgt agacccgcag ctggtggggc cgtgcatacc 900

cggggtcttg acttcgcctg cgatatctac atttgggccc ctctggctgg tacttgcggg 960

gtcctgctgc tttcactcgt gatcactctt tactgtaagc gcggtcggaa gaagctgctg 1020

tacatcttta agcaaccctt catgaggcct gtgcagacta ctcaagagga ggacggctgt 1080

tcatgccggt tcccagagga ggaggaaggc ggctgcgaac tgcgcgtgaa attcagccgc 1140

agcgcagatg ctccagccta caagcagggg cagaaccagc tctacaacga actcaatctt 1200

ggtcggagag aggagtacga cgtgctggac aagcggagag gacgggaccc agaaatgggc 1260

gggaagccgc gcagaaagaa tccccaagag ggcctgtaca acgagctcca aaaggataag 1320

atggcagaag cctatagcga gattggtatg aaaggggaac gcagaagagg caaaggccac 1380

gacggactgt accagggact cagcaccgcc accaaggaca cctatgacgc tcttcacatg 1440

caggccctgc cgcctcgg 1458

<210> 295
<211> 486
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 295
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Glu Val Gln Leu Val Gln Ser Gly Ala Glu Val
20 25 30

Lys Lys Pro Gly Glu Ser Leu Arg Ile Ser Cys Lys Gly Ser Gly Tyr
35 40 45

Thr Phe Thr Ser Tyr Trp Met Asn Trp Val Arg Gln Met Pro Gly Lys
50 55 60

Gly Leu Glu Trp Met Gly Arg Ile Asp Pro Tyr Asp Ser Glu Thr His
65 70 75 80

Tyr Asn Gln Lys Phe Lys Asp His Val Thr Ile Ser Val Asp Lys Ser
85 90 95

Ile Ser Thr Ala Tyr Leu Gln Trp Ser Ser Leu Lys Ala Ser Asp Thr
100 105 110

Ala Met Tyr Tyr Cys Ala Arg Gly Asn Trp Asp Asp Tyr Trp Gly Gln
115 120 125

Gly Thr Thr Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly
130 135 140

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Val Gln Leu
145 150 155 160

```
Thr Gln Ser Pro Ser Phe Leu Ser Ala Ser Val Gly Asp Arg Val Thr
                165                 170                 175

Ile Thr Cys Arg Ala Ser Lys Ser Ile Ser Lys Asp Leu Ala Trp Tyr
            180                 185                 190

Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile Tyr Ser Gly Ser
        195                 200                 205

Thr Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly
    210                 215                 220

Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro Glu Asp Phe Ala
225                 230                 235                 240

Thr Tyr Tyr Cys Gln Gln His Asn Lys Tyr Pro Tyr Thr Phe Gly Gly
                245                 250                 255

Gly Thr Lys Val Glu Ile Lys Thr Thr Thr Pro Ala Pro Arg Pro Pro
            260                 265                 270

Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser Leu Arg Pro Glu
        275                 280                 285

Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr Arg Gly Leu Asp
    290                 295                 300

Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly
305                 310                 315                 320

Val Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr Cys Lys Arg Gly Arg
                325                 330                 335

Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met Arg Pro Val Gln
            340                 345                 350

Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu Glu Glu
        355                 360                 365
```

```
Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg Ser Ala Asp Ala
    370                 375                 380

Pro Ala Tyr Lys Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn Leu
385                 390                 395                 400

Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg Asp
                405                 410                 415

Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu
            420                 425                 430

Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile
        435                 440                 445

Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His Asp Gly Leu Tyr
    450                 455                 460

Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu His Met
465                 470                 475                 480

Gln Ala Leu Pro Pro Arg
                485
```

<210> 296
<211> 263
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 296

```
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1               5                   10                  15

His Ala Ala Arg Pro Glu Val Gln Leu Val Gln Ser Gly Ala Glu Val
            20                  25                  30

Lys Lys Pro Gly Glu Ser Leu Arg Ile Ser Cys Lys Gly Ser Gly Tyr
        35                  40                  45
```

```
Thr Phe Thr Ser Tyr Trp Met Asn Trp Val Arg Gln Met Pro Gly Lys
    50                  55                  60

Gly Leu Glu Trp Met Gly Arg Ile Asp Pro Tyr Asp Ser Glu Thr His
65                  70                  75                  80

Tyr Asn Gln Lys Phe Lys Asp His Val Thr Ile Ser Val Asp Lys Ser
                85                  90                  95

Ile Ser Thr Ala Tyr Leu Gln Trp Ser Ser Leu Lys Ala Ser Asp Thr
            100                 105                 110

Ala Met Tyr Tyr Cys Ala Arg Gly Asn Trp Asp Asp Tyr Trp Gly Gln
        115                 120                 125

Gly Thr Thr Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly
    130                 135                 140

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Val Gln Leu
145                 150                 155                 160

Thr Gln Ser Pro Ser Phe Leu Ser Ala Ser Val Gly Asp Arg Val Thr
                165                 170                 175

Ile Thr Cys Arg Ala Ser Lys Ser Ile Ser Lys Asp Leu Ala Trp Tyr
            180                 185                 190

Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile Tyr Ser Gly Ser
        195                 200                 205

Thr Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly
    210                 215                 220

Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro Glu Asp Phe Ala
225                 230                 235                 240

Thr Tyr Tyr Cys Gln Gln His Asn Lys Tyr Pro Tyr Thr Phe Gly Gly
                245                 250                 255

Gly Thr Lys Val Glu Ile Lys
```

260

<210> 297
<211> 115
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 297
Glu Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Glu
1 5 10 15

Ser Leu Arg Ile Ser Cys Lys Gly Ser Gly Tyr Thr Phe Thr Ser Tyr
20 25 30

Trp Met Asn Trp Val Arg Gln Met Pro Gly Lys Gly Leu Glu Trp Met
35 40 45

Gly Arg Ile Asp Pro Tyr Asp Ser Glu Thr His Tyr Asn Gln Lys Phe
50 55 60

Lys Asp His Val Thr Ile Ser Val Asp Lys Ser Ile Ser Thr Ala Tyr
65 70 75 80

Leu Gln Trp Ser Ser Leu Lys Ala Ser Asp Thr Ala Met Tyr Tyr Cys
85 90 95

Ala Arg Gly Asn Trp Asp Asp Tyr Trp Gly Gln Gly Thr Thr Val Thr
100 105 110

Val Ser Ser
115

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

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic

polypeptide"

<400> 298
Asp Val 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 Lys Ser Ile Ser Lys Asp
20 25 30

Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
35 40 45

Tyr Ser Gly 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 His Asn Lys Tyr Pro Tyr
85 90 95

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

<210> 299
<211> 1458
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 299
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

cccgaggtgc agctggtgca gagcggagcc gaggtcaaga agcctggaga atccctgagg 120

atcagctgca aaggcagcgg gtataccttc acctcctact ggatgaattg ggtccgccag 180

atgcccggaa aaggcctgga gtggatggga cggattgacc cctacgactc ggaaacccat 240

tacaaccaga agttcaagga tcacgtgacc atctccgtgg acaagtccat ttccactgcg 300

tacctccagt ggtcaagcct gaaggcctcc gacactgcta tgtactactg cgcacgcgga 360

aactgggatg attactgggg acagggaaca accgtgactg tgtcctccgg gggtggcggt 420

agcggaggag ggggctccgg cggcggcggc tcagggggcg gaggaagcga agtggtgctg 480

acccagtcgc ccgcaaccct ctctctgtcg ccgggagaac gcgccactct ttcctgtcgg 540

gcgtccaaga gcatctcaaa ggacctcgcc tggtaccagc agaagcctgg tcaagccccg 600

cggctgctga tctactccgg ctccacgctg caatcaggaa tcccagccag attttccggt 660

tcggggtcgg ggactgactt caccttgacc attagctcgc tggaacctga ggacttcgcc 720

gtgtattact gccagcagca caacaagtac ccgtacacct tcggaggcgg tactaaggtc 780

gagatcaaga ccactacccc agcaccgagg ccacccaccc cggctcctac catcgcctcc 840

cagcctctgt ccctgcgtcc ggaggcatgt agacccgcag ctggtggggc cgtgcatacc 900

cggggtcttg acttcgcctg cgatatctac atttgggccc ctctggctgg tacttgcggg 960

gtcctgctgc tttcactcgt gatcactctt tactgtaagc gcggtcggaa gaagctgctg 1020

tacatcttta agcaaccctt catgaggcct gtgcagacta ctcaagagga ggacggctgt 1080

tcatgccggt tcccagagga ggaggaaggc ggctgcgaac tgcgcgtgaa attcagccgc 1140

agcgcagatg ctccagccta caagcagggg cagaaccagc tctacaacga actcaatctt 1200

ggtcggagag aggagtacga cgtgctggac aagcggagag gacgggaccc agaaatgggc 1260

gggaagccgc gcagaaagaa tccccaagag ggcctgtaca acgagctcca aaaggataag 1320

atggcagaag cctatagcga gattggtatg aaaggggaac gcagaagagg caaaggccac 1380

gacggactgt accagggact cagcaccgcc accaaggaca cctatgacgc tcttcacatg 1440

caggccctgc cgcctcgg 1458

<210> 300
<211> 486
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 300
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

```
His Ala Ala Arg Pro Glu Val Gln Leu Val Gln Ser Gly Ala Glu Val
            20                  25                  30

Lys Lys Pro Gly Glu Ser Leu Arg Ile Ser Cys Lys Gly Ser Gly Tyr
        35                  40                  45

Thr Phe Thr Ser Tyr Trp Met Asn Trp Val Arg Gln Met Pro Gly Lys
    50                  55                  60

Gly Leu Glu Trp Met Gly Arg Ile Asp Pro Tyr Asp Ser Glu Thr His
65                  70                  75                  80

Tyr Asn Gln Lys Phe Lys Asp His Val Thr Ile Ser Val Asp Lys Ser
                85                  90                  95

Ile Ser Thr Ala Tyr Leu Gln Trp Ser Ser Leu Lys Ala Ser Asp Thr
            100                 105                 110

Ala Met Tyr Tyr Cys Ala Arg Gly Asn Trp Asp Asp Tyr Trp Gly Gln
        115                 120                 125

Gly Thr Thr Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly
    130                 135                 140

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Val Val Leu
145                 150                 155                 160

Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly Glu Arg Ala Thr
                165                 170                 175

Leu Ser Cys Arg Ala Ser Lys Ser Ile Ser Lys Asp Leu Ala Trp Tyr
            180                 185                 190

Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile Tyr Ser Gly Ser
        195                 200                 205

Thr Leu Gln Ser Gly Ile Pro Ala Arg Phe Ser Gly Ser Gly Ser Gly
    210                 215                 220

Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Glu Pro Glu Asp Phe Ala
225                 230                 235                 240
```

```
Val Tyr Tyr Cys Gln Gln His Asn Lys Tyr Pro Tyr Thr Phe Gly Gly
                245                 250                 255

Gly Thr Lys Val Glu Ile Lys Thr Thr Thr Pro Ala Pro Arg Pro Pro
            260                 265                 270

Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser Leu Arg Pro Glu
        275                 280                 285

Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr Arg Gly Leu Asp
    290                 295                 300

Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly
305                 310                 315                 320

Val Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr Cys Lys Arg Gly Arg
                325                 330                 335

Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met Arg Pro Val Gln
            340                 345                 350

Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu Glu Glu
        355                 360                 365

Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg Ser Ala Asp Ala
    370                 375                 380

Pro Ala Tyr Lys Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn Leu
385                 390                 395                 400

Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg Asp
                405                 410                 415

Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu
            420                 425                 430

Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile
        435                 440                 445
```

Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His Asp Gly Leu Tyr
450 455 460

Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu His Met
465 470 475 480

Gln Ala Leu Pro Pro Arg
485

<210> 301
<211> 263
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 301
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Glu Val Gln Leu Val Gln Ser Gly Ala Glu Val
20 25 30

Lys Lys Pro Gly Glu Ser Leu Arg Ile Ser Cys Lys Gly Ser Gly Tyr
35 40 45

Thr Phe Thr Ser Tyr Trp Met Asn Trp Val Arg Gln Met Pro Gly Lys
50 55 60

Gly Leu Glu Trp Met Gly Arg Ile Asp Pro Tyr Asp Ser Glu Thr His
65 70 75 80

Tyr Asn Gln Lys Phe Lys Asp His Val Thr Ile Ser Val Asp Lys Ser
85 90 95

Ile Ser Thr Ala Tyr Leu Gln Trp Ser Ser Leu Lys Ala Ser Asp Thr
100 105 110

Ala Met Tyr Tyr Cys Ala Arg Gly Asn Trp Asp Asp Tyr Trp Gly Gln
115 120 125

```
Gly Thr Thr Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly
    130                 135                 140

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Val Val Leu
145                 150                 155                 160

Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly Glu Arg Ala Thr
                165                 170                 175

Leu Ser Cys Arg Ala Ser Lys Ser Ile Ser Lys Asp Leu Ala Trp Tyr
            180                 185                 190

Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile Tyr Ser Gly Ser
        195                 200                 205

Thr Leu Gln Ser Gly Ile Pro Ala Arg Phe Ser Gly Ser Gly Ser Gly
    210                 215                 220

Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Glu Pro Glu Asp Phe Ala
225                 230                 235                 240

Val Tyr Tyr Cys Gln Gln His Asn Lys Tyr Pro Tyr Thr Phe Gly Gly
                245                 250                 255

Gly Thr Lys Val Glu Ile Lys
            260
```

<210> 302
<211> 115
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 302

```
Glu Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Glu
1               5                   10                  15

Ser Leu Arg Ile Ser Cys Lys Gly Ser Gly Tyr Thr Phe Thr Ser Tyr
            20                  25                  30
```

```
Trp Met Asn Trp Val Arg Gln Met Pro Gly Lys Gly Leu Glu Trp Met
        35                  40                  45

Gly Arg Ile Asp Pro Tyr Asp Ser Glu Thr His Tyr Asn Gln Lys Phe
    50                  55                  60

Lys Asp His Val Thr Ile Ser Val Asp Lys Ser Ile Ser Thr Ala Tyr
65                  70                  75                  80

Leu Gln Trp Ser Ser Leu Lys Ala Ser Asp Thr Ala Met Tyr Tyr Cys
                85                  90                  95

Ala Arg Gly Asn Trp Asp Asp Tyr Trp Gly Gln Gly Thr Thr Val Thr
            100                 105                 110

Val Ser Ser
        115


<210> 303
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 303
Glu Val Val Leu Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly
1               5                   10                  15

Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Lys Ser Ile Ser Lys Asp
            20                  25                  30

Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile
        35                  40                  45

Tyr Ser Gly Ser Thr Leu Gln Ser Gly Ile Pro Ala Arg Phe Ser Gly
    50                  55                  60

Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Glu Pro
```

65 70 75 80

Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln His Asn Lys Tyr Pro Tyr
85 90 95

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

<210> 304
<211> 1458
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 304
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

cccgaggtgc agctggtgca gagcggagcc gaggtcaaga agcctggaga atccctgagg 120

atcagctgca aaggcagcgg gtataccttc acctcctact ggatgaattg ggtccgccag 180

atgcccggaa aaggcctgga gtggatggga cggattgacc cctacgactc ggaaacccat 240

tacaaccaga agttcaagga tcacgtgacc atctccgtgg acaagtccat ttccactgcg 300

tacctccagt ggtcaagcct gaaggcctcc gacactgcta tgtactactg cgcacgcgga 360

aactgggatg attactgggg acagggaaca accgtgactg tgtcctccgg gggtggcggt 420

agcggaggag ggggctccgg cggcggcggc tcaggggggcg gaggaagcga cgtcgtgatg 480

acccagtcac cggcattcct gtccgtgact cccggagaaa aggtcacgat tacttgccgg 540

gcgtccaaga gcatctccaa ggacctcgcc tggtaccaac agaagccgga ccaggccccct 600

aagctgttga tctactcggg gtccaccctt caatcgggag tgccatcgcg gtttagcggt 660

tcgggttctg ggaccgactt cactttcacc atctcctcac tggaagccga ggatgccgcc 720

acttactact gtcagcagca caacaagtat ccgtacacct tcggaggcgg taccaaagtg 780

gagatcaaga ccactacccc agcaccgagg ccacccaccc cggctcctac catcgcctcc 840

cagcctctgt ccctgcgtcc ggaggcatgt agacccgcag ctggtggggc cgtgcatacc 900

cggggtcttg acttcgcctg cgatatctac atttgggccc ctctggctgg tacttgcggg 960

gtcctgctgc tttcactcgt gatcactctt tactgtaagc gcggtcggaa gaagctgctg 1020

tacatcttta agcaaccctt catgaggcct gtgcagacta ctcaagagga ggacggctgt 1080

tcatgccggt tcccagagga ggaggaaggc ggctgcgaac tgcgcgtgaa attcagccgc 1140

agcgcagatg ctccagccta caagcagggg cagaaccagc tctacaacga actcaatctt 1200

ggtcggagag aggagtacga cgtgctggac aagcggagag gacgggaccc agaaatgggc 1260

gggaagccgc gcagaaagaa tccccaagag ggcctgtaca acgagctcca aaaggataag 1320

atggcagaag cctatagcga gattggtatg aaaggggaac gcagaagagg caaaggccac 1380

gacggactgt accagggact cagcaccgcc accaaggaca cctatgacgc tcttcacatg 1440

caggccctgc cgcctcgg 1458

<210> 305
<211> 486
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 305
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Glu Val Gln Leu Val Gln Ser Gly Ala Glu Val
20 25 30

Lys Lys Pro Gly Glu Ser Leu Arg Ile Ser Cys Lys Gly Ser Gly Tyr
35 40 45

Thr Phe Thr Ser Tyr Trp Met Asn Trp Val Arg Gln Met Pro Gly Lys
50 55 60

Gly Leu Glu Trp Met Gly Arg Ile Asp Pro Tyr Asp Ser Glu Thr His
65 70 75 80

Tyr Asn Gln Lys Phe Lys Asp His Val Thr Ile Ser Val Asp Lys Ser
85 90 95

```
Ile Ser Thr Ala Tyr Leu Gln Trp Ser Ser Leu Lys Ala Ser Asp Thr
            100                 105                 110

Ala Met Tyr Tyr Cys Ala Arg Gly Asn Trp Asp Asp Tyr Trp Gly Gln
        115                 120                 125

Gly Thr Thr Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly
    130                 135                 140

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Val Val Met
145                 150                 155                 160

Thr Gln Ser Pro Ala Phe Leu Ser Val Thr Pro Gly Glu Lys Val Thr
                165                 170                 175

Ile Thr Cys Arg Ala Ser Lys Ser Ile Ser Lys Asp Leu Ala Trp Tyr
            180                 185                 190

Gln Gln Lys Pro Asp Gln Ala Pro Lys Leu Leu Ile Tyr Ser Gly Ser
        195                 200                 205

Thr Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly
    210                 215                 220

Thr Asp Phe Thr Phe Thr Ile Ser Ser Leu Glu Ala Glu Asp Ala Ala
225                 230                 235                 240

Thr Tyr Tyr Cys Gln Gln His Asn Lys Tyr Pro Tyr Thr Phe Gly Gly
                245                 250                 255

Gly Thr Lys Val Glu Ile Lys Thr Thr Thr Pro Ala Pro Arg Pro Pro
            260                 265                 270

Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser Leu Arg Pro Glu
        275                 280                 285

Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr Arg Gly Leu Asp
    290                 295                 300

Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly
305                 310                 315                 320
```

```
Val Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr Cys Lys Arg Gly Arg
                325                 330                 335

Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met Arg Pro Val Gln
            340                 345                 350

Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu Glu Glu
        355                 360                 365

Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg Ser Ala Asp Ala
    370                 375                 380

Pro Ala Tyr Lys Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn Leu
385                 390                 395                 400

Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg Asp
                405                 410                 415

Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu
            420                 425                 430

Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile
        435                 440                 445

Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His Asp Gly Leu Tyr
    450                 455                 460

Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu His Met
465                 470                 475                 480

Gln Ala Leu Pro Pro Arg
                485
```

<210> 306
<211> 263
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic

polypeptide"

<400> 306

```
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1               5                  10                  15

His Ala Ala Arg Pro Glu Val Gln Leu Val Gln Ser Gly Ala Glu Val
            20                  25                  30

Lys Lys Pro Gly Glu Ser Leu Arg Ile Ser Cys Lys Gly Ser Gly Tyr
        35                  40                  45

Thr Phe Thr Ser Tyr Trp Met Asn Trp Val Arg Gln Met Pro Gly Lys
    50                  55                  60

Gly Leu Glu Trp Met Gly Arg Ile Asp Pro Tyr Asp Ser Glu Thr His
65                  70                  75                  80

Tyr Asn Gln Lys Phe Lys Asp His Val Thr Ile Ser Val Asp Lys Ser
                85                  90                  95

Ile Ser Thr Ala Tyr Leu Gln Trp Ser Ser Leu Lys Ala Ser Asp Thr
            100                 105                 110

Ala Met Tyr Tyr Cys Ala Arg Gly Asn Trp Asp Asp Tyr Trp Gly Gln
        115                 120                 125

Gly Thr Thr Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly
    130                 135                 140

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Val Val Met
145                 150                 155                 160

Thr Gln Ser Pro Ala Phe Leu Ser Val Thr Pro Gly Glu Lys Val Thr
                165                 170                 175

Ile Thr Cys Arg Ala Ser Lys Ser Ile Ser Lys Asp Leu Ala Trp Tyr
            180                 185                 190

Gln Gln Lys Pro Asp Gln Ala Pro Lys Leu Leu Ile Tyr Ser Gly Ser
        195                 200                 205
```

Thr Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly
210 215 220

Thr Asp Phe Thr Phe Thr Ile Ser Ser Leu Glu Ala Glu Asp Ala Ala
225 230 235 240

Thr Tyr Tyr Cys Gln Gln His Asn Lys Tyr Pro Tyr Thr Phe Gly Gly
245 250 255

Gly Thr Lys Val Glu Ile Lys
260

<210> 307
<211> 115
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 307
Glu Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Glu
1 5 10 15

Ser Leu Arg Ile Ser Cys Lys Gly Ser Gly Tyr Thr Phe Thr Ser Tyr
20 25 30

Trp Met Asn Trp Val Arg Gln Met Pro Gly Lys Gly Leu Glu Trp Met
35 40 45

Gly Arg Ile Asp Pro Tyr Asp Ser Glu Thr His Tyr Asn Gln Lys Phe
50 55 60

Lys Asp His Val Thr Ile Ser Val Asp Lys Ser Ile Ser Thr Ala Tyr
65 70 75 80

Leu Gln Trp Ser Ser Leu Lys Ala Ser Asp Thr Ala Met Tyr Tyr Cys
85 90 95

Ala Arg Gly Asn Trp Asp Asp Tyr Trp Gly Gln Gly Thr Thr Val Thr
100 105 110

Val Ser Ser
        115

<210> 308
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 308
Asp Val Val Met Thr Gln Ser Pro Ala Phe Leu Ser Val Thr Pro Gly
1   5   10   15

Glu Lys Val Thr Ile Thr Cys Arg Ala Ser Lys Ser Ile Ser Lys Asp
            20   25   30

Leu Ala Trp Tyr Gln Gln Lys Pro Asp Gln Ala Pro Lys Leu Leu Ile
        35   40   45

Tyr Ser Gly Ser Thr Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
    50   55   60

Ser Gly Ser Gly Thr Asp Phe Thr Phe Thr Ile Ser Ser Leu Glu Ala
65   70   75   80

Glu Asp Ala Ala Thr Tyr Tyr Cys Gln Gln His Asn Lys Tyr Pro Tyr
                85   90   95

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

<210> 309
<211> 1458
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polynucleotide"

<400> 309
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

cccgaggtgc agctggtgca gagcggagcc gaggtcaaga agcctggaga atccctgagg 120

atcagctgca aaggcagcgg gtataccttc acctcctact ggatgaattg ggtccgccag 180

atgcccggaa aaggcctgga gtggatggga cggattgacc cctacgactc ggaaacccat 240

tacaaccaga agttcaagga tcacgtgacc atctccgtgg acaagtccat ttccactgcg 300

tacctccagt ggtcaagcct gaaggcctcc gacactgcta tgtactactg cgcacgcgga 360

aactgggatg attactgggg acagggaaca accgtgactg tgtcctccgg gggtggcggt 420

agcggaggag ggggctccgg cggcggcggc tcagggggcg gaggaagcga cgtggtcatg 480

actcagtccc cggactcact cgcggtgtcg cttggagaga gagcgaccat caactgtcgg 540

gcctcaaaga gcatcagcaa ggacctggcc tggtaccagc agaagccggg acagccgcca 600

aagctgctga tctactccgg gtccaccttg caatctggtg tccctgaccg gttctccggt 660

tccgggtcgg gtaccgactt cacgctcact atttcgtcgc tgcaagccga agatgtggcc 720

gtgtactatt gccaacagca caacaagtac ccctacactt ttggcggagg caccaaggtg 780

gaaatcaaga ccactacccc agcaccgagg ccacccaccc cggctcctac catcgcctcc 840

cagcctctgt ccctgcgtcc ggaggcatgt agacccgcag ctggtggggc cgtgcatacc 900

cggggtcttg acttcgcctg cgatatctac atttgggccc ctctggctgg tacttgcggg 960

gtcctgctgc tttcactcgt gatcactctt tactgtaagc gcggtcggaa gaagctgctg 1020

tacatcttta agcaaccctt catgaggcct gtgcagacta ctcaagagga ggacggctgt 1080

tcatgccggt tcccagagga ggaggaaggc ggctgcgaac tgcgcgtgaa attcagccgc 1140

agcgcagatg ctccagccta caagcagggg cagaaccagc tctacaacga actcaatctt 1200

ggtcggagag aggagtacga cgtgctggac aagcggagag gacgggaccc agaaatgggc 1260

gggaagccgc gcagaaagaa tccccaagag ggcctgtaca acgagctcca aaaggataag 1320

atggcagaag cctatagcga gattggtatg aaaggggaac gcagaagagg caaaggccac 1380

gacggactgt accagggact cagcaccgcc accaaggaca cctatgacgc tcttcacatg 1440

caggccctgc cgcctcgg 1458

<210> 310

<211> 486
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 310
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Glu Val Gln Leu Val Gln Ser Gly Ala Glu Val
20 25 30

Lys Lys Pro Gly Glu Ser Leu Arg Ile Ser Cys Lys Gly Ser Gly Tyr
35 40 45

Thr Phe Thr Ser Tyr Trp Met Asn Trp Val Arg Gln Met Pro Gly Lys
50 55 60

Gly Leu Glu Trp Met Gly Arg Ile Asp Pro Tyr Asp Ser Glu Thr His
65 70 75 80

Tyr Asn Gln Lys Phe Lys Asp His Val Thr Ile Ser Val Asp Lys Ser
85 90 95

Ile Ser Thr Ala Tyr Leu Gln Trp Ser Ser Leu Lys Ala Ser Asp Thr
100 105 110

Ala Met Tyr Tyr Cys Ala Arg Gly Asn Trp Asp Asp Tyr Trp Gly Gln
115 120 125

Gly Thr Thr Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly
130 135 140

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Val Val Met
145 150 155 160

Thr Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly Glu Arg Ala Thr
165 170 175

```
Ile Asn Cys Arg Ala Ser Lys Ser Ile Ser Lys Asp Leu Ala Trp Tyr
            180                 185                 190

Gln Gln Lys Pro Gly Gln Pro Pro Lys Leu Leu Ile Tyr Ser Gly Ser
        195                 200                 205

Thr Leu Gln Ser Gly Val Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly
    210                 215                 220

Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Ala Glu Asp Val Ala
225                 230                 235                 240

Val Tyr Tyr Cys Gln Gln His Asn Lys Tyr Pro Tyr Thr Phe Gly Gly
                245                 250                 255

Gly Thr Lys Val Glu Ile Lys Thr Thr Thr Pro Ala Pro Arg Pro Pro
            260                 265                 270

Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser Leu Arg Pro Glu
        275                 280                 285

Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr Arg Gly Leu Asp
    290                 295                 300

Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly
305                 310                 315                 320

Val Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr Cys Lys Arg Gly Arg
                325                 330                 335

Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met Arg Pro Val Gln
            340                 345                 350

Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu Glu Glu
        355                 360                 365

Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg Ser Ala Asp Ala
    370                 375                 380

Pro Ala Tyr Lys Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn Leu
385                 390                 395                 400
```

Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg Asp
405 410 415

Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu
420 425 430

Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile
435 440 445

Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His Asp Gly Leu Tyr
450 455 460

Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu His Met
465 470 475 480

Gln Ala Leu Pro Pro Arg
485

<210> 311
<211> 263
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 311
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Glu Val Gln Leu Val Gln Ser Gly Ala Glu Val
20 25 30

Lys Lys Pro Gly Glu Ser Leu Arg Ile Ser Cys Lys Gly Ser Gly Tyr
35 40 45

Thr Phe Thr Ser Tyr Trp Met Asn Trp Val Arg Gln Met Pro Gly Lys
50 55 60

Gly Leu Glu Trp Met Gly Arg Ile Asp Pro Tyr Asp Ser Glu Thr His

65 70 75 80

Tyr Asn Gln Lys Phe Lys Asp His Val Thr Ile Ser Val Asp Lys Ser
85 90 95

Ile Ser Thr Ala Tyr Leu Gln Trp Ser Ser Leu Lys Ala Ser Asp Thr
100 105 110

Ala Met Tyr Tyr Cys Ala Arg Gly Asn Trp Asp Asp Tyr Trp Gly Gln
115 120 125

Gly Thr Thr Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly
130 135 140

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Val Val Met
145 150 155 160

Thr Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly Glu Arg Ala Thr
165 170 175

Ile Asn Cys Arg Ala Ser Lys Ser Ile Ser Lys Asp Leu Ala Trp Tyr
180 185 190

Gln Gln Lys Pro Gly Gln Pro Pro Lys Leu Leu Ile Tyr Ser Gly Ser
195 200 205

Thr Leu Gln Ser Gly Val Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly
210 215 220

Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Ala Glu Asp Val Ala
225 230 235 240

Val Tyr Tyr Cys Gln Gln His Asn Lys Tyr Pro Tyr Thr Phe Gly Gly
245 250 255

Gly Thr Lys Val Glu Ile Lys
260

<210> 312
<211> 115
<212> PRT

<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 312
Glu Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Glu
1 5 10 15

Ser Leu Arg Ile Ser Cys Lys Gly Ser Gly Tyr Thr Phe Thr Ser Tyr
20 25 30

Trp Met Asn Trp Val Arg Gln Met Pro Gly Lys Gly Leu Glu Trp Met
35 40 45

Gly Arg Ile Asp Pro Tyr Asp Ser Glu Thr His Tyr Asn Gln Lys Phe
50 55 60

Lys Asp His Val Thr Ile Ser Val Asp Lys Ser Ile Ser Thr Ala Tyr
65 70 75 80

Leu Gln Trp Ser Ser Leu Lys Ala Ser Asp Thr Ala Met Tyr Tyr Cys
85 90 95

Ala Arg Gly Asn Trp Asp Asp Tyr Trp Gly Gln Gly Thr Thr Val Thr
100 105 110

Val Ser Ser
115

<210> 313
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 313
Asp Val 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 Arg Ala Ser Lys Ser Ile Ser Lys Asp
            20   25   30

Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro Lys Leu Leu Ile
        35   40   45

Tyr Ser Gly Ser Thr Leu Gln Ser Gly Val Pro Asp Arg Phe Ser Gly
    50   55   60

Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Ala
65   70   75   80

Glu Asp Val Ala Val Tyr Tyr Cys Gln Gln His Asn Lys Tyr Pro Tyr
                85   90   95

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

<210> 314
<211> 1458
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polynucleotide"

<400> 314
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

cccgacgtgc agctcaccca gtcgccctca tttctgtcgg cctcagtggg agacagagtg 120

accattactt gtcgggcctc caagagcatc tccaaggacc tggcctggta tcagcagaag 180

ccaggaaagg cgcctaagtt gctcatctac tcggggtcga ccctgcaatc tggcgtgccg 240

tcccggttct ccggttcggg aagcggtacc gaattcaccc ttactatctc ctccctgcaa 300

ccggaggact tcgccaccta ctactgccaa cagcacaaca agtacccgta cactttcggg 360

ggtggcacga aggtcgaaat caaggggggt ggcggtagcg gaggaggggg ctccggcggc 420

ggcggctcag ggggcggagg aagcgaggtg cagctggtgc agagcggagc cgaggtcaag 480

aagcctggag aatccctgag gatcagctgc aaaggcagcg ggtatacctt cacctcctac 540

tggatgaatt gggtccgcca gatgcccgga aaaggcctgg agtggatggg acggattgac 600

ccctacgact cggaaaccca ttacaaccag aagttcaagg atcacgtgac catctccgtg 660

gacaagtcca tttccactgc gtacctccag tggtcaagcc tgaaggcctc cgacactgct 720

atgtactact gcgcacgcgg aaactgggat gattactggg gacagggaac aaccgtgact 780

gtgtcctcca ccactacccc agcaccgagg ccacccaccc cggctcctac catcgcctcc 840

cagcctctgt ccctgcgtcc ggaggcatgt agacccgcag ctggtggggc cgtgcatacc 900

cggggtcttg acttcgcctg cgatatctac atttgggccc ctctggctgg tacttgcggg 960

gtcctgctgc tttcactcgt gatcactctt tactgtaagc gcggtcggaa gaagctgctg 1020

tacatcttta agcaaccctt catgaggcct gtgcagacta ctcaagagga ggacggctgt 1080

tcatgccggt tcccagagga ggaggaaggc ggctgcgaac tgcgcgtgaa attcagccgc 1140

agcgcagatg ctccagccta caagcagggg cagaaccagc tctacaacga actcaatctt 1200

ggtcggagag aggagtacga cgtgctggac aagcggagag gacgggaccc agaaatgggc 1260

gggaagccgc gcagaaagaa tccccaagag ggcctgtaca acgagctcca aaaggataag 1320

atggcagaag cctatagcga gattggtatg aaaggggaac gcagaagagg caaaggccac 1380

gacggactgt accagggact cagcaccgcc accaaggaca cctatgacgc tcttcacatg 1440

caggccctgc cgcctcgg 1458

<210> 315
<211> 486
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 315
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Asp Val Gln Leu Thr Gln Ser Pro Ser Phe Leu
20 25 30

Ser Ala Ser Val Gly Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Lys
35 40 45

```
Ser Ile Ser Lys Asp Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala
    50                  55                  60

Pro Lys Leu Leu Ile Tyr Ser Gly Ser Thr Leu Gln Ser Gly Val Pro
65                  70                  75                  80

Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile
                85                  90                  95

Ser Ser Leu Gln Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln His
            100                 105                 110

Asn Lys Tyr Pro Tyr Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
        115                 120                 125

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly
    130                 135                 140

Gly Gly Gly Ser Glu Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys
145                 150                 155                 160

Lys Pro Gly Glu Ser Leu Arg Ile Ser Cys Lys Gly Ser Gly Tyr Thr
                165                 170                 175

Phe Thr Ser Tyr Trp Met Asn Trp Val Arg Gln Met Pro Gly Lys Gly
            180                 185                 190

Leu Glu Trp Met Gly Arg Ile Asp Pro Tyr Asp Ser Glu Thr His Tyr
        195                 200                 205

Asn Gln Lys Phe Lys Asp His Val Thr Ile Ser Val Asp Lys Ser Ile
    210                 215                 220

Ser Thr Ala Tyr Leu Gln Trp Ser Ser Leu Lys Ala Ser Asp Thr Ala
225                 230                 235                 240

Met Tyr Tyr Cys Ala Arg Gly Asn Trp Asp Asp Tyr Trp Gly Gln Gly
                245                 250                 255
```

```
Thr Thr Val Thr Val Ser Ser Thr Thr Thr Pro Ala Pro Arg Pro Pro
            260                 265                 270

Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser Leu Arg Pro Glu
        275                 280                 285

Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr Arg Gly Leu Asp
    290                 295                 300

Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly
305                 310                 315                 320

Val Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr Cys Lys Arg Gly Arg
                325                 330                 335

Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met Arg Pro Val Gln
            340                 345                 350

Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu Glu Glu
        355                 360                 365

Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg Ser Ala Asp Ala
    370                 375                 380

Pro Ala Tyr Lys Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn Leu
385                 390                 395                 400

Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg Asp
                405                 410                 415

Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu
            420                 425                 430

Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile
        435                 440                 445

Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His Asp Gly Leu Tyr
    450                 455                 460

Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu His Met
465                 470                 475                 480
```

Gln Ala Leu Pro Pro Arg
485

<210> 316
<211> 263
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 316
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Asp Val Gln Leu Thr Gln Ser Pro Ser Phe Leu
20 25 30

Ser Ala Ser Val Gly Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Lys
35 40 45

Ser Ile Ser Lys Asp Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala
50 55 60

Pro Lys Leu Leu Ile Tyr Ser Gly Ser Thr Leu Gln Ser Gly Val Pro
65 70 75 80

Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile
85 90 95

Ser Ser Leu Gln Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln His
100 105 110

Asn Lys Tyr Pro Tyr Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
115 120 125

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly
130 135 140

Gly Gly Gly Ser Glu Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys

145 150 155 160

Lys Pro Gly Glu Ser Leu Arg Ile Ser Cys Lys Gly Ser Gly Tyr Thr
165 170 175

Phe Thr Ser Tyr Trp Met Asn Trp Val Arg Gln Met Pro Gly Lys Gly
180 185 190

Leu Glu Trp Met Gly Arg Ile Asp Pro Tyr Asp Ser Glu Thr His Tyr
195 200 205

Asn Gln Lys Phe Lys Asp His Val Thr Ile Ser Val Asp Lys Ser Ile
210 215 220

Ser Thr Ala Tyr Leu Gln Trp Ser Ser Leu Lys Ala Ser Asp Thr Ala
225 230 235 240

Met Tyr Tyr Cys Ala Arg Gly Asn Trp Asp Asp Tyr Trp Gly Gln Gly
245 250 255

Thr Thr Val Thr Val Ser Ser
260

<210> 317
<211> 115
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 317
Glu Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Glu
1 5 10 15

Ser Leu Arg Ile Ser Cys Lys Gly Ser Gly Tyr Thr Phe Thr Ser Tyr
20 25 30

Trp Met Asn Trp Val Arg Gln Met Pro Gly Lys Gly Leu Glu Trp Met
35 40 45

```
Gly Arg Ile Asp Pro Tyr Asp Ser Glu Thr His Tyr Asn Gln Lys Phe
    50                  55                  60

Lys Asp His Val Thr Ile Ser Val Asp Lys Ser Ile Ser Thr Ala Tyr
65                  70                  75                  80

Leu Gln Trp Ser Ser Leu Lys Ala Ser Asp Thr Ala Met Tyr Tyr Cys
                85                  90                  95

Ala Arg Gly Asn Trp Asp Asp Tyr Trp Gly Gln Gly Thr Thr Val Thr
            100                 105                 110

Val Ser Ser
        115
```

<210> 318
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 318

```
Asp Val 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 Lys Ser Ile Ser Lys Asp
            20                  25                  30

Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
        35                  40                  45

Tyr Ser Gly 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 His Asn Lys Tyr Pro Tyr
                85                  90                  95
```

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

<210> 319
<211> 1458
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 319
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

cccgaagtgg tgctgaccca gtcgcccgca accctctctc tgtcgccggg agaacgcgcc 120

actctttcct gtcgggcgtc caagagcatc tcaaaggacc tcgcctggta ccagcagaag 180

cctggtcaag ccccgcggct gctgatctac tccggctcca cgctgcaatc aggaatccca 240

gccagatttt ccggttcggg gtcggggact gacttcacct tgaccattag ctcgctggaa 300

cctgaggact tcgccgtgta ttactgccag cagcacaaca agtacccgta caccttcgga 360

ggcggtacta aggtcgagat caaggggggt ggcggtagcg gaggaggggg ctccggcggc 420

ggcggctcag ggggcggagg aagcgaggtg cagctggtgc agagcggagc cgaggtcaag 480

aagcctggag aatccctgag gatcagctgc aaaggcagcg ggtatacctt cacctcctac 540

tggatgaatt gggtccgcca gatgcccgga aaaggcctgg agtggatggg acggattgac 600

ccctacgact cggaaaccca ttacaaccag aagttcaagg atcacgtgac catctccgtg 660

gacaagtcca tttccactgc gtacctccag tggtcaagcc tgaaggcctc cgacactgct 720

atgtactact gcgcacgcgg aaactgggat gattactggg gacagggaac aaccgtgact 780

gtgtcctcca ccactacccc agcaccgagg ccacccaccc cggctcctac catcgcctcc 840

cagcctctgt ccctgcgtcc ggaggcatgt agacccgcag ctggtggggc cgtgcatacc 900

cggggtcttg acttcgcctg cgatatctac atttgggccc ctctggctgg tacttgcggg 960

gtcctgctgc tttcactcgt gatcactctt tactgtaagc gcggtcggaa gaagctgctg 1020

tacatcttta agcaaccctt catgaggcct gtgcagacta ctcaagagga ggacggctgt 1080

tcatgccggt tcccagagga ggaggaaggc ggctgcgaac tgcgcgtgaa attcagccgc 1140

agcgcagatg ctccagccta caagcagggg cagaaccagc tctacaacga actcaatctt 1200

ggtcggagag aggagtacga cgtgctggac aagcggagag gacgggaccc agaaatgggc 1260

gggaagccgc gcagaaagaa tccccaagag ggcctgtaca acgagctcca aaaggataag 1320

atggcagaag cctatagcga gattggtatg aaaggggaac gcagaagagg caaaggccac 1380

gacggactgt accagggact cagcaccgcc accaaggaca cctatgacgc tcttcacatg 1440

caggccctgc cgcctcgg 1458

<210> 320
<211> 486
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 320
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Glu Val Val Leu Thr Gln Ser Pro Ala Thr Leu
20 25 30

Ser Leu Ser Pro Gly Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Lys
35 40 45

Ser Ile Ser Lys Asp Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala
50 55 60

Pro Arg Leu Leu Ile Tyr Ser Gly Ser Thr Leu Gln Ser Gly Ile Pro
65 70 75 80

Ala Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile
85 90 95

Ser Ser Leu Glu Pro Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln His
100 105 110

Asn Lys Tyr Pro Tyr Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
115 120 125

```
Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly
    130                 135                 140

Gly Gly Gly Ser Glu Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys
145                 150                 155                 160

Lys Pro Gly Glu Ser Leu Arg Ile Ser Cys Lys Gly Ser Gly Tyr Thr
                165                 170                 175

Phe Thr Ser Tyr Trp Met Asn Trp Val Arg Gln Met Pro Gly Lys Gly
            180                 185                 190

Leu Glu Trp Met Gly Arg Ile Asp Pro Tyr Asp Ser Glu Thr His Tyr
        195                 200                 205

Asn Gln Lys Phe Lys Asp His Val Thr Ile Ser Val Asp Lys Ser Ile
    210                 215                 220

Ser Thr Ala Tyr Leu Gln Trp Ser Ser Leu Lys Ala Ser Asp Thr Ala
225                 230                 235                 240

Met Tyr Tyr Cys Ala Arg Gly Asn Trp Asp Asp Tyr Trp Gly Gln Gly
                245                 250                 255

Thr Thr Val Thr Val Ser Ser Thr Thr Thr Pro Ala Pro Arg Pro Pro
            260                 265                 270

Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser Leu Arg Pro Glu
        275                 280                 285

Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr Arg Gly Leu Asp
    290                 295                 300

Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly
305                 310                 315                 320

Val Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr Cys Lys Arg Gly Arg
                325                 330                 335
```

```
Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met Arg Pro Val Gln
            340                 345                 350

Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu Glu Glu
        355                 360                 365

Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg Ser Ala Asp Ala
    370                 375                 380

Pro Ala Tyr Lys Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn Leu
385                 390                 395                 400

Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg Asp
                405                 410                 415

Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu
            420                 425                 430

Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile
        435                 440                 445

Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His Asp Gly Leu Tyr
    450                 455                 460

Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu His Met
465                 470                 475                 480

Gln Ala Leu Pro Pro Arg
                485
```

<210> 321
<211> 263
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 321

```
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1               5                   10                  15
```

```
His Ala Ala Arg Pro Glu Val Val Leu Thr Gln Ser Pro Ala Thr Leu
            20                  25                  30

Ser Leu Ser Pro Gly Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Lys
        35                  40                  45

Ser Ile Ser Lys Asp Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala
    50                  55                  60

Pro Arg Leu Leu Ile Tyr Ser Gly Ser Thr Leu Gln Ser Gly Ile Pro
65                  70                  75                  80

Ala Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile
                85                  90                  95

Ser Ser Leu Glu Pro Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln His
            100                 105                 110

Asn Lys Tyr Pro Tyr Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
        115                 120                 125

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly
    130                 135                 140

Gly Gly Gly Ser Glu Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys
145                 150                 155                 160

Lys Pro Gly Glu Ser Leu Arg Ile Ser Cys Lys Gly Ser Gly Tyr Thr
                165                 170                 175

Phe Thr Ser Tyr Trp Met Asn Trp Val Arg Gln Met Pro Gly Lys Gly
            180                 185                 190

Leu Glu Trp Met Gly Arg Ile Asp Pro Tyr Asp Ser Glu Thr His Tyr
        195                 200                 205

Asn Gln Lys Phe Lys Asp His Val Thr Ile Ser Val Asp Lys Ser Ile
    210                 215                 220

Ser Thr Ala Tyr Leu Gln Trp Ser Ser Leu Lys Ala Ser Asp Thr Ala
```

225 230 235 240

Met Tyr Tyr Cys Ala Arg Gly Asn Trp Asp Asp Tyr Trp Gly Gln Gly
245 250 255

Thr Thr Val Thr Val Ser Ser
260

<210> 322
<211> 115
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 322
Glu Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Glu
1 5 10 15

Ser Leu Arg Ile Ser Cys Lys Gly Ser Gly Tyr Thr Phe Thr Ser Tyr
20 25 30

Trp Met Asn Trp Val Arg Gln Met Pro Gly Lys Gly Leu Glu Trp Met
35 40 45

Gly Arg Ile Asp Pro Tyr Asp Ser Glu Thr His Tyr Asn Gln Lys Phe
50 55 60

Lys Asp His Val Thr Ile Ser Val Asp Lys Ser Ile Ser Thr Ala Tyr
65 70 75 80

Leu Gln Trp Ser Ser Leu Lys Ala Ser Asp Thr Ala Met Tyr Tyr Cys
85 90 95

Ala Arg Gly Asn Trp Asp Asp Tyr Trp Gly Gln Gly Thr Thr Val Thr
100 105 110

Val Ser Ser
115

<210> 323
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 323
Glu Val Val Leu Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly
1 5 10 15

Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Lys Ser Ile Ser Lys Asp
20 25 30

Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile
35 40 45

Tyr Ser Gly Ser Thr Leu Gln Ser Gly Ile Pro Ala Arg Phe Ser Gly
50 55 60

Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Glu Pro
65 70 75 80

Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln His Asn Lys Tyr Pro Tyr
85 90 95

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

<210> 324
<211> 1458
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 324
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

cccgacgtcg tgatgaccca gtcaccggca ttcctgtccg tgactcccgg agaaaaggtc 120

acgattactt gccgggcgtc caagagcatc tccaaggacc tcgcctggta ccaacagaag 180

ccggaccagg cccctaagct gttgatctac tcggggtcca cccttcaatc gggagtgcca 240

tcgcggttta gcggttcggg ttctgggacc gacttcactt tcaccatctc ctcactggaa 300

gccgaggatg ccgccactta ctactgtcag cagcacaaca agtatccgta caccttcgga 360

ggcggtacca aagtggagat caaggggggt ggcggtagcg gaggaggggg ctccggcggc 420

ggcggctcag ggggcggagg aagcgaggtg cagctggtgc agagcggagc cgaggtcaag 480

aagcctggag aatccctgag gatcagctgc aaaggcagcg ggtatacctt cacctcctac 540

tggatgaatt gggtccgcca gatgcccgga aaaggcctgg agtggatggg acggattgac 600

ccctacgact cggaaaccca ttacaaccag aagttcaagg atcacgtgac catctccgtg 660

gacaagtcca tttccactgc gtacctccag tggtcaagcc tgaaggcctc cgacactgct 720

atgtactact gcgcacgcgg aaactgggat gattactggg gacagggaac aaccgtgact 780

gtgtcctcca ccactacccc agcaccgagg ccacccaccc cggctcctac catcgcctcc 840

cagcctctgt ccctgcgtcc ggaggcatgt agacccgcag ctggtggggc cgtgcatacc 900

cggggtcttg acttcgcctg cgatatctac atttgggccc ctctggctgg tacttgcggg 960

gtcctgctgc tttcactcgt gatcactctt tactgtaagc gcggtcggaa gaagctgctg 1020

tacatcttta agcaaccctt catgaggcct gtgcagacta ctcaagagga ggacggctgt 1080

tcatgccggt tcccagagga ggaggaaggc ggctgcgaac tgcgcgtgaa attcagccgc 1140

agcgcagatg ctccagccta caagcagggg cagaaccagc tctacaacga actcaatctt 1200

ggtcggagag aggagtacga cgtgctggac aagcggagag gacgggaccc agaaatgggc 1260

gggaagccgc gcagaaagaa tccccaagag ggcctgtaca acgagctcca aaaggataag 1320

atggcagaag cctatagcga gattggtatg aaaggggaac gcagaagagg caaaggccac 1380

gacggactgt accagggact cagcaccgcc accaaggaca cctatgacgc tcttcacatg 1440

caggccctgc cgcctcgg 1458

<210> 325
<211> 486
<212> PRT
<213> Artificial Sequence

<220>
<221> source

<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 325

```
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1               5                  10                  15

His Ala Ala Arg Pro Asp Val Val Met Thr Gln Ser Pro Ala Phe Leu
            20                  25                  30

Ser Val Thr Pro Gly Glu Lys Val Thr Ile Thr Cys Arg Ala Ser Lys
        35                  40                  45

Ser Ile Ser Lys Asp Leu Ala Trp Tyr Gln Gln Lys Pro Asp Gln Ala
    50                  55                  60

Pro Lys Leu Leu Ile Tyr Ser Gly Ser Thr Leu Gln Ser Gly Val Pro
65                  70                  75                  80

Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Phe Thr Ile
                85                  90                  95

Ser Ser Leu Glu Ala Glu Asp Ala Ala Thr Tyr Tyr Cys Gln Gln His
            100                 105                 110

Asn Lys Tyr Pro Tyr Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
        115                 120                 125

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly
    130                 135                 140

Gly Gly Gly Ser Glu Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys
145                 150                 155                 160

Lys Pro Gly Glu Ser Leu Arg Ile Ser Cys Lys Gly Ser Gly Tyr Thr
                165                 170                 175

Phe Thr Ser Tyr Trp Met Asn Trp Val Arg Gln Met Pro Gly Lys Gly
            180                 185                 190

Leu Glu Trp Met Gly Arg Ile Asp Pro Tyr Asp Ser Glu Thr His Tyr
        195                 200                 205
```

```
Asn Gln Lys Phe Lys Asp His Val Thr Ile Ser Val Asp Lys Ser Ile
    210                 215                 220

Ser Thr Ala Tyr Leu Gln Trp Ser Ser Leu Lys Ala Ser Asp Thr Ala
225                 230                 235                 240

Met Tyr Tyr Cys Ala Arg Gly Asn Trp Asp Asp Tyr Trp Gly Gln Gly
                245                 250                 255

Thr Thr Val Thr Val Ser Ser Thr Thr Thr Pro Ala Pro Arg Pro Pro
            260                 265                 270

Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser Leu Arg Pro Glu
        275                 280                 285

Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr Arg Gly Leu Asp
    290                 295                 300

Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly
305                 310                 315                 320

Val Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr Cys Lys Arg Gly Arg
                325                 330                 335

Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met Arg Pro Val Gln
            340                 345                 350

Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu Glu Glu
        355                 360                 365

Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg Ser Ala Asp Ala
    370                 375                 380

Pro Ala Tyr Lys Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn Leu
385                 390                 395                 400

Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg Asp
                405                 410                 415
```

```
Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu
            420                 425                 430

Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile
        435                 440                 445

Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His Asp Gly Leu Tyr
    450                 455                 460

Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu His Met
465                 470                 475                 480

Gln Ala Leu Pro Pro Arg
                485
```

<210> 326
<211> 263
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 326

```
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1               5                   10                  15

His Ala Ala Arg Pro Asp Val Val Met Thr Gln Ser Pro Ala Phe Leu
            20                  25                  30

Ser Val Thr Pro Gly Glu Lys Val Thr Ile Thr Cys Arg Ala Ser Lys
        35                  40                  45

Ser Ile Ser Lys Asp Leu Ala Trp Tyr Gln Gln Lys Pro Asp Gln Ala
    50                  55                  60

Pro Lys Leu Leu Ile Tyr Ser Gly Ser Thr Leu Gln Ser Gly Val Pro
65                  70                  75                  80

Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Phe Thr Ile
                85                  90                  95
```

```
Ser Ser Leu Glu Ala Glu Asp Ala Ala Thr Tyr Tyr Cys Gln Gln His
            100                 105                 110

Asn Lys Tyr Pro Tyr Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
        115                 120                 125

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly
    130                 135                 140

Gly Gly Gly Ser Glu Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys
145                 150                 155                 160

Lys Pro Gly Glu Ser Leu Arg Ile Ser Cys Lys Gly Ser Gly Tyr Thr
                165                 170                 175

Phe Thr Ser Tyr Trp Met Asn Trp Val Arg Gln Met Pro Gly Lys Gly
            180                 185                 190

Leu Glu Trp Met Gly Arg Ile Asp Pro Tyr Asp Ser Glu Thr His Tyr
        195                 200                 205

Asn Gln Lys Phe Lys Asp His Val Thr Ile Ser Val Asp Lys Ser Ile
    210                 215                 220

Ser Thr Ala Tyr Leu Gln Trp Ser Ser Leu Lys Ala Ser Asp Thr Ala
225                 230                 235                 240

Met Tyr Tyr Cys Ala Arg Gly Asn Trp Asp Asp Tyr Trp Gly Gln Gly
                245                 250                 255

Thr Thr Val Thr Val Ser Ser
            260
```

<210> 327
<211> 115
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 327
Glu Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Glu
1   5   10   15

Ser Leu Arg Ile Ser Cys Lys Gly Ser Gly Tyr Thr Phe Thr Ser Tyr
            20   25   30

Trp Met Asn Trp Val Arg Gln Met Pro Gly Lys Gly Leu Glu Trp Met
        35   40   45

Gly Arg Ile Asp Pro Tyr Asp Ser Glu Thr His Tyr Asn Gln Lys Phe
    50   55   60

Lys Asp His Val Thr Ile Ser Val Asp Lys Ser Ile Ser Thr Ala Tyr
65   70   75   80

Leu Gln Trp Ser Ser Leu Lys Ala Ser Asp Thr Ala Met Tyr Tyr Cys
                85   90   95

Ala Arg Gly Asn Trp Asp Asp Tyr Trp Gly Gln Gly Thr Thr Val Thr
            100   105   110

Val Ser Ser
        115

<210> 328
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 328
Asp Val Val Met Thr Gln Ser Pro Ala Phe Leu Ser Val Thr Pro Gly
1   5   10   15

Glu Lys Val Thr Ile Thr Cys Arg Ala Ser Lys Ser Ile Ser Lys Asp
            20   25   30

Leu Ala Trp Tyr Gln Gln Lys Pro Asp Gln Ala Pro Lys Leu Leu Ile

35 40 45

Tyr Ser Gly Ser Thr Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
50 55 60

Ser Gly Ser Gly Thr Asp Phe Thr Phe Thr Ile Ser Ser Leu Glu Ala
65 70 75 80

Glu Asp Ala Ala Thr Tyr Tyr Cys Gln Gln His Asn Lys Tyr Pro Tyr
85 90 95

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

<210> 329
<211> 1458
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 329
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

cccgacgtgg tcatgactca gtccccggac tcactcgcgg tgtcgcttgg agagagagcg 120

accatcaact gtcgggcctc aaagagcatc agcaaggacc tggcctggta ccagcagaag 180

ccgggacagc cgccaaagct gctgatctac tccgggtcca ccttgcaatc tggtgtccct 240

gaccggttct ccggttccgg gtcgggtacc gacttcacgc tcactatttc gtcgctgcaa 300

gccgaagatg tggccgtgta ctattgccaa cagcacaaca agtaccccta cacttttggc 360

ggaggcacca aggtggaaat caaggggggt ggcggtagcg gaggaggggg ctccggcggc 420

ggcggctcag ggggcggagg aagcgaggtg cagctggtgc agagcggagc cgaggtcaag 480

aagcctggag aatccctgag gatcagctgc aaaggcagcg ggtatacctt cacctcctac 540

tggatgaatt gggtccgcca gatgcccgga aaaggcctgg agtggatggg acggattgac 600

ccctacgact cggaaaccca ttacaaccag aagttcaagg atcacgtgac catctccgtg 660

gacaagtcca tttccactgc gtacctccag tggtcaagcc tgaaggcctc cgacactgct 720

atgtactact gcgcacgcgg aaactgggat gattactggg gacagggaac aaccgtgact 780

gtgtcctcca ccactacccc agcaccgagg ccacccaccc cggctcctac catcgcctcc 840

cagcctctgt ccctgcgtcc ggaggcatgt agacccgcag ctggtggggc cgtgcatacc 900

cggggtcttg acttcgcctg cgatatctac atttgggccc ctctggctgg tacttgcggg 960

gtcctgctgc tttcactcgt gatcactctt tactgtaagc gcggtcggaa gaagctgctg 1020

tacatcttta agcaaccctt catgaggcct gtgcagacta ctcaagagga ggacggctgt 1080

tcatgccggt tcccagagga ggaggaaggc ggctgcgaac tgcgcgtgaa attcagccgc 1140

agcgcagatg ctccagccta caagcagggg cagaaccagc tctacaacga actcaatctt 1200

ggtcggagag aggagtacga cgtgctggac aagcggagag gacgggaccc agaaatgggc 1260

gggaagccgc gcagaaagaa tccccaagag ggcctgtaca acgagctcca aaaggataag 1320

atggcagaag cctatagcga gattggtatg aaaggggaac gcagaagagg caaaggccac 1380

gacggactgt accagggact cagcaccgcc accaaggaca cctatgacgc tcttcacatg 1440

caggccctgc cgcctcgg 1458

<210> 330
<211> 486
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 330
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Asp Val Val Met Thr Gln Ser Pro Asp Ser Leu
20 25 30

Ala Val Ser Leu Gly Glu Arg Ala Thr Ile Asn Cys Arg Ala Ser Lys
35 40 45

Ser Ile Ser Lys Asp Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Pro
50 55 60

```
Pro Lys Leu Leu Ile Tyr Ser Gly Ser Thr Leu Gln Ser Gly Val Pro
65                  70                  75                  80

Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile
                85                  90                  95

Ser Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln Gln His
            100                 105                 110

Asn Lys Tyr Pro Tyr Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
        115                 120                 125

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly
    130                 135                 140

Gly Gly Gly Ser Glu Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys
145                 150                 155                 160

Lys Pro Gly Glu Ser Leu Arg Ile Ser Cys Lys Gly Ser Gly Tyr Thr
                165                 170                 175

Phe Thr Ser Tyr Trp Met Asn Trp Val Arg Gln Met Pro Gly Lys Gly
            180                 185                 190

Leu Glu Trp Met Gly Arg Ile Asp Pro Tyr Asp Ser Glu Thr His Tyr
        195                 200                 205

Asn Gln Lys Phe Lys Asp His Val Thr Ile Ser Val Asp Lys Ser Ile
    210                 215                 220

Ser Thr Ala Tyr Leu Gln Trp Ser Ser Leu Lys Ala Ser Asp Thr Ala
225                 230                 235                 240

Met Tyr Tyr Cys Ala Arg Gly Asn Trp Asp Asp Tyr Trp Gly Gln Gly
                245                 250                 255

Thr Thr Val Thr Val Ser Ser Thr Thr Thr Pro Ala Pro Arg Pro Pro
            260                 265                 270

Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser Leu Arg Pro Glu
        275                 280                 285
```

```
Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr Arg Gly Leu Asp
    290                 295                 300

Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly
305                 310                 315                 320

Val Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr Cys Lys Arg Gly Arg
                325                 330                 335

Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met Arg Pro Val Gln
            340                 345                 350

Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu Glu Glu
        355                 360                 365

Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg Ser Ala Asp Ala
    370                 375                 380

Pro Ala Tyr Lys Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn Leu
385                 390                 395                 400

Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg Asp
                405                 410                 415

Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu
            420                 425                 430

Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile
        435                 440                 445

Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His Asp Gly Leu Tyr
    450                 455                 460

Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu His Met
465                 470                 475                 480

Gln Ala Leu Pro Pro Arg
                485
```

<210> 331
<211> 263
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 331
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Asp Val Val Met Thr Gln Ser Pro Asp Ser Leu
20 25 30

Ala Val Ser Leu Gly Glu Arg Ala Thr Ile Asn Cys Arg Ala Ser Lys
35 40 45

Ser Ile Ser Lys Asp Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Pro
50 55 60

Pro Lys Leu Leu Ile Tyr Ser Gly Ser Thr Leu Gln Ser Gly Val Pro
65 70 75 80

Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile
85 90 95

Ser Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln Gln His
100 105 110

Asn Lys Tyr Pro Tyr Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
115 120 125

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly
130 135 140

Gly Gly Gly Ser Glu Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys
145 150 155 160

Lys Pro Gly Glu Ser Leu Arg Ile Ser Cys Lys Gly Ser Gly Tyr Thr
165 170 175

```
Phe Thr Ser Tyr Trp Met Asn Trp Val Arg Gln Met Pro Gly Lys Gly
            180                 185                 190


Leu Glu Trp Met Gly Arg Ile Asp Pro Tyr Asp Ser Glu Thr His Tyr
        195                 200                 205


Asn Gln Lys Phe Lys Asp His Val Thr Ile Ser Val Asp Lys Ser Ile
    210                 215                 220


Ser Thr Ala Tyr Leu Gln Trp Ser Ser Leu Lys Ala Ser Asp Thr Ala
225                 230                 235                 240


Met Tyr Tyr Cys Ala Arg Gly Asn Trp Asp Asp Tyr Trp Gly Gln Gly
                245                 250                 255


Thr Thr Val Thr Val Ser Ser
            260


<210> 332
<211> 115
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 332
Glu Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Glu
1               5                   10                  15


Ser Leu Arg Ile Ser Cys Lys Gly Ser Gly Tyr Thr Phe Thr Ser Tyr
            20                  25                  30


Trp Met Asn Trp Val Arg Gln Met Pro Gly Lys Gly Leu Glu Trp Met
        35                  40                  45


Gly Arg Ile Asp Pro Tyr Asp Ser Glu Thr His Tyr Asn Gln Lys Phe
    50                  55                  60


Lys Asp His Val Thr Ile Ser Val Asp Lys Ser Ile Ser Thr Ala Tyr
65                  70                  75                  80
```

```
Leu Gln Trp Ser Ser Leu Lys Ala Ser Asp Thr Ala Met Tyr Tyr Cys
                85                  90                  95


Ala Arg Gly Asn Trp Asp Asp Tyr Trp Gly Gln Gly Thr Thr Val Thr
            100                 105                 110


Val Ser Ser
        115


<210> 333
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 333
Asp Val 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 Arg Ala Ser Lys Ser Ile Ser Lys Asp
            20                  25                  30


Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro Lys Leu Leu Ile
        35                  40                  45


Tyr Ser Gly Ser Thr Leu Gln Ser Gly Val Pro Asp Arg Phe Ser Gly
    50                  55                  60


Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Ala
65                  70                  75                  80


Glu Asp Val Ala Val Tyr Tyr Cys Gln Gln His Asn Lys Tyr Pro Tyr
                85                  90                  95


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


<210> 334
```

<211> 1458
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 334
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

cccgaagtgc agctcgtcga gagcggaggg ggactggtgc agcccggagg aagcctgagg 120

ctgtcctgcg ctgcctccgg ctacaccttc acctcctact ggatgaactg ggtcagacag 180

gcacctggaa agggactggt ctgggtgtcg cgcattgacc cctacgactc cgaaacccat 240

tacaatcaga aattcaagga ccgcttcacc atctccgtgg acaaagccaa gagcaccgcg 300

tacctccaaa tgaactccct gcgcgctgag gatacagcag tgtactattg cgcccgggga 360

aactgggatg attactgggg ccagggaact actgtgactg tgtcatccgg gggtggcggt 420

agcggaggag ggggctccgg cggcggcggc tcagggggcg gaggaagcga cgtgcagctc 480

acccagtcgc cctcatttct gtcggcctca gtgggagaca gagtgaccat tacttgtcgg 540

gcctccaaga gcatctccaa ggacctggcc tggtatcagc agaagccagg aaaggcgcct 600

aagttgctca tctactcggg gtcgaccctg caatctggcg tgccgtcccg gttctccggt 660

tcgggaagcg gtaccgaatt cacccttact atctcctccc tgcaaccgga ggacttcgcc 720

acctactact gccaacagca caacaagtac ccgtacactt tcgggggtgg cacgaaggtc 780

gaaatcaaga ccactacccc agcaccgagg ccacccaccc cggctcctac catcgcctcc 840

cagcctctgt ccctgcgtcc ggaggcatgt agacccgcag ctggtggggc cgtgcatacc 900

cggggtcttg acttcgcctg cgatatctac atttgggccc ctctggctgg tacttgcggg 960

gtcctgctgc tttcactcgt gatcactctt tactgtaagc gcggtcggaa gaagctgctg 1020

tacatcttta agcaaccctt catgaggcct gtgcagacta ctcaagagga ggacggctgt 1080

tcatgccggt tcccagagga ggaggaaggc ggctgcgaac tgcgcgtgaa attcagccgc 1140

agcgcagatg ctccagccta caagcagggg cagaaccagc tctacaacga actcaatctt 1200

ggtcggagag aggagtacga cgtgctggac aagcggagag gacgggaccc agaaatgggc 1260

gggaagccgc gcagaaagaa tccccaagag ggcctgtaca acgagctcca aaaggataag 1320

atggcagaag cctatagcga gattggtatg aaaggggaac gcagaagagg caaaggccac 1380

gacggactgt accagggact cagcaccgcc accaaggaca cctatgacgc tcttcacatg 1440

caggccctgc cgcctcgg 1458

<210> 335
<211> 486
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 335
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu
20 25 30

Val Gln Pro Gly Gly Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Tyr
35 40 45

Thr Phe Thr Ser Tyr Trp Met Asn Trp Val Arg Gln Ala Pro Gly Lys
50 55 60

Gly Leu Val Trp Val Ser Arg Ile Asp Pro Tyr Asp Ser Glu Thr His
65 70 75 80

Tyr Asn Gln Lys Phe Lys Asp Arg Phe Thr Ile Ser Val Asp Lys Ala
85 90 95

Lys Ser Thr Ala Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr
100 105 110

Ala Val Tyr Tyr Cys Ala Arg Gly Asn Trp Asp Asp Tyr Trp Gly Gln
115 120 125

Gly Thr Thr Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly
130 135 140

```
Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Val Gln Leu
145                 150                 155                 160


Thr Gln Ser Pro Ser Phe Leu Ser Ala Ser Val Gly Asp Arg Val Thr
                165                 170                 175


Ile Thr Cys Arg Ala Ser Lys Ser Ile Ser Lys Asp Leu Ala Trp Tyr
            180                 185                 190


Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile Tyr Ser Gly Ser
        195                 200                 205


Thr Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly
    210                 215                 220


Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro Glu Asp Phe Ala
225                 230                 235                 240


Thr Tyr Tyr Cys Gln Gln His Asn Lys Tyr Pro Tyr Thr Phe Gly Gly
                245                 250                 255


Gly Thr Lys Val Glu Ile Lys Thr Thr Thr Pro Ala Pro Arg Pro Pro
            260                 265                 270


Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser Leu Arg Pro Glu
        275                 280                 285


Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr Arg Gly Leu Asp
    290                 295                 300


Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly
305                 310                 315                 320


Val Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr Cys Lys Arg Gly Arg
                325                 330                 335


Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met Arg Pro Val Gln
            340                 345                 350


Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu Glu Glu
        355                 360                 365
```

```
Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg Ser Ala Asp Ala
    370                 375                 380

Pro Ala Tyr Lys Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn Leu
385                 390                 395                 400

Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg Asp
                405                 410                 415

Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu
            420                 425                 430

Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile
        435                 440                 445

Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His Asp Gly Leu Tyr
    450                 455                 460

Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu His Met
465                 470                 475                 480

Gln Ala Leu Pro Pro Arg
                485
```

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

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 336

```
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1               5                   10                  15

His Ala Ala Arg Pro Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu
            20                  25                  30

Val Gln Pro Gly Gly Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Tyr
```

```
        35                  40                  45

Thr Phe Thr Ser Tyr Trp Met Asn Trp Val Arg Gln Ala Pro Gly Lys
    50                  55                  60

Gly Leu Val Trp Val Ser Arg Ile Asp Pro Tyr Asp Ser Glu Thr His
65                  70                  75                  80

Tyr Asn Gln Lys Phe Lys Asp Arg Phe Thr Ile Ser Val Asp Lys Ala
                85                  90                  95

Lys Ser Thr Ala Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr
            100                 105                 110

Ala Val Tyr Tyr Cys Ala Arg Gly Asn Trp Asp Asp Tyr Trp Gly Gln
        115                 120                 125

Gly Thr Thr Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly
    130                 135                 140

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Val Gln Leu
145                 150                 155                 160

Thr Gln Ser Pro Ser Phe Leu Ser Ala Ser Val Gly Asp Arg Val Thr
                165                 170                 175

Ile Thr Cys Arg Ala Ser Lys Ser Ile Ser Lys Asp Leu Ala Trp Tyr
            180                 185                 190

Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile Tyr Ser Gly Ser
        195                 200                 205

Thr Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly
    210                 215                 220

Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro Glu Asp Phe Ala
225                 230                 235                 240

Thr Tyr Tyr Cys Gln Gln His Asn Lys Tyr Pro Tyr Thr Phe Gly Gly
                245                 250                 255
```

Gly Thr Lys Val Glu Ile Lys
            260

<210> 337
<211> 115
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 337
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 Tyr Thr Phe Thr Ser Tyr
            20   25   30

Trp Met Asn Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Val Trp Val
        35   40   45

Ser Arg Ile Asp Pro Tyr Asp Ser Glu Thr His Tyr Asn Gln Lys Phe
    50   55   60

Lys Asp Arg Phe Thr Ile Ser Val Asp Lys Ala Lys Ser Thr Ala 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 Gly Asn Trp Asp Asp Tyr Trp Gly Gln Gly Thr Thr Val Thr
            100   105   110

Val Ser Ser
        115

<210> 338
<211> 107
<212> PRT
<213> Artificial Sequence

<220>

<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 338
Asp Val 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 Lys Ser Ile Ser Lys Asp
20 25 30

Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
35 40 45

Tyr Ser Gly 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 His Asn Lys Tyr Pro Tyr
85 90 95

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

<210> 339
<211> 1458
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 339
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

cccgaagtgc agctcgtcga gagcggaggg ggactggtgc agcccggagg aagcctgagg 120

ctgtcctgcg ctgcctccgg ctacaccttc acctcctact ggatgaactg ggtcagacag 180

gcacctggaa agggactggt ctgggtgtcg cgcattgacc cctacgactc cgaaacccat 240

tacaatcaga aattcaagga ccgcttcacc atctccgtgg acaaagccaa gagcaccgcg 300

tacctccaaa tgaactccct gcgcgctgag gatacagcag tgtactattg cgcccgggga 360

aactgggatg attactgggg ccagggaact actgtgactg tgtcatccgg gggtggcggt 420

agcggaggag ggggctccgg cggcggcggc tcagggggcg gaggaagcga agtggtgctg 480

acccagtcgc ccgcaaccct ctctctgtcg ccgggagaac gcgccactct ttcctgtcgg 540

gcgtccaaga gcatctcaaa ggacctcgcc tggtaccagc agaagcctgg tcaagccccg 600

cggctgctga tctactccgg ctccacgctg caatcaggaa tcccagccag attttccggt 660

tcggggtcgg ggactgactt caccttgacc attagctcgc tggaacctga ggacttcgcc 720

gtgtattact gccagcagca caacaagtac ccgtacacct tcggaggcgg tactaaggtc 780

gagatcaaga ccactacccc agcaccgagg ccacccaccc cggctcctac catcgcctcc 840

cagcctctgt ccctgcgtcc ggaggcatgt agacccgcag ctggtggggc cgtgcatacc 900

cggggtcttg acttcgcctg cgatatctac atttgggccc ctctggctgg tacttgcggg 960

gtcctgctgc tttcactcgt gatcactctt tactgtaagc gcggtcggaa gaagctgctg 1020

tacatcttta agcaaccctt catgaggcct gtgcagacta ctcaagagga ggacggctgt 1080

tcatgccggt tcccagagga ggaggaaggc ggctgcgaac tgcgcgtgaa attcagccgc 1140

agcgcagatg ctccagccta caagcagggg cagaaccagc tctacaacga actcaatctt 1200

ggtcggagag aggagtacga cgtgctggac aagcggagag gacgggaccc agaaatgggc 1260

gggaagccgc gcagaaagaa tccccaagag ggcctgtaca acgagctcca aaaggataag 1320

atggcagaag cctatagcga gattggtatg aaaggggaac gcagaagagg caaaggccac 1380

gacggactgt accagggact cagcaccgcc accaaggaca cctatgacgc tcttcacatg 1440

caggccctgc cgcctcgg 1458

<210> 340
<211> 486
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 340
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

```
His Ala Ala Arg Pro Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu
            20                  25                  30

Val Gln Pro Gly Gly Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Tyr
        35                  40                  45

Thr Phe Thr Ser Tyr Trp Met Asn Trp Val Arg Gln Ala Pro Gly Lys
    50                  55                  60

Gly Leu Val Trp Val Ser Arg Ile Asp Pro Tyr Asp Ser Glu Thr His
65                  70                  75                  80

Tyr Asn Gln Lys Phe Lys Asp Arg Phe Thr Ile Ser Val Asp Lys Ala
                85                  90                  95

Lys Ser Thr Ala Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr
            100                 105                 110

Ala Val Tyr Tyr Cys Ala Arg Gly Asn Trp Asp Asp Tyr Trp Gly Gln
        115                 120                 125

Gly Thr Thr Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly
    130                 135                 140

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Val Val Leu
145                 150                 155                 160

Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly Glu Arg Ala Thr
                165                 170                 175

Leu Ser Cys Arg Ala Ser Lys Ser Ile Ser Lys Asp Leu Ala Trp Tyr
            180                 185                 190

Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile Tyr Ser Gly Ser
        195                 200                 205

Thr Leu Gln Ser Gly Ile Pro Ala Arg Phe Ser Gly Ser Gly Ser Gly
    210                 215                 220
```

```
Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Glu Pro Glu Asp Phe Ala
225                 230                 235                 240

Val Tyr Tyr Cys Gln Gln His Asn Lys Tyr Pro Tyr Thr Phe Gly Gly
                245                 250                 255

Gly Thr Lys Val Glu Ile Lys Thr Thr Thr Pro Ala Pro Arg Pro Pro
            260                 265                 270

Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser Leu Arg Pro Glu
        275                 280                 285

Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr Arg Gly Leu Asp
    290                 295                 300

Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly
305                 310                 315                 320

Val Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr Cys Lys Arg Gly Arg
                325                 330                 335

Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met Arg Pro Val Gln
            340                 345                 350

Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu Glu Glu
        355                 360                 365

Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg Ser Ala Asp Ala
    370                 375                 380

Pro Ala Tyr Lys Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn Leu
385                 390                 395                 400

Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg Asp
                405                 410                 415

Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu
            420                 425                 430

Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile
        435                 440                 445
```

Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His Asp Gly Leu Tyr
450 455 460

Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu His Met
465 470 475 480

Gln Ala Leu Pro Pro Arg
485

<210> 341
<211> 263
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 341
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu
20 25 30

Val Gln Pro Gly Gly Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Tyr
35 40 45

Thr Phe Thr Ser Tyr Trp Met Asn Trp Val Arg Gln Ala Pro Gly Lys
50 55 60

Gly Leu Val Trp Val Ser Arg Ile Asp Pro Tyr Asp Ser Glu Thr His
65 70 75 80

Tyr Asn Gln Lys Phe Lys Asp Arg Phe Thr Ile Ser Val Asp Lys Ala
85 90 95

Lys Ser Thr Ala Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr
100 105 110

Ala Val Tyr Tyr Cys Ala Arg Gly Asn Trp Asp Asp Tyr Trp Gly Gln

```
        115                 120                 125

Gly Thr Thr Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly
    130                 135                 140

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Val Val Leu
145                 150                 155                 160

Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly Glu Arg Ala Thr
                165                 170                 175

Leu Ser Cys Arg Ala Ser Lys Ser Ile Ser Lys Asp Leu Ala Trp Tyr
            180                 185                 190

Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile Tyr Ser Gly Ser
        195                 200                 205

Thr Leu Gln Ser Gly Ile Pro Ala Arg Phe Ser Gly Ser Gly Ser Gly
    210                 215                 220

Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Glu Pro Glu Asp Phe Ala
225                 230                 235                 240

Val Tyr Tyr Cys Gln Gln His Asn Lys Tyr Pro Tyr Thr Phe Gly Gly
                245                 250                 255

Gly Thr Lys Val Glu Ile Lys
            260
```

<210> 342
<211> 115
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 342

```
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 Tyr Thr Phe Thr Ser Tyr
            20                  25                  30


Trp Met Asn Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Val Trp Val
        35                  40                  45


Ser Arg Ile Asp Pro Tyr Asp Ser Glu Thr His Tyr Asn Gln Lys Phe
    50                  55                  60


Lys Asp Arg Phe Thr Ile Ser Val Asp Lys Ala Lys Ser Thr Ala 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 Gly Asn Trp Asp Asp Tyr Trp Gly Gln Gly Thr Thr Val Thr
            100                 105                 110


Val Ser Ser
        115


<210> 343
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 343
Glu Val Val Leu Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly
1               5                   10                  15


Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Lys Ser Ile Ser Lys Asp
            20                  25                  30


Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile
        35                  40                  45


Tyr Ser Gly Ser Thr Leu Gln Ser Gly Ile Pro Ala Arg Phe Ser Gly
    50                  55                  60
```

Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Glu Pro
65 70 75 80

Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln His Asn Lys Tyr Pro Tyr
85 90 95

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

<210> 344
<211> 1458
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 344
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

cccgaagtgc agctcgtcga gagcggaggg ggactggtgc agcccggagg aagcctgagg 120

ctgtcctgcg ctgcctccgg ctacaccttc acctcctact ggatgaactg ggtcagacag 180

gcacctggaa agggactggt ctgggtgtcg cgcattgacc cctacgactc cgaaacccat 240

tacaatcaga aattcaagga ccgcttcacc atctccgtgg acaaagccaa gagcaccgcg 300

tacctccaaa tgaactccct gcgcgctgag gatacagcag tgtactattg cgcccgggga 360

aactgggatg attactgggg ccagggaact actgtgactg tgtcatccgg gggtggcggt 420

agcggaggag ggggctccgg cggcggcggc tcagggggcg gaggaagcga cgtcgtgatg 480

acccagtcac cggcattcct gtccgtgact cccggagaaa aggtcacgat tacttgccgg 540

gcgtccaaga gcatctccaa ggacctcgcc tggtaccaac agaagccgga ccaggcccct 600

aagctgttga tctactcggg gtccaccctt caatcgggag tgccatcgcg gtttagcggt 660

tcgggttctg ggaccgactt cactttcacc atctcctcac tggaagccga ggatgccgcc 720

acttactact gtcagcagca caacaagtat ccgtacacct tcggaggcgg taccaaagtg 780

gagatcaaga ccactacccc agcaccgagg ccacccaccc cggctcctac catcgcctcc 840

cagcctctgt ccctgcgtcc ggaggcatgt agacccgcag ctggtggggc cgtgcatacc 900

cggggtcttg acttcgcctg cgatatctac atttgggccc ctctggctgg tacttgcggg 960

gtcctgctgc tttcactcgt gatcactctt tactgtaagc gcggtcggaa gaagctgctg 1020

tacatcttta agcaaccctt catgaggcct gtgcagacta ctcaagagga ggacggctgt 1080

tcatgccggt tcccagagga ggaggaaggc ggctgcgaac tgcgcgtgaa attcagccgc 1140

agcgcagatg ctccagccta caagcagggg cagaaccagc tctacaacga actcaatctt 1200

ggtcggagag aggagtacga cgtgctggac aagcggagag gacgggaccc agaaatgggc 1260

gggaagccgc gcagaaagaa tccccaagag ggcctgtaca acgagctcca aaaggataag 1320

atggcagaag cctatagcga gattggtatg aaaggggaac gcagaagagg caaaggccac 1380

gacggactgt accagggact cagcaccgcc accaaggaca cctatgacgc tcttcacatg 1440

caggccctgc cgcctcgg 1458

<210> 345
<211> 486
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 345
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu
20 25 30

Val Gln Pro Gly Gly Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Tyr
35 40 45

Thr Phe Thr Ser Tyr Trp Met Asn Trp Val Arg Gln Ala Pro Gly Lys
50 55 60

Gly Leu Val Trp Val Ser Arg Ile Asp Pro Tyr Asp Ser Glu Thr His
65 70 75 80

Tyr Asn Gln Lys Phe Lys Asp Arg Phe Thr Ile Ser Val Asp Lys Ala
85 90 95

```
Lys Ser Thr Ala Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr
            100                 105                 110

Ala Val Tyr Tyr Cys Ala Arg Gly Asn Trp Asp Asp Tyr Trp Gly Gln
        115                 120                 125

Gly Thr Thr Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly
    130                 135                 140

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Val Val Met
145                 150                 155                 160

Thr Gln Ser Pro Ala Phe Leu Ser Val Thr Pro Gly Glu Lys Val Thr
                165                 170                 175

Ile Thr Cys Arg Ala Ser Lys Ser Ile Ser Lys Asp Leu Ala Trp Tyr
            180                 185                 190

Gln Gln Lys Pro Asp Gln Ala Pro Lys Leu Leu Ile Tyr Ser Gly Ser
        195                 200                 205

Thr Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly
    210                 215                 220

Thr Asp Phe Thr Phe Thr Ile Ser Ser Leu Glu Ala Glu Asp Ala Ala
225                 230                 235                 240

Thr Tyr Tyr Cys Gln Gln His Asn Lys Tyr Pro Tyr Thr Phe Gly Gly
                245                 250                 255

Gly Thr Lys Val Glu Ile Lys Thr Thr Thr Pro Ala Pro Arg Pro Pro
            260                 265                 270

Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser Leu Arg Pro Glu
        275                 280                 285

Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr Arg Gly Leu Asp
    290                 295                 300
```

```
Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly
305                 310                 315                 320

Val Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr Cys Lys Arg Gly Arg
                325                 330                 335

Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met Arg Pro Val Gln
            340                 345                 350

Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu Glu Glu
        355                 360                 365

Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg Ser Ala Asp Ala
    370                 375                 380

Pro Ala Tyr Lys Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn Leu
385                 390                 395                 400

Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg Asp
                405                 410                 415

Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu
            420                 425                 430

Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile
        435                 440                 445

Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His Asp Gly Leu Tyr
    450                 455                 460

Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu His Met
465                 470                 475                 480

Gln Ala Leu Pro Pro Arg
                485
```

<210> 346
<211> 263
<212> PRT
<213> Artificial Sequence

<220>

<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 346
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu
20 25 30

Val Gln Pro Gly Gly Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Tyr
35 40 45

Thr Phe Thr Ser Tyr Trp Met Asn Trp Val Arg Gln Ala Pro Gly Lys
50 55 60

Gly Leu Val Trp Val Ser Arg Ile Asp Pro Tyr Asp Ser Glu Thr His
65 70 75 80

Tyr Asn Gln Lys Phe Lys Asp Arg Phe Thr Ile Ser Val Asp Lys Ala
85 90 95

Lys Ser Thr Ala Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr
100 105 110

Ala Val Tyr Tyr Cys Ala Arg Gly Asn Trp Asp Asp Tyr Trp Gly Gln
115 120 125

Gly Thr Thr Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly
130 135 140

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Val Val Met
145 150 155 160

Thr Gln Ser Pro Ala Phe Leu Ser Val Thr Pro Gly Glu Lys Val Thr
165 170 175

Ile Thr Cys Arg Ala Ser Lys Ser Ile Ser Lys Asp Leu Ala Trp Tyr
180 185 190

Gln Gln Lys Pro Asp Gln Ala Pro Lys Leu Leu Ile Tyr Ser Gly Ser

195 200 205

Thr Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly
210 215 220

Thr Asp Phe Thr Phe Thr Ile Ser Ser Leu Glu Ala Glu Asp Ala Ala
225 230 235 240

Thr Tyr Tyr Cys Gln Gln His Asn Lys Tyr Pro Tyr Thr Phe Gly Gly
245 250 255

Gly Thr Lys Val Glu Ile Lys
260

<210> 347
<211> 115
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 347
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 Tyr Thr Phe Thr Ser Tyr
20 25 30

Trp Met Asn Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Val Trp Val
35 40 45

Ser Arg Ile Asp Pro Tyr Asp Ser Glu Thr His Tyr Asn Gln Lys Phe
50 55 60

Lys Asp Arg Phe Thr Ile Ser Val Asp Lys Ala Lys Ser Thr Ala 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 Gly Asn Trp Asp Asp Tyr Trp Gly Gln Gly Thr Thr Val Thr
100 105 110

Val Ser Ser
115

<210> 348
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 348
Asp Val Val Met Thr Gln Ser Pro Ala Phe Leu Ser Val Thr Pro Gly
1 5 10 15

Glu Lys Val Thr Ile Thr Cys Arg Ala Ser Lys Ser Ile Ser Lys Asp
20 25 30

Leu Ala Trp Tyr Gln Gln Lys Pro Asp Gln Ala Pro Lys Leu Leu Ile
35 40 45

Tyr Ser Gly Ser Thr Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
50 55 60

Ser Gly Ser Gly Thr Asp Phe Thr Phe Thr Ile Ser Ser Leu Glu Ala
65 70 75 80

Glu Asp Ala Ala Thr Tyr Tyr Cys Gln Gln His Asn Lys Tyr Pro Tyr
85 90 95

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

<210> 349
<211> 1458
<212> DNA
<213> Artificial Sequence

<220>
<221> source

<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 349
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

cccgaagtgc agctcgtcga gagcggaggg ggactggtgc agcccggagg aagcctgagg 120

ctgtcctgcg ctgcctccgg ctacaccttc acctcctact ggatgaactg ggtcagacag 180

gcacctggaa agggactggt ctgggtgtcg cgcattgacc cctacgactc cgaaacccat 240

tacaatcaga aattcaagga ccgcttcacc atctccgtgg acaaagccaa gagcaccgcg 300

tacctccaaa tgaactccct gcgcgctgag gatacagcag tgtactattg cgcccgggga 360

aactgggatg attactgggg ccagggaact actgtgactg tgtcatccgg gggtggcggt 420

agcggaggag ggggctccgg cggcggcggc tcagggggcg gaggaagcga cgtggtcatg 480

actcagtccc cggactcact cgcggtgtcg cttggagaga gagcgaccat caactgtcgg 540

gcctcaaaga gcatcagcaa ggacctggcc tggtaccagc agaagccggg acagccgcca 600

aagctgctga tctactccgg gtccaccttg caatctggtg tccctgaccg gttctccggt 660

tccgggtcgg gtaccgactt cacgctcact atttcgtcgc tgcaagccga agatgtggcc 720

gtgtactatt gccaacagca caacaagtac ccctacactt ttggcggagg caccaaggtg 780

gaaatcaaga ccactacccc agcaccgagg ccacccaccc cggctcctac catcgcctcc 840

cagcctctgt ccctgcgtcc ggaggcatgt agacccgcag ctggtggggc cgtgcatacc 900

cggggtcttg acttcgcctg cgatatctac atttgggccc ctctggctgg tacttgcggg 960

gtcctgctgc tttcactcgt gatcactctt tactgtaagc gcggtcggaa gaagctgctg 1020

tacatcttta agcaaccctt catgaggcct gtgcagacta ctcaagagga ggacggctgt 1080

tcatgccggt tcccagagga ggaggaaggc ggctgcgaac tgcgcgtgaa attcagccgc 1140

agcgcagatg ctccagccta caagcagggg cagaaccagc tctacaacga actcaatctt 1200

ggtcggagag aggagtacga cgtgctggac aagcggagag gacgggaccc agaaatgggc 1260

gggaagccgc gcagaaagaa tccccaagag ggcctgtaca acgagctcca aaaggataag 1320

atggcagaag cctatagcga gattggtatg aaaggggaac gcagaagagg caaaggccac 1380

gacggactgt accagggact cagcaccgcc accaaggaca cctatgacgc tcttcacatg 1440

caggccctgc cgcctcgg 1458

<210> 350
<211> 486
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 350
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu
20 25 30

Val Gln Pro Gly Gly Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Tyr
35 40 45

Thr Phe Thr Ser Tyr Trp Met Asn Trp Val Arg Gln Ala Pro Gly Lys
50 55 60

Gly Leu Val Trp Val Ser Arg Ile Asp Pro Tyr Asp Ser Glu Thr His
65 70 75 80

Tyr Asn Gln Lys Phe Lys Asp Arg Phe Thr Ile Ser Val Asp Lys Ala
85 90 95

Lys Ser Thr Ala Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr
100 105 110

Ala Val Tyr Tyr Cys Ala Arg Gly Asn Trp Asp Asp Tyr Trp Gly Gln
115 120 125

Gly Thr Thr Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly
130 135 140

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Val Val Met
145 150 155 160

Thr Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly Glu Arg Ala Thr
165 170 175

```
Ile Asn Cys Arg Ala Ser Lys Ser Ile Ser Lys Asp Leu Ala Trp Tyr
            180                 185                 190

Gln Gln Lys Pro Gly Gln Pro Pro Lys Leu Leu Ile Tyr Ser Gly Ser
        195                 200                 205

Thr Leu Gln Ser Gly Val Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly
    210                 215                 220

Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Ala Glu Asp Val Ala
225                 230                 235                 240

Val Tyr Tyr Cys Gln Gln His Asn Lys Tyr Pro Tyr Thr Phe Gly Gly
                245                 250                 255

Gly Thr Lys Val Glu Ile Lys Thr Thr Thr Pro Ala Pro Arg Pro Pro
            260                 265                 270

Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser Leu Arg Pro Glu
        275                 280                 285

Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr Arg Gly Leu Asp
    290                 295                 300

Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly
305                 310                 315                 320

Val Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr Cys Lys Arg Gly Arg
                325                 330                 335

Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met Arg Pro Val Gln
            340                 345                 350

Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu Glu Glu
        355                 360                 365

Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg Ser Ala Asp Ala
    370                 375                 380
```

```
Pro Ala Tyr Lys Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn Leu
385                 390                 395                 400


Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg Asp
                405                 410                 415


Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu
            420                 425                 430


Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile
        435                 440                 445


Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His Asp Gly Leu Tyr
    450                 455                 460


Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu His Met
465                 470                 475                 480


Gln Ala Leu Pro Pro Arg
                485


<210> 351
<211> 263
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 351
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1               5                   10                  15


His Ala Ala Arg Pro Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu
            20                  25                  30


Val Gln Pro Gly Gly Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Tyr
        35                  40                  45


Thr Phe Thr Ser Tyr Trp Met Asn Trp Val Arg Gln Ala Pro Gly Lys
    50                  55                  60
```

```
Gly Leu Val Trp Val Ser Arg Ile Asp Pro Tyr Asp Ser Glu Thr His
65                  70                  75                  80

Tyr Asn Gln Lys Phe Lys Asp Arg Phe Thr Ile Ser Val Asp Lys Ala
                85                  90                  95

Lys Ser Thr Ala Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr
            100                 105                 110

Ala Val Tyr Tyr Cys Ala Arg Gly Asn Trp Asp Asp Tyr Trp Gly Gln
        115                 120                 125

Gly Thr Thr Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly
    130                 135                 140

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Val Val Met
145                 150                 155                 160

Thr Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly Glu Arg Ala Thr
                165                 170                 175

Ile Asn Cys Arg Ala Ser Lys Ser Ile Ser Lys Asp Leu Ala Trp Tyr
            180                 185                 190

Gln Gln Lys Pro Gly Gln Pro Pro Lys Leu Leu Ile Tyr Ser Gly Ser
        195                 200                 205

Thr Leu Gln Ser Gly Val Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly
    210                 215                 220

Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Ala Glu Asp Val Ala
225                 230                 235                 240

Val Tyr Tyr Cys Gln Gln His Asn Lys Tyr Pro Tyr Thr Phe Gly Gly
                245                 250                 255

Gly Thr Lys Val Glu Ile Lys
            260
```

<210> 352

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

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 352
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 Tyr Thr Phe Thr Ser Tyr
20 25 30

Trp Met Asn Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Val Trp Val
35 40 45

Ser Arg Ile Asp Pro Tyr Asp Ser Glu Thr His Tyr Asn Gln Lys Phe
50 55 60

Lys Asp Arg Phe Thr Ile Ser Val Asp Lys Ala Lys Ser Thr Ala 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 Gly Asn Trp Asp Asp Tyr Trp Gly Gln Gly Thr Thr Val Thr
100 105 110

Val Ser Ser
115

<210> 353
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 353
Asp Val 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 Arg Ala Ser Lys Ser Ile Ser Lys Asp
20 25 30

Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro Lys Leu Leu Ile
35 40 45

Tyr Ser Gly Ser Thr Leu Gln Ser Gly Val Pro Asp Arg Phe Ser Gly
50 55 60

Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Ala
65 70 75 80

Glu Asp Val Ala Val Tyr Tyr Cys Gln Gln His Asn Lys Tyr Pro Tyr
85 90 95

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

<210> 354
<211> 1458
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 354
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

cccgacgtgc agctcaccca gtcgccctca tttctgtcgg cctcagtggg agacagagtg 120

accattactt gtcgggcctc caagagcatc tccaaggacc tggcctggta tcagcagaag 180

ccaggaaagg cgcctaagtt gctcatctac tcggggtcga ccctgcaatc tggcgtgccg 240

tcccggttct ccggttcggg aagcggtacc gaattcaccc ttactatctc ctccctgcaa 300

ccggaggact tcgccaccta ctactgccaa cagcacaaca agtacccgta cactttcggg 360

ggtggcacga aggtcgaaat caaggggggt ggcggtagcg gaggaggggg ctccggcggc 420

ggcggctcag ggggcggagg aagcgaagtg cagctcgtcg agagcggagg gggactggtg 480

cagcccggag gaagcctgag gctgtcctgc gctgcctccg gctacacctt cacctcctac 540

tggatgaact gggtcagaca ggcacctgga aagggactgg tctgggtgtc gcgcattgac 600

ccctacgact ccgaaaccca ttacaatcag aaattcaagg accgcttcac catctccgtg 660

gacaaagcca agagcaccgc gtacctccaa atgaactccc tgcgcgctga ggatacagca 720

gtgtactatt gcgcccgggg aaactgggat gattactggg gccagggaac tactgtgact 780

gtgtcatcca ccactacccc agcaccgagg ccacccaccc cggctcctac catcgcctcc 840

cagcctctgt ccctgcgtcc ggaggcatgt agacccgcag ctggtggggc cgtgcatacc 900

cggggtcttg acttcgcctg cgatatctac atttgggccc ctctggctgg tacttgcggg 960

gtcctgctgc tttcactcgt gatcactctt tactgtaagc gcggtcggaa gaagctgctg 1020

tacatcttta agcaaccctt catgaggcct gtgcagacta ctcaagagga ggacggctgt 1080

tcatgccggt tcccagagga ggaggaaggc ggctgcgaac tgcgcgtgaa attcagccgc 1140

agcgcagatg ctccagccta caagcagggg cagaaccagc tctacaacga actcaatctt 1200

ggtcggagag aggagtacga cgtgctggac aagcggagag gacgggaccc agaaatgggc 1260

gggaagccgc gcagaaagaa tccccaagag ggcctgtaca acgagctcca aaaggataag 1320

atggcagaag cctatagcga gattggtatg aaaggggaac gcagaagagg caaaggccac 1380

gacggactgt accagggact cagcaccgcc accaaggaca cctatgacgc tcttcacatg 1440

caggccctgc cgcctcgg 1458

<210> 355
<211> 486
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 355
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Asp Val Gln Leu Thr Gln Ser Pro Ser Phe Leu
20 25 30

```
Ser Ala Ser Val Gly Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Lys
        35                  40                  45

Ser Ile Ser Lys Asp Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala
    50                  55                  60

Pro Lys Leu Leu Ile Tyr Ser Gly Ser Thr Leu Gln Ser Gly Val Pro
65                  70                  75                  80

Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile
                85                  90                  95

Ser Ser Leu Gln Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln His
            100                 105                 110

Asn Lys Tyr Pro Tyr Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
        115                 120                 125

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly
    130                 135                 140

Gly Gly Gly Ser Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val
145                 150                 155                 160

Gln Pro Gly Gly Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Tyr Thr
                165                 170                 175

Phe Thr Ser Tyr Trp Met Asn Trp Val Arg Gln Ala Pro Gly Lys Gly
            180                 185                 190

Leu Val Trp Val Ser Arg Ile Asp Pro Tyr Asp Ser Glu Thr His Tyr
        195                 200                 205

Asn Gln Lys Phe Lys Asp Arg Phe Thr Ile Ser Val Asp Lys Ala Lys
    210                 215                 220

Ser Thr Ala Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala
225                 230                 235                 240

Val Tyr Tyr Cys Ala Arg Gly Asn Trp Asp Asp Tyr Trp Gly Gln Gly
                245                 250                 255
```

```
Thr Thr Val Thr Val Ser Ser Thr Thr Thr Pro Ala Pro Arg Pro Pro
            260                 265                 270

Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser Leu Arg Pro Glu
        275                 280                 285

Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr Arg Gly Leu Asp
    290                 295                 300

Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly
305                 310                 315                 320

Val Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr Cys Lys Arg Gly Arg
                325                 330                 335

Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met Arg Pro Val Gln
            340                 345                 350

Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu Glu Glu
        355                 360                 365

Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg Ser Ala Asp Ala
    370                 375                 380

Pro Ala Tyr Lys Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn Leu
385                 390                 395                 400

Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg Asp
                405                 410                 415

Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu
            420                 425                 430

Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile
        435                 440                 445

Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His Asp Gly Leu Tyr
    450                 455                 460
```

Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu His Met
465 470 475 480

Gln Ala Leu Pro Pro Arg
485

<210> 356
<211> 263
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 356
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Asp Val Gln Leu Thr Gln Ser Pro Ser Phe Leu
20 25 30

Ser Ala Ser Val Gly Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Lys
35 40 45

Ser Ile Ser Lys Asp Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala
50 55 60

Pro Lys Leu Leu Ile Tyr Ser Gly Ser Thr Leu Gln Ser Gly Val Pro
65 70 75 80

Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile
85 90 95

Ser Ser Leu Gln Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln His
100 105 110

Asn Lys Tyr Pro Tyr Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
115 120 125

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly
130 135 140

```
Gly Gly Gly Ser Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val
145                 150                 155                 160


Gln Pro Gly Gly Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Tyr Thr
                165                 170                 175


Phe Thr Ser Tyr Trp Met Asn Trp Val Arg Gln Ala Pro Gly Lys Gly
            180                 185                 190


Leu Val Trp Val Ser Arg Ile Asp Pro Tyr Asp Ser Glu Thr His Tyr
        195                 200                 205


Asn Gln Lys Phe Lys Asp Arg Phe Thr Ile Ser Val Asp Lys Ala Lys
    210                 215                 220


Ser Thr Ala Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala
225                 230                 235                 240


Val Tyr Tyr Cys Ala Arg Gly Asn Trp Asp Asp Tyr Trp Gly Gln Gly
                245                 250                 255


Thr Thr Val Thr Val Ser Ser
            260


<210> 357
<211> 115
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 357
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 Tyr Thr Phe Thr Ser Tyr
            20                  25                  30


Trp Met Asn Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Val Trp Val
        35                  40                  45
```

Ser Arg Ile Asp Pro Tyr Asp Ser Glu Thr His Tyr Asn Gln Lys Phe
    50   55   60

Lys Asp Arg Phe Thr Ile Ser Val Asp Lys Ala Lys Ser Thr Ala 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 Gly Asn Trp Asp Asp Tyr Trp Gly Gln Gly Thr Thr Val Thr
            100   105   110

Val Ser Ser
        115

<210> 358
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 358
Asp Val 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 Lys Ser Ile Ser Lys Asp
            20   25   30

Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
        35   40   45

Tyr Ser Gly 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 His Asn Lys Tyr Pro Tyr

85 90 95

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

<210> 359
<211> 1458
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 359
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

cccgaagtgg tgctgaccca gtcgcccgca accctctctc tgtcgccggg agaacgcgcc 120

actctttcct gtcgggcgtc caagagcatc tcaaaggacc tcgcctggta ccagcagaag 180

cctggtcaag ccccgcggct gctgatctac tccggctcca cgctgcaatc aggaatccca 240

gccagatttt ccggttcggg gtcggggact gacttcacct tgaccattag ctcgctggaa 300

cctgaggact tcgccgtgta ttactgccag cagcacaaca agtacccgta caccttcgga 360

ggcggtacta aggtcgagat caaggggggt ggcggtagcg gaggaggggg ctccggcggc 420

ggcggctcag ggggcggagg aagcgaagtg cagctcgtcg agagcggagg gggactggtg 480

cagcccggag gaagcctgag gctgtcctgc gctgcctccg gctacacctt cacctcctac 540

tggatgaact gggtcagaca ggcacctgga aagggactgg tctgggtgtc gcgcattgac 600

ccctacgact ccgaaaccca ttacaatcag aaattcaagg accgcttcac catctccgtg 660

gacaaagcca agagcaccgc gtacctccaa atgaactccc tgcgcgctga ggatacagca 720

gtgtactatt gcgcccgggg aaactgggat gattactggg gccagggaac tactgtgact 780

gtgtcatcca ccactacccc agcaccgagg ccacccaccc cggctcctac catcgcctcc 840

cagcctctgt ccctgcgtcc ggaggcatgt agacccgcag ctggtggggc cgtgcatacc 900

cggggtcttg acttcgcctg cgatatctac atttgggccc ctctggctgg tacttgcggg 960

gtcctgctgc tttcactcgt gatcactctt tactgtaagc gcggtcggaa gaagctgctg 1020

tacatcttta agcaaccctt catgaggcct gtgcagacta ctcaagagga ggacggctgt 1080

tcatgccggt tcccagagga ggaggaaggc ggctgcgaac tgcgcgtgaa attcagccgc 1140

agcgcagatg ctccagccta caagcagggg cagaaccagc tctacaacga actcaatctt 1200

ggtcggagag aggagtacga cgtgctggac aagcggagag gacgggaccc agaaatgggc 1260

gggaagccgc gcagaaagaa tccccaagag ggcctgtaca acgagctcca aaaggataag 1320

atggcagaag cctatagcga gattggtatg aaaggggaac gcagaagagg caaaggccac 1380

gacggactgt accagggact cagcaccgcc accaaggaca cctatgacgc tcttcacatg 1440

caggccctgc cgcctcgg 1458

<210> 360
<211> 486
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 360
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Glu Val Val Leu Thr Gln Ser Pro Ala Thr Leu
20 25 30

Ser Leu Ser Pro Gly Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Lys
35 40 45

Ser Ile Ser Lys Asp Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala
50 55 60

Pro Arg Leu Leu Ile Tyr Ser Gly Ser Thr Leu Gln Ser Gly Ile Pro
65 70 75 80

Ala Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile
85 90 95

Ser Ser Leu Glu Pro Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln His
100 105 110

```
Asn Lys Tyr Pro Tyr Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
        115                 120                 125

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly
    130                 135                 140

Gly Gly Gly Ser Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val
145                 150                 155                 160

Gln Pro Gly Gly Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Tyr Thr
                165                 170                 175

Phe Thr Ser Tyr Trp Met Asn Trp Val Arg Gln Ala Pro Gly Lys Gly
            180                 185                 190

Leu Val Trp Val Ser Arg Ile Asp Pro Tyr Asp Ser Glu Thr His Tyr
        195                 200                 205

Asn Gln Lys Phe Lys Asp Arg Phe Thr Ile Ser Val Asp Lys Ala Lys
    210                 215                 220

Ser Thr Ala Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala
225                 230                 235                 240

Val Tyr Tyr Cys Ala Arg Gly Asn Trp Asp Asp Tyr Trp Gly Gln Gly
                245                 250                 255

Thr Thr Val Thr Val Ser Ser Thr Thr Thr Pro Ala Pro Arg Pro Pro
            260                 265                 270

Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser Leu Arg Pro Glu
        275                 280                 285

Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr Arg Gly Leu Asp
    290                 295                 300

Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly
305                 310                 315                 320

Val Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr Cys Lys Arg Gly Arg
                325                 330                 335
```

```
Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met Arg Pro Val Gln
            340                 345                 350

Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu Glu Glu
        355                 360                 365

Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg Ser Ala Asp Ala
    370                 375                 380

Pro Ala Tyr Lys Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn Leu
385                 390                 395                 400

Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg Asp
                405                 410                 415

Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu
            420                 425                 430

Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile
        435                 440                 445

Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His Asp Gly Leu Tyr
    450                 455                 460

Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu His Met
465                 470                 475                 480

Gln Ala Leu Pro Pro Arg
                485
```

<210> 361
<211> 263
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 361
```
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
```

```
1               5                   10                  15

His Ala Ala Arg Pro Glu Val Val Leu Thr Gln Ser Pro Ala Thr Leu
            20                  25                  30

Ser Leu Ser Pro Gly Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Lys
        35                  40                  45

Ser Ile Ser Lys Asp Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala
    50                  55                  60

Pro Arg Leu Leu Ile Tyr Ser Gly Ser Thr Leu Gln Ser Gly Ile Pro
65                  70                  75                  80

Ala Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile
                85                  90                  95

Ser Ser Leu Glu Pro Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln His
            100                 105                 110

Asn Lys Tyr Pro Tyr Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
        115                 120                 125

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly
    130                 135                 140

Gly Gly Gly Ser Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val
145                 150                 155                 160

Gln Pro Gly Gly Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Tyr Thr
                165                 170                 175

Phe Thr Ser Tyr Trp Met Asn Trp Val Arg Gln Ala Pro Gly Lys Gly
            180                 185                 190

Leu Val Trp Val Ser Arg Ile Asp Pro Tyr Asp Ser Glu Thr His Tyr
        195                 200                 205

Asn Gln Lys Phe Lys Asp Arg Phe Thr Ile Ser Val Asp Lys Ala Lys
    210                 215                 220
```

Ser Thr Ala Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala
225 230 235 240

Val Tyr Tyr Cys Ala Arg Gly Asn Trp Asp Asp Tyr Trp Gly Gln Gly
245 250 255

Thr Thr Val Thr Val Ser Ser
260

<210> 362
<211> 115
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 362
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 Tyr Thr Phe Thr Ser Tyr
20 25 30

Trp Met Asn Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Val Trp Val
35 40 45

Ser Arg Ile Asp Pro Tyr Asp Ser Glu Thr His Tyr Asn Gln Lys Phe
50 55 60

Lys Asp Arg Phe Thr Ile Ser Val Asp Lys Ala Lys Ser Thr Ala 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 Gly Asn Trp Asp Asp Tyr Trp Gly Gln Gly Thr Thr Val Thr
100 105 110

Val Ser Ser
115

<210> 363
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 363
Glu Val Val Leu Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly
1 5 10 15

Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Lys Ser Ile Ser Lys Asp
20 25 30

Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile
35 40 45

Tyr Ser Gly Ser Thr Leu Gln Ser Gly Ile Pro Ala Arg Phe Ser Gly
50 55 60

Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Glu Pro
65 70 75 80

Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln His Asn Lys Tyr Pro Tyr
85 90 95

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

<210> 364
<211> 1458
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 364
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

cccgacgtcg tgatgaccca gtcaccggca ttcctgtccg tgactcccgg agaaaaggtc 120

acgattactt gccgggcgtc caagagcatc tccaaggacc tcgcctggta ccaacagaag 180

ccggaccagg cccctaagct gttgatctac tcggggtcca cccttcaatc gggagtgcca 240

tcgcggttta gcggttcggg ttctgggacc gacttcactt tcaccatctc ctcactggaa 300

gccgaggatg ccgccactta ctactgtcag cagcacaaca agtatccgta caccttcgga 360

ggcggtacca aagtggagat caaggggggt ggcggtagcg gaggaggggg ctccggcggc 420

ggcggctcag ggggcggagg aagcgaagtg cagctcgtcg agagcggagg gggactggtg 480

cagcccggag gaagcctgag gctgtcctgc gctgcctccg gctacacctt cacctcctac 540

tggatgaact gggtcagaca ggcacctgga aagggactgg tctgggtgtc gcgcattgac 600

ccctacgact ccgaaaccca ttacaatcag aaattcaagg accgcttcac catctccgtg 660

gacaaagcca agagcaccgc gtacctccaa atgaactccc tgcgcgctga ggatacagca 720

gtgtactatt gcgcccgggg aaactgggat gattactggg gccagggaac tactgtgact 780

gtgtcatcca ccactacccc agcaccgagg ccacccaccc cggctcctac catcgcctcc 840

cagcctctgt ccctgcgtcc ggaggcatgt agacccgcag ctggtggggc cgtgcatacc 900

cggggtcttg acttcgcctg cgatatctac atttgggccc ctctggctgg tacttgcggg 960

gtcctgctgc tttcactcgt gatcactctt tactgtaagc gcggtcggaa gaagctgctg 1020

tacatcttta agcaaccctt catgaggcct gtgcagacta ctcaagagga ggacggctgt 1080

tcatgccggt tcccagagga ggaggaaggc ggctgcgaac tgcgcgtgaa attcagccgc 1140

agcgcagatg ctccagccta caagcagggg cagaaccagc tctacaacga actcaatctt 1200

ggtcggagag aggagtacga cgtgctggac aagcggagag gacgggaccc agaaatgggc 1260

gggaagccgc gcagaaagaa tccccaagag ggcctgtaca acgagctcca aaaggataag 1320

atggcagaag cctatagcga gattggtatg aaaggggaac gcagaagagg caaaggccac 1380

gacggactgt accagggact cagcaccgcc accaaggaca cctatgacgc tcttcacatg 1440

caggccctgc cgcctcgg 1458

<210> 365
<211> 486
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 365
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Asp Val Val Met Thr Gln Ser Pro Ala Phe Leu
20 25 30

Ser Val Thr Pro Gly Glu Lys Val Thr Ile Thr Cys Arg Ala Ser Lys
35 40 45

Ser Ile Ser Lys Asp Leu Ala Trp Tyr Gln Gln Lys Pro Asp Gln Ala
50 55 60

Pro Lys Leu Leu Ile Tyr Ser Gly Ser Thr Leu Gln Ser Gly Val Pro
65 70 75 80

Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Phe Thr Ile
85 90 95

Ser Ser Leu Glu Ala Glu Asp Ala Ala Thr Tyr Tyr Cys Gln Gln His
100 105 110

Asn Lys Tyr Pro Tyr Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
115 120 125

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly
130 135 140

Gly Gly Gly Ser Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val
145 150 155 160

Gln Pro Gly Gly Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Tyr Thr
165 170 175

Phe Thr Ser Tyr Trp Met Asn Trp Val Arg Gln Ala Pro Gly Lys Gly
180 185 190

```
Leu Val Trp Val Ser Arg Ile Asp Pro Tyr Asp Ser Glu Thr His Tyr
        195                 200                 205

Asn Gln Lys Phe Lys Asp Arg Phe Thr Ile Ser Val Asp Lys Ala Lys
    210                 215                 220

Ser Thr Ala Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala
225                 230                 235                 240

Val Tyr Tyr Cys Ala Arg Gly Asn Trp Asp Asp Tyr Trp Gly Gln Gly
                245                 250                 255

Thr Thr Val Thr Val Ser Ser Thr Thr Thr Pro Ala Pro Arg Pro Pro
            260                 265                 270

Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser Leu Arg Pro Glu
        275                 280                 285

Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr Arg Gly Leu Asp
    290                 295                 300

Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly
305                 310                 315                 320

Val Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr Cys Lys Arg Gly Arg
                325                 330                 335

Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met Arg Pro Val Gln
            340                 345                 350

Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu Glu Glu
        355                 360                 365

Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg Ser Ala Asp Ala
    370                 375                 380

Pro Ala Tyr Lys Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn Leu
385                 390                 395                 400

Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg Asp
                405                 410                 415
```

Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu
            420   425   430

Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile
        435   440   445

Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His Asp Gly Leu Tyr
    450   455   460

Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu His Met
465   470   475   480

Gln Ala Leu Pro Pro Arg
                485

<210> 366
<211> 263
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 366
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1   5   10   15

His Ala Ala Arg Pro Asp Val Val Met Thr Gln Ser Pro Ala Phe Leu
            20   25   30

Ser Val Thr Pro Gly Glu Lys Val Thr Ile Thr Cys Arg Ala Ser Lys
        35   40   45

Ser Ile Ser Lys Asp Leu Ala Trp Tyr Gln Gln Lys Pro Asp Gln Ala
    50   55   60

Pro Lys Leu Leu Ile Tyr Ser Gly Ser Thr Leu Gln Ser Gly Val Pro
65   70   75   80

Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Phe Thr Ile

```
                85                  90                  95

Ser Ser Leu Glu Ala Glu Asp Ala Ala Thr Tyr Tyr Cys Gln Gln His
            100                 105                 110

Asn Lys Tyr Pro Tyr Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
        115                 120                 125

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly
    130                 135                 140

Gly Gly Gly Ser Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val
145                 150                 155                 160

Gln Pro Gly Gly Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Tyr Thr
                165                 170                 175

Phe Thr Ser Tyr Trp Met Asn Trp Val Arg Gln Ala Pro Gly Lys Gly
            180                 185                 190

Leu Val Trp Val Ser Arg Ile Asp Pro Tyr Asp Ser Glu Thr His Tyr
        195                 200                 205

Asn Gln Lys Phe Lys Asp Arg Phe Thr Ile Ser Val Asp Lys Ala Lys
    210                 215                 220

Ser Thr Ala Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala
225                 230                 235                 240

Val Tyr Tyr Cys Ala Arg Gly Asn Trp Asp Asp Tyr Trp Gly Gln Gly
                245                 250                 255

Thr Thr Val Thr Val Ser Ser
            260


<210> 367
<211> 115
<212> PRT
<213> Artificial Sequence

<220>
<221> source
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<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 367
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 Tyr Thr Phe Thr Ser Tyr
20 25 30

Trp Met Asn Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Val Trp Val
35 40 45

Ser Arg Ile Asp Pro Tyr Asp Ser Glu Thr His Tyr Asn Gln Lys Phe
50 55 60

Lys Asp Arg Phe Thr Ile Ser Val Asp Lys Ala Lys Ser Thr Ala 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 Gly Asn Trp Asp Asp Tyr Trp Gly Gln Gly Thr Thr Val Thr
100 105 110

Val Ser Ser
115

<210> 368
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 368
Asp Val Val Met Thr Gln Ser Pro Ala Phe Leu Ser Val Thr Pro Gly
1 5 10 15

Glu Lys Val Thr Ile Thr Cys Arg Ala Ser Lys Ser Ile Ser Lys Asp
20 25 30

```
Leu Ala Trp Tyr Gln Gln Lys Pro Asp Gln Ala Pro Lys Leu Leu Ile
        35                  40                  45

Tyr Ser Gly Ser Thr Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
    50                  55                  60

Ser Gly Ser Gly Thr Asp Phe Thr Phe Thr Ile Ser Ser Leu Glu Ala
65                  70                  75                  80

Glu Asp Ala Ala Thr Tyr Tyr Cys Gln Gln His Asn Lys Tyr Pro Tyr
                85                  90                  95

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

<210> 369
<211> 1458
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 369

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atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg       60

cccgacgtgg tcatgactca gtccccggac tcactcgcgg tgtcgcttgg agagagagcg      120

accatcaact gtcgggcctc aaagagcatc agcaaggacc tggcctggta ccagcagaag      180

ccgggacagc cgccaaagct gctgatctac tccgggtcca ccttgcaatc tggtgtccct      240

gaccggttct ccggttccgg gtcgggtacc gacttcacgc tcactatttc gtcgctgcaa      300

gccgaagatg tggccgtgta ctattgccaa cagcacaaca agtaccccta cacttttggc      360

ggaggcacca aggtggaaat caaggggggt ggcggtagcg gaggaggggg ctccggcggc      420

ggcggctcag ggggcggagg aagcgaagtg cagctcgtcg agagcggagg gggactggtg      480

cagcccggag gaagcctgag gctgtcctgc gctgcctccg gctacacctt cacctcctac      540

tggatgaact gggtcagaca ggcacctgga aagggactgg tctgggtgtc gcgcattgac      600

ccctacgact ccgaaaccca ttacaatcag aaattcaagg accgcttcac catctccgtg      660
```

gacaaagcca agagcaccgc gtacctccaa atgaactccc tgcgcgctga ggatacagca 720

gtgtactatt gcgcccgggg aaactgggat gattactggg gccagggaac tactgtgact 780

gtgtcatcca ccactacccc agcaccgagg ccacccaccc cggctcctac catcgcctcc 840

cagcctctgt ccctgcgtcc ggaggcatgt agacccgcag ctggtggggc cgtgcatacc 900

cggggtcttg acttcgcctg cgatatctac atttgggccc ctctggctgg tacttgcggg 960

gtcctgctgc tttcactcgt gatcactctt tactgtaagc gcggtcggaa gaagctgctg 1020

tacatcttta agcaaccctt catgaggcct gtgcagacta ctcaagagga ggacggctgt 1080

tcatgccggt tcccagagga ggaggaaggc ggctgcgaac tgcgcgtgaa attcagccgc 1140

agcgcagatg ctccagccta caagcagggg cagaaccagc tctacaacga actcaatctt 1200

ggtcggagag aggagtacga cgtgctggac aagcggagag gacgggaccc agaaatgggc 1260

gggaagccgc gcagaaagaa tccccaagag ggcctgtaca acgagctcca aaaggataag 1320

atggcagaag cctatagcga gattggtatg aaaggggaac gcagaagagg caaaggccac 1380

gacggactgt accagggact cagcaccgcc accaaggaca cctatgacgc tcttcacatg 1440

caggccctgc cgcctcgg 1458

<210> 370
<211> 486
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 370
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Asp Val Val Met Thr Gln Ser Pro Asp Ser Leu
20 25 30

Ala Val Ser Leu Gly Glu Arg Ala Thr Ile Asn Cys Arg Ala Ser Lys
35 40 45

Ser Ile Ser Lys Asp Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Pro
50 55 60

```
Pro Lys Leu Leu Ile Tyr Ser Gly Ser Thr Leu Gln Ser Gly Val Pro
65                  70                  75                  80

Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile
                85                  90                  95

Ser Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln Gln His
            100                 105                 110

Asn Lys Tyr Pro Tyr Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
        115                 120                 125

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly
    130                 135                 140

Gly Gly Gly Ser Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val
145                 150                 155                 160

Gln Pro Gly Gly Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Tyr Thr
                165                 170                 175

Phe Thr Ser Tyr Trp Met Asn Trp Val Arg Gln Ala Pro Gly Lys Gly
            180                 185                 190

Leu Val Trp Val Ser Arg Ile Asp Pro Tyr Asp Ser Glu Thr His Tyr
        195                 200                 205

Asn Gln Lys Phe Lys Asp Arg Phe Thr Ile Ser Val Asp Lys Ala Lys
    210                 215                 220

Ser Thr Ala Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala
225                 230                 235                 240

Val Tyr Tyr Cys Ala Arg Gly Asn Trp Asp Asp Tyr Trp Gly Gln Gly
                245                 250                 255

Thr Thr Val Thr Val Ser Ser Thr Thr Thr Pro Ala Pro Arg Pro Pro
            260                 265                 270
```

```
Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser Leu Arg Pro Glu
        275                 280                 285

Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr Arg Gly Leu Asp
    290                 295                 300

Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly
305                 310                 315                 320

Val Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr Cys Lys Arg Gly Arg
                325                 330                 335

Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met Arg Pro Val Gln
            340                 345                 350

Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu Glu Glu
        355                 360                 365

Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg Ser Ala Asp Ala
    370                 375                 380

Pro Ala Tyr Lys Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn Leu
385                 390                 395                 400

Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg Asp
                405                 410                 415

Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu
            420                 425                 430

Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile
        435                 440                 445

Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His Asp Gly Leu Tyr
    450                 455                 460

Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu His Met
465                 470                 475                 480

Gln Ala Leu Pro Pro Arg
                485
```

<210> 371
<211> 263
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 371
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Asp Val Val Met Thr Gln Ser Pro Asp Ser Leu
20 25 30

Ala Val Ser Leu Gly Glu Arg Ala Thr Ile Asn Cys Arg Ala Ser Lys
35 40 45

Ser Ile Ser Lys Asp Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Pro
50 55 60

Pro Lys Leu Leu Ile Tyr Ser Gly Ser Thr Leu Gln Ser Gly Val Pro
65 70 75 80

Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile
85 90 95

Ser Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln Gln His
100 105 110

Asn Lys Tyr Pro Tyr Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
115 120 125

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly
130 135 140

Gly Gly Gly Ser Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val
145 150 155 160

Gln Pro Gly Gly Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Tyr Thr

```
                165                 170                 175

Phe Thr Ser Tyr Trp Met Asn Trp Val Arg Gln Ala Pro Gly Lys Gly
            180                 185                 190

Leu Val Trp Val Ser Arg Ile Asp Pro Tyr Asp Ser Glu Thr His Tyr
        195                 200                 205

Asn Gln Lys Phe Lys Asp Arg Phe Thr Ile Ser Val Asp Lys Ala Lys
    210                 215                 220

Ser Thr Ala Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala
225                 230                 235                 240

Val Tyr Tyr Cys Ala Arg Gly Asn Trp Asp Asp Tyr Trp Gly Gln Gly
                245                 250                 255

Thr Thr Val Thr Val Ser Ser
            260


<210> 372
<211> 115
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 372
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 Tyr Thr Phe Thr Ser Tyr
            20                  25                  30

Trp Met Asn Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Val Trp Val
        35                  40                  45

Ser Arg Ile Asp Pro Tyr Asp Ser Glu Thr His Tyr Asn Gln Lys Phe
    50                  55                  60
```

```
Lys Asp Arg Phe Thr Ile Ser Val Asp Lys Ala Lys Ser Thr Ala 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 Gly Asn Trp Asp Asp Tyr Trp Gly Gln Gly Thr Thr Val Thr
            100                 105                 110


Val Ser Ser
        115


<210> 373
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 373
Asp Val 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 Arg Ala Ser Lys Ser Ile Ser Lys Asp
            20                  25                  30


Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro Lys Leu Leu Ile
        35                  40                  45


Tyr Ser Gly Ser Thr Leu Gln Ser Gly Val Pro Asp Arg Phe Ser Gly
    50                  55                  60


Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Ala
65                  70                  75                  80


Glu Asp Val Ala Val Tyr Tyr Cys Gln Gln His Asn Lys Tyr Pro Tyr
                85                  90                  95


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

<210> 374
<211> 729
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 374
caagtgcaac tcgtccaaag cggagcggaa gtcaagaaac ccggagcgag cgtgaaagtg 60

tcctgcaaag cctccggcta cacctttacg ggctactaca tgcactgggt gcgccaggca 120

ccaggacagg gtcttgaatg gatgggatgg atcaacccta attcgggcgg aactaactac 180

gcacagaagt tccaggggag agtgactctg actcgggata cctccatctc aactgtctac 240

atggaactct cccgcttgcg gtcagatgat acggcagtgt actactgcgc ccgcgacatg 300

aatatcctgg ctaccgtgcc gttcgacatc tggggacagg ggactatggt tactgtctca 360

tcgggcggtg gaggttcagg aggaggcggc tcgggaggcg gaggttcgga cattcagatg 420

acccagtccc catcctctct gtcggccagc gtcggagata gggtgaccat tacctgtcgg 480

gcctcgcaaa gcatctcctc gtacctcaac tggtatcagc aaaagccggg aaaggcgcct 540

aagctgctga tctacgccgc ttcgagcttg caaagcgggg tgccatccag attctcggga 600

tcaggctcag gaaccgactt caccctgacc gtgaacagcc tccagccgga ggactttgcc 660

acttactact gccagcaggg agactccgtg ccgcttactt tcgggggggg tacccgcctg 720

gagatcaag 729

<210> 375
<211> 243
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 375
Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
1 5 10 15

```
Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Gly Tyr
            20                  25                  30

Tyr Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
        35                  40                  45

Gly Trp Ile Asn Pro Asn Ser Gly Gly Thr Asn Tyr Ala Gln Lys Phe
    50                  55                  60

Gln Gly Arg Val Thr Leu Thr Arg Asp Thr Ser Ile Ser Thr Val Tyr
65                  70                  75                  80

Met Glu Leu Ser Arg Leu Arg Ser Asp Asp Thr Ala Val Tyr Tyr Cys
                85                  90                  95

Ala Arg Asp Met Asn Ile Leu Ala Thr Val Pro Phe Asp Ile Trp Gly
            100                 105                 110

Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly
        115                 120                 125

Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Gln Met Thr Gln Ser Pro
    130                 135                 140

Ser Ser Leu Ser Ala Ser Val Gly Asp Arg Val Thr Ile Thr Cys Arg
145                 150                 155                 160

Ala Ser Gln Ser Ile Ser Ser Tyr Leu Asn Trp Tyr Gln Gln Lys Pro
                165                 170                 175

Gly Lys Ala Pro Lys Leu Leu Ile Tyr Ala Ala Ser Ser Leu Gln Ser
            180                 185                 190

Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr
        195                 200                 205

Leu Thr Val Asn Ser Leu Gln Pro Glu Asp Phe Ala Thr Tyr Tyr Cys
    210                 215                 220

Gln Gln Gly Asp Ser Val Pro Leu Thr Phe Gly Gly Gly Thr Arg Leu
225                 230                 235                 240
```

Glu Ile Lys

<210> 376
<211> 1760
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 376
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

ccccaagtgc aactcgtcca aagcggagcg gaagtcaaga aacccggagc gagcgtgaaa 120

gtgtcctgca aagcctccgg ctacaccttt acgggctact acatgcactg ggtgcgccag 180

gcaccaggac agggtcttga atggatggga tggatcaacc ctaattcggg cggaactaac 240

tacgcacaga agttccaggg gagagtgact ctgactcggg atacctccat ctcaactgtc 300

tacatggaac tctcccgctt gcggtcagat gatacggcag tgtactactg cgcccgcgac 360

atgaatatcc tggctaccgt gccgttcgac atctggggac aggggactat ggttactgtc 420

tcatcgggcg gtggaggttc aggaggaggc ggctcgggag gcggaggttc ggacattcag 480

atgacccagt ccccatcctc tctgtcggcc agcgtcggag atagggtgac cattacctgt 540

cgggcctcgc aaagcatctc ctcgtacctc aactggtatc agcaaaagcc gggaaaggcg 600

cctaagctgc tgatctacgc cgcttcgagc ttgcaaagcg gggtgccatc cagattctcg 660

ggatcaggct caggaaccga cttcaccctg accgtgaaca gcctccagcc ggaggacttt 720

gccacttact actgccagca gggagactcc gtgccgctta ctttcggggg gggtacccgc 780

ctggagatca agaccactac cccagcaccg aggccaccca ccccggctcc taccatcgcc 840

tcccagcctc tgtccctgcg tccggaggca tgtagacccg cagctggtgg ggccgtgcat 900

acccggggtc ttgacttcgc ctgcgatatc tacatttggg cccctctggc tggtacttgc 960

ggggtcctgc tgctttcact cgtgatcact ctttactgta agcgcggtcg gaagaagctg 1020

ctgtacatct ttaagcaacc cttcatgagg cctgtgcaga ctactcaaga ggaggacggc 1080

tgttcttgcc ggttcccaga ggaggaggaa ggcggctgcg aactgcgcgt gaaattcagc 1140

cgcagcgcag acgctccagc ctacaagcag gggcagaacc agctctacaa cgaactcaat 1200

cttggtcgga gagaggagta cgacgtgctg gacaagcgga gaggacggga cccagaaatg 1260

ggcgggaagc cgcgcagaaa gaatccccaa gagggcctgt acaacgagct ccaaaaggat 1320

aagatggcag aagcctatag cgagattggt atgaaagggg aacgcagaag aggcaaaggc 1380

cacgacggac tgtaccaggg actcagcacc gccaccaagg acacctatga cgctcttcac 1440

atgcaggccc tgccgcctcg gtaagtcgac agctcgcttt cttgctgtcc aatttctatt 1500

aaaggttcct ttgttcccta agtccaacta ctaaactggg ggatattatg aagggccttg 1560

agcatctgga ttctgcctaa taaaaaacat ttattttcat tgctgcgtcg agagctcgct 1620

ttcttgctgt ccaatttcta ttaaaggttc ctttgttccc taagtccaac tactaaactg 1680

ggggatatta tgaagggcct tgagcatctg gattctgcct aataaaaaac atttattttc 1740

attgctgcct cgacgaattc 1760

<210> 377
<211> 729
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 377
caagtccaac tcgttcaatc cggcgcagaa gtcaagaagc caggagcatc agtgaaagtg 60

tcctgcaaag cctcaggcta catcttcacg ggatactaca tccactgggt gcgccaggct 120

ccgggccagg gccttgagtg gatgggctgg atcaacccta actctggggg aaccaactac 180

gctcagaagt tccaggggag ggtcactatg actcgcgata cctccatctc cactgcgtac 240

atggaactct cgggactgag atccgacgat cctgccgtgt actactgcgc ccgggacatg 300

aacatcttgg cgaccgtgcc gtttgacatt tggggacagg gcaccctcgt cactgtgtcg 360

agcggtggag gaggctcggg gggtggcgga tcaggagggg gaggaagcga catccagctg 420

actcagagcc catcgtcgtt gtccgcgtcg gtgggggata gagtgaccat tacttgccgc 480

gccagccaga gcatctcatc atatctgaat tggtaccagc agaagcccgg aaaggcccca 540

aaactgctga tctacgctgc aagcagcctc caatcgggag tgccgtcacg gttctccggg 600

tccggttcgg gaactgactt taccctgacc gtgaattcgc tgcaaccgga ggatttcgcc 660

acgtactact gtcagcaagg agactccgtg ccgctgacct tcggtggagg caccaaggtc 720

gaaatcaag 729

<210> 378
<211> 243
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 378
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 Ile Phe Thr Gly Tyr
20 25 30

Tyr Ile His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45

Gly Trp Ile Asn Pro Asn Ser Gly Gly Thr Asn Tyr Ala Gln Lys Phe
50 55 60

Gln Gly Arg Val Thr Met Thr Arg Asp Thr Ser Ile Ser Thr Ala Tyr
65 70 75 80

Met Glu Leu Ser Gly Leu Arg Ser Asp Asp Pro Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Asp Met Asn Ile Leu Ala Thr Val Pro Phe Asp Ile Trp Gly
100 105 110

Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly
115 120 125

Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Gln Leu Thr Gln Ser Pro
130 135 140

```
Ser Ser Leu Ser Ala Ser Val Gly Asp Arg Val Thr Ile Thr Cys Arg
145                 150                 155                 160


Ala Ser Gln Ser Ile Ser Ser Tyr Leu Asn Trp Tyr Gln Gln Lys Pro
                165                 170                 175


Gly Lys Ala Pro Lys Leu Leu Ile Tyr Ala Ala Ser Ser Leu Gln Ser
            180                 185                 190


Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr
        195                 200                 205


Leu Thr Val Asn Ser Leu Gln Pro Glu Asp Phe Ala Thr Tyr Tyr Cys
    210                 215                 220


Gln Gln Gly Asp Ser Val Pro Leu Thr Phe Gly Gly Gly Thr Lys Val
225                 230                 235                 240


Glu Ile Lys
```

<210> 379
<211> 735
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 379
caagtccaac tccaacagtc aggcgcagaa gtgaaaaaga gcggtgcatc ggtgaaagtg 60

tcatgcaaag cctcgggcta caccttcact gactactata tgcactggct gcggcaggca 120

ccgggacagg gacttgagtg gatgggatgg atcaacccga attcagggga cactaactac 180

gcgcagaagt tccaggggag agtgaccctg acgagggaca cctcaatttc gaccgtctac 240

atggaattgt cgcgcctgag atcggacgat actgctgtgt actactgtgc ccgcgacatg 300

aacatcctcg cgactgtgcc ttttgatatc tggggacagg ggactatggt caccgtttcc 360

tccgcttccg gtggcggagg ctcgggaggc cgggcctccg gtggaggagg cagcgacatc 420

cagatgactc agagcccttc ctcgctgagc gcctcagtgg gagatcgcgt gaccatcact 480

tgccgggcca gccagtccat ttcgtcctac ctcaattggt accagcagaa gccgggaaag 540

gcgcccaagc tcttgatcta cgctgcgagc tccctgcaaa gcggggtgcc gagccgattc 600

tcgggttccg gctcgggaac cgacttcact ctgaccatct catccctgca accagaggac 660

tttgccacct actactgcca acaaggagat tctgtcccac tgacgttcgg cggaggaacc 720

aaggtcgaaa tcaag 735

<210> 380
<211> 245
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 380
Gln Val Gln Leu Gln Gln Ser Gly Ala Glu Val Lys Lys Ser Gly Ala
1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asp Tyr
20 25 30

Tyr Met His Trp Leu Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45

Gly Trp Ile Asn Pro Asn Ser Gly Asp Thr Asn Tyr Ala Gln Lys Phe
50 55 60

Gln Gly Arg Val Thr Leu Thr Arg Asp Thr Ser Ile Ser Thr Val Tyr
65 70 75 80

Met Glu Leu Ser Arg Leu Arg Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Asp Met Asn Ile Leu Ala Thr Val Pro Phe Asp Ile Trp Gly
100 105 110

Gln Gly Thr Met Val Thr Val Ser Ser Ala Ser Gly Gly Gly Gly Ser
115 120 125

```
Gly Gly Arg Ala Ser Gly Gly Gly Gly Ser Asp Ile Gln Met Thr Gln
    130                 135                 140


Ser Pro Ser Ser Leu Ser Ala Ser Val Gly Asp Arg Val Thr Ile Thr
145                 150                 155                 160


Cys Arg Ala Ser Gln Ser Ile Ser Ser Tyr Leu Asn Trp Tyr Gln Gln
                165                 170                 175


Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile Tyr Ala Ala Ser Ser Leu
            180                 185                 190


Gln Ser Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp
        195                 200                 205


Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro Glu Asp Phe Ala Thr Tyr
    210                 215                 220


Tyr Cys Gln Gln Gly Asp Ser Val Pro Leu Thr Phe Gly Gly Gly Thr
225                 230                 235                 240


Lys Val Glu Ile Lys
                245


<210> 381
<211> 243
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 381
Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
1               5                   10                  15


Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Gly Tyr
            20                  25                  30


Tyr Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
```

```
        35                  40                  45

Gly Trp Ile Asn Pro Asn Ser Gly Gly Thr Asn Tyr Ala Gln Lys Phe
    50                  55                  60

Gln Gly Arg Val Thr Met Thr Arg Asp Thr Ser Ile Ser Thr Ala Tyr
65                  70                  75                  80

Met Glu Leu Ser Arg Leu Arg Ser Asp Asp Thr Ala Val Tyr Tyr Cys
                85                  90                  95

Ala Arg Asp Met Asn Ile Leu Ala Thr Val Pro Phe Asp Ile Trp Gly
            100                 105                 110

Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly
        115                 120                 125

Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Gln Met Thr Gln Ser Pro
    130                 135                 140

Ser Ser Leu Ser Ala Ser Val Gly Asp Arg Val Thr Ile Thr Cys Arg
145                 150                 155                 160

Ala Ser Gln Ser Ile Ser Thr Tyr Leu Asn Trp Tyr Gln Gln Lys Pro
                165                 170                 175

Gly Lys Ala Pro Asn Leu Leu Ile Tyr Ala Ala Phe Ser Leu Gln Ser
            180                 185                 190

Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr
        195                 200                 205

Leu Thr Ile Asn Ser Leu Gln Pro Glu Asp Phe Ala Thr Tyr Tyr Cys
    210                 215                 220

Gln Gln Gly Asp Ser Val Pro Leu Thr Phe Gly Gly Gly Thr Lys Leu
225                 230                 235                 240

Glu Ile Lys
```

<210> 382
<211> 242
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 382
Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Ser Tyr
20 25 30

Trp Met Asn Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45

Gly Arg Ile Asp Pro Tyr Asp Ser Glu Thr His Tyr Asn Gln Lys Phe
50 55 60

Lys Asp Arg Val Thr Met Thr Val Asp Lys Ser Thr Ser Thr Ala Tyr
65 70 75 80

Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Gly Asn Trp Asp Asp Tyr Trp Gly Gln Gly Thr Thr Val Thr
100 105 110

Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly
115 120 125

Gly Ser Gly Gly Gly Gly Ser Asp Val Gln Leu Thr Gln Ser Pro Ser
130 135 140

Phe Leu Ser Ala Ser Val Gly Asp Arg Val Thr Ile Thr Cys Arg Ala
145 150 155 160

Ser Lys Ser Ile Ser Lys Asp Leu Ala Trp Tyr Gln Gln Lys Pro Gly
165 170 175

Lys Ala Pro Lys Leu Leu Ile Tyr Ser Gly Ser Thr Leu Gln Ser Gly
            180   185   190

Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Glu Phe Thr Leu
        195   200   205

Thr Ile Ser Ser Leu Gln Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Gln
    210   215   220

Gln His Asn Lys Tyr Pro Tyr Thr Phe Gly Gly Gly Thr Lys Val Glu
225   230   235   240

Ile Lys

<210> 383
<211> 242
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 383
Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
1   5   10   15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Ser Tyr
            20   25   30

Trp Met Asn Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
        35   40   45

Gly Arg Ile Asp Pro Tyr Asp Ser Glu Thr His Tyr Asn Gln Lys Phe
    50   55   60

Lys Asp Arg Val Thr Met Thr Val Asp Lys Ser Thr Ser Thr Ala Tyr
65   70   75   80

Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys

```
                85                  90                  95

Ala Arg Gly Asn Trp Asp Asp Tyr Trp Gly Gln Gly Thr Thr Val Thr
            100                 105                 110

Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly
        115                 120                 125

Gly Ser Gly Gly Gly Gly Ser Glu Val Val Leu Thr Gln Ser Pro Ala
    130                 135                 140

Thr Leu Ser Leu Ser Pro Gly Glu Arg Ala Thr Leu Ser Cys Arg Ala
145                 150                 155                 160

Ser Lys Ser Ile Ser Lys Asp Leu Ala Trp Tyr Gln Gln Lys Pro Gly
                165                 170                 175

Gln Ala Pro Arg Leu Leu Ile Tyr Ser Gly Ser Thr Leu Gln Ser Gly
            180                 185                 190

Ile Pro Ala Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu
        195                 200                 205

Thr Ile Ser Ser Leu Glu Pro Glu Asp Phe Ala Val Tyr Tyr Cys Gln
    210                 215                 220

Gln His Asn Lys Tyr Pro Tyr Thr Phe Gly Gly Gly Thr Lys Val Glu
225                 230                 235                 240

Ile Lys
```

<210> 384
<211> 242
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 384

```
Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
1               5                   10                  15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Ser Tyr
            20                  25                  30

Trp Met Asn Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
        35                  40                  45

Gly Arg Ile Asp Pro Tyr Asp Ser Glu Thr His Tyr Asn Gln Lys Phe
    50                  55                  60

Lys Asp Arg Val Thr Met Thr Val Asp Lys Ser Thr Ser Thr Ala Tyr
65                  70                  75                  80

Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
                85                  90                  95

Ala Arg Gly Asn Trp Asp Asp Tyr Trp Gly Gln Gly Thr Thr Val Thr
            100                 105                 110

Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly
        115                 120                 125

Gly Ser Gly Gly Gly Gly Ser Asp Val Val Met Thr Gln Ser Pro Ala
    130                 135                 140

Phe Leu Ser Val Thr Pro Gly Glu Lys Val Thr Ile Thr Cys Arg Ala
145                 150                 155                 160

Ser Lys Ser Ile Ser Lys Asp Leu Ala Trp Tyr Gln Gln Lys Pro Asp
                165                 170                 175

Gln Ala Pro Lys Leu Leu Ile Tyr Ser Gly Ser Thr Leu Gln Ser Gly
            180                 185                 190

Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Phe
        195                 200                 205

Thr Ile Ser Ser Leu Glu Ala Glu Asp Ala Ala Thr Tyr Tyr Cys Gln
    210                 215                 220
```

Gln His Asn Lys Tyr Pro Tyr Thr Phe Gly Gly Gly Thr Lys Val Glu
225 230 235 240

Ile Lys

<210> 385
<211> 242
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 385
Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Ser Tyr
20 25 30

Trp Met Asn Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45

Gly Arg Ile Asp Pro Tyr Asp Ser Glu Thr His Tyr Asn Gln Lys Phe
50 55 60

Lys Asp Arg Val Thr Met Thr Val Asp Lys Ser Thr Ser Thr Ala Tyr
65 70 75 80

Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Gly Asn Trp Asp Asp Tyr Trp Gly Gln Gly Thr Thr Val Thr
100 105 110

Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly
115 120 125

Gly Ser Gly Gly Gly Gly Ser Asp Val Val Met Thr Gln Ser Pro Asp

130 135 140

Ser Leu Ala Val Ser Leu Gly Glu Arg Ala Thr Ile Asn Cys Arg Ala
145 150 155 160

Ser Lys Ser Ile Ser Lys Asp Leu Ala Trp Tyr Gln Gln Lys Pro Gly
165 170 175

Gln Pro Pro Lys Leu Leu Ile Tyr Ser Gly Ser Thr Leu Gln Ser Gly
180 185 190

Val Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu
195 200 205

Thr Ile Ser Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln
210 215 220

Gln His Asn Lys Tyr Pro Tyr Thr Phe Gly Gly Gly Thr Lys Val Glu
225 230 235 240

Ile Lys

<210> 386
<211> 242
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 386
Asp Val 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 Lys Ser Ile Ser Lys Asp
20 25 30

Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
35 40 45

```
Tyr Ser Gly 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 His Asn Lys Tyr Pro Tyr
                85                  90                  95

Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Gly Gly Gly Gly Ser
            100                 105                 110

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gln
        115                 120                 125

Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala Ser
    130                 135                 140

Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Ser Tyr Trp
145                 150                 155                 160

Met Asn Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met Gly
                165                 170                 175

Arg Ile Asp Pro Tyr Asp Ser Glu Thr His Tyr Asn Gln Lys Phe Lys
            180                 185                 190

Asp Arg Val Thr Met Thr Val Asp Lys Ser Thr Ser Thr Ala Tyr Met
        195                 200                 205

Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys Ala
    210                 215                 220

Arg Gly Asn Trp Asp Asp Tyr Trp Gly Gln Gly Thr Thr Val Thr Val
225                 230                 235                 240

Ser Ser
```

<210> 387
<211> 242

<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 387
Glu Val Val Leu Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly
1 5 10 15

Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Lys Ser Ile Ser Lys Asp
20 25 30

Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile
35 40 45

Tyr Ser Gly Ser Thr Leu Gln Ser Gly Ile Pro Ala Arg Phe Ser Gly
50 55 60

Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Glu Pro
65 70 75 80

Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln His Asn Lys Tyr Pro Tyr
85 90 95

Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Gly Gly Gly Gly Ser
100 105 110

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gln
115 120 125

Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala Ser
130 135 140

Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Ser Tyr Trp
145 150 155 160

Met Asn Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met Gly
165 170 175

Arg Ile Asp Pro Tyr Asp Ser Glu Thr His Tyr Asn Gln Lys Phe Lys

```
            180                 185                 190

Asp Arg Val Thr Met Thr Val Asp Lys Ser Thr Ser Thr Ala Tyr Met
        195                 200                 205

Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys Ala
    210                 215                 220

Arg Gly Asn Trp Asp Asp Tyr Trp Gly Gln Gly Thr Thr Val Thr Val
225                 230                 235                 240

Ser Ser
```

<210> 388
<211> 242
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 388

```
Asp Val Val Met Thr Gln Ser Pro Ala Phe Leu Ser Val Thr Pro Gly
1               5                   10                  15

Glu Lys Val Thr Ile Thr Cys Arg Ala Ser Lys Ser Ile Ser Lys Asp
            20                  25                  30

Leu Ala Trp Tyr Gln Gln Lys Pro Asp Gln Ala Pro Lys Leu Leu Ile
        35                  40                  45

Tyr Ser Gly Ser Thr Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
    50                  55                  60

Ser Gly Ser Gly Thr Asp Phe Thr Phe Thr Ile Ser Ser Leu Glu Ala
65                  70                  75                  80

Glu Asp Ala Ala Thr Tyr Tyr Cys Gln Gln His Asn Lys Tyr Pro Tyr
                85                  90                  95
```

```
Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Gly Gly Gly Gly Ser
            100                 105                 110

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gln
        115                 120                 125

Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala Ser
    130                 135                 140

Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Ser Tyr Trp
145                 150                 155                 160

Met Asn Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met Gly
                165                 170                 175

Arg Ile Asp Pro Tyr Asp Ser Glu Thr His Tyr Asn Gln Lys Phe Lys
            180                 185                 190

Asp Arg Val Thr Met Thr Val Asp Lys Ser Thr Ser Thr Ala Tyr Met
        195                 200                 205

Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys Ala
    210                 215                 220

Arg Gly Asn Trp Asp Asp Tyr Trp Gly Gln Gly Thr Thr Val Thr Val
225                 230                 235                 240

Ser Ser
```

<210> 389
<211> 242
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 389

```
Asp Val 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 Arg Ala Ser Lys Ser Ile Ser Lys Asp
            20                  25                  30

Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro Lys Leu Leu Ile
        35                  40                  45

Tyr Ser Gly Ser Thr Leu Gln Ser Gly Val Pro Asp Arg Phe Ser Gly
    50                  55                  60

Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Ala
65                  70                  75                  80

Glu Asp Val Ala Val Tyr Tyr Cys Gln Gln His Asn Lys Tyr Pro Tyr
                85                  90                  95

Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Gly Gly Gly Gly Ser
            100                 105                 110

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gln
        115                 120                 125

Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala Ser
    130                 135                 140

Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Ser Tyr Trp
145                 150                 155                 160

Met Asn Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met Gly
                165                 170                 175

Arg Ile Asp Pro Tyr Asp Ser Glu Thr His Tyr Asn Gln Lys Phe Lys
            180                 185                 190

Asp Arg Val Thr Met Thr Val Asp Lys Ser Thr Ser Thr Ala Tyr Met
        195                 200                 205

Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys Ala
    210                 215                 220

Arg Gly Asn Trp Asp Asp Tyr Trp Gly Gln Gly Thr Thr Val Thr Val
```

225 230 235 240

Ser Ser

<210> 390
<211> 242
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 390
Gln Val Gln Leu Val Gln Ser Gly Ser Glu Leu Lys Lys Pro Gly Ala
1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Ser Tyr
20 25 30

Trp Met Asn Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45

Gly Arg Ile Asp Pro Tyr Asp Ser Glu Thr His Tyr Asn Gln Lys Phe
50 55 60

Lys Asp Arg Phe Val Phe Ser Val Asp Lys Ser Val Ser Thr Ala Tyr
65 70 75 80

Leu Gln Ile Ser Ser Leu Lys Ala Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Gly Asn Trp Asp Asp Tyr Trp Gly Gln Gly Thr Thr Val Thr
100 105 110

Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly
115 120 125

Gly Ser Gly Gly Gly Gly Ser Asp Val Gln Leu Thr Gln Ser Pro Ser
130 135 140

```
Phe Leu Ser Ala Ser Val Gly Asp Arg Val Thr Ile Thr Cys Arg Ala
145                 150                 155                 160


Ser Lys Ser Ile Ser Lys Asp Leu Ala Trp Tyr Gln Gln Lys Pro Gly
                165                 170                 175


Lys Ala Pro Lys Leu Leu Ile Tyr Ser Gly Ser Thr Leu Gln Ser Gly
            180                 185                 190


Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Glu Phe Thr Leu
        195                 200                 205


Thr Ile Ser Ser Leu Gln Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Gln
    210                 215                 220


Gln His Asn Lys Tyr Pro Tyr Thr Phe Gly Gly Gly Thr Lys Val Glu
225                 230                 235                 240


Ile Lys



<210> 391
<211> 242
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 391
Gln Val Gln Leu Val Gln Ser Gly Ser Glu Leu Lys Lys Pro Gly Ala
1               5                   10                  15


Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Ser Tyr
            20                  25                  30


Trp Met Asn Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
        35                  40                  45


Gly Arg Ile Asp Pro Tyr Asp Ser Glu Thr His Tyr Asn Gln Lys Phe
    50                  55                  60
```

```
Lys Asp Arg Phe Val Phe Ser Val Asp Lys Ser Val Ser Thr Ala Tyr
65                  70                  75                  80

Leu Gln Ile Ser Ser Leu Lys Ala Glu Asp Thr Ala Val Tyr Tyr Cys
                85                  90                  95

Ala Arg Gly Asn Trp Asp Asp Tyr Trp Gly Gln Gly Thr Thr Val Thr
            100                 105                 110

Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly
        115                 120                 125

Gly Ser Gly Gly Gly Gly Ser Glu Val Val Leu Thr Gln Ser Pro Ala
    130                 135                 140

Thr Leu Ser Leu Ser Pro Gly Glu Arg Ala Thr Leu Ser Cys Arg Ala
145                 150                 155                 160

Ser Lys Ser Ile Ser Lys Asp Leu Ala Trp Tyr Gln Gln Lys Pro Gly
                165                 170                 175

Gln Ala Pro Arg Leu Leu Ile Tyr Ser Gly Ser Thr Leu Gln Ser Gly
            180                 185                 190

Ile Pro Ala Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu
        195                 200                 205

Thr Ile Ser Ser Leu Glu Pro Glu Asp Phe Ala Val Tyr Tyr Cys Gln
    210                 215                 220

Gln His Asn Lys Tyr Pro Tyr Thr Phe Gly Gly Gly Thr Lys Val Glu
225                 230                 235                 240

Ile Lys
```

<210> 392
<211> 242
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 392
Gln Val Gln Leu Val Gln Ser Gly Ser Glu Leu Lys Lys Pro Gly Ala
1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Ser Tyr
20 25 30

Trp Met Asn Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45

Gly Arg Ile Asp Pro Tyr Asp Ser Glu Thr His Tyr Asn Gln Lys Phe
50 55 60

Lys Asp Arg Phe Val Phe Ser Val Asp Lys Ser Val Ser Thr Ala Tyr
65 70 75 80

Leu Gln Ile Ser Ser Leu Lys Ala Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Gly Asn Trp Asp Asp Tyr Trp Gly Gln Gly Thr Thr Val Thr
100 105 110

Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly
115 120 125

Gly Ser Gly Gly Gly Gly Ser Asp Val Val Met Thr Gln Ser Pro Ala
130 135 140

Phe Leu Ser Val Thr Pro Gly Glu Lys Val Thr Ile Thr Cys Arg Ala
145 150 155 160

Ser Lys Ser Ile Ser Lys Asp Leu Ala Trp Tyr Gln Gln Lys Pro Asp
165 170 175

Gln Ala Pro Lys Leu Leu Ile Tyr Ser Gly Ser Thr Leu Gln Ser Gly
180 185 190

```
Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Phe
        195                 200                 205


Thr Ile Ser Ser Leu Glu Ala Glu Asp Ala Ala Thr Tyr Tyr Cys Gln
    210                 215                 220


Gln His Asn Lys Tyr Pro Tyr Thr Phe Gly Gly Gly Thr Lys Val Glu
225                 230                 235                 240


Ile Lys
```

<210> 393
<211> 242
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 393

```
Gln Val Gln Leu Val Gln Ser Gly Ser Glu Leu Lys Lys Pro Gly Ala
1               5                   10                  15


Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Ser Tyr
            20                  25                  30


Trp Met Asn Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
        35                  40                  45


Gly Arg Ile Asp Pro Tyr Asp Ser Glu Thr His Tyr Asn Gln Lys Phe
    50                  55                  60


Lys Asp Arg Phe Val Phe Ser Val Asp Lys Ser Val Ser Thr Ala Tyr
65                  70                  75                  80


Leu Gln Ile Ser Ser Leu Lys Ala Glu Asp Thr Ala Val Tyr Tyr Cys
                85                  90                  95


Ala Arg Gly Asn Trp Asp Asp Tyr Trp Gly Gln Gly Thr Thr Val Thr
            100                 105                 110
```

```
Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly
        115                 120                 125


Gly Ser Gly Gly Gly Gly Ser Asp Val Val Met Thr Gln Ser Pro Asp
    130                 135                 140


Ser Leu Ala Val Ser Leu Gly Glu Arg Ala Thr Ile Asn Cys Arg Ala
145                 150                 155                 160


Ser Lys Ser Ile Ser Lys Asp Leu Ala Trp Tyr Gln Gln Lys Pro Gly
                165                 170                 175


Gln Pro Pro Lys Leu Leu Ile Tyr Ser Gly Ser Thr Leu Gln Ser Gly
            180                 185                 190


Val Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu
        195                 200                 205


Thr Ile Ser Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln
    210                 215                 220


Gln His Asn Lys Tyr Pro Tyr Thr Phe Gly Gly Gly Thr Lys Val Glu
225                 230                 235                 240


Ile Lys
```

<210> 394
<211> 242
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 394

```
Asp Val 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 Lys Ser Ile Ser Lys Asp
            20                  25                  30
```

```
Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
        35                  40                  45

Tyr Ser Gly 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 His Asn Lys Tyr Pro Tyr
                85                  90                  95

Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Gly Gly Gly Gly Ser
            100                 105                 110

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gln
        115                 120                 125

Val Gln Leu Val Gln Ser Gly Ser Glu Leu Lys Lys Pro Gly Ala Ser
    130                 135                 140

Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Ser Tyr Trp
145                 150                 155                 160

Met Asn Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met Gly
                165                 170                 175

Arg Ile Asp Pro Tyr Asp Ser Glu Thr His Tyr Asn Gln Lys Phe Lys
            180                 185                 190

Asp Arg Phe Val Phe Ser Val Asp Lys Ser Val Ser Thr Ala Tyr Leu
        195                 200                 205

Gln Ile Ser Ser Leu Lys Ala Glu Asp Thr Ala Val Tyr Tyr Cys Ala
    210                 215                 220

Arg Gly Asn Trp Asp Asp Tyr Trp Gly Gln Gly Thr Thr Val Thr Val
225                 230                 235                 240
```

Ser Ser

<210> 395
<211> 242
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 395
Glu Val Val Leu Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly
1 5 10 15

Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Lys Ser Ile Ser Lys Asp
20 25 30

Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile
35 40 45

Tyr Ser Gly Ser Thr Leu Gln Ser Gly Ile Pro Ala Arg Phe Ser Gly
50 55 60

Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Glu Pro
65 70 75 80

Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln His Asn Lys Tyr Pro Tyr
85 90 95

Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Gly Gly Gly Gly Ser
100 105 110

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gln
115 120 125

Val Gln Leu Val Gln Ser Gly Ser Glu Leu Lys Lys Pro Gly Ala Ser
130 135 140

Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Ser Tyr Trp
145 150 155 160

```
Met Asn Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met Gly
                165                 170                 175


Arg Ile Asp Pro Tyr Asp Ser Glu Thr His Tyr Asn Gln Lys Phe Lys
            180                 185                 190


Asp Arg Phe Val Phe Ser Val Asp Lys Ser Val Ser Thr Ala Tyr Leu
        195                 200                 205


Gln Ile Ser Ser Leu Lys Ala Glu Asp Thr Ala Val Tyr Tyr Cys Ala
    210                 215                 220


Arg Gly Asn Trp Asp Asp Tyr Trp Gly Gln Gly Thr Thr Val Thr Val
225                 230                 235                 240


Ser Ser
```

<210> 396
<211> 242
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 396

```
Asp Val Val Met Thr Gln Ser Pro Ala Phe Leu Ser Val Thr Pro Gly
1               5                   10                  15


Glu Lys Val Thr Ile Thr Cys Arg Ala Ser Lys Ser Ile Ser Lys Asp
            20                  25                  30


Leu Ala Trp Tyr Gln Gln Lys Pro Asp Gln Ala Pro Lys Leu Leu Ile
        35                  40                  45


Tyr Ser Gly Ser Thr Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
    50                  55                  60


Ser Gly Ser Gly Thr Asp Phe Thr Phe Thr Ile Ser Ser Leu Glu Ala
65                  70                  75                  80
```

```
Glu Asp Ala Ala Thr Tyr Tyr Cys Gln Gln His Asn Lys Tyr Pro Tyr
                85                  90                  95

Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Gly Gly Gly Gly Ser
            100                 105                 110

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gln
        115                 120                 125

Val Gln Leu Val Gln Ser Gly Ser Glu Leu Lys Lys Pro Gly Ala Ser
    130                 135                 140

Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Ser Tyr Trp
145                 150                 155                 160

Met Asn Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met Gly
                165                 170                 175

Arg Ile Asp Pro Tyr Asp Ser Glu Thr His Tyr Asn Gln Lys Phe Lys
            180                 185                 190

Asp Arg Phe Val Phe Ser Val Asp Lys Ser Val Ser Thr Ala Tyr Leu
        195                 200                 205

Gln Ile Ser Ser Leu Lys Ala Glu Asp Thr Ala Val Tyr Tyr Cys Ala
    210                 215                 220

Arg Gly Asn Trp Asp Asp Tyr Trp Gly Gln Gly Thr Thr Val Thr Val
225                 230                 235                 240

Ser Ser
```

<210> 397
<211> 242
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic

polypeptide"

<400> 397

```
Asp Val 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 Arg Ala Ser Lys Ser Ile Ser Lys Asp
            20                  25                  30

Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro Lys Leu Leu Ile
        35                  40                  45

Tyr Ser Gly Ser Thr Leu Gln Ser Gly Val Pro Asp Arg Phe Ser Gly
    50                  55                  60

Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Ala
65                  70                  75                  80

Glu Asp Val Ala Val Tyr Tyr Cys Gln Gln His Asn Lys Tyr Pro Tyr
                85                  90                  95

Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Gly Gly Gly Gly Ser
            100                 105                 110

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gln
        115                 120                 125

Val Gln Leu Val Gln Ser Gly Ser Glu Leu Lys Lys Pro Gly Ala Ser
    130                 135                 140

Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Ser Tyr Trp
145                 150                 155                 160

Met Asn Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met Gly
                165                 170                 175

Arg Ile Asp Pro Tyr Asp Ser Glu Thr His Tyr Asn Gln Lys Phe Lys
            180                 185                 190

Asp Arg Phe Val Phe Ser Val Asp Lys Ser Val Ser Thr Ala Tyr Leu
        195                 200                 205
```

```
Gln Ile Ser Ser Leu Lys Ala Glu Asp Thr Ala Val Tyr Tyr Cys Ala
    210                 215                 220

Arg Gly Asn Trp Asp Asp Tyr Trp Gly Gln Gly Thr Thr Val Thr Val
225                 230                 235                 240

Ser Ser
```

<210> 398
<211> 242
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 398

```
Glu Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Glu
1               5                   10                  15

Ser Leu Arg Ile Ser Cys Lys Gly Ser Gly Tyr Thr Phe Thr Ser Tyr
            20                  25                  30

Trp Met Asn Trp Val Arg Gln Met Pro Gly Lys Gly Leu Glu Trp Met
        35                  40                  45

Gly Arg Ile Asp Pro Tyr Asp Ser Glu Thr His Tyr Asn Gln Lys Phe
    50                  55                  60

Lys Asp His Val Thr Ile Ser Val Asp Lys Ser Ile Ser Thr Ala Tyr
65                  70                  75                  80

Leu Gln Trp Ser Ser Leu Lys Ala Ser Asp Thr Ala Met Tyr Tyr Cys
                85                  90                  95

Ala Arg Gly Asn Trp Asp Asp Tyr Trp Gly Gln Gly Thr Thr Val Thr
            100                 105                 110

Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly
        115                 120                 125
```

```
Gly Ser Gly Gly Gly Gly Ser Asp Val Gln Leu Thr Gln Ser Pro Ser
    130                 135                 140

Phe Leu Ser Ala Ser Val Gly Asp Arg Val Thr Ile Thr Cys Arg Ala
145                 150                 155                 160

Ser Lys Ser Ile Ser Lys Asp Leu Ala Trp Tyr Gln Gln Lys Pro Gly
                165                 170                 175

Lys Ala Pro Lys Leu Leu Ile Tyr Ser Gly Ser Thr Leu Gln Ser Gly
            180                 185                 190

Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Glu Phe Thr Leu
        195                 200                 205

Thr Ile Ser Ser Leu Gln Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Gln
    210                 215                 220

Gln His Asn Lys Tyr Pro Tyr Thr Phe Gly Gly Gly Thr Lys Val Glu
225                 230                 235                 240

Ile Lys
```

<210> 399
<211> 242
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 399

```
Glu Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Glu
1               5                   10                  15

Ser Leu Arg Ile Ser Cys Lys Gly Ser Gly Tyr Thr Phe Thr Ser Tyr
            20                  25                  30

Trp Met Asn Trp Val Arg Gln Met Pro Gly Lys Gly Leu Glu Trp Met
```

```
        35                  40                  45

Gly Arg Ile Asp Pro Tyr Asp Ser Glu Thr His Tyr Asn Gln Lys Phe
    50                  55                  60

Lys Asp His Val Thr Ile Ser Val Asp Lys Ser Ile Ser Thr Ala Tyr
65                  70                  75                  80

Leu Gln Trp Ser Ser Leu Lys Ala Ser Asp Thr Ala Met Tyr Tyr Cys
                85                  90                  95

Ala Arg Gly Asn Trp Asp Asp Tyr Trp Gly Gln Gly Thr Thr Val Thr
            100                 105                 110

Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly
        115                 120                 125

Gly Ser Gly Gly Gly Gly Ser Glu Val Val Leu Thr Gln Ser Pro Ala
    130                 135                 140

Thr Leu Ser Leu Ser Pro Gly Glu Arg Ala Thr Leu Ser Cys Arg Ala
145                 150                 155                 160

Ser Lys Ser Ile Ser Lys Asp Leu Ala Trp Tyr Gln Gln Lys Pro Gly
                165                 170                 175

Gln Ala Pro Arg Leu Leu Ile Tyr Ser Gly Ser Thr Leu Gln Ser Gly
            180                 185                 190

Ile Pro Ala Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu
        195                 200                 205

Thr Ile Ser Ser Leu Glu Pro Glu Asp Phe Ala Val Tyr Tyr Cys Gln
    210                 215                 220

Gln His Asn Lys Tyr Pro Tyr Thr Phe Gly Gly Gly Thr Lys Val Glu
225                 230                 235                 240

Ile Lys
```

<210> 400
<211> 242
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

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

Ser Leu Arg Ile Ser Cys Lys Gly Ser Gly Tyr Thr Phe Thr Ser Tyr
20 25 30

Trp Met Asn Trp Val Arg Gln Met Pro Gly Lys Gly Leu Glu Trp Met
35 40 45

Gly Arg Ile Asp Pro Tyr Asp Ser Glu Thr His Tyr Asn Gln Lys Phe
50 55 60

Lys Asp His Val Thr Ile Ser Val Asp Lys Ser Ile Ser Thr Ala Tyr
65 70 75 80

Leu Gln Trp Ser Ser Leu Lys Ala Ser Asp Thr Ala Met Tyr Tyr Cys
85 90 95

Ala Arg Gly Asn Trp Asp Asp Tyr Trp Gly Gln Gly Thr Thr Val Thr
100 105 110

Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly
115 120 125

Gly Ser Gly Gly Gly Gly Ser Asp Val Val Met Thr Gln Ser Pro Ala
130 135 140

Phe Leu Ser Val Thr Pro Gly Glu Lys Val Thr Ile Thr Cys Arg Ala
145 150 155 160

Ser Lys Ser Ile Ser Lys Asp Leu Ala Trp Tyr Gln Gln Lys Pro Asp
165 170 175

```
Gln Ala Pro Lys Leu Leu Ile Tyr Ser Gly Ser Thr Leu Gln Ser Gly
            180                 185                 190


Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Phe
        195                 200                 205


Thr Ile Ser Ser Leu Glu Ala Glu Asp Ala Ala Thr Tyr Tyr Cys Gln
    210                 215                 220


Gln His Asn Lys Tyr Pro Tyr Thr Phe Gly Gly Gly Thr Lys Val Glu
225                 230                 235                 240


Ile Lys
```

<210> 401
<211> 242
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 401

```
Glu Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Glu
1               5                   10                  15


Ser Leu Arg Ile Ser Cys Lys Gly Ser Gly Tyr Thr Phe Thr Ser Tyr
            20                  25                  30


Trp Met Asn Trp Val Arg Gln Met Pro Gly Lys Gly Leu Glu Trp Met
        35                  40                  45


Gly Arg Ile Asp Pro Tyr Asp Ser Glu Thr His Tyr Asn Gln Lys Phe
    50                  55                  60


Lys Asp His Val Thr Ile Ser Val Asp Lys Ser Ile Ser Thr Ala Tyr
65                  70                  75                  80


Leu Gln Trp Ser Ser Leu Lys Ala Ser Asp Thr Ala Met Tyr Tyr Cys
```

```
                85                  90                  95

Ala Arg Gly Asn Trp Asp Asp Tyr Trp Gly Gln Gly Thr Thr Val Thr
            100                 105                 110

Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly
        115                 120                 125

Gly Ser Gly Gly Gly Gly Ser Asp Val Val Met Thr Gln Ser Pro Asp
    130                 135                 140

Ser Leu Ala Val Ser Leu Gly Glu Arg Ala Thr Ile Asn Cys Arg Ala
145                 150                 155                 160

Ser Lys Ser Ile Ser Lys Asp Leu Ala Trp Tyr Gln Gln Lys Pro Gly
                165                 170                 175

Gln Pro Pro Lys Leu Leu Ile Tyr Ser Gly Ser Thr Leu Gln Ser Gly
            180                 185                 190

Val Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu
        195                 200                 205

Thr Ile Ser Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln
    210                 215                 220

Gln His Asn Lys Tyr Pro Tyr Thr Phe Gly Gly Gly Thr Lys Val Glu
225                 230                 235                 240

Ile Lys



<210> 402
<211> 242
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 402
```

```
Asp Val 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 Lys Ser Ile Ser Lys Asp
            20                  25                  30

Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
        35                  40                  45

Tyr Ser Gly 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 His Asn Lys Tyr Pro Tyr
                85                  90                  95

Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Gly Gly Gly Gly Ser
            100                 105                 110

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu
        115                 120                 125

Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Glu Ser
    130                 135                 140

Leu Arg Ile Ser Cys Lys Gly Ser Gly Tyr Thr Phe Thr Ser Tyr Trp
145                 150                 155                 160

Met Asn Trp Val Arg Gln Met Pro Gly Lys Gly Leu Glu Trp Met Gly
                165                 170                 175

Arg Ile Asp Pro Tyr Asp Ser Glu Thr His Tyr Asn Gln Lys Phe Lys
            180                 185                 190

Asp His Val Thr Ile Ser Val Asp Lys Ser Ile Ser Thr Ala Tyr Leu
        195                 200                 205

Gln Trp Ser Ser Leu Lys Ala Ser Asp Thr Ala Met Tyr Tyr Cys Ala
    210                 215                 220
```

Arg Gly Asn Trp Asp Asp Tyr Trp Gly Gln Gly Thr Thr Val Thr Val
225 230 235 240

Ser Ser

<210> 403
<211> 242
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 403
Glu Val Val Leu Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly
1 5 10 15

Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Lys Ser Ile Ser Lys Asp
20 25 30

Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile
35 40 45

Tyr Ser Gly Ser Thr Leu Gln Ser Gly Ile Pro Ala Arg Phe Ser Gly
50 55 60

Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Glu Pro
65 70 75 80

Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln His Asn Lys Tyr Pro Tyr
85 90 95

Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Gly Gly Gly Gly Ser
100 105 110

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu
115 120 125

Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Glu Ser

```
    130                 135                 140

Leu Arg Ile Ser Cys Lys Gly Ser Gly Tyr Thr Phe Thr Ser Tyr Trp
145                 150                 155                 160

Met Asn Trp Val Arg Gln Met Pro Gly Lys Gly Leu Glu Trp Met Gly
                165                 170                 175

Arg Ile Asp Pro Tyr Asp Ser Glu Thr His Tyr Asn Gln Lys Phe Lys
            180                 185                 190

Asp His Val Thr Ile Ser Val Asp Lys Ser Ile Ser Thr Ala Tyr Leu
        195                 200                 205

Gln Trp Ser Ser Leu Lys Ala Ser Asp Thr Ala Met Tyr Tyr Cys Ala
    210                 215                 220

Arg Gly Asn Trp Asp Asp Tyr Trp Gly Gln Gly Thr Thr Val Thr Val
225                 230                 235                 240

Ser Ser
```

<210> 404
<211> 242
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 404

```
Asp Val Val Met Thr Gln Ser Pro Ala Phe Leu Ser Val Thr Pro Gly
1               5                   10                  15

Glu Lys Val Thr Ile Thr Cys Arg Ala Ser Lys Ser Ile Ser Lys Asp
            20                  25                  30

Leu Ala Trp Tyr Gln Gln Lys Pro Asp Gln Ala Pro Lys Leu Leu Ile
        35                  40                  45
```

```
Tyr Ser Gly Ser Thr Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
    50                  55                  60

Ser Gly Ser Gly Thr Asp Phe Thr Phe Thr Ile Ser Ser Leu Glu Ala
65                  70                  75                  80

Glu Asp Ala Ala Thr Tyr Tyr Cys Gln Gln His Asn Lys Tyr Pro Tyr
                85                  90                  95

Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Gly Gly Gly Gly Ser
            100                 105                 110

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu
        115                 120                 125

Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Glu Ser
    130                 135                 140

Leu Arg Ile Ser Cys Lys Gly Ser Gly Tyr Thr Phe Thr Ser Tyr Trp
145                 150                 155                 160

Met Asn Trp Val Arg Gln Met Pro Gly Lys Gly Leu Glu Trp Met Gly
                165                 170                 175

Arg Ile Asp Pro Tyr Asp Ser Glu Thr His Tyr Asn Gln Lys Phe Lys
            180                 185                 190

Asp His Val Thr Ile Ser Val Asp Lys Ser Ile Ser Thr Ala Tyr Leu
        195                 200                 205

Gln Trp Ser Ser Leu Lys Ala Ser Asp Thr Ala Met Tyr Tyr Cys Ala
    210                 215                 220

Arg Gly Asn Trp Asp Asp Tyr Trp Gly Gln Gly Thr Thr Val Thr Val
225                 230                 235                 240

Ser Ser
```

<210> 405
<211> 242

<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 405
Asp Val 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 Arg Ala Ser Lys Ser Ile Ser Lys Asp
20 25 30

Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro Lys Leu Leu Ile
35 40 45

Tyr Ser Gly Ser Thr Leu Gln Ser Gly Val Pro Asp Arg Phe Ser Gly
50 55 60

Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Ala
65 70 75 80

Glu Asp Val Ala Val Tyr Tyr Cys Gln Gln His Asn Lys Tyr Pro Tyr
85 90 95

Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Gly Gly Gly Gly Ser
100 105 110

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu
115 120 125

Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Glu Ser
130 135 140

Leu Arg Ile Ser Cys Lys Gly Ser Gly Tyr Thr Phe Thr Ser Tyr Trp
145 150 155 160

Met Asn Trp Val Arg Gln Met Pro Gly Lys Gly Leu Glu Trp Met Gly
165 170 175

Arg Ile Asp Pro Tyr Asp Ser Glu Thr His Tyr Asn Gln Lys Phe Lys

```
            180                 185                 190

Asp His Val Thr Ile Ser Val Asp Lys Ser Ile Ser Thr Ala Tyr Leu
        195                 200                 205

Gln Trp Ser Ser Leu Lys Ala Ser Asp Thr Ala Met Tyr Tyr Cys Ala
    210                 215                 220

Arg Gly Asn Trp Asp Asp Tyr Trp Gly Gln Gly Thr Thr Val Thr Val
225                 230                 235                 240

Ser Ser
```

<210> 406
<211> 242
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 406

```
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 Tyr Thr Phe Thr Ser Tyr
            20                  25                  30

Trp Met Asn Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Val Trp Val
        35                  40                  45

Ser Arg Ile Asp Pro Tyr Asp Ser Glu Thr His Tyr Asn Gln Lys Phe
    50                  55                  60

Lys Asp Arg Phe Thr Ile Ser Val Asp Lys Ala Lys Ser Thr Ala 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 Gly Asn Trp Asp Asp Tyr Trp Gly Gln Gly Thr Thr Val Thr
            100                 105                 110


Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly
        115                 120                 125


Gly Ser Gly Gly Gly Gly Ser Asp Val Gln Leu Thr Gln Ser Pro Ser
    130                 135                 140


Phe Leu Ser Ala Ser Val Gly Asp Arg Val Thr Ile Thr Cys Arg Ala
145                 150                 155                 160


Ser Lys Ser Ile Ser Lys Asp Leu Ala Trp Tyr Gln Gln Lys Pro Gly
                165                 170                 175


Lys Ala Pro Lys Leu Leu Ile Tyr Ser Gly Ser Thr Leu Gln Ser Gly
            180                 185                 190


Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Glu Phe Thr Leu
        195                 200                 205


Thr Ile Ser Ser Leu Gln Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Gln
    210                 215                 220


Gln His Asn Lys Tyr Pro Tyr Thr Phe Gly Gly Gly Thr Lys Val Glu
225                 230                 235                 240


Ile Lys
```

<210> 407
<211> 242
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 407

```
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 Tyr Thr Phe Thr Ser Tyr
            20                  25                  30

Trp Met Asn Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Val Trp Val
        35                  40                  45

Ser Arg Ile Asp Pro Tyr Asp Ser Glu Thr His Tyr Asn Gln Lys Phe
    50                  55                  60

Lys Asp Arg Phe Thr Ile Ser Val Asp Lys Ala Lys Ser Thr Ala 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 Gly Asn Trp Asp Asp Tyr Trp Gly Gln Gly Thr Thr Val Thr
            100                 105                 110

Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly
        115                 120                 125

Gly Ser Gly Gly Gly Gly Ser Glu Val Val Leu Thr Gln Ser Pro Ala
    130                 135                 140

Thr Leu Ser Leu Ser Pro Gly Glu Arg Ala Thr Leu Ser Cys Arg Ala
145                 150                 155                 160

Ser Lys Ser Ile Ser Lys Asp Leu Ala Trp Tyr Gln Gln Lys Pro Gly
                165                 170                 175

Gln Ala Pro Arg Leu Leu Ile Tyr Ser Gly Ser Thr Leu Gln Ser Gly
            180                 185                 190

Ile Pro Ala Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu
        195                 200                 205

Thr Ile Ser Ser Leu Glu Pro Glu Asp Phe Ala Val Tyr Tyr Cys Gln
    210                 215                 220

Gln His Asn Lys Tyr Pro Tyr Thr Phe Gly Gly Gly Thr Lys Val Glu
```

225 230 235 240

Ile Lys

<210> 408
<211> 242
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 408
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 Tyr Thr Phe Thr Ser Tyr
20 25 30

Trp Met Asn Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Val Trp Val
35 40 45

Ser Arg Ile Asp Pro Tyr Asp Ser Glu Thr His Tyr Asn Gln Lys Phe
50 55 60

Lys Asp Arg Phe Thr Ile Ser Val Asp Lys Ala Lys Ser Thr Ala 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 Gly Asn Trp Asp Asp Tyr Trp Gly Gln Gly Thr Thr Val Thr
100 105 110

Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly
115 120 125

Gly Ser Gly Gly Gly Gly Ser Asp Val Val Met Thr Gln Ser Pro Ala
130 135 140

```
Phe Leu Ser Val Thr Pro Gly Glu Lys Val Thr Ile Thr Cys Arg Ala
145                 150                 155                 160


Ser Lys Ser Ile Ser Lys Asp Leu Ala Trp Tyr Gln Gln Lys Pro Asp
                165                 170                 175


Gln Ala Pro Lys Leu Leu Ile Tyr Ser Gly Ser Thr Leu Gln Ser Gly
            180                 185                 190


Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Phe
        195                 200                 205


Thr Ile Ser Ser Leu Glu Ala Glu Asp Ala Ala Thr Tyr Tyr Cys Gln
    210                 215                 220


Gln His Asn Lys Tyr Pro Tyr Thr Phe Gly Gly Gly Thr Lys Val Glu
225                 230                 235                 240


Ile Lys



<210> 409
<211> 242
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 409
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 Tyr Thr Phe Thr Ser Tyr
            20                  25                  30


Trp Met Asn Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Val Trp Val
        35                  40                  45


Ser Arg Ile Asp Pro Tyr Asp Ser Glu Thr His Tyr Asn Gln Lys Phe
    50                  55                  60
```

```
Lys Asp Arg Phe Thr Ile Ser Val Asp Lys Ala Lys Ser Thr Ala 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 Gly Asn Trp Asp Asp Tyr Trp Gly Gln Gly Thr Thr Val Thr
            100                 105                 110

Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly
        115                 120                 125

Gly Ser Gly Gly Gly Gly Ser Asp Val Val Met Thr Gln Ser Pro Asp
    130                 135                 140

Ser Leu Ala Val Ser Leu Gly Glu Arg Ala Thr Ile Asn Cys Arg Ala
145                 150                 155                 160

Ser Lys Ser Ile Ser Lys Asp Leu Ala Trp Tyr Gln Gln Lys Pro Gly
                165                 170                 175

Gln Pro Pro Lys Leu Leu Ile Tyr Ser Gly Ser Thr Leu Gln Ser Gly
            180                 185                 190

Val Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu
        195                 200                 205

Thr Ile Ser Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln
    210                 215                 220

Gln His Asn Lys Tyr Pro Tyr Thr Phe Gly Gly Gly Thr Lys Val Glu
225                 230                 235                 240

Ile Lys
```

<210> 410
<211> 242
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 410
Asp Val 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 Lys Ser Ile Ser Lys Asp
20 25 30

Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
35 40 45

Tyr Ser Gly 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 His Asn Lys Tyr Pro Tyr
85 90 95

Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Gly Gly Gly Gly Ser
100 105 110

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu
115 120 125

Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly Ser
130 135 140

Leu Arg Leu Ser Cys Ala Ala Ser Gly Tyr Thr Phe Thr Ser Tyr Trp
145 150 155 160

Met Asn Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Val Trp Val Ser
165 170 175

Arg Ile Asp Pro Tyr Asp Ser Glu Thr His Tyr Asn Gln Lys Phe Lys
180 185 190

Asp Arg Phe Thr Ile Ser Val Asp Lys Ala Lys Ser Thr Ala Tyr Leu
195 200 205

Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys Ala
210 215 220

Arg Gly Asn Trp Asp Asp Tyr Trp Gly Gln Gly Thr Thr Val Thr Val
225 230 235 240

Ser Ser

<210> 411
<211> 242
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 411
Glu Val Val Leu Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly
1 5 10 15

Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Lys Ser Ile Ser Lys Asp
20 25 30

Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile
35 40 45

Tyr Ser Gly Ser Thr Leu Gln Ser Gly Ile Pro Ala Arg Phe Ser Gly
50 55 60

Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Glu Pro
65 70 75 80

Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln His Asn Lys Tyr Pro Tyr
85 90 95

Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Gly Gly Gly Gly Ser
100 105 110

```
Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu
        115                 120                 125


Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly Ser
    130                 135                 140


Leu Arg Leu Ser Cys Ala Ala Ser Gly Tyr Thr Phe Thr Ser Tyr Trp
145                 150                 155                 160


Met Asn Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Val Trp Val Ser
                165                 170                 175


Arg Ile Asp Pro Tyr Asp Ser Glu Thr His Tyr Asn Gln Lys Phe Lys
            180                 185                 190


Asp Arg Phe Thr Ile Ser Val Asp Lys Ala Lys Ser Thr Ala Tyr Leu
        195                 200                 205


Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys Ala
    210                 215                 220


Arg Gly Asn Trp Asp Asp Tyr Trp Gly Gln Gly Thr Thr Val Thr Val
225                 230                 235                 240


Ser Ser



<210> 412
<211> 242
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 412
Asp Val Val Met Thr Gln Ser Pro Ala Phe Leu Ser Val Thr Pro Gly
1               5                   10                  15


Glu Lys Val Thr Ile Thr Cys Arg Ala Ser Lys Ser Ile Ser Lys Asp
            20                  25                  30
```

```
Leu Ala Trp Tyr Gln Gln Lys Pro Asp Gln Ala Pro Lys Leu Leu Ile
        35                  40                  45

Tyr Ser Gly Ser Thr Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
    50                  55                  60

Ser Gly Ser Gly Thr Asp Phe Thr Phe Thr Ile Ser Ser Leu Glu Ala
65                  70                  75                  80

Glu Asp Ala Ala Thr Tyr Tyr Cys Gln Gln His Asn Lys Tyr Pro Tyr
                85                  90                  95

Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Gly Gly Gly Gly Ser
            100                 105                 110

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu
        115                 120                 125

Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly Ser
    130                 135                 140

Leu Arg Leu Ser Cys Ala Ala Ser Gly Tyr Thr Phe Thr Ser Tyr Trp
145                 150                 155                 160

Met Asn Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Val Trp Val Ser
                165                 170                 175

Arg Ile Asp Pro Tyr Asp Ser Glu Thr His Tyr Asn Gln Lys Phe Lys
            180                 185                 190

Asp Arg Phe Thr Ile Ser Val Asp Lys Ala Lys Ser Thr Ala Tyr Leu
        195                 200                 205

Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys Ala
    210                 215                 220

Arg Gly Asn Trp Asp Asp Tyr Trp Gly Gln Gly Thr Thr Val Thr Val
225                 230                 235                 240
```

Ser Ser

<210> 413
<211> 242
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 413
Asp Val 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 Arg Ala Ser Lys Ser Ile Ser Lys Asp
20 25 30

Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro Lys Leu Leu Ile
35 40 45

Tyr Ser Gly Ser Thr Leu Gln Ser Gly Val Pro Asp Arg Phe Ser Gly
50 55 60

Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Ala
65 70 75 80

Glu Asp Val Ala Val Tyr Tyr Cys Gln Gln His Asn Lys Tyr Pro Tyr
85 90 95

Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Gly Gly Gly Gly Ser
100 105 110

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu
115 120 125

Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly Ser
130 135 140

Leu Arg Leu Ser Cys Ala Ala Ser Gly Tyr Thr Phe Thr Ser Tyr Trp
145 150 155 160

```
Met Asn Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Val Trp Val Ser
                165                 170                 175

Arg Ile Asp Pro Tyr Asp Ser Glu Thr His Tyr Asn Gln Lys Phe Lys
            180                 185                 190

Asp Arg Phe Thr Ile Ser Val Asp Lys Ala Lys Ser Thr Ala Tyr Leu
        195                 200                 205

Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys Ala
    210                 215                 220

Arg Gly Asn Trp Asp Asp Tyr Trp Gly Gln Gly Thr Thr Val Thr Val
225                 230                 235                 240

Ser Ser
```

<210> 414
<211> 491
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 414

```
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1               5                   10                  15

His Ala Ala Arg Pro Gly Ser Glu Ile Gln Leu Gln Gln Ser Gly Ala
            20                  25                  30

Glu Leu Val Lys Pro Gly Ala Ser Val Lys Leu Ser Cys Thr Gly Ser
        35                  40                  45

Gly Phe Asn Ile Glu Asp Tyr Tyr Ile His Trp Val Lys Gln Arg Thr
    50                  55                  60

Glu Gln Gly Leu Glu Trp Ile Gly Arg Ile Asp Pro Glu Asn Asp Glu
65                  70                  75                  80
```

```
Thr Lys Tyr Gly Pro Ile Phe Gln Gly Arg Ala Thr Ile Thr Ala Asp
                85                  90                  95

Thr Ser Ser Asn Thr Val Tyr Leu Gln Leu Ser Ser Leu Thr Ser Glu
            100                 105                 110

Asp Thr Ala Val Tyr Tyr Cys Ala Phe Arg Gly Gly Val Tyr Trp Gly
        115                 120                 125

Pro Gly Thr Thr Leu Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly
    130                 135                 140

Gly Gly Ser Gly Gly Gly Gly Ser His Met Asp Val Val Met Thr Gln
145                 150                 155                 160

Ser Pro Leu Thr Leu Ser Val Ala Ile Gly Gln Ser Ala Ser Ile Ser
                165                 170                 175

Cys Lys Ser Ser Gln Ser Leu Leu Asp Ser Asp Gly Lys Thr Tyr Leu
            180                 185                 190

Asn Trp Leu Leu Gln Arg Pro Gly Gln Ser Pro Lys Arg Leu Ile Ser
        195                 200                 205

Leu Val Ser Lys Leu Asp Ser Gly Val Pro Asp Arg Phe Thr Gly Ser
    210                 215                 220

Gly Ser Gly Thr Asp Phe Thr Leu Arg Ile Ser Arg Val Glu Ala Glu
225                 230                 235                 240

Asp Leu Gly Ile Tyr Tyr Cys Trp Gln Gly Thr His Phe Pro Gly Thr
                245                 250                 255

Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys Ala Ser Thr Thr Thr Pro
            260                 265                 270

Ala Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu
        275                 280                 285
```

```
Ser Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His
    290                 295                 300

Thr Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu
305                 310                 315                 320

Ala Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr
                325                 330                 335

Cys Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe
            340                 345                 350

Met Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg
        355                 360                 365

Phe Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser
    370                 375                 380

Arg Ser Ala Asp Ala Pro Ala Tyr Lys Gln Gly Gln Asn Gln Leu Tyr
385                 390                 395                 400

Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys
                405                 410                 415

Arg Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn
            420                 425                 430

Pro Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu
        435                 440                 445

Ala Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly
    450                 455                 460

His Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr
465                 470                 475                 480

Asp Ala Leu His Met Gln Ala Leu Pro Pro Arg
                485                 490
```

<210> 415
<211> 246

<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 415
Glu Ile Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
1 5 10 15

Thr Val Lys Ile Ser Cys Lys Gly Ser Gly Phe Asn Ile Glu Asp Tyr
20 25 30

Tyr Ile His Trp Val Gln Gln Ala Pro Gly Lys Gly Leu Glu Trp Met
35 40 45

Gly Arg Ile Asp Pro Glu Asn Asp Glu Thr Lys Tyr Gly Pro Ile Phe
50 55 60

Gln Gly Arg Val Thr Ile Thr Ala Asp Thr Ser Thr Asn Thr Val Tyr
65 70 75 80

Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Phe Arg Gly Gly Val Tyr Trp Gly Gln Gly Thr Thr Val Thr Val
100 105 110

Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly
115 120 125

Ser Gly Gly Gly Gly Ser Asp Val Val Met Thr Gln Ser Pro Asp Ser
130 135 140

Leu Ala Val Ser Leu Gly Glu Arg Ala Thr Ile Asn Cys Lys Ser Ser
145 150 155 160

Gln Ser Leu Leu Asp Ser Asp Gly Lys Thr Tyr Leu Asn Trp Leu Gln
165 170 175

Gln Lys Pro Gly Gln Pro Pro Lys Arg Leu Ile Ser Leu Val Ser Lys

```
            180                 185                 190

Leu Asp Ser Gly Val Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr
        195                 200                 205

Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Ala Glu Asp Val Ala Val
    210                 215                 220

Tyr Tyr Cys Trp Gln Gly Thr His Phe Pro Gly Thr Phe Gly Gly Gly
225                 230                 235                 240

Thr Lys Val Glu Ile Lys
                245
```

<210> 416
<211> 738
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 416
gaaatccagc tggtccaatc gggagctgag gtcaagaagc cgggagccac cgtcaagatc 60

tcatgcaagg ggtcgggatt caacatcgag gactactaca ttcactgggt gcagcaagct 120

ccgggaaaag gcctggaatg gatgggcaga atcgacccag aaaacgacga aactaagtac 180

ggaccgattt tccaaggaag agtgactatc accgccgata cttcaaccaa taccgtctac 240

atggaactga gctcgctccg gtccgaagat actgcagtgt attactgtgc ctttcgcgga 300

ggggtgtact ggggccaagg aactactgtc actgtctcgt caggaggcgg agggtcggga 360

ggaggcggga gcggaggcgg tggctcgggt ggcggaggaa gcgacgtggt gatgacccag 420

tccccggact ccctcgccgt gagcctcgga gagagggcga ctatcaattg caagtcgtcc 480

cagtcacttc tggattccga tggtaaaacg tacctcaact ggctgcagca aaagccaggg 540

cagccaccca aacggttgat ctcccttgtg tccaaactgg atagcggagt gcctgaccgc 600

ttctcgggtt ccggtagcgg gaccgacttc accctgacga tcagctcact gcaggcggag 660

gacgtggcag tgtactactg ctggcaggga acccacttcc ctggcacctt tggaggtggc 720

accaaggtgg agatcaag 738

<210> 417
<211> 831
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 417
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

cccgaaatcc agctggtcca atcgggagct gaggtcaaga agccgggagc caccgtcaag 120

atctcatgca aggggtcggg attcaacatc gaggactact acattcactg ggtgcagcaa 180

gctccgggaa aaggcctgga atggatgggc agaatcgacc cagaaaacga cgaaactaag 240

tacggaccga ttttccaagg aagagtgact atcaccgccg atacttcaac caataccgtc 300

tacatggaac tgagctcgct ccggtccgaa gatactgcag tgtattactg tgcctttcgc 360

ggaggggtgt actggggcca aggaactact gtcactgtct cgtcaggagg cggagggtcg 420

ggaggaggcg ggagcggagg cggtggctcg ggtggcggag gaagcgacgt ggtgatgacc 480

cagtccccgg actccctcgc cgtgagcctc ggagagaggg cgactatcaa ttgcaagtcg 540

tcccagtcac ttctggattc cgatggtaaa acgtacctca actggctgca gcaaaagcca 600

gggcagccac ccaaacggtt gatctccctt gtgtccaaac tggatagcgg agtgcctgac 660

cgcttctcgg gttccggtag cgggaccgac ttcaccctga cgatcagctc actgcaggcg 720

gaggacgtgg cagtgtacta ctgctggcag ggaacccact tccctggcac ctttggaggt 780

ggcaccaagg tggagatcaa gggatcgcac caccatcacc atcatcatca c 831

<210> 418
<211> 277
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 418

```
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1               5                  10                  15

His Ala Ala Arg Pro Glu Ile Gln Leu Val Gln Ser Gly Ala Glu Val
            20                  25                  30

Lys Lys Pro Gly Ala Thr Val Lys Ile Ser Cys Lys Gly Ser Gly Phe
        35                  40                  45

Asn Ile Glu Asp Tyr Tyr Ile His Trp Val Gln Gln Ala Pro Gly Lys
    50                  55                  60

Gly Leu Glu Trp Met Gly Arg Ile Asp Pro Glu Asn Asp Glu Thr Lys
65                  70                  75                  80

Tyr Gly Pro Ile Phe Gln Gly Arg Val Thr Ile Thr Ala Asp Thr Ser
                85                  90                  95

Thr Asn Thr Val Tyr Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr
            100                 105                 110

Ala Val Tyr Tyr Cys Ala Phe Arg Gly Gly Val Tyr Trp Gly Gln Gly
        115                 120                 125

Thr Thr Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly
    130                 135                 140

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Val Val Met Thr
145                 150                 155                 160

Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly Glu Arg Ala Thr Ile
                165                 170                 175

Asn Cys Lys Ser Ser Gln Ser Leu Leu Asp Ser Asp Gly Lys Thr Tyr
            180                 185                 190

Leu Asn Trp Leu Gln Gln Lys Pro Gly Gln Pro Pro Lys Arg Leu Ile
        195                 200                 205

Ser Leu Val Ser Lys Leu Asp Ser Gly Val Pro Asp Arg Phe Ser Gly
    210                 215                 220
```

```
Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Ala
225                 230                 235                 240


Glu Asp Val Ala Val Tyr Tyr Cys Trp Gln Gly Thr His Phe Pro Gly
                245                 250                 255


Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Gly Ser His His His
            260                 265                 270


His His His His His
        275


<210> 419
<211> 1470
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polynucleotide"

<400> 419
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg       60

cccgagatcc agctggtgca gtcgggagct gaagtcaaaa agcctggcgc aaccgtcaag      120

atctcgtgca aaggatcagg gttcaacatc gaggactact acatccattg ggtgcaacag      180

gcacccggaa aaggcctgga gtggatgggg aggattgacc cagaaaatga cgaaaccaag      240

tacggaccga tcttccaagg acgggtgacc atcacggctg acacttccac taacaccgtc      300

tacatggaac tctcgagcct tcgctcggaa gataccgcgg tgtactactg cgcctttaga      360

ggtggagtct actggggaca agggactacc gtcaccgtgt cgtcaggtgg cggaggatca      420

ggcggaggcg gctccggtgg aggaggaagc ggaggaggtg gctccgacgt ggtgatgacg      480

cagtcaccgg actccttggc ggtgagcctg ggtgaacgcg ccactatcaa ctgcaagagc      540

tcccagagct tgctggactc cgatggaaag acttatctca attggctgca acagaagcct      600

ggccagccgc caaagagact catctcactg gtgagcaagc tggatagcgg agtgccagat      660

cggttttcgg gatcgggctc aggcaccgac ttcaccctga ctatttcctc cctccaagcc      720

gaggatgtgg ccgtctacta ctgttggcag gggactcact tcccggggac cttcggtgga      780
```

ggcactaagg tggagatcaa aaccactacc ccagcaccga ggccacccac cccggctcct 840

accatcgcct cccagcctct gtccctgcgt ccggaggcat gtagacccgc agctggtggg 900

gccgtgcata cccggggtct tgacttcgcc tgcgatatct acatttgggc ccctctggct 960

ggtacttgcg gggtcctgct gctttcactc gtgatcactc tttactgtaa gcgcggtcgg 1020

aagaagctgc tgtacatctt taagcaaccc ttcatgaggc ctgtgcagac tactcaagag 1080

gaggacggct gttcatgccg gttcccagag gaggaggaag gcggctgcga actgcgcgtg 1140

aaattcagcc gcagcgcaga tgctccagcc tacaagcagg ggcagaacca gctctacaac 1200

gaactcaatc ttggtcggag agaggagtac gacgtgctgg acaagcggag aggacgggac 1260

ccagaaatgg gcgggaagcc gcgcagaaag aatccccaag agggcctgta caacgagctc 1320

caaaaggata agatggcaga agcctatagc gagattggta tgaaaggggа acgcagaaga 1380

ggcaaaggcc acgacggact gtaccaggga ctcagcaccg ccaccaagga cacctatgac 1440

gctcttcaca tgcaggccct gccgcctcgg 1470

<210> 420
<211> 490
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 420
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Glu Ile Gln Leu Val Gln Ser Gly Ala Glu Val
20 25 30

Lys Lys Pro Gly Ala Thr Val Lys Ile Ser Cys Lys Gly Ser Gly Phe
35 40 45

Asn Ile Glu Asp Tyr Tyr Ile His Trp Val Gln Gln Ala Pro Gly Lys
50 55 60

Gly Leu Glu Trp Met Gly Arg Ile Asp Pro Glu Asn Asp Glu Thr Lys

```
65                  70                  75                  80

Tyr Gly Pro Ile Phe Gln Gly Arg Val Thr Ile Thr Ala Asp Thr Ser
                85                  90                  95

Thr Asn Thr Val Tyr Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr
            100                 105                 110

Ala Val Tyr Tyr Cys Ala Phe Arg Gly Gly Val Tyr Trp Gly Gln Gly
        115                 120                 125

Thr Thr Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly
    130                 135                 140

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Val Val Met Thr
145                 150                 155                 160

Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly Glu Arg Ala Thr Ile
                165                 170                 175

Asn Cys Lys Ser Ser Gln Ser Leu Leu Asp Ser Asp Gly Lys Thr Tyr
            180                 185                 190

Leu Asn Trp Leu Gln Gln Lys Pro Gly Gln Pro Pro Lys Arg Leu Ile
        195                 200                 205

Ser Leu Val Ser Lys Leu Asp Ser Gly Val Pro Asp Arg Phe Ser Gly
    210                 215                 220

Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Ala
225                 230                 235                 240

Glu Asp Val Ala Val Tyr Tyr Cys Trp Gln Gly Thr His Phe Pro Gly
                245                 250                 255

Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Thr Thr Thr Pro Ala
            260                 265                 270

Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser
        275                 280                 285
```

```
Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr
    290                 295                 300

Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala
305                 310                 315                 320

Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr Cys
                325                 330                 335

Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met
            340                 345                 350

Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe
        355                 360                 365

Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg
    370                 375                 380

Ser Ala Asp Ala Pro Ala Tyr Lys Gln Gly Gln Asn Gln Leu Tyr Asn
385                 390                 395                 400

Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg
                405                 410                 415

Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro
            420                 425                 430

Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala
        435                 440                 445

Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His
    450                 455                 460

Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp
465                 470                 475                 480

Ala Leu His Met Gln Ala Leu Pro Pro Arg
                485                 490
```

<210> 421

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

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 421
Asp Val 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 Leu Leu Asp Ser
20 25 30

Asp Gly Lys Thr Tyr Leu Asn Trp Leu Gln Gln Lys Pro Gly Gln Pro
35 40 45

Pro Lys Arg Leu Ile Ser Leu Val Ser Lys Leu Asp Ser Gly Val Pro
50 55 60

Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile
65 70 75 80

Ser Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Trp Gln Gly
85 90 95

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

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly
115 120 125

Gly Gly Gly Ser Glu Ile Gln Leu Val Gln Ser Gly Ala Glu Val Lys
130 135 140

Lys Pro Gly Ala Thr Val Lys Ile Ser Cys Lys Gly Ser Gly Phe Asn
145 150 155 160

Ile Glu Asp Tyr Tyr Ile His Trp Val Gln Gln Ala Pro Gly Lys Gly
165 170 175

```
Leu Glu Trp Met Gly Arg Ile Asp Pro Glu Asn Asp Glu Thr Lys Tyr
            180                 185                 190


Gly Pro Ile Phe Gln Gly Arg Val Thr Ile Thr Ala Asp Thr Ser Thr
        195                 200                 205


Asn Thr Val Tyr Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala
    210                 215                 220


Val Tyr Tyr Cys Ala Phe Arg Gly Gly Val Tyr Trp Gly Gln Gly Thr
225                 230                 235                 240


Thr Val Thr Val Ser Ser
                245
```

<210> 422
<211> 738
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 422

```
gatgtcgtga tgacccagtc cccagactcc ctcgcagtgt ccttgggaga acgggccacc       60

atcaactgca aatcgagcca gtcactgctg gactcagacg gaaagaccta cctcaactgg      120

ctgcagcaga agcctggcca gccaccgaag cgcctgatct ccctggtgtc caagctggac      180

tcgggcgtcc cggacaggtt tagcggtagc ggctcgggaa ccgacttcac tctgaccatt      240

agctcgctcc aagctgaaga tgtggcggtc tactactgct ggcaggggac ccacttcccc      300

gggacctttg gcggaggaac taaagtcgaa atcaaaggag gaggcggatc aggtggagga      360

ggcagcggag gaggagggag cggcggtggc ggctccgaaa ttcaacttgt gcaatccggt      420

gccgaggtga agaaacctgg tgccactgtc aagatctcgt gtaagggatc gggattcaat      480

atcgaggact actacatcca ctgggtgcaa caggcgccag gaaagggatt ggagtggatg      540

ggtcgcatcg acccggaaaa cgatgagact aagtacggac cgatcttcca aggccgggtc      600

acgatcactg cggatacctc cactaatacc gtgtatatgg agctctcgtc actgagaagc      660

gaagatacgg ccgtgtacta ctgcgcattc agaggaggtg tgtactgggg ccagggaact      720
```

actgtgaccg tgtcgtcg 738

<210> 423
<211> 831
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 423
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

cccgatgtcg tgatgaccca gtccccagac tccctcgcag tgtccttggg agaacgggcc 120

accatcaact gcaaatcgag ccagtcactg ctggactcag acggaaagac ctacctcaac 180

tggctgcagc agaagcctgg ccagccaccg aagcgcctga tctccctggt gtccaagctg 240

gactcgggcg tcccggacag gtttagcggt agcggctcgg gaaccgactt cactctgacc 300

attagctcgc tccaagctga agatgtggcg gtctactact gctggcaggg gacccacttc 360

cccgggacct ttggcggagg aactaaagtc gaaatcaaag gaggaggcgg atcaggtgga 420

ggaggcagcg gaggaggagg gagcggcggt ggcggctccg aaattcaact tgtgcaatcc 480

ggtgccgagg tgaagaaacc tggtgccact gtcaagatct cgtgtaaggg atcgggattc 540

aatatcgagg actactacat ccactgggtg caacaggcgc caggaaaggg attggagtgg 600

atgggtcgca tcgacccgga aaacgatgag actaagtacg gaccgatctt ccaaggccgg 660

gtcacgatca ctgcggatac ctccactaat accgtgtata tggagctctc gtcactgaga 720

agcgaagata cggccgtgta ctactgcgca ttcagaggag gtgtgtactg gggccaggga 780

actactgtga ccgtgtcgtc ggggtcacat caccaccatc atcatcacca c 831

<210> 424
<211> 277
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 424
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1   5   10   15

His Ala Ala Arg Pro Asp Val Val Met Thr Gln Ser Pro Asp Ser Leu
            20   25   30

Ala Val Ser Leu Gly Glu Arg Ala Thr Ile Asn Cys Lys Ser Ser Gln
        35   40   45

Ser Leu Leu Asp Ser Asp Gly Lys Thr Tyr Leu Asn Trp Leu Gln Gln
    50   55   60

Lys Pro Gly Gln Pro Pro Lys Arg Leu Ile Ser Leu Val Ser Lys Leu
65   70   75   80

Asp Ser Gly Val Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp
                85   90   95

Phe Thr Leu Thr Ile Ser Ser Leu Gln Ala Glu Asp Val Ala Val Tyr
            100   105   110

Tyr Cys Trp Gln Gly Thr His Phe Pro Gly Thr Phe Gly Gly Gly Thr
        115   120   125

Lys Val Glu Ile Lys Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly
    130   135   140

Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Ile Gln Leu Val Gln Ser
145   150   155   160

Gly Ala Glu Val Lys Lys Pro Gly Ala Thr Val Lys Ile Ser Cys Lys
                165   170   175

Gly Ser Gly Phe Asn Ile Glu Asp Tyr Tyr Ile His Trp Val Gln Gln
            180   185   190

Ala Pro Gly Lys Gly Leu Glu Trp Met Gly Arg Ile Asp Pro Glu Asn
        195   200   205

Asp Glu Thr Lys Tyr Gly Pro Ile Phe Gln Gly Arg Val Thr Ile Thr

210 215 220

Ala Asp Thr Ser Thr Asn Thr Val Tyr Met Glu Leu Ser Ser Leu Arg
225 230 235 240

Ser Glu Asp Thr Ala Val Tyr Tyr Cys Ala Phe Arg Gly Gly Val Tyr
245 250 255

Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser Gly Ser His His His
260 265 270

His His His His His
275

<210> 425
<211> 1470
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 425
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

cccgacgtgg tcatgactca aagcccagat tccttggctg tctcccttgg agaaagagca 120

acgatcaatt gcaaaagctc gcagtccctg ttggactccg atggaaaaac ctacctcaac 180

tggctgcagc agaagccggg acaaccacca aagcggctga tttccctcgt gtccaagctg 240

gacagcggcg tgccggatcg cttctcgggc agcggctcgg gaaccgattt tactctcact 300

atttcgtcac tgcaagcgga ggacgtggcg gtgtattact gctggcaggg cactcacttc 360

ccgggtactt ttggtggagg taccaaagtc gaaatcaagg gtggaggcgg gagcggagga 420

ggcgggtcgg gaggaggagg atcgggtggc ggaggctcag aaatccagct ggtgcagtca 480

ggtgccgaag tgaagaagcc tggggccacg gtgaagatct cgtgcaaggg gagcggattc 540

aacatcgagg attactacat ccattgggtg caacaggccc ctggcaaagg gctggaatgg 600

atgggaagga tcgaccccga gaatgacgag actaagtacg gcccgatctt ccaaggacgg 660

gtgaccatca ctgcagacac ttcaaccaac accgtctaca tggaactctc ctcgctgcgc 720

tccgaggaca ccgccgtgta ctactgtgct ttcagaggag gagtctactg gggacaggga 780

acgaccgtga ccgtcagctc aaccactacc ccagcaccga ggccacccac cccggctcct 840

accatcgcct cccagcctct gtccctgcgt ccggaggcat gtagacccgc agctggtggg 900

gccgtgcata cccggggtct tgacttcgcc tgcgatatct acatttgggc ccctctggct 960

ggtacttgcg gggtcctgct gctttcactc gtgatcactc tttactgtaa gcgcggtcgg 1020

aagaagctgc tgtacatctt taagcaaccc ttcatgaggc ctgtgcagac tactcaagag 1080

gaggacggct gttcatgccg gttcccagag gaggaggaag gcggctgcga actgcgcgtg 1140

aaattcagcc gcagcgcaga tgctccagcc tacaagcagg ggcagaacca gctctacaac 1200

gaactcaatc ttggtcggag agaggagtac gacgtgctgg acaagcggag aggacgggac 1260

ccagaaatgg gcgggaagcc gcgcagaaag aatccccaag agggcctgta caacgagctc 1320

caaaaggata agatggcaga agcctatagc gagattggta tgaaagggga acgcagaaga 1380

ggcaaaggcc acgacggact gtaccaggga ctcagcaccg ccaccaagga cacctatgac 1440

gctcttcaca tgcaggccct gccgcctcgg 1470

<210> 426
<211> 490
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 426
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Asp Val Val Met Thr Gln Ser Pro Asp Ser Leu
20 25 30

Ala Val Ser Leu Gly Glu Arg Ala Thr Ile Asn Cys Lys Ser Ser Gln
35 40 45

Ser Leu Leu Asp Ser Asp Gly Lys Thr Tyr Leu Asn Trp Leu Gln Gln
50 55 60

```
Lys Pro Gly Gln Pro Pro Lys Arg Leu Ile Ser Leu Val Ser Lys Leu
65                  70                  75                  80


Asp Ser Gly Val Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp
                85                  90                  95


Phe Thr Leu Thr Ile Ser Ser Leu Gln Ala Glu Asp Val Ala Val Tyr
            100                 105                 110


Tyr Cys Trp Gln Gly Thr His Phe Pro Gly Thr Phe Gly Gly Gly Thr
        115                 120                 125


Lys Val Glu Ile Lys Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly
    130                 135                 140


Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Ile Gln Leu Val Gln Ser
145                 150                 155                 160


Gly Ala Glu Val Lys Lys Pro Gly Ala Thr Val Lys Ile Ser Cys Lys
                165                 170                 175


Gly Ser Gly Phe Asn Ile Glu Asp Tyr Tyr Ile His Trp Val Gln Gln
            180                 185                 190


Ala Pro Gly Lys Gly Leu Glu Trp Met Gly Arg Ile Asp Pro Glu Asn
        195                 200                 205


Asp Glu Thr Lys Tyr Gly Pro Ile Phe Gln Gly Arg Val Thr Ile Thr
    210                 215                 220


Ala Asp Thr Ser Thr Asn Thr Val Tyr Met Glu Leu Ser Ser Leu Arg
225                 230                 235                 240


Ser Glu Asp Thr Ala Val Tyr Tyr Cys Ala Phe Arg Gly Gly Val Tyr
                245                 250                 255


Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser Thr Thr Thr Pro Ala
            260                 265                 270


Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser
        275                 280                 285
```

```
Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr
    290                 295                 300

Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala
305                 310                 315                 320

Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr Cys
                325                 330                 335

Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met
            340                 345                 350

Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe
        355                 360                 365

Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg
    370                 375                 380

Ser Ala Asp Ala Pro Ala Tyr Lys Gln Gly Gln Asn Gln Leu Tyr Asn
385                 390                 395                 400

Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg
                405                 410                 415

Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro
            420                 425                 430

Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala
        435                 440                 445

Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His
    450                 455                 460

Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp
465                 470                 475                 480

Ala Leu His Met Gln Ala Leu Pro Pro Arg
                485                 490
```

<210> 427
<211> 246
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 427
Glu Ile Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Glu
1 5 10 15

Ser Leu Arg Ile Ser Cys Lys Gly Ser Gly Phe Asn Ile Glu Asp Tyr
20 25 30

Tyr Ile His Trp Val Arg Gln Met Pro Gly Lys Gly Leu Glu Trp Met
35 40 45

Gly Arg Ile Asp Pro Glu Asn Asp Glu Thr Lys Tyr Gly Pro Ile Phe
50 55 60

Gln Gly His Val Thr Ile Ser Ala Asp Thr Ser Ile Asn Thr Val Tyr
65 70 75 80

Leu Gln Trp Ser Ser Leu Lys Ala Ser Asp Thr Ala Met Tyr Tyr Cys
85 90 95

Ala Phe Arg Gly Gly Val Tyr Trp Gly Gln Gly Thr Thr Val Thr Val
100 105 110

Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly
115 120 125

Ser Gly Gly Gly Gly Ser Asp Val Val Met Thr Gln Ser Pro Leu Ser
130 135 140

Leu Pro Val Thr Leu Gly Gln Pro Ala Ser Ile Ser Cys Lys Ser Ser
145 150 155 160

Gln Ser Leu Leu Asp Ser Asp Gly Lys Thr Tyr Leu Asn Trp Leu Gln
165 170 175

```
Gln Arg Pro Gly Gln Ser Pro Arg Arg Leu Ile Ser Leu Val Ser Lys
            180                 185                 190

Leu Asp Ser Gly Val Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr
        195                 200                 205

Asp Phe Thr Leu Lys Ile Ser Arg Val Glu Ala Glu Asp Val Gly Val
    210                 215                 220

Tyr Tyr Cys Trp Gln Gly Thr His Phe Pro Gly Thr Phe Gly Gly Gly
225                 230                 235                 240

Thr Lys Val Glu Ile Lys
                245
```

<210> 428
<211> 738
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 428

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gagattcagc tggtccaaag cggcgcagaa gtgaaaaagc caggggaatc gttgcgcatc       60

agctgtaaag gttccggctt caacatcgag gactattaca tccattgggt gcggcagatg      120

ccaggaaagg ggctggaatg gatgggacgg attgacccgg agaacgacga aaccaagtac      180

ggaccgatct ttcaaggaca cgtgactatc tccgccgaca ccagcatcaa tacggtgtac      240

ctccaatggt cctcactcaa ggcctcggat accgcgatgt actactgcgc gttcagagga      300

ggcgtctact ggggacaagg gactactgtg actgtctcat caggaggtgg aggaagcgga      360

ggaggtggct cgggcggagg tggatcggga ggaggagggt ccgatgtggt gatgacccag      420

tccccactgt cgctcccggt gaccctcgga cagcctgcta gcatctcgtg caaatcctcg      480

caatccctgc tggactcgga cggaaaaacg tacctcaatt ggctgcagca gcgccctggc      540

cagagcccga gaaggcttat ctcgctggtg tcaaagctgg atagcggtgt gcccgaccgg      600

ttcagcggct cagggtcagg aaccgatttc accttgaaga tctcccgcgt ggaagccgaa      660
```

gatgtcggag tctactactg ctggcagggt actcacttcc cggggacctt tggtggcggc 720

actaaggtcg agattaag 738

<210> 429
<211> 831
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 429
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

cccgagattc agctggtcca aagcggcgca gaagtgaaaa agccagggga atcgttgcgc 120

atcagctgta aaggttccgg cttcaacatc gaggactatt acatccattg ggtgcggcag 180

atgccaggaa aggggctgga atggatggga cggattgacc cggagaacga cgaaaccaag 240

tacggaccga tctttcaagg acacgtgact atctccgccg acaccagcat caatacggtg 300

tacctccaat ggtcctcact caaggcctcg gataccgcga tgtactactg cgcgttcaga 360

ggaggcgtct actggggaca agggactact gtgactgtct catcaggagg tggaggaagc 420

ggaggaggtg gctcgggcgg aggtggatcg ggaggaggag ggtccgatgt ggtgatgacc 480

cagtccccac tgtcgctccc ggtgaccctc ggacagcctg ctagcatctc gtgcaaatcc 540

tcgcaatccc tgctggactc ggacggaaaa acgtacctca attggctgca gcagcgccct 600

ggccagagcc cgagaaggct tatctcgctg gtgtcaaagc tggatagcgg tgtgcccgac 660

cggttcagcg gctcagggtc aggaaccgat ttcaccttga agatctcccg cgtggaagcc 720

gaagatgtcg gagtctacta ctgctggcag ggtactcact tcccggggac ctttggtggc 780

ggcactaagg tcgagattaa gggctcacac catcatcacc atcaccacca c 831

<210> 430
<211> 277
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 430
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1   5   10   15

His Ala Ala Arg Pro Glu Ile Gln Leu Val Gln Ser Gly Ala Glu Val
            20   25   30

Lys Lys Pro Gly Glu Ser Leu Arg Ile Ser Cys Lys Gly Ser Gly Phe
        35   40   45

Asn Ile Glu Asp Tyr Tyr Ile His Trp Val Arg Gln Met Pro Gly Lys
    50   55   60

Gly Leu Glu Trp Met Gly Arg Ile Asp Pro Glu Asn Asp Glu Thr Lys
65   70   75   80

Tyr Gly Pro Ile Phe Gln Gly His Val Thr Ile Ser Ala Asp Thr Ser
                85   90   95

Ile Asn Thr Val Tyr Leu Gln Trp Ser Ser Leu Lys Ala Ser Asp Thr
            100   105   110

Ala Met Tyr Tyr Cys Ala Phe Arg Gly Gly Val Tyr Trp Gly Gln Gly
        115   120   125

Thr Thr Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly
    130   135   140

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Val Val Met Thr
145   150   155   160

Gln Ser Pro Leu Ser Leu Pro Val Thr Leu Gly Gln Pro Ala Ser Ile
                165   170   175

Ser Cys Lys Ser Ser Gln Ser Leu Leu Asp Ser Asp Gly Lys Thr Tyr
            180   185   190

Leu Asn Trp Leu Gln Gln Arg Pro Gly Gln Ser Pro Arg Arg Leu Ile
        195   200   205

```
Ser Leu Val Ser Lys Leu Asp Ser Gly Val Pro Asp Arg Phe Ser Gly
    210                 215                 220

Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile Ser Arg Val Glu Ala
225                 230                 235                 240

Glu Asp Val Gly Val Tyr Tyr Cys Trp Gln Gly Thr His Phe Pro Gly
                245                 250                 255

Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Gly Ser His His His
            260                 265                 270

His His His His His
        275
```

<210> 431
<211> 1470
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 431
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

cccgaaatcc agctggtgca aagcggagcc gaggtgaaga agcccggaga atccctgcgc 120

atctcgtgta agggttccgg ctttaacatc gaggattact acatccactg ggtgagacag 180

atgccgggca aaggtctgga atggatgggc cgcatcgacc cggagaacga cgaaaccaaa 240

tacggaccaa tcttccaagg acatgtgact atttccgcgg atacctccat caacactgtc 300

tacttgcagt ggagctcgct caaggcgtcg gataccgcca tgtactactg cgcattcaga 360

ggaggtgtgt actggggcca gggcactacg gtcaccgtgt cctcgggagg tggagggtca 420

ggaggcggag gctcgggcgg tggaggatca ggcggaggag gaagcgatgt ggtcatgact 480

caatccccac tgtcactgcc tgtcactctg gggcaaccgg cttccatctc atgcaagtca 540

agccaatcgc tgctcgactc cgacggaaaa acctacctca attggcttca gcagcgccca 600

ggccagtcgc ctcggaggct gatctcactc gtgtcgaagc ttgactccgg ggtgccggat 660

cggtttagcg gaagcggatc ggggaccgac ttcacgttga agattagccg ggtggaagcc 720

gaggacgtgg gagtctatta ctgctggcag gggacccact tcccggggac tttcggagga 780

ggcaccaaag tcgagattaa gaccactacc ccagcaccga ggccacccac cccggctcct 840

accatcgcct cccagcctct gtccctgcgt ccggaggcat gtagacccgc agctggtggg 900

gccgtgcata cccggggtct tgacttcgcc tgcgatatct acatttgggc ccctctggct 960

ggtacttgcg gggtcctgct gctttcactc gtgatcactc tttactgtaa gcgcggtcgg 1020

aagaagctgc tgtacatctt taagcaaccc ttcatgaggc ctgtgcagac tactcaagag 1080

gaggacggct gttcatgccg gttcccagag gaggaggaag gcggctgcga actgcgcgtg 1140

aaattcagcc gcagcgcaga tgctccagcc tacaagcagg ggcagaacca gctctacaac 1200

gaactcaatc ttggtcggag agaggagtac gacgtgctgg acaagcggag aggacgggac 1260

ccagaaatgg gcgggaagcc gcgcagaaag aatccccaag agggcctgta caacgagctc 1320

caaaaggata agatggcaga agcctatagc gagattggta tgaaaggggа acgcagaaga 1380

ggcaaaggcc acgacggact gtaccaggga ctcagcaccg ccaccaagga cacctatgac 1440

gctcttcaca tgcaggccct gccgcctcgg 1470

<210> 432
<211> 490
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 432
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Glu Ile Gln Leu Val Gln Ser Gly Ala Glu Val
20 25 30

Lys Lys Pro Gly Glu Ser Leu Arg Ile Ser Cys Lys Gly Ser Gly Phe
35 40 45

Asn Ile Glu Asp Tyr Tyr Ile His Trp Val Arg Gln Met Pro Gly Lys
50 55 60

```
Gly Leu Glu Trp Met Gly Arg Ile Asp Pro Glu Asn Asp Glu Thr Lys
65                  70                  75                  80

Tyr Gly Pro Ile Phe Gln Gly His Val Thr Ile Ser Ala Asp Thr Ser
                85                  90                  95

Ile Asn Thr Val Tyr Leu Gln Trp Ser Ser Leu Lys Ala Ser Asp Thr
            100                 105                 110

Ala Met Tyr Tyr Cys Ala Phe Arg Gly Gly Val Tyr Trp Gly Gln Gly
        115                 120                 125

Thr Thr Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly
    130                 135                 140

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Val Val Met Thr
145                 150                 155                 160

Gln Ser Pro Leu Ser Leu Pro Val Thr Leu Gly Gln Pro Ala Ser Ile
                165                 170                 175

Ser Cys Lys Ser Ser Gln Ser Leu Leu Asp Ser Asp Gly Lys Thr Tyr
            180                 185                 190

Leu Asn Trp Leu Gln Gln Arg Pro Gly Gln Ser Pro Arg Arg Leu Ile
        195                 200                 205

Ser Leu Val Ser Lys Leu Asp Ser Gly Val Pro Asp Arg Phe Ser Gly
    210                 215                 220

Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile Ser Arg Val Glu Ala
225                 230                 235                 240

Glu Asp Val Gly Val Tyr Tyr Cys Trp Gln Gly Thr His Phe Pro Gly
                245                 250                 255

Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Thr Thr Thr Pro Ala
            260                 265                 270

Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser
```

```
        275                 280                 285

Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr
    290                 295                 300

Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala
305                 310                 315                 320

Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr Cys
                325                 330                 335

Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met
            340                 345                 350

Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe
        355                 360                 365

Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg
    370                 375                 380

Ser Ala Asp Ala Pro Ala Tyr Lys Gln Gly Gln Asn Gln Leu Tyr Asn
385                 390                 395                 400

Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg
                405                 410                 415

Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro
            420                 425                 430

Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala
        435                 440                 445

Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His
    450                 455                 460

Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp
465                 470                 475                 480

Ala Leu His Met Gln Ala Leu Pro Pro Arg
                485                 490
```

<210> 433
<211> 246
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 433
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 Lys Ser Ser Gln Ser Leu Leu Asp Ser
20 25 30

Asp Gly Lys Thr Tyr Leu Asn Trp Leu Gln Gln Arg Pro Gly Gln Ser
35 40 45

Pro Arg Arg Leu Ile Ser Leu Val Ser Lys Leu 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 Trp Gln Gly
85 90 95

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

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly
115 120 125

Gly Gly Gly Ser Glu Ile Gln Leu Val Gln Ser Gly Ala Glu Val Lys
130 135 140

Lys Pro Gly Glu Ser Leu Arg Ile Ser Cys Lys Gly Ser Gly Phe Asn
145 150 155 160

Ile Glu Asp Tyr Tyr Ile His Trp Val Arg Gln Met Pro Gly Lys Gly
165 170 175

Leu Glu Trp Met Gly Arg Ile Asp Pro Glu Asn Asp Glu Thr Lys Tyr
180 185 190

Gly Pro Ile Phe Gln Gly His Val Thr Ile Ser Ala Asp Thr Ser Ile
195 200 205

Asn Thr Val Tyr Leu Gln Trp Ser Ser Leu Lys Ala Ser Asp Thr Ala
210 215 220

Met Tyr Tyr Cys Ala Phe Arg Gly Gly Val Tyr Trp Gly Gln Gly Thr
225 230 235 240

Thr Val Thr Val Ser Ser
245

<210> 434
<211> 738
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 434
gacgtcgtca tgacccagag cccgctgtca ctgcctgtga ccctgggcca gccggcgtcc 60

attagctgca aatcctcgca atccctgctc gactcagacg gaaaaacgta cttgaactgg 120

ctccaacagc gccctgggca atccccaagg cggcttatct cactcgtcag caagctcgat 180

agcggtgtcc cagacagatt ttcgggctcg ggatcgggca ctgatttcac tctgaagatc 240

tcgcgggtgg aagccgagga tgtgggagtg tactattgct ggcagggcac tcacttcccc 300

gggacgtttg gcggaggaac taaggtcgag atcaaaggag gaggtggatc aggcggaggt 360

gggagcggag gaggaggaag cggtggtgga ggttccgaaa tccagctggt gcaatcagga 420

gccgaggtga agaagccggg agaatccctg cgcatctcgt gcaagggctc gggcttcaac 480

atcgaggatt actacatcca ctgggtgcgg cagatgccgg gaaaggggtt ggaatggatg 540

ggacgcattg acccggaaaa tgatgaaacc aaatacgggc caatcttcca aggccacgtg 600

accattagcg ctgacacttc catcaacacc gtgtaccttc agtggtcctc actgaaggcg 660

tcggacactg ccatgtacta ctgtgcattc agaggagggg tctactgggg acagggcacc 720

accgtgaccg tgagctcc 738

<210> 435
<211> 831
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 435
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

cccgacgtcg tcatgaccca gagcccgctg tcactgcctg tgaccctggg ccagccggcg 120

tccattagct gcaaatcctc gcaatccctg ctcgactcag acggaaaaac gtacttgaac 180

tggctccaac agcgccctgg gcaatcccca aggcggctta tctcactcgt cagcaagctc 240

gatagcggtg tcccagacag attttcgggc tcgggatcgg gcactgattt cactctgaag 300

atctcgcggg tggaagccga ggatgtggga gtgtactatt gctggcaggg cactcacttc 360

cccgggacgt ttggcggagg aactaaggtc gagatcaaag gaggaggtgg atcaggcgga 420

ggtgggagcg gaggaggagg aagcggtggt ggaggttccg aaatccagct ggtgcaatca 480

ggagccgagg tgaagaagcc gggagaatcc ctgcgcatct cgtgcaaggg ctcgggcttc 540

aacatcgagg attactacat ccactgggtg cggcagatgc cgggaaaggg gttggaatgg 600

atgggacgca ttgacccgga aaatgatgaa accaaatacg ggccaatctt ccaaggccac 660

gtgaccatta gcgctgacac ttccatcaac accgtgtacc ttcagtggtc ctcactgaag 720

gcgtcggaca ctgccatgta ctactgtgca ttcagaggag gggtctactg gggacagggc 780

accaccgtga ccgtgagctc cggctcgcat caccatcatc accaccatca c 831

<210> 436
<211> 277
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic

polypeptide"

<400> 436

```
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1               5                  10                  15

His Ala Ala Arg Pro Asp Val Val Met Thr Gln Ser Pro Leu Ser Leu
            20                  25                  30

Pro Val Thr Leu Gly Gln Pro Ala Ser Ile Ser Cys Lys Ser Ser Gln
        35                  40                  45

Ser Leu Leu Asp Ser Asp Gly Lys Thr Tyr Leu Asn Trp Leu Gln Gln
    50                  55                  60

Arg Pro Gly Gln Ser Pro Arg Arg Leu Ile Ser Leu Val Ser Lys Leu
65                  70                  75                  80

Asp Ser Gly Val Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp
                85                  90                  95

Phe Thr Leu Lys Ile Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr
            100                 105                 110

Tyr Cys Trp Gln Gly Thr His Phe Pro Gly Thr Phe Gly Gly Gly Thr
        115                 120                 125

Lys Val Glu Ile Lys Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly
    130                 135                 140

Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Ile Gln Leu Val Gln Ser
145                 150                 155                 160

Gly Ala Glu Val Lys Lys Pro Gly Glu Ser Leu Arg Ile Ser Cys Lys
                165                 170                 175

Gly Ser Gly Phe Asn Ile Glu Asp Tyr Tyr Ile His Trp Val Arg Gln
            180                 185                 190

Met Pro Gly Lys Gly Leu Glu Trp Met Gly Arg Ile Asp Pro Glu Asn
        195                 200                 205
```

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Asp Glu Thr Lys Tyr Gly Pro Ile Phe Gln Gly His Val Thr Ile Ser
    210                 215                 220


Ala Asp Thr Ser Ile Asn Thr Val Tyr Leu Gln Trp Ser Ser Leu Lys
225                 230                 235                 240


Ala Ser Asp Thr Ala Met Tyr Tyr Cys Ala Phe Arg Gly Gly Val Tyr
                245                 250                 255


Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser Gly Ser His His His
            260                 265                 270


His His His His His
        275


<210> 437
<211> 1470
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polynucleotide"

<400> 437
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg       60

cccgacgtcg tcatgaccca atcccctctc tccctgccgg tcaccctggg tcagccggcg      120

tcgatctcat gcaaaagctc acagtccctg ctggattcgg acggaaaaac ctacttgaac      180

tggctccaac agaggccggg tcagtcccct cgcagactga tctcgctggt gagcaagctc      240

gactcgggtg tgccggatcg gttctccggg tcaggatcgg gcaccgactt tacgctcaag      300

atttcgagag tggaggccga ggatgtggga gtgtactatt gctggcaggg cacgcatttc      360

cccgggacct ttggaggcgg gactaaggtg gaaatcaagg gaggtggcgg atcaggcgga      420

ggaggcagcg gcggaggtgg atcaggaggc ggagggtcag agatccagct ggtccaaagc      480

ggagcagagg tgaagaagcc aggcgagtcc cttcgcattt cgtgcaaagg gagcggcttc      540

aacattgaag attactacat ccactgggtg cggcaaatgc caggaaaggg tctggaatgg      600

atgggacgga tcgacccaga aaatgatgaa actaagtacg gaccgatctt ccaaggacac      660
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gtcactatct ccgcggacac ttcgatcaac accgtgtacc tccagtggag cagcttgaaa 720

gcctccgaca ccgctatgta ctactgtgcc ttccgcggag gagtctactg gggacagggg 780

actactgtga ccgtgtcgtc caccactacc ccagcaccga ggccacccac cccggctcct 840

accatcgcct cccagcctct gtccctgcgt ccggaggcat gtagacccgc agctggtggg 900

gccgtgcata cccggggtct tgacttcgcc tgcgatatct acatttgggc ccctctggct 960

ggtacttgcg gggtcctgct gctttcactc gtgatcactc tttactgtaa gcgcggtcgg 1020

aagaagctgc tgtacatctt taagcaaccc ttcatgaggc ctgtgcagac tactcaagag 1080

gaggacggct gttcatgccg gttcccagag gaggaggaag gcggctgcga actgcgcgtg 1140

aaattcagcc gcagcgcaga tgctccagcc tacaagcagg ggcagaacca gctctacaac 1200

gaactcaatc ttggtcggag agaggagtac gacgtgctgg acaagcggag aggacgggac 1260

ccagaaatgg gcgggaagcc gcgcagaaag aatccccaag agggcctgta caacgagctc 1320

caaaaggata agatggcaga agcctatagc gagattggta tgaaagggga acgcagaaga 1380

ggcaaaggcc acgacggact gtaccaggga ctcagcaccg ccaccaagga cacctatgac 1440

gctcttcaca tgcaggccct gccgcctcgg 1470

<210> 438
<211> 490
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 438
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Asp Val Val Met Thr Gln Ser Pro Leu Ser Leu
20 25 30

Pro Val Thr Leu Gly Gln Pro Ala Ser Ile Ser Cys Lys Ser Ser Gln
35 40 45

Ser Leu Leu Asp Ser Asp Gly Lys Thr Tyr Leu Asn Trp Leu Gln Gln
50 55 60

```
Arg Pro Gly Gln Ser Pro Arg Arg Leu Ile Ser Leu Val Ser Lys Leu
65                  70                  75                  80

Asp Ser Gly Val Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp
                85                  90                  95

Phe Thr Leu Lys Ile Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr
            100                 105                 110

Tyr Cys Trp Gln Gly Thr His Phe Pro Gly Thr Phe Gly Gly Gly Thr
        115                 120                 125

Lys Val Glu Ile Lys Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly
    130                 135                 140

Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Ile Gln Leu Val Gln Ser
145                 150                 155                 160

Gly Ala Glu Val Lys Lys Pro Gly Glu Ser Leu Arg Ile Ser Cys Lys
                165                 170                 175

Gly Ser Gly Phe Asn Ile Glu Asp Tyr Tyr Ile His Trp Val Arg Gln
            180                 185                 190

Met Pro Gly Lys Gly Leu Glu Trp Met Gly Arg Ile Asp Pro Glu Asn
        195                 200                 205

Asp Glu Thr Lys Tyr Gly Pro Ile Phe Gln Gly His Val Thr Ile Ser
    210                 215                 220

Ala Asp Thr Ser Ile Asn Thr Val Tyr Leu Gln Trp Ser Ser Leu Lys
225                 230                 235                 240

Ala Ser Asp Thr Ala Met Tyr Tyr Cys Ala Phe Arg Gly Gly Val Tyr
                245                 250                 255

Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser Thr Thr Thr Pro Ala
            260                 265                 270
```

```
Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser
        275                 280                 285

Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr
    290                 295                 300

Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala
305                 310                 315                 320

Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr Cys
                325                 330                 335

Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met
            340                 345                 350

Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe
        355                 360                 365

Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg
    370                 375                 380

Ser Ala Asp Ala Pro Ala Tyr Lys Gln Gly Gln Asn Gln Leu Tyr Asn
385                 390                 395                 400

Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg
                405                 410                 415

Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro
            420                 425                 430

Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala
        435                 440                 445

Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His
    450                 455                 460

Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp
465                 470                 475                 480

Ala Leu His Met Gln Ala Leu Pro Pro Arg
                485                 490
```

<210> 439
<211> 246
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 439
Glu Ile Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
1 5 10 15

Thr Val Lys Ile Ser Cys Lys Gly Ser Gly Phe Asn Ile Glu Asp Tyr
20 25 30

Tyr Ile His Trp Val Gln Gln Ala Pro Gly Lys Gly Leu Glu Trp Met
35 40 45

Gly Arg Ile Asp Pro Glu Asn Asp Glu Thr Lys Tyr Gly Pro Ile Phe
50 55 60

Gln Gly Arg Val Thr Ile Thr Ala Asp Thr Ser Thr Asn Thr Val Tyr
65 70 75 80

Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Phe Arg Gly Gly Val Tyr Trp Gly Gln Gly Thr Thr Val Thr Val
100 105 110

Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly
115 120 125

Ser Gly Gly Gly Gly Ser Asp Val Val Met Thr Gln Ser Pro Leu Ser
130 135 140

Leu Pro Val Thr Leu Gly Gln Pro Ala Ser Ile Ser Cys Lys Ser Ser
145 150 155 160

Gln Ser Leu Leu Asp Ser Asp Gly Lys Thr Tyr Leu Asn Trp Leu Gln

```
                165                 170                 175

Gln Arg Pro Gly Gln Ser Pro Arg Arg Leu Ile Ser Leu Val Ser Lys
            180                 185                 190

Leu Asp Ser Gly Val Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr
        195                 200                 205

Asp Phe Thr Leu Lys Ile Ser Arg Val Glu Ala Glu Asp Val Gly Val
    210                 215                 220

Tyr Tyr Cys Trp Gln Gly Thr His Phe Pro Gly Thr Phe Gly Gly Gly
225                 230                 235                 240

Thr Lys Val Glu Ile Lys
                245
```

<210> 440
<211> 738
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 440
gaaatccagc tcgtgcagag cggagccgag gtcaagaaac cgggtgctac cgtgaagatt 60

tcatgcaagg gatcgggctt caacatcgag gattactaca tccactgggt gcagcaggca 120

ccaggaaaag gacttgaatg gatgggccgg atcgacccgg aaaatgacga gactaagtac 180

ggccctatct tccaaggacg ggtgacgatc accgcagaca ctagcaccaa caccgtctat 240

atggaactct cgtccctgag gtccgaagat actgccgtgt actactgtgc gtttcgcgga 300

ggtgtgtact ggggacaggg taccaccgtc accgtgtcat cgggcggtgg aggctccggt 360

ggaggagggt caggaggcgg tggaagcgga ggaggcggca gcgacgtggt catgactcaa 420

tcgccgctgt cgctgcccgt cactctggga caacccgcgt ccatcagctg caaatcctcg 480

cagtcactgc ttgactccga tggaaagacc tacctcaact ggctgcagca acgcccaggc 540

caatccccaa gacgcctgat ctcgttggtg tcaaagctgg actcaggggt gccggaccgg 600

ttctccggga gcgggtcggg cacggatttc actctcaaga tctccagagt ggaagccgag 660

gatgtgggag tctactactg ctggcaggga acccatttcc ctggaacttt tggcggagga 720

actaaggtcg agattaaa 738

<210> 441
<211> 831
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 441
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

cccgaaatcc agctcgtgca gagcggagcc gaggtcaaga aaccgggtgc taccgtgaag 120

atttcatgca agggatcggg cttcaacatc gaggattact acatccactg ggtgcagcag 180

gcaccaggaa aaggacttga atggatgggc cggatcgacc cggaaaatga cgagactaag 240

tacggcccta tcttccaagg acgggtgacg atcaccgcag acactagcac caacaccgtc 300

tatatggaac tctcgtccct gaggtccgaa gatactgccg tgtactactg tgcgtttcgc 360

ggaggtgtgt actggggaca gggtaccacc gtcaccgtgt catcgggcgg tggaggctcc 420

ggtggaggag ggtcaggagg cggtggaagc ggaggaggcg gcagcgacgt ggtcatgact 480

caatcgccgc tgtcgctgcc cgtcactctg ggacaacccg cgtccatcag ctgcaaatcc 540

tcgcagtcac tgcttgactc cgatggaaag acctacctca actggctgca gcaacgccca 600

ggccaatccc caagacgcct gatctcgttg gtgtcaaagc tggactcagg ggtgccggac 660

cggttctccg ggagcgggtc gggcacggat ttcactctca agatctccag agtggaagcc 720

gaggatgtgg gagtctacta ctgctggcag ggaacccatt tccctggaac ttttggcgga 780

ggaactaagg tcgagattaa agggagccac catcatcatc accaccacca c 831

<210> 442
<211> 277
<212> PRT
<213> Artificial Sequence

<220>
<221> source

<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 442
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Glu Ile Gln Leu Val Gln Ser Gly Ala Glu Val
20 25 30

Lys Lys Pro Gly Ala Thr Val Lys Ile Ser Cys Lys Gly Ser Gly Phe
35 40 45

Asn Ile Glu Asp Tyr Tyr Ile His Trp Val Gln Gln Ala Pro Gly Lys
50 55 60

Gly Leu Glu Trp Met Gly Arg Ile Asp Pro Glu Asn Asp Glu Thr Lys
65 70 75 80

Tyr Gly Pro Ile Phe Gln Gly Arg Val Thr Ile Thr Ala Asp Thr Ser
85 90 95

Thr Asn Thr Val Tyr Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr
100 105 110

Ala Val Tyr Tyr Cys Ala Phe Arg Gly Gly Val Tyr Trp Gly Gln Gly
115 120 125

Thr Thr Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly
130 135 140

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Val Val Met Thr
145 150 155 160

Gln Ser Pro Leu Ser Leu Pro Val Thr Leu Gly Gln Pro Ala Ser Ile
165 170 175

Ser Cys Lys Ser Ser Gln Ser Leu Leu Asp Ser Asp Gly Lys Thr Tyr
180 185 190

Leu Asn Trp Leu Gln Gln Arg Pro Gly Gln Ser Pro Arg Arg Leu Ile
195 200 205

Ser Leu Val Ser Lys Leu Asp Ser Gly Val Pro Asp Arg Phe Ser Gly
210 215 220

Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile Ser Arg Val Glu Ala
225 230 235 240

Glu Asp Val Gly Val Tyr Tyr Cys Trp Gln Gly Thr His Phe Pro Gly
245 250 255

Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Gly Ser His His His
260 265 270

His His His His His
275

<210> 443
<211> 1470
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 443
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

cccgaaatcc agctcgtgca gagcggagcc gaggtcaaga aaccgggtgc taccgtgaag 120

atttcatgca agggatcggg cttcaacatc gaggattact acatccactg ggtgcagcag 180

gcaccaggaa aaggacttga atggatgggc cggatcgacc cggaaaatga cgagactaag 240

tacggcccta tcttccaagg acgggtgacg atcaccgcag acactagcac caacaccgtc 300

tatatggaac tctcgtccct gaggtccgaa gatactgccg tgtactactg tgcgtttcgc 360

ggaggtgtgt actggggaca gggtaccacc gtcaccgtgt catcgggcgg tggaggctcc 420

ggtggaggag ggtcaggagg cggtggaagc ggaggaggcg gcagcgacgt ggtcatgact 480

caatcgccgc tgtcgctgcc cgtcactctg ggacaacccg cgtccatcag ctgcaaatcc 540

tcgcagtcac tgcttgactc cgatggaaag acctacctca actggctgca gcaacgccca 600

ggccaatccc caagacgcct gatctcgttg gtgtcaaagc tggactcagg ggtgccggac 660

cggttctccg ggagcgggtc gggcacggat ttcactctca agatctccag agtggaagcc 720

gaggatgtgg gagtctacta ctgctggcag ggaacccatt tccctggaac ttttggcgga 780

ggaactaagg tcgagattaa aaccactacc ccagcaccga ggccacccac cccggctcct 840

accatcgcct cccagcctct gtccctgcgt ccggaggcat gtagacccgc agctggtggg 900

gccgtgcata cccggggtct tgacttcgcc tgcgatatct acatttgggc ccctctggct 960

ggtacttgcg gggtcctgct gctttcactc gtgatcactc tttactgtaa gcgcggtcgg 1020

aagaagctgc tgtacatctt taagcaaccc ttcatgaggc ctgtgcagac tactcaagag 1080

gaggacggct gttcatgccg gttcccagag gaggaggaag gcggctgcga actgcgcgtg 1140

aaattcagcc gcagcgcaga tgctccagcc tacaagcagg ggcagaacca gctctacaac 1200

gaactcaatc ttggtcggag agaggagtac gacgtgctgg acaagcggag aggacgggac 1260

ccagaaatgg gcgggaagcc gcgcagaaag aatccccaag agggcctgta caacgagctc 1320

caaaaggata agatggcaga agcctatagc gagattggta tgaaaggggа acgcagaaga 1380

ggcaaaggcc acgacggact gtaccaggga ctcagcaccg ccaccaagga cacctatgac 1440

gctcttcaca tgcaggccct gccgcctcgg 1470

<210> 444
<211> 490
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 444
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Glu Ile Gln Leu Val Gln Ser Gly Ala Glu Val
20 25 30

Lys Lys Pro Gly Ala Thr Val Lys Ile Ser Cys Lys Gly Ser Gly Phe
35 40 45

Asn Ile Glu Asp Tyr Tyr Ile His Trp Val Gln Gln Ala Pro Gly Lys

```
    50                  55                  60

Gly Leu Glu Trp Met Gly Arg Ile Asp Pro Glu Asn Asp Glu Thr Lys
65                  70                  75                  80

Tyr Gly Pro Ile Phe Gln Gly Arg Val Thr Ile Thr Ala Asp Thr Ser
                85                  90                  95

Thr Asn Thr Val Tyr Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr
            100                 105                 110

Ala Val Tyr Tyr Cys Ala Phe Arg Gly Gly Val Tyr Trp Gly Gln Gly
        115                 120                 125

Thr Thr Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly
    130                 135                 140

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Val Val Met Thr
145                 150                 155                 160

Gln Ser Pro Leu Ser Leu Pro Val Thr Leu Gly Gln Pro Ala Ser Ile
                165                 170                 175

Ser Cys Lys Ser Ser Gln Ser Leu Leu Asp Ser Asp Gly Lys Thr Tyr
            180                 185                 190

Leu Asn Trp Leu Gln Gln Arg Pro Gly Gln Ser Pro Arg Arg Leu Ile
        195                 200                 205

Ser Leu Val Ser Lys Leu Asp Ser Gly Val Pro Asp Arg Phe Ser Gly
    210                 215                 220

Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile Ser Arg Val Glu Ala
225                 230                 235                 240

Glu Asp Val Gly Val Tyr Tyr Cys Trp Gln Gly Thr His Phe Pro Gly
                245                 250                 255

Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Thr Thr Thr Pro Ala
            260                 265                 270
```

```
Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser
        275                 280                 285

Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr
    290                 295                 300

Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala
305                 310                 315                 320

Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr Cys
                325                 330                 335

Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met
            340                 345                 350

Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe
        355                 360                 365

Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg
    370                 375                 380

Ser Ala Asp Ala Pro Ala Tyr Lys Gln Gly Gln Asn Gln Leu Tyr Asn
385                 390                 395                 400

Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg
                405                 410                 415

Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro
            420                 425                 430

Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala
        435                 440                 445

Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His
    450                 455                 460

Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp
465                 470                 475                 480

Ala Leu His Met Gln Ala Leu Pro Pro Arg
```

485 490

<210> 445
<211> 246
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 445
Glu Ile Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Glu
1 5 10 15

Ser Leu Arg Ile Ser Cys Lys Gly Ser Gly Phe Asn Ile Glu Asp Tyr
20 25 30

Tyr Ile His Trp Val Arg Gln Met Pro Gly Lys Gly Leu Glu Trp Met
35 40 45

Gly Arg Ile Asp Pro Glu Asn Asp Glu Thr Lys Tyr Gly Pro Ile Phe
50 55 60

Gln Gly His Val Thr Ile Ser Ala Asp Thr Ser Ile Asn Thr Val Tyr
65 70 75 80

Leu Gln Trp Ser Ser Leu Lys Ala Ser Asp Thr Ala Met Tyr Tyr Cys
85 90 95

Ala Phe Arg Gly Gly Val Tyr Trp Gly Gln Gly Thr Thr Val Thr Val
100 105 110

Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly
115 120 125

Ser Gly Gly Gly Gly Ser Asp Val Val Met Thr Gln Ser Pro Asp Ser
130 135 140

Leu Ala Val Ser Leu Gly Glu Arg Ala Thr Ile Asn Cys Lys Ser Ser
145 150 155 160

```
Gln Ser Leu Leu Asp Ser Asp Gly Lys Thr Tyr Leu Asn Trp Leu Gln
                165                 170                 175

Gln Lys Pro Gly Gln Pro Pro Lys Arg Leu Ile Ser Leu Val Ser Lys
            180                 185                 190

Leu Asp Ser Gly Val Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr
        195                 200                 205

Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Ala Glu Asp Val Ala Val
    210                 215                 220

Tyr Tyr Cys Trp Gln Gly Thr His Phe Pro Gly Thr Phe Gly Gly Gly
225                 230                 235                 240

Thr Lys Val Glu Ile Lys
                245
```

<210> 446
<211> 738
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 446

```
gaaatccagc tggtgcagtc aggcgccgag gtcaagaagc cgggagagtc gctgagaatc       60

tcgtgcaagg gctcggggtt caacatcgag gactactaca ttcactgggt caggcagatg      120

ccgggaaagg gactggaatg gatgggccgg atcgacccag aaaatgacga aaccaaatac      180

gggccgattt ttcaaggcca cgtgactatc agcgcagaca cgagcatcaa cactgtctac      240

ctccagtggt cctcgcttaa ggccagcgat accgctatgt actactgcgc attcagaggc      300

ggggtgtact ggggacaagg aaccactgtg accgtgagca gcggaggtgg cggctcggga      360

ggaggtggga gcggaggagg aggttccggc ggtggaggat cagatgtcgt gatgacccag      420

tccccggact ccctcgctgt ctcactgggc gagcgcgcga ccatcaactg caaatcgagc      480

cagtcgctgt tggactccga tggaaagact tatctgaatt ggctgcaaca gaaaccagga      540

caacctccca agcggctcat ctcgcttgtg tcaaaactcg attcgggagt gccagaccgc      600
```

ttctcggggt ccgggagcgg aactgacttt actttgacca tttcctcact gcaagcggag 660

gatgtggccg tgtattactg ttggcagggc acgcatttcc ctggaacctt cggtggcgga 720

actaaggtgg aaatcaag 738

<210> 447
<211> 834
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 447
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

cccgaaatcc agctggtgca gtcaggcgcc gaggtcaaga agccgggaga gtcgctgaga 120

atctcgtgca agggctcggg gttcaacatc gaggactact acattcactg ggtcaggcag 180

atgccgggaa agggactgga atggatgggc cggatcgacc cagaaaatga cgaaaccaaa 240

tacgggccga tttttcaagg ccacgtgact atcagcgcag acacgagcat caacactgtc 300

tacctccagt ggtcctcgct taaggccagc gataccgcta tgtactactg cgcattcaga 360

ggcggggtgt actggggaca aggaaccact gtgaccgtga gcagcggagg tggcggctcg 420

ggaggaggtg ggagcggagg aggaggttcc ggcggtggag gatcagatgt cgtgatgacc 480

cagtccccgg actccctcgc tgtctcactg ggcgagcgcg cgaccatcaa ctgcaaatcg 540

agccagtcgc tgttggactc cgatggaaag acttatctga attggctgca acagaaacca 600

ggacaacctc ccaagcggct catctcgctt gtgtcaaaac tcgattcggg agtgccagac 660

cgcttctcgg ggtccgggag cggaactgac tttactttga ccatttcctc actgcaagcg 720

gaggatgtgg ccgtgtatta ctgttggcag ggcacgcatt tccctggaac cttcggtggc 780

ggaactaagg tggaaatcaa gggatcacac caccatcatc accatcacca ccat 834

<210> 448
<211> 278
<212> PRT
<213> Artificial Sequence

<220>

<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 448
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Glu Ile Gln Leu Val Gln Ser Gly Ala Glu Val
20 25 30

Lys Lys Pro Gly Glu Ser Leu Arg Ile Ser Cys Lys Gly Ser Gly Phe
35 40 45

Asn Ile Glu Asp Tyr Tyr Ile His Trp Val Arg Gln Met Pro Gly Lys
50 55 60

Gly Leu Glu Trp Met Gly Arg Ile Asp Pro Glu Asn Asp Glu Thr Lys
65 70 75 80

Tyr Gly Pro Ile Phe Gln Gly His Val Thr Ile Ser Ala Asp Thr Ser
85 90 95

Ile Asn Thr Val Tyr Leu Gln Trp Ser Ser Leu Lys Ala Ser Asp Thr
100 105 110

Ala Met Tyr Tyr Cys Ala Phe Arg Gly Gly Val Tyr Trp Gly Gln Gly
115 120 125

Thr Thr Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly
130 135 140

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Val Val Met Thr
145 150 155 160

Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly Glu Arg Ala Thr Ile
165 170 175

Asn Cys Lys Ser Ser Gln Ser Leu Leu Asp Ser Asp Gly Lys Thr Tyr
180 185 190

Leu Asn Trp Leu Gln Gln Lys Pro Gly Gln Pro Pro Lys Arg Leu Ile

195 200 205

Ser Leu Val Ser Lys Leu Asp Ser Gly Val Pro Asp Arg Phe Ser Gly
210 215 220

Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Ala
225 230 235 240

Glu Asp Val Ala Val Tyr Tyr Cys Trp Gln Gly Thr His Phe Pro Gly
245 250 255

Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Gly Ser His His His
260 265 270

His His His His His His
275

<210> 449
<211> 1470
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 449
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

cccgagattc agctcgtgca atcgggagcg gaagtcaaga agccaggaga gtccttgcgg 120

atctcatgca agggtagcgg ctttaacatc gaggattact acatccactg ggtgaggcag 180

atgccgggga agggactcga atggatggga cggatcgacc cagaaaacga cgaaactaag 240

tacggtccga tcttccaagg ccatgtgact attagcgccg atacttcaat caataccgtg 300

tatctgcaat ggtcctcatt gaaagcctca gataccgcga tgtactactg tgctttcaga 360

ggaggggtct actggggaca gggaactacc gtgactgtct cgtccggcgg aggcgggtca 420

ggaggtggcg gcagcggagg aggagggtcc ggcggaggtg ggtccgacgt cgtgatgacc 480

cagagccctg acagcctggc agtgagcctg ggcgaaagag ctaccattaa ctgcaaatcg 540

tcgcagagcc tgctggactc ggacggaaaa acgtacctca attggctgca gcaaaagcct 600

ggccagccac cgaagcgcct tatctcactg gtgtcgaagc tggattcggg agtgcccgat 660

cgcttctccg gctcgggatc gggtactgac ttcaccctca ctatctcctc gcttcaagca 720

gaggacgtgg ccgtctacta ctgctggcag ggaacccact ttccgggaac cttcggcgga 780

gggacgaaag tggagatcaa gaccactacc ccagcaccga ggccacccac cccggctcct 840

accatcgcct cccagcctct gtccctgcgt ccggaggcat gtagacccgc agctggtggg 900

gccgtgcata cccggggtct tgacttcgcc tgcgatatct acatttgggc ccctctggct 960

ggtacttgcg gggtcctgct gctttcactc gtgatcactc tttactgtaa gcgcggtcgg 1020

aagaagctgc tgtacatctt taagcaaccc ttcatgaggc ctgtgcagac tactcaagag 1080

gaggacggct gttcatgccg gttcccagag gaggaggaag gcggctgcga actgcgcgtg 1140

aaattcagcc gcagcgcaga tgctccagcc tacaagcagg ggcagaacca gctctacaac 1200

gaactcaatc ttggtcggag agaggagtac gacgtgctgg acaagcggag aggacgggac 1260

ccagaaatgg gcgggaagcc gcgcagaaag aatccccaag agggcctgta caacgagctc 1320

caaaaggata agatggcaga agcctatagc gagattggta tgaaagggga acgcagaaga 1380

ggcaaaggcc acgacggact gtaccaggga ctcagcaccg ccaccaagga cacctatgac 1440

gctcttcaca tgcaggccct gccgcctcgg 1470

<210> 450
<211> 490
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 450
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Glu Ile Gln Leu Val Gln Ser Gly Ala Glu Val
20 25 30

Lys Lys Pro Gly Glu Ser Leu Arg Ile Ser Cys Lys Gly Ser Gly Phe
35 40 45

```
Asn Ile Glu Asp Tyr Tyr Ile His Trp Val Arg Gln Met Pro Gly Lys
    50                  55                  60

Gly Leu Glu Trp Met Gly Arg Ile Asp Pro Glu Asn Asp Glu Thr Lys
65                  70                  75                  80

Tyr Gly Pro Ile Phe Gln Gly His Val Thr Ile Ser Ala Asp Thr Ser
                85                  90                  95

Ile Asn Thr Val Tyr Leu Gln Trp Ser Ser Leu Lys Ala Ser Asp Thr
            100                 105                 110

Ala Met Tyr Tyr Cys Ala Phe Arg Gly Gly Val Tyr Trp Gly Gln Gly
        115                 120                 125

Thr Thr Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly
    130                 135                 140

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Val Val Met Thr
145                 150                 155                 160

Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly Glu Arg Ala Thr Ile
                165                 170                 175

Asn Cys Lys Ser Ser Gln Ser Leu Leu Asp Ser Asp Gly Lys Thr Tyr
            180                 185                 190

Leu Asn Trp Leu Gln Gln Lys Pro Gly Gln Pro Pro Lys Arg Leu Ile
        195                 200                 205

Ser Leu Val Ser Lys Leu Asp Ser Gly Val Pro Asp Arg Phe Ser Gly
    210                 215                 220

Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Ala
225                 230                 235                 240

Glu Asp Val Ala Val Tyr Tyr Cys Trp Gln Gly Thr His Phe Pro Gly
                245                 250                 255

Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Thr Thr Thr Pro Ala
            260                 265                 270
```

```
Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser
        275                 280                 285

Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr
    290                 295                 300

Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala
305                 310                 315                 320

Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr Cys
                325                 330                 335

Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met
            340                 345                 350

Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe
        355                 360                 365

Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg
    370                 375                 380

Ser Ala Asp Ala Pro Ala Tyr Lys Gln Gly Gln Asn Gln Leu Tyr Asn
385                 390                 395                 400

Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg
                405                 410                 415

Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro
            420                 425                 430

Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala
        435                 440                 445

Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His
    450                 455                 460

Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp
465                 470                 475                 480
```

Ala Leu His Met Gln Ala Leu Pro Pro Arg
485 490

<210> 451
<211> 246
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 451
Asp Val 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 Leu Leu Asp Ser
20 25 30

Asp Gly Lys Thr Tyr Leu Asn Trp Leu Gln Gln Lys Pro Gly Gln Pro
35 40 45

Pro Lys Arg Leu Ile Ser Leu Val Ser Lys Leu Asp Ser Gly Val Pro
50 55 60

Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile
65 70 75 80

Ser Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Trp Gln Gly
85 90 95

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

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly
115 120 125

Gly Gly Gly Ser Glu Ile Gln Leu Val Gln Ser Gly Ala Glu Val Lys
130 135 140

Lys Pro Gly Glu Ser Leu Arg Ile Ser Cys Lys Gly Ser Gly Phe Asn
145 150 155 160

```
Ile Glu Asp Tyr Tyr Ile His Trp Val Arg Gln Met Pro Gly Lys Gly
                165                 170                 175

Leu Glu Trp Met Gly Arg Ile Asp Pro Glu Asn Asp Glu Thr Lys Tyr
            180                 185                 190

Gly Pro Ile Phe Gln Gly His Val Thr Ile Ser Ala Asp Thr Ser Ile
        195                 200                 205

Asn Thr Val Tyr Leu Gln Trp Ser Ser Leu Lys Ala Ser Asp Thr Ala
    210                 215                 220

Met Tyr Tyr Cys Ala Phe Arg Gly Gly Val Tyr Trp Gly Gln Gly Thr
225                 230                 235                 240

Thr Val Thr Val Ser Ser
                245
```

<210> 452
<211> 738
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 452
gacgtggtga tgacccaatc gccagattcc ctggcagtgt ccctgggcga acgcgccact 60

attaactgca aatcgtcaca gtccttgctt gattccgacg gaaagaccta cctcaattgg 120

ctccagcaga agccaggaca accgccaaag agactgatct ccctggtgtc aaagctggac 180

tcgggagtgc ctgatcggtt ctcgggtagc gggagcggca ccgacttcac tctgaccatc 240

tcgtcactcc aggctgagga cgtggccgtg tattactgtt ggcagggtac tcactttccg 300

ggcactttcg gaggcggcac caaggtggag attaaaggag gaggcggaag cggaggtgga 360

ggatcgggag gtggtgggag cggcggagga gggagcgaga tccagctcgt ccaatcggga 420

gcggaagtga agaagcccgg agagtcactt agaatctcat gcaaggggtc gggcttcaac 480

atcgaggatt actacatcca ttgggtccgc cagatgcctg gtaaaggact ggaatggatg 540

gggaggattg acccggaaaa cgacgaaact aagtacggac cgatctttca agggcacgtg 600

actatctccg ctgatacctc aatcaatact gtctacctcc agtggtcctc gctgaaagca 660

agcgacaccg cgatgtacta ctgcgccttc cggggaggag tgtactgggg ccaaggcacc 720

acggtcacgg tcagctcc 738

<210> 453
<211> 834
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 453
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

cccgacgtgg tgatgaccca atcgccagat tccctggcag tgtccctggg cgaacgcgcc 120

actattaact gcaaatcgtc acagtccttg cttgattccg acggaaagac ctacctcaat 180

tggctccagc agaagccagg acaaccgcca aagagactga tctccctggt gtcaaagctg 240

gactcgggag tgcctgatcg gttctcgggt agcgggagcg gcaccgactt cactctgacc 300

atctcgtcac tccaggctga ggacgtggcc gtgtattact gttggcaggg tactcacttt 360

ccgggcactt tcggaggcgg caccaaggtg gagattaaag gaggaggcgg aagcggaggt 420

ggaggatcgg gaggtggtgg gagcggcgga ggagggagcg agatccagct cgtccaatcg 480

ggagcggaag tgaagaagcc cggagagtca cttagaatct catgcaaggg gtcgggcttc 540

aacatcgagg attactacat ccattgggtc cgccagatgc ctggtaaagg actggaatgg 600

atggggagga ttgacccgga aaacgacgaa actaagtacg gaccgatctt tcaagggcac 660

gtgactatct ccgctgatac ctcaatcaat actgtctacc tccagtggtc ctcgctgaaa 720

gcaagcgaca ccgcgatgta ctactgcgcc ttccggggag gagtgtactg gggccaaggc 780

accacggtca cggtcagctc cggctcccat caccaccacc atcaccatca tcac 834

<210> 454
<211> 278
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 454
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Asp Val Val Met Thr Gln Ser Pro Asp Ser Leu
20 25 30

Ala Val Ser Leu Gly Glu Arg Ala Thr Ile Asn Cys Lys Ser Ser Gln
35 40 45

Ser Leu Leu Asp Ser Asp Gly Lys Thr Tyr Leu Asn Trp Leu Gln Gln
50 55 60

Lys Pro Gly Gln Pro Pro Lys Arg Leu Ile Ser Leu Val Ser Lys Leu
65 70 75 80

Asp Ser Gly Val Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp
85 90 95

Phe Thr Leu Thr Ile Ser Ser Leu Gln Ala Glu Asp Val Ala Val Tyr
100 105 110

Tyr Cys Trp Gln Gly Thr His Phe Pro Gly Thr Phe Gly Gly Gly Thr
115 120 125

Lys Val Glu Ile Lys Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly
130 135 140

Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Ile Gln Leu Val Gln Ser
145 150 155 160

Gly Ala Glu Val Lys Lys Pro Gly Glu Ser Leu Arg Ile Ser Cys Lys
165 170 175

Gly Ser Gly Phe Asn Ile Glu Asp Tyr Tyr Ile His Trp Val Arg Gln
180 185 190

```
Met Pro Gly Lys Gly Leu Glu Trp Met Gly Arg Ile Asp Pro Glu Asn
        195                 200                 205


Asp Glu Thr Lys Tyr Gly Pro Ile Phe Gln Gly His Val Thr Ile Ser
    210                 215                 220


Ala Asp Thr Ser Ile Asn Thr Val Tyr Leu Gln Trp Ser Ser Leu Lys
225                 230                 235                 240


Ala Ser Asp Thr Ala Met Tyr Tyr Cys Ala Phe Arg Gly Gly Val Tyr
                245                 250                 255


Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser Gly Ser His His His
            260                 265                 270


His His His His His His
        275
```

<210> 455
<211> 1470
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 455

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atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg       60

cccgacgtgg tgatgactca gtcgcctgac tcgctggctg tgtcccttgg agagcgggcc      120

actatcaatt gcaagtcatc ccagtcgctg ctggattccg acgggaaaac ctacctcaat      180

tggctgcagc aaaaaccggg acagcctcca aagcggctca tcagcctggt gtccaagttg      240

gacagcggcg tgccagaccg cttctccggt tcgggaagcg gtactgattt cacgctgacc      300

atctcatccc tccaagcgga ggatgtggca gtctactact gttggcaggg cacgcatttt      360

ccgggcactt ttggaggagg gaccaaggtc gaaatcaagg gaggaggtgg ctcgggcgga      420

ggaggctcgg gaggaggagg atcaggaggc ggtggaagcg agattcaact ggtccagagc      480

ggcgcagaag tcaagaagcc gggtgaatcg ctcagaatct cgtgcaaagg atcgggattc      540

aacatcgagg actactacat tcactgggtc agacaaatgc cgggcaaagg gctggaatgg      600
```

atggggagga tcgaccccga aaacgatgaa accaagtacg gaccaatctt ccaagggcac 660

gtgaccattt cggcggacac ctcaatcaac actgtgtacc tccagtggag ctcacttaag 720

gccagcgata ccgccatgta ctattgcgct ttccgcggag gggtgtactg gggacagggc 780

actactgtga ccgtgtcatc caccactacc ccagcaccga ggccacccac cccggctcct 840

accatcgcct cccagcctct gtccctgcgt ccggaggcat gtagacccgc agctggtggg 900

gccgtgcata cccggggtct tgacttcgcc tgcgatatct acatttgggc ccctctggct 960

ggtacttgcg gggtcctgct gctttcactc gtgatcactc tttactgtaa gcgcggtcgg 1020

aagaagctgc tgtacatctt taagcaaccc ttcatgaggc ctgtgcagac tactcaagag 1080

gaggacggct gttcatgccg gttcccagag gaggaggaag gcggctgcga actgcgcgtg 1140

aaattcagcc gcagcgcaga tgctccagcc tacaagcagg ggcagaacca gctctacaac 1200

gaactcaatc ttggtcggag agaggagtac gacgtgctgg acaagcggag aggacgggac 1260

ccagaaatgg gcgggaagcc gcgcagaaag aatccccaag agggcctgta caacgagctc 1320

caaaaggata agatggcaga agcctatagc gagattggta tgaaagggga acgcagaaga 1380

ggcaaaggcc acgacggact gtaccaggga ctcagcaccg ccaccaagga cacctatgac 1440

gctcttcaca tgcaggccct gccgcctcgg 1470

<210> 456
<211> 490
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 456
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Asp Val Val Met Thr Gln Ser Pro Asp Ser Leu
20 25 30

Ala Val Ser Leu Gly Glu Arg Ala Thr Ile Asn Cys Lys Ser Ser Gln
35 40 45

```
Ser Leu Leu Asp Ser Asp Gly Lys Thr Tyr Leu Asn Trp Leu Gln Gln
    50                  55                  60

Lys Pro Gly Gln Pro Pro Lys Arg Leu Ile Ser Leu Val Ser Lys Leu
65                  70                  75                  80

Asp Ser Gly Val Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp
                85                  90                  95

Phe Thr Leu Thr Ile Ser Ser Leu Gln Ala Glu Asp Val Ala Val Tyr
            100                 105                 110

Tyr Cys Trp Gln Gly Thr His Phe Pro Gly Thr Phe Gly Gly Gly Thr
        115                 120                 125

Lys Val Glu Ile Lys Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly
    130                 135                 140

Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Ile Gln Leu Val Gln Ser
145                 150                 155                 160

Gly Ala Glu Val Lys Lys Pro Gly Glu Ser Leu Arg Ile Ser Cys Lys
                165                 170                 175

Gly Ser Gly Phe Asn Ile Glu Asp Tyr Tyr Ile His Trp Val Arg Gln
            180                 185                 190

Met Pro Gly Lys Gly Leu Glu Trp Met Gly Arg Ile Asp Pro Glu Asn
        195                 200                 205

Asp Glu Thr Lys Tyr Gly Pro Ile Phe Gln Gly His Val Thr Ile Ser
    210                 215                 220

Ala Asp Thr Ser Ile Asn Thr Val Tyr Leu Gln Trp Ser Ser Leu Lys
225                 230                 235                 240

Ala Ser Asp Thr Ala Met Tyr Tyr Cys Ala Phe Arg Gly Gly Val Tyr
                245                 250                 255

Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser Thr Thr Thr Pro Ala
```

```
            260                 265                 270

Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser
        275                 280                 285

Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr
    290                 295                 300

Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala
305                 310                 315                 320

Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr Cys
                325                 330                 335

Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met
            340                 345                 350

Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe
        355                 360                 365

Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg
    370                 375                 380

Ser Ala Asp Ala Pro Ala Tyr Lys Gln Gly Gln Asn Gln Leu Tyr Asn
385                 390                 395                 400

Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg
                405                 410                 415

Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro
            420                 425                 430

Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala
        435                 440                 445

Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His
    450                 455                 460

Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp
465                 470                 475                 480
```

Ala Leu His Met Gln Ala Leu Pro Pro Arg
485 490

<210> 457
<211> 246
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 457
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 Lys Ser Ser Gln Ser Leu Leu Asp Ser
20 25 30

Asp Gly Lys Thr Tyr Leu Asn Trp Leu Gln Gln Arg Pro Gly Gln Ser
35 40 45

Pro Arg Arg Leu Ile Ser Leu Val Ser Lys Leu 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 Trp Gln Gly
85 90 95

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

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly
115 120 125

Gly Gly Gly Ser Glu Ile Gln Leu Val Gln Ser Gly Ala Glu Val Lys
130 135 140

Lys Pro Gly Ala Thr Val Lys Ile Ser Cys Lys Gly Ser Gly Phe Asn
145 150 155 160

```
Ile Glu Asp Tyr Tyr Ile His Trp Val Gln Gln Ala Pro Gly Lys Gly
                165                 170                 175


Leu Glu Trp Met Gly Arg Ile Asp Pro Glu Asn Asp Glu Thr Lys Tyr
            180                 185                 190


Gly Pro Ile Phe Gln Gly Arg Val Thr Ile Thr Ala Asp Thr Ser Thr
        195                 200                 205


Asn Thr Val Tyr Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala
    210                 215                 220


Val Tyr Tyr Cys Ala Phe Arg Gly Gly Val Tyr Trp Gly Gln Gly Thr
225                 230                 235                 240


Thr Val Thr Val Ser Ser
                245


<210> 458
<211> 738
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polynucleotide"

<400> 458
gatgtggtca tgacgcagtc accactgtcc ctccccgtga cccttggaca gccagcgtcg       60

attagctgca agtcatccca atccctgctc gattcggatg gaaagaccta tctcaactgg      120

ctgcagcaaa gacccggtca gagccctagg agactcatct cgttggtgtc aaagctggac      180

agcggagtgc cggaccggtt ttccggttcg ggatcgggga cggacttcac tctgaagatt      240

tcacgggtgg aagctgagga tgtgggagtg tactactgct ggcagggaac ccatttccct      300

ggcacttttg gcggaggaac taaggtcgaa atcaagggag gaggtggctc gggaggaggc      360

ggatcgggcg gaggcgggag cggcggagga gggtccgaaa tccaacttgt ccagtcagga      420

gccgaagtga agaaaccggg agccaccgtc aaaatcagct gtaagggatc gggattcaat      480

atcgaggact actacatcca ctgggtgcag caagctccgg gcaaaggact ggagtggatg      540
```

gggcgcatcg acccagagaa cgacgaaacc aaatacggcc cgatcttcca agggcgggtg 600

accatcaccg cggacacctc aactaacact gtgtacatgg agctgagctc cctgcgctcc 660

gaagatactg cagtctacta ctgcgccttc cgcggtggtg tgtactgggg acagggcacc 720

actgtgactg tcagctcg 738

<210> 459
<211> 831
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 459
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

cccgatgtgg tcatgacgca gtcaccactg tccctccccg tgacccttgg acagccagcg 120

tcgattagct gcaagtcatc ccaatccctg ctcgattcgg atggaaagac ctatctcaac 180

tggctgcagc aaagacccgg tcagagccct aggagactca tctcgttggt gtcaaagctg 240

gacagcggag tgccggaccg gttttccggt tcgggatcgg ggacggactt cactctgaag 300

atttcacggg tggaagctga ggatgtggga gtgtactact gctggcaggg aacccatttc 360

cctggcactt ttggcggagg aactaaggtc gaaatcaagg gaggaggtgg ctcgggagga 420

ggcggatcgg gcggaggcgg gagcggcgga ggagggtccg aaatccaact tgtccagtca 480

ggagccgaag tgaagaaacc gggagccacc gtcaaaatca gctgtaaggg atcgggattc 540

aatatcgagg actactacat ccactgggtg cagcaagctc cgggcaaagg actggagtgg 600

atggggcgca tcgacccaga gaacgacgaa accaaatacg gcccgatctt ccaagggcgg 660

gtgaccatca ccgcggacac ctcaactaac actgtgtaca tggagctgag ctccctgcgc 720

tccgaagata ctgcagtcta ctactgcgcc ttccgcggtg gtgtgtactg gggacagggc 780

accactgtga ctgtcagctc ggggtcccac catcatcacc accaccatca c 831

<210> 460
<211> 277
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 460
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Asp Val Val Met Thr Gln Ser Pro Leu Ser Leu
20 25 30

Pro Val Thr Leu Gly Gln Pro Ala Ser Ile Ser Cys Lys Ser Ser Gln
35 40 45

Ser Leu Leu Asp Ser Asp Gly Lys Thr Tyr Leu Asn Trp Leu Gln Gln
50 55 60

Arg Pro Gly Gln Ser Pro Arg Arg Leu Ile Ser Leu Val Ser Lys Leu
65 70 75 80

Asp Ser Gly Val Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp
85 90 95

Phe Thr Leu Lys Ile Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr
100 105 110

Tyr Cys Trp Gln Gly Thr His Phe Pro Gly Thr Phe Gly Gly Gly Thr
115 120 125

Lys Val Glu Ile Lys Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly
130 135 140

Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Ile Gln Leu Val Gln Ser
145 150 155 160

Gly Ala Glu Val Lys Lys Pro Gly Ala Thr Val Lys Ile Ser Cys Lys
165 170 175

Gly Ser Gly Phe Asn Ile Glu Asp Tyr Tyr Ile His Trp Val Gln Gln
180 185 190

Ala Pro Gly Lys Gly Leu Glu Trp Met Gly Arg Ile Asp Pro Glu Asn
195 200 205

Asp Glu Thr Lys Tyr Gly Pro Ile Phe Gln Gly Arg Val Thr Ile Thr
210 215 220

Ala Asp Thr Ser Thr Asn Thr Val Tyr Met Glu Leu Ser Ser Leu Arg
225 230 235 240

Ser Glu Asp Thr Ala Val Tyr Tyr Cys Ala Phe Arg Gly Gly Val Tyr
245 250 255

Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser Gly Ser His His His
260 265 270

His His His His His
275

<210> 461
<211> 1470
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 461
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

cccgatgtgg tcatgacgca gtcaccactg tccctccccg tgacccttgg acagccagcg 120

tcgattagct gcaagtcatc ccaatccctg ctcgattcgg atggaaagac ctatctcaac 180

tggctgcagc aaagacccgg tcagagccct aggagactca tctcgttggt gtcaaagctg 240

gacagcggag tgccggaccg gttttccggt tcgggatcgg ggacggactt cactctgaag 300

atttcacggg tggaagctga ggatgtggga gtgtactact gctggcaggg aacccatttc 360

cctggcactt ttggcggagg aactaaggtc gaaatcaagg gaggaggtgg ctcgggagga 420

ggcggatcgg gcggaggcgg gagcggcgga ggagggtccg aaatccaact tgtccagtca 480

ggagccgaag tgaagaaacc gggagccacc gtcaaaatca gctgtaaggg atcgggattc 540

aatatcgagg actactacat ccactgggtg cagcaagctc cgggcaaagg actggagtgg 600

atggggcgca tcgacccaga gaacgacgaa accaaatacg gcccgatctt ccaagggcgg 660

gtgaccatca ccgcggacac ctcaactaac actgtgtaca tggagctgag ctccctgcgc 720

tccgaagata ctgcagtcta ctactgcgcc ttccgcggtg gtgtgtactg gggacagggc 780

accactgtga ctgtcagctc gaccactacc ccagcaccga ggccacccac cccggctcct 840

accatcgcct cccagcctct gtccctgcgt ccggaggcat gtagacccgc agctggtggg 900

gccgtgcata cccggggtct tgacttcgcc tgcgatatct acatttgggc ccctctggct 960

ggtacttgcg gggtcctgct gctttcactc gtgatcactc tttactgtaa gcgcggtcgg 1020

aagaagctgc tgtacatctt taagcaaccc ttcatgaggc ctgtgcagac tactcaagag 1080

gaggacggct gttcatgccg gttcccagag gaggaggaag gcggctgcga actgcgcgtg 1140

aaattcagcc gcagcgcaga tgctccagcc tacaagcagg ggcagaacca gctctacaac 1200

gaactcaatc ttggtcggag agaggagtac gacgtgctgg acaagcggag aggacgggac 1260

ccagaaatgg gcgggaagcc gcgcagaaag aatccccaag agggcctgta caacgagctc 1320

caaaaggata agatggcaga agcctatagc gagattggta tgaaagggga acgcagaaga 1380

ggcaaaggcc acgacggact gtaccaggga ctcagcaccg ccaccaagga cacctatgac 1440

gctcttcaca tgcaggccct gccgcctcgg 1470

<210> 462
<211> 490
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 462
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Asp Val Val Met Thr Gln Ser Pro Leu Ser Leu
20 25 30

Pro Val Thr Leu Gly Gln Pro Ala Ser Ile Ser Cys Lys Ser Ser Gln
35 40 45

```
Ser Leu Leu Asp Ser Asp Gly Lys Thr Tyr Leu Asn Trp Leu Gln Gln
    50                  55                  60

Arg Pro Gly Gln Ser Pro Arg Arg Leu Ile Ser Leu Val Ser Lys Leu
65                  70                  75                  80

Asp Ser Gly Val Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp
                85                  90                  95

Phe Thr Leu Lys Ile Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr
            100                 105                 110

Tyr Cys Trp Gln Gly Thr His Phe Pro Gly Thr Phe Gly Gly Gly Thr
        115                 120                 125

Lys Val Glu Ile Lys Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly
    130                 135                 140

Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Ile Gln Leu Val Gln Ser
145                 150                 155                 160

Gly Ala Glu Val Lys Lys Pro Gly Ala Thr Val Lys Ile Ser Cys Lys
                165                 170                 175

Gly Ser Gly Phe Asn Ile Glu Asp Tyr Tyr Ile His Trp Val Gln Gln
            180                 185                 190

Ala Pro Gly Lys Gly Leu Glu Trp Met Gly Arg Ile Asp Pro Glu Asn
        195                 200                 205

Asp Glu Thr Lys Tyr Gly Pro Ile Phe Gln Gly Arg Val Thr Ile Thr
    210                 215                 220

Ala Asp Thr Ser Thr Asn Thr Val Tyr Met Glu Leu Ser Ser Leu Arg
225                 230                 235                 240

Ser Glu Asp Thr Ala Val Tyr Tyr Cys Ala Phe Arg Gly Gly Val Tyr
                245                 250                 255
```

```
Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser Thr Thr Thr Pro Ala
            260                 265                 270

Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser
        275                 280                 285

Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr
    290                 295                 300

Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala
305                 310                 315                 320

Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr Cys
                325                 330                 335

Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met
            340                 345                 350

Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe
        355                 360                 365

Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg
    370                 375                 380

Ser Ala Asp Ala Pro Ala Tyr Lys Gln Gly Gln Asn Gln Leu Tyr Asn
385                 390                 395                 400

Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg
                405                 410                 415

Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro
            420                 425                 430

Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala
        435                 440                 445

Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His
    450                 455                 460

Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp
465                 470                 475                 480
```

Ala Leu His Met Gln Ala Leu Pro Pro Arg
485 490

<210> 463
<211> 243
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 463
Glu Ile Gln Leu Gln Gln Ser Gly Ala Glu Leu Val Lys Pro Gly Ala
1 5 10 15

Ser Val Lys Leu Ser Cys Thr Gly Ser Gly Phe Asn Ile Glu Asp Tyr
20 25 30

Tyr Ile His Trp Val Lys Gln Arg Thr Glu Gln Gly Leu Glu Trp Ile
35 40 45

Gly Arg Ile Asp Pro Glu Asn Asp Glu Thr Lys Tyr Gly Pro Ile Phe
50 55 60

Gln Gly Arg Ala Thr Ile Thr Ala Asp Thr Ser Ser Asn Thr Val Tyr
65 70 75 80

Leu Gln Leu Ser Ser Leu Thr Ser Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Phe Arg Gly Gly Val Tyr Trp Gly Pro Gly Thr Thr Leu Thr Val
100 105 110

Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly
115 120 125

Ser His Met Asp Val Val Met Thr Gln Ser Pro Leu Thr Leu Ser Val
130 135 140

Ala Ile Gly Gln Ser Ala Ser Ile Ser Cys Lys Ser Ser Gln Ser Leu

145 150 155 160

Leu Asp Ser Asp Gly Lys Thr Tyr Leu Asn Trp Leu Leu Gln Arg Pro
165 170 175

Gly Gln Ser Pro Lys Arg Leu Ile Ser Leu Val Ser Lys Leu Asp Ser
180 185 190

Gly Val Pro Asp Arg Phe Thr Gly Ser Gly Ser Gly Thr Asp Phe Thr
195 200 205

Leu Arg Ile Ser Arg Val Glu Ala Glu Asp Leu Gly Ile Tyr Tyr Cys
210 215 220

Trp Gln Gly Thr His Phe Pro Gly Thr Phe Gly Gly Gly Thr Lys Leu
225 230 235 240

Glu Ile Lys

<210> 464
<211> 729
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 464
gagatccagc tccaacagag cggagccgaa ctggtcaaac cgggagcgtc ggtgaagttg 60

tcatgcactg gatcgggctt caacatcgag gattactaca tccactgggt caagcaacgc 120

accgagcagg ggctggaatg gatcggacgg atcgaccccg aaaacgatga aaccaagtac 180

gggcctatct tccaaggacg ggccaccatt acggctgaca cgtcaagcaa taccgtctac 240

ctccagcttt ccagcctgac ctccgaggac actgccgtgt actactgcgc cttcagagga 300

ggcgtgtact ggggaccagg aaccactttg accgtgtcca gcggaggcgg tggatcagga 360

ggaggaggct caggcggtgg cggctcgcac atggacgtgg tcatgactca gtccccgctg 420

accctgtcgg tggcaattgg acagagcgca tccatctcgt gcaagagctc acagtcgctg 480

ctggattccg acggaaagac ttatctgaac tggctgctcc aaagaccagg gcaatcaccg 540

aaacgcctta tctccctggt gtcgaaactc gactcgggtg tgccggatcg gtttaccggt 600

agcgggtccg gcacggactt cactctccgc atttcgaggg tggaagcgga ggatctcggg 660

atctactact gttggcaggg aacccacttc cctgggactt ttggaggcgg aactaagctg 720

gaaatcaag 729

<210> 465
<211> 822
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 465
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

cccgagatcc agctccaaca gagcggagcc gaactggtca aaccgggagc gtcggtgaag 120

ttgtcatgca ctggatcggg cttcaacatc gaggattact acatccactg ggtcaagcaa 180

cgcaccgagc aggggctgga atggatcgga cggatcgacc ccgaaaacga tgaaaccaag 240

tacgggccta tcttccaagg acgggccacc attacggctg acacgtcaag caataccgtc 300

tacctccagc tttccagcct gacctccgag gacactgccg tgtactactg cgccttcaga 360

ggaggcgtgt actggggacc aggaaccact ttgaccgtgt ccagcggagg cggtggatca 420

ggaggaggag gctcaggcgg tggcggctcg cacatggacg tggtcatgac tcagtccccg 480

ctgaccctgt cggtggcaat tggacagagc gcatccatct cgtgcaagag ctcacagtcg 540

ctgctggatt ccgacggaaa gacttatctg aactggctgc tccaaagacc agggcaatca 600

ccgaaacgcc ttatctccct ggtgtcgaaa ctcgactcgg gtgtgccgga tcggtttacc 660

ggtagcgggt ccggcacgga cttcactctc cgcatttcga gggtggaagc ggaggatctc 720

gggatctact actgttggca gggaacccac ttccctggga cttttggagg cggaactaag 780

ctggaaatca agggtagcca tcaccatcac caccaccatc at 822

<210> 466
<211> 274
<212> PRT

<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 466
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Glu Ile Gln Leu Gln Gln Ser Gly Ala Glu Leu
20 25 30

Val Lys Pro Gly Ala Ser Val Lys Leu Ser Cys Thr Gly Ser Gly Phe
35 40 45

Asn Ile Glu Asp Tyr Tyr Ile His Trp Val Lys Gln Arg Thr Glu Gln
50 55 60

Gly Leu Glu Trp Ile Gly Arg Ile Asp Pro Glu Asn Asp Glu Thr Lys
65 70 75 80

Tyr Gly Pro Ile Phe Gln Gly Arg Ala Thr Ile Thr Ala Asp Thr Ser
85 90 95

Ser Asn Thr Val Tyr Leu Gln Leu Ser Ser Leu Thr Ser Glu Asp Thr
100 105 110

Ala Val Tyr Tyr Cys Ala Phe Arg Gly Gly Val Tyr Trp Gly Pro Gly
115 120 125

Thr Thr Leu Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly
130 135 140

Ser Gly Gly Gly Gly Ser His Met Asp Val Val Met Thr Gln Ser Pro
145 150 155 160

Leu Thr Leu Ser Val Ala Ile Gly Gln Ser Ala Ser Ile Ser Cys Lys
165 170 175

Ser Ser Gln Ser Leu Leu Asp Ser Asp Gly Lys Thr Tyr Leu Asn Trp
180 185 190

```
Leu Leu Gln Arg Pro Gly Gln Ser Pro Lys Arg Leu Ile Ser Leu Val
        195                 200                 205

Ser Lys Leu Asp Ser Gly Val Pro Asp Arg Phe Thr Gly Ser Gly Ser
    210                 215                 220

Gly Thr Asp Phe Thr Leu Arg Ile Ser Arg Val Glu Ala Glu Asp Leu
225                 230                 235                 240

Gly Ile Tyr Tyr Cys Trp Gln Gly Thr His Phe Pro Gly Thr Phe Gly
                245                 250                 255

Gly Gly Thr Lys Leu Glu Ile Lys Gly Ser His His His His His His
            260                 265                 270

His His
```

<210> 467
<211> 1461
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 467

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atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg       60

cccgagatcc agctccaaca gagcggagcc gaactggtca aaccgggagc gtcggtgaag      120

ttgtcatgca ctggatcggg cttcaacatc gaggattact acatccactg ggtcaagcaa      180

cgcaccgagc aggggctgga atggatcgga cggatcgacc ccgaaaacga tgaaaccaag      240

tacgggccta tcttccaagg acgggccacc attacggctg acacgtcaag caataccgtc      300

tacctccagc tttccagcct gacctccgag gacactgccg tgtactactg cgccttcaga      360

ggaggcgtgt actggggacc aggaaccact ttgaccgtgt ccagcggagg cggtggatca      420

ggaggaggag gctcaggcgg tggcggctcg cacatggacg tggtcatgac tcagtccccg      480

ctgaccctgt cggtggcaat tggacagagc gcatccatct cgtgcaagag ctcacagtcg      540
```

ctgctggatt ccgacggaaa gacttatctg aactggctgc tccaaagacc agggcaatca 600

ccgaaacgcc ttatctccct ggtgtcgaaa ctcgactcgg gtgtgccgga tcggtttacc 660

ggtagcgggt ccggcacgga cttcactctc cgcatttcga gggtggaagc ggaggatctc 720

gggatctact actgttggca gggaacccac ttccctggga cttttggagg cggaactaag 780

ctggaaatca agaccactac cccagcaccg aggccaccca ccccggctcc taccatcgcc 840

tcccagcctc tgtccctgcg tccggaggca tgtagacccg cagctggtgg ggccgtgcat 900

acccggggtc ttgacttcgc ctgcgatatc tacatttggg cccctctggc tggtacttgc 960

ggggtcctgc tgctttcact cgtgatcact ctttactgta agcgcggtcg gaagaagctg 1020

ctgtacatct ttaagcaacc cttcatgagg cctgtgcaga ctactcaaga ggaggacggc 1080

tgttcatgcc ggttcccaga ggaggaggaa ggcggctgcg aactgcgcgt gaaattcagc 1140

cgcagcgcag atgctccagc ctacaagcag gggcagaacc agctctacaa cgaactcaat 1200

cttggtcgga gagaggagta cgacgtgctg gacaagcgga gaggacggga cccagaaatg 1260

ggcgggaagc cgcgcagaaa gaatccccaa gagggcctgt acaacgagct ccaaaaggat 1320

aagatggcag aagcctatag cgagattggt atgaaagggg aacgcagaag aggcaaaggc 1380

cacgacggac tgtaccaggg actcagcacc gccaccaagg acacctatga cgctcttcac 1440

atgcaggccc tgccgcctcg g 1461

<210> 468
<211> 487
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 468
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Glu Ile Gln Leu Gln Gln Ser Gly Ala Glu Leu
20 25 30

Val Lys Pro Gly Ala Ser Val Lys Leu Ser Cys Thr Gly Ser Gly Phe

```
        35                  40                  45

Asn Ile Glu Asp Tyr Tyr Ile His Trp Val Lys Gln Arg Thr Glu Gln
    50                  55                  60

Gly Leu Glu Trp Ile Gly Arg Ile Asp Pro Glu Asn Asp Glu Thr Lys
65                  70                  75                  80

Tyr Gly Pro Ile Phe Gln Gly Arg Ala Thr Ile Thr Ala Asp Thr Ser
                85                  90                  95

Ser Asn Thr Val Tyr Leu Gln Leu Ser Ser Leu Thr Ser Glu Asp Thr
            100                 105                 110

Ala Val Tyr Tyr Cys Ala Phe Arg Gly Gly Val Tyr Trp Gly Pro Gly
        115                 120                 125

Thr Thr Leu Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly
    130                 135                 140

Ser Gly Gly Gly Gly Ser His Met Asp Val Val Met Thr Gln Ser Pro
145                 150                 155                 160

Leu Thr Leu Ser Val Ala Ile Gly Gln Ser Ala Ser Ile Ser Cys Lys
                165                 170                 175

Ser Ser Gln Ser Leu Leu Asp Ser Asp Gly Lys Thr Tyr Leu Asn Trp
            180                 185                 190

Leu Leu Gln Arg Pro Gly Gln Ser Pro Lys Arg Leu Ile Ser Leu Val
        195                 200                 205

Ser Lys Leu Asp Ser Gly Val Pro Asp Arg Phe Thr Gly Ser Gly Ser
    210                 215                 220

Gly Thr Asp Phe Thr Leu Arg Ile Ser Arg Val Glu Ala Glu Asp Leu
225                 230                 235                 240

Gly Ile Tyr Tyr Cys Trp Gln Gly Thr His Phe Pro Gly Thr Phe Gly
                245                 250                 255
```

```
Gly Gly Thr Lys Leu Glu Ile Lys Thr Thr Thr Pro Ala Pro Arg Pro
            260                 265                 270

Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser Leu Arg Pro
        275                 280                 285

Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr Arg Gly Leu
    290                 295                 300

Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys
305                 310                 315                 320

Gly Val Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr Cys Lys Arg Gly
                325                 330                 335

Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met Arg Pro Val
            340                 345                 350

Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu Glu
        355                 360                 365

Glu Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg Ser Ala Asp
    370                 375                 380

Ala Pro Ala Tyr Lys Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn
385                 390                 395                 400

Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg
                405                 410                 415

Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly
            420                 425                 430

Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu
        435                 440                 445

Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His Asp Gly Leu
    450                 455                 460

Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu His
```

465 470 475 480

Met Gln Ala Leu Pro Pro Arg
485

<210> 469
<211> 240
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 469
Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
1 5 10 15

Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Gly Ile Arg Asn Asn
20 25 30

Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Arg Leu Ile
35 40 45

Tyr Ala Ala Ser Asn Leu Gln Ser Gly Val Pro Ser Arg Phe Thr Gly
50 55 60

Ser Gly Ser Gly Thr Glu Phe Thr Leu Ile Val Ser Ser Leu Gln Pro
65 70 75 80

Glu Asp Phe Ala Thr Tyr Tyr Cys Leu Gln His His Ser Tyr Pro Leu
85 90 95

Thr Ser Gly Gly Gly Thr Lys Val Glu Ile Lys Arg Thr Gly Ser Thr
100 105 110

Ser Gly Ser Gly Lys Pro Gly Ser Gly Glu Gly Ser Glu Val Gln Val
115 120 125

Leu Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly Ser Leu Arg Leu
130 135 140

```
Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr Ala Met Ser Trp
145                 150                 155                 160


Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val Ser Ala Ile Ser
                165                 170                 175


Gly Ser Gly Gly Ser Thr Asn Tyr Ala Asp Ser Val Lys Gly Arg Phe
            180                 185                 190


Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr Leu Gln Met Asn
        195                 200                 205


Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys Ala Gly Ser Ser
    210                 215                 220


Gly Trp Ser Glu Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
225                 230                 235                 240


<210> 470
<211> 720
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polynucleotide"

<400> 470
gatatccaaa tgactcagag cccttcatcc ctgagcgcca gcgtcggaga cagggtgacc       60

atcacgtgcc gggcatccca aggcattaga aataacttgg cgtggtatca gcaaaaacca      120

ggaaaggccc cgaagcgcct gatctacgcg gcctccaacc ttcagtcagg agtgccctcg      180

cgcttcaccg ggagcggtag cggaactgag tttaccctta tcgtgtcgtc cctgcagcca      240

gaggacttcg cgacctacta ctgcctccag catcactcgt acccgttgac ttcgggaggc      300

ggaaccaagg tcgaaatcaa acgcactggc tcgacgtcag ggtccggtaa accgggatcg      360

ggagaaggat cggaagtcca agtgctggag agcggaggcg gactcgtgca acctggcggg      420

tcgctgcggc tcagctgtgc cgcgtcgggt tttactttca gctcgtacgc tatgtcatgg      480

gtgcggcagg ctccgggaaa ggggctggaa tgggtgtccg ctatttccgg ctcgggtgga      540

agcaccaatt acgccgactc cgtgaaggga cgcttcacca tctcacggga taactccaag      600
```

aatactctgt acctccagat gaactcgctg agagccgagg acaccgcagt gtactactgc 660

gcagggtcaa gcggctggtc cgaatactgg ggacagggca ccctcgtcac tgtcagctcc 720

<210> 471
<211> 807
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 471
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

cccgatatcc aaatgactca gagcccttca tccctgagcg ccagcgtcgg agacagggtg 120

accatcacgt gccgggcatc ccaaggcatt agaaataact tggcgtggta tcagcaaaaa 180

ccaggaaagg ccccgaagcg cctgatctac gcggcctcca accttcagtc aggagtgccc 240

tcgcgcttca ccgggagcgg tagcggaact gagtttaccc ttatcgtgtc gtccctgcag 300

ccagaggact tcgcgaccta ctactgcctc cagcatcact cgtacccgtt gacttcggga 360

ggcggaacca aggtcgaaat caaacgcact ggctcgacgt cagggtccgg taaaccggga 420

tcgggagaag gatcggaagt ccaagtgctg gagagcggag gcggactcgt gcaacctggc 480

gggtcgctgc ggctcagctg tgccgcgtcg ggttttactt tcagctcgta cgctatgtca 540

tgggtgcggc aggctccggg aaaggggctg gaatgggtgt ccgctatttc cggctcgggt 600

ggaagcacca attacgccga ctccgtgaag ggacgcttca ccatctcacg ggataactcc 660

aagaatactc tgtacctcca gatgaactcg ctgagagccg aggacaccgc agtgtactac 720

tgcgcagggt caagcggctg gtccgaatac tggggacagg gcaccctcgt cactgtcagc 780

tcccatcacc atcaccacca ccatcac 807

<210> 472
<211> 269
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic

polypeptide"

<400> 472

```
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1               5                  10                  15

His Ala Ala Arg Pro Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu
            20                  25                  30

Ser Ala Ser Val Gly Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln
        35                  40                  45

Gly Ile Arg Asn Asn Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala
    50                  55                  60

Pro Lys Arg Leu Ile Tyr Ala Ala Ser Asn Leu Gln Ser Gly Val Pro
65                  70                  75                  80

Ser Arg Phe Thr Gly Ser Gly Ser Gly Thr Glu Phe Thr Leu Ile Val
                85                  90                  95

Ser Ser Leu Gln Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Leu Gln His
            100                 105                 110

His Ser Tyr Pro Leu Thr Ser Gly Gly Gly Thr Lys Val Glu Ile Lys
        115                 120                 125

Arg Thr Gly Ser Thr Ser Gly Ser Gly Lys Pro Gly Ser Gly Glu Gly
    130                 135                 140

Ser Glu Val Gln Val Leu Glu Ser Gly Gly Gly Leu Val Gln Pro Gly
145                 150                 155                 160

Gly Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser
                165                 170                 175

Tyr Ala Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp
            180                 185                 190

Val Ser Ala Ile Ser Gly Ser Gly Gly Ser Thr Asn Tyr Ala Asp Ser
        195                 200                 205
```

Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu
210 215 220

Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr
225 230 235 240

Cys Ala Gly Ser Ser Gly Trp Ser Glu Tyr Trp Gly Gln Gly Thr Leu
245 250 255

Val Thr Val Ser Ser His His His His His His His His
260 265

<210> 473
<211> 1452
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 473
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

cccgatatcc aaatgactca gagcccttca tccctgagcg ccagcgtcgg agacagggtg 120

accatcacgt gccgggcatc ccaaggcatt agaaataact tggcgtggta tcagcaaaaa 180

ccaggaaagg ccccgaagcg cctgatctac gcggcctcca accttcagtc aggagtgccc 240

tcgcgcttca ccgggagcgg tagcggaact gagtttaccc ttatcgtgtc gtccctgcag 300

ccagaggact tcgcgaccta ctactgcctc cagcatcact cgtacccgtt gacttcggga 360

ggcggaacca aggtcgaaat caaacgcact ggctcgacgt cagggtccgg taaaccggga 420

tcgggagaag gatcggaagt ccaagtgctg gagagcggag gcggactcgt gcaacctggc 480

gggtcgctgc ggctcagctg tgccgcgtcg ggttttactt tcagctcgta cgctatgtca 540

tgggtgcggc aggctccggg aaaggggctg gaatgggtgt ccgctatttc cggctcgggt 600

ggaagcacca attacgccga ctccgtgaag ggacgcttca ccatctcacg ggataactcc 660

aagaatactc tgtacctcca gatgaactcg ctgagagccg aggacaccgc agtgtactac 720

tgcgcagggt caagcggctg gtccgaatac tggggacagg gcaccctcgt cactgtcagc 780

tccaccacta ccccagcacc gaggccaccc accccggctc ctaccatcgc ctcccagcct 840

ctgtccctgc gtccggaggc atgtagaccc gcagctggtg gggccgtgca tacccggggt 900

cttgacttcg cctgcgatat ctacatttgg gcccctctgg ctggtacttg cggggtcctg 960

ctgctttcac tcgtgatcac tctttactgt aagcgcggtc ggaagaagct gctgtacatc 1020

tttaagcaac ccttcatgag gcctgtgcag actactcaag aggaggacgg ctgttcatgc 1080

cggttcccag aggaggagga aggcggctgc gaactgcgcg tgaaattcag ccgcagcgca 1140

gatgctccag cctacaagca ggggcagaac cagctctaca acgaactcaa tcttggtcgg 1200

agagaggagt acgacgtgct ggacaagcgg agaggacggg acccagaaat gggcgggaag 1260

ccgcgcagaa agaatcccca agagggcctg tacaacgagc tccaaaagga taagatggca 1320

gaagcctata gcgagattgg tatgaaaggg gaacgcagaa gaggcaaagg ccacgacgga 1380

ctgtaccagg gactcagcac cgccaccaag gacacctatg acgctcttca catgcaggcc 1440

ctgccgcctc gg 1452

<210> 474
<211> 484
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 474
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu
20 25 30

Ser Ala Ser Val Gly Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln
35 40 45

Gly Ile Arg Asn Asn Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala
50 55 60

Pro Lys Arg Leu Ile Tyr Ala Ala Ser Asn Leu Gln Ser Gly Val Pro
65 70 75 80

```
Ser Arg Phe Thr Gly Ser Gly Ser Gly Thr Glu Phe Thr Leu Ile Val
                85                  90                  95

Ser Ser Leu Gln Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Leu Gln His
            100                 105                 110

His Ser Tyr Pro Leu Thr Ser Gly Gly Gly Thr Lys Val Glu Ile Lys
        115                 120                 125

Arg Thr Gly Ser Thr Ser Gly Ser Gly Lys Pro Gly Ser Gly Glu Gly
    130                 135                 140

Ser Glu Val Gln Val Leu Glu Ser Gly Gly Gly Leu Val Gln Pro Gly
145                 150                 155                 160

Gly Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser
                165                 170                 175

Tyr Ala Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp
            180                 185                 190

Val Ser Ala Ile Ser Gly Ser Gly Gly Ser Thr Asn Tyr Ala Asp Ser
        195                 200                 205

Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu
    210                 215                 220

Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr
225                 230                 235                 240

Cys Ala Gly Ser Ser Gly Trp Ser Glu Tyr Trp Gly Gln Gly Thr Leu
                245                 250                 255

Val Thr Val Ser Ser Thr Thr Thr Pro Ala Pro Arg Pro Pro Thr Pro
            260                 265                 270

Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser Leu Arg Pro Glu Ala Cys
        275                 280                 285
```

```
Arg Pro Ala Ala Gly Gly Ala Val His Thr Arg Gly Leu Asp Phe Ala
    290                 295                 300

Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly Val Leu
305                 310                 315                 320

Leu Leu Ser Leu Val Ile Thr Leu Tyr Cys Lys Arg Gly Arg Lys Lys
                325                 330                 335

Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met Arg Pro Val Gln Thr Thr
            340                 345                 350

Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu Glu Glu Glu Gly
        355                 360                 365

Gly Cys Glu Leu Arg Val Lys Phe Ser Arg Ser Ala Asp Ala Pro Ala
    370                 375                 380

Tyr Lys Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn Leu Gly Arg
385                 390                 395                 400

Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg Asp Pro Glu
                405                 410                 415

Met Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu Tyr Asn
            420                 425                 430

Glu Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile Gly Met
        435                 440                 445

Lys Gly Glu Arg Arg Arg Gly Lys Gly His Asp Gly Leu Tyr Gln Gly
    450                 455                 460

Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu His Met Gln Ala
465                 470                 475                 480

Leu Pro Pro Arg
```

<210> 475
<211> 1482

<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 475
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

ccccaagtgc aactcgtcca gtccggtgca gaagtcaaga agccaggaga atcactcaag 120

attagctgca aaggcagcgg ctactccttc acttcctact ggatcggctg ggtgcgccag 180

atgcccggaa agggactgga gtggatggga atcatctacc ctggcgatag cgacaccaga 240

tactccccga gctttcaagg ccaagtgacc atttcggccg acaagtcgat ctccaccgcg 300

tatctgcagt ggagctcact gaaggcttcg gacaccgcca tgtactactg tgcccggctg 360

gggggaagcc tgcccgatta cggaatggac gtgtggggcc agggaaccat ggtcactgtg 420

tcctccgcct ccgggggtgg aggctccggt ggaggggggt ccggtggtgg aggatcagaa 480

attgtgctga cccagtctcc gctgtccttg cctgtgaccc cgggcgaacc cgcaagcatc 540

tcctgccggt cgtcgcagtc cctgcttcac tccaacggct acaactacct cgattggtac 600

ctccagaagc ctggacagag cccacagctg ttgatctacc tgggctcgaa ccgggcctca 660

ggagtgccgg acaggttctc cggctccggg tcgggaaccg acttcacgct gaagatctcc 720

cgcgtggagg ccgaggacgt gggcgtgtac tattgcatgc aggcgctgca gacccttatt 780

acattcggac aggggactaa ggtcgatatc aagaccacta ccccagcacc gaggccaccc 840

accccggctc ctaccatcgc ctcccagcct ctgtccctgc gtccggaggc atgtagaccc 900

gcagctggtg gggccgtgca tacccggggt cttgacttcg cctgcgatat ctacatttgg 960

gcccctctgg ctggtacttg cggggtcctg ctgctttcac tcgtgatcac tctttactgt 1020

aagcgcggtc ggaagaagct gctgtacatc tttaagcaac ccttcatgag gcctgtgcag 1080

actactcaag aggaggacgg ctgttcatgc cggttcccag aggaggagga aggcggctgc 1140

gaactgcgcg tgaaattcag ccgcagcgca gatgctccag cctacaagca ggggcagaac 1200

cagctctaca acgaactcaa tcttggtcgg agagaggagt acgacgtgct ggacaagcgg 1260

agaggacggg acccagaaat gggcgggaag ccgcgcagaa agaatcccca agagggcctg 1320

tacaacgagc tccaaaagga taagatggca gaagcctata gcgagattgg tatgaaaggg 1380

gaacgcagaa gaggcaaagg ccacgacgga ctgtaccagg gactcagcac cgccaccaag 1440

gacacctatg acgctcttca catgcaggcc ctgccgcctc gg 1482

<210> 476
<211> 494
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 476
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val
20 25 30

Lys Lys Pro Gly Glu Ser Leu Lys Ile Ser Cys Lys Gly Ser Gly Tyr
35 40 45

Ser Phe Thr Ser Tyr Trp Ile Gly Trp Val Arg Gln Met Pro Gly Lys
50 55 60

Gly Leu Glu Trp Met Gly Ile Ile Tyr Pro Gly Asp Ser Asp Thr Arg
65 70 75 80

Tyr Ser Pro Ser Phe Gln Gly Gln Val Thr Ile Ser Ala Asp Lys Ser
85 90 95

Ile Ser Thr Ala Tyr Leu Gln Trp Ser Ser Leu Lys Ala Ser Asp Thr
100 105 110

Ala Met Tyr Tyr Cys Ala Arg Leu Gly Gly Ser Leu Pro Asp Tyr Gly
115 120 125

Met Asp Val Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Ala Ser
130 135 140

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu

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145                 150                 155                 160

Ile Val Leu Thr Gln Ser Pro Leu Ser Leu Pro Val Thr Pro Gly Glu
                165                 170                 175

Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Leu His Ser Asn
            180                 185                 190

Gly Tyr Asn Tyr Leu Asp Trp Tyr Leu Gln Lys Pro Gly Gln Ser Pro
        195                 200                 205

Gln Leu Leu Ile Tyr Leu Gly Ser Asn Arg Ala Ser Gly Val Pro Asp
    210                 215                 220

Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile Ser
225                 230                 235                 240

Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln Ala Leu
                245                 250                 255

Gln Thr Leu Ile Thr Phe Gly Gln Gly Thr Lys Val Asp Ile Lys Thr
            260                 265                 270

Thr Thr Pro Ala Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser
        275                 280                 285

Gln Pro Leu Ser Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly
    290                 295                 300

Ala Val His Thr Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp
305                 310                 315                 320

Ala Pro Leu Ala Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile
                325                 330                 335

Thr Leu Tyr Cys Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys
            340                 345                 350

Gln Pro Phe Met Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys
        355                 360                 365
```

Ser Cys Arg Phe Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg Val
370 375 380

Lys Phe Ser Arg Ser Ala Asp Ala Pro Ala Tyr Lys Gln Gly Gln Asn
385 390 395 400

Gln Leu Tyr Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val
405 410 415

Leu Asp Lys Arg Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg
420 425 430

Arg Lys Asn Pro Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys
435 440 445

Met Ala Glu Ala Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg
450 455 460

Gly Lys Gly His Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys
465 470 475 480

Asp Thr Tyr Asp Ala Leu His Met Gln Ala Leu Pro Pro Arg
485 490

<210> 477
<211> 271
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 477
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val
20 25 30

Lys Lys Pro Gly Glu Ser Leu Lys Ile Ser Cys Lys Gly Ser Gly Tyr
35 40 45

```
Ser Phe Thr Ser Tyr Trp Ile Gly Trp Val Arg Gln Met Pro Gly Lys
    50                  55                  60

Gly Leu Glu Trp Met Gly Ile Ile Tyr Pro Gly Asp Ser Asp Thr Arg
65                  70                  75                  80

Tyr Ser Pro Ser Phe Gln Gly Gln Val Thr Ile Ser Ala Asp Lys Ser
                85                  90                  95

Ile Ser Thr Ala Tyr Leu Gln Trp Ser Ser Leu Lys Ala Ser Asp Thr
            100                 105                 110

Ala Met Tyr Tyr Cys Ala Arg Leu Gly Gly Ser Leu Pro Asp Tyr Gly
        115                 120                 125

Met Asp Val Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Ala Ser
    130                 135                 140

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu
145                 150                 155                 160

Ile Val Leu Thr Gln Ser Pro Leu Ser Leu Pro Val Thr Pro Gly Glu
                165                 170                 175

Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Leu His Ser Asn
            180                 185                 190

Gly Tyr Asn Tyr Leu Asp Trp Tyr Leu Gln Lys Pro Gly Gln Ser Pro
        195                 200                 205

Gln Leu Leu Ile Tyr Leu Gly Ser Asn Arg Ala Ser Gly Val Pro Asp
    210                 215                 220

Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile Ser
225                 230                 235                 240

Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln Ala Leu
                245                 250                 255
```

Gln Thr Leu Ile Thr Phe Gly Gln Gly Thr Lys Val Asp Ile Lys
260 265 270

<210> 478
<211> 121
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 478
Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Glu
1 5 10 15

Ser Leu Lys Ile Ser Cys Lys Gly Ser Gly Tyr Ser Phe Thr Ser Tyr
20 25 30

Trp Ile Gly Trp Val Arg Gln Met Pro Gly Lys Gly Leu Glu Trp Met
35 40 45

Gly Ile Ile Tyr Pro Gly Asp Ser Asp Thr Arg Tyr Ser Pro Ser Phe
50 55 60

Gln Gly Gln Val Thr Ile Ser Ala Asp Lys Ser Ile Ser Thr Ala Tyr
65 70 75 80

Leu Gln Trp Ser Ser Leu Lys Ala Ser Asp Thr Ala Met Tyr Tyr Cys
85 90 95

Ala Arg Leu Gly Gly Ser Leu Pro Asp Tyr Gly Met Asp Val Trp Gly
100 105 110

Gln Gly Thr Met Val Thr Val Ser Ser
115 120

<210> 479
<211> 112
<212> PRT
<213> Artificial Sequence

<220>
<221> source

<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 479
Glu Ile Val Leu Thr Gln Ser Pro Leu Ser Leu Pro Val Thr Pro Gly
1 5 10 15

Glu Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Leu 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 Leu Ile Thr Phe Gly Gln Gly Thr Lys Val Asp Ile Lys
100 105 110

<210> 480
<211> 1485
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 480
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

ccccaagtcc aactcgtcca atcaggagct gaagtcaaga agcctggagc atccgtgaga 120

gtgtcctgta aagcctccgg ctacatcttc accaactact acgtgcactg ggtcagacag 180

gccccgggcc agggactgga atggatggga atcatttccc cgtccggcgg atcgcctact 240

tacgcgcaac ggctgcaggg ccgcgtgacc atgactcggg atctctccac ttcaaccgtg 300

tacatggaac tgtccagcct tacatcggag gatactgccg tgtacttctg cgcgagggag 360

tcccggctga ggggcaaccg cctcgggctg cagtcaagca tcttcgatca ctggggccag 420

ggcaccctcg tgaccgtgtc cagcgcctcg gggggaggag gctccggggg cggaggttcg 480

ggcggtggtg gatctgacat tcgcatgact cagtccccac cttcactgtc cgctagcgtg 540

ggggaccgcg tgacgattcc gtgccaagcc agccaggaca tcaacaacca tctgaactgg 600

tatcagcaga agcccggaaa ggccccgcag ctgctgatct acgacacctc gaatctggag 660

atcggcgtgc catcccggtt ctccggttcg ggaagcggaa ccgactttac cctgactatc 720

tcctccttgc aacccgagga cattgccacc tactactgcc agcagtacga aaaccttccc 780

ctgaccttcg ggggtggaac caaagtggag atcaagacca ctaccccagc accgaggcca 840

cccaccccgg ctcctaccat cgcctcccag cctctgtccc tgcgtccgga ggcatgtaga 900

cccgcagctg gtggggccgt gcatacccgg ggtcttgact tcgcctgcga tatctacatt 960

tgggcccctc tggctggtac ttgcggggtc ctgctgcttt cactcgtgat cactctttac 1020

tgtaagcgcg gtcggaagaa gctgctgtac atctttaagc aacccttcat gaggcctgtg 1080

cagactactc aagaggagga cggctgttca tgccggttcc cagaggagga ggaaggcggc 1140

tgcgaactgc gcgtgaaatt cagccgcagc gcagatgctc cagcctacaa gcaggggcag 1200

aaccagctct acaacgaact caatcttggt cggagagagg agtacgacgt gctggacaag 1260

cggagaggac gggacccaga aatgggcggg aagccgcgca gaaagaatcc ccaagagggc 1320

ctgtacaacg agctccaaaa ggataagatg gcagaagcct atagcgagat tggtatgaaa 1380

ggggaacgca gaagaggcaa aggccacgac ggactgtacc agggactcag caccgccacc 1440

aaggacacct atgacgctct tcacatgcag gccctgccgc ctcgg 1485

<210> 481
<211> 495
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 481
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

```
His Ala Ala Arg Pro Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val
            20                  25                  30

Lys Lys Pro Gly Ala Ser Val Arg Val Ser Cys Lys Ala Ser Gly Tyr
        35                  40                  45

Ile Phe Thr Asn Tyr Tyr Val His Trp Val Arg Gln Ala Pro Gly Gln
    50                  55                  60

Gly Leu Glu Trp Met Gly Ile Ile Ser Pro Ser Gly Gly Ser Pro Thr
65                  70                  75                  80

Tyr Ala Gln Arg Leu Gln Gly Arg Val Thr Met Thr Arg Asp Leu Ser
                85                  90                  95

Thr Ser Thr Val Tyr Met Glu Leu Ser Ser Leu Thr Ser Glu Asp Thr
            100                 105                 110

Ala Val Tyr Phe Cys Ala Arg Glu Ser Arg Leu Arg Gly Asn Arg Leu
        115                 120                 125

Gly Leu Gln Ser Ser Ile Phe Asp His Trp Gly Gln Gly Thr Leu Val
    130                 135                 140

Thr Val Ser Ser Ala Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
145                 150                 155                 160

Gly Gly Gly Gly Ser Asp Ile Arg Met Thr Gln Ser Pro Pro Ser Leu
                165                 170                 175

Ser Ala Ser Val Gly Asp Arg Val Thr Ile Pro Cys Gln Ala Ser Gln
            180                 185                 190

Asp Ile Asn Asn His Leu Asn Trp Tyr Gln Gln Lys Pro Gly Lys Ala
        195                 200                 205

Pro Gln Leu Leu Ile Tyr Asp Thr Ser Asn Leu Glu Ile Gly Val Pro
    210                 215                 220

Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile
```

```
225                 230                 235                 240

Ser Ser Leu Gln Pro Glu Asp Ile Ala Thr Tyr Tyr Cys Gln Gln Tyr
                245                 250                 255

Glu Asn Leu Pro Leu Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
            260                 265                 270

Thr Thr Thr Pro Ala Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala
        275                 280                 285

Ser Gln Pro Leu Ser Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly
    290                 295                 300

Gly Ala Val His Thr Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile
305                 310                 315                 320

Trp Ala Pro Leu Ala Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val
                325                 330                 335

Ile Thr Leu Tyr Cys Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe
            340                 345                 350

Lys Gln Pro Phe Met Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly
        355                 360                 365

Cys Ser Cys Arg Phe Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg
    370                 375                 380

Val Lys Phe Ser Arg Ser Ala Asp Ala Pro Ala Tyr Lys Gln Gly Gln
385                 390                 395                 400

Asn Gln Leu Tyr Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp
                405                 410                 415

Val Leu Asp Lys Arg Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro
            420                 425                 430

Arg Arg Lys Asn Pro Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp
        435                 440                 445
```

Lys Met Ala Glu Ala Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg
450 455 460

Arg Gly Lys Gly His Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr
465 470 475 480

Lys Asp Thr Tyr Asp Ala Leu His Met Gln Ala Leu Pro Pro Arg
485 490 495

<210> 482
<211> 272
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 482
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val
20 25 30

Lys Lys Pro Gly Ala Ser Val Arg Val Ser Cys Lys Ala Ser Gly Tyr
35 40 45

Ile Phe Thr Asn Tyr Tyr Val His Trp Val Arg Gln Ala Pro Gly Gln
50 55 60

Gly Leu Glu Trp Met Gly Ile Ile Ser Pro Ser Gly Gly Ser Pro Thr
65 70 75 80

Tyr Ala Gln Arg Leu Gln Gly Arg Val Thr Met Thr Arg Asp Leu Ser
85 90 95

Thr Ser Thr Val Tyr Met Glu Leu Ser Ser Leu Thr Ser Glu Asp Thr
100 105 110

Ala Val Tyr Phe Cys Ala Arg Glu Ser Arg Leu Arg Gly Asn Arg Leu
115 120 125

```
Gly Leu Gln Ser Ser Ile Phe Asp His Trp Gly Gln Gly Thr Leu Val
    130                 135                 140


Thr Val Ser Ser Ala Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
145                 150                 155                 160


Gly Gly Gly Gly Ser Asp Ile Arg Met Thr Gln Ser Pro Pro Ser Leu
                165                 170                 175


Ser Ala Ser Val Gly Asp Arg Val Thr Ile Pro Cys Gln Ala Ser Gln
            180                 185                 190


Asp Ile Asn Asn His Leu Asn Trp Tyr Gln Gln Lys Pro Gly Lys Ala
        195                 200                 205


Pro Gln Leu Leu Ile Tyr Asp Thr Ser Asn Leu Glu Ile Gly Val Pro
    210                 215                 220


Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile
225                 230                 235                 240


Ser Ser Leu Gln Pro Glu Asp Ile Ala Thr Tyr Tyr Cys Gln Gln Tyr
                245                 250                 255


Glu Asn Leu Pro Leu Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
            260                 265                 270


<210> 483
<211> 127
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 483
Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
1               5                   10                  15


Ser Val Arg Val Ser Cys Lys Ala Ser Gly Tyr Ile Phe Thr Asn Tyr
```

```
            20                  25                  30

Tyr Val His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
        35                  40                  45

Gly Ile Ile Ser Pro Ser Gly Gly Ser Pro Thr Tyr Ala Gln Arg Leu
    50                  55                  60

Gln Gly Arg Val Thr Met Thr Arg Asp Leu Ser Thr Ser Thr Val Tyr
65                  70                  75                  80

Met Glu Leu Ser Ser Leu Thr Ser Glu Asp Thr Ala Val Tyr Phe Cys
                85                  90                  95

Ala Arg Glu Ser Arg Leu Arg Gly Asn Arg Leu Gly Leu Gln Ser Ser
            100                 105                 110

Ile Phe Asp His Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
        115                 120                 125


<210> 484
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 484
Asp Ile Arg Met Thr Gln Ser Pro Pro Ser Leu Ser Ala Ser Val Gly
1               5                   10                  15

Asp Arg Val Thr Ile Pro Cys Gln Ala Ser Gln Asp Ile Asn Asn His
            20                  25                  30

Leu Asn Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Gln Leu Leu Ile
        35                  40                  45

Tyr Asp Thr Ser Asn Leu Glu Ile 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 Ile Ala Thr Tyr Tyr Cys Gln Gln Tyr Glu Asn Leu Pro Leu
85 90 95

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

<210> 485
<211> 1479
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 485
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

ccccaagtgc aattggtgca gtcaggagga ggattggtgc aacccggagg atcgctgaga 120

ctgtcatgtg ctgccagcgg gttcacattc tcctcctacg caatgtcctg ggtccgccag 180

gcgccgggca aaggactgga atgggtgtcc gccatctcgg ggtcgggcgg ctccacctat 240

tacgctgact ccgtgaaggg acgcttcacc attagcagag ataactccaa gaacaccctc 300

tacctccaaa tgaacagcct tagggctgag gacaccgccg tctattactg cgccaaggag 360

gacacgatcc ggggacctaa ctactattac tacggaatgg atgtctgggg ccagggtacc 420

actgtgaccg tgtcctcggc ctcgggaggc ggaggatcag ggggtggtgg ctctgggggg 480

ggtggcagcg aaactactct gacccagtcc ccctcatccg tgtcagcgtc cgtgggcgat 540

cgggtgtcga tcacttgccg ggcctcccaa gacatcgaca cctggctcgc gtggtaccag 600

ctgaagccag gaaaggcccc taagctgctg atgtacgcag cctccaatct gcaaggaggg 660

gtgccctccc gcttttccgg gtccggcagc ggaaccgact tcattctgac tatctcgagc 720

ctccagccgg aggatttcgc cacctactac tgccagcagg cctccatctt cccgccgact 780

ttcggtggcg gaaccaaggt cgacattaag accactaccc cagcaccgag gccacccacc 840

ccggctccta ccatcgcctc ccagcctctg tccctgcgtc cggaggcatg tagacccgca 900

gctggtgggg ccgtgcatac ccggggtctt gacttcgcct gcgatatcta catttgggcc 960

cctctggctg gtacttgcgg ggtcctgctg ctttcactcg tgatcactct ttactgtaag 1020

cgcggtcgga agaagctgct gtacatcttt aagcaaccct tcatgaggcc tgtgcagact 1080

actcaagagg aggacggctg ttcatgccgg ttcccagagg aggaggaagg cggctgcgaa 1140

ctgcgcgtga aattcagccg cagcgcagat gctccagcct acaagcaggg gcagaaccag 1200

ctctacaacg aactcaatct tggtcggaga gaggagtacg acgtgctgga caagcggaga 1260

ggacgggacc cagaaatggg cgggaagccg cgcagaaaga atccccaaga gggcctgtac 1320

aacgagctcc aaaaggataa gatggcagaa gcctatagcg agattggtat gaaaggggaa 1380

cgcagaagag gcaaaggcca cgacggactg taccagggac tcagcaccgc caccaaggac 1440

acctatgacg ctcttcacat gcaggccctg ccgcctcgg 1479

<210> 486
<211> 493
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 486
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Gln Val Gln Leu Val Gln Ser Gly Gly Gly Leu
20 25 30

Val Gln Pro Gly Gly Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe
35 40 45

Thr Phe Ser Ser Tyr Ala Met Ser Trp Val Arg Gln Ala Pro Gly Lys
50 55 60

Gly Leu Glu Trp Val Ser Ala Ile Ser Gly Ser Gly Gly Ser Thr Tyr
65 70 75 80

Tyr Ala Asp Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser
85 90 95

```
Lys Asn Thr Leu Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr
            100                 105                 110

Ala Val Tyr Tyr Cys Ala Lys Glu Asp Thr Ile Arg Gly Pro Asn Tyr
        115                 120                 125

Tyr Tyr Tyr Gly Met Asp Val Trp Gly Gln Gly Thr Thr Val Thr Val
    130                 135                 140

Ser Ser Ala Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly
145                 150                 155                 160

Gly Gly Ser Glu Thr Thr Leu Thr Gln Ser Pro Ser Ser Val Ser Ala
                165                 170                 175

Ser Val Gly Asp Arg Val Ser Ile Thr Cys Arg Ala Ser Gln Asp Ile
            180                 185                 190

Asp Thr Trp Leu Ala Trp Tyr Gln Leu Lys Pro Gly Lys Ala Pro Lys
        195                 200                 205

Leu Leu Met Tyr Ala Ala Ser Asn Leu Gln Gly Gly Val Pro Ser Arg
    210                 215                 220

Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Ile Leu Thr Ile Ser Ser
225                 230                 235                 240

Leu Gln Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Ala Ser Ile
                245                 250                 255

Phe Pro Pro Thr Phe Gly Gly Gly Thr Lys Val Asp Ile Lys Thr Thr
            260                 265                 270

Thr Pro Ala Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln
        275                 280                 285

Pro Leu Ser Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala
    290                 295                 300

Val His Thr Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala
```

305 310 315 320

Pro Leu Ala Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr
325 330 335

Leu Tyr Cys Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln
340 345 350

Pro Phe Met Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser
355 360 365

Cys Arg Phe Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg Val Lys
370 375 380

Phe Ser Arg Ser Ala Asp Ala Pro Ala Tyr Lys Gln Gly Gln Asn Gln
385 390 395 400

Leu Tyr Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu
405 410 415

Asp Lys Arg Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg
420 425 430

Lys Asn Pro Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met
435 440 445

Ala Glu Ala Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly
450 455 460

Lys Gly His Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp
465 470 475 480

Thr Tyr Asp Ala Leu His Met Gln Ala Leu Pro Pro Arg
485 490

<210> 487
<211> 270
<212> PRT
<213> Artificial Sequence

<220>
<221> source

<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 487
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Gln Val Gln Leu Val Gln Ser Gly Gly Gly Leu
20 25 30

Val Gln Pro Gly Gly Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe
35 40 45

Thr Phe Ser Ser Tyr Ala Met Ser Trp Val Arg Gln Ala Pro Gly Lys
50 55 60

Gly Leu Glu Trp Val Ser Ala Ile Ser Gly Ser Gly Gly Ser Thr Tyr
65 70 75 80

Tyr Ala Asp Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser
85 90 95

Lys Asn Thr Leu Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr
100 105 110

Ala Val Tyr Tyr Cys Ala Lys Glu Asp Thr Ile Arg Gly Pro Asn Tyr
115 120 125

Tyr Tyr Tyr Gly Met Asp Val Trp Gly Gln Gly Thr Thr Val Thr Val
130 135 140

Ser Ser Ala Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly
145 150 155 160

Gly Gly Ser Glu Thr Thr Leu Thr Gln Ser Pro Ser Ser Val Ser Ala
165 170 175

Ser Val Gly Asp Arg Val Ser Ile Thr Cys Arg Ala Ser Gln Asp Ile
180 185 190

Asp Thr Trp Leu Ala Trp Tyr Gln Leu Lys Pro Gly Lys Ala Pro Lys
195 200 205

```
Leu Leu Met Tyr Ala Ala Ser Asn Leu Gln Gly Gly Val Pro Ser Arg
    210                 215                 220

Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Ile Leu Thr Ile Ser Ser
225                 230                 235                 240

Leu Gln Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Ala Ser Ile
                245                 250                 255

Phe Pro Pro Thr Phe Gly Gly Gly Thr Lys Val Asp Ile Lys
            260                 265                 270
```

<210> 488
<211> 125
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 488

```
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 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 Ser Gly Gly Ser Thr Tyr Tyr Ala Asp Ser Val
    50                  55                  60

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
65                  70                  75                  80

Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
                85                  90                  95

Ala Lys Glu Asp Thr Ile Arg Gly Pro Asn Tyr Tyr Tyr Tyr Gly Met
```

100 105 110

Asp Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser
115 120 125

<210> 489
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 489
Glu Thr Thr Leu Thr Gln Ser Pro Ser Ser Val Ser Ala Ser Val Gly
1 5 10 15

Asp Arg Val Ser Ile Thr Cys Arg Ala Ser Gln Asp Ile Asp Thr Trp
20 25 30

Leu Ala Trp Tyr Gln Leu Lys Pro Gly Lys Ala Pro Lys Leu Leu Met
35 40 45

Tyr Ala Ala Ser Asn Leu Gln Gly Gly Val Pro Ser Arg Phe Ser Gly
50 55 60

Ser Gly Ser Gly Thr Asp Phe Ile Leu Thr Ile Ser Ser Leu Gln Pro
65 70 75 80

Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Ala Ser Ile Phe Pro Pro
85 90 95

Thr Phe Gly Gly Gly Thr Lys Val Asp Ile Lys
100 105

<210> 490
<211> 1482
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic

polynucleotide"

<400> 490
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

ccccaagtgc agctcgtcca atccggtgca gaagtgaaga agcctggcga atccctgaag 120

atctcatgca aaggctcggg atacagcttc acctcatatt ggattggatg ggtcagacag 180

atgccaggaa agggtctgga gtggatggga atcatctacc cgggagacag cgatacccgg 240

tactccccga gcttccaggg acaggtcacc atctcggccg acaagtccat tactactgcc 300

tacttgcaat ggtcctcgct gcgcgcctcc gatagcgcca tgtactactg cgcgagaggc 360

ggctactccg actacgacta ctacttcgat ttctggggac aggggacact cgtgactgtg 420

tcctccgcgt cgggtggcgg cggctcgggt ggaggaggaa gcggaggggg aggctccgaa 480

attgtgatga cccagtcacc cctgtcgctc cctgtgactc ctggggaacc ggcctccatc 540

tcctgccgga gctcacagag cctgctgcac tccaacggat acaactacct cgattggtac 600

cttcagaagc ccggccagtc gccccagctg ctgatctacc tggggtccaa ccgggctagc 660

ggcgtgccgg accgcttctc cggttccggg tctggaaccg acttcacgct gaaaatctcc 720

agggtggagg ccgaggacgt gggagtgtat tactgtatgc aggccctgca aacccccttc 780

acctttggcg ggggcaccaa ggtcgagatt aagaccacta ccccagcacc gaggccaccc 840

accccggctc ctaccatcgc ctcccagcct ctgtccctgc gtccggaggc atgtagaccc 900

gcagctggtg gggccgtgca tacccggggt cttgacttcg cctgcgatat ctacatttgg 960

gcccctctgg ctggtacttg cggggtcctg ctgctttcac tcgtgatcac tctttactgt 1020

aagcgcggtc ggaagaagct gctgtacatc tttaagcaac ccttcatgag gcctgtgcag 1080

actactcaag aggaggacgg ctgttcatgc cggttcccag aggaggagga aggcggctgc 1140

gaactgcgcg tgaaattcag ccgcagcgca gatgctccag cctacaagca ggggcagaac 1200

cagctctaca acgaactcaa tcttggtcgg agagaggagt acgacgtgct ggacaagcgg 1260

agaggacggg acccagaaat gggcgggaag ccgcgcagaa agaatcccca agagggcctg 1320

tacaacgagc tccaaaagga taagatggca gaagcctata gcgagattgg tatgaaaggg 1380

gaacgcagaa gaggcaaagg ccacgacgga ctgtaccagg gactcagcac cgccaccaag 1440

gacacctatg acgctcttca catgcaggcc ctgccgcctc gg 1482

<210> 491
<211> 494
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 491
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val
20 25 30

Lys Lys Pro Gly Glu Ser Leu Lys Ile Ser Cys Lys Gly Ser Gly Tyr
35 40 45

Ser Phe Thr Ser Tyr Trp Ile Gly Trp Val Arg Gln Met Pro Gly Lys
50 55 60

Gly Leu Glu Trp Met Gly Ile Ile Tyr Pro Gly Asp Ser Asp Thr Arg
65 70 75 80

Tyr Ser Pro Ser Phe Gln Gly Gln Val Thr Ile Ser Ala Asp Lys Ser
85 90 95

Ile Thr Thr Ala Tyr Leu Gln Trp Ser Ser Leu Arg Ala Ser Asp Ser
100 105 110

Ala Met Tyr Tyr Cys Ala Arg Gly Gly Tyr Ser Asp Tyr Asp Tyr Tyr
115 120 125

Phe Asp Phe Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Ala Ser
130 135 140

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu
145 150 155 160

Ile Val Met Thr Gln Ser Pro Leu Ser Leu Pro Val Thr Pro Gly Glu
165 170 175

```
Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Leu His Ser Asn
            180                 185                 190

Gly Tyr Asn Tyr Leu Asp Trp Tyr Leu Gln Lys Pro Gly Gln Ser Pro
        195                 200                 205

Gln Leu Leu Ile Tyr Leu Gly Ser Asn Arg Ala Ser Gly Val Pro Asp
    210                 215                 220

Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile Ser
225                 230                 235                 240

Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln Ala Leu
                245                 250                 255

Gln Thr Pro Phe Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Thr
            260                 265                 270

Thr Thr Pro Ala Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser
        275                 280                 285

Gln Pro Leu Ser Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly
    290                 295                 300

Ala Val His Thr Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp
305                 310                 315                 320

Ala Pro Leu Ala Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile
                325                 330                 335

Thr Leu Tyr Cys Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys
            340                 345                 350

Gln Pro Phe Met Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys
        355                 360                 365

Ser Cys Arg Phe Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg Val
    370                 375                 380

Lys Phe Ser Arg Ser Ala Asp Ala Pro Ala Tyr Lys Gln Gly Gln Asn
```

385 390 395 400

Gln Leu Tyr Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val
405 410 415

Leu Asp Lys Arg Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg
420 425 430

Arg Lys Asn Pro Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys
435 440 445

Met Ala Glu Ala Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg
450 455 460

Gly Lys Gly His Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys
465 470 475 480

Asp Thr Tyr Asp Ala Leu His Met Gln Ala Leu Pro Pro Arg
485 490

<210> 492
<211> 271
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 492
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val
20 25 30

Lys Lys Pro Gly Glu Ser Leu Lys Ile Ser Cys Lys Gly Ser Gly Tyr
35 40 45

Ser Phe Thr Ser Tyr Trp Ile Gly Trp Val Arg Gln Met Pro Gly Lys
50 55 60

```
Gly Leu Glu Trp Met Gly Ile Ile Tyr Pro Gly Asp Ser Asp Thr Arg
65                  70                  75                  80

Tyr Ser Pro Ser Phe Gln Gly Gln Val Thr Ile Ser Ala Asp Lys Ser
                85                  90                  95

Ile Thr Thr Ala Tyr Leu Gln Trp Ser Ser Leu Arg Ala Ser Asp Ser
            100                 105                 110

Ala Met Tyr Tyr Cys Ala Arg Gly Gly Tyr Ser Asp Tyr Asp Tyr Tyr
        115                 120                 125

Phe Asp Phe Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Ala Ser
    130                 135                 140

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu
145                 150                 155                 160

Ile Val Met Thr Gln Ser Pro Leu Ser Leu Pro Val Thr Pro Gly Glu
                165                 170                 175

Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Leu His Ser Asn
            180                 185                 190

Gly Tyr Asn Tyr Leu Asp Trp Tyr Leu Gln Lys Pro Gly Gln Ser Pro
        195                 200                 205

Gln Leu Leu Ile Tyr Leu Gly Ser Asn Arg Ala Ser Gly Val Pro Asp
    210                 215                 220

Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile Ser
225                 230                 235                 240

Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln Ala Leu
                245                 250                 255

Gln Thr Pro Phe Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
            260                 265                 270

<210> 493
<211> 121
```

<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 493
Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Glu
1 5 10 15

Ser Leu Lys Ile Ser Cys Lys Gly Ser Gly Tyr Ser Phe Thr Ser Tyr
20 25 30

Trp Ile Gly Trp Val Arg Gln Met Pro Gly Lys Gly Leu Glu Trp Met
35 40 45

Gly Ile Ile Tyr Pro Gly Asp Ser Asp Thr Arg Tyr Ser Pro Ser Phe
50 55 60

Gln Gly Gln Val Thr Ile Ser Ala Asp Lys Ser Ile Thr Thr Ala Tyr
65 70 75 80

Leu Gln Trp Ser Ser Leu Arg Ala Ser Asp Ser Ala Met Tyr Tyr Cys
85 90 95

Ala Arg Gly Gly Tyr Ser Asp Tyr Asp Tyr Tyr Phe Asp Phe Trp Gly
100 105 110

Gln Gly Thr Leu Val Thr Val Ser Ser
115 120

<210> 494
<211> 112
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 494
Glu Ile Val Met Thr Gln Ser Pro Leu Ser Leu Pro Val Thr Pro Gly
1 5 10 15

```
Glu Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Leu His Ser
            20                  25                  30

Asn Gly Tyr Asn Tyr Leu Asp Trp Tyr Leu Gln Lys Pro Gly Gln Ser
        35                  40                  45

Pro Gln Leu Leu Ile Tyr Leu Gly Ser Asn Arg Ala Ser Gly Val Pro
    50                  55                  60

Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile
65                  70                  75                  80

Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln Ala
                85                  90                  95

Leu Gln Thr Pro Phe Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
            100                 105                 110
```

<210> 495
<211> 1452
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 495
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

ccccaagtgc aactcgtcca aagcggtgga gatctcgccc agcccggaag atcccttaga 120

ctctcatgtg ccgccagcgg gttcaccttc gacgactacg ctatgcattg ggtgcgccag 180

gccccgggga agggactgga atgggtggcc gtgatttggc cggacggcgg acagaagtac 240

tacggagaca gcgtgaaagg gcggttcacc gtgtcgaggg acaacccgaa gaataccctc 300

taccttcaaa tgaactccct gcgcgccgag gacaccgcga tctactactg cgtgcgccac 360

tttaacgcat gggattactg gggacagggg actctggtca ctgtgtcctc cgcctctggc 420

ggcggaggtt ccggcggtgg tggctccggt ggaggaggat cggacatcca gctgacccag 480

tccccttcct cactgtcggc gtacgtggga ggccgggtca ctatcacgtg ccaggcatcc 540

cagggcattt cccagttcct gaactggttc cagcagaagc ccggaaaggc ccctaagctg 600

ttgatttccg atgctagcaa cctggaaccc ggcgtgccgt cacggttcag cggctccggg 660

tcgggcaccg acttcacctt caccatcact aacctccaac cggaggacat cgccacctat 720

tactgccagc agtacgatga tctgccactg actttcggcg gcggaaccaa ggtcgaaatc 780

aagaccacta ccccagcacc gaggccaccc accccggctc ctaccatcgc ctcccagcct 840

ctgtccctgc gtccggaggc atgtagaccc gcagctggtg gggccgtgca tacccggggt 900

cttgacttcg cctgcgatat ctacatttgg gcccctctgg ctggtacttg cggggtcctg 960

ctgctttcac tcgtgatcac tctttactgt aagcgcggtc ggaagaagct gctgtacatc 1020

tttaagcaac ccttcatgag gcctgtgcag actactcaag aggaggacgg ctgttcatgc 1080

cggttcccag aggaggagga aggcggctgc gaactgcgcg tgaaattcag ccgcagcgca 1140

gatgctccag cctacaagca ggggcagaac cagctctaca acgaactcaa tcttggtcgg 1200

agagaggagt acgacgtgct ggacaagcgg agaggacggg acccagaaat gggcgggaag 1260

ccgcgcagaa agaatcccca agagggcctg tacaacgagc tccaaaagga taagatggca 1320

gaagcctata gcgagattgg tatgaaaggg gaacgcagaa gaggcaaagg ccacgacgga 1380

ctgtaccagg gactcagcac cgccaccaag gacacctatg acgctcttca catgcaggcc 1440

ctgccgcctc gg 1452

<210> 496
<211> 484
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 496
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Gln Val Gln Leu Val Gln Ser Gly Gly Asp Leu
20 25 30

Ala Gln Pro Gly Arg Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe

```
        35                  40                  45

Thr Phe Asp Asp Tyr Ala Met His Trp Val Arg Gln Ala Pro Gly Lys
    50                  55                  60

Gly Leu Glu Trp Val Ala Val Ile Trp Pro Asp Gly Gly Gln Lys Tyr
65                  70                  75                  80

Tyr Gly Asp Ser Val Lys Gly Arg Phe Thr Val Ser Arg Asp Asn Pro
                85                  90                  95

Lys Asn Thr Leu Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr
            100                 105                 110

Ala Ile Tyr Tyr Cys Val Arg His Phe Asn Ala Trp Asp Tyr Trp Gly
        115                 120                 125

Gln Gly Thr Leu Val Thr Val Ser Ser Ala Ser Gly Gly Gly Gly Ser
    130                 135                 140

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Gln Leu Thr Gln
145                 150                 155                 160

Ser Pro Ser Ser Leu Ser Ala Tyr Val Gly Gly Arg Val Thr Ile Thr
                165                 170                 175

Cys Gln Ala Ser Gln Gly Ile Ser Gln Phe Leu Asn Trp Phe Gln Gln
            180                 185                 190

Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile Ser Asp Ala Ser Asn Leu
        195                 200                 205

Glu Pro Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp
    210                 215                 220

Phe Thr Phe Thr Ile Thr Asn Leu Gln Pro Glu Asp Ile Ala Thr Tyr
225                 230                 235                 240

Tyr Cys Gln Gln Tyr Asp Asp Leu Pro Leu Thr Phe Gly Gly Gly Thr
                245                 250                 255
```

```
Lys Val Glu Ile Lys Thr Thr Thr Pro Ala Pro Arg Pro Pro Thr Pro
            260                 265                 270

Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser Leu Arg Pro Glu Ala Cys
        275                 280                 285

Arg Pro Ala Ala Gly Gly Ala Val His Thr Arg Gly Leu Asp Phe Ala
    290                 295                 300

Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly Val Leu
305                 310                 315                 320

Leu Leu Ser Leu Val Ile Thr Leu Tyr Cys Lys Arg Gly Arg Lys Lys
                325                 330                 335

Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met Arg Pro Val Gln Thr Thr
            340                 345                 350

Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu Glu Glu Glu Gly
        355                 360                 365

Gly Cys Glu Leu Arg Val Lys Phe Ser Arg Ser Ala Asp Ala Pro Ala
    370                 375                 380

Tyr Lys Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn Leu Gly Arg
385                 390                 395                 400

Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg Asp Pro Glu
                405                 410                 415

Met Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu Tyr Asn
            420                 425                 430

Glu Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile Gly Met
        435                 440                 445

Lys Gly Glu Arg Arg Arg Gly Lys Gly His Asp Gly Leu Tyr Gln Gly
    450                 455                 460

Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu His Met Gln Ala
```

465 470 475 480

Leu Pro Pro Arg

<210> 497
<211> 261
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 497
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Gln Val Gln Leu Val Gln Ser Gly Gly Asp Leu
20 25 30

Ala Gln Pro Gly Arg Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe
35 40 45

Thr Phe Asp Asp Tyr Ala Met His Trp Val Arg Gln Ala Pro Gly Lys
50 55 60

Gly Leu Glu Trp Val Ala Val Ile Trp Pro Asp Gly Gly Gln Lys Tyr
65 70 75 80

Tyr Gly Asp Ser Val Lys Gly Arg Phe Thr Val Ser Arg Asp Asn Pro
85 90 95

Lys Asn Thr Leu Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr
100 105 110

Ala Ile Tyr Tyr Cys Val Arg His Phe Asn Ala Trp Asp Tyr Trp Gly
115 120 125

Gln Gly Thr Leu Val Thr Val Ser Ser Ala Ser Gly Gly Gly Gly Ser
130 135 140

```
Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Gln Leu Thr Gln
145                 150                 155                 160


Ser Pro Ser Ser Leu Ser Ala Tyr Val Gly Gly Arg Val Thr Ile Thr
                165                 170                 175


Cys Gln Ala Ser Gln Gly Ile Ser Gln Phe Leu Asn Trp Phe Gln Gln
            180                 185                 190


Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile Ser Asp Ala Ser Asn Leu
        195                 200                 205


Glu Pro Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp
    210                 215                 220


Phe Thr Phe Thr Ile Thr Asn Leu Gln Pro Glu Asp Ile Ala Thr Tyr
225                 230                 235                 240


Tyr Cys Gln Gln Tyr Asp Asp Leu Pro Leu Thr Phe Gly Gly Gly Thr
                245                 250                 255


Lys Val Glu Ile Lys
            260


<210> 498
<211> 116
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 498
Gln Val Gln Leu Val Gln Ser Gly Gly Asp Leu Ala 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
```

```
Ala Val Ile Trp Pro Asp Gly Gly Gln Lys Tyr Tyr Gly Asp Ser Val
    50                  55                  60

Lys Gly Arg Phe Thr Val Ser Arg Asp Asn Pro Lys Asn Thr Leu Tyr
65                  70                  75                  80

Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Ile Tyr Tyr Cys
                85                  90                  95

Val Arg His Phe Asn Ala Trp Asp Tyr Trp Gly Gln Gly Thr Leu Val
            100                 105                 110

Thr Val Ser Ser
        115
```

<210> 499
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 499

```
Asp Ile Gln Leu Thr Gln Ser Pro Ser Ser Leu Ser Ala Tyr Val Gly
1               5                   10                  15

Gly Arg Val Thr Ile Thr Cys Gln Ala Ser Gln Gly Ile Ser Gln Phe
            20                  25                  30

Leu Asn Trp Phe Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
        35                  40                  45

Ser Asp Ala Ser Asn Leu Glu Pro Gly Val Pro Ser Arg Phe Ser Gly
    50                  55                  60

Ser Gly Ser Gly Thr Asp Phe Thr Phe Thr Ile Thr Asn Leu Gln Pro
65                  70                  75                  80

Glu Asp Ile Ala Thr Tyr Tyr Cys Gln Gln Tyr Asp Asp Leu Pro Leu
                85                  90                  95
```

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

<210> 500
<211> 1476
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 500
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

ccccaagtgc aactcgtcca atccggtggt ggtgtcgtgc aaccaggaaa gtctcttcgc 120

ctctcatgcg ctgccagcgg attcacgttt tccatcttcg ctatgcactg ggtgcggcag 180

gccccgggaa agggactgga atgggtggca accatttcat acgatggatc aaacgcgttc 240

tacgccgact ccgtggaagg aaggttcacc atctcgagag acaactccaa ggactcgctg 300

tatctgcaaa tggactccct gcgccctgag gataccgccg tctactactg cgtgaaggcc 360

ggcgacgggg gatacgacgt gttcgattcg tggggccagg gaactctggt caccgtgtcc 420

agcgcgagcg ggggaggcgg atcgggtggt ggagggtccg ggggaggagg ctccgagatc 480

gtgatgactc agtcgccgct ctccctcccc gtgaccccg gagagccagc tagcatttca 540

tgtcggagct cccagtccct gctgcactcc aacggctaca attacctgga ttggtacttg 600

cagaagcctg ggcagagccc tcagctgctg atctacctcg gctcgaacag agcctccggc 660

gtgccggacc ggttttccgg gagcggcagc ggcaccgatt tcaccttgaa aatctcccgc 720

gtggaagccg aggacgtggg cgtgtactat tgcatgcagg ccctgcagac tcccaccttc 780

ggcccgggaa ctaaggtcga catcaagacc actaccccag caccgaggcc acccaccccg 840

gctcctacca tcgcctccca gcctctgtcc ctgcgtccgg aggcatgtag acccgcagct 900

ggtggggccg tgcatacccg gggtcttgac ttcgcctgcg atatctacat ttgggccct 960

ctggctggta cttgcggggt cctgctgctt tcactcgtga tcactcttta ctgtaagcgc 1020

ggtcggaaga agctgctgta catctttaag caacccttca tgaggcctgt gcagactact 1080

caagaggagg acggctgttc atgccggttc ccagaggagg aggaaggcgg ctgcgaactg 1140

cgcgtgaaat tcagccgcag cgcagatgct ccagcctaca agcaggggca gaaccagctc 1200

tacaacgaac tcaatcttgg tcggagagag gagtacgacg tgctggacaa gcggagagga 1260

cgggacccag aaatgggcgg gaagccgcgc agaaagaatc cccaagaggg cctgtacaac 1320

gagctccaaa aggataagat ggcagaagcc tatagcgaga ttggtatgaa aggggaacgc 1380

agaagaggca aaggccacga cggactgtac cagggactca gcaccgccac caaggacacc 1440

tatgacgctc ttcacatgca ggccctgccg cctcgg 1476

<210> 501
<211> 492
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 501
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Gln Val Gln Leu Val Gln Ser Gly Gly Gly Val
20 25 30

Val Gln Pro Gly Lys Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe
35 40 45

Thr Phe Ser Ile Phe Ala Met His Trp Val Arg Gln Ala Pro Gly Lys
50 55 60

Gly Leu Glu Trp Val Ala Thr Ile Ser Tyr Asp Gly Ser Asn Ala Phe
65 70 75 80

Tyr Ala Asp Ser Val Glu Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser
85 90 95

Lys Asp Ser Leu Tyr Leu Gln Met Asp Ser Leu Arg Pro Glu Asp Thr
100 105 110

Ala Val Tyr Tyr Cys Val Lys Ala Gly Asp Gly Gly Tyr Asp Val Phe

```
        115                 120                 125

Asp Ser Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Ala Ser Gly
    130                 135                 140

Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Ile
145                 150                 155                 160

Val Met Thr Gln Ser Pro Leu Ser Leu Pro Val Thr Pro Gly Glu Pro
                165                 170                 175

Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Leu His Ser Asn Gly
            180                 185                 190

Tyr Asn Tyr Leu Asp Trp Tyr Leu Gln Lys Pro Gly Gln Ser Pro Gln
        195                 200                 205

Leu Leu Ile Tyr Leu Gly Ser Asn Arg Ala Ser Gly Val Pro Asp Arg
    210                 215                 220

Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile Ser Arg
225                 230                 235                 240

Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln Ala Leu Gln
                245                 250                 255

Thr Pro Thr Phe Gly Pro Gly Thr Lys Val Asp Ile Lys Thr Thr Thr
            260                 265                 270

Pro Ala Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro
        275                 280                 285

Leu Ser Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala Val
    290                 295                 300

His Thr Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro
305                 310                 315                 320

Leu Ala Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr Leu
                325                 330                 335
```

```
Tyr Cys Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro
            340                 345                 350

Phe Met Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys
        355                 360                 365

Arg Phe Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg Val Lys Phe
    370                 375                 380

Ser Arg Ser Ala Asp Ala Pro Ala Tyr Lys Gln Gly Gln Asn Gln Leu
385                 390                 395                 400

Tyr Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp
                405                 410                 415

Lys Arg Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys
            420                 425                 430

Asn Pro Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala
        435                 440                 445

Glu Ala Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys
    450                 455                 460

Gly His Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr
465                 470                 475                 480

Tyr Asp Ala Leu His Met Gln Ala Leu Pro Pro Arg
                485                 490


<210> 502
<211> 269
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 502
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1               5                   10                  15
```

```
His Ala Ala Arg Pro Gln Val Gln Leu Val Gln Ser Gly Gly Gly Val
            20                  25                  30

Val Gln Pro Gly Lys Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe
        35                  40                  45

Thr Phe Ser Ile Phe Ala Met His Trp Val Arg Gln Ala Pro Gly Lys
    50                  55                  60

Gly Leu Glu Trp Val Ala Thr Ile Ser Tyr Asp Gly Ser Asn Ala Phe
65                  70                  75                  80

Tyr Ala Asp Ser Val Glu Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser
                85                  90                  95

Lys Asp Ser Leu Tyr Leu Gln Met Asp Ser Leu Arg Pro Glu Asp Thr
            100                 105                 110

Ala Val Tyr Tyr Cys Val Lys Ala Gly Asp Gly Gly Tyr Asp Val Phe
        115                 120                 125

Asp Ser Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Ala Ser Gly
    130                 135                 140

Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Ile
145                 150                 155                 160

Val Met Thr Gln Ser Pro Leu Ser Leu Pro Val Thr Pro Gly Glu Pro
                165                 170                 175

Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Leu His Ser Asn Gly
            180                 185                 190

Tyr Asn Tyr Leu Asp Trp Tyr Leu Gln Lys Pro Gly Gln Ser Pro Gln
        195                 200                 205

Leu Leu Ile Tyr Leu Gly Ser Asn Arg Ala Ser Gly Val Pro Asp Arg
    210                 215                 220
```

```
Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile Ser Arg
225                 230                 235                 240


Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln Ala Leu Gln
                245                 250                 255


Thr Pro Thr Phe Gly Pro Gly Thr Lys Val Asp Ile Lys
            260                 265


<210> 503
<211> 120
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 503
Gln Val Gln Leu Val Gln Ser Gly Gly Gly Val Val Gln Pro Gly Lys
1               5                   10                  15


Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ile Phe
            20                  25                  30


Ala Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35                  40                  45


Ala Thr Ile Ser Tyr Asp Gly Ser Asn Ala Phe Tyr Ala Asp Ser Val
    50                  55                  60


Glu Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asp Ser Leu Tyr
65                  70                  75                  80


Leu Gln Met Asp Ser Leu Arg Pro Glu Asp Thr Ala Val Tyr Tyr Cys
                85                  90                  95


Val Lys Ala Gly Asp Gly Gly Tyr Asp Val Phe Asp Ser Trp Gly Gln
            100                 105                 110


Gly Thr Leu Val Thr Val Ser Ser
        115                 120
```

<210> 504
<211> 111
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 504
Glu Ile Val Met Thr Gln Ser Pro Leu Ser Leu Pro Val Thr Pro Gly
1 5 10 15

Glu Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Leu His Ser
20 25 30

Asn Gly Tyr Asn Tyr Leu Asp Trp Tyr Leu Gln Lys Pro Gly Gln Ser
35 40 45

Pro Gln Leu Leu Ile Tyr Leu Gly Ser Asn Arg Ala Ser Gly Val Pro
50 55 60

Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile
65 70 75 80

Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln Ala
85 90 95

Leu Gln Thr Pro Thr Phe Gly Pro Gly Thr Lys Val Asp Ile Lys
100 105 110

<210> 505
<211> 1467
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 505
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

cccgaagtgc aattggtgga atctggagga ggattggtgc aacctggagg atctctgaga 120

ctgtcatgtg ccgccagcgg cttcacattt tcctcctacg cgatgtcatg ggtccgccag 180

gcaccgggga aaggactgga atgggtgtcc gccatttcgg gatcgggagg ctcgacctac 240

tacgccgaca gcgtgaaggg aagattcact atctcccggg ataactccaa gaatactctg 300

tatctccaaa tgaactccct gagggccgag gatactgccg tgtactactg cgctaaggaa 360

accgactact acggctcagg aaccttcgac tactggggcc agggcaccct cgtgaccgtg 420

tcctcggcct ccggcggcgg aggttcgggg gggggcggtt ccgggggagg gggcagcgac 480

atccagatga cccagtcccc aagctccctt tccgcgtccg tgggagatcg cgtgaccatt 540

tcgtgccggg ctagccaggg catcggtatc tatcttgcgt ggtaccagca gcggagcgga 600

aagccgcccc agctgctgat ccacggcgcc tcaactctgc aatccggggt ccccagccgg 660

ttcagcggta gcgggtcggg taccgacttt accctgacta tctcctccct ccaaccggag 720

gacttcgcct cctactggtg ccagcagtcc aacaacttcc ctcccacctt cggccaggga 780

acgaaggtcg agattaagac cactacccca gcaccgaggc cacccacccc ggctcctacc 840

atcgcctccc agcctctgtc cctgcgtccg gaggcatgta gacccgcagc tggtggggcc 900

gtgcataccc ggggtcttga cttcgcctgc gatatctaca tttgggcccc tctggctggt 960

acttgcgggg tcctgctgct ttcactcgtg atcactcttt actgtaagcg cggtcggaag 1020

aagctgctgt acatctttaa gcaacccttc atgaggcctg tgcagactac tcaagaggag 1080

gacggctgtt catgccggtt cccagaggag gaggaaggcg gctgcgaact gcgcgtgaaa 1140

ttcagccgca gcgcagatgc tccagcctac aagcaggggc agaaccagct ctacaacgaa 1200

ctcaatcttg gtcggagaga ggagtacgac gtgctggaca agcggagagg acgggaccca 1260

gaaatgggcg ggaagccgcg cagaaagaat ccccaagagg gcctgtacaa cgagctccaa 1320

aaggataaga tggcagaagc ctatagcgag attggtatga aaggggaacg cagaagaggc 1380

aaaggccacg acggactgta ccagggactc agcaccgcca ccaaggacac ctatgacgct 1440

cttcacatgc aggccctgcc gcctcgg 1467

<210> 506
<211> 489
<212> PRT
<213> Artificial Sequence

<220>

<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 506
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu
20 25 30

Val Gln Pro Gly Gly Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe
35 40 45

Thr Phe Ser Ser Tyr Ala Met Ser Trp Val Arg Gln Ala Pro Gly Lys
50 55 60

Gly Leu Glu Trp Val Ser Ala Ile Ser Gly Ser Gly Gly Ser Thr Tyr
65 70 75 80

Tyr Ala Asp Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser
85 90 95

Lys Asn Thr Leu Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr
100 105 110

Ala Val Tyr Tyr Cys Ala Lys Glu Thr Asp Tyr Tyr Gly Ser Gly Thr
115 120 125

Phe Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Ala Ser
130 135 140

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp
145 150 155 160

Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly Asp
165 170 175

Arg Val Thr Ile Ser Cys Arg Ala Ser Gln Gly Ile Gly Ile Tyr Leu
180 185 190

Ala Trp Tyr Gln Gln Arg Ser Gly Lys Pro Pro Gln Leu Leu Ile His

```
        195                 200                 205

Gly Ala Ser Thr Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly Ser
    210                 215                 220

Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro Glu
225                 230                 235                 240

Asp Phe Ala Ser Tyr Trp Cys Gln Gln Ser Asn Asn Phe Pro Pro Thr
                245                 250                 255

Phe Gly Gln Gly Thr Lys Val Glu Ile Lys Thr Thr Thr Pro Ala Pro
            260                 265                 270

Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser Leu
        275                 280                 285

Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr Arg
    290                 295                 300

Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala Gly
305                 310                 315                 320

Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr Cys Lys
                325                 330                 335

Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met Arg
            340                 345                 350

Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro
        355                 360                 365

Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg Ser
    370                 375                 380

Ala Asp Ala Pro Ala Tyr Lys Gln Gly Gln Asn Gln Leu Tyr Asn Glu
385                 390                 395                 400

Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg
                405                 410                 415
```

```
Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln
            420                 425                 430

Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr
        435                 440                 445

Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His Asp
    450                 455                 460

Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala
465                 470                 475                 480

Leu His Met Gln Ala Leu Pro Pro Arg
                485
```

<210> 507
<211> 266
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 507

```
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1               5                   10                  15

His Ala Ala Arg Pro Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu
            20                  25                  30

Val Gln Pro Gly Gly Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe
        35                  40                  45

Thr Phe Ser Ser Tyr Ala Met Ser Trp Val Arg Gln Ala Pro Gly Lys
    50                  55                  60

Gly Leu Glu Trp Val Ser Ala Ile Ser Gly Ser Gly Gly Ser Thr Tyr
65                  70                  75                  80

Tyr Ala Asp Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser
                85                  90                  95
```

```
Lys Asn Thr Leu Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr
            100                 105                 110


Ala Val Tyr Tyr Cys Ala Lys Glu Thr Asp Tyr Tyr Gly Ser Gly Thr
        115                 120                 125


Phe Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Ala Ser
    130                 135                 140


Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp
145                 150                 155                 160


Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly Asp
                165                 170                 175


Arg Val Thr Ile Ser Cys Arg Ala Ser Gln Gly Ile Gly Ile Tyr Leu
            180                 185                 190


Ala Trp Tyr Gln Gln Arg Ser Gly Lys Pro Pro Gln Leu Leu Ile His
        195                 200                 205


Gly Ala Ser Thr Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly Ser
    210                 215                 220


Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro Glu
225                 230                 235                 240


Asp Phe Ala Ser Tyr Trp Cys Gln Gln Ser Asn Asn Phe Pro Pro Thr
                245                 250                 255


Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
            260                 265


<210> 508
<211> 121
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
```

polypeptide"

<400> 508
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr
20 25 30

Ala Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45

Ser Ala Ile Ser Gly Ser Gly Gly Ser Thr Tyr Tyr Ala Asp Ser Val
50 55 60

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
65 70 75 80

Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Lys Glu Thr Asp Tyr Tyr Gly Ser Gly Thr Phe Asp Tyr Trp Gly
100 105 110

Gln Gly Thr Leu Val Thr Val Ser Ser
115 120

<210> 509
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 509
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 Ser Cys Arg Ala Ser Gln Gly Ile Gly Ile Tyr
20 25 30

Leu Ala Trp Tyr Gln Gln Arg Ser Gly Lys Pro Pro Gln Leu Leu Ile
35 40 45

His Gly Ala Ser Thr Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
50 55 60

Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
65 70 75 80

Glu Asp Phe Ala Ser Tyr Trp Cys Gln Gln Ser Asn Asn Phe Pro Pro
85 90 95

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

<210> 510
<211> 1467
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 510
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

ccccaagtcc aactcgtcca gtccggtgca gaagtcaaga agccaggagc ctccgtgaga 120

gtgtcgtgca aagcgtccgg ctacatgttc accgactttt tcattcactg ggtgcgccag 180

gcgcccggac agggtctgga gtggatgggg tggatcaacc ctaactccgg cgtgactaaa 240

tacgcccaga agttccaggg ccgcgtgacc atgacccgga acactagcat ctccaccgcc 300

tacatggaac tgtcatccct ccggtccgag gataccgccg tgtactactg cgccacctgg 360

tacagcagcg gttggtacgg catcgcgaac atttggggac aggggactat ggtcaccgtg 420

tcatccgcct ccgggggagg agggtccggc ggcggaggtt ctggaggagg cggctcggac 480

atccagttga cgcagagccc ctcgtcgctg agcgcctccg tgggcgacag agtgaccatt 540

acctgtcaag cttcccatga tatctcgaac tacctccact ggtatcagca gaagccggga 600

aaggctccca agctgctgat ctacgacgcc tccaatctgg aaaccggagt gccgagccgg 660

ttcactggat cagggagcgg cactgacttc accctgacaa ttaggtcgct gcagccggag 720

gatgtggcag cctactactg ccaacagtca gacgaccttc ctcacacttt cggacaaggg 780

actaaggtcg acatcaagac cactacccca gcaccgaggc cacccacccc ggctcctacc 840

atcgcctccc agcctctgtc cctgcgtccg gaggcatgta gacccgcagc tggtggggcc 900

gtgcataccc ggggtcttga cttcgcctgc gatatctaca tttgggcccc tctggctggt 960

acttgcgggg tcctgctgct ttcactcgtg atcactcttt actgtaagcg cggtcggaag 1020

aagctgctgt acatctttaa gcaacccttc atgaggcctg tgcagactac tcaagaggag 1080

gacggctgtt catgccggtt cccagaggag gaggaaggcg gctgcgaact gcgcgtgaaa 1140

ttcagccgca gcgcagatgc tccagcctac aagcaggggc agaaccagct ctacaacgaa 1200

ctcaatcttg gtcggagaga ggagtacgac gtgctggaca agcggagagg acgggaccca 1260

gaaatgggcg ggaagccgcg cagaaagaat ccccaagagg gcctgtacaa cgagctccaa 1320

aaggataaga tggcagaagc ctatagcgag attggtatga aaggggaacg cagaagaggc 1380

aaaggccacg acggactgta ccagggactc agcaccgcca ccaaggacac ctatgacgct 1440

cttcacatgc aggccctgcc gcctcgg 1467

<210> 511
<211> 489
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 511
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val
20 25 30

Lys Lys Pro Gly Ala Ser Val Arg Val Ser Cys Lys Ala Ser Gly Tyr
35 40 45

Met Phe Thr Asp Phe Phe Ile His Trp Val Arg Gln Ala Pro Gly Gln
50 55 60

```
Gly Leu Glu Trp Met Gly Trp Ile Asn Pro Asn Ser Gly Val Thr Lys
65                  70                  75                  80

Tyr Ala Gln Lys Phe Gln Gly Arg Val Thr Met Thr Arg Asn Thr Ser
                85                  90                  95

Ile Ser Thr Ala Tyr Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr
            100                 105                 110

Ala Val Tyr Tyr Cys Ala Thr Trp Tyr Ser Ser Gly Trp Tyr Gly Ile
        115                 120                 125

Ala Asn Ile Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Ala Ser
    130                 135                 140

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp
145                 150                 155                 160

Ile Gln Leu Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly Asp
                165                 170                 175

Arg Val Thr Ile Thr Cys Gln Ala Ser His Asp Ile Ser Asn Tyr Leu
            180                 185                 190

His Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile Tyr
        195                 200                 205

Asp Ala Ser Asn Leu Glu Thr Gly Val Pro Ser Arg Phe Thr Gly Ser
    210                 215                 220

Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Arg Ser Leu Gln Pro Glu
225                 230                 235                 240

Asp Val Ala Ala Tyr Tyr Cys Gln Gln Ser Asp Asp Leu Pro His Thr
                245                 250                 255

Phe Gly Gln Gly Thr Lys Val Asp Ile Lys Thr Thr Thr Pro Ala Pro
            260                 265                 270

Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser Leu
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        275                 280                 285

Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr Arg
    290                 295                 300

Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala Gly
305                 310                 315                 320

Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr Cys Lys
                325                 330                 335

Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met Arg
            340                 345                 350

Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro
        355                 360                 365

Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg Ser
    370                 375                 380

Ala Asp Ala Pro Ala Tyr Lys Gln Gly Gln Asn Gln Leu Tyr Asn Glu
385                 390                 395                 400

Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg
                405                 410                 415

Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln
            420                 425                 430

Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr
        435                 440                 445

Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His Asp
    450                 455                 460

Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala
465                 470                 475                 480

Leu His Met Gln Ala Leu Pro Pro Arg
                485
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<210> 512
<211> 266
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 512
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val
20 25 30

Lys Lys Pro Gly Ala Ser Val Arg Val Ser Cys Lys Ala Ser Gly Tyr
35 40 45

Met Phe Thr Asp Phe Phe Ile His Trp Val Arg Gln Ala Pro Gly Gln
50 55 60

Gly Leu Glu Trp Met Gly Trp Ile Asn Pro Asn Ser Gly Val Thr Lys
65 70 75 80

Tyr Ala Gln Lys Phe Gln Gly Arg Val Thr Met Thr Arg Asn Thr Ser
85 90 95

Ile Ser Thr Ala Tyr Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr
100 105 110

Ala Val Tyr Tyr Cys Ala Thr Trp Tyr Ser Ser Gly Trp Tyr Gly Ile
115 120 125

Ala Asn Ile Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Ala Ser
130 135 140

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp
145 150 155 160

Ile Gln Leu Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly Asp
165 170 175

```
Arg Val Thr Ile Thr Cys Gln Ala Ser His Asp Ile Ser Asn Tyr Leu
            180                 185                 190


His Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile Tyr
        195                 200                 205


Asp Ala Ser Asn Leu Glu Thr Gly Val Pro Ser Arg Phe Thr Gly Ser
    210                 215                 220


Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Arg Ser Leu Gln Pro Glu
225                 230                 235                 240


Asp Val Ala Ala Tyr Tyr Cys Gln Gln Ser Asp Asp Leu Pro His Thr
                245                 250                 255


Phe Gly Gln Gly Thr Lys Val Asp Ile Lys
            260                 265


<210> 513
<211> 121
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 513
Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
1               5                   10                  15


Ser Val Arg Val Ser Cys Lys Ala Ser Gly Tyr Met Phe Thr Asp Phe
            20                  25                  30


Phe Ile His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
        35                  40                  45


Gly Trp Ile Asn Pro Asn Ser Gly Val Thr Lys Tyr Ala Gln Lys Phe
    50                  55                  60


Gln Gly Arg Val Thr Met Thr Arg Asn Thr Ser Ile Ser Thr Ala Tyr
```

65 70 75 80

Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Thr Trp Tyr Ser Ser Gly Trp Tyr Gly Ile Ala Asn Ile Trp Gly
100 105 110

Gln Gly Thr Met Val Thr Val Ser Ser
115 120

<210> 514
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 514
Asp 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 Gln Ala Ser His Asp Ile Ser Asn Tyr
20 25 30

Leu His Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
35 40 45

Tyr Asp Ala Ser Asn Leu Glu Thr Gly Val Pro Ser Arg Phe Thr Gly
50 55 60

Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Arg Ser Leu Gln Pro
65 70 75 80

Glu Asp Val Ala Ala Tyr Tyr Cys Gln Gln Ser Asp Asp Leu Pro His
85 90 95

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

<210> 515
<211> 1464
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 515
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

ccccaagtgc aactcgtcca gtccggtgca gaagtgaaaa agccaggaga aagcctcaag 120

atcagctgca agggatctgg gtacagcttc accaactact ggatcggctg ggtgcgccag 180

atgcccggaa agggactgga gtggatgggc attatctacc ctggggactc cgacacccgg 240

tattccccga gcttccaagg acaggtcacc atctccgccg ataagtcgat tagcactgcg 300

tacttgcagt ggtcaagcct gaaggcctcg gacaccgcca tgtactactg cgcgagacac 360

gggccctcgt cctggggcga atttgactac tggggccagg gaacgcttgt gaccgtgtcg 420

tccgcgtccg ggggtggagg atcaggagga ggaggctccg gtggtggcgg tagcgacatc 480

cggctgactc agtccccttc ctcactctcc gcctccgtgg gggaccgcgt gaccattacc 540

tgtcgggcat cacagtccat cagctcatac ctgaactggt atcagcagaa gccggggaag 600

gccccgaaac tcctgatcta cgccgcctcc tccctgcaat ccggcgtgcc ctcgaggttc 660

tccggctccg gctcgggaac cgatttcact ctgacaatta gcagcctgca gcctgaggat 720

ttcgctacct actactgcca gcagtcctac tcgactccgc tgactttcgg cgggggaacc 780

aaggtcgaca tcaagaccac taccccagca ccgaggccac ccaccccggc tcctaccatc 840

gcctcccagc ctctgtccct gcgtccggag gcatgtagac ccgcagctgg tggggccgtg 900

catacccggg gtcttgactt cgcctgcgat atctacattt gggcccctct ggctggtact 960

tgcggggtcc tgctgctttc actcgtgatc actctttact gtaagcgcgg tcggaagaag 1020

ctgctgtaca tctttaagca acccttcatg aggcctgtgc agactactca agaggaggac 1080

ggctgttcat gccggttccc agaggaggag gaaggcggct gcgaactgcg cgtgaaattc 1140

agccgcagcg cagatgctcc agcctacaag caggggcaga accagctcta caacgaactc 1200

aatcttggtc ggagagagga gtacgacgtg ctggacaagc ggagaggacg ggacccagaa 1260

atgggcggga agccgcgcag aaagaatccc caagagggcc tgtacaacga gctccaaaag 1320

gataagatgg cagaagccta tagcgagatt ggtatgaaag gggaacgcag aagaggcaaa 1380

ggccacgacg gactgtacca gggactcagc accgccacca aggacaccta tgacgctctt 1440

cacatgcagg ccctgccgcc tcgg 1464

<210> 516
<211> 488
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 516
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val
20 25 30

Lys Lys Pro Gly Glu Ser Leu Lys Ile Ser Cys Lys Gly Ser Gly Tyr
35 40 45

Ser Phe Thr Asn Tyr Trp Ile Gly Trp Val Arg Gln Met Pro Gly Lys
50 55 60

Gly Leu Glu Trp Met Gly Ile Ile Tyr Pro Gly Asp Ser Asp Thr Arg
65 70 75 80

Tyr Ser Pro Ser Phe Gln Gly Gln Val Thr Ile Ser Ala Asp Lys Ser
85 90 95

Ile Ser Thr Ala Tyr Leu Gln Trp Ser Ser Leu Lys Ala Ser Asp Thr
100 105 110

Ala Met Tyr Tyr Cys Ala Arg His Gly Pro Ser Ser Trp Gly Glu Phe
115 120 125

Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Ala Ser Gly
130 135 140

```
Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile
145                 150                 155                 160


Arg Leu Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly Asp Arg
                165                 170                 175


Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Ser Ser Tyr Leu Asn
            180                 185                 190


Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile Tyr Ala
        195                 200                 205


Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly Ser Gly
    210                 215                 220


Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro Glu Asp
225                 230                 235                 240


Phe Ala Thr Tyr Tyr Cys Gln Gln Ser Tyr Ser Thr Pro Leu Thr Phe
                245                 250                 255


Gly Gly Gly Thr Lys Val Asp Ile Lys Thr Thr Thr Pro Ala Pro Arg
            260                 265                 270


Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser Leu Arg
        275                 280                 285


Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr Arg Gly
    290                 295                 300


Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr
305                 310                 315                 320


Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr Cys Lys Arg
                325                 330                 335


Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met Arg Pro
            340                 345                 350


Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu
```

355 360 365

Glu Glu Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg Ser Ala
370 375 380

Asp Ala Pro Ala Tyr Lys Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu
385 390 395 400

Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly
405 410 415

Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu
420 425 430

Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser
435 440 445

Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His Asp Gly
450 455 460

Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu
465 470 475 480

His Met Gln Ala Leu Pro Pro Arg
485

<210> 517
<211> 265
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 517
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val
20 25 30

```
Lys Lys Pro Gly Glu Ser Leu Lys Ile Ser Cys Lys Gly Ser Gly Tyr
        35                  40                  45

Ser Phe Thr Asn Tyr Trp Ile Gly Trp Val Arg Gln Met Pro Gly Lys
    50                  55                  60

Gly Leu Glu Trp Met Gly Ile Ile Tyr Pro Gly Asp Ser Asp Thr Arg
65                  70                  75                  80

Tyr Ser Pro Ser Phe Gln Gly Gln Val Thr Ile Ser Ala Asp Lys Ser
                85                  90                  95

Ile Ser Thr Ala Tyr Leu Gln Trp Ser Ser Leu Lys Ala Ser Asp Thr
            100                 105                 110

Ala Met Tyr Tyr Cys Ala Arg His Gly Pro Ser Ser Trp Gly Glu Phe
        115                 120                 125

Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Ala Ser Gly
    130                 135                 140

Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile
145                 150                 155                 160

Arg Leu Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly Asp Arg
                165                 170                 175

Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Ser Ser Tyr Leu Asn
            180                 185                 190

Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile Tyr Ala
        195                 200                 205

Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly Ser Gly
    210                 215                 220

Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro Glu Asp
225                 230                 235                 240

Phe Ala Thr Tyr Tyr Cys Gln Gln Ser Tyr Ser Thr Pro Leu Thr Phe
                245                 250                 255
```

Gly Gly Gly Thr Lys Val Asp Ile Lys
260 265

<210> 518
<211> 120
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 518
Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Glu
1 5 10 15

Ser Leu Lys Ile Ser Cys Lys Gly Ser Gly Tyr Ser Phe Thr Asn Tyr
20 25 30

Trp Ile Gly Trp Val Arg Gln Met Pro Gly Lys Gly Leu Glu Trp Met
35 40 45

Gly Ile Ile Tyr Pro Gly Asp Ser Asp Thr Arg Tyr Ser Pro Ser Phe
50 55 60

Gln Gly Gln Val Thr Ile Ser Ala Asp Lys Ser Ile Ser Thr Ala Tyr
65 70 75 80

Leu Gln Trp Ser Ser Leu Lys Ala Ser Asp Thr Ala Met Tyr Tyr Cys
85 90 95

Ala Arg His Gly Pro Ser Ser Trp Gly Glu Phe Asp Tyr Trp Gly Gln
100 105 110

Gly Thr Leu Val Thr Val Ser Ser
115 120

<210> 519
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 519
Asp Ile Arg 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 Ser Ile Ser Ser Tyr
20 25 30

Leu Asn Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
35 40 45

Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
50 55 60

Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
65 70 75 80

Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Ser Tyr Ser Thr Pro Leu
85 90 95

Thr Phe Gly Gly Gly Thr Lys Val Asp Ile Lys
100 105

<210> 520
<211> 750
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 520
caagtgcaac tcgtccagtc cggtgcagaa gtcaagaagc caggagaatc actcaagatt 60

agctgcaaag gcagcggcta ctccttcact tcctactgga tcggctgggt gcgccagatg 120

cccggaaagg gactggagtg gatgggaatc atctaccctg gcgatagcga caccagatac 180

tccccgagct ttcaaggcca agtgaccatt tcggccgaca agtcgatctc caccgcgtat 240

ctgcagtgga gctcactgaa ggcttcggac accgccatgt actactgtgc ccggctgggg 300

ggaagcctgc ccgattacgg aatggacgtg tggggccagg gaaccatggt cactgtgtcc 360

tccgcctccg ggggtggagg ctccggtgga ggggggtccg gtggtggagg atcagaaatt 420

gtgctgaccc agtctccgct gtccttgcct gtgaccccgg gcgaacccgc aagcatctcc 480

tgccggtcgt cgcagtccct gcttcactcc aacggctaca actacctcga ttggtacctc 540

cagaagcctg gacagagccc acagctgttg atctacctgg gctcgaaccg ggcctcagga 600

gtgccggaca ggttctccgg ctccgggtcg ggaaccgact tcacgctgaa gatctcccgc 660

gtggaggccg aggacgtggg cgtgtactat tgcatgcagg cgctgcagac ccttattaca 720

ttcggacagg ggactaaggt cgatatcaag 750

<210> 521
<211> 250
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 521
Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Glu
1 5 10 15

Ser Leu Lys Ile Ser Cys Lys Gly Ser Gly Tyr Ser Phe Thr Ser Tyr
20 25 30

Trp Ile Gly Trp Val Arg Gln Met Pro Gly Lys Gly Leu Glu Trp Met
35 40 45

Gly Ile Ile Tyr Pro Gly Asp Ser Asp Thr Arg Tyr Ser Pro Ser Phe
50 55 60

Gln Gly Gln Val Thr Ile Ser Ala Asp Lys Ser Ile Ser Thr Ala Tyr
65 70 75 80

Leu Gln Trp Ser Ser Leu Lys Ala Ser Asp Thr Ala Met Tyr Tyr Cys
85 90 95

Ala Arg Leu Gly Gly Ser Leu Pro Asp Tyr Gly Met Asp Val Trp Gly

```
            100                 105                 110

Gln Gly Thr Met Val Thr Val Ser Ser Ala Ser Gly Gly Gly Gly Ser
        115                 120                 125

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Ile Val Leu Thr Gln
    130                 135                 140

Ser Pro Leu Ser Leu Pro Val Thr Pro Gly Glu Pro Ala Ser Ile Ser
145                 150                 155                 160

Cys Arg Ser Ser Gln Ser Leu Leu His Ser Asn Gly Tyr Asn Tyr Leu
                165                 170                 175

Asp Trp Tyr Leu Gln Lys Pro Gly Gln Ser Pro Gln Leu Leu Ile Tyr
            180                 185                 190

Leu Gly Ser Asn Arg Ala Ser Gly Val Pro Asp Arg Phe Ser Gly Ser
        195                 200                 205

Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile Ser Arg Val Glu Ala Glu
    210                 215                 220

Asp Val Gly Val Tyr Tyr Cys Met Gln Ala Leu Gln Thr Leu Ile Thr
225                 230                 235                 240

Phe Gly Gln Gly Thr Lys Val Asp Ile Lys
                245                 250


<210> 522
<211> 753
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polynucleotide"

<400> 522
caagtccaac tcgtccaatc aggagctgaa gtcaagaagc ctggagcatc cgtgagagtg       60

tcctgtaaag cctccggcta catcttcacc aactactacg tgcactgggt cagacaggcc      120
```

ccgggccagg gactggaatg gatgggaatc atttccccgt ccggcggatc gcctacttac 180

gcgcaacggc tgcagggccg cgtgaccatg actcgggatc tctccacttc aaccgtgtac 240

atggaactgt ccagccttac atcggaggat actgccgtgt acttctgcgc gagggagtcc 300

cggctgaggg gcaaccgcct cgggctgcag tcaagcatct tcgatcactg gggccagggc 360

accctcgtga ccgtgtccag cgcctcgggg ggaggaggct ccgggggcgg aggttcgggc 420

ggtggtggat ctgacattcg catgactcag tccccacctt cactgtccgc tagcgtgggg 480

gaccgcgtga cgattccgtg ccaagccagc caggacatca acaaccatct gaactggtat 540

cagcagaagc ccggaaaggc cccgcagctg ctgatctacg acacctcgaa tctggagatc 600

ggcgtgccat cccggttctc cggttcggga agcggaaccg actttaccct gactatctcc 660

tccttgcaac ccgaggacat tgccacctac tactgccagc agtacgaaaa ccttcccctg 720

accttcgggg gtggaaccaa agtggagatc aag 753

<210> 523
<211> 251
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 523
Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
1 5 10 15

Ser Val Arg Val Ser Cys Lys Ala Ser Gly Tyr Ile Phe Thr Asn Tyr
20 25 30

Tyr Val His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45

Gly Ile Ile Ser Pro Ser Gly Gly Ser Pro Thr Tyr Ala Gln Arg Leu
50 55 60

Gln Gly Arg Val Thr Met Thr Arg Asp Leu Ser Thr Ser Thr Val Tyr
65 70 75 80

```
Met Glu Leu Ser Ser Leu Thr Ser Glu Asp Thr Ala Val Tyr Phe Cys
                85                  90                  95


Ala Arg Glu Ser Arg Leu Arg Gly Asn Arg Leu Gly Leu Gln Ser Ser
            100                 105                 110


Ile Phe Asp His Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Ala
        115                 120                 125


Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
    130                 135                 140


Asp Ile Arg Met Thr Gln Ser Pro Pro Ser Leu Ser Ala Ser Val Gly
145                 150                 155                 160


Asp Arg Val Thr Ile Pro Cys Gln Ala Ser Gln Asp Ile Asn Asn His
                165                 170                 175


Leu Asn Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Gln Leu Leu Ile
            180                 185                 190


Tyr Asp Thr Ser Asn Leu Glu Ile Gly Val Pro Ser Arg Phe Ser Gly
        195                 200                 205


Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
    210                 215                 220


Glu Asp Ile Ala Thr Tyr Tyr Cys Gln Gln Tyr Glu Asn Leu Pro Leu
225                 230                 235                 240


Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
                245                 250


<210> 524
<211> 750
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polynucleotide"
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<400> 524
caagtgcagc tcgtccaatc cggtgcagaa gtgaagaagc ctggcgaatc cctgaagatc 60

tcatgcaaag gctcgggata cagcttcacc tcatattgga ttggatgggt cagacagatg 120

ccaggaaagg gtctggagtg gatgggaatc atctacccgg gagacagcga tacccggtac 180

tccccgagct tccagggaca ggtcaccatc tcggccgaca agtccattac tactgcctac 240

ttgcaatggt cctcgctgcg cgcctccgat agcgccatgt actactgcgc gagaggcggc 300

tactccgact acgactacta cttcgatttc tggggacagg ggacactcgt gactgtgtcc 360

tccgcgtcgg gtggcggcgg ctcgggtgga ggaggaagcg gagggggagg ctccgaaatt 420

gtgatgaccc agtcaccccc gtcgctccct gtgactcctg gggaaccggc ctccatctcc 480

tgccggagct cacagagcct gctgcactcc aacggataca actacctcga ttggtacctt 540

cagaagcccg gccagtcgcc ccagctgctg atctacctgg ggtccaaccg ggctagcggc 600

gtgccggacc gcttctccgg ttccgggtct ggaaccgact tcacgctgaa aatctccagg 660

gtggaggccg aggacgtggg agtgtattac tgtatgcagg ccctgcaaac ccccttcacc 720

tttggcgggg gcaccaaggt cgagattaag 750

<210> 525
<211> 250
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 525
Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Glu
1 5 10 15

Ser Leu Lys Ile Ser Cys Lys Gly Ser Gly Tyr Ser Phe Thr Ser Tyr
20 25 30

Trp Ile Gly Trp Val Arg Gln Met Pro Gly Lys Gly Leu Glu Trp Met
35 40 45

Gly Ile Ile Tyr Pro Gly Asp Ser Asp Thr Arg Tyr Ser Pro Ser Phe
50 55 60

```
Gln Gly Gln Val Thr Ile Ser Ala Asp Lys Ser Ile Thr Thr Ala Tyr
65                  70                  75                  80

Leu Gln Trp Ser Ser Leu Arg Ala Ser Asp Ser Ala Met Tyr Tyr Cys
                85                  90                  95

Ala Arg Gly Gly Tyr Ser Asp Tyr Asp Tyr Tyr Phe Asp Phe Trp Gly
            100                 105                 110

Gln Gly Thr Leu Val Thr Val Ser Ser Ala Ser Gly Gly Gly Gly Ser
        115                 120                 125

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Ile Val Met Thr Gln
    130                 135                 140

Ser Pro Leu Ser Leu Pro Val Thr Pro Gly Glu Pro Ala Ser Ile Ser
145                 150                 155                 160

Cys Arg Ser Ser Gln Ser Leu Leu His Ser Asn Gly Tyr Asn Tyr Leu
                165                 170                 175

Asp Trp Tyr Leu Gln Lys Pro Gly Gln Ser Pro Gln Leu Leu Ile Tyr
            180                 185                 190

Leu Gly Ser Asn Arg Ala Ser Gly Val Pro Asp Arg Phe Ser Gly Ser
        195                 200                 205

Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile Ser Arg Val Glu Ala Glu
    210                 215                 220

Asp Val Gly Val Tyr Tyr Cys Met Gln Ala Leu Gln Thr Pro Phe Thr
225                 230                 235                 240

Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
                245                 250
```

<210> 526
<211> 720
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 526
caagtgcaac tcgtccaaag cggtggagat ctcgcccagc ccggaagatc ccttagactc 60

tcatgtgccg ccagcgggtt caccttcgac gactacgcta tgcattgggt gcgccaggcc 120

ccggggaagg gactggaatg ggtggccgtg atttggccgg acggcggaca gaagtactac 180

ggagacagcg tgaaagggcg gttcaccgtg tcgagggaca acccgaagaa taccctctac 240

cttcaaatga actccctgcg cgccgaggac accgcgatct actactgcgt gcgccacttt 300

aacgcatggg attactgggg acaggggact ctggtcactg tgtcctccgc ctctggcggc 360

ggaggttccg gcggtggtgg ctccggtgga ggaggatcgg acatccagct gacccagtcc 420

ccttcctcac tgtcggcgta cgtgggaggc cgggtcacta tcacgtgcca ggcatcccag 480

ggcatttccc agttcctgaa ctggttccag cagaagcccg gaaaggcccc taagctgttg 540

atttccgatg ctagcaacct ggaacccggc gtgccgtcac ggttcagcgg ctccgggtcg 600

ggcaccgact tcaccttcac catcactaac ctccaaccgg aggacatcgc cacctattac 660

tgccagcagt acgatgatct gccactgact ttcggcggcg gaaccaaggt cgaaatcaag 720

<210> 527
<211> 240
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 527
Gln Val Gln Leu Val Gln Ser Gly Gly Asp Leu Ala 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

```
Ala Val Ile Trp Pro Asp Gly Gly Gln Lys Tyr Tyr Gly Asp Ser Val
    50                  55                  60

Lys Gly Arg Phe Thr Val Ser Arg Asp Asn Pro Lys Asn Thr Leu Tyr
65                  70                  75                  80

Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Ile Tyr Tyr Cys
                85                  90                  95

Val Arg His Phe Asn Ala Trp Asp Tyr Trp Gly Gln Gly Thr Leu Val
            100                 105                 110

Thr Val Ser Ser Ala Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
        115                 120                 125

Gly Gly Gly Gly Ser Asp Ile Gln Leu Thr Gln Ser Pro Ser Ser Leu
    130                 135                 140

Ser Ala Tyr Val Gly Gly Arg Val Thr Ile Thr Cys Gln Ala Ser Gln
145                 150                 155                 160

Gly Ile Ser Gln Phe Leu Asn Trp Phe Gln Gln Lys Pro Gly Lys Ala
                165                 170                 175

Pro Lys Leu Leu Ile Ser Asp Ala Ser Asn Leu Glu Pro Gly Val Pro
            180                 185                 190

Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Phe Thr Ile
        195                 200                 205

Thr Asn Leu Gln Pro Glu Asp Ile Ala Thr Tyr Tyr Cys Gln Gln Tyr
    210                 215                 220

Asp Asp Leu Pro Leu Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
225                 230                 235                 240
```

<210> 528
<211> 744
<212> DNA
<213> Artificial Sequence

<220>

<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 528
caagtgcaac tcgtccaatc cggtggtggt gtcgtgcaac caggaaagtc tcttcgcctc 60

tcatgcgctg ccagcggatt cacgttttcc atcttcgcta tgcactgggt gcggcaggcc 120

ccgggaaagg gactggaatg ggtggcaacc atttcatacg atggatcaaa cgcgttctac 180

gccgactccg tggaaggaag gttcaccatc tcgagagaca actccaagga ctcgctgtat 240

ctgcaaatgg actccctgcg ccctgaggat accgccgtct actactgcgt gaaggccggc 300

gacgggggat acgacgtgtt cgattcgtgg ggccagggaa ctctggtcac cgtgtccagc 360

gcgagcgggg gaggcggatc gggtggtgga gggtccgggg gaggaggctc cgagatcgtg 420

atgactcagt cgccgctctc cctccccgtg acccccggag agccagctag catttcatgt 480

cggagctccc agtccctgct gcactccaac ggctacaatt acctggattg gtacttgcag 540

aagcctgggc agagccctca gctgctgatc tacctcggct cgaacagagc ctccggcgtg 600

ccggaccggt tttccgggag cggcagcggc accgatttca ccttgaaaat ctcccgcgtg 660

gaagccgagg acgtgggcgt gtactattgc atgcaggccc tgcagactcc caccttcggc 720

ccgggaacta aggtcgacat caag 744

<210> 529
<211> 248
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 529
Gln Val Gln Leu Val Gln Ser Gly Gly Gly Val Val Gln Pro Gly Lys
1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ile Phe
20 25 30

Ala Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45

```
Ala Thr Ile Ser Tyr Asp Gly Ser Asn Ala Phe Tyr Ala Asp Ser Val
    50                  55                  60

Glu Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asp Ser Leu Tyr
65                  70                  75                  80

Leu Gln Met Asp Ser Leu Arg Pro Glu Asp Thr Ala Val Tyr Tyr Cys
                85                  90                  95

Val Lys Ala Gly Asp Gly Gly Tyr Asp Val Phe Asp Ser Trp Gly Gln
            100                 105                 110

Gly Thr Leu Val Thr Val Ser Ser Ala Ser Gly Gly Gly Gly Ser Gly
        115                 120                 125

Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Ile Val Met Thr Gln Ser
    130                 135                 140

Pro Leu Ser Leu Pro Val Thr Pro Gly Glu Pro Ala Ser Ile Ser Cys
145                 150                 155                 160

Arg Ser Ser Gln Ser Leu Leu His Ser Asn Gly Tyr Asn Tyr Leu Asp
                165                 170                 175

Trp Tyr Leu Gln Lys Pro Gly Gln Ser Pro Gln Leu Leu Ile Tyr Leu
            180                 185                 190

Gly Ser Asn Arg Ala Ser Gly Val Pro Asp Arg Phe Ser Gly Ser Gly
        195                 200                 205

Ser Gly Thr Asp Phe Thr Leu Lys Ile Ser Arg Val Glu Ala Glu Asp
    210                 215                 220

Val Gly Val Tyr Tyr Cys Met Gln Ala Leu Gln Thr Pro Thr Phe Gly
225                 230                 235                 240

Pro Gly Thr Lys Val Asp Ile Lys
                245
```

<210> 530

<211> 735
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 530
gaagtgcaat tggtggaatc tggaggagga ttggtgcaac ctggaggatc tctgagactg 60

tcatgtgccg ccagcggctt cacattttcc tcctacgcga tgtcatgggt ccgccaggca 120

ccggggaaag gactggaatg ggtgtccgcc atttcgggat cgggaggctc gacctactac 180

gccgacagcg tgaagggaag attcactatc tcccgggata actccaagaa tactctgtat 240

ctccaaatga actccctgag ggccgaggat actgccgtgt actactgcgc taaggaaacc 300

gactactacg gctcaggaac cttcgactac tggggccagg gcaccctcgt gaccgtgtcc 360

tcggcctccg gcggcggagg ttcgggggggg ggcggttccg ggggaggggg cagcgacatc 420

cagatgaccc agtccccaag ctccctttcc gcgtccgtgg gagatcgcgt gaccatttcg 480

tgccgggcta gccagggcat cggtatctat cttgcgtggt accagcagcg gagcggaaag 540

ccgccccagc tgctgatcca cggcgcctca actctgcaat ccggggtccc cagccggttc 600

agcggtagcg ggtcgggtac cgactttacc ctgactatct cctccctcca accggaggac 660

ttcgcctcct actggtgcca gcagtccaac aacttccctc ccaccttcgg ccagggaacg 720

aaggtcgaga ttaag 735

<210> 531
<211> 245
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 531
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr
20 25 30

```
Ala Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35                  40                  45

Ser Ala Ile Ser Gly Ser Gly Gly Ser Thr Tyr Tyr Ala Asp Ser Val
    50                  55                  60

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
65                  70                  75                  80

Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
                85                  90                  95

Ala Lys Glu Thr Asp Tyr Tyr Gly Ser Gly Thr Phe Asp Tyr Trp Gly
            100                 105                 110

Gln Gly Thr Leu Val Thr Val Ser Ser Ala Ser Gly Gly Gly Gly Ser
        115                 120                 125

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Gln Met Thr Gln
    130                 135                 140

Ser Pro Ser Ser Leu Ser Ala Ser Val Gly Asp Arg Val Thr Ile Ser
145                 150                 155                 160

Cys Arg Ala Ser Gln Gly Ile Gly Ile Tyr Leu Ala Trp Tyr Gln Gln
                165                 170                 175

Arg Ser Gly Lys Pro Pro Gln Leu Leu Ile His Gly Ala Ser Thr Leu
            180                 185                 190

Gln Ser Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp
        195                 200                 205

Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro Glu Asp Phe Ala Ser Tyr
    210                 215                 220

Trp Cys Gln Gln Ser Asn Asn Phe Pro Pro Thr Phe Gly Gln Gly Thr
225                 230                 235                 240
```

Lys Val Glu Ile Lys
245

<210> 532
<211> 732
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 532
caagtgcaac tcgtccagtc cggtgcagaa gtgaaaaagc caggagaaag cctcaagatc 60

agctgcaagg gatctgggta cagcttcacc aactactgga tcggctgggt gcgccagatg 120

cccggaaagg gactggagtg gatgggcatt atctaccctg gggactccga cacccggtat 180

tccccgagct tccaaggaca ggtcaccatc tccgccgata agtcgattag cactgcgtac 240

ttgcagtggt caagcctgaa ggcctcggac accgccatgt actactgcgc gagacacggg 300

ccctcgtcct ggggcgaatt tgactactgg ggccagggaa cgcttgtgac cgtgtcgtcc 360

gcgtccgggg gtggaggatc aggaggagga ggctccggtg gtggcggtag cgacatccgg 420

ctgactcagt ccccttcctc actctccgcc tccgtggggg accgcgtgac cattacctgt 480

cgggcatcac agtccatcag ctcatacctg aactggtatc agcagaagcc ggggaaggcc 540

ccgaaactcc tgatctacgc cgcctcctcc ctgcaatccg gcgtgccctc gaggttctcc 600

ggctccggct cgggaaccga tttcactctg acaattagca gcctgcagcc tgaggatttc 660

gctacctact actgccagca gtcctactcg actccgctga ctttcggcgg gggaaccaag 720

gtcgacatca ag 732

<210> 533
<211> 244
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 533
Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Glu

```
1               5                   10                  15

Ser Leu Lys Ile Ser Cys Lys Gly Ser Gly Tyr Ser Phe Thr Asn Tyr
            20                  25                  30

Trp Ile Gly Trp Val Arg Gln Met Pro Gly Lys Gly Leu Glu Trp Met
        35                  40                  45

Gly Ile Ile Tyr Pro Gly Asp Ser Asp Thr Arg Tyr Ser Pro Ser Phe
    50                  55                  60

Gln Gly Gln Val Thr Ile Ser Ala Asp Lys Ser Ile Ser Thr Ala Tyr
65                  70                  75                  80

Leu Gln Trp Ser Ser Leu Lys Ala Ser Asp Thr Ala Met Tyr Tyr Cys
                85                  90                  95

Ala Arg His Gly Pro Ser Ser Trp Gly Glu Phe Asp Tyr Trp Gly Gln
            100                 105                 110

Gly Thr Leu Val Thr Val Ser Ser Ala Ser Gly Gly Gly Gly Ser Gly
        115                 120                 125

Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Arg Leu Thr Gln Ser
    130                 135                 140

Pro Ser Ser Leu Ser Ala Ser Val Gly Asp Arg Val Thr Ile Thr Cys
145                 150                 155                 160

Arg Ala Ser Gln Ser Ile Ser Ser Tyr Leu Asn Trp Tyr Gln Gln Lys
                165                 170                 175

Pro Gly Lys Ala Pro Lys Leu Leu Ile Tyr Ala Ala Ser Ser Leu Gln
            180                 185                 190

Ser Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe
        195                 200                 205

Thr Leu Thr Ile Ser Ser Leu Gln Pro Glu Asp Phe Ala Thr Tyr Tyr
    210                 215                 220
```

Cys Gln Gln Ser Tyr Ser Thr Pro Leu Thr Phe Gly Gly Gly Thr Lys
225 230 235 240

Val Asp Ile Lys

<210> 534
<211> 244
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 534
Gln Val Gln Leu Gln Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Gly Tyr
20 25 30

Tyr Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45

Gly Arg Ile Asn Pro Asn Ser Gly Gly Thr Asn Tyr Ala Gln Lys Phe
50 55 60

Gln Gly Arg Val Thr Met Thr Arg Asp Thr Ser Ile Ser Thr Ala Tyr
65 70 75 80

Met Glu Leu Ser Arg Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Gly Arg Tyr Tyr Gly Met Asp Val Trp Gly Gln Gly Thr Met
100 105 110

Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly
115 120 125

Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Ile Val Leu Thr Gln Ser
130 135 140

```
Pro Ala Thr Leu Ser Leu Ser Pro Gly Glu Arg Ala Thr Ile Ser Cys
145                 150                 155                 160


Arg Ala Ser Gln Ser Val Ser Ser Asn Phe Ala Trp Tyr Gln Gln Arg
                165                 170                 175


Pro Gly Gln Ala Pro Arg Leu Leu Ile Tyr Asp Ala Ser Asn Arg Ala
            180                 185                 190


Thr Gly Ile Pro Pro Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe
        195                 200                 205


Thr Leu Thr Ile Ser Ser Leu Glu Pro Glu Asp Phe Ala Ala Tyr Tyr
    210                 215                 220


Cys His Gln Arg Ser Asn Trp Leu Tyr Thr Phe Gly Gln Gly Thr Lys
225                 230                 235                 240


Val Asp Ile Lys
```

<210> 535
<211> 488
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 535

```
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1               5                   10                  15


His Ala Ala Arg Pro Gln Val Gln Leu Gln Gln Ser Gly Ala Glu Val
            20                  25                  30


Lys Lys Pro Gly Ala Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr
        35                  40                  45


Thr Phe Thr Gly Tyr Tyr Met His Trp Val Arg Gln Ala Pro Gly Gln
```

```
    50                  55                  60

Gly Leu Glu Trp Met Gly Arg Ile Asn Pro Asn Ser Gly Gly Thr Asn
65                  70                  75                  80

Tyr Ala Gln Lys Phe Gln Gly Arg Val Thr Met Thr Arg Asp Thr Ser
                85                  90                  95

Ile Ser Thr Ala Tyr Met Glu Leu Ser Arg Leu Arg Ser Glu Asp Thr
            100                 105                 110

Ala Val Tyr Tyr Cys Ala Arg Gly Arg Tyr Tyr Gly Met Asp Val Trp
        115                 120                 125

Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly
    130                 135                 140

Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Ile
145                 150                 155                 160

Val Leu Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly Glu Arg
                165                 170                 175

Ala Thr Ile Ser Cys Arg Ala Ser Gln Ser Val Ser Ser Asn Phe Ala
            180                 185                 190

Trp Tyr Gln Gln Arg Pro Gly Gln Ala Pro Arg Leu Leu Ile Tyr Asp
        195                 200                 205

Ala Ser Asn Arg Ala Thr Gly Ile Pro Pro Arg Phe Ser Gly Ser Gly
    210                 215                 220

Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Glu Pro Glu Asp
225                 230                 235                 240

Phe Ala Ala Tyr Tyr Cys His Gln Arg Ser Asn Trp Leu Tyr Thr Phe
                245                 250                 255

Gly Gln Gly Thr Lys Val Asp Ile Lys Thr Thr Thr Pro Ala Pro Arg
            260                 265                 270
```

```
Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser Leu Arg
        275                 280                 285

Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr Arg Gly
    290                 295                 300

Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr
305                 310                 315                 320

Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr Cys Lys Arg
                325                 330                 335

Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met Arg Pro
            340                 345                 350

Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu
        355                 360                 365

Glu Glu Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg Ser Ala
    370                 375                 380

Asp Ala Pro Ala Tyr Lys Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu
385                 390                 395                 400

Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly
                405                 410                 415

Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu
            420                 425                 430

Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser
        435                 440                 445

Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His Asp Gly
    450                 455                 460

Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu
465                 470                 475                 480

His Met Gln Ala Leu Pro Pro Arg
```

485

<210> 536
<211> 253
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 536
Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Gly Tyr
20 25 30

Tyr Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45

Gly Trp Ile Asn Pro Asn Ser Gly Gly Thr Asn Tyr Ala Gln Lys Phe
50 55 60

Gln Gly Arg Val Thr Met Thr Arg Asp Thr Ser Ile Ser Thr Ala Tyr
65 70 75 80

Met Glu Leu Ser Arg Leu Arg Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Asp Leu Arg Arg Thr Val Val Thr Pro Arg Ala Tyr Tyr Gly
100 105 110

Met Asp Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser Gly Gly
115 120 125

Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly
130 135 140

Gly Ser Asp Ile Gln Leu Thr Gln Ser Pro Ser Thr Leu Ser Ala Ser
145 150 155 160

```
Val Gly Asp Arg Val Thr Ile Thr Cys Gln Ala Ser Gln Asp Ile Ser
                165                 170                 175


Asn Ser Leu Asn Trp Tyr Gln Gln Lys Ala Gly Lys Ala Pro Lys Leu
            180                 185                 190


Leu Ile Tyr Asp Ala Ser Thr Leu Glu Thr Gly Val Pro Ser Arg Phe
        195                 200                 205


Ser Gly Ser Gly Ser Gly Thr Asp Phe Ser Phe Thr Ile Ser Ser Leu
    210                 215                 220


Gln Pro Glu Asp Ile Ala Thr Tyr Tyr Cys Gln Gln His Asp Asn Leu
225                 230                 235                 240


Pro Leu Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
                245                 250


<210> 537
<211> 497
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 537
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1               5                   10                  15


His Ala Ala Arg Pro Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val
            20                  25                  30


Lys Lys Pro Gly Ala Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr
        35                  40                  45


Thr Phe Thr Gly Tyr Tyr Met His Trp Val Arg Gln Ala Pro Gly Gln
    50                  55                  60


Gly Leu Glu Trp Met Gly Trp Ile Asn Pro Asn Ser Gly Gly Thr Asn
65                  70                  75                  80
```

```
Tyr Ala Gln Lys Phe Gln Gly Arg Val Thr Met Thr Arg Asp Thr Ser
                85                  90                  95

Ile Ser Thr Ala Tyr Met Glu Leu Ser Arg Leu Arg Ser Asp Asp Thr
            100                 105                 110

Ala Val Tyr Tyr Cys Ala Arg Asp Leu Arg Arg Thr Val Val Thr Pro
        115                 120                 125

Arg Ala Tyr Tyr Gly Met Asp Val Trp Gly Gln Gly Thr Thr Val Thr
    130                 135                 140

Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly
145                 150                 155                 160

Gly Ser Gly Gly Gly Gly Ser Asp Ile Gln Leu Thr Gln Ser Pro Ser
                165                 170                 175

Thr Leu Ser Ala Ser Val Gly Asp Arg Val Thr Ile Thr Cys Gln Ala
            180                 185                 190

Ser Gln Asp Ile Ser Asn Ser Leu Asn Trp Tyr Gln Gln Lys Ala Gly
        195                 200                 205

Lys Ala Pro Lys Leu Leu Ile Tyr Asp Ala Ser Thr Leu Glu Thr Gly
    210                 215                 220

Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Ser Phe
225                 230                 235                 240

Thr Ile Ser Ser Leu Gln Pro Glu Asp Ile Ala Thr Tyr Tyr Cys Gln
                245                 250                 255

Gln His Asp Asn Leu Pro Leu Thr Phe Gly Gln Gly Thr Lys Val Glu
            260                 265                 270

Ile Lys Thr Thr Thr Pro Ala Pro Arg Pro Pro Thr Pro Ala Pro Thr
        275                 280                 285

Ile Ala Ser Gln Pro Leu Ser Leu Arg Pro Glu Ala Cys Arg Pro Ala
```

```
    290                 295                 300

Ala Gly Gly Ala Val His Thr Arg Gly Leu Asp Phe Ala Cys Asp Ile
305                 310                 315                 320

Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly Val Leu Leu Leu Ser
                325                 330                 335

Leu Val Ile Thr Leu Tyr Cys Lys Arg Gly Arg Lys Lys Leu Leu Tyr
            340                 345                 350

Ile Phe Lys Gln Pro Phe Met Arg Pro Val Gln Thr Thr Gln Glu Glu
        355                 360                 365

Asp Gly Cys Ser Cys Arg Phe Pro Glu Glu Glu Glu Gly Gly Cys Glu
    370                 375                 380

Leu Arg Val Lys Phe Ser Arg Ser Ala Asp Ala Pro Ala Tyr Lys Gln
385                 390                 395                 400

Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu
                405                 410                 415

Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg Asp Pro Glu Met Gly Gly
            420                 425                 430

Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu Tyr Asn Glu Leu Gln
        435                 440                 445

Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile Gly Met Lys Gly Glu
    450                 455                 460

Arg Arg Arg Gly Lys Gly His Asp Gly Leu Tyr Gln Gly Leu Ser Thr
465                 470                 475                 480

Ala Thr Lys Asp Thr Tyr Asp Ala Leu His Met Gln Ala Leu Pro Pro
                485                 490                 495

Arg
```

<210> 538
<211> 246
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 538
Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
1 5 10 15

Pro Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Gly Tyr
20 25 30

Tyr Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45

Gly Trp Ile Asn Pro Asn Ser Gly Gly Thr Asn Tyr Ala Gln Lys Phe
50 55 60

Gln Gly Arg Val Thr Met Thr Arg Asp Thr Ser Ile Ser Thr Ala Tyr
65 70 75 80

Met Glu Leu Ser Arg Leu Arg Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Gly Glu Trp Asp Gly Ser Tyr Tyr Tyr Asp Tyr Trp Gly Gln
100 105 110

Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly
115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Val Leu
130 135 140

Thr Gln Thr Pro Ser Ser Leu Ser Ala Ser Val Gly Asp Arg Val Thr
145 150 155 160

Ile Thr Cys Arg Ala Ser Gln Ser Ile Asn Thr Tyr Leu Asn Trp Tyr
165 170 175

Gln His Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile Tyr Ala Ala Ser
180 185 190

Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly
195 200 205

Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro Glu Asp Phe Ala
210 215 220

Thr Tyr Tyr Cys Gln Gln Ser Phe Ser Pro Leu Thr Phe Gly Gly Gly
225 230 235 240

Thr Lys Leu Glu Ile Lys
245

<210> 539
<211> 490
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 539
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val
20 25 30

Lys Lys Pro Gly Ala Pro Val Lys Val Ser Cys Lys Ala Ser Gly Tyr
35 40 45

Thr Phe Thr Gly Tyr Tyr Met His Trp Val Arg Gln Ala Pro Gly Gln
50 55 60

Gly Leu Glu Trp Met Gly Trp Ile Asn Pro Asn Ser Gly Gly Thr Asn
65 70 75 80

Tyr Ala Gln Lys Phe Gln Gly Arg Val Thr Met Thr Arg Asp Thr Ser

```
                85                  90                  95

Ile Ser Thr Ala Tyr Met Glu Leu Ser Arg Leu Arg Ser Asp Asp Thr
            100                 105                 110

Ala Val Tyr Tyr Cys Ala Arg Gly Glu Trp Asp Gly Ser Tyr Tyr Tyr
        115                 120                 125

Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly
    130                 135                 140

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly
145                 150                 155                 160

Ser Asp Ile Val Leu Thr Gln Thr Pro Ser Ser Leu Ser Ala Ser Val
                165                 170                 175

Gly Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Asn Thr
            180                 185                 190

Tyr Leu Asn Trp Tyr Gln His Lys Pro Gly Lys Ala Pro Lys Leu Leu
        195                 200                 205

Ile Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser
    210                 215                 220

Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln
225                 230                 235                 240

Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Ser Phe Ser Pro Leu
                245                 250                 255

Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys Thr Thr Thr Pro Ala
            260                 265                 270

Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser
        275                 280                 285

Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr
    290                 295                 300
```

```
Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala
305                 310                 315                 320

Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr Cys
                325                 330                 335

Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met
            340                 345                 350

Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe
        355                 360                 365

Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg
    370                 375                 380

Ser Ala Asp Ala Pro Ala Tyr Lys Gln Gly Gln Asn Gln Leu Tyr Asn
385                 390                 395                 400

Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg
                405                 410                 415

Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro
            420                 425                 430

Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala
        435                 440                 445

Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His
    450                 455                 460

Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp
465                 470                 475                 480

Ala Leu His Met Gln Ala Leu Pro Pro Arg
                485                 490
```

<210> 540
<211> 242
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 540
Gln Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr
20 25 30

Trp Met His Trp Val Arg Gln Val Pro Gly Lys Gly Leu Val Trp Val
35 40 45

Ser Arg Ile Asn Thr Asp Gly Ser Thr Thr Thr Tyr Ala Asp Ser Val
50 55 60

Glu Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Thr Leu Tyr
65 70 75 80

Leu Gln Met Asn Ser Leu Arg Asp Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Val Gly Gly His Trp Ala Val Trp Gly Gln Gly Thr Thr Val Thr Val
100 105 110

Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly
115 120 125

Ser Gly Gly Gly Gly Ser Asp Ile Gln Met Thr Gln Ser Pro Ser Thr
130 135 140

Leu Ser Ala Ser Val Gly Asp Arg Val Thr Ile Thr Cys Arg Ala Ser
145 150 155 160

Gln Ser Ile Ser Asp Arg Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys
165 170 175

Ala Pro Lys Leu Leu Ile Tyr Lys Ala Ser Ser Leu Glu Ser Gly Val
180 185 190

```
Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr
        195                 200                 205


Ile Ser Ser Leu Gln Pro Asp Asp Phe Ala Val Tyr Tyr Cys Gln Gln
    210                 215                 220


Tyr Gly His Leu Pro Met Tyr Thr Phe Gly Gln Gly Thr Lys Val Glu
225                 230                 235                 240


Ile Lys
```

<210> 541
<211> 486
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 541

```
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1               5                   10                  15


His Ala Ala Arg Pro Gln Val Gln Leu Val Glu Ser Gly Gly Gly Leu
            20                  25                  30


Val Gln Pro Gly Gly Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe
        35                  40                  45


Thr Phe Ser Ser Tyr Trp Met His Trp Val Arg Gln Val Pro Gly Lys
    50                  55                  60


Gly Leu Val Trp Val Ser Arg Ile Asn Thr Asp Gly Ser Thr Thr Thr
65                  70                  75                  80


Tyr Ala Asp Ser Val Glu Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala
                85                  90                  95


Lys Asn Thr Leu Tyr Leu Gln Met Asn Ser Leu Arg Asp Asp Asp Thr
            100                 105                 110
```

```
Ala Val Tyr Tyr Cys Val Gly Gly His Trp Ala Val Trp Gly Gln Gly
        115                 120                 125

Thr Thr Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly
    130                 135                 140

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Gln Met Thr
145                 150                 155                 160

Gln Ser Pro Ser Thr Leu Ser Ala Ser Val Gly Asp Arg Val Thr Ile
                165                 170                 175

Thr Cys Arg Ala Ser Gln Ser Ile Ser Asp Arg Leu Ala Trp Tyr Gln
            180                 185                 190

Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile Tyr Lys Ala Ser Ser
        195                 200                 205

Leu Glu Ser Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr
    210                 215                 220

Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro Asp Asp Phe Ala Val
225                 230                 235                 240

Tyr Tyr Cys Gln Gln Tyr Gly His Leu Pro Met Tyr Thr Phe Gly Gln
                245                 250                 255

Gly Thr Lys Val Glu Ile Lys Thr Thr Thr Pro Ala Pro Arg Pro Pro
            260                 265                 270

Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser Leu Arg Pro Glu
        275                 280                 285

Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr Arg Gly Leu Asp
    290                 295                 300

Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly
305                 310                 315                 320

Val Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr Cys Lys Arg Gly Arg
```

```
                325                 330                 335

Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met Arg Pro Val Gln
            340                 345                 350

Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu Glu Glu
        355                 360                 365

Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg Ser Ala Asp Ala
    370                 375                 380

Pro Ala Tyr Lys Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn Leu
385                 390                 395                 400

Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg Asp
                405                 410                 415

Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu
            420                 425                 430

Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile
        435                 440                 445

Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His Asp Gly Leu Tyr
    450                 455                 460

Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu His Met
465                 470                 475                 480

Gln Ala Leu Pro Pro Arg
                485


<210> 542
<211> 241
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 542
```

```
Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Glu Lys Pro Gly Ala
1               5                   10                  15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asp Tyr
            20                  25                  30

Tyr Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
        35                  40                  45

Gly Trp Ile Asn Pro Asn Ser Gly Gly Thr Asn Tyr Ala Gln Lys Phe
    50                  55                  60

Gln Gly Arg Val Thr Met Thr Arg Asp Thr Ser Ile Ser Thr Ala Tyr
65                  70                  75                  80

Met Glu Leu Ser Arg Leu Arg Ser Asp Asp Thr Ala Val Tyr Tyr Cys
                85                  90                  95

Ala Ser Gly Trp Asp Phe Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr
            100                 105                 110

Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly
        115                 120                 125

Gly Ser Gly Gly Gly Gly Ser Asp Ile Val Met Thr Gln Ser Pro Ser
    130                 135                 140

Ser Leu Ser Ala Ser Val Gly Asp Arg Val Thr Ile Thr Cys Arg Ala
145                 150                 155                 160

Ser Gln Ser Ile Arg Tyr Tyr Leu Ser Trp Tyr Gln Gln Lys Pro Gly
                165                 170                 175

Lys Ala Pro Lys Leu Leu Ile Tyr Thr Ala Ser Ile Leu Gln Asn Gly
            180                 185                 190

Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu
        195                 200                 205

Thr Ile Ser Ser Leu Gln Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Leu
    210                 215                 220
```

Gln Thr Tyr Thr Thr Pro Asp Phe Gly Pro Gly Thr Lys Val Glu Ile
225 230 235 240

Lys

<210> 543
<211> 485
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 543
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val
20 25 30

Glu Lys Pro Gly Ala Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr
35 40 45

Thr Phe Thr Asp Tyr Tyr Met His Trp Val Arg Gln Ala Pro Gly Gln
50 55 60

Gly Leu Glu Trp Met Gly Trp Ile Asn Pro Asn Ser Gly Gly Thr Asn
65 70 75 80

Tyr Ala Gln Lys Phe Gln Gly Arg Val Thr Met Thr Arg Asp Thr Ser
85 90 95

Ile Ser Thr Ala Tyr Met Glu Leu Ser Arg Leu Arg Ser Asp Asp Thr
100 105 110

Ala Val Tyr Tyr Cys Ala Ser Gly Trp Asp Phe Asp Tyr Trp Gly Gln
115 120 125

Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly

```
    130                 135                 140

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Val Met
145                 150                 155                 160

Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly Asp Arg Val Thr
                165                 170                 175

Ile Thr Cys Arg Ala Ser Gln Ser Ile Arg Tyr Tyr Leu Ser Trp Tyr
            180                 185                 190

Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile Tyr Thr Ala Ser
        195                 200                 205

Ile Leu Gln Asn Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly
    210                 215                 220

Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro Glu Asp Phe Ala
225                 230                 235                 240

Thr Tyr Tyr Cys Leu Gln Thr Tyr Thr Thr Pro Asp Phe Gly Pro Gly
                245                 250                 255

Thr Lys Val Glu Ile Lys Thr Thr Thr Pro Ala Pro Arg Pro Pro Thr
            260                 265                 270

Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser Leu Arg Pro Glu Ala
        275                 280                 285

Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr Arg Gly Leu Asp Phe
    290                 295                 300

Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly Val
305                 310                 315                 320

Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr Cys Lys Arg Gly Arg Lys
                325                 330                 335

Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met Arg Pro Val Gln Thr
            340                 345                 350
```

```
Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu Glu Glu Glu
        355                 360                 365


Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg Ser Ala Asp Ala Pro
    370                 375                 380


Ala Tyr Lys Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn Leu Gly
385                 390                 395                 400


Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg Asp Pro
                405                 410                 415


Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu Tyr
            420                 425                 430


Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile Gly
        435                 440                 445


Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His Asp Gly Leu Tyr Gln
    450                 455                 460


Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu His Met Gln
465                 470                 475                 480


Ala Leu Pro Pro Arg
                485


<210> 544
<211> 253
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 544
Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
1               5                   10                  15


Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Ser Tyr
            20                  25                  30
```

```
Tyr Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
        35                  40                  45

Gly Ile Ile Asn Pro Ser Gly Gly Ser Thr Ser Tyr Ala Gln Lys Phe
    50                  55                  60

Gln Gly Arg Val Thr Met Thr Arg Asp Thr Ser Thr Ser Thr Val Tyr
65                  70                  75                  80

Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
                85                  90                  95

Ala Arg Tyr Arg Leu Ile Ala Val Ala Gly Asp Tyr Tyr Tyr Tyr Gly
            100                 105                 110

Met Asp Val Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly
        115                 120                 125

Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly
    130                 135                 140

Gly Ser Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Val Ser Ala Ser
145                 150                 155                 160

Val Gly Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Gly Val Gly
                165                 170                 175

Arg Trp Leu Ala Trp Tyr Gln Gln Lys Pro Gly Thr Ala Pro Lys Leu
            180                 185                 190

Leu Ile Tyr Ala Ala Ser Thr Leu Gln Ser Gly Val Pro Ser Arg Phe
        195                 200                 205

Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Asn Asn Leu
    210                 215                 220

Gln Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Ala Asn Ser Phe
225                 230                 235                 240
```

Pro Leu Thr Phe Gly Gly Gly Thr Arg Leu Glu Ile Lys
245 250

<210> 545
<211> 497
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 545
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val
20 25 30

Lys Lys Pro Gly Ala Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr
35 40 45

Thr Phe Thr Ser Tyr Tyr Met His Trp Val Arg Gln Ala Pro Gly Gln
50 55 60

Gly Leu Glu Trp Met Gly Ile Ile Asn Pro Ser Gly Gly Ser Thr Ser
65 70 75 80

Tyr Ala Gln Lys Phe Gln Gly Arg Val Thr Met Thr Arg Asp Thr Ser
85 90 95

Thr Ser Thr Val Tyr Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr
100 105 110

Ala Val Tyr Tyr Cys Ala Arg Tyr Arg Leu Ile Ala Val Ala Gly Asp
115 120 125

Tyr Tyr Tyr Tyr Gly Met Asp Val Trp Gly Gln Gly Thr Met Val Thr
130 135 140

Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly
145 150 155 160

```
Gly Ser Gly Gly Gly Gly Ser Asp Ile Gln Met Thr Gln Ser Pro Ser
                165                 170                 175

Ser Val Ser Ala Ser Val Gly Asp Arg Val Thr Ile Thr Cys Arg Ala
            180                 185                 190

Ser Gln Gly Val Gly Arg Trp Leu Ala Trp Tyr Gln Gln Lys Pro Gly
        195                 200                 205

Thr Ala Pro Lys Leu Leu Ile Tyr Ala Ala Ser Thr Leu Gln Ser Gly
    210                 215                 220

Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu
225                 230                 235                 240

Thr Ile Asn Asn Leu Gln Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Gln
                245                 250                 255

Gln Ala Asn Ser Phe Pro Leu Thr Phe Gly Gly Gly Thr Arg Leu Glu
            260                 265                 270

Ile Lys Thr Thr Thr Pro Ala Pro Arg Pro Pro Thr Pro Ala Pro Thr
        275                 280                 285

Ile Ala Ser Gln Pro Leu Ser Leu Arg Pro Glu Ala Cys Arg Pro Ala
    290                 295                 300

Ala Gly Gly Ala Val His Thr Arg Gly Leu Asp Phe Ala Cys Asp Ile
305                 310                 315                 320

Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly Val Leu Leu Leu Ser
                325                 330                 335

Leu Val Ile Thr Leu Tyr Cys Lys Arg Gly Arg Lys Lys Leu Leu Tyr
            340                 345                 350

Ile Phe Lys Gln Pro Phe Met Arg Pro Val Gln Thr Thr Gln Glu Glu
        355                 360                 365

Asp Gly Cys Ser Cys Arg Phe Pro Glu Glu Glu Glu Gly Gly Cys Glu
```

370 375 380

Leu Arg Val Lys Phe Ser Arg Ser Ala Asp Ala Pro Ala Tyr Lys Gln
385 390 395 400

Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu
405 410 415

Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg Asp Pro Glu Met Gly Gly
420 425 430

Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu Tyr Asn Glu Leu Gln
435 440 445

Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile Gly Met Lys Gly Glu
450 455 460

Arg Arg Arg Gly Lys Gly His Asp Gly Leu Tyr Gln Gly Leu Ser Thr
465 470 475 480

Ala Thr Lys Asp Thr Tyr Asp Ala Leu His Met Gln Ala Leu Pro Pro
485 490 495

Arg

<210> 546
<211> 250
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 546
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

```
Ala 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 Arg Trp Lys Val Ser Ser Ser Ser Pro Ala Phe Asp Tyr Trp Gly
            100                 105                 110

Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly
        115                 120                 125

Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Ile Val
    130                 135                 140

Leu Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly Glu Arg Ala
145                 150                 155                 160

Ile Leu Ser Cys Arg Ala Ser Gln Ser Val Tyr Thr Lys Tyr Leu Gly
                165                 170                 175

Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile Tyr Asp
            180                 185                 190

Ala Ser Thr Arg Ala Thr Gly Ile Pro Asp Arg Phe Ser Gly Ser Gly
        195                 200                 205

Ser Gly Thr Asp Phe Thr Leu Thr Ile Asn Arg Leu Glu Pro Glu Asp
    210                 215                 220

Phe Ala Val Tyr Tyr Cys Gln His Tyr Gly Gly Ser Pro Leu Ile Thr
225                 230                 235                 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys
                245                 250
```

<210> 547
<211> 494
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 547
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Gln Val Gln Leu Val Gln Ser Gly Gly Gly Val
20 25 30

Val Gln Pro Gly Arg Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe
35 40 45

Thr Phe Ser Ser Tyr Ala Met His Trp Val Arg Gln Ala Pro Gly Lys
50 55 60

Gly Leu Glu Trp Val Ala Val Ile Ser Tyr Asp Gly Ser Asn Lys Tyr
65 70 75 80

Tyr Ala Asp Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser
85 90 95

Lys Asn Thr Leu Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr
100 105 110

Ala Val Tyr Tyr Cys Ala Arg Trp Lys Val Ser Ser Ser Ser Pro Ala
115 120 125

Phe Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly
130 135 140

Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly
145 150 155 160

Gly Ser Glu Ile Val Leu Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser

```
                165                 170                 175

Pro Gly Glu Arg Ala Ile Leu Ser Cys Arg Ala Ser Gln Ser Val Tyr
            180                 185                 190

Thr Lys Tyr Leu Gly Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg
        195                 200                 205

Leu Leu Ile Tyr Asp Ala Ser Thr Arg Ala Thr Gly Ile Pro Asp Arg
    210                 215                 220

Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Asn Arg
225                 230                 235                 240

Leu Glu Pro Glu Asp Phe Ala Val Tyr Tyr Cys Gln His Tyr Gly Gly
                245                 250                 255

Ser Pro Leu Ile Thr Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Thr
            260                 265                 270

Thr Thr Pro Ala Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser
        275                 280                 285

Gln Pro Leu Ser Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly
    290                 295                 300

Ala Val His Thr Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp
305                 310                 315                 320

Ala Pro Leu Ala Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile
                325                 330                 335

Thr Leu Tyr Cys Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys
            340                 345                 350

Gln Pro Phe Met Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys
        355                 360                 365

Ser Cys Arg Phe Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg Val
    370                 375                 380
```

```
Lys Phe Ser Arg Ser Ala Asp Ala Pro Ala Tyr Lys Gln Gly Gln Asn
385                 390                 395                 400


Gln Leu Tyr Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val
                405                 410                 415


Leu Asp Lys Arg Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg
            420                 425                 430


Arg Lys Asn Pro Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys
        435                 440                 445


Met Ala Glu Ala Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg
    450                 455                 460


Gly Lys Gly His Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys
465                 470                 475                 480


Asp Thr Tyr Asp Ala Leu His Met Gln Ala Leu Pro Pro Arg
                485                 490


<210> 548
<211> 246
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 548
Gln Val Gln Leu Gln Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
1               5                   10                  15


Ser Val Lys Val Ser Cys Lys Thr Ser Gly Tyr Pro Phe Thr Gly Tyr
            20                  25                  30


Ser Leu His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
        35                  40                  45


Gly Trp Ile Asn Pro Asn Ser Gly Gly Thr Asn Tyr Ala Gln Lys Phe
    50                  55                  60
```

```
Gln Gly Arg Val Thr Met Thr Arg Asp Thr Ser Ile Ser Thr Ala Tyr
65                  70                  75                  80

Met Glu Leu Ser Arg Leu Arg Ser Asp Asp Thr Ala Val Tyr Tyr Cys
                85                  90                  95

Ala Arg Asp His Tyr Gly Gly Asn Ser Leu Phe Tyr Trp Gly Gln Gly
            100                 105                 110

Thr Leu Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly
        115                 120                 125

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Gln Leu Thr
    130                 135                 140

Gln Ser Pro Ser Ser Ile Ser Ala Ser Val Gly Asp Thr Val Ser Ile
145                 150                 155                 160

Thr Cys Arg Ala Ser Gln Asp Ser Gly Thr Trp Leu Ala Trp Tyr Gln
                165                 170                 175

Gln Lys Pro Gly Lys Ala Pro Asn Leu Leu Met Tyr Asp Ala Ser Thr
            180                 185                 190

Leu Glu Asp Gly Val Pro Ser Arg Phe Ser Gly Ser Ala Ser Gly Thr
        195                 200                 205

Glu Phe Thr Leu Thr Val Asn Arg Leu Gln Pro Glu Asp Ser Ala Thr
    210                 215                 220

Tyr Tyr Cys Gln Gln Tyr Asn Ser Tyr Pro Leu Thr Phe Gly Gly Gly
225                 230                 235                 240

Thr Lys Val Asp Ile Lys
                245
```

<210> 549
<211> 490
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 549
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Gln Val Gln Leu Gln Gln Ser Gly Ala Glu Val
20 25 30

Lys Lys Pro Gly Ala Ser Val Lys Val Ser Cys Lys Thr Ser Gly Tyr
35 40 45

Pro Phe Thr Gly Tyr Ser Leu His Trp Val Arg Gln Ala Pro Gly Gln
50 55 60

Gly Leu Glu Trp Met Gly Trp Ile Asn Pro Asn Ser Gly Gly Thr Asn
65 70 75 80

Tyr Ala Gln Lys Phe Gln Gly Arg Val Thr Met Thr Arg Asp Thr Ser
85 90 95

Ile Ser Thr Ala Tyr Met Glu Leu Ser Arg Leu Arg Ser Asp Asp Thr
100 105 110

Ala Val Tyr Tyr Cys Ala Arg Asp His Tyr Gly Gly Asn Ser Leu Phe
115 120 125

Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly Gly
130 135 140

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
145 150 155 160

Asp Ile Gln Leu Thr Gln Ser Pro Ser Ser Ile Ser Ala Ser Val Gly
165 170 175

Asp Thr Val Ser Ile Thr Cys Arg Ala Ser Gln Asp Ser Gly Thr Trp
180 185 190

```
Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Asn Leu Leu Met
        195                 200                 205

Tyr Asp Ala Ser Thr Leu Glu Asp Gly Val Pro Ser Arg Phe Ser Gly
    210                 215                 220

Ser Ala Ser Gly Thr Glu Phe Thr Leu Thr Val Asn Arg Leu Gln Pro
225                 230                 235                 240

Glu Asp Ser Ala Thr Tyr Tyr Cys Gln Gln Tyr Asn Ser Tyr Pro Leu
                245                 250                 255

Thr Phe Gly Gly Gly Thr Lys Val Asp Ile Lys Thr Thr Thr Pro Ala
            260                 265                 270

Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser
        275                 280                 285

Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr
    290                 295                 300

Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala
305                 310                 315                 320

Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr Cys
                325                 330                 335

Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met
            340                 345                 350

Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe
        355                 360                 365

Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg
    370                 375                 380

Ser Ala Asp Ala Pro Ala Tyr Lys Gln Gly Gln Asn Gln Leu Tyr Asn
385                 390                 395                 400

Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg
```

405 410 415

Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro
420 425 430

Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala
435 440 445

Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His
450 455 460

Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp
465 470 475 480

Ala Leu His Met Gln Ala Leu Pro Pro Arg
485 490

<210> 550
<211> 248
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 550
Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
1 5 10 15

Ser Val Glu Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Ser Tyr
20 25 30

Tyr Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45

Gly Ile Ile Asn Pro Ser Gly Gly Ser Thr Gly Tyr Ala Gln Lys Phe
50 55 60

Gln Gly Arg Val Thr Met Thr Arg Asp Thr Ser Thr Ser Thr Val His
65 70 75 80

```
Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
                85                  90                  95

Ala Arg Gly Gly Tyr Ser Ser Ser Ser Asp Ala Phe Asp Ile Trp Gly
            100                 105                 110

Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly
        115                 120                 125

Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Gln
    130                 135                 140

Met Thr Gln Ser Pro Pro Ser Leu Ser Ala Ser Val Gly Asp Arg Val
145                 150                 155                 160

Thr Ile Thr Cys Arg Ala Ser Gln Asp Ile Ser Ser Ala Leu Ala Trp
                165                 170                 175

Tyr Gln Gln Lys Pro Gly Thr Pro Pro Lys Leu Leu Ile Tyr Asp Ala
            180                 185                 190

Ser Ser Leu Glu Ser Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser
        195                 200                 205

Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro Glu Asp Phe
    210                 215                 220

Ala Thr Tyr Tyr Cys Gln Gln Phe Ser Ser Tyr Pro Leu Thr Phe Gly
225                 230                 235                 240

Gly Gly Thr Arg Leu Glu Ile Lys
                245
```

<210> 551
<211> 492
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 551
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1   5   10   15

His Ala Ala Arg Pro Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val
            20   25   30

Lys Lys Pro Gly Ala Ser Val Glu Val Ser Cys Lys Ala Ser Gly Tyr
        35   40   45

Thr Phe Thr Ser Tyr Tyr Met His Trp Val Arg Gln Ala Pro Gly Gln
    50   55   60

Gly Leu Glu Trp Met Gly Ile Ile Asn Pro Ser Gly Gly Ser Thr Gly
65   70   75   80

Tyr Ala Gln Lys Phe Gln Gly Arg Val Thr Met Thr Arg Asp Thr Ser
                85   90   95

Thr Ser Thr Val His Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr
            100   105   110

Ala Val Tyr Tyr Cys Ala Arg Gly Gly Tyr Ser Ser Ser Ser Asp Ala
        115   120   125

Phe Asp Ile Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly
    130   135   140

Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly
145   150   155   160

Gly Ser Asp Ile Gln Met Thr Gln Ser Pro Pro Ser Leu Ser Ala Ser
                165   170   175

Val Gly Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Asp Ile Ser
            180   185   190

Ser Ala Leu Ala Trp Tyr Gln Gln Lys Pro Gly Thr Pro Pro Lys Leu
        195   200   205

Leu Ile Tyr Asp Ala Ser Ser Leu Glu Ser Gly Val Pro Ser Arg Phe

```
    210                 215                 220

Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu
225                 230                 235                 240

Gln Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Phe Ser Ser Tyr
                245                 250                 255

Pro Leu Thr Phe Gly Gly Gly Thr Arg Leu Glu Ile Lys Thr Thr Thr
            260                 265                 270

Pro Ala Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro
        275                 280                 285

Leu Ser Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala Val
    290                 295                 300

His Thr Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro
305                 310                 315                 320

Leu Ala Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr Leu
                325                 330                 335

Tyr Cys Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro
            340                 345                 350

Phe Met Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys
        355                 360                 365

Arg Phe Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg Val Lys Phe
    370                 375                 380

Ser Arg Ser Ala Asp Ala Pro Ala Tyr Lys Gln Gly Gln Asn Gln Leu
385                 390                 395                 400

Tyr Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp
                405                 410                 415

Lys Arg Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys
            420                 425                 430
```

Asn Pro Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala
435 440 445

Glu Ala Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys
450 455 460

Gly His Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr
465 470 475 480

Tyr Asp Ala Leu His Met Gln Ala Leu Pro Pro Arg
485 490

<210> 552
<211> 255
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 552
Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Ser Tyr
20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45

Gly Trp Ile Ser Ala Tyr Asn Gly Asn Thr Asn Tyr Ala Gln Lys Leu
50 55 60

Gln Gly Arg Val Thr Met Thr Thr Asp Thr Ser Thr Ser Thr Ala Tyr
65 70 75 80

Met Glu Leu Arg Ser Leu Arg Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Val Ala Gly Gly Ile Tyr Tyr Tyr Tyr Gly Met Asp Val Trp
100 105 110

```
Gly Gln Gly Thr Thr Ile Thr Val Ser Ser Gly Gly Gly Gly Ser Gly
        115                 120                 125


Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile
    130                 135                 140


Val Met Thr Gln Thr Pro Asp Ser Leu Ala Val Ser Leu Gly Glu Arg
145                 150                 155                 160


Ala Thr Ile Ser Cys Lys Ser Ser His Ser Val Leu Tyr Asn Arg Asn
                165                 170                 175


Asn Lys Asn Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro
            180                 185                 190


Lys Leu Leu Phe Tyr Trp Ala Ser Thr Arg Lys Ser Gly Val Pro Asp
        195                 200                 205


Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser
    210                 215                 220


Ser Leu Gln Pro Glu Asp Phe Ala Thr Tyr Phe Cys Gln Gln Thr Gln
225                 230                 235                 240


Thr Phe Pro Leu Thr Phe Gly Gln Gly Thr Arg Leu Glu Ile Asn
                245                 250                 255


<210> 553
<211> 499
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 553
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1               5                   10                  15


His Ala Ala Arg Pro Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val
```

```
            20                  25                  30

Lys Lys Pro Gly Ala Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr
        35                  40                  45

Thr Phe Thr Ser Tyr Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln
    50                  55                  60

Gly Leu Glu Trp Met Gly Trp Ile Ser Ala Tyr Asn Gly Asn Thr Asn
65                  70                  75                  80

Tyr Ala Gln Lys Leu Gln Gly Arg Val Thr Met Thr Thr Asp Thr Ser
                85                  90                  95

Thr Ser Thr Ala Tyr Met Glu Leu Arg Ser Leu Arg Ser Asp Asp Thr
            100                 105                 110

Ala Val Tyr Tyr Cys Ala Arg Val Ala Gly Gly Ile Tyr Tyr Tyr Tyr
        115                 120                 125

Gly Met Asp Val Trp Gly Gln Gly Thr Thr Ile Thr Val Ser Ser Gly
    130                 135                 140

Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly
145                 150                 155                 160

Gly Gly Ser Asp Ile Val Met Thr Gln Thr Pro Asp Ser Leu Ala Val
                165                 170                 175

Ser Leu Gly Glu Arg Ala Thr Ile Ser Cys Lys Ser Ser His Ser Val
            180                 185                 190

Leu Tyr Asn Arg Asn Asn Lys Asn Tyr Leu Ala Trp Tyr Gln Gln Lys
        195                 200                 205

Pro Gly Gln Pro Pro Lys Leu Leu Phe Tyr Trp Ala Ser Thr Arg Lys
    210                 215                 220

Ser Gly Val Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe
225                 230                 235                 240
```

```
Thr Leu Thr Ile Ser Ser Leu Gln Pro Glu Asp Phe Ala Thr Tyr Phe
                245                 250                 255

Cys Gln Gln Thr Gln Thr Phe Pro Leu Thr Phe Gly Gln Gly Thr Arg
            260                 265                 270

Leu Glu Ile Asn Thr Thr Thr Pro Ala Pro Arg Pro Pro Thr Pro Ala
        275                 280                 285

Pro Thr Ile Ala Ser Gln Pro Leu Ser Leu Arg Pro Glu Ala Cys Arg
    290                 295                 300

Pro Ala Ala Gly Gly Ala Val His Thr Arg Gly Leu Asp Phe Ala Cys
305                 310                 315                 320

Asp Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly Val Leu Leu
                325                 330                 335

Leu Ser Leu Val Ile Thr Leu Tyr Cys Lys Arg Gly Arg Lys Lys Leu
            340                 345                 350

Leu Tyr Ile Phe Lys Gln Pro Phe Met Arg Pro Val Gln Thr Thr Gln
        355                 360                 365

Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu Glu Glu Glu Gly Gly
    370                 375                 380

Cys Glu Leu Arg Val Lys Phe Ser Arg Ser Ala Asp Ala Pro Ala Tyr
385                 390                 395                 400

Lys Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn Leu Gly Arg Arg
                405                 410                 415

Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg Asp Pro Glu Met
            420                 425                 430

Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu Tyr Asn Glu
        435                 440                 445

Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile Gly Met Lys
```

```
    450                 455                 460

Gly Glu Arg Arg Arg Gly Lys Gly His Asp Gly Leu Tyr Gln Gly Leu
465                 470                 475                 480

Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu His Met Gln Ala Leu
                485                 490                 495

Pro Pro Arg
```

<210> 554
<211> 241
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 554

```
Gln Val Gln Leu Gln Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
1               5                   10                  15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Gly Tyr
            20                  25                  30

Tyr Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
        35                  40                  45

Gly Trp Ile Asn Pro Asn Ser Gly Gly Thr Asn Tyr Ala Gln Asn Phe
    50                  55                  60

Gln Gly Arg Val Thr Met Thr Arg Asp Thr Ser Ile Ser Thr Ala Tyr
65                  70                  75                  80

Met Glu Leu Arg Arg Leu Arg Ser Asp Asp Thr Ala Val Tyr Tyr Cys
                85                  90                  95

Ala Ser Gly Trp Asp Phe Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr
            100                 105                 110
```

```
Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly
        115                 120                 125


Gly Ser Gly Gly Gly Gly Ser Asp Ile Arg Met Thr Gln Ser Pro Ser
    130                 135                 140


Ser Leu Ser Ala Ser Val Gly Asp Arg Val Thr Ile Thr Cys Arg Ala
145                 150                 155                 160


Ser Gln Ser Ile Arg Tyr Tyr Leu Ser Trp Tyr Gln Gln Lys Pro Gly
                165                 170                 175


Lys Ala Pro Lys Leu Leu Ile Tyr Thr Ala Ser Ile Leu Gln Asn Gly
            180                 185                 190


Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu
        195                 200                 205


Thr Ile Ser Ser Leu Gln Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Leu
    210                 215                 220


Gln Thr Tyr Thr Thr Pro Asp Phe Gly Pro Gly Thr Lys Val Glu Ile
225                 230                 235                 240


Lys
```

<210> 555
<211> 485
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 555

```
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1               5                   10                  15


His Ala Ala Arg Pro Gln Val Gln Leu Gln Gln Ser Gly Ala Glu Val
            20                  25                  30
```

```
Lys Lys Pro Gly Ala Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr
        35                  40                  45

Thr Phe Thr Gly Tyr Tyr Met His Trp Val Arg Gln Ala Pro Gly Gln
    50                  55                  60

Gly Leu Glu Trp Met Gly Trp Ile Asn Pro Asn Ser Gly Gly Thr Asn
65                  70                  75                  80

Tyr Ala Gln Asn Phe Gln Gly Arg Val Thr Met Thr Arg Asp Thr Ser
                85                  90                  95

Ile Ser Thr Ala Tyr Met Glu Leu Arg Arg Leu Arg Ser Asp Asp Thr
            100                 105                 110

Ala Val Tyr Tyr Cys Ala Ser Gly Trp Asp Phe Asp Tyr Trp Gly Gln
        115                 120                 125

Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly
    130                 135                 140

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Arg Met
145                 150                 155                 160

Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly Asp Arg Val Thr
                165                 170                 175

Ile Thr Cys Arg Ala Ser Gln Ser Ile Arg Tyr Tyr Leu Ser Trp Tyr
            180                 185                 190

Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile Tyr Thr Ala Ser
        195                 200                 205

Ile Leu Gln Asn Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly
    210                 215                 220

Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro Glu Asp Phe Ala
225                 230                 235                 240

Thr Tyr Tyr Cys Leu Gln Thr Tyr Thr Thr Pro Asp Phe Gly Pro Gly
```

```
               245                 250                 255

Thr Lys Val Glu Ile Lys Thr Thr Thr Pro Ala Pro Arg Pro Pro Thr
            260                 265                 270

Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser Leu Arg Pro Glu Ala
        275                 280                 285

Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr Arg Gly Leu Asp Phe
    290                 295                 300

Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly Val
305                 310                 315                 320

Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr Cys Lys Arg Gly Arg Lys
               325                 330                 335

Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met Arg Pro Val Gln Thr
            340                 345                 350

Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu Glu Glu Glu
        355                 360                 365

Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg Ser Ala Asp Ala Pro
    370                 375                 380

Ala Tyr Lys Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn Leu Gly
385                 390                 395                 400

Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg Asp Pro
               405                 410                 415

Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu Tyr
            420                 425                 430

Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile Gly
        435                 440                 445

Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His Asp Gly Leu Tyr Gln
    450                 455                 460
```

Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu His Met Gln
465 470 475 480

Ala Leu Pro Pro Arg
485

<210> 556
<211> 246
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 556
Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Gly Tyr
20 25 30

Tyr Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45

Gly Arg Ile Asn Pro Asn Ser Gly Gly Thr Asn Tyr Ala Gln Lys Phe
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 Thr Thr Thr Ser Tyr Ala Phe Asp Ile Trp Gly Gln Gly Thr
100 105 110

Met Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
115 120 125

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Gln Leu Thr Gln
130 135 140

```
Ser Pro Ser Thr Leu Ser Ala Ser Val Gly Asp Arg Val Thr Ile Thr
145                 150                 155                 160


Cys Arg Ala Ser Gln Ser Ile Ser Thr Trp Leu Ala Trp Tyr Gln Gln
                165                 170                 175


Lys Pro Gly Lys Ala Pro Asn Leu Leu Ile Tyr Lys Ala Ser Thr Leu
            180                 185                 190


Glu Ser Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Glu
        195                 200                 205


Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro Asp Asp Phe Ala Thr Tyr
    210                 215                 220


Tyr Cys Gln Gln Tyr Asn Thr Tyr Ser Pro Tyr Thr Phe Gly Gln Gly
225                 230                 235                 240


Thr Lys Leu Glu Ile Lys
                245


<210> 557
<211> 490
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 557
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1               5                   10                  15


His Ala Ala Arg Pro Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val
            20                  25                  30


Lys Lys Pro Gly Ala Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr
        35                  40                  45


Thr Phe Thr Gly Tyr Tyr Met His Trp Val Arg Gln Ala Pro Gly Gln
```

```
    50                  55                  60

Gly Leu Glu Trp Met Gly Arg Ile Asn Pro Asn Ser Gly Gly Thr Asn
65                  70                  75                  80

Tyr Ala Gln Lys Phe Gln Gly Arg Val Thr Met Thr Thr Asp Thr Ser
                85                  90                  95

Thr Ser Thr Ala Tyr Met Glu Leu Arg Ser Leu Arg Ser Asp Asp Thr
            100                 105                 110

Ala Val Tyr Tyr Cys Ala Arg Thr Thr Thr Ser Tyr Ala Phe Asp Ile
        115                 120                 125

Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly Gly Ser
    130                 135                 140

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp
145                 150                 155                 160

Ile Gln Leu Thr Gln Ser Pro Ser Thr Leu Ser Ala Ser Val Gly Asp
                165                 170                 175

Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Ser Thr Trp Leu
            180                 185                 190

Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Asn Leu Leu Ile Tyr
        195                 200                 205

Lys Ala Ser Thr Leu Glu Ser Gly Val Pro Ser Arg Phe Ser Gly Ser
    210                 215                 220

Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro Asp
225                 230                 235                 240

Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Tyr Asn Thr Tyr Ser Pro Tyr
                245                 250                 255

Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys Thr Thr Thr Pro Ala
            260                 265                 270
```

```
Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser
        275                 280                 285

Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr
    290                 295                 300

Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala
305                 310                 315                 320

Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr Cys
                325                 330                 335

Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met
            340                 345                 350

Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe
        355                 360                 365

Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg
    370                 375                 380

Ser Ala Asp Ala Pro Ala Tyr Lys Gln Gly Gln Asn Gln Leu Tyr Asn
385                 390                 395                 400

Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg
                405                 410                 415

Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro
            420                 425                 430

Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala
        435                 440                 445

Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His
    450                 455                 460

Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp
465                 470                 475                 480

Ala Leu His Met Gln Ala Leu Pro Pro Arg
```

485 490

<210> 558
<211> 249
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 558
Gln Val Gln Leu Val Gln Ser Gly Gly Gly Leu Val Lys Pro Gly Gly
1 5 10 15

Ser Leu Arg Leu Ser Cys Glu Ala Ser Gly Phe Ile Phe Ser Asp Tyr
20 25 30

Tyr Met Gly Trp Ile Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45

Ser Tyr Ile Gly Arg Ser Gly Ser Ser Met Tyr Tyr Ala Asp Ser Val
50 55 60

Lys Gly Arg Phe Thr Phe 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 Ala Ser Pro Val Val Ala Ala Thr Glu Asp Phe Gln His Trp Gly
100 105 110

Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly
115 120 125

Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Val
130 135 140

Met Thr Gln Thr Pro Ala Thr Leu Ser Leu Ser Pro Gly Glu Arg Ala
145 150 155 160

```
Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Ser Asn Tyr Leu Ala
                165                 170                 175


Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Leu Phe Gly
            180                 185                 190


Ala Ser Thr Arg Ala Thr Gly Ile Pro Asp Arg Phe Ser Gly Ser Gly
        195                 200                 205


Ser Gly Thr Asp Phe Thr Leu Thr Ile Asn Arg Leu Glu Pro Glu Asp
    210                 215                 220


Phe Ala Met Tyr Tyr Cys Gln Gln Tyr Gly Ser Ala Pro Val Thr Phe
225                 230                 235                 240


Gly Gln Gly Thr Lys Leu Glu Ile Lys
                245
```

<210> 559
<211> 493
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 559

```
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1               5                   10                  15


His Ala Ala Arg Pro Gln Val Gln Leu Val Gln Ser Gly Gly Gly Leu
            20                  25                  30


Val Lys Pro Gly Gly Ser Leu Arg Leu Ser Cys Glu Ala Ser Gly Phe
        35                  40                  45


Ile Phe Ser Asp Tyr Tyr Met Gly Trp Ile Arg Gln Ala Pro Gly Lys
    50                  55                  60


Gly Leu Glu Trp Val Ser Tyr Ile Gly Arg Ser Gly Ser Ser Met Tyr
65                  70                  75                  80
```

```
Tyr Ala Asp Ser Val Lys Gly Arg Phe Thr Phe Ser Arg Asp Asn Ala
                85                  90                  95

Lys Asn Ser Leu Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr
            100                 105                 110

Ala Val Tyr Tyr Cys Ala Ala Ser Pro Val Val Ala Ala Thr Glu Asp
        115                 120                 125

Phe Gln His Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly
    130                 135                 140

Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly
145                 150                 155                 160

Gly Ser Asp Ile Val Met Thr Gln Thr Pro Ala Thr Leu Ser Leu Ser
                165                 170                 175

Pro Gly Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr
            180                 185                 190

Ser Asn Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg
        195                 200                 205

Leu Leu Leu Phe Gly Ala Ser Thr Arg Ala Thr Gly Ile Pro Asp Arg
    210                 215                 220

Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Asn Arg
225                 230                 235                 240

Leu Glu Pro Glu Asp Phe Ala Met Tyr Tyr Cys Gln Gln Tyr Gly Ser
                245                 250                 255

Ala Pro Val Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys Thr Thr
            260                 265                 270

Thr Pro Ala Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln
        275                 280                 285

Pro Leu Ser Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala
```

```
    290                 295                 300

Val His Thr Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala
305                 310                 315                 320

Pro Leu Ala Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr
                325                 330                 335

Leu Tyr Cys Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln
            340                 345                 350

Pro Phe Met Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser
        355                 360                 365

Cys Arg Phe Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg Val Lys
    370                 375                 380

Phe Ser Arg Ser Ala Asp Ala Pro Ala Tyr Lys Gln Gly Gln Asn Gln
385                 390                 395                 400

Leu Tyr Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu
                405                 410                 415

Asp Lys Arg Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg
            420                 425                 430

Lys Asn Pro Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met
        435                 440                 445

Ala Glu Ala Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly
    450                 455                 460

Lys Gly His Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp
465                 470                 475                 480

Thr Tyr Asp Ala Leu His Met Gln Ala Leu Pro Pro Arg
                485                 490

<210> 560
<211> 249
<212> PRT
```

<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 560
Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Arg Ala Pro Gly Ala
1 5 10 15

Ser Val Lys Ile Ser Cys Lys Ala Ser Gly Phe Thr Phe Arg Gly Tyr
20 25 30

Tyr Ile His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45

Gly Ile Ile Asn Pro Ser Gly Gly Ser Arg Ala Tyr Ala Gln Lys Phe
50 55 60

Gln Gly Arg Val Thr Met Thr Arg Asp Thr Ser Thr Ser Thr Val Tyr
65 70 75 80

Met Glu Leu Ser Ser Leu Arg Ser Asp Asp Thr Ala Met Tyr Tyr Cys
85 90 95

Ala Arg Thr Ala Ser Cys Gly Gly Asp Cys Tyr Tyr Leu Asp Tyr Trp
100 105 110

Gly Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly
115 120 125

Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile
130 135 140

Gln Met Thr Gln Ser Pro Pro Thr Leu Ser Ala Ser Val Gly Asp Arg
145 150 155 160

Val Thr Ile Thr Cys Arg Ala Ser Glu Asn Val Asn Ile Trp Leu Ala
165 170 175

Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile Tyr Lys
180 185 190

```
Ser Ser Ser Leu Ala Ser Gly Val Pro Ser Arg Phe Ser Gly Ser Gly
        195                 200                 205


Ser Gly Ala Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro Asp Asp
    210                 215                 220


Phe Ala Thr Tyr Tyr Cys Gln Gln Tyr Gln Ser Tyr Pro Leu Thr Phe
225                 230                 235                 240


Gly Gly Gly Thr Lys Val Asp Ile Lys
                245


<210> 561
<211> 493
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 561
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1               5                   10                  15


His Ala Ala Arg Pro Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val
            20                  25                  30


Arg Ala Pro Gly Ala Ser Val Lys Ile Ser Cys Lys Ala Ser Gly Phe
        35                  40                  45


Thr Phe Arg Gly Tyr Tyr Ile His Trp Val Arg Gln Ala Pro Gly Gln
    50                  55                  60


Gly Leu Glu Trp Met Gly Ile Ile Asn Pro Ser Gly Gly Ser Arg Ala
65                  70                  75                  80


Tyr Ala Gln Lys Phe Gln Gly Arg Val Thr Met Thr Arg Asp Thr Ser
                85                  90                  95


Thr Ser Thr Val Tyr Met Glu Leu Ser Ser Leu Arg Ser Asp Asp Thr
```

```
            100                 105                 110

Ala Met Tyr Tyr Cys Ala Arg Thr Ala Ser Cys Gly Gly Asp Cys Tyr
        115                 120                 125

Tyr Leu Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Gly
    130                 135                 140

Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly
145                 150                 155                 160

Gly Gly Ser Asp Ile Gln Met Thr Gln Ser Pro Pro Thr Leu Ser Ala
                165                 170                 175

Ser Val Gly Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Glu Asn Val
            180                 185                 190

Asn Ile Trp Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys
        195                 200                 205

Leu Leu Ile Tyr Lys Ser Ser Ser Leu Ala Ser Gly Val Pro Ser Arg
    210                 215                 220

Phe Ser Gly Ser Gly Ser Gly Ala Glu Phe Thr Leu Thr Ile Ser Ser
225                 230                 235                 240

Leu Gln Pro Asp Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Tyr Gln Ser
                245                 250                 255

Tyr Pro Leu Thr Phe Gly Gly Gly Thr Lys Val Asp Ile Lys Thr Thr
            260                 265                 270

Thr Pro Ala Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln
        275                 280                 285

Pro Leu Ser Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala
    290                 295                 300

Val His Thr Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala
305                 310                 315                 320
```

```
Pro Leu Ala Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr
                325                 330                 335

Leu Tyr Cys Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln
            340                 345                 350

Pro Phe Met Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser
        355                 360                 365

Cys Arg Phe Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg Val Lys
    370                 375                 380

Phe Ser Arg Ser Ala Asp Ala Pro Ala Tyr Lys Gln Gly Gln Asn Gln
385                 390                 395                 400

Leu Tyr Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu
                405                 410                 415

Asp Lys Arg Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg
            420                 425                 430

Lys Asn Pro Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met
        435                 440                 445

Ala Glu Ala Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly
    450                 455                 460

Lys Gly His Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp
465                 470                 475                 480

Thr Tyr Asp Ala Leu His Met Gln Ala Leu Pro Pro Arg
                485                 490
```

<210> 562
<211> 244
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 562

```
Gln Val Gln Leu Val Gln 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 Ser Trp Asn Ser Gly Ser Ile Gly Tyr Ala Asp Ser Val
    50                  55                  60


Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Ser Leu Tyr
65                  70                  75                  80


Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
                85                  90                  95


Ala Lys Asp Gly Ser Ser Ser Trp Ser Trp Gly Tyr Phe Asp Tyr Trp
            100                 105                 110


Gly Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly
        115                 120                 125


Gly Gly Gly Ser Gly Gly Gly Gly Ser Ser Ser Glu Leu Thr Gln Asp
    130                 135                 140


Pro Ala Val Ser Val Ala Leu Gly Gln Thr Val Arg Thr Thr Cys Gln
145                 150                 155                 160


Gly Asp Ala Leu Arg Ser Tyr Tyr Ala Ser Trp Tyr Gln Gln Lys Pro
                165                 170                 175


Gly Gln Ala Pro Met Leu Val Ile Tyr Gly Lys Asn Asn Arg Pro Ser
            180                 185                 190


Gly Ile Pro Asp Arg Phe Ser Gly Ser Asp Ser Gly Asp Thr Ala Ser
        195                 200                 205
```

Leu Thr Ile Thr Gly Ala Gln Ala Glu Asp Glu Ala Asp Tyr Tyr Cys
210 215 220

Asn Ser Arg Asp Ser Ser Gly Tyr Pro Val Phe Gly Thr Gly Thr Lys
225 230 235 240

Val Thr Val Leu

<210> 563
<211> 488
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 563
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Gln Val Gln Leu Val Gln Ser Gly Gly Gly Leu
20 25 30

Val Gln Pro Gly Arg Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe
35 40 45

Thr Phe Asp Asp Tyr Ala Met His Trp Val Arg Gln Ala Pro Gly Lys
50 55 60

Gly Leu Glu Trp Val Ser Gly Ile Ser Trp Asn Ser Gly Ser Ile Gly
65 70 75 80

Tyr Ala Asp Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala
85 90 95

Lys Asn Ser Leu Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr
100 105 110

Ala Val Tyr Tyr Cys Ala Lys Asp Gly Ser Ser Ser Trp Ser Trp Gly
115 120 125

```
Tyr Phe Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Gly
    130                 135                 140

Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ser Ser
145                 150                 155                 160

Glu Leu Thr Gln Asp Pro Ala Val Ser Val Ala Leu Gly Gln Thr Val
                165                 170                 175

Arg Thr Thr Cys Gln Gly Asp Ala Leu Arg Ser Tyr Tyr Ala Ser Trp
            180                 185                 190

Tyr Gln Gln Lys Pro Gly Gln Ala Pro Met Leu Val Ile Tyr Gly Lys
        195                 200                 205

Asn Asn Arg Pro Ser Gly Ile Pro Asp Arg Phe Ser Gly Ser Asp Ser
    210                 215                 220

Gly Asp Thr Ala Ser Leu Thr Ile Thr Gly Ala Gln Ala Glu Asp Glu
225                 230                 235                 240

Ala Asp Tyr Tyr Cys Asn Ser Arg Asp Ser Ser Gly Tyr Pro Val Phe
                245                 250                 255

Gly Thr Gly Thr Lys Val Thr Val Leu Thr Thr Thr Pro Ala Pro Arg
            260                 265                 270

Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser Leu Arg
        275                 280                 285

Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr Arg Gly
    290                 295                 300

Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr
305                 310                 315                 320

Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr Cys Lys Arg
                325                 330                 335

Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met Arg Pro
```

340 345 350

Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu
355 360 365

Glu Glu Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg Ser Ala
370 375 380

Asp Ala Pro Ala Tyr Lys Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu
385 390 395 400

Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly
405 410 415

Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu
420 425 430

Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser
435 440 445

Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His Asp Gly
450 455 460

Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu
465 470 475 480

His Met Gln Ala Leu Pro Pro Arg
485

<210> 564
<211> 246
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 564
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 Ser Trp Asn Ser Gly Ser Thr Gly Tyr Ala Asp Ser Val
    50                  55                  60

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Ser Leu Tyr
65                  70                  75                  80

Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Leu Tyr Tyr Cys
                85                  90                  95

Ala Lys Asp Ser Ser Ser Trp Tyr Gly Gly Gly Ser Ala Phe Asp Ile
            100                 105                 110

Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly Gly Ser
        115                 120                 125

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ser Ser Glu Leu Thr Gln
    130                 135                 140

Glu Pro Ala Val Ser Val Ala Leu Gly Gln Thr Val Arg Ile Thr Cys
145                 150                 155                 160

Gln Gly Asp Ser Leu Arg Ser Tyr Tyr Ala Ser Trp Tyr Gln Gln Lys
                165                 170                 175

Pro Gly Gln Ala Pro Val Leu Val Ile Phe Gly Arg Ser Arg Arg Pro
            180                 185                 190

Ser Gly Ile Pro Asp Arg Phe Ser Gly Ser Ser Ser Gly Asn Thr Ala
        195                 200                 205

Ser Leu Ile Ile Thr Gly Ala Gln Ala Glu Asp Glu Ala Asp Tyr Tyr
    210                 215                 220

Cys Asn Ser Arg Asp Asn Thr Ala Asn His Tyr Val Phe Gly Thr Gly
225                 230                 235                 240
```

Thr Lys Leu Thr Val Leu
245

<210> 565
<211> 490
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 565
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu
20 25 30

Val Gln Pro Gly Arg Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe
35 40 45

Thr Phe Asp Asp Tyr Ala Met His Trp Val Arg Gln Ala Pro Gly Lys
50 55 60

Gly Leu Glu Trp Val Ser Gly Ile Ser Trp Asn Ser Gly Ser Thr Gly
65 70 75 80

Tyr Ala Asp Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala
85 90 95

Lys Asn Ser Leu Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr
100 105 110

Ala Leu Tyr Tyr Cys Ala Lys Asp Ser Ser Ser Trp Tyr Gly Gly Gly
115 120 125

Ser Ala Phe Asp Ile Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser
130 135 140

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ser

```
145                 150                 155                 160

Ser Glu Leu Thr Gln Glu Pro Ala Val Ser Val Ala Leu Gly Gln Thr
                165                 170                 175

Val Arg Ile Thr Cys Gln Gly Asp Ser Leu Arg Ser Tyr Tyr Ala Ser
            180                 185                 190

Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Val Leu Val Ile Phe Gly
        195                 200                 205

Arg Ser Arg Arg Pro Ser Gly Ile Pro Asp Arg Phe Ser Gly Ser Ser
    210                 215                 220

Ser Gly Asn Thr Ala Ser Leu Ile Ile Thr Gly Ala Gln Ala Glu Asp
225                 230                 235                 240

Glu Ala Asp Tyr Tyr Cys Asn Ser Arg Asp Asn Thr Ala Asn His Tyr
                245                 250                 255

Val Phe Gly Thr Gly Thr Lys Leu Thr Val Leu Thr Thr Thr Pro Ala
            260                 265                 270

Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser
        275                 280                 285

Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr
    290                 295                 300

Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala
305                 310                 315                 320

Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr Cys
                325                 330                 335

Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met
            340                 345                 350

Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe
        355                 360                 365
```

```
Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg
    370                 375                 380

Ser Ala Asp Ala Pro Ala Tyr Lys Gln Gly Gln Asn Gln Leu Tyr Asn
385                 390                 395                 400

Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg
                405                 410                 415

Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro
            420                 425                 430

Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala
        435                 440                 445

Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His
    450                 455                 460

Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp
465                 470                 475                 480

Ala Leu His Met Gln Ala Leu Pro Pro Arg
                485                 490
```

<210> 566
<211> 246
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 566

```
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 Ser Trp Asn Ser Gly Ser Thr Gly Tyr Ala Asp Ser Val
    50                  55                  60

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Ser Leu Tyr
65                  70                  75                  80

Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Leu Tyr Tyr Cys
                85                  90                  95

Ala Lys Asp Ser Ser Ser Trp Tyr Gly Gly Gly Ser Ala Phe Asp Ile
            100                 105                 110

Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly Gly Ser
        115                 120                 125

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ser Ser Glu Leu Thr Gln
    130                 135                 140

Asp Pro Ala Val Ser Val Ala Leu Gly Gln Thr Val Arg Ile Thr Cys
145                 150                 155                 160

Gln Gly Asp Ser Leu Arg Ser Tyr Tyr Ala Ser Trp Tyr Gln Gln Lys
                165                 170                 175

Pro Gly Gln Ala Pro Val Leu Val Ile Tyr Gly Lys Asn Asn Arg Pro
            180                 185                 190

Ser Gly Ile Pro Asp Arg Phe Ser Gly Ser Ser Ser Gly Asn Thr Ala
        195                 200                 205

Ser Leu Thr Ile Thr Gly Ala Gln Ala Glu Asp Glu Ala Asp Tyr Tyr
    210                 215                 220

Cys Asn Ser Arg Gly Ser Ser Gly Asn His Tyr Val Phe Gly Thr Gly
225                 230                 235                 240

Thr Lys Val Thr Val Leu
                245
```

<210> 567
<211> 490
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 567
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu
20 25 30

Val Gln Pro Gly Arg Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe
35 40 45

Thr Phe Asp Asp Tyr Ala Met His Trp Val Arg Gln Ala Pro Gly Lys
50 55 60

Gly Leu Glu Trp Val Ser Gly Ile Ser Trp Asn Ser Gly Ser Thr Gly
65 70 75 80

Tyr Ala Asp Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala
85 90 95

Lys Asn Ser Leu Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr
100 105 110

Ala Leu Tyr Tyr Cys Ala Lys Asp Ser Ser Ser Trp Tyr Gly Gly Gly
115 120 125

Ser Ala Phe Asp Ile Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser
130 135 140

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ser
145 150 155 160

Ser Glu Leu Thr Gln Asp Pro Ala Val Ser Val Ala Leu Gly Gln Thr
165 170 175

```
Val Arg Ile Thr Cys Gln Gly Asp Ser Leu Arg Ser Tyr Tyr Ala Ser
            180                 185                 190

Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Val Leu Val Ile Tyr Gly
        195                 200                 205

Lys Asn Asn Arg Pro Ser Gly Ile Pro Asp Arg Phe Ser Gly Ser Ser
    210                 215                 220

Ser Gly Asn Thr Ala Ser Leu Thr Ile Thr Gly Ala Gln Ala Glu Asp
225                 230                 235                 240

Glu Ala Asp Tyr Tyr Cys Asn Ser Arg Gly Ser Ser Gly Asn His Tyr
                245                 250                 255

Val Phe Gly Thr Gly Thr Lys Val Thr Val Leu Thr Thr Thr Pro Ala
            260                 265                 270

Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser
        275                 280                 285

Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr
    290                 295                 300

Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala
305                 310                 315                 320

Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr Cys
                325                 330                 335

Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met
            340                 345                 350

Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe
        355                 360                 365

Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg
    370                 375                 380

Ser Ala Asp Ala Pro Ala Tyr Lys Gln Gly Gln Asn Gln Leu Tyr Asn
```

385 390 395 400

Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg
405 410 415

Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro
420 425 430

Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala
435 440 445

Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His
450 455 460

Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp
465 470 475 480

Ala Leu His Met Gln Ala Leu Pro Pro Arg
485 490

<210> 568
<211> 251
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 568
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 Ala Ser Gly Phe Thr Phe Ser Ser Tyr
20 25 30

Trp Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Val Trp Val
35 40 45

Ser Arg Ile Asn Ser Asp Gly Ser Ser Thr Ser Tyr Ala Asp Ser Val
50 55 60

```
Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Thr Leu Tyr
65                  70                  75                  80

Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
                85                  90                  95

Val Arg Thr Gly Trp Val Gly Ser Tyr Tyr Tyr Tyr Met Asp Val Trp
            100                 105                 110

Gly Lys Gly Thr Thr Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly
        115                 120                 125

Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Ile
    130                 135                 140

Val Leu Thr Gln Ser Pro Gly Thr Leu Ser Leu Ser Pro Gly Glu Arg
145                 150                 155                 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Ser Asn Tyr Leu
                165                 170                 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro Arg Leu Leu Ile Tyr
            180                 185                 190

Asp Val Ser Thr Arg Ala Thr Gly Ile Pro Ala Arg Phe Ser Gly Gly
        195                 200                 205

Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Glu Pro Glu
    210                 215                 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Arg Ser Asn Trp Pro Pro Trp
225                 230                 235                 240

Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
                245                 250
```

<210> 569
<211> 495
<212> PRT
<213> Artificial Sequence

<220>

<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 569
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Gln Val Gln Leu Val Gln Ser Gly Gly Gly Leu
20 25 30

Val Gln Pro Gly Gly Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe
35 40 45

Thr Phe Ser Ser Tyr Trp Met His Trp Val Arg Gln Ala Pro Gly Lys
50 55 60

Gly Leu Val Trp Val Ser Arg Ile Asn Ser Asp Gly Ser Ser Thr Ser
65 70 75 80

Tyr Ala Asp Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala
85 90 95

Lys Asn Thr Leu Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr
100 105 110

Ala Val Tyr Tyr Cys Val Arg Thr Gly Trp Val Gly Ser Tyr Tyr Tyr
115 120 125

Tyr Met Asp Val Trp Gly Lys Gly Thr Thr Val Thr Val Ser Ser Gly
130 135 140

Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly
145 150 155 160

Gly Gly Ser Glu Ile Val Leu Thr Gln Ser Pro Gly Thr Leu Ser Leu
165 170 175

Ser Pro Gly Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val
180 185 190

Ser Ser Asn Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro

```
        195                 200                 205

Arg Leu Leu Ile Tyr Asp Val Ser Thr Arg Ala Thr Gly Ile Pro Ala
    210                 215                 220

Arg Phe Ser Gly Gly Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser
225                 230                 235                 240

Ser Leu Glu Pro Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Arg Ser
                245                 250                 255

Asn Trp Pro Pro Trp Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
            260                 265                 270

Thr Thr Thr Pro Ala Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala
        275                 280                 285

Ser Gln Pro Leu Ser Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly
    290                 295                 300

Gly Ala Val His Thr Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile
305                 310                 315                 320

Trp Ala Pro Leu Ala Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val
                325                 330                 335

Ile Thr Leu Tyr Cys Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe
            340                 345                 350

Lys Gln Pro Phe Met Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly
        355                 360                 365

Cys Ser Cys Arg Phe Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg
    370                 375                 380

Val Lys Phe Ser Arg Ser Ala Asp Ala Pro Ala Tyr Lys Gln Gly Gln
385                 390                 395                 400

Asn Gln Leu Tyr Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp
                405                 410                 415
```

Val Leu Asp Lys Arg Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro
420 425 430

Arg Arg Lys Asn Pro Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp
435 440 445

Lys Met Ala Glu Ala Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg
450 455 460

Arg Gly Lys Gly His Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr
465 470 475 480

Lys Asp Thr Tyr Asp Ala Leu His Met Gln Ala Leu Pro Pro Arg
485 490 495

<210> 570
<211> 250
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 570
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 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 Gly Tyr Ser Arg Tyr Tyr Tyr Tyr Gly Met Asp Val Trp Gly
            100                 105                 110


Gln Gly Thr Thr Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly
        115                 120                 125


Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Ile Val
    130                 135                 140


Met Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly Glu Arg Ala
145                 150                 155                 160


Ile Leu Ser Cys Arg Ala Ser Gln Ser Val Tyr Thr Lys Tyr Leu Gly
                165                 170                 175


Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile Tyr Asp
            180                 185                 190


Ala Ser Thr Arg Ala Thr Gly Ile Pro Asp Arg Phe Ser Gly Ser Gly
        195                 200                 205


Ser Gly Thr Asp Phe Thr Leu Thr Ile Asn Arg Leu Glu Pro Glu Asp
    210                 215                 220


Phe Ala Val Tyr Tyr Cys Gln His Tyr Gly Gly Ser Pro Leu Ile Thr
225                 230                 235                 240


Phe Gly Gln Gly Thr Lys Val Asp Ile Lys
                245                 250


<210> 571
<211> 494
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 571
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
```

```
1               5                   10                  15

His Ala Ala Arg Pro Gln Val Gln Leu Val Gln Ser Gly Gly Gly Val
            20                  25                  30

Val Gln Pro Gly Arg Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe
        35                  40                  45

Thr Phe Ser Ser Tyr Gly Met His Trp Val Arg Gln Ala Pro Gly Lys
    50                  55                  60

Gly Leu Glu Trp Val Ala Val Ile Ser Tyr Asp Gly Ser Asn Lys Tyr
65                  70                  75                  80

Tyr Ala Asp Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser
                85                  90                  95

Lys Asn Thr Leu Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr
            100                 105                 110

Ala Val Tyr Tyr Cys Ala Lys Gly Tyr Ser Arg Tyr Tyr Tyr Tyr Gly
        115                 120                 125

Met Asp Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser Gly Gly
    130                 135                 140

Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly
145                 150                 155                 160

Gly Ser Glu Ile Val Met Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser
                165                 170                 175

Pro Gly Glu Arg Ala Ile Leu Ser Cys Arg Ala Ser Gln Ser Val Tyr
            180                 185                 190

Thr Lys Tyr Leu Gly Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg
        195                 200                 205

Leu Leu Ile Tyr Asp Ala Ser Thr Arg Ala Thr Gly Ile Pro Asp Arg
    210                 215                 220
```

```
Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Asn Arg
225                 230                 235                 240

Leu Glu Pro Glu Asp Phe Ala Val Tyr Tyr Cys Gln His Tyr Gly Gly
                245                 250                 255

Ser Pro Leu Ile Thr Phe Gly Gln Gly Thr Lys Val Asp Ile Lys Thr
            260                 265                 270

Thr Thr Pro Ala Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser
        275                 280                 285

Gln Pro Leu Ser Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly
    290                 295                 300

Ala Val His Thr Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp
305                 310                 315                 320

Ala Pro Leu Ala Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile
                325                 330                 335

Thr Leu Tyr Cys Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys
            340                 345                 350

Gln Pro Phe Met Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys
        355                 360                 365

Ser Cys Arg Phe Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg Val
    370                 375                 380

Lys Phe Ser Arg Ser Ala Asp Ala Pro Ala Tyr Lys Gln Gly Gln Asn
385                 390                 395                 400

Gln Leu Tyr Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val
                405                 410                 415

Leu Asp Lys Arg Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg
            420                 425                 430

Arg Lys Asn Pro Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys
```

```
        435                 440                 445

Met Ala Glu Ala Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg
    450                 455                 460

Gly Lys Gly His Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys
465                 470                 475                 480

Asp Thr Tyr Asp Ala Leu His Met Gln Ala Leu Pro Pro Arg
                485                 490
```

<210> 572
<211> 249
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 572

```
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 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 Ser Gly Gly Ser Thr Tyr Tyr Ala Asp Ser Val
    50                  55                  60

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
65                  70                  75                  80

Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
                85                  90                  95

Ala Lys Arg Glu Ala Ala Ala Gly His Asp Trp Tyr Phe Asp Leu Trp
            100                 105                 110
```

```
Gly Arg Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly
        115                 120                 125


Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile
    130                 135                 140


Arg Val Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly Asp Arg
145                 150                 155                 160


Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Ser Ser Tyr Leu Asn
                165                 170                 175


Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile Tyr Ala
            180                 185                 190


Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly Ser Gly
        195                 200                 205


Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro Glu Asp
    210                 215                 220


Phe Ala Thr Tyr Tyr Cys Gln Gln Ser Tyr Ser Ile Pro Leu Thr Phe
225                 230                 235                 240


Gly Gln Gly Thr Lys Val Glu Ile Lys
                245
```

<210> 573
<211> 493
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 573

```
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1               5                   10                  15


His Ala Ala Arg Pro Gln Val Gln Leu Val Gln Ser Gly Gly Gly Leu
            20                  25                  30
```

```
Val Gln Pro Gly Gly Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe
        35                  40                  45

Thr Phe Ser Ser Tyr Ala Met Ser Trp Val Arg Gln Ala Pro Gly Lys
    50                  55                  60

Gly Leu Glu Trp Val Ser Ala Ile Ser Gly Ser Gly Gly Ser Thr Tyr
65                  70                  75                  80

Tyr Ala Asp Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser
                85                  90                  95

Lys Asn Thr Leu Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr
            100                 105                 110

Ala Val Tyr Tyr Cys Ala Lys Arg Glu Ala Ala Ala Gly His Asp Trp
        115                 120                 125

Tyr Phe Asp Leu Trp Gly Arg Gly Thr Leu Val Thr Val Ser Ser Gly
    130                 135                 140

Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly
145                 150                 155                 160

Gly Gly Ser Asp Ile Arg Val Thr Gln Ser Pro Ser Ser Leu Ser Ala
                165                 170                 175

Ser Val Gly Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile
            180                 185                 190

Ser Ser Tyr Leu Asn Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys
        195                 200                 205

Leu Leu Ile Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg
    210                 215                 220

Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser
225                 230                 235                 240

Leu Gln Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Ser Tyr Ser
```

```
               245                 250                 255

Ile Pro Leu Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys Thr Thr
            260                 265                 270

Thr Pro Ala Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln
        275                 280                 285

Pro Leu Ser Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala
    290                 295                 300

Val His Thr Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala
305                 310                 315                 320

Pro Leu Ala Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr
                325                 330                 335

Leu Tyr Cys Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln
            340                 345                 350

Pro Phe Met Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser
        355                 360                 365

Cys Arg Phe Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg Val Lys
    370                 375                 380

Phe Ser Arg Ser Ala Asp Ala Pro Ala Tyr Lys Gln Gly Gln Asn Gln
385                 390                 395                 400

Leu Tyr Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu
                405                 410                 415

Asp Lys Arg Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg
            420                 425                 430

Lys Asn Pro Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met
        435                 440                 445

Ala Glu Ala Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly
    450                 455                 460
```

```
Lys Gly His Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp
465                 470                 475                 480


Thr Tyr Asp Ala Leu His Met Gln Ala Leu Pro Pro Arg
                485                 490


<210> 574
<211> 239
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 574
Gln Val Gln Leu Gln Gln Ser Gly Pro Glu Leu Glu Lys Pro Gly Ala
1               5                   10                  15


Ser Val Lys Ile Ser Cys Lys Ala Ser Gly Tyr Ser Phe Thr Gly Tyr
            20                  25                  30


Thr Met Asn Trp Val Lys Gln Ser His Gly Lys Ser Leu Glu Trp Ile
        35                  40                  45


Gly Leu Ile Thr Pro Tyr Asn Gly Ala Ser Ser Tyr Asn Gln Lys Phe
    50                  55                  60


Arg Gly Lys Ala Thr Leu Thr Val Asp Lys Ser Ser Ser Thr Ala Tyr
65                  70                  75                  80


Met Asp Leu Leu Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr Phe Cys
                85                  90                  95


Ala Arg Gly Gly Tyr Asp Gly Arg Gly Phe Asp Tyr Trp Gly Gln Gly
            100                 105                 110


Thr Thr Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly
        115                 120                 125


Ser Gly Gly Gly Gly Ser Asp Ile Glu Leu Thr Gln Ser Pro Ala Ile
    130                 135                 140
```

```
Met Ser Ala Ser Pro Gly Glu Lys Val Thr Met Thr Cys Ser Ala Ser
145                 150                 155                 160


Ser Ser Val Ser Tyr Met His Trp Tyr Gln Gln Lys Ser Gly Thr Ser
                165                 170                 175


Pro Lys Arg Trp Ile Tyr Asp Thr Ser Lys Leu Ala Ser Gly Val Pro
            180                 185                 190


Gly Arg Phe Ser Gly Ser Gly Ser Gly Asn Ser Tyr Ser Leu Thr Ile
        195                 200                 205


Ser Ser Val Glu Ala Glu Asp Asp Ala Thr Tyr Tyr Cys Gln Gln Trp
    210                 215                 220


Ser Gly Tyr Pro Leu Thr Phe Gly Ala Gly Thr Lys Leu Glu Ile
225                 230                 235


<210> 575
<211> 383
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 575
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1               5                   10                  15


His Ala Ala Arg Pro Gln Val Gln Leu Gln Gln Ser Gly Pro Glu Leu
            20                  25                  30


Glu Lys Pro Gly Ala Ser Val Lys Ile Ser Cys Lys Ala Ser Gly Tyr
        35                  40                  45


Ser Phe Thr Gly Tyr Thr Met Asn Trp Val Lys Gln Ser His Gly Lys
    50                  55                  60


Ser Leu Glu Trp Ile Gly Leu Ile Thr Pro Tyr Asn Gly Ala Ser Ser
```

```
65                  70                  75                  80

Tyr Asn Gln Lys Phe Arg Gly Lys Ala Thr Leu Thr Val Asp Lys Ser
                85                  90                  95

Ser Ser Thr Ala Tyr Met Asp Leu Leu Ser Leu Thr Ser Glu Asp Ser
            100                 105                 110

Ala Val Tyr Phe Cys Ala Arg Gly Gly Tyr Asp Gly Arg Gly Phe Asp
        115                 120                 125

Tyr Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser Gly Gly Gly Gly
    130                 135                 140

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Glu Leu Thr
145                 150                 155                 160

Gln Ser Pro Ala Ile Met Ser Ala Ser Pro Gly Glu Lys Val Thr Met
                165                 170                 175

Thr Cys Ser Ala Ser Ser Ser Val Ser Tyr Met His Trp Tyr Gln Gln
            180                 185                 190

Lys Ser Gly Thr Ser Pro Lys Arg Trp Ile Tyr Asp Thr Ser Lys Leu
        195                 200                 205

Ala Ser Gly Val Pro Gly Arg Phe Ser Gly Ser Gly Ser Gly Asn Ser
    210                 215                 220

Tyr Ser Leu Thr Ile Ser Ser Val Glu Ala Glu Asp Asp Ala Thr Tyr
225                 230                 235                 240

Tyr Cys Gln Gln Trp Ser Gly Tyr Pro Leu Thr Phe Gly Ala Gly Thr
                245                 250                 255

Lys Leu Glu Ile Thr Thr Thr Pro Ala Pro Arg Pro Pro Thr Pro Ala
            260                 265                 270

Pro Thr Ile Ala Ser Gln Pro Leu Ser Leu Arg Pro Glu Ala Cys Arg
        275                 280                 285
```

Pro Ala Ala Gly Gly Ala Val His Thr Arg Gly Leu Asp Phe Ala Cys
290 295 300

Asp Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly Val Leu Leu
305 310 315 320

Leu Ser Leu Val Ile Thr Leu Tyr Cys Lys Arg Gly Arg Lys Lys Leu
325 330 335

Leu Tyr Ile Phe Lys Gln Pro Phe Met Arg Pro Val Gln Thr Thr Gln
340 345 350

Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu Glu Glu Glu Gly Gly
355 360 365

Cys Glu Leu Arg Val Lys Phe Ser Arg Ser Ala Asp Ala Pro Ala
370 375 380

<210> 576
<211> 732
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 576
caagtccaac tgcagcagtc aggagcggaa gtgaagaaac caggagcgtc agtcaaagtg 60

tcgtgcaagg ctagcggcta caccttcacc ggctactaca tgcactgggt tcgacaggct 120

ccagggcagg gtctggagtg gatgggccgc atcaacccga attccggtgg gactaactac 180

gcccagaagt tccagggaag agtgaccatg actagggaca cgtcgatcag cactgcgtac 240

atggaactga gccgcctgcg gtccgaggat actgccgtct actactgcgc acgcggaagg 300

tactatggaa tggacgtgtg gggccaaggg actatggtga ctgtgagctc gggaggggga 360

ggctccggtg gcgggggatc aggaggagga ggatcagggg gaggaggttc cgaaattgtc 420

ctcacccaga gcccggcaac cctctcactt tccccgggag agcgcgcaac catctcttgc 480

cgggctagcc aatccgtgtc gtccaatttc gcctggtacc agcaacggcc gggacaagcc 540

cctagactcc tgatctacga cgccagcaac agagcgactg gaattcctcc acgcttttcg 600

ggatcaggct ccggtaccga cttcaccctg actatctcgt cgctcgaacc cgaggatttc 660

gccgcctact actgtcatca gcggtcgaac tggttgtata cgtttggcca gggcaccaag 720

gtggatatca ag 732

<210> 577
<211> 1464
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 577
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

ccccaagtcc aactgcagca gtcaggagcg gaagtgaaga aaccaggagc gtcagtcaaa 120

gtgtcgtgca aggctagcgg ctacaccttc accggctact acatgcactg ggttcgacag 180

gctccagggc agggtctgga gtggatgggc cgcatcaacc cgaattccgg tgggactaac 240

tacgcccaga agttccaggg aagagtgacc atgactaggg acacgtcgat cagcactgcg 300

tacatggaac tgagccgcct gcggtccgag gatactgccg tctactactg cgcacgcgga 360

aggtactatg gaatggacgt gtggggccaa gggactatgg tgactgtgag ctcgggaggg 420

ggaggctccg gtggcggggg atcaggagga ggaggatcag ggggaggagg ttccgaaatt 480

gtcctcaccc agagcccggc aaccctctca ctttccccgg gagagcgcgc aaccatctct 540

tgccgggcta gccaatccgt gtcgtccaat ttcgcctggt accagcaacg gccgggacaa 600

gcccctagac tcctgatcta cgacgccagc aacagagcga ctggaattcc tccacgcttt 660

tcgggatcag gctccggtac cgacttcacc ctgactatct cgtcgctcga acccgaggat 720

ttcgccgcct actactgtca tcagcggtcg aactggttgt atacgtttgg ccagggcacc 780

aaggtggata tcaagaccac taccccagca ccgaggccac ccaccccggc tcctaccatc 840

gcctcccagc ctctgtccct gcgtccggag gcatgtagac ccgcagctgg tggggccgtg 900

catacccggg gtcttgactt cgcctgcgat atctacattt gggcccctct ggctggtact 960

tgcggggtcc tgctgctttc actcgtgatc actctttact gtaagcgcgg tcggaagaag 1020

ctgctgtaca tctttaagca acccttcatg aggcctgtgc agactactca agaggaggac 1080

ggctgttcat gccggttccc agaggaggag gaaggcggct gcgaactgcg cgtgaaattc 1140

agccgcagcg cagatgctcc agcctacaag caggggcaga accagctcta caacgaactc 1200

aatcttggtc ggagagagga gtacgacgtg ctggacaagc ggagaggacg ggacccagaa 1260

atgggcggga agccgcgcag aaagaatccc caagagggcc tgtacaacga gctccaaaag 1320

gataagatgg cagaagccta tagcgagatt ggtatgaaag gggaacgcag aagaggcaaa 1380

ggccacgacg gactgtacca gggactcagc accgccacca aggacaccta tgacgctctt 1440

cacatgcagg ccctgccgcc tcgg 1464

<210> 578
<211> 759
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 578
caagtccaac tcgtccagtc aggagcagaa gtcaagaaac caggtgctag cgtgaaagtg 60

tcgtgcaagg cgtcgggata cactttcacc ggatactaca tgcactgggt ccgccaggcc 120

cccggacaag gactggaatg gatgggctgg atcaacccga atagcggggg aactaattac 180

gcccagaagt ttcagggacg agtgaccatg acccgcgata cctctatctc gaccgcctac 240

atggagctct ccagactgcg ctccgacgat actgcagtgt actactgcgc ccgggacctg 300

aggcggactg tggttactcc tcgcgcctat tatggcatgg acgtgtgggg ccaaggaact 360

actgtgactg tgagctcggg aggcggtggg tcaggcggag gagggtcggg cggtggtggc 420

tcgggagggg gaggaagcga cattcaactt acgcagagcc cgtcaaccct gtcagcgtca 480

gtgggagatc gggtgaccat cacgtgtcag gccagccagg atatctccaa ctcgctcaac 540

tggtaccagc aaaaggcggg taaagctccg aagctgctga tctacgacgc ttccaccctc 600

gagactggag tcccatccag attttccggg tcaggaagcg gcaccgattt ctccttcacc 660

atttcgtcct tgcaaccgga ggacatcgca acctactact gccagcagca tgacaacttg 720

cctctgacgt tcgggcaggg caccaaggtg gaaatcaag 759

<210> 579
<211> 1491
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 579
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

ccccaagtcc aactcgtcca gtcaggagca gaagtcaaga aaccaggtgc tagcgtgaaa 120

gtgtcgtgca aggcgtcggg atacactttc accggatact acatgcactg ggtccgccag 180

gcccccggac aaggactgga atggatgggc tggatcaacc cgaatagcgg gggaactaat 240

tacgcccaga agtttcaggg acgagtgacc atgacccgcg atacctctat ctcgaccgcc 300

tacatggagc tctccagact gcgctccgac gatactgcag tgtactactg cgcccgggac 360

ctgaggcgga ctgtggttac tcctcgcgcc tattatggca tggacgtgtg gggccaagga 420

actactgtga ctgtgagctc gggaggcggt gggtcaggcg gaggagggtc gggcggtggt 480

ggctcgggag ggggaggaag cgacattcaa cttacgcaga gcccgtcaac cctgtcagcg 540

tcagtgggag atcgggtgac catcacgtgt caggccagcc aggatatctc caactcgctc 600

aactggtacc agcaaaaggc gggtaaagct ccgaagctgc tgatctacga cgcttccacc 660

ctcgagactg gagtcccatc cagattttcc gggtcaggaa gcggcaccga tttctccttc 720

accatttcgt ccttgcaacc ggaggacatc gcaacctact actgccagca gcatgacaac 780

ttgcctctga cgttcgggca gggcaccaag gtggaaatca agaccactac cccagcaccg 840

aggccaccca ccccggctcc taccatcgcc tcccagcctc tgtccctgcg tccggaggca 900

tgtagacccg cagctggtgg ggccgtgcat acccggggtc ttgacttcgc ctgcgatatc 960

tacatttggg cccctctggc tggtacttgc ggggtcctgc tgctttcact cgtgatcact 1020

ctttactgta agcgcggtcg gaagaagctg ctgtacatct ttaagcaacc cttcatgagg 1080

cctgtgcaga ctactcaaga ggaggacggc tgttcatgcc ggttcccaga ggaggaggaa 1140

ggcggctgcg aactgcgcgt gaaattcagc cgcagcgcag atgctccagc ctacaagcag 1200

gggcagaacc agctctacaa cgaactcaat cttggtcgga gagaggagta cgacgtgctg 1260

gacaagcgga gaggacggga cccagaaatg ggcgggaagc cgcgcagaaa gaatccccaa 1320

gagggcctgt acaacgagct ccaaaaggat aagatggcag aagcctatag cgagattggt 1380

atgaaagggg aacgcagaag aggcaaaggc cacgacggac tgtaccaggg actcagcacc 1440

gccaccaagg acacctatga cgctcttcac atgcaggccc tgccgcctcg g 1491

<210> 580
<211> 738
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 580
caagtccaac tcgtccaatc aggagcggaa gtcaaaaagc ccggagctcc agtgaaagtg 60

tcatgcaagg cctccggcta caccttcacc ggttactata tgcactgggt gcggcaggcc 120

ccgggccagg ggttggaatg gatgggatgg atcaatccaa actcgggtgg gactaactac 180

gcccagaagt tccaaggacg ggtgaccatg actagggaca cctcgatctc caccgcatac 240

atggagctta gcagactccg ctccgacgat accgcagtct actattgcgc gcggggagag 300

tgggacggat cgtactacta cgattactgg ggccagggaa ctctggtgac tgtttcctcg 360

ggtggaggag gttcaggcgg aggcggctcg ggcgggggag gatctggagg aggagggtcc 420

gacattgtgc tgacccaaac tccttcgtcc ctgtcggcca gcgtgggcga ccgcgtgacg 480

attacgtgca gagctagcca atccatcaat acttacctca actggtacca gcataagccg 540

gggaaagcac caaagctgct gatctacgcc gcctcatcct tgcagagcgg tgtgccttca 600

cgctttagcg gatcgggatc gggaacggat ttcaccctga ctatcagctc cctccagccg 660

gaggattttg cgacctacta ctgtcagcag agcttctcac cgctgacttt cggcggcggg 720

accaagctgg aaatcaag 738

<210> 581
<211> 1470
<212> DNA
<213> Artificial Sequence

<220>
<221> source

<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 581
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

ccccaagtcc aactcgtcca atcaggagcg gaagtcaaaa agcccggagc tccagtgaaa 120

gtgtcatgca aggcctccgg ctacaccttc accggttact atatgcactg ggtgcggcag 180

gccccgggcc aggggttgga atggatggga tggatcaatc caaactcggg tgggactaac 240

tacgcccaga agttccaagg acgggtgacc atgactaggg acacctcgat ctccaccgca 300

tacatggagc ttagcagact ccgctccgac gataccgcag tctactattg cgcgcgggga 360

gagtgggacg gatcgtacta ctacgattac tggggccagg gaactctggt gactgtttcc 420

tcgggtggag gaggttcagg cggaggcggc tcgggcgggg gaggatctgg aggaggaggg 480

tccgacattg tgctgaccca aactccttcg tccctgtcgg ccagcgtggg cgaccgcgtg 540

acgattacgt gcagagctag ccaatccatc aatacttacc tcaactggta ccagcataag 600

ccggggaaag caccaaagct gctgatctac gccgcctcat ccttgcagag cggtgtgcct 660

tcacgcttta gcggatcggg atcgggaacg gatttcaccc tgactatcag ctccctccag 720

ccggaggatt ttgcgaccta ctactgtcag cagagcttct caccgctgac tttcggcggc 780

gggaccaagc tggaaatcaa gaccactacc ccagcaccga ggccacccac cccggctcct 840

accatcgcct cccagcctct gtccctgcgt ccggaggcat gtagacccgc agctggtggg 900

gccgtgcata cccggggtct tgacttcgcc tgcgatatct acatttgggc ccctctggct 960

ggtacttgcg gggtcctgct gctttcactc gtgatcactc tttactgtaa gcgcggtcgg 1020

aagaagctgc tgtacatctt taagcaaccc ttcatgaggc ctgtgcagac tactcaagag 1080

gaggacggct gttcatgccg gttcccagag gaggaggaag gcggctgcga actgcgcgtg 1140

aaattcagcc gcagcgcaga tgctccagcc tacaagcagg ggcagaacca gctctacaac 1200

gaactcaatc ttggtcggag agaggagtac gacgtgctgg acaagcggag aggacgggac 1260

ccagaaatgg gcgggaagcc gcgcagaaag aatccccaag agggcctgta caacgagctc 1320

caaaaggata agatggcaga agcctatagc gagattggta tgaaagggga acgcagaaga 1380

ggcaaaggcc acgacggact gtaccaggga ctcagcaccg ccaccaagga cacctatgac 1440

gctcttcaca tgcaggccct gccgcctcgg 1470

<210> 582
<211> 726
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 582
caagtgcaac tcgttgaatc aggtggaggt ttggtgcaac ccggaggatc tctcagactg 60

tcgtgtgcgg cgtccgggtt cacctttttcg tcctactgga tgcactgggt gcgccaggtg 120

ccgggaaaag gactggtgtg ggtgtccaga atcaacaccg acgggtcaac gactacctac 180

gcagatagcg tggaaggtcg gttcaccatt tcgcgggaca acgctaaaaa cactctgtac 240

cttcagatga attcactgcg cgatgacgac accgcagtct actactgcgt cggtggacac 300

tgggcggtct ggggacaggg aactacggtg actgtgtcca gcggcggggg aggaagcggc 360

ggaggggggga gcggaggcgg aggatcagga ggaggcggct ccgatatcca gatgacccag 420

tcgccatcga ccctctccgc tagcgtgggg gatagggtca ctatcacttg ccgagccagc 480

caatccatta gcgaccggct tgcctggtac caacagaaac ctggaaaggc cccgaagctg 540

ctcatctaca aggcctcgtc actggagtcg ggagtcccgt cccgcttttc cggctcgggc 600

tcaggcaccg agttcactct gaccatctcg agcctgcagc cggacgattt cgccgtgtat 660

tactgccagc aatacggaca tctcccaatg tacacgttcg gtcagggcac caaggtcgaa 720

atcaag 726

<210> 583
<211> 1458
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 583
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

ccccaagtgc aactcgttga atcaggtgga ggtttggtgc aacccggagg atctctcaga 120

ctgtcgtgtg cggcgtccgg gttcaccttt tcgtcctact ggatgcactg ggtgcgccag 180

gtgccgggaa aaggactggt gtgggtgtcc agaatcaaca ccgacgggtc aacgactacc 240

tacgcagata gcgtggaagg tcggttcacc atttcgcggg acaacgctaa aaacactctg 300

taccttcaga tgaattcact gcgcgatgac gacaccgcag tctactactg cgtcggtgga 360

cactgggcgg tctggggaca gggaactacg gtgactgtgt ccagcggcgg gggaggaagc 420

ggcggagggg ggagcggagg cggaggatca ggaggaggcg gctccgatat ccagatgacc 480

cagtcgccat cgaccctctc cgctagcgtg ggggataggg tcactatcac ttgccgagcc 540

agccaatcca ttagcgaccg gcttgcctgg taccaacaga aacctggaaa ggccccgaag 600

ctgctcatct acaaggcctc gtcactggag tcgggagtcc cgtcccgctt ttccggctcg 660

ggctcaggca ccgagttcac tctgaccatc tcgagcctgc agccggacga tttcgccgtg 720

tattactgcc agcaatacgg acatctccca atgtacacgt tcggtcaggg caccaaggtc 780

gaaatcaaga ccactacccc agcaccgagg ccacccaccc cggctcctac catcgcctcc 840

cagcctctgt ccctgcgtcc ggaggcatgt agacccgcag ctggtggggc cgtgcatacc 900

cggggtcttg acttcgcctg cgatatctac atttgggccc ctctggctgg tacttgcggg 960

gtcctgctgc tttcactcgt gatcactctt tactgtaagc gcggtcggaa gaagctgctg 1020

tacatcttta agcaaccctt catgaggcct gtgcagacta ctcaagagga ggacggctgt 1080

tcatgccggt tcccagagga ggaggaaggc ggctgcgaac tgcgcgtgaa attcagccgc 1140

agcgcagatg ctccagccta caagcagggg cagaaccagc tctacaacga actcaatctt 1200

ggtcggagag aggagtacga cgtgctggac aagcggagag gacgggaccc agaaatgggc 1260

gggaagccgc gcagaaagaa tccccaagag ggcctgtaca acgagctcca aaaggataag 1320

atggcagaag cctatagcga gattggtatg aaaggggaac gcagaagagg caaaggccac 1380

gacggactgt accagggact cagcaccgcc accaaggaca cctatgacgc tcttcacatg 1440

caggccctgc cgcctcgg 1458

<210> 584
<211> 723
<212> DNA
<213> Artificial Sequence

<220>
<221> source

<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 584
caagtccaac tcgttcaatc aggcgcagaa gtcgaaaagc ccggagcatc agtcaaagtc 60

tcttgcaagg cttccggcta caccttcacg gactactaca tgcactgggt gcgccaggct 120

ccaggccagg gactggagtg gatgggatgg atcaacccga attccggggg aactaactac 180

gcccagaagt ttcagggccg ggtgactatg actcgcgata cctcgatctc gactgcgtac 240

atggagctca gccgcctccg gtcggacgat accgccgtgt actattgtgc gtcgggatgg 300

gacttcgact actgggggca gggcactctg gtcactgtgt caagcggagg aggtggatca 360

ggtggaggtg gaagcggggg aggaggttcc ggcggcggag gatcagatat cgtgatgacg 420

caatcgcctt cctcgttgtc cgcatccgtg ggagacaggg tgaccattac ttgcagagcg 480

tcccagtcca ttcggtacta cctgtcgtgg taccagcaga agccggggaa agccccaaaa 540

ctgcttatct atactgcctc gatcctccaa aacggcgtgc catcaagatt cagcggttcg 600

ggcagcggga ccgactttac cctgactatc agcagcctgc agccggaaga tttcgccacg 660

tactactgcc tgcaaaccta caccaccccg gacttcggac ctggaaccaa ggtggagatc 720

aag 723

<210> 585
<211> 1455
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 585
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

ccccaagtcc aactcgttca atcaggcgca gaagtcgaaa agcccggagc atcagtcaaa 120

gtctcttgca aggcttccgg ctacaccttc acggactact acatgcactg ggtgcgccag 180

gctccaggcc agggactgga gtggatggga tggatcaacc cgaattccgg gggaactaac 240

tacgcccaga agtttcaggg ccgggtgact atgactcgcg atacctcgat ctcgactgcg 300

tacatggagc tcagccgcct ccggtcggac gataccgccg tgtactattg tgcgtcggga 360

tgggacttcg actactgggg gcagggcact ctggtcactg tgtcaagcgg aggaggtgga 420

tcaggtggag gtggaagcgg gggaggaggt tccggcggcg gaggatcaga tatcgtgatg 480

acgcaatcgc cttcctcgtt gtccgcatcc gtgggagaca gggtgaccat tacttgcaga 540

gcgtcccagt ccattcggta ctacctgtcg tggtaccagc agaagccggg gaaagcccca 600

aaactgctta tctatactgc ctcgatcctc caaaacggcg tgccatcaag attcagcggt 660

tcgggcagcg ggaccgactt taccctgact atcagcagcc tgcagccgga agatttcgcc 720

acgtactact gcctgcaaac ctacaccacc ccggacttcg gacctggaac caaggtggag 780

atcaagacca ctaccccagc accgaggcca cccaccccgg ctcctaccat cgcctcccag 840

cctctgtccc tgcgtccgga ggcatgtaga cccgcagctg gtggggccgt gcatacccgg 900

ggtcttgact tcgcctgcga tatctacatt tgggcccctc tggctggtac ttgcggggtc 960

ctgctgcttt cactcgtgat cactctttac tgtaagcgcg gtcggaagaa gctgctgtac 1020

atctttaagc aacccttcat gaggcctgtg cagactactc aagaggagga cggctgttca 1080

tgccggttcc cagaggagga ggaaggcggc tgcgaactgc gcgtgaaatt cagccgcagc 1140

gcagatgctc cagcctacaa gcaggggcag aaccagctct acaacgaact caatcttggt 1200

cggagagagg agtacgacgt gctggacaag cggagaggac gggacccaga aatgggcggg 1260

aagccgcgca gaaagaatcc ccaagagggc ctgtacaacg agctccaaaa ggataagatg 1320

gcagaagcct atagcgagat tggtatgaaa ggggaacgca gaagaggcaa aggccacgac 1380

ggactgtacc agggactcag caccgccacc aaggacacct atgacgctct tcacatgcag 1440

gccctgccgc ctcgg 1455

<210> 586
<211> 759
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 586
caagtgcaac tcgtccagtc aggtgcagaa gtgaagaaac ccggagcgtc agtcaaagtg 60

tcatgcaagg cgtcaggcta caccttcacc agctactaca tgcactgggt gcggcaggcc 120

ccaggccaag gcttggagtg gatgggaatc attaacccgt caggaggctc cacctcctac 180

gcccagaagt ttcagggaag agtgacgatg actcgggata cgtcgacctc gaccgtgtac 240

atggaactga gctcgctgcg ctccgaggac actgctgtgt actactgcgc acggtacaga 300

ctcattgccg tggcaggaga ctactactac tatggcatgg acgtctgggg gcagggcact 360

atggtcactg tgtcgtccgg cggaggaggc tcgggtggag gaggtagcgg aggaggggga 420

agcggagggg ggggctccga tatccagatg actcagtcgc cttcctccgt gtcggcctcg 480

gttggagatc gcgtcaccat cacttgtcga gcttcccaag gagtcggtag gtggctggcg 540

tggtaccagc aaaagccggg aactgccccg aagctcctga tctacgcggc tagcaccctg 600

cagtcgggag tgccatcccg cttcagcgga tctgggtcag gtaccgactt cacccttacg 660

atcaacaatc tccagccgga ggactttgcc acctattact gccaacaggc caacagcttc 720

cctctgactt tcggaggggg cactcgcctg gaaatcaag 759

<210> 587
<211> 1491
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 587
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

ccccaagtgc aactcgtcca gtcaggtgca gaagtgaaga aacccggagc gtcagtcaaa 120

gtgtcatgca aggcgtcagg ctacaccttc accagctact acatgcactg ggtgcggcag 180

gccccaggcc aaggcttgga gtggatggga atcattaacc cgtcaggagg ctccacctcc 240

tacgcccaga agtttcaggg aagagtgacg atgactcggg atacgtcgac ctcgaccgtg 300

tacatggaac tgagctcgct gcgctccgag gacactgctg tgtactactg cgcacggtac 360

agactcattg ccgtggcagg agactactac tactatggca tggacgtctg ggggcagggc 420

actatggtca ctgtgtcgtc cggcggagga ggctcgggtg gaggaggtag cggaggaggg 480

ggaagcggag gggggggctc cgatatccag atgactcagt cgccttcctc cgtgtcggcc 540

tcggttggag atcgcgtcac catcacttgt cgagcttccc aaggagtcgg taggtggctg 600

gcgtggtacc agcaaaagcc gggaactgcc ccgaagctcc tgatctacgc ggctagcacc 660

ctgcagtcgg gagtgccatc ccgcttcagc ggatctgggt caggtaccga cttcaccctt 720

acgatcaaca atctccagcc ggaggacttt gccacctatt actgccaaca ggccaacagc 780

ttccctctga ctttcggagg gggcactcgc ctggaaatca agaccactac cccagcaccg 840

aggccaccca ccccggctcc taccatcgcc tcccagcctc tgtccctgcg tccggaggca 900

tgtagacccg cagctggtgg ggccgtgcat acccggggtc ttgacttcgc ctgcgatatc 960

tacatttggg cccctctggc tggtacttgc ggggtcctgc tgctttcact cgtgatcact 1020

ctttactgta agcgcggtcg gaagaagctg ctgtacatct ttaagcaacc cttcatgagg 1080

cctgtgcaga ctactcaaga ggaggacggc tgttcatgcc ggttcccaga ggaggaggaa 1140

ggcggctgcg aactgcgcgt gaaattcagc cgcagcgcag atgctccagc ctacaagcag 1200

gggcagaacc agctctacaa cgaactcaat cttggtcgga gagaggagta cgacgtgctg 1260

gacaagcgga gaggacggga cccagaaatg ggcgggaagc cgcgcagaaa gaatccccaa 1320

gagggcctgt acaacgagct ccaaaaggat aagatggcag aagcctatag cgagattggt 1380

atgaaagggg aacgcagaag aggcaaaggc cacgacggac tgtaccaggg actcagcacc 1440

gccaccaagg acacctatga cgctcttcac atgcaggccc tgccgcctcg g 1491

<210> 588
<211> 750
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 588
caagtgcaat tggttcaatc aggaggagga gtggtgcaac ctggaagatc tctcagactg 60

tcgtgtgcgg catcgggatt cactttctca tcatacgcaa tgcactgggt ccgccaggcc 120

ccgggcaaag gcttggaatg ggtggcggtc atttcatacg acggctcgaa caagtactac 180

gctgacagcg tgaagggacg ctttactatt tcccgggaca attcgaagaa cactctgtac 240

ctccagatga actcccttag ggctgaggac accgccgtct actactgcgc acgctggaaa 300

gtgtcgtcca gctccccagc ttttgactac tggggacagg gaaccttgt gaccgtgtcg 360

tccggtggag ggggaagcgg cggaggggga tcaggtggcg gcggatcggg aggcgggggа 420

tcagaaatcg tgctgactca gtccccggcc acgctgtctc tcagcccggg agagagagcg 480

atcctgtcct gccgcgcctc gcagagcgtg tacactaagt acctggggtg gtaccagcag 540

aaaccgggtc aagcgcctcg gctgctgatc tacgatgcct ccacccgggc caccggaatc 600

cccgatcggt tctccggcag cggctcggga actgatttca cgctgaccat caatcgcctg 660

gagccggaag atttcgccgt ctattactgc cagcattacg gcgggagccc actcatcacc 720

ttcggtcaag gaacccgact cgaaatcaag 750

<210> 589
<211> 1482
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 589
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

ccccaagtgc aattggttca atcaggagga ggagtggtgc aacctggaag atctctcaga 120

ctgtcgtgtg cggcatcggg attcactttc tcatcatacg caatgcactg ggtccgccag 180

gccccgggca aaggcttgga atgggtggcg gtcatttcat acgacggctc gaacaagtac 240

tacgctgaca gcgtgaaggg acgctttact atttcccggg acaattcgaa gaacactctg 300

tacctccaga tgaactccct tagggctgag gacaccgccg tctactactg cgcacgctgg 360

aaagtgtcgt ccagctcccc agcttttgac tactggggac agggaaccct tgtgaccgtg 420

tcgtccggtg gaggggggaag cggcggaggg ggatcaggtg gcggcggatc gggaggcggg 480

ggatcagaaa tcgtgctgac tcagtccccg gccacgctgt ctctcagccc gggagagaga 540

gcgatcctgt cctgccgcgc ctcgcagagc gtgtacacta agtacctggg gtggtaccag 600

cagaaaccgg gtcaagcgcc tcggctgctg atctacgatg cctccacccg ggccaccgga 660

atccccgatc ggttctccgg cagcggctcg ggaactgatt tcacgctgac catcaatcgc 720

ctggagccgg aagatttcgc cgtctattac tgccagcatt acggcgggag cccactcatc 780

accttcggtc aaggaacccg actcgaaatc aagaccacta ccccagcacc gaggccaccc 840

accccggctc ctaccatcgc ctcccagcct ctgtccctgc gtccggaggc atgtagaccc 900

gcagctggtg gggccgtgca tacccggggt cttgacttcg cctgcgatat ctacatttgg 960

gcccctctgg ctggtacttg cggggtcctg ctgctttcac tcgtgatcac tctttactgt 1020

aagcgcggtc ggaagaagct gctgtacatc tttaagcaac ccttcatgag gcctgtgcag 1080

actactcaag aggaggacgg ctgttcatgc cggttcccag aggaggagga aggcggctgc 1140

gaactgcgcg tgaaattcag ccgcagcgca gatgctccag cctacaagca ggggcagaac 1200

cagctctaca acgaactcaa tcttggtcgg agagaggagt acgacgtgct ggacaagcgg 1260

agaggacggg acccagaaat gggcgggaag ccgcgcagaa agaatcccca agagggcctg 1320

tacaacgagc tccaaaagga taagatggca gaagcctata gcgagattgg tatgaaaggg 1380

gaacgcagaa gaggcaaagg ccacgacgga ctgtaccagg gactcagcac cgccaccaag 1440

gacacctatg acgctcttca catgcaggcc ctgccgcctc gg 1482

<210> 590
<211> 738
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 590
caagtccaac tccagcagtc aggtgcagaa gtcaaaaagc caggagcatc cgtgaaggtt 60

tcgtgcaaga cttccggcta ccctttttacc gggtactccc tccattgggt gagacaagca 120

ccgggccagg gactggagtg gatgggatgg atcaacccaa attcgggcgg caccaactat 180

gcgcagaagt tccagggacg ggtgaccatg actcgcgaca cttcgatctc cactgcctac 240

atggagctgt cccgcttgag atctgacgac acggccgtct actactgcgc ccgggatcac 300

tacggaggta attcgctgtt ctactggggg cagggaaccc ttgtgactgt gtcctcgggt 360

ggtggagggt caggaggcgg aggctcaggg ggaggaggta gcggaggagg cggatcagac 420

atccaactga cccagtcacc atcctccatc tcggctagcg tcggagacac cgtgtcgatt 480

acttgtaggg cctcccaaga ctcagggacg tggctggcgt ggtatcagca aaaaccgggc 540

aaagctccga acctgttgat gtacgacgcc agcaccctcg aagatggagt gcctagccgc 600

ttcagcggaa gcgcctcggg cactgaattc acgctgactg tgaatcggct ccagccggag 660

gattcggcga cctactactg ccagcagtac aacagctacc ccctgacctt tggaggcggg 720

accaaggtgg atatcaag 738

<210> 591
<211> 1470
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 591
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

ccccaagtcc aactccagca gtcaggtgca gaagtcaaaa agccaggagc atccgtgaag 120

gtttcgtgca agacttccgg ctacccttttt accgggtact ccctccattg ggtgagacaa 180

gcaccgggcc agggactgga gtggatggga tggatcaacc caaattcggg cggcaccaac 240

tatgcgcaga agttccaggg acgggtgacc atgactcgcg acacttcgat ctccactgcc 300

tacatggagc tgtcccgctt gagatctgac gacacggccg tctactactg cgcccgggat 360

cactacggag gtaattcgct gttctactgg gggcagggaa cccttgtgac tgtgtcctcg 420

ggtggtggag ggtcaggagg cggaggctca gggggaggag gtagcggagg aggcggatca 480

gacatccaac tgacccagtc accatcctcc atctcggcta gcgtcggaga caccgtgtcg 540

attacttgta gggcctccca agactcaggg acgtggctgg cgtggtatca gcaaaaaccg 600

ggcaaagctc cgaacctgtt gatgtacgac gccagcaccc tcgaagatgg agtgcctagc 660

cgcttcagcg gaagcgcctc gggcactgaa ttcacgctga ctgtgaatcg gctccagccg 720

gaggattcgg cgacctacta ctgccagcag tacaacagct acccccctgac ctttggaggc 780

gggaccaagg tggatatcaa gaccactacc ccagcaccga ggccacccac cccggctcct 840

accatcgcct cccagcctct gtccctgcgt ccggaggcat gtagacccgc agctggtggg 900

gccgtgcata cccggggtct tgacttcgcc tgcgatatct acatttgggc ccctctggct 960

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aagaagctgc tgtacatctt taagcaaccc ttcatgaggc ctgtgcagac tactcaagag 1080

gaggacggct gttcatgccg gttcccagag gaggaggaag gcggctgcga actgcgcgtg 1140

aaattcagcc gcagcgcaga tgctccagcc tacaagcagg ggcagaacca gctctacaac 1200

gaactcaatc ttggtcggag agaggagtac gacgtgctgg acaagcggag aggacgggac 1260

ccagaaatgg gcgggaagcc gcgcagaaag aatccccaag agggcctgta caacgagctc 1320

caaaaggata agatggcaga agcctatagc gagattggta tgaaaggggа acgcagaaga 1380

ggcaaaggcc acgacggact gtaccaggga ctcagcaccg ccaccaagga cacctatgac 1440

gctcttcaca tgcaggccct gccgcctcgg 1470

<210> 592
<211> 744
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 592
caagtgcaac tcgtccagtc aggtgcagaa gtgaagaaac caggagcgtc cgtcgaagtg 60

tcgtgtaagg cgtccggcta cactttcacc tcgtactaca tgcactgggt gcggcaggcc 120

ccgggacaag gcctcgaatg gatgggaatc atcaacccga gcggaggctc gactggttac 180

gcccagaagt tccagggaag ggtgacgatg acccgcgata cctcgacttc gaccgttcat 240

atggagctct cgtccctgcg gagcgaggac actgctgtct actattgcgc gcggggagga 300

tactctagct cctccgatgc atttgacatt tggggccagg gaactatggt gaccgtgtca 360

tcaggcggag gtggatcagg aggaggaggg tcgggagggg gaggcagcgg cgggggtggg 420

tcggacattc agatgacgca gtcccctcct agcctgagcg cctcggtggg tgacagagtg 480

accatcactt gcagagcctc gcaagacatc tcctccgcat tggcttggta ccagcaaaag 540

ccgggcactc cgccgaaact gctcatctac gatgcctcct cactggagtc aggagtccca 600

tctcgcttct cggggtcagg aagcggcacc gattttaccc ttaccatctc agcctgcag 660

cccgaggact tcgccacgta ctactgccaa cagttcagct cctacccact gaccttcggg 720

ggcggaactc gcctggaaat caag 744

<210> 593

<211> 1476
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 593
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

ccccaagtgc aactcgtcca gtcaggtgca gaagtgaaga aaccaggagc gtccgtcgaa 120

gtgtcgtgta aggcgtccgg ctacactttc acctcgtact acatgcactg ggtgcggcag 180

gccccgggac aaggcctcga atggatggga atcatcaacc cgagcggagg ctcgactggt 240

tacgcccaga agttccaggg aagggtgacg atgacccgcg atacctcgac ttcgaccgtt 300

catatggagc tctcgtccct gcggagcgag gacactgctg tctactattg cgcgcgggga 360

ggatactcta gctcctccga tgcatttgac atttggggcc agggaactat ggtgaccgtg 420

tcatcaggcg gaggtggatc aggaggagga gggtcgggag ggggaggcag cggcgggggt 480

gggtcggaca ttcagatgac gcagtcccct cctagcctga gcgcctcggt gggtgacaga 540

gtgaccatca cttgcagagc ctcgcaagac atctcctccg cattggcttg gtaccagcaa 600

aagccgggca ctccgccgaa actgctcatc tacgatgcct cctcactgga gtcaggagtc 660

ccatctcgct tctcggggtc aggaagcggc accgatttta cccttaccat ctccagcctg 720

cagcccgagg acttcgccac gtactactgc caacagttca gctcctaccc actgaccttc 780

gggggcggaa ctcgcctgga aatcaagacc actaccccag caccgaggcc acccaccccg 840

gctcctacca tcgcctccca gcctctgtcc ctgcgtccgg aggcatgtag acccgcagct 900

ggtggggccg tgcatacccg gggtcttgac ttcgcctgcg atatctacat ttgggccccc 960

ctggctggta cttgcggggt cctgctgctt tcactcgtga tcactcttta ctgtaagcgc 1020

ggtcggaaga agctgctgta catctttaag caacccttca tgaggcctgt gcagactact 1080

caagaggagg acggctgttc atgccggttc ccagaggagg aggaaggcgg ctgcgaactg 1140

cgcgtgaaat tcagccgcag cgcagatgct ccagcctaca agcaggggca gaaccagctc 1200

tacaacgaac tcaatcttgg tcggagagag gagtacgacg tgctggacaa gcggagagga 1260

cgggacccag aaatgggcgg gaagccgcgc agaaagaatc cccaagaggg cctgtacaac 1320

gagctccaaa aggataagat ggcagaagcc tatagcgaga ttggtatgaa aggggaacgc 1380

agaagaggca aaggccacga cggactgtac cagggactca gcaccgccac caaggacacc 1440

tatgacgctc ttcacatgca ggccctgccg cctcgg 1476

<210> 594
<211> 765
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 594
caagtgcaac tcgtccagag cggagcagaa gtcaagaagc caggagcgtc agtgaaagtg 60

tcatgcaagg ccagcggcta tacctttact tcgtatggga tctcctgggt gcggcaggca 120

ccgggccaag gactggagtg gatgggatgg atctcagcct acaacggtaa caccaactac 180

gcccagaagc tgcaaggacg cgtgaccatg actactgata cgagcacctc cactgcctac 240

atggaattgc ggtcccttcg gtcggacgat actgctgtgt actactgcgc aagagtcgcc 300

ggagggatct actactacta cggcatggac gtctggggac agggaaccac cattacggtg 360

tcgagcggag ggggaggctc ggggggagga ggaagcggag gtggcggctc cgggggcggc 420

ggatcggaca ttgtgatgac ccagactcct gactccctgg ctgtttcgtt gggagagcgc 480

gcgactatct cgtgtaagtc cagccactca gtcctgtaca atcgcaataa caagaactac 540

ctcgcgtggt accagcaaaa accgggtcag ccgcctaaac tcctgttcta ctgggcctcc 600

accagaaaga gcggggtgcc agatcgattc tctggatcag gatcaggtac cgactttacg 660

ctgaccatct cgtccctgca gccggaggat ttcgcgactt acttctgcca gcagactcag 720

actttccccc tcaccttcgg tcaaggcacc aggctggaaa tcaat 765

<210> 595
<211> 1497
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 595
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

ccccaagtgc aactcgtcca gagcggagca gaagtcaaga agccaggagc gtcagtgaaa 120

gtgtcatgca aggccagcgg ctataccttt acttcgtatg ggatctcctg ggtgcggcag 180

gcaccgggcc aaggactgga gtggatggga tggatctcag cctacaacgg taacaccaac 240

tacgcccaga agctgcaagg acgcgtgacc atgactactg atacgagcac ctccactgcc 300

tacatggaat tgcggtccct tcggtcggac gatactgctg tgtactactg cgcaagagtc 360

gccggaggga tctactacta ctacggcatg gacgtctggg gacagggaac caccattacg 420

gtgtcgagcg gaggggggagg ctcgggggga ggaggaagcg gaggtggcgg ctccgggggc 480

ggcggatcgg acattgtgat gacccagact cctgactccc tggctgtttc gttgggagag 540

cgcgcgacta tctcgtgtaa gtccagccac tcagtcctgt acaatcgcaa taacaagaac 600

tacctcgcgt ggtaccagca aaaaccgggt cagccgccta aactcctgtt ctactgggcc 660

tccaccagaa agagcggggt gccagatcga ttctctggat caggatcagg taccgacttt 720

acgctgacca tctcgtccct gcagccggag gatttcgcga cttacttctg ccagcagact 780

cagactttcc ccctcacctt cggtcaaggc accaggctgg aaatcaatac cactacccca 840

gcaccgaggc cacccacccc ggctcctacc atcgcctccc agcctctgtc cctgcgtccg 900

gaggcatgta gacccgcagc tggtggggcc gtgcataccc ggggtcttga cttcgcctgc 960

gatatctaca tttgggcccc tctggctggt acttgcgggg tcctgctgct ttcactcgtg 1020

atcactcttt actgtaagcg cggtcggaag aagctgctgt acatctttaa gcaacccttc 1080

atgaggcctg tgcagactac tcaagaggag gacggctgtt catgccggtt cccagaggag 1140

gaggaaggcg gctgcgaact gcgcgtgaaa ttcagccgca gcgcagatgc tccagcctac 1200

aagcaggggc agaaccagct ctacaacgaa ctcaatcttg gtcggagaga ggagtacgac 1260

gtgctggaca agcggagagg acgggaccca gaaatgggcg ggaagccgcg cagaaagaat 1320

ccccaagagg gcctgtacaa cgagctccaa aaggataaga tggcagaagc ctatagcgag 1380

attggtatga aaggggaacg cagaagaggc aaaggccacg acggactgta ccagggactc 1440

agcaccgcca ccaaggacac ctatgacgct cttcacatgc aggccctgcc gcctcgg 1497

<210> 596

<211> 723
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 596
caagtccaat tgcagcagag cggagcagaa gtgaagaagc caggagcgtc agtcaaagtg 60

tcgtgtaagg cgtcaggata caccttcacg ggatactaca tgcactgggt gcgccaggcc 120

ccgggccaag gactcgagtg gatgggctgg atcaacccta actctggagg caccaactac 180

gcccagaatt tccaaggcag agtgaccatg acccgggaca cctccatctc gactgcctat 240

atggaactgc ggcggctgcg ctcggacgat actgctgtgt attactgcgc cagcggctgg 300

gactttgact actggggaca gggtactctg gtgactgttt cctcgggagg aggcggatcg 360

ggtggaggag gtagcggggg agggggtcg ggaggcggag gcagcgatat tcgcatgact 420

caatcgccgt cctccctgag cgctagcgtg ggagatcgag tcaccatcac ttgcagagcg 480

tcacagtcga ttcgctacta cctgtcctgg taccagcaga aaccgggaaa ggcaccaaag 540

cttctgatct acacggcctc catcctgcaa aatggtgtcc catcaaggtt ctccgggtca 600

gggagcggca ctgacttcac tctcaccatc tcctcactcc agcccgagga ctttgcaacc 660

tactactgcc tccagacgta caccaccccg gatttcggtc ctggaaccaa ggtggaaatc 720

aaa 723

<210> 597
<211> 1455
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 597
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

ccccaagtcc aattgcagca gagcggagca gaagtgaaga agccaggagc gtcagtcaaa 120

gtgtcgtgta aggcgtcagg atacaccttc acgggatact acatgcactg ggtgcgccag 180

gccccgggcc aaggactcga gtggatgggc tggatcaacc ctaactctgg aggcaccaac 240

tacgcccaga atttccaagg cagagtgacc atgacccggg acacctccat ctcgactgcc 300

tatatggaac tgcggcggct gcgctcggac gatactgctg tgtattactg cgccagcggc 360

tgggactttg actactgggg acagggtact ctggtgactg tttcctcggg aggaggcgga 420

tcgggtggag gaggtagcgg gggaggggcg tcgggaggcg gaggcagcga tattcgcatg 480

actcaatcgc cgtcctccct gagcgctagc gtgggagatc gagtcaccat cacttgcaga 540

gcgtcacagt cgattcgcta ctacctgtcc tggtaccagc agaaaccggg aaaggcacca 600

aagcttctga tctacacggc ctccatcctg caaaatggtg tcccatcaag gttctccggg 660

tcagggagcg gcactgactt cactctcacc atctcctcac tccagcccga ggactttgca 720

acctactact gcctccagac gtacaccacc ccggatttcg gtcctggaac caaggtggaa 780

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cctctgtccc tgcgtccgga ggcatgtaga cccgcagctg gtggggccgt gcatacccgg 900

ggtcttgact tcgcctgcga tatctacatt tgggcccctc tggctggtac ttgcggggtc 960

ctgctgcttt cactcgtgat cactctttac tgtaagcgcg gtcggaagaa gctgctgtac 1020

atctttaagc aacccttcat gaggcctgtg cagactactc aagaggagga cggctgttca 1080

tgccggttcc cagaggagga ggaaggcggc tgcgaactgc gcgtgaaatt cagccgcagc 1140

gcagatgctc cagcctacaa gcaggggcag aaccagctct acaacgaact caatcttggt 1200

cggagagagg agtacgacgt gctggacaag cggagaggac gggacccaga aatgggcggg 1260

aagccgcgca gaaagaatcc ccaagagggc ctgtacaacg agctccaaaa ggataagatg 1320

gcagaagcct atagcgagat tggtatgaaa ggggaacgca gaagaggcaa aggccacgac 1380

ggactgtacc agggactcag caccgccacc aaggacacct atgacgctct tcacatgcag 1440

gccctgccgc ctcgg 1455

<210> 598
<211> 738
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 598
caagtccaac tcgtccaaag cggagcagaa gtcaaaaagc caggagcgtc ggtgaaagtg 60

tcttgcaaag ccagcggcta caccttcacg ggttactaca tgcactgggt gcgccaggcg 120

ccgggccagg ggctggagtg gatgggccgg attaacccta acagcggggg aactaattac 180

gctcagaagt tccagggtag agtcaccatg actacggaca cttccacttc caccgcctat 240

atggaactgc gctccctccg ctcagatgat actgccgtgt attactgcgc gcggactacc 300

acgtcatacg catttgacat ctggggccag ggaactatgg tgaccgtgag ctcgggcgga 360

ggcggttcag ggggaggagg aagcggagga ggaggatcgg gaggaggtgg ctccgatatc 420

cagctgactc agtccccgag caccctgtcg gcgtcggtgg gggacagggt taccatcacc 480

tgtagagctt cccaatccat ttcgacttgg ctggcctggt accagcaaaa gccgggaaag 540

gcccctaatt tgcttatcta caaggcatcg accctcgaaa gcggtgtgcc ctcccggttt 600

tcgggatcag gatcagggac cgagttcacc ctgaccatct catccctcca gccggacgac 660

ttcgccactt actactgcca gcagtacaac acctactcgc catacacttt cggccaaggc 720

accaagctgg agatcaag 738

<210> 599
<211> 1470
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 599
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

ccccaagtcc aactcgtcca aagcggagca gaagtcaaaa agccaggagc gtcggtgaaa 120

gtgtcttgca aagccagcgg ctacaccttc acgggttact acatgcactg ggtgcgccag 180

gcgccgggcc aggggctgga gtggatgggc cggattaacc ctaacagcgg gggaactaat 240

tacgctcaga agttccaggg tagagtcacc atgactacgg acacttccac ttccaccgcc 300

tatatggaac tgcgctccct ccgctcagat gatactgccg tgtattactg cgcgcggact 360

accacgtcat acgcatttga catctggggc cagggaacta tggtgaccgt gagctcgggc 420

ggaggcggtt caggggggagg aggaagcgga ggaggaggat cgggaggagg tggctccgat 480

atccagctga ctcagtcccc gagcaccctg tcggcgtcgg tgggggacag ggttaccatc 540

acctgtagag cttcccaatc catttcgact tggctggcct ggtaccagca aaagccggga 600

aaggccccta atttgcttat ctacaaggca tcgaccctcg aaagcggtgt gccctcccgg 660

ttttcgggat caggatcagg gaccgagttc accctgacca tctcatccct ccagccggac 720

gacttcgcca cttactactg ccagcagtac aacacctact cgccatacac tttcggccaa 780

ggcaccaagc tggagatcaa gaccactacc ccagcaccga ggccacccac cccggctcct 840

accatcgcct cccagcctct gtccctgcgt ccggaggcat gtagacccgc agctggtggg 900

gccgtgcata cccggggtct tgacttcgcc tgcgatatct acatttgggc ccctctggct 960

ggtacttgcg gggtcctgct gctttcactc gtgatcactc tttactgtaa gcgcggtcgg 1020

aagaagctgc tgtacatctt taagcaaccc ttcatgaggc ctgtgcagac tactcaagag 1080

gaggacggct gttcatgccg gttcccagag gaggaggaag gcggctgcga actgcgcgtg 1140

aaattcagcc gcagcgcaga tgctccagcc tacaagcagg ggcagaacca gctctacaac 1200

gaactcaatc ttggtcggag agaggagtac gacgtgctgg acaagcggag aggacgggac 1260

ccagaaatgg gcgggaagcc gcgcagaaag aatccccaag agggcctgta caacgagctc 1320

caaaaggata agatggcaga agcctatagc gagattggta tgaaaggggа acgcagaaga 1380

ggcaaaggcc acgacggact gtaccaggga ctcagcaccg ccaccaagga cacctatgac 1440

gctcttcaca tgcaggccct gccgcctcgg 1470

<210> 600
<211> 747
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 600
caagttcaac tcgtgcaatc aggtggagga ctcgtcaaac ccggaggatc attgagactg 60

tcatgcgaag cgagcggttt tatcttctcc gattactata tgggatggat tcggcaggcc 120

ccgggaaagg gactcgaatg ggtgtcatac atcggaaggt caggctcgtc catgtactac 180

gcagactcgg tgaaaggcag attcaccttt agccgggaca acgccaagaa ttccctctac 240

ttgcagatga acagcctgcg agccgaggat actgctgtct actactgtgc cgcgtcgccg 300

gtggtggcag ctactgaaga tttccagcac tggggacagg gaactctggt cacggtgtcg 360

agcggtgggg gcggaagcgg aggcggagga tcgggcggcg gaggttcggg gggggggaggg 420

tctgacatcg tgatgaccca aaccccagcc accctgagcc tctcccctgg agagcgcgcg 480

actctttcgt gccgcgcttc ccagtcagtg accagcaatt acttggcttg gtaccaacag 540

aagccgggac aggcgccacg gctgctgctt tttggtgcca gcactcgcgc caccggaatc 600

ccggatcgct tctcgggctc agggtccggg acggacttca ccctgactat caaccggctg 660

gaacctgagg acttcgcgat gtactactgc cagcagtacg gctccgcacc agtcactttc 720

ggacaaggca ccaagctgga gatcaag 747

<210> 601
<211> 1479
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 601
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

ccccaagttc aactcgtgca atcaggtgga ggactcgtca aacccggagg atcattgaga 120

ctgtcatgcg aagcgagcgg ttttatcttc tccgattact atatgggatg gattcggcag 180

gccccgggaa agggactcga atgggtgtca tacatcggaa ggtcaggctc gtccatgtac 240

tacgcagact cggtgaaagg cagattcacc tttagccggg acaacgccaa gaattccctc 300

tacttgcaga tgaacagcct gcgagccgag gatactgctg tctactactg tgccgcgtcg 360

ccggtggtgg cagctactga agatttccag cactggggac agggaactct ggtcacggtg 420

tcgagcggtg ggggcggaag cggaggcgga ggatcgggcg gcggaggttc gggggggga 480

gggtctgaca tcgtgatgac ccaaacccca gccaccctga gcctctcccc tggagagcgc 540

gcgactcttt cgtgccgcgc ttcccagtca gtgaccagca attacttggc ttggtaccaa 600

cagaagccgg gacaggcgcc acggctgctg ctttttggtg ccagcactcg cgccaccgga 660

atcccggatc gcttctcggg ctcagggtcc gggacggact tcaccctgac tatcaaccgg 720

ctggaacctg aggacttcgc gatgtactac tgccagcagt acggctccgc accagtcact 780

ttcggacaag gcaccaagct ggagatcaag accactaccc cagcaccgag gccacccacc 840

ccggctccta ccatcgcctc ccagcctctg tccctgcgtc cggaggcatg tagacccgca 900

gctggtgggg ccgtgcatac ccggggtctt gacttcgcct gcgatatcta catttgggcc 960

cctctggctg gtacttgcgg ggtcctgctg ctttcactcg tgatcactct ttactgtaag 1020

cgcggtcgga agaagctgct gtacatcttt aagcaaccct tcatgaggcc tgtgcagact 1080

actcaagagg aggacggctg ttcatgccgg ttcccagagg aggaggaagg cggctgcgaa 1140

ctgcgcgtga aattcagccg cagcgcagat gctccagcct acaagcaggg gcagaaccag 1200

ctctacaacg aactcaatct tggtcggaga gaggagtacg acgtgctgga caagcggaga 1260

ggacgggacc cagaaatggg cgggaagccg cgcagaaaga atccccaaga gggcctgtac 1320

aacgagctcc aaaaggataa gatggcagaa gcctatagcg agattggtat gaaaggggaa 1380

cgcagaagag gcaaaggcca cgacggactg taccagggac tcagcaccgc caccaaggac 1440

acctatgacg ctcttcacat gcaggccctg ccgcctcgg 1479

<210> 602
<211> 747
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 602
caagtccaac tcgtccagtc gggagcagaa gttagagcac caggagcgtc agtgaaaatc 60

tcatgcaagg cctcgggctt cacgttccgc ggatactaca tccactgggt gcgccaagcc 120

ccgggtcagg gattggagtg gatgggaatc attaacccat caggagggag ccgggcttac 180

gcgcagaagt tccagggacg cgtcactatg acccgagata cttccacctc gactgtgtac 240

atggaactct cgtccctgag gtccgacgac actgcgatgt attactgtgc tcggactgcc 300

agctgcggtg gggactgtta ctacctcgat tactggggcc agggaactct ggtgaccgtg 360

tccagcggag gtggcgggtc agggggtggc ggaagcggag gcggcggttc aggcggagga 420

ggctcggaca tccaaatgac gcaatcgccg cctaccctga gcgcttccgt gggagatcgg 480

gtgaccatta cttgcagagc atccgagaac gtcaatatct ggctggcctg gtaccaacag 540

aagccgggga aggcccctaa actgctgatc tacaagtcga gcagccttgc ctctggagtg 600

ccctcccgct tctcgggctc gggatcagga gcggaattca ccctcaccat ctcctccctg 660

cagccagatg actttgccac ctactactgc cagcagtacc agagctatcc gttgaccttt 720

gggggaggca ctaaagtgga catcaag 747

<210> 603
<211> 1479
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 603
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

ccccaagtcc aactcgtcca gtcgggagca gaagttagag caccaggagc gtcagtgaaa 120

atctcatgca aggcctcggg cttcacgttc cgcggatact acatccactg ggtgcgccaa 180

gccccgggtc agggattgga gtggatggga atcattaacc catcaggagg gagccgggct 240

tacgcgcaga agttccaggg acgcgtcact atgacccgag atacttccac ctcgactgtg 300

tacatggaac tctcgtccct gaggtccgac gacactgcga tgtattactg tgctcggact 360

gccagctgcg gtggggactg ttactacctc gattactggg gccagggaac tctggtgacc 420

gtgtccagcg gaggtggcgg gtcaggggt ggcggaagcg gaggcggcgg ttcaggcgga 480

ggaggctcgg acatccaaat gacgcaatcg ccgcctaccc tgagcgcttc cgtgggagat 540

cgggtgacca ttacttgcag agcatccgag aacgtcaata tctggctggc ctggtaccaa 600

cagaagccgg ggaaggcccc taaactgctg atctacaagt cgagcagcct tgcctctgga 660

gtgccctccc gcttctcggg ctcgggatca ggagcggaat tcaccctcac catctcctcc 720

ctgcagccag atgactttgc cacctactac tgccagcagt accagagcta tccgttgacc 780

tttgggggag gcactaaagt ggacatcaag accactaccc cagcaccgag gccacccacc 840

ccggctccta ccatcgcctc ccagcctctg tccctgcgtc cggaggcatg tagacccgca 900

gctggtgggg ccgtgcatac ccggggtctt gacttcgcct gcgatatcta catttgggcc 960

cctctggctg gtacttgcgg ggtcctgctg ctttcactcg tgatcactct ttactgtaag 1020

cgcggtcgga agaagctgct gtacatcttt aagcaaccct tcatgaggcc tgtgcagact 1080

actcaagagg aggacggctg ttcatgccgg ttcccagagg aggaggaagg cggctgcgaa 1140

ctgcgcgtga aattcagccg cagcgcagat gctccagcct acaagcaggg gcagaaccag 1200

ctctacaacg aactcaatct tggtcggaga gaggagtacg acgtgctgga caagcggaga 1260

ggacgggacc cagaaatggg cgggaagccg cgcagaaaga atccccaaga gggcctgtac 1320

aacgagctcc aaaaggataa gatggcagaa gcctatagcg agattggtat gaaaggggaa 1380

cgcagaagag gcaaaggcca cgacggactg taccagggac tcagcaccgc caccaaggac 1440

acctatgacg ctcttcacat gcaggccctg ccgcctcgg 1479

<210> 604
<211> 732
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 604
caagttcaac tcgttcaatc aggtggagga ctcgtgcaac caggaagatc actcagactc 60

agctgcgccg cgtcgggatt cactttcgat gactacgcaa tgcactgggt gcggcaggcc 120

ccgggcaaag gactggaatg ggtgagcgga attagctgga actcggggtc catcgggtac 180

gccgactcgg tgaagggacg ctttacgatc tcccgggaca atgccaagaa ctccctgtat 240

ttgcagatga actccttgag ggctgaggac accgccgtgt actactgcgc taaagatgga 300

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tcgtcaggcg gtggagggtc gggcggagga ggtagcggag gcggagggag cagctctgaa 420

ctgacccaag acccggcggt gtcggtcgcc cttggtcaga ctgtgcggac tacctgtcag 480

ggggacgcgc tgcgctcgta ctacgcttca tggtaccagc agaagcccgg acaggcacct 540

atgctggtca tctacggaaa gaataaccgc ccatccggca tcccggatcg cttctcgggt 600

tcggacagcg gcgacaccgc atccctgacg atcactggag cgcaggccga ggatgaagcc 660

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gtcaccgtcc tg 732

<210> 605
<211> 1464
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 605
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

ccccaagttc aactcgttca atcaggtgga ggactcgtgc aaccaggaag atcactcaga 120

ctcagctgcg ccgcgtcggg attcactttc gatgactacg caatgcactg ggtgcggcag 180

gccccgggca aaggactgga atgggtgagc ggaattagct ggaactcggg gtccatcggg 240

tacgccgact cggtgaaggg acgctttacg atctcccggg acaatgccaa gaactccctg 300

tatttgcaga tgaactcctt gagggctgag gacaccgccg tgtactactg cgctaaagat 360

ggatcatcgt cctggtcctg gggatacttc gattactggg gccagggcac tctggtgacc 420

gtgtcgtcag gcggtggagg gtcgggcgga ggaggtagcg gaggcggagg gagcagctct 480

gaactgaccc aagacccggc ggtgtcggtc gcccttggtc agactgtgcg gactacctgt 540

caggggacg cgctgcgctc gtactacgct tcatggtacc agcagaagcc cggacaggca 600

cctatgctgg tcatctacgg aaagaataac cgcccatccg gcatcccgga tcgcttctcg 660

ggttcggaca gcggcgacac cgcatccctg acgatcactg gagcgcaggc cgaggatgaa 720

gccgactact actgcaattc ccgagattca agcggctacc ctgtgtttgg gaccggaact 780

aaggtcaccg tcctgaccac taccccagca ccgaggccac ccaccccggc tcctaccatc 840

gcctcccagc ctctgtccct gcgtccggag gcatgtagac ccgcagctgg tggggccgtg 900

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ggctgttcat gccggttccc agaggaggag gaaggcggct gcgaactgcg cgtgaaattc 1140

agccgcagcg cagatgctcc agcctacaag caggggcaga accagctcta caacgaactc 1200

aatcttggtc ggagagagga gtacgacgtg ctggacaagc ggagaggacg ggacccagaa 1260

atgggcggga agccgcgcag aaagaatccc caagagggcc tgtacaacga gctccaaaag 1320

gataagatgg cagaagccta tagcgagatt ggtatgaaag gggaacgcag aagaggcaaa 1380

ggccacgacg gactgtacca gggactcagc accgccacca aggacaccta tgacgctctt 1440

cacatgcagg ccctgccgcc tcgg 1464

<210> 606
<211> 738
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 606
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tcatgtgctg cctccgggtt cacctttgac gactacgcca tgcactgggt gcgccaggca 120

ccaggaaagg gtctggagtg ggtttcgggt atctcgtgga actccgggag cactggctac 180

gctgattcgg tgaaaggccg gtttaccatc tcccgagaca atgcgaagaa ttccctctat 240

ctgcagatga acagcctccg ggccgaggat actgccctgt actactgcgc caaggatagc 300

tcatcatggt acggaggtgg atcggctttc gatatctggg gccagggcac gatggtcacc 360

gtgtcctcgg ggggcggagg ctccgggggа ggaggtagcg gaggaggagg atcgagctca 420

gagttgactc aagaacccgc agtgtccgtg gcactgggcc aaaccgtcag gatcacttgc 480

cagggagaca gcctgaggtc gtactacgcg tcctggtacc agcagaagcc gggacaggcc 540

ccggtcctgg tcattttcgg acgctcaaga cgcccatcgg gcatcccgga ccggttcagc 600

ggaagctcct cgggaaacac cgcgtcactt atcattaccg gcgcacaggc tgaggacgaa 660

gcggattact actgcaactc ccgcgacaat actgccaacc attacgtgtt cgggaccgga 720

acgaaactga ctgtcctg 738

<210> 607
<211> 1470
<212> DNA

<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 607
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

cccgaagtgc aactcgtgga atctggtgga ggacttgtgc aacctggaag atcgttgaga 120

ctctcatgtg ctgcctccgg gttcaccttt gacgactacg ccatgcactg ggtgcgccag 180

gcaccaggaa agggtctgga gtgggtttcg ggtatctcgt ggaactccgg gagcactggc 240

tacgctgatt cggtgaaagg ccggtttacc atctcccgag acaatgcgaa gaattccctc 300

tatctgcaga tgaacagcct ccgggccgag gatactgccc tgtactactg cgccaaggat 360

agctcatcat ggtacggagg tggatcggct ttcgatatct ggggccaggg cacgatggtc 420

accgtgtcct cgggggcgg aggctccggg ggaggaggta gcggaggagg aggatcgagc 480

tcagagttga ctcaagaacc cgcagtgtcc gtggcactgg gccaaaccgt caggatcact 540

tgccagggag acagcctgag gtcgtactac gcgtcctggt accagcagaa gccgggacag 600

gccccggtcc tggtcatttt cggacgctca agacgcccat cgggcatccc ggaccggttc 660

agcggaagct cctcgggaaa caccgcgtca cttatcatta ccggcgcaca ggctgaggac 720

gaagcggatt actactgcaa ctcccgcgac aatactgcca accattacgt gttcgggacc 780

ggaacgaaac tgactgtcct gaccactacc ccagcaccga ggccacccac cccggctcct 840

accatcgcct cccagcctct gtccctgcgt ccggaggcat gtagacccgc agctggtggg 900

gccgtgcata cccggggtct tgacttcgcc tgcgatatct acatttgggc ccctctggct 960

ggtacttgcg gggtcctgct gctttcactc gtgatcactc tttactgtaa gcgcggtcgg 1020

aagaagctgc tgtacatctt taagcaaccc ttcatgaggc ctgtgcagac tactcaagag 1080

gaggacggct gttcatgccg gttcccagag gaggaggaag gcggctgcga actgcgcgtg 1140

aaattcagcc gcagcgcaga tgctccagcc tacaagcagg ggcagaacca gctctacaac 1200

gaactcaatc ttggtcggag agaggagtac gacgtgctgg acaagcggag aggacgggac 1260

ccagaaatgg gcgggaagcc gcgcagaaag aatccccaag agggcctgta caacgagctc 1320

caaaaggata agatggcaga agcctatagc gagattggta tgaaagggga acgcagaaga 1380

ggcaaaggcc acgacggact gtaccaggga ctcagcaccg ccaccaagga cacctatgac 1440

gctcttcaca tgcaggccct gccgcctcgg 1470

<210> 608
<211> 738
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 608
gaagttcaat tggtggaatc tggaggagga cttgtgcaac ccggtagatc tctgagactg 60

tcctgtgcgg catcgggatt caccttcgac gactacgcta tgcactgggt gagacaagcc 120

cctggaaaag gactggagtg ggtgtcaggc atctcctgga atagcgggtc cactggatac 180

gccgattcgg tcaagggtcg cttcaccatt tcccgggaca atgccaagaa ctccctgtac 240

cttcaaatga actccctccg ggccgaggat accgccctct actactgcgc caaagacagc 300

tcgtcatggt atggcggagg gtcggcattt gacatctggg gacagggaac tatggtgact 360

gtgtcatcag gaggcggcgg aagcggcggc ggcgggtccg gcggaggagg gtcgtccagc 420

gaactcaccc aagatccagc agtgagcgtc gcgctgggcc agaccgtcag gatcacgtgc 480

cagggagatt cactgcgctc atactacgcg tcctggtacc agcagaagcc ggggcaggcc 540

ccggtcctcg tgatctacgg aaagaacaac cgcccgtcgg gtatcccaga ccgcttttcg 600

ggtagctcca gcggaaatac ggctagcctg accatcactg gagcacaggc tgaggatgaa 660

gcggactact actgcaattc gcggggctca tcggggaacc attacgtgtt cggaactggt 720

accaaggtga ctgtcctg 738

<210> 609
<211> 1470
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 609

atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

cccgaagttc aattggtgga atctggagga ggacttgtgc aacccggtag atctctgaga 120

ctgtcctgtg cggcatcggg attcaccttc gacgactacg ctatgcactg ggtgagacaa 180

gcccctggaa aaggactgga gtgggtgtca ggcatctcct ggaatagcgg gtccactgga 240

tacgccgatt cggtcaaggg tcgcttcacc atttcccggg acaatgccaa gaactccctg 300

taccttcaaa tgaactccct ccgggccgag gataccgccc tctactactg cgccaaagac 360

agctcgtcat ggtatggcgg agggtcggca tttgacatct ggggacaggg aactatggtg 420

actgtgtcat caggaggcgg cggaagcggc ggcggcgggt ccggcggagg agggtcgtcc 480

agcgaactca cccaagatcc agcagtgagc gtcgcgctgg gccagaccgt caggatcacg 540

tgccagggag attcactgcg ctcatactac gcgtcctggt accagcagaa gccggggcag 600

gccccggtcc tcgtgatcta cggaaagaac aaccgcccgt cgggtatccc agaccgcttt 660

tcgggtagct ccagcggaaa tacggctagc ctgaccatca ctggagcaca ggctgaggat 720

gaagcggact actactgcaa ttcgcggggc tcatcgggga accattacgt gttcggaact 780

ggtaccaagg tgactgtcct gaccactacc ccagcaccga ggccacccac cccggctcct 840

accatcgcct cccagcctct gtccctgcgt ccggaggcat gtagacccgc agctggtggg 900

gccgtgcata cccggggtct tgacttcgcc tgcgatatct acatttgggc ccctctggct 960

ggtacttgcg gggtcctgct gctttcactc gtgatcactc tttactgtaa gcgcggtcgg 1020

aagaagctgc tgtacatctt taagcaaccc ttcatgaggc ctgtgcagac tactcaagag 1080

gaggacggct gttcatgccg gttcccagag gaggaggaag gcggctgcga actgcgcgtg 1140

aaattcagcc gcagcgcaga tgctccagcc tacaagcagg ggcagaacca gctctacaac 1200

gaactcaatc ttggtcggag agaggagtac gacgtgctgg acaagcggag aggacgggac 1260

ccagaaatgg gcgggaagcc gcgcagaaag aatccccaag agggcctgta caacgagctc 1320

caaaaggata agatggcaga agcctatagc gagattggta tgaaagggga acgcagaaga 1380

ggcaaaggcc acgacggact gtaccaggga ctcagcaccg ccaccaagga cacctatgac 1440

gctcttcaca tgcaggccct gccgcctcgg 1470

<210> 610
<211> 753
<212> DNA

<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 610
caagtgcagc tcgttcaatc aggcggagga ctcgttcaac caggaggatc attgcgactc 60

tcatgtgcgg cctctggatt cacgtttagc tcatattgga tgcactgggt gcggcaggcg 120

ccggggaaag gtctggtgtg ggtcagccgc atcaactcag acggctcctc gacttcgtac 180

gccgactccg tgaagggacg ctttaccatt tcccgcgaca acgccaagaa tacccctttac 240

cttcagatga actccctccg cgctgaggat accgccgtgt actactgcgt gaggactggc 300

tgggtcggca gctactacta ctacatggac gtgtggggca aaggaactac tgtcaccgtg 360

tcaagcggcg gtggaggttc cggcgggggga ggatcggggg ggggcggatc gggtggcgga 420

ggatcggaga tcgtgttgac ccagtcgccg ggaaccctgt cgctgtcgcc tggggagaga 480

gcaactctgt cctgccgggc ttcccagtcg gtgtcgagca attacctggc atggtaccaa 540

cagaagccgg gacagccgcc acgcctgctg atctatgacg tgtcaactcg ggcaactgga 600

atccctgcgc ggttcagcgg cggagggagc ggtaccgatt tcaccctgac tatttcctcc 660

ctcgaaccag aagatttcgc cgtctactac tgccagcaga gaagcaactg gccgccctgg 720

acgttcggac aaggaaccaa ggtcgaaatc aag 753

<210> 611
<211> 1485
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 611
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

ccccaagtgc agctcgttca atcaggcgga ggactcgttc aaccaggagg atcattgcga 120

ctctcatgtg cggcctctgg attcacgttt agctcatatt ggatgcactg ggtgcggcag 180

gcgccgggga aaggtctggt gtgggtcagc cgcatcaact cagacggctc ctcgacttcg 240

tacgccgact ccgtgaaggg acgctttacc atttcccgcg acaacgccaa gaataccctt 300

taccttcaga tgaactccct ccgcgctgag gataccgccg tgtactactg cgtgaggact 360

ggctgggtcg gcagctacta ctactacatg gacgtgtggg gcaaaggaac tactgtcacc 420

gtgtcaagcg gcggtggagg ttccggcggg ggaggatcgg gggggggcgg atcgggtggc 480

ggaggatcgg agatcgtgtt gacccagtcg ccgggaaccc tgtcgctgtc gcctggggag 540

agagcaactc tgtcctgccg ggcttcccag tcggtgtcga gcaattacct ggcatggtac 600

caacagaagc cgggacagcc gccacgcctg ctgatctatg acgtgtcaac tcgggcaact 660

ggaatccctg cgcggttcag cggcggaggg agcggtaccg atttcaccct gactatttcc 720

tccctcgaac cagaagattt cgccgtctac tactgccagc agagaagcaa ctggccgccc 780

tggacgttcg gacaaggaac caaggtcgaa atcaagacca ctaccccagc accgaggcca 840

cccaccccgg ctcctaccat cgcctcccag cctctgtccc tgcgtccgga ggcatgtaga 900

cccgcagctg gtggggccgt gcatacccgg ggtcttgact tcgcctgcga tatctacatt 960

tgggcccctc tggctggtac ttgcggggtc ctgctgcttt cactcgtgat cactctttac 1020

tgtaagcgcg gtcggaagaa gctgctgtac atctttaagc aacccttcat gaggcctgtg 1080

cagactactc aagaggagga cggctgttca tgccggttcc cagaggagga ggaaggcggc 1140

tgcgaactgc gcgtgaaatt cagccgcagc gcagatgctc cagcctacaa gcaggggcag 1200

aaccagctct acaacgaact caatcttggt cggagagagg agtacgacgt gctggacaag 1260

cggagaggac gggacccaga aatgggcggg aagccgcgca gaaagaatcc ccaagagggc 1320

ctgtacaacg agctccaaaa ggataagatg gcagaagcct atagcgagat tggtatgaaa 1380

ggggaacgca gaagaggcaa aggccacgac ggactgtacc agggactcag caccgccacc 1440

aaggacacct atgacgctct tcacatgcag gccctgccgc ctcgg 1485

<210> 612
<211> 750
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 612

caagtgcaat tggttcaatc aggaggagga gtcgtgcagc ccggaagatc gttgagactg 60

tcatgtgccg cgagcggctt tactttctca agctacggaa tgcattgggt gcgacaggct 120

ccgggaaaag gactggaatg ggtcgcagtg atctcatacg acggctcgaa caagtactac 180

gccgactccg tcaagggtcg gttcacgatt tcgcgcgata attccaagaa cactctgtac 240

ctccaaatga acagcctccg ggcagaggac accgccgtct actactgcgc taagggatac 300

tcgcgctact actactatgg aatggatgtg tggggccagg gaactaccgt gacggtgtcg 360

tccggcggcg gtgggtcggg cggaggcgga tcaggtggag gtggaagcgg aggaggaggg 420

agcgaaatcg tcatgactca gtcccctgct acccctttctc tgtcgccggg agaaagagcc 480

atcctgagct gccgggcctc ccagagcgtg tacaccaaat acctgggatg gtaccagcag 540

aagccggggc aggcaccaag gctcctgatc tacgatgcgt ccacccgcgc gactggtatc 600

ccagaccgct tttccggctc ggggtcaggg actgacttca cccttactat caatcggctc 660

gagcctgagg atttcgccgt gtattactgc cagcactacg gagggtcccc gctgattacc 720

ttcggccaag gcaccaaagt ggacatcaag 750

<210> 613
<211> 1482
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 613
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

ccccaagtgc aattggttca atcaggagga ggagtcgtgc agcccggaag atcgttgaga 120

ctgtcatgtg ccgcgagcgg ctttactttc tcaagctacg gaatgcattg ggtgcgacag 180

gctccgggaa aaggactgga atgggtcgca gtgatctcat acgacggctc gaacaagtac 240

tacgccgact ccgtcaaggg tcggttcacg atttcgcgcg ataattccaa gaacactctg 300

tacctccaaa tgaacagcct ccgggcagag gacaccgccg tctactactg cgctaaggga 360

tactcgcgct actactacta tggaatggat gtgtggggcc agggaactac cgtgacggtg 420

tcgtccggcg gcggtgggtc gggcggaggc ggatcaggtg gaggtggaag cggaggagga 480

gggagcgaaa tcgtcatgac tcagtcccct gctacccttt ctctgtcgcc gggagaaaga 540

gccatcctga gctgccgggc ctcccagagc gtgtacacca aatacctggg atggtaccag 600

cagaagccgg ggcaggcacc aaggctcctg atctacgatg cgtccacccg cgcgactggt 660

atcccagacc gcttttccgg ctcggggtca gggactgact tcacccttac tatcaatcgg 720

ctcgagcctg aggatttcgc cgtgtattac tgccagcact acggagggtc cccgctgatt 780

accttcggcc aaggcaccaa agtggacatc aagaccacta ccccagcacc gaggccaccc 840

accccggctc ctaccatcgc ctcccagcct ctgtccctgc gtccggaggc atgtagaccc 900

gcagctggtg gggccgtgca tacccggggt cttgacttcg cctgcgatat ctacatttgg 960

gcccctctgg ctggtacttg cggggtcctg ctgctttcac tcgtgatcac tctttactgt 1020

aagcgcggtc ggaagaagct gctgtacatc tttaagcaac ccttcatgag gcctgtgcag 1080

actactcaag aggaggacgg ctgttcatgc cggttcccag aggaggagga aggcggctgc 1140

gaactgcgcg tgaaattcag ccgcagcgca gatgctccag cctacaagca ggggcagaac 1200

cagctctaca acgaactcaa tcttggtcgg agagaggagt acgacgtgct ggacaagcgg 1260

agaggacggg acccagaaat gggcgggaag ccgcgcagaa agaatcccca agagggcctg 1320

tacaacgagc tccaaaagga taagatggca gaagcctata gcgagattgg tatgaaaggg 1380

gaacgcagaa gaggcaaagg ccacgacgga ctgtaccagg gactcagcac cgccaccaag 1440

gacacctatg acgctcttca catgcaggcc ctgccgcctc gg 1482

<210> 614
<211> 747
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 614
caagtgcaac ttgttcaatc aggaggagga ctcgttcaac ccggaggatc actgcgactc 60

tcatgtgcag cgtcggggtt caccttctcc agctacgcaa tgtcctgggt gcgccaagcc 120

cctggaaaag gcctggagtg ggtgtcggcc atctctggga gcgggggatc aacttactac 180

gctgactccg tcaagggccg ctttaccatc tcccgggaca acagcaagaa cactctctat 240

ctccagatga actcgctgag agccgaagat accgctgtct actactgcgc gaagagagaa 300

gctgccgcag ggcacgattg gtacttcgac ttgtggggca ggggcaccct tgtgaccgtg 360

tcctccggtg gaggcggatc aggaggtggg ggatcgggtg gaggaggaag cggaggcggc 420

ggttcggaca ttcgcgtcac ccagtcaccg agctccctca gcgcatcggt gggcgaccgg 480

gtcactatca cttgccgggc gtcccagtcg atctcatcgt atctgaattg gtaccagcag 540

aaaccgggaa aggcgccgaa gctgttgatc tacgctgcca gctccctgca gtcgggtgtg 600

ccatcacgct tttccggctc gggatcggga accgatttca ctctgacgat ctctagcctg 660

cagccagaag atttcgccac ttactactgc cagcagtcct acagcatccc tctgactttc 720

ggacaaggga cgaaagtgga gattaag 747

<210> 615
<211> 1479
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 615
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

ccccaagtgc aacttgttca atcaggagga ggactcgttc aacccggagg atcactgcga 120

ctctcatgtg cagcgtcggg gttcaccttc tccagctacg caatgtcctg ggtgcgccaa 180

gcccctggaa aaggcctgga gtgggtgtcg gccatctctg ggagcggggg atcaacttac 240

tacgctgact ccgtcaaggg ccgctttacc atctcccggg acaacagcaa gaacactctc 300

tatctccaga tgaactcgct gagagccgaa gataccgctg tctactactg cgcgaagaga 360

gaagctgccg cagggcacga ttggtacttc gacttgtggg gcaggggcac ccttgtgacc 420

gtgtcctccg gtggaggcgg atcaggaggt gggggatcgg gtggaggagg aagcggaggc 480

ggcggttcgg acattcgcgt cacccagtca ccgagctccc tcagcgcatc ggtgggcgac 540

cgggtcacta tcacttgccg ggcgtcccag tcgatctcat cgtatctgaa ttggtaccag 600

cagaaaccgg gaaaggcgcc gaagctgttg atctacgctg ccagctccct gcagtcgggt 660

gtgccatcac gcttttccgg ctcgggatcg ggaaccgatt tcactctgac gatctctagc 720

ctgcagccag aagatttcgc cacttactac tgccagcagt cctacagcat ccctctgact 780

ttcggacaag ggacgaaagt ggagattaag accactaccc cagcaccgag gccacccacc 840

ccggctccta ccatcgcctc ccagcctctg tccctgcgtc cggaggcatg tagacccgca 900

gctggtgggg ccgtgcatac ccggggtctt gacttcgcct gcgatatcta catttgggcc 960

cctctggctg gtacttgcgg ggtcctgctg ctttcactcg tgatcactct ttactgtaag 1020

cgcggtcgga agaagctgct gtacatcttt aagcaaccct tcatgaggcc tgtgcagact 1080

actcaagagg aggacggctg ttcatgccgg ttcccagagg aggaggaagg cggctgcgaa 1140

ctgcgcgtga aattcagccg cagcgcagat gctccagcct acaagcaggg gcagaaccag 1200

ctctacaacg aactcaatct tggtcggaga gaggagtacg acgtgctgga caagcggaga 1260

ggacgggacc cagaaatggg cgggaagccg cgcagaaaga atccccaaga gggcctgtac 1320

aacgagctcc aaaaggataa gatggcagaa gcctatagcg agattggtat gaaaggggaa 1380

cgcagaagag gcaaaggcca cgacggactg taccagggac tcagcaccgc caccaaggac 1440

acctatgacg ctcttcacat gcaggccctg ccgcctcgg 1479

<210> 616
<211> 741
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 616
caagtccaac tcgttcagtc atgggcagaa gtcaagaaac ccggtgcaag cgtcaaagtg 60

tcgtgtaagg cctccggcta cactttcact tcctactaca tgcactgggt gcgccaagcc 120

ccgggacagg gccttgaatg gatgggcatc atcaacccat caggaggttc cacgagctac 180

gcgcagaagt tccaggggag agtgacgatg actagagata cctccacgag caccgtctac 240

atggagctgt cgaatctgcg gtcagaggac actgctgtgt attactgcgc gcgctccccg 300

cgggtgacca ctggctactt tgactactgg ggacaaggga ccctggtgac cgtcagctcg 360

ggaggcggag gatcgggagg tggagggtcc ggtggaggcg gctctggagg aggcgggtcg 420

gacattcaat tgacccagag cccatccacc ctctcagcct cggtgggga tagggtgact 480

atcacttgcc gggcctccca gtcaatttcc agctggctgg cttggtacca gcaaaagcct 540

ggaaaggcac cgaagctcct gatctacaag gcctcatctc tggaatcagg agtgccttcg 600

cgcttcagcg gaagcggctc gggaactgag tttaccctga ccatctcgag cctgcagcca 660

gatgacttcg cgacctatta ctgccagcag tactcgtcct acccgttgac tttcggagga 720

ggtacccgcc tcgaaatcaa a 741

<210> 617
<211> 1473
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 617
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

ccccaagtcc aactcgttca gtcatgggca gaagtcaaga aacccggtgc aagcgtcaaa 120

gtgtcgtgta aggcctccgg ctacactttc acttcctact acatgcactg ggtgcgccaa 180

gccccgggac agggccttga atggatgggc atcatcaacc catcaggagg ttccacgagc 240

tacgcgcaga agttccaggg gagagtgacg atgactagag atacctccac gagcaccgtc 300

tacatggagc tgtcgaatct gcggtcagag gacactgctg tgtattactg cgcgcgctcc 360

ccgcgggtga ccactggcta ctttgactac tggggacaag ggaccctggt gaccgtcagc 420

tcgggaggcg gaggatcggg aggtggaggg tccggtggag gcggctctgg aggaggcggg 480

tcggacattc aattgaccca gagcccatcc accctctcag cctcggtggg ggatagggtg 540

actatcactt gccgggcctc ccagtcaatt tccagctggc tggcttggta ccagcaaaag 600

cctggaaagg caccgaagct cctgatctac aaggcctcat ctctggaatc aggagtgcct 660

tcgcgcttca gcggaagcgg ctcgggaact gagtttaccc tgaccatctc gagcctgcag 720

ccagatgact tcgcgaccta ttactgccag cagtactcgt cctacccgtt gactttcgga 780

ggaggtaccc gcctcgaaat caaaaccact accccagcac cgaggccacc caccccggct 840

cctaccatcg cctcccagcc tctgtccctg cgtccggagg catgtagacc cgcagctggt 900

ggggccgtgc atacccgggg tcttgacttc gcctgcgata tctacatttg ggcccctctg 960

gctggtactt gcggggtcct gctgctttca ctcgtgatca ctctttactg taagcgcggt 1020

cggaagaagc tgctgtacat ctttaagcaa cccttcatga ggcctgtgca gactactcaa 1080

gaggaggacg gctgttcatg ccggttccca gaggaggagg aaggcggctg cgaactgcgc 1140

gtgaaattca gccgcagcgc agatgctcca gcctacaagc aggggcagaa ccagctctac 1200

aacgaactca atcttggtcg gagagaggag tacgacgtgc tggacaagcg gagaggacgg 1260

gacccagaaa tgggcgggaa gccgcgcaga aagaatcccc aagagggcct gtacaacgag 1320

ctccaaaagg ataagatggc agaagcctat agcgagattg gtatgaaagg ggaacgcaga 1380

agaggcaaag gccacgacgg actgtaccag ggactcagca ccgccaccaa ggacacctat 1440

gacgctcttc acatgcaggc cctgccgcct cgg 1473

<210> 618
<211> 759
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 618
caagtccaac tcgtccagtc cggtgcagaa gtcagaaggc caggagcaag cgtgaagatc 60

tcgtgtagag cgtcaggaga caccagcact cgccattaca tccactggct gcgccaggct 120

ccgggccaag ggccggagtg gatgggtgtg atcaacccga ctacgggacc ggctaccgga 180

agccctgcgt acgcacagat gctgcaggga cgggtgacta tgacccgcga tactagcact 240

aggaccgtgt acatggaact ccgctcgttg cggttcgaag ataccgccgt ctactactgc 300

gcccggtccg tggtgggccg aagcgcccct tactacttcg attactgggg acagggcact 360

ctggtgaccg ttagctccgg tgggggaggc tcgggtggag gcggatcggg aggaggaggc 420

agcggtggag ggggatcgga cattcagatg acccagtcac cctcctccct ctcagcctcg 480

gtcggggacc gggtgaccat tacgtgcaga gcctcacaag ggatctcgga ctactccgcc 540

tggtaccagc agaaaccggg aaaagcgcca aagctcctga tctacgccgc gagcaccctg 600

caatcaggag tgccatcgcg cttttctgga tcgggctcag ggactgactt cacgctgact 660

atctcctacc ttcagtccga ggatttcgct acctactact gccaacagta ttactcctat 720

cccctgacct ttggcggagg cactaaggtg gacatcaag 759

<210> 619
<211> 1491
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 619
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

ccccaagtcc aactcgtcca gtccggtgca gaagtcagaa ggccaggagc aagcgtgaag 120

atctcgtgta gagcgtcagg agacaccagc actcgccatt acatccactg gctgcgccag 180

gctccgggcc aagggccgga gtggatgggt gtgatcaacc cgactacggg accggctacc 240

ggaagccctg cgtacgcaca gatgctgcag ggacgggtga ctatgacccg cgatactagc 300

actaggaccg tgtacatgga actccgctcg ttgcggttcg aagataccgc cgtctactac 360

tgcgcccggt ccgtggtggg ccgaagcgcc ccttactact tcgattactg gggacagggc 420

actctggtga ccgttagctc cggtggggga ggctcgggtg gaggcggatc gggaggagga 480

ggcagcggtg gaggggggatc ggacattcag atgacccagt caccctcctc cctctcagcc 540

tcggtcgggg accgggtgac cattacgtgc agagcctcac aagggatctc ggactactcc 600

gcctggtacc agcagaaacc gggaaaagcg ccaaagctcc tgatctacgc cgcgagcacc 660

ctgcaatcag gagtgccatc gcgcttttct ggatcgggct cagggactga cttcacgctg 720

actatctcct accttcagtc cgaggatttc gctacctact actgccaaca gtattactcc 780

tatcccctga cctttggcgg aggcactaag gtggacatca agaccactac cccagcaccg 840

aggccaccca ccccggctcc taccatcgcc tcccagcctc tgtccctgcg tccggaggca 900

tgtagacccg cagctggtgg ggccgtgcat acccggggtc ttgacttcgc ctgcgatatc 960

tacatttggg cccctctggc tggtacttgc ggggtcctgc tgctttcact cgtgatcact 1020

ctttactgta agcgcggtcg gaagaagctg ctgtacatct ttaagcaacc cttcatgagg 1080

cctgtgcaga ctactcaaga ggaggacggc tgttcatgcc ggttcccaga ggaggaggaa 1140

ggcggctgcg aactgcgcgt gaaattcagc cgcagcgcag atgctccagc ctacaagcag 1200

gggcagaacc agctctacaa cgaactcaat cttggtcgga gagaggagta cgacgtgctg 1260

gacaagcgga gaggacggga cccagaaatg ggcgggaagc cgcgcagaaa gaatccccaa 1320

gagggcctgt acaacgagct ccaaaaggat aagatggcag aagcctatag cgagattggt 1380

atgaaagggg aacgcagaag aggcaaaggc cacgacggac tgtaccaggg actcagcacc 1440

gccaccaagg acacctatga cgctcttcac atgcaggccc tgccgcctcg g 1491

<210> 620
<211> 747
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 620
caagtccaac tccagcaatc gggagcagaa gtcaagaaac caggcgcatc ggtgaaagtg 60

tcgtgtaagg cgtcagggta caccttcacc aactactata tgcactgggt gcgccaggct 120

ccaggccagg ggttggagtg gatggggatc atcaatccgt caggtggcta caccacttac 180

gctcagaagt tccagggacg cctcactatg actcgcgata ctagcacctc cacggtgtac 240

atggaactgt catcgctgag gtccgaagat accgccgtct actactgcgc acggatcaga 300

tcctgcggag gagattgtta ctactttgac aactggggac agggcaccct tgttactgtg 360

tcatcgggag gaggggaag cggaggaggt ggatcaggcg gcggtggcag cgggggcgga 420

ggatcggaca ttcagctgac tcagtccccc tccactttgt cggccagcgt gggagacaga 480

gtgaccatca cttgccgggc gtccgagaac gtcaatatct ggctggcctg gtaccagcaa 540

aagcctggaa aagccccgaa gctgctcatc tataagtcat ccagcctggc gtctggtgtg 600

ccgtcgcggt tctccggcag cgggagcgga gccgagttca ctctcaccat ttcgagcctt 660

caaccggacg atttcgccac ctactactgc cagcagtacc aatcctaccc tctgacgttt 720

ggaggtggaa ccaaggtgga catcaag 747

<210> 621
<211> 1479
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 621
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

ccccaagtcc aactccagca atcgggagca gaagtcaaga aaccaggcgc atcggtgaaa 120

gtgtcgtgta aggcgtcagg gtacaccttc accaactact atatgcactg ggtgcgccag 180

gctccaggcc aggggttgga gtggatgggg atcatcaatc cgtcaggtgg ctacaccact 240

tacgctcaga agttccaggg acgcctcact atgactcgcg atactagcac ctccacggtg 300

tacatggaac tgtcatcgct gaggtccgaa gataccgccg tctactactg cgcacggatc 360

agatcctgcg gaggagattg ttactacttt gacaactggg gacagggcac ccttgttact 420

gtgtcatcgg gaggaggggg aagcggagga ggtggatcag gcggcggtgg cagcgggggc 480

ggaggatcgg acattcagct gactcagtcc ccctccactt tgtcggccag cgtgggagac 540

agagtgacca tcacttgccg ggcgtccgag aacgtcaata tctggctggc ctggtaccag 600

caaaagcctg gaaaagcccc gaagctgctc atctataagt catccagcct ggcgtctggt 660

gtgccgtcgc ggttctccgg cagcgggagc ggagccgagt tcactctcac catttcgagc 720

cttcaaccgg acgatttcgc cacctactac tgccagcagt accaatccta ccctctgacg 780

tttggaggtg gaaccaaggt ggacatcaag accactaccc cagcaccgag gccacccacc 840

ccggctccta ccatcgcctc ccagcctctg tccctgcgtc cggaggcatg tagacccgca 900

gctggtgggg ccgtgcatac ccggggtctt gacttcgcct gcgatatcta catttgggcc 960

cctctggctg gtacttgcgg ggtcctgctg ctttcactcg tgatcactct ttactgtaag 1020

cgcggtcgga agaagctgct gtacatcttt aagcaaccct tcatgaggcc tgtgcagact 1080

actcaagagg aggacggctg ttcatgccgg ttcccagagg aggaggaagg cggctgcgaa 1140

ctgcgcgtga aattcagccg cagcgcagat gctccagcct acaagcaggg gcagaaccag 1200

ctctacaacg aactcaatct tggtcggaga gaggagtacg acgtgctgga caagcggaga 1260

ggacgggacc cagaaatggg cgggaagccg cgcagaaaga atccccaaga gggcctgtac 1320

aacgagctcc aaaaggataa gatggcagaa gcctatagcg agattggtat gaaaggggaa 1380

cgcagaagag gcaaaggcca cgacggactg taccagggac tcagcaccgc caccaaggac 1440

acctatgacg ctcttcacat gcaggccctg ccgcctcgg 1479

<210> 622
<211> 738
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 622
caaatcactc tgaaagaatc tggaccggcc ctggttaagc cgactcaaac gctcaccctt 60

acttgcacct tcagcggatt ctcactcagc actgctggtg tgcacgtcgg atggattaga 120

cagccgcctg gaaaggccct ggaatggctc gccctcatct cctgggccga tgacaagaga 180

tacaggccct cgcttcgatc ccggttggac attacccggg tgacctcgaa agatcaggtg 240

gtgctctcaa tgaccaatat gcagccggag gacaccgcta cgtactactg cgcactgcaa 300

ggatttgacg gctacgaggc taactgggga ccaggtactc tggtcaccgt gagctccggc 360

gggggaggat caggcggggg ggggtcagga ggcggaggct ccggtggagg aggatcggat 420

atcgtcatga cccagtcccc aagctcgctg agcgcgtcag cgggcgaccg cgtgactatc 480

acttgccggg ccagccgcgg catctcctcc gcactggcgt ggtaccagca gaagcctgga 540

aaaccgccaa agctcctgat ctatgatgcc tccagcctgg agtcaggtgt ccccagccgc 600

ttctcgggtt cgggctcggg aaccgacttc actttgacca tcgactcgct ggaaccggaa 660

gatttcgcaa cctactactg tcagcagtcc tactcgaccc cttggacttt tggacaaggg 720

acgaaggtgg acatcaag 738

<210> 623
<211> 1470
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 623
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

ccccaaatca ctctgaaaga atctggaccg gccctggtta agccgactca aacgctcacc 120

cttacttgca ccttcagcgg attctcactc agcactgctg gtgtgcacgt cggatggatt 180

agacagccgc ctggaaaggc cctggaatgg ctcgccctca tctcctgggc cgatgacaag 240

agatacaggc cctcgcttcg atcccggttg gacattaccc gggtgacctc gaaagatcag 300

gtggtgctct caatgaccaa tatgcagccg gaggacaccg ctacgtacta ctgcgcactg 360

caaggatttg acggctacga ggctaactgg ggaccaggta ctctggtcac cgtgagctcc 420

ggcgggggag gatcaggcgg gggggggtca ggaggcggag gctccggtgg aggaggatcg 480

gatatcgtca tgacccagtc cccaagctcg ctgagcgcgt cagcgggcga ccgcgtgact 540

atcacttgcc gggccagccg cggcatctcc tccgcactgg cgtggtacca gcagaagcct 600

ggaaaaccgc caaagctcct gatctatgat gcctccagcc tggagtcagg tgtccccagc 660

cgcttctcgg gttcgggctc gggaaccgac ttcactttga ccatcgactc gctggaaccg 720

gaagatttcg caacctacta ctgtcagcag tcctactcga ccccttggac ttttggacaa 780

gggacgaagg tggacatcaa gaccactacc ccagcaccga ggccacccac cccggctcct 840

accatcgcct cccagcctct gtccctgcgt ccggaggcat gtagacccgc agctggtggg 900

gccgtgcata cccggggtct tgacttcgcc tgcgatatct acatttgggc ccctctggct 960

ggtacttgcg gggtcctgct gctttcactc gtgatcactc tttactgtaa gcgcggtcgg 1020

aagaagctgc tgtacatctt taagcaaccc ttcatgaggc ctgtgcagac tactcaagag 1080

gaggacggct gttcatgccg gttcccagag gaggaggaag gcggctgcga actgcgcgtg 1140

aaattcagcc gcagcgcaga tgctccagcc tacaagcagg ggcagaacca gctctacaac 1200

gaactcaatc ttggtcggag agaggagtac gacgtgctgg acaagcggag aggacgggac 1260

ccagaaatgg gcgggaagcc gcgcagaaag aatccccaag agggcctgta caacgagctc 1320

caaaaggata agatggcaga agcctatagc gagattggta tgaaaggggа acgcagaaga 1380

ggcaaaggcc acgacggact gtaccaggga ctcagcaccg ccaccaagga cacctatgac 1440

gctcttcaca tgcaggccct gccgcctcgg 1470

<210> 624
<211> 717
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 624
caagtccagc tccagcagtc gggcccagag ttggagaagc ctggggcgag cgtgaagatc 60

tcatgcaaag cctcaggcta ctcctttact ggatacacga tgaattgggt gaaacagtcg 120

catggaaagt cactggaatg gatcggtctg attacgccct acaacggcgc ctccagctac 180

aaccagaagt tcaggggaaa ggcgaccctt actgtcgaca agtcgtcaag caccgcctac 240

atggacctcc tgtccctgac ctccgaagat agcgcggtct acttttgtgc acgcggaggt 300

tacgatggac ggggattcga ctactggggc cagggaacca ctgtcaccgt gtcgagcgga 360

ggcggaggga gcggaggagg aggcagcgga ggtggagggt cggatatcga actcactcag 420

tccccagcaa tcatgtccgc ttcaccggga gaaaaggtga ccatgacttg ctcggcctcc 480

tcgtccgtgt catacatgca ctggtaccaa caaaaatcgg ggacctcccc taagagatgg 540

atctacgata ccagcaaact ggcttcaggc gtgccgggac gcttctcggg ttcggggagc 600

ggaaattcgt attcgttgac catttcgtcc gtggaagccg aggacgacgc aacttattac 660

tgccaacagt ggtcaggcta cccgctcact ttcggagccg gcactaagct ggagatc 717

<210> 625
<211> 1149
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 625
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

ccccaagtcc agctccagca gtcgggccca gagttggaga agcctggggc gagcgtgaag 120

atctcatgca aagcctcagg ctactccttt actggataca cgatgaattg ggtgaaacag 180

tcgcatggaa agtcactgga atggatcggt ctgattacgc cctacaacgg cgcctccagc 240

tacaaccaga agttcagggg aaaggcgacc cttactgtcg acaagtcgtc aagcaccgcc 300

tacatggacc tcctgtccct gacctccgaa gatagcgcgg tctacttttg tgcacgcgga 360

ggttacgatg gacggggatt cgactactgg ggccagggaa ccactgtcac cgtgtcgagc 420

ggaggcggag ggagcggagg aggaggcagc ggaggtggag ggtcggatat cgaactcact 480

cagtccccag caatcatgtc cgcttcaccg ggagaaaagg tgaccatgac ttgctcggcc 540

tcctcgtccg tgtcatacat gcactggtac caacaaaaat cggggacctc ccctaagaga 600

tggatctacg ataccagcaa actggcttca ggcgtgccgg gacgcttctc gggttcgggg 660

agcggaaatt cgtattcgtt gaccatttcg tccgtggaag ccgaggacga cgcaacttat 720

tactgccaac agtggtcagg ctacccgctc actttcggag ccggcactaa gctggagatc 780

accactaccc cagcaccgag gccacccacc ccggctccta ccatcgcctc ccagcctctg 840

tccctgcgtc cggaggcatg tagacccgca gctggtgggg ccgtgcatac ccggggtctt 900

gacttcgcct gcgatatcta catttgggcc cctctggctg gtacttgcgg ggtcctgctg 960

ctttcactcg tgatcactct ttactgtaag cgcggtcgga agaagctgct gtacatcttt 1020

aagcaaccct tcatgaggcc tgtgcagact actcaagagg aggacggctg ttcatgccgg 1080

ttcccagagg aggaggaagg cggctgcgaa ctgcgcgtga aattcagccg cagcgcagat 1140

gctccagcc 1149

<210> 626
<211> 249
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 626
Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ser
1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Gly Thr Phe Ser Asn Tyr
20 25 30

Trp Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45

Gly Ala Thr Tyr Arg Gly His Ser Asp Thr Tyr Tyr Asn Gln Lys Phe
50 55 60

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Lys Gly Arg Val Thr Ile Thr Ala Asp Lys Ser Thr Ser Thr Ala Tyr
65                  70                  75                  80

Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
                85                  90                  95

Ala Arg Gly Ala Ile Tyr Asn Gly Tyr Asp Val Leu Asp Asn Trp Gly
            100                 105                 110

Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly
        115                 120                 125

Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Gln
    130                 135                 140

Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly Asp Arg Val
145                 150                 155                 160

Thr Ile Thr Cys Ser Ala Ser Gln Asp Ile Ser Asn Tyr Leu Asn Trp
                165                 170                 175

Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile Tyr Tyr Thr
            180                 185                 190

Ser Asn Leu His Ser Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser
        195                 200                 205

Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro Glu Asp Phe
    210                 215                 220

Ala Thr Tyr Tyr Cys Gln Gln Tyr Arg Lys Leu Pro Trp Thr Phe Gly
225                 230                 235                 240

Gln Gly Thr Lys Leu Glu Ile Lys Arg
                245
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<210> 627
<211> 249
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 627
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 Ser Ala Ser Gln Asp Ile Ser Asn Tyr
20 25 30

Leu Asn Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
35 40 45

Tyr Tyr Thr Ser Asn Leu His Ser Gly Val Pro Ser Arg Phe Ser Gly
50 55 60

Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
65 70 75 80

Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Tyr Arg Lys Leu Pro Trp
85 90 95

Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys Arg Gly Gly Gly Gly
100 105 110

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
115 120 125

Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ser
130 135 140

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Gly Thr Phe Ser Asn Tyr
145 150 155 160

Trp Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
165 170 175

Gly Ala Thr Tyr Arg Gly His Ser Asp Thr Tyr Tyr Asn Gln Lys Phe
180 185 190

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Lys Gly Arg Val Thr Ile Thr Ala Asp Lys Ser Thr Ser Thr Ala Tyr
        195                 200                 205


Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
    210                 215                 220


Ala Arg Gly Ala Ile Tyr Asn Gly Tyr Asp Val Leu Asp Asn Trp Gly
225                 230                 235                 240


Gln Gly Thr Leu Val Thr Val Ser Ser
                245


<210> 628
<211> 239
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 628
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 Ala Leu Ser Asn His
            20                  25                  30


Gly Met Ser Trp Val Arg Arg Ala Pro Gly Lys Gly Leu Glu Trp Val
        35                  40                  45


Ser Gly Ile Val Tyr Ser Gly Ser Thr Tyr Tyr Ala Ala Ser Val Lys
    50                  55                  60


Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Arg Asn Thr Leu Tyr Leu
65                  70                  75                  80


Gln Met Asn Ser Leu Arg Pro Glu Asp Thr Ala Ile Tyr Tyr Cys Ser
                85                  90                  95


Ala His Gly Gly Glu Ser Asp Val Trp Gly Gln Gly Thr Thr Val Thr
            100                 105                 110
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Val Ser Ser Ala Ser Gly Gly Gly Gly Ser Gly Gly Arg Ala Ser Gly
        115                 120                 125


Gly Gly Gly Ser Asp Ile Gln Leu Thr Gln Ser Pro Ser Ser Leu Ser
    130                 135                 140


Ala Ser Val Gly Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Ser
145                 150                 155                 160


Ile Ser Ser Tyr Leu Asn Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro
                165                 170                 175


Lys Leu Leu Ile Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser
            180                 185                 190


Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser
        195                 200                 205


Ser Leu Gln Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Ser Tyr
    210                 215                 220


Ser Thr Pro Tyr Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
225                 230                 235


<210> 629
<211> 717
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polynucleotide"

<400> 629
gaagtgcaat tggtggaatc agggggagga cttgtgcagc ctggaggatc gctgagactg       60

tcatgtgccg tgtccggctt tgccctgtcc aaccacggga tgtcctgggt ccgccgcgcg      120

cctggaaagg gcctcgaatg ggtgtcgggt attgtgtaca gcggtagcac ctactatgcc      180

gcatccgtga aggggagatt caccatcagc cgggacaact ccaggaacac tctgtacctc      240

caaatgaatt cgctgaggcc agaggacact gccatctact actgctccgc gcatggcgga      300
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gagtccgacg tctggggaca ggggaccacc gtgaccgtgt ctagcgcgtc cggcggaggc 360

ggcagcgggg gtcgggcatc agggggcggc ggatcggaca tccagctcac ccagtccccg 420

agctcgctgt ccgcctccgt gggagatcgg gtcaccatca cgtgccgcgc cagccagtcg 480

atttcctcct acctgaactg gtaccaacag aagcccggaa aagccccgaa gcttctcatc 540

tacgccgcct cgagcctgca gtcaggagtg ccctcacggt tctccggctc cggttccggt 600

actgatttca ccctgaccat ttcctccctg caaccggagg acttcgctac ttactactgc 660

cagcagtcgt actccacccc ctacactttc ggacaaggca ccaaggtcga aatcaag 717

<210> 630
<211> 115
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 630
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 Ala Leu Ser Asn His
20 25 30

Gly Met Ser Trp Val Arg Arg Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45

Ser Gly Ile Val Tyr Ser Gly Ser Thr Tyr Tyr Ala Ala Ser Val Lys
50 55 60

Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Arg Asn Thr Leu Tyr Leu
65 70 75 80

Gln Met Asn Ser Leu Arg Pro Glu Asp Thr Ala Ile Tyr Tyr Cys Ser
85 90 95

Ala His Gly Gly Glu Ser Asp Val Trp Gly Gln Gly Thr Thr Val Thr
100 105 110

Val Ser Ser
        115

<210> 631
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 631
Asp 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 Ser Ile Ser Ser Tyr
            20   25   30

Leu Asn Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
        35   40   45

Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
    50   55   60

Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
65   70   75   80

Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Ser Tyr Ser Thr Pro Tyr
                85   90   95

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

<210> 632
<211> 483
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 632
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1   5   10   15

His Ala Ala Arg Pro Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu
            20   25   30

Val Gln Pro Gly Gly Ser Leu Arg Leu Ser Cys Ala Val Ser Gly Phe
        35   40   45

Ala Leu Ser Asn His Gly Met Ser Trp Val Arg Arg Ala Pro Gly Lys
    50   55   60

Gly Leu Glu Trp Val Ser Gly Ile Val Tyr Ser Gly Ser Thr Tyr Tyr
65   70   75   80

Ala Ala Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Arg
                85   90   95

Asn Thr Leu Tyr Leu Gln Met Asn Ser Leu Arg Pro Glu Asp Thr Ala
            100   105   110

Ile Tyr Tyr Cys Ser Ala His Gly Gly Glu Ser Asp Val Trp Gly Gln
        115   120   125

Gly Thr Thr Val Thr Val Ser Ser Ala Ser Gly Gly Gly Gly Ser Gly
    130   135   140

Gly Arg Ala Ser Gly Gly Gly Gly Ser Asp Ile Gln Leu Thr Gln Ser
145   150   155   160

Pro Ser Ser Leu Ser Ala Ser Val Gly Asp Arg Val Thr Ile Thr Cys
                165   170   175

Arg Ala Ser Gln Ser Ile Ser Ser Tyr Leu Asn Trp Tyr Gln Gln Lys
            180   185   190

Pro Gly Lys Ala Pro Lys Leu Leu Ile Tyr Ala Ala Ser Ser Leu Gln
        195   200   205

Ser Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe

```
    210                 215                 220

Thr Leu Thr Ile Ser Ser Leu Gln Pro Glu Asp Phe Ala Thr Tyr Tyr
225                 230                 235                 240

Cys Gln Gln Ser Tyr Ser Thr Pro Tyr Thr Phe Gly Gln Gly Thr Lys
                245                 250                 255

Val Glu Ile Lys Thr Thr Thr Pro Ala Pro Arg Pro Pro Thr Pro Ala
            260                 265                 270

Pro Thr Ile Ala Ser Gln Pro Leu Ser Leu Arg Pro Glu Ala Cys Arg
        275                 280                 285

Pro Ala Ala Gly Gly Ala Val His Thr Arg Gly Leu Asp Phe Ala Cys
    290                 295                 300

Asp Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly Val Leu Leu
305                 310                 315                 320

Leu Ser Leu Val Ile Thr Leu Tyr Cys Lys Arg Gly Arg Lys Lys Leu
                325                 330                 335

Leu Tyr Ile Phe Lys Gln Pro Phe Met Arg Pro Val Gln Thr Thr Gln
            340                 345                 350

Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu Glu Glu Glu Gly Gly
        355                 360                 365

Cys Glu Leu Arg Val Lys Phe Ser Arg Ser Ala Asp Ala Pro Ala Tyr
    370                 375                 380

Lys Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn Leu Gly Arg Arg
385                 390                 395                 400

Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg Asp Pro Glu Met
                405                 410                 415

Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu Tyr Asn Glu
            420                 425                 430
```

Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile Gly Met Lys
435 440 445

Gly Glu Arg Arg Arg Gly Lys Gly His Asp Gly Leu Tyr Gln Gly Leu
450 455 460

Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu His Met Gln Ala Leu
465 470 475 480

Pro Pro Arg

<210> 633
<211> 1449
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 633
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

cccgaagtgc aattggtgga atcaggggga ggacttgtgc agcctggagg atcgctgaga 120

ctgtcatgtg ccgtgtccgg ctttgccctg tccaaccacg ggatgtcctg ggtccgccgc 180

gcgcctggaa agggcctcga atgggtgtcg ggtattgtgt acagcggtag cacctactat 240

gccgcatccg tgaaggggag attcaccatc agccgggaca actccaggaa cactctgtac 300

ctccaaatga attcgctgag gccagaggac actgccatct actactgctc cgcgcatggc 360

ggagagtccg acgtctgggg acaggggacc accgtgaccg tgtctagcgc gtccggcgga 420

ggcggcagcg ggggtcgggc atcaggggc ggcggatcgg acatccagct cacccagtcc 480

ccgagctcgc tgtccgcctc cgtgggagat cgggtcacca tcacgtgccg cgccagccag 540

tcgatttcct cctacctgaa ctggtaccaa cagaagcccg gaaaagcccc gaagcttctc 600

atctacgccg cctcgagcct gcagtcagga gtgccctcac ggttctccgg ctccggttcc 660

ggtactgatt tcaccctgac catttcctcc ctgcaaccgg aggacttcgc tacttactac 720

tgccagcagt cgtactccac cccctacact ttcggacaag gcaccaaggt cgaaatcaag 780

accactaccc cagcaccgag gccacccacc ccggctccta ccatcgcctc ccagcctctg 840

tccctgcgtc cggaggcatg tagacccgca gctggtgggg ccgtgcatac ccggggtctt 900

gacttcgcct gcgatatcta catttgggcc cctctggctg gtacttgcgg ggtcctgctg 960

ctttcactcg tgatcactct ttactgtaag cgcggtcgga agaagctgct gtacatcttt 1020

aagcaaccct tcatgaggcc tgtgcagact actcaagagg aggacggctg ttcatgccgg 1080

ttcccagagg aggaggaagg cggctgcgaa ctgcgcgtga aattcagccg cagcgcagat 1140

gctccagcct acaagcaggg gcagaaccag ctctacaacg aactcaatct tggtcggaga 1200

gaggagtacg acgtgctgga caagcggaga ggacgggacc cagaaatggg cgggaagccg 1260

cgcagaaaga atccccaaga gggcctgtac aacgagctcc aaaaggataa gatggcagaa 1320

gcctatagcg agattggtat gaaaggggaa cgcagaagag gcaaaggcca cgacggactg 1380

taccagggac tcagcaccgc caccaaggac acctatgacg ctcttcacat gcaggccctg 1440

ccgcctcgg 1449

<210> 634
<211> 246
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 634
Gln 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 Ser Asn Tyr
20 25 30

Ala Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Gly Trp Val
35 40 45

Ser Gly Ile Ser Arg Ser Gly Glu Asn Thr Tyr Tyr Ala Asp Ser Val
50 55 60

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
65 70 75 80

```
Leu Gln Met Asn Ser Leu Arg Asp Glu Asp Thr Ala Val Tyr Tyr Cys
                85                  90                  95

Ala Arg Ser Pro Ala His Tyr Tyr Gly Gly Met Asp Val Trp Gly Gln
            100                 105                 110

Gly Thr Thr Val Thr Val Ser Ser Ala Ser Gly Gly Gly Gly Ser Gly
        115                 120                 125

Gly Arg Ala Ser Gly Gly Gly Gly Ser Asp Ile Val Leu Thr Gln Ser
    130                 135                 140

Pro Gly Thr Leu Ser Leu Ser Pro Gly Glu Arg Ala Thr Leu Ser Cys
145                 150                 155                 160

Arg Ala Ser Gln Ser Ile Ser Ser Ser Phe Leu Ala Trp Tyr Gln Gln
                165                 170                 175

Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile Tyr Gly Ala Ser Arg Arg
            180                 185                 190

Ala Thr Gly Ile Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp
        195                 200                 205

Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu Asp Ser Ala Val Tyr
    210                 215                 220

Tyr Cys Gln Gln Tyr His Ser Ser Pro Ser Trp Thr Phe Gly Gln Gly
225                 230                 235                 240

Thr Lys Leu Glu Ile Lys
                245
```

<210> 635
<211> 738
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic

polynucleotide"

<400> 635
caagtgcaac tcgtggaatc tggtggagga ctcgtgcaac ccggaagatc gcttagactg 60

tcgtgtgccg ccagcgggtt cactttctcg aactacgcga tgtcctgggt ccgccaggca 120

cccggaaagg gactcggttg ggtgtccggc atttcccggt ccggcgaaaa tacctactac 180

gccgactccg tgaagggccg cttcaccatc tcaagggaca acagcaaaaa caccctgtac 240

ttgcaaatga actccctgcg ggatgaagat acagccgtgt actattgcgc ccggtcgcct 300

gcccattact acggcggaat ggacgtctgg ggacagggaa ccactgtgac tgtcagcagc 360

gcgtcgggtg gcggcggctc agggggtcgg gcctccgggg ggggagggtc cgacatcgtg 420

ctgacccagt ccccgggaac cctgagcctg agcccgggag agcgcgcgac cctgtcatgc 480

cgggcatccc agagcattag ctcctccttt ctcgcctggt atcagcagaa gcccggacag 540

gccccgaggc tgctgatcta cggcgctagc agaagggcta ccggaatccc agaccggttc 600

tccggctccg gttccgggac cgatttcacc cttactatct cgcgcctgga acctgaggac 660

tccgccgtct actactgcca gcagtaccac tcatccccgt cgtggacgtt cggacagggc 720

accaagctgg agattaag 738

<210> 636
<211> 120
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 636
Gln 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 Ser Asn Tyr
20 25 30

Ala Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Gly Trp Val
35 40 45

Ser Gly Ile Ser Arg Ser Gly Glu Asn Thr Tyr Tyr Ala Asp Ser Val

```
    50                  55                  60

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
65                  70                  75                  80

Leu Gln Met Asn Ser Leu Arg Asp Glu Asp Thr Ala Val Tyr Tyr Cys
                85                  90                  95

Ala Arg Ser Pro Ala His Tyr Tyr Gly Gly Met Asp Val Trp Gly Gln
            100                 105                 110

Gly Thr Thr Val Thr Val Ser Ser
        115                 120


<210> 637
<211> 109
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 637
Asp 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 Ile Ser Ser Ser
            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 Arg 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 Ser Ala Val Tyr Tyr Cys Gln Gln Tyr His Ser Ser Pro
                85                  90                  95
```

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

<210> 638
<211> 490
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 638
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Gln Val Gln Leu Val Glu Ser Gly Gly Gly Leu
20 25 30

Val Gln Pro Gly Arg Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe
35 40 45

Thr Phe Ser Asn Tyr Ala Met Ser Trp Val Arg Gln Ala Pro Gly Lys
50 55 60

Gly Leu Gly Trp Val Ser Gly Ile Ser Arg Ser Gly Glu Asn Thr Tyr
65 70 75 80

Tyr Ala Asp Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser
85 90 95

Lys Asn Thr Leu Tyr Leu Gln Met Asn Ser Leu Arg Asp Glu Asp Thr
100 105 110

Ala Val Tyr Tyr Cys Ala Arg Ser Pro Ala His Tyr Tyr Gly Gly Met
115 120 125

Asp Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser Ala Ser Gly
130 135 140

Gly Gly Gly Ser Gly Gly Arg Ala Ser Gly Gly Gly Gly Ser Asp Ile
145 150 155 160

```
Val Leu Thr Gln Ser Pro Gly Thr Leu Ser Leu Ser Pro Gly Glu Arg
                165                 170                 175

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Ile Ser Ser Ser Phe Leu
            180                 185                 190

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile Tyr
        195                 200                 205

Gly Ala Ser Arg Arg Ala Thr Gly Ile Pro Asp Arg Phe Ser Gly Ser
    210                 215                 220

Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu
225                 230                 235                 240

Asp Ser Ala Val Tyr Tyr Cys Gln Gln Tyr His Ser Ser Pro Ser Trp
                245                 250                 255

Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys Thr Thr Thr Pro Ala
            260                 265                 270

Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser
        275                 280                 285

Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr
    290                 295                 300

Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala
305                 310                 315                 320

Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr Cys
                325                 330                 335

Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met
            340                 345                 350

Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe
        355                 360                 365

Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg
```

```
    370                 375                 380

Ser Ala Asp Ala Pro Ala Tyr Lys Gln Gly Gln Asn Gln Leu Tyr Asn
385                 390                 395                 400

Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg
                405                 410                 415

Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro
            420                 425                 430

Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala
        435                 440                 445

Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His
    450                 455                 460

Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp
465                 470                 475                 480

Ala Leu His Met Gln Ala Leu Pro Pro Arg
                485                 490
```

<210> 639
<211> 1470
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 639
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

ccccaagtgc aactcgtgga atctggtgga ggactcgtgc aacccggaag atcgcttaga 120

ctgtcgtgtg ccgccagcgg gttcactttc tcgaactacg cgatgtcctg ggtccgccag 180

gcacccggaa agggactcgg ttgggtgtcc ggcatttccc ggtccggcga aaatacctac 240

tacgccgact ccgtgaaggg ccgcttcacc atctcaaggg acaacagcaa aaacaccctg 300

tacttgcaaa tgaactccct gcgggatgaa gatacagccg tgtactattg cgcccggtcg 360

cctgcccatt actacggcgg aatggacgtc tggggacagg gaaccactgt gactgtcagc 420

agcgcgtcgg gtggcggcgg ctcaggggggt cgggcctccg gggggggagg gtccgacatc 480

gtgctgaccc agtccccggg aaccctgagc ctgagcccgg gagagcgcgc gaccctgtca 540

tgccgggcat cccagagcat tagctcctcc tttctcgcct ggtatcagca gaagcccgga 600

caggccccga ggctgctgat ctacggcgct agcagaaggg ctaccggaat cccagaccgg 660

ttctccggct ccggttccgg gaccgatttc acccttacta tctcgcgcct ggaacctgag 720

gactccgccg tctactactg ccagcagtac cactcatccc cgtcgtggac gttcggacag 780

ggcaccaagc tggagattaa gaccactacc ccagcaccga ggccacccac cccggctcct 840

accatcgcct cccagcctct gtccctgcgt ccggaggcat gtagacccgc agctggtggg 900

gccgtgcata cccggggtct tgacttcgcc tgcgatatct acatttgggc ccctctggct 960

ggtacttgcg gggtcctgct gctttcactc gtgatcactc tttactgtaa gcgcggtcgg 1020

aagaagctgc tgtacatctt taagcaaccc ttcatgaggc ctgtgcagac tactcaagag 1080

gaggacggct gttcatgccg gttcccagag gaggaggaag gcggctgcga actgcgcgtg 1140

aaattcagcc gcagcgcaga tgctccagcc tacaagcagg ggcagaacca gctctacaac 1200

gaactcaatc ttggtcggag agaggagtac gacgtgctgg acaagcggag aggacgggac 1260

ccagaaatgg gcgggaagcc gcgcagaaag aatccccaag agggcctgta caacgagctc 1320

caaaaggata agatggcaga agcctatagc gagattggta tgaaagggga acgcagaaga 1380

ggcaaaggcc acgacggact gtaccaggga ctcagcaccg ccaccaagga cacctatgac 1440

gctcttcaca tgcaggccct gccgcctcgg 1470

<210> 640
<211> 244
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 640
Gln 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 Ser Trp Asn Ser Gly Ser Ile Gly Tyr Ala Asp Ser Val
    50                  55                  60

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Ser Leu Tyr
65                  70                  75                  80

Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Leu Tyr Tyr Cys
                85                  90                  95

Ser Val His Ser Phe Leu Ala Tyr Trp Gly Gln Gly Thr Leu Val Thr
            100                 105                 110

Val Ser Ser Ala Ser Gly Gly Gly Gly Ser Gly Gly Arg Ala Ser Gly
        115                 120                 125

Gly Gly Gly Ser Asp Ile Val Met Thr Gln Thr Pro Leu Ser Leu Pro
    130                 135                 140

Val Thr Pro Gly Glu Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser
145                 150                 155                 160

Leu Leu His Ser Asn Gly Tyr Asn Tyr Leu Asp Trp Tyr Leu Gln Lys
                165                 170                 175

Pro Gly Gln Ser Pro Gln Leu Leu Ile Tyr Leu Gly Ser Asn Arg Ala
            180                 185                 190

Ser Gly Val Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe
        195                 200                 205

Thr Leu Lys Ile Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr
    210                 215                 220

Cys Met Gln Ala Leu Gln Thr Pro Tyr Thr Phe Gly Gln Gly Thr Lys
225                 230                 235                 240
```

Val Glu Ile Lys

<210> 641
<211> 732
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 641
caagtgcaac tcgtcgaatc cggtggaggt ctggtccaac ctggtagaag cctgagactg 60

tcgtgtgcgg ccagcggatt cacctttgat gactatgcta tgcactgggt gcggcaggcc 120

ccaggaaagg gcctggaatg ggtgtcggga attagctgga actccgggtc cattggctac 180

gccgactccg tgaagggccg cttcaccatc tcccgcgaca acgcaaagaa ctccctgtac 240

ttgcaaatga actcgctcag ggctgaggat accgcgctgt actactgctc cgtgcattcc 300

ttcctggcct actggggaca gggaactctg gtcaccgtgt cgagcgcctc cggcggcggg 360

ggctcgggtg gacgggcctc gggcggaggg gggtccgaca tcgtgatgac ccagaccccg 420

ctgagcttgc ccgtgactcc cggagagcct gcatccatct cctgccggtc atcccagtcc 480

cttctccact ccaacggata caactacctc gactggtacc tccagaagcc gggacagagc 540

cctcagcttc tgatctacct ggggtcaaat agagcctcag gagtgccgga tcggttcagc 600

ggatctggtt cgggaactga tttcactctg aagatttccc gcgtggaagc cgaggacgtg 660

ggcgtctact actgtatgca ggcgctgcag acccctata ccttcggcca agggacgaaa 720

gtggagatca ag 732

<210> 642
<211> 115
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 642
Gln 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 Ser Trp Asn Ser Gly Ser Ile Gly Tyr Ala Asp Ser Val
    50   55   60

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Ser Leu Tyr
65   70   75   80

Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Leu Tyr Tyr Cys
                85   90   95

Ser Val His Ser Phe Leu Ala Tyr Trp Gly Gln Gly Thr Leu Val Thr
            100   105   110

Val Ser Ser
        115

<210> 643
<211> 112
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 643
Asp Ile Val Met Thr Gln Thr Pro Leu Ser Leu Pro Val Thr Pro Gly
1   5   10   15

Glu Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Leu His Ser
            20   25   30

Asn Gly Tyr Asn Tyr Leu Asp Trp Tyr Leu Gln Lys Pro Gly Gln Ser
        35   40   45

```
Pro Gln Leu Leu Ile Tyr Leu Gly Ser Asn Arg Ala Ser Gly Val Pro
    50                  55                  60

Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile
65                  70                  75                  80

Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln Ala
                85                  90                  95

Leu Gln Thr Pro Tyr Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
            100                 105                 110
```

<210> 644
<211> 488
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 644

```
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1               5                   10                  15

His Ala Ala Arg Pro Gln Val Gln Leu Val Glu Ser Gly Gly Gly Leu
            20                  25                  30

Val Gln Pro Gly Arg Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe
        35                  40                  45

Thr Phe Asp Asp Tyr Ala Met His Trp Val Arg Gln Ala Pro Gly Lys
    50                  55                  60

Gly Leu Glu Trp Val Ser Gly Ile Ser Trp Asn Ser Gly Ser Ile Gly
65                  70                  75                  80

Tyr Ala Asp Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala
                85                  90                  95

Lys Asn Ser Leu Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr
```

```
            100                 105                 110

Ala Leu Tyr Tyr Cys Ser Val His Ser Phe Leu Ala Tyr Trp Gly Gln
        115                 120                 125

Gly Thr Leu Val Thr Val Ser Ser Ala Ser Gly Gly Gly Gly Ser Gly
    130                 135                 140

Gly Arg Ala Ser Gly Gly Gly Gly Ser Asp Ile Val Met Thr Gln Thr
145                 150                 155                 160

Pro Leu Ser Leu Pro Val Thr Pro Gly Glu Pro Ala Ser Ile Ser Cys
                165                 170                 175

Arg Ser Ser Gln Ser Leu Leu His Ser Asn Gly Tyr Asn Tyr Leu Asp
            180                 185                 190

Trp Tyr Leu Gln Lys Pro Gly Gln Ser Pro Gln Leu Leu Ile Tyr Leu
        195                 200                 205

Gly Ser Asn Arg Ala Ser Gly Val Pro Asp Arg Phe Ser Gly Ser Gly
    210                 215                 220

Ser Gly Thr Asp Phe Thr Leu Lys Ile Ser Arg Val Glu Ala Glu Asp
225                 230                 235                 240

Val Gly Val Tyr Tyr Cys Met Gln Ala Leu Gln Thr Pro Tyr Thr Phe
                245                 250                 255

Gly Gln Gly Thr Lys Val Glu Ile Lys Thr Thr Thr Pro Ala Pro Arg
            260                 265                 270

Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser Leu Arg
        275                 280                 285

Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr Arg Gly
    290                 295                 300

Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr
305                 310                 315                 320
```

```
Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr Cys Lys Arg
                325                 330                 335

Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met Arg Pro
            340                 345                 350

Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu
        355                 360                 365

Glu Glu Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg Ser Ala
    370                 375                 380

Asp Ala Pro Ala Tyr Lys Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu
385                 390                 395                 400

Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly
                405                 410                 415

Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu
            420                 425                 430

Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser
        435                 440                 445

Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His Asp Gly
    450                 455                 460

Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu
465                 470                 475                 480

His Met Gln Ala Leu Pro Pro Arg
                485
```

<210> 645
<211> 1464
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 645
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

ccccaagtgc aactcgtcga atccggtgga ggtctggtcc aacctggtag aagcctgaga 120

ctgtcgtgtg cggccagcgg attcaccttt gatgactatg ctatgcactg ggtgcggcag 180

gccccaggaa agggcctgga atgggtgtcg ggaattagct ggaactccgg gtccattggc 240

tacgccgact ccgtgaaggg ccgcttcacc atctcccgcg acaacgcaaa gaactccctg 300

tacttgcaaa tgaactcgct cagggctgag gataccgcgc tgtactactg ctccgtgcat 360

tccttcctgg cctactgggg acagggaact ctggtcaccg tgtcgagcgc ctccggcggc 420

gggggctcgg gtggacgggc ctcgggcgga ggggggtccg acatcgtgat gacccagacc 480

ccgctgagct tgcccgtgac tcccggagag cctgcatcca tctcctgccg gtcatcccag 540

tcccttctcc actccaacgg atacaactac ctcgactggt acctccagaa gccgggacag 600

agccctcagc ttctgatcta cctggggtca aatagagcct caggagtgcc ggatcggttc 660

agcggatctg gttcgggaac tgatttcact ctgaagattt cccgcgtgga agccgaggac 720

gtgggcgtct actactgtat gcaggcgctg cagaccccct ataccttcgg ccaagggacg 780

aaagtggaga tcaagaccac taccccagca ccgaggccac ccaccccggc tcctaccatc 840

gcctcccagc ctctgtccct gcgtccggag gcatgtagac ccgcagctgg tggggccgtg 900

catacccggg gtcttgactt cgcctgcgat atctacattt gggcccctct ggctggtact 960

tgcggggtcc tgctgctttc actcgtgatc actctttact gtaagcgcgg tcggaagaag 1020

ctgctgtaca tctttaagca acccttcatg aggcctgtgc agactactca agaggaggac 1080

ggctgttcat gccggttccc agaggaggag gaaggcggct gcgaactgcg cgtgaaattc 1140

agccgcagcg cagatgctcc agcctacaag caggggcaga accagctcta caacgaactc 1200

aatcttggtc ggagagagga gtacgacgtg ctggacaagc ggagaggacg ggacccagaa 1260

atgggcggga agccgcgcag aaagaatccc caagagggcc tgtacaacga gctccaaaag 1320

gataagatgg cagaagccta tagcgagatt ggtatgaaag gggaacgcag aagaggcaaa 1380

ggccacgacg gactgtacca gggactcagc accgccacca aggacaccta tgacgctctt 1440

cacatgcagg ccctgccgcc tcgg 1464

<210> 646

<211> 243
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 646
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 Val Ser Gly Phe Ala Leu Ser Asn His
20 25 30

Gly Met Ser Trp Val Arg Arg Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45

Ser Gly Ile Val Tyr Ser Gly Ser Thr Tyr Tyr Ala Ala Ser Val Lys
50 55 60

Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Arg Asn Thr Leu Tyr Leu
65 70 75 80

Gln Met Asn Ser Leu Arg Pro Glu Asp Thr Ala Ile Tyr Tyr Cys Ser
85 90 95

Ala His Gly Gly Glu Ser Asp Val Trp Gly Gln Gly Thr Thr Val Thr
100 105 110

Val Ser Ser Ala Ser Gly Gly Gly Gly Ser Gly Gly Arg Ala Ser Gly
115 120 125

Gly Gly Gly Ser Asp Ile Val Met Thr Gln Thr Pro Leu Ser Leu Ser
130 135 140

Val Thr Pro Gly Gln Pro Ala Ser Ile Ser Cys Lys Ser Ser Gln Ser
145 150 155 160

Leu Leu Arg Asn Asp Gly Lys Thr Pro Leu Tyr Trp Tyr Leu Gln Lys
165 170 175

Ala Gly Gln Pro Pro Gln Leu Leu Ile Tyr Glu Val Ser Asn Arg Phe
180 185 190

Ser Gly Val Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe
195 200 205

Thr Leu Lys Ile Ser Arg Val Glu Ala Glu Asp Val Gly Ala Tyr Tyr
210 215 220

Cys Met Gln Asn Ile Gln Phe Pro Ser Phe Gly Gly Gly Thr Lys Leu
225 230 235 240

Glu Ile Lys

<210> 647
<211> 729
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 647
gaagtgcaat tgttggaatc tggaggagga cttgtgcagc ctggaggatc actgagactt 60

tcgtgtgcgg tgtcaggctt cgccctgagc aaccacggca tgagctgggt gcggagagcc 120

ccggggaagg gtctggaatg ggtgtccggg atcgtctact ccggttcaac ttactacgcc 180

gcaagcgtga agggtcgctt caccatttcc cgcgataact cccggaacac cctgtacctc 240

caaatgaact ccctgcggcc cgaggacacc gccatctact actgttccgc gcatggagga 300

gagtccgatg tctggggaca gggcactacc gtgaccgtgt cgagcgcctc gggggggagga 360

ggctccggcg gtcgcgcctc cgggggggggt ggcagcgaca ttgtgatgac gcagactcca 420

ctctcgctgt ccgtgacccc gggacagccc gcgtccatct cgtgcaagag ctcccagagc 480

ctgctgagga acgacggaaa gactcctctg tattggtacc tccagaaggc tggacagccc 540

ccgcaactgc tcatctacga agtgtcaaat cgcttctccg gggtgccgga tcggttttcc 600

ggctcgggat cgggcaccga cttcaccctg aaaatctcca gggtcgaggc cgaggacgtg 660

ggagcctact actgcatgca aaacatccag ttcccttcct tcggcggcgg cacaaagctg 720

gagattaag 729

<210> 648
<211> 115
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 648
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 Val Ser Gly Phe Ala Leu Ser Asn His
20 25 30

Gly Met Ser Trp Val Arg Arg Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45

Ser Gly Ile Val Tyr Ser Gly Ser Thr Tyr Tyr Ala Ala Ser Val Lys
50 55 60

Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Arg Asn Thr Leu Tyr Leu
65 70 75 80

Gln Met Asn Ser Leu Arg Pro Glu Asp Thr Ala Ile Tyr Tyr Cys Ser
85 90 95

Ala His Gly Gly Glu Ser Asp Val Trp Gly Gln Gly Thr Thr Val Thr
100 105 110

Val Ser Ser
115

<210> 649
<211> 111
<212> PRT
<213> Artificial Sequence

<220>
<221> source

<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 649
Asp Ile Val Met Thr Gln Thr Pro Leu Ser Leu Ser Val Thr Pro Gly
1 5 10 15

Gln Pro Ala Ser Ile Ser Cys Lys Ser Ser Gln Ser Leu Leu Arg Asn
20 25 30

Asp Gly Lys Thr Pro Leu Tyr Trp Tyr Leu Gln Lys Ala Gly Gln Pro
35 40 45

Pro Gln Leu Leu Ile Tyr Glu Val Ser Asn Arg Phe 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 Ala Tyr Tyr Cys Met Gln Asn
85 90 95

Ile Gln Phe Pro Ser Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys
100 105 110

<210> 650
<211> 487
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 650
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Glu Val Gln Leu Leu Glu Ser Gly Gly Gly Leu
20 25 30

Val Gln Pro Gly Gly Ser Leu Arg Leu Ser Cys Ala Val Ser Gly Phe
35 40 45

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Ala Leu Ser Asn His Gly Met Ser Trp Val Arg Arg Ala Pro Gly Lys
    50                  55                  60

Gly Leu Glu Trp Val Ser Gly Ile Val Tyr Ser Gly Ser Thr Tyr Tyr
65                  70                  75                  80

Ala Ala Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Arg
                85                  90                  95

Asn Thr Leu Tyr Leu Gln Met Asn Ser Leu Arg Pro Glu Asp Thr Ala
            100                 105                 110

Ile Tyr Tyr Cys Ser Ala His Gly Gly Glu Ser Asp Val Trp Gly Gln
        115                 120                 125

Gly Thr Thr Val Thr Val Ser Ser Ala Ser Gly Gly Gly Gly Ser Gly
    130                 135                 140

Gly Arg Ala Ser Gly Gly Gly Gly Ser Asp Ile Val Met Thr Gln Thr
145                 150                 155                 160

Pro Leu Ser Leu Ser Val Thr Pro Gly Gln Pro Ala Ser Ile Ser Cys
                165                 170                 175

Lys Ser Ser Gln Ser Leu Leu Arg Asn Asp Gly Lys Thr Pro Leu Tyr
            180                 185                 190

Trp Tyr Leu Gln Lys Ala Gly Gln Pro Pro Gln Leu Leu Ile Tyr Glu
        195                 200                 205

Val Ser Asn Arg Phe Ser Gly Val Pro Asp Arg Phe Ser Gly Ser Gly
    210                 215                 220

Ser Gly Thr Asp Phe Thr Leu Lys Ile Ser Arg Val Glu Ala Glu Asp
225                 230                 235                 240

Val Gly Ala Tyr Tyr Cys Met Gln Asn Ile Gln Phe Pro Ser Phe Gly
                245                 250                 255

Gly Gly Thr Lys Leu Glu Ile Lys Thr Thr Thr Pro Ala Pro Arg Pro
```

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            260                 265                 270

Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser Leu Arg Pro
        275                 280                 285

Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr Arg Gly Leu
    290                 295                 300

Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys
305                 310                 315                 320

Gly Val Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr Cys Lys Arg Gly
                325                 330                 335

Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met Arg Pro Val
            340                 345                 350

Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu Glu
        355                 360                 365

Glu Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg Ser Ala Asp
    370                 375                 380

Ala Pro Ala Tyr Lys Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn
385                 390                 395                 400

Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg
                405                 410                 415

Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly
            420                 425                 430

Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu
        435                 440                 445

Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His Asp Gly Leu
    450                 455                 460

Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu His
465                 470                 475                 480
```

Met Gln Ala Leu Pro Pro Arg
485

<210> 651
<211> 1461
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 651
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

cccgaagtgc aattgttgga atctggagga ggacttgtgc agcctggagg atcactgaga 120

ctttcgtgtg cggtgtcagg cttcgccctg agcaaccacg gcatgagctg ggtgcggaga 180

gccccgggga agggtctgga atgggtgtcc gggatcgtct actccggttc aacttactac 240

gccgcaagcg tgaagggtcg cttcaccatt tcccgcgata actcccggaa caccctgtac 300

ctccaaatga actccctgcg gcccgaggac accgccatct actactgttc cgcgcatgga 360

ggagagtccg atgtctgggg acagggcact accgtgaccg tgtcgagcgc ctcgggggga 420

ggaggctccg gcggtcgcgc ctccgggggg ggtggcagcg acattgtgat gacgcagact 480

ccactctcgc tgtccgtgac cccgggacag cccgcgtcca tctcgtgcaa gagctcccag 540

agcctgctga ggaacgacgg aaagactcct ctgtattggt acctccagaa ggctggacag 600

cccccgcaac tgctcatcta cgaagtgtca aatcgcttct ccggggtgcc ggatcggttt 660

tccggctcgg gatcgggcac cgacttcacc ctgaaaatct ccagggtcga ggccgaggac 720

gtgggagcct actactgcat gcaaaacatc cagttccctt ccttcggcgg cggcacaaag 780

ctggagatta agaccactac cccagcaccg aggccaccca ccccggctcc taccatcgcc 840

tcccagcctc tgtccctgcg tccggaggca tgtagacccg cagctggtgg ggccgtgcat 900

acccggggtc ttgacttcgc ctgcgatatc tacatttggg cccctctggc tggtacttgc 960

ggggtcctgc tgctttcact cgtgatcact ctttactgta agcgcggtcg gaagaagctg 1020

ctgtacatct ttaagcaacc cttcatgagg cctgtgcaga ctactcaaga ggaggacggc 1080

tgttcatgcc ggttcccaga ggaggaggaa ggcggctgcg aactgcgcgt gaaattcagc 1140

cgcagcgcag atgctccagc ctacaagcag gggcagaacc agctctacaa cgaactcaat 1200

cttggtcgga gagaggagta cgacgtgctg gacaagcgga gaggacggga cccagaaatg 1260

ggcgggaagc cgcgcagaaa gaatccccaa gagggcctgt acaacgagct ccaaaaggat 1320

aagatggcag aagcctatag cgagattggt atgaaagggg aacgcagaag aggcaaaggc 1380

cacgacggac tgtaccaggg actcagcacc gccaccaagg acacctatga cgctcttcac 1440

atgcaggccc tgccgcctcg g 1461

<210> 652
<211> 249
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 652
Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Arg Lys Thr Gly Ala
1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Ile Phe Asp Asn Phe
20 25 30

Gly Ile Asn Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45

Gly Trp Ile Asn Pro Lys Asn Asn Asn Thr Asn Tyr Ala Gln Lys Phe
50 55 60

Gln Gly Arg Val Thr Ile Thr Ala Asp Glu Ser Thr Asn Thr Ala Tyr
65 70 75 80

Met Glu Val Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Gly Pro Tyr Tyr Tyr Gln Ser Tyr Met Asp Val Trp Gly Gln
100 105 110

Gly Thr Met Val Thr Val Ser Ser Ala Ser Gly Gly Gly Gly Ser Gly
115 120 125

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Gly Arg Ala Ser Gly Gly Gly Gly Ser Asp Ile Val Met Thr Gln Thr
    130                 135                 140

Pro Leu Ser Leu Pro Val Thr Pro Gly Glu Pro Ala Ser Ile Ser Cys
145                 150                 155                 160

Arg Ser Ser Gln Ser Leu Leu His Ser Asn Gly Tyr Asn Tyr Leu Asn
                165                 170                 175

Trp Tyr Leu Gln Lys Pro Gly Gln Ser Pro Gln Leu Leu Ile Tyr Leu
            180                 185                 190

Gly Ser Lys Arg Ala Ser Gly Val Pro Asp Arg Phe Ser Gly Ser Gly
        195                 200                 205

Ser Gly Thr Asp Phe Thr Leu His Ile Thr Arg Val Gly Ala Glu Asp
    210                 215                 220

Val Gly Val Tyr Tyr Cys Met Gln Ala Leu Gln Thr Pro Tyr Thr Phe
225                 230                 235                 240

Gly Gln Gly Thr Lys Leu Glu Ile Lys
                245
```

<210> 653
<211> 747
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 653
caagtccaac tcgtccagtc cggcgcagaa gtcagaaaaa ccggtgctag cgtgaaagtg 60

tcctgcaagg cctccggcta cattttcgat aacttcggaa tcaactgggt cagacaggcc 120

ccgggccagg ggctggaatg gatgggatgg atcaacccca agaacaacaa caccaactac 180

gcacagaagt tccagggccg cgtgactatc accgccgatg aatcgaccaa taccgcctac 240

atggaggtgt cctccctgcg gtcggaggac actgccgtgt attactgcgc gaggggccca 300

tactactacc aaagctacat ggacgtctgg ggacagggaa ccatggtgac cgtgtcatcc 360

gcctccggtg gtggaggctc ggggggcgg gcttcaggag gcggaggaag cgatattgtg 420

atgacccaga ctccgcttag cctgcccgtg actcctggag aaccggcctc catttcctgc 480

cggtcctcgc aatcactcct gcattccaac ggttacaact acctgaattg gtacctccag 540

aagcctggcc agtcgcccca gttgctgatc tatctgggct cgaagcgcgc ctccggggtg 600

cctgaccggt ttagcggatc tgggagcggc acggacttca ctctccacat cacccgcgtg 660

ggagcggagg acgtgggagt gtactactgt atgcaggcgc tgcagactcc gtacacattc 720

ggacagggca ccaagctgga gatcaag 747

<210> 654
<211> 120
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 654
Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Arg Lys Thr Gly Ala
1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Ile Phe Asp Asn Phe
20 25 30

Gly Ile Asn Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45

Gly Trp Ile Asn Pro Lys Asn Asn Asn Thr Asn Tyr Ala Gln Lys Phe
50 55 60

Gln Gly Arg Val Thr Ile Thr Ala Asp Glu Ser Thr Asn Thr Ala Tyr
65 70 75 80

Met Glu Val Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Gly Pro Tyr Tyr Tyr Gln Ser Tyr Met Asp Val Trp Gly Gln

100 105 110

Gly Thr Met Val Thr Val Ser Ser
115 120

<210> 655
<211> 112
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 655
Asp Ile Val Met Thr Gln Thr 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 Asn Trp Tyr Leu Gln Lys Pro Gly Gln Ser
35 40 45

Pro Gln Leu Leu Ile Tyr Leu Gly Ser Lys Arg Ala Ser Gly Val Pro
50 55 60

Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu His Ile
65 70 75 80

Thr Arg Val Gly Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln Ala
85 90 95

Leu Gln Thr Pro Tyr Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
100 105 110

<210> 656
<211> 493
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic

polypeptide"

<400> 656

```
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1               5                  10                  15

His Ala Ala Arg Pro Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val
            20                  25                  30

Arg Lys Thr Gly Ala Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr
        35                  40                  45

Ile Phe Asp Asn Phe Gly Ile Asn Trp Val Arg Gln Ala Pro Gly Gln
    50                  55                  60

Gly Leu Glu Trp Met Gly Trp Ile Asn Pro Lys Asn Asn Asn Thr Asn
65                  70                  75                  80

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

Thr Asn Thr Ala Tyr Met Glu Val Ser Ser Leu Arg Ser Glu Asp Thr
            100                 105                 110

Ala Val Tyr Tyr Cys Ala Arg Gly Pro Tyr Tyr Tyr Gln Ser Tyr Met
        115                 120                 125

Asp Val Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Ala Ser Gly
    130                 135                 140

Gly Gly Gly Ser Gly Gly Arg Ala Ser Gly Gly Gly Gly Ser Asp Ile
145                 150                 155                 160

Val Met Thr Gln Thr Pro Leu Ser Leu Pro Val Thr Pro Gly Glu Pro
                165                 170                 175

Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Leu His Ser Asn Gly
            180                 185                 190

Tyr Asn Tyr Leu Asn Trp Tyr Leu Gln Lys Pro Gly Gln Ser Pro Gln
        195                 200                 205
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Leu Leu Ile Tyr Leu Gly Ser Lys Arg Ala Ser Gly Val Pro Asp Arg
    210                 215                 220

Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu His Ile Thr Arg
225                 230                 235                 240

Val Gly Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln Ala Leu Gln
                245                 250                 255

Thr Pro Tyr Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys Thr Thr
            260                 265                 270

Thr Pro Ala Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln
        275                 280                 285

Pro Leu Ser Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala
    290                 295                 300

Val His Thr Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala
305                 310                 315                 320

Pro Leu Ala Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr
                325                 330                 335

Leu Tyr Cys Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln
            340                 345                 350

Pro Phe Met Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser
        355                 360                 365

Cys Arg Phe Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg Val Lys
    370                 375                 380

Phe Ser Arg Ser Ala Asp Ala Pro Ala Tyr Lys Gln Gly Gln Asn Gln
385                 390                 395                 400

Leu Tyr Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu
                405                 410                 415

Asp Lys Arg Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg
```

420 425 430

Lys Asn Pro Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met
435 440 445

Ala Glu Ala Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly
450 455 460

Lys Gly His Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp
465 470 475 480

Thr Tyr Asp Ala Leu His Met Gln Ala Leu Pro Pro Arg
485 490

<210> 657
<211> 1479
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 657
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

ccccaagtcc aactcgtcca gtccggcgca gaagtcagaa aaaccggtgc tagcgtgaaa 120

gtgtcctgca aggcctccgg ctacattttc gataacttcg gaatcaactg ggtcagacag 180

gccccgggcc aggggctgga atggatggga tggatcaacc ccaagaacaa caacaccaac 240

tacgcacaga agttccaggg ccgcgtgact atcaccgccg atgaatcgac caataccgcc 300

tacatggagg tgtcctccct gcggtcggag gacactgccg tgtattactg cgcgaggggc 360

ccatactact accaaagcta catggacgtc tggggacagg gaaccatggt gaccgtgtca 420

tccgcctccg gtggtggagg ctccgggggg cgggcttcag gaggcggagg aagcgatatt 480

gtgatgaccc agactccgct tagcctgccc gtgactcctg gagaaccggc ctccatttcc 540

tgccggtcct cgcaatcact cctgcattcc aacggttaca actacctgaa ttggtacctc 600

cagaagcctg gccagtcgcc ccagttgctg atctatctgg gctcgaagcg cgcctccggg 660

gtgcctgacc ggtttagcgg atctgggagc ggcacggact tcactctcca catcacccgc 720

gtgggagcgg aggacgtggg agtgtactac tgtatgcagg cgctgcagac tccgtacaca 780

ttcggacagg gcaccaagct ggagatcaag accactaccc cagcaccgag gccacccacc 840

ccggctccta ccatcgcctc ccagcctctg tccctgcgtc cggaggcatg tagacccgca 900

gctggtgggg ccgtgcatac ccggggtctt gacttcgcct gcgatatcta catttgggcc 960

cctctggctg gtacttgcgg ggtcctgctg ctttcactcg tgatcactct ttactgtaag 1020

cgcggtcgga agaagctgct gtacatcttt aagcaaccct tcatgaggcc tgtgcagact 1080

actcaagagg aggacggctg ttcatgccgg ttcccagagg aggaggaagg cggctgcgaa 1140

ctgcgcgtga aattcagccg cagcgcagat gctccagcct acaagcaggg gcagaaccag 1200

ctctacaacg aactcaatct tggtcggaga gaggagtacg acgtgctgga caagcggaga 1260

ggacgggacc cagaaatggg cgggaagccg cgcagaaaga atccccaaga gggcctgtac 1320

aacgagctcc aaaaggataa gatggcagaa gcctatagcg agattggtat gaaaggggaa 1380

cgcagaagag gcaaaggcca cgacggactg taccagggac tcagcaccgc caccaaggac 1440

acctatgacg ctcttcacat gcaggccctg ccgcctcgg 1479

<210> 658
<211> 246
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 658
Gln Val Gln Leu Gln 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 Asp
20 25 30

Ala Met Thr Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45

Ser Val 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 Leu Asp Ser Ser Gly Tyr Tyr Tyr Ala Arg Gly Pro Arg Tyr
            100                 105                 110

Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Ala Ser Gly Gly Gly
        115                 120                 125

Gly Ser Gly Gly Arg Ala Ser Gly Gly Gly Gly Ser Asp Ile Gln Leu
    130                 135                 140

Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly Asp Arg Val Thr
145                 150                 155                 160

Ile Thr Cys Arg Ala Ser Gln Ser Ile Ser Ser Tyr Leu Asn Trp Tyr
                165                 170                 175

Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile Tyr Gly Ala Ser
            180                 185                 190

Thr Leu Ala Ser Gly Val Pro Ala Arg Phe Ser Gly Ser Gly Ser Gly
        195                 200                 205

Thr His Phe Thr Leu Thr Ile Asn Ser Leu Gln Ser Glu Asp Ser Ala
    210                 215                 220

Thr Tyr Tyr Cys Gln Gln Ser Tyr Lys Arg Ala Ser Phe Gly Gln Gly
225                 230                 235                 240

Thr Lys Val Glu Ile Lys
                245
```

<210> 659
<211> 738
<212> DNA
<213> Artificial Sequence

<220>

<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 659
caagtgcaac ttcaagaatc aggcggagga ctcgtgcagc ccggaggatc attgcggctc 60

tcgtgcgccg cctcgggctt caccttctcg agcgacgcca tgacctgggt ccgccaggcc 120

ccggggaagg ggctggaatg ggtgtctgtg atttccggct ccgggggaac tacgtactac 180

gccgattccg tgaaaggtcg cttcactatc tcccgggaca acagcaagaa cacccttttat 240

ctgcaaatga attccctccg cgccgaggac accgccgtgt actactgcgc caagctggac 300

tcctcgggct actactatgc ccggggtccg agatactggg gacagggaac cctcgtgacc 360

gtgtcctccg cgtccggcgg aggagggtcg ggagggcggg cctccggcgg cggcggttcg 420

gacatccagc tgacccagtc cccatcctca ctgagcgcaa gcgtgggcga cagagtcacc 480

attacatgca gggcgtccca gagcatcagc tcctacctga actggtacca acagaagcct 540

ggaaaggctc ctaagctgtt gatctacggg gcttcgaccc tggcatccgg ggtgcccgcg 600

aggtttagcg gaagcggtag cggcactcac ttcactctga ccattaacag cctccagtcc 660

gaggattcag ccacttacta ctgtcagcag tcctacaagc gggccagctt cggacagggc 720

actaaggtcg agatcaag 738

<210> 660
<211> 123
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 660
Gln Val Gln Leu Gln 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 Asp
20 25 30

Ala Met Thr Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45

Ser Val 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 Leu Asp Ser Ser Gly Tyr Tyr Tyr Ala Arg Gly Pro Arg Tyr
            100   105   110

Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
        115   120

<210> 661
<211> 106
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 661
Asp 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 Ser Ile Ser Ser Tyr
            20   25   30

Leu Asn Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
        35   40   45

Tyr Gly Ala Ser Thr Leu Ala Ser Gly Val Pro Ala Arg Phe Ser Gly
    50   55   60

Ser Gly Ser Gly Thr His Phe Thr Leu Thr Ile Asn Ser Leu Gln Ser
65   70   75   80

Glu Asp Ser Ala Thr Tyr Tyr Cys Gln Gln Ser Tyr Lys Arg Ala Ser
                85   90   95

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

<210> 662
<211> 490
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 662
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Gln Val Gln Leu Gln Glu Ser Gly Gly Gly Leu
20 25 30

Val Gln Pro Gly Gly Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe
35 40 45

Thr Phe Ser Ser Asp Ala Met Thr Trp Val Arg Gln Ala Pro Gly Lys
50 55 60

Gly Leu Glu Trp Val Ser Val Ile Ser Gly Ser Gly Gly Thr Thr Tyr
65 70 75 80

Tyr Ala Asp Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser
85 90 95

Lys Asn Thr Leu Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr
100 105 110

Ala Val Tyr Tyr Cys Ala Lys Leu Asp Ser Ser Gly Tyr Tyr Tyr Ala
115 120 125

Arg Gly Pro Arg Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
130 135 140

Ala Ser Gly Gly Gly Gly Ser Gly Gly Arg Ala Ser Gly Gly Gly Gly

```
145                 150                 155                 160

Ser Asp Ile Gln Leu Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val
                165                 170                 175

Gly Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Ser Ser
            180                 185                 190

Tyr Leu Asn Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu
        195                 200                 205

Ile Tyr Gly Ala Ser Thr Leu Ala Ser Gly Val Pro Ala Arg Phe Ser
    210                 215                 220

Gly Ser Gly Ser Gly Thr His Phe Thr Leu Thr Ile Asn Ser Leu Gln
225                 230                 235                 240

Ser Glu Asp Ser Ala Thr Tyr Tyr Cys Gln Gln Ser Tyr Lys Arg Ala
                245                 250                 255

Ser Phe Gly Gln Gly Thr Lys Val Glu Ile Lys Thr Thr Thr Pro Ala
            260                 265                 270

Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser
        275                 280                 285

Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr
    290                 295                 300

Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala
305                 310                 315                 320

Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr Cys
                325                 330                 335

Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met
            340                 345                 350

Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe
        355                 360                 365
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Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg
    370                 375                 380

Ser Ala Asp Ala Pro Ala Tyr Lys Gln Gly Gln Asn Gln Leu Tyr Asn
385                 390                 395                 400

Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg
                405                 410                 415

Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro
            420                 425                 430

Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala
        435                 440                 445

Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His
    450                 455                 460

Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp
465                 470                 475                 480

Ala Leu His Met Gln Ala Leu Pro Pro Arg
                485                 490
```

<210> 663
<211> 1470
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 663
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

ccccaagtgc aacttcaaga atcaggcgga ggactcgtgc agcccggagg atcattgcgg 120

ctctcgtgcg ccgcctcggg cttcaccttc tcgagcgacg ccatgacctg ggtccgccag 180

gccccgggga aggggctgga atgggtgtct gtgatttccg gctccggggg aactacgtac 240

tacgccgatt ccgtgaaagg tcgcttcact atctcccggg acaacagcaa gaacaccctt 300

tatctgcaaa tgaattccct ccgcgccgag gacaccgccg tgtactactg cgccaagctg 360

gactcctcgg gctactacta tgcccggggt ccgagatact ggggacaggg aaccctcgtg 420

accgtgtcct ccgcgtccgg cggaggaggg tcgggagggc gggcctccgg cggcggcggt 480

tcggacatcc agctgaccca gtccccatcc tcactgagcg caagcgtggg cgacagagtc 540

accattacat gcagggcgtc ccagagcatc agctcctacc tgaactggta ccaacagaag 600

cctggaaagg ctcctaagct gttgatctac ggggcttcga ccctggcatc cggggtgccc 660

gcgaggttta gcggaagcgg tagcggcact cacttcactc tgaccattaa cagcctccag 720

tccgaggatt cagccactta ctactgtcag cagtcctaca agcgggccag cttcggacag 780

ggcactaagg tcgagatcaa gaccactacc ccagcaccga ggccacccac cccggctcct 840

accatcgcct cccagcctct gtccctgcgt ccggaggcat gtagacccgc agctggtggg 900

gccgtgcata cccggggtct tgacttcgcc tgcgatatct acatttgggc ccctctggct 960

ggtacttgcg gggtcctgct gctttcactc gtgatcactc tttactgtaa gcgcggtcgg 1020

aagaagctgc tgtacatctt taagcaaccc ttcatgaggc ctgtgcagac tactcaagag 1080

gaggacggct gttcatgccg gttcccagag gaggaggaag gcggctgcga actgcgcgtg 1140

aaattcagcc gcagcgcaga tgctccagcc tacaagcagg ggcagaacca gctctacaac 1200

gaactcaatc ttggtcggag agaggagtac gacgtgctgg acaagcggag aggacgggac 1260

ccagaaatgg gcgggaagcc gcgcagaaag aatccccaag agggcctgta caacgagctc 1320

caaaaggata agatggcaga agcctatagc gagattggta tgaaaggggа acgcagaaga 1380

ggcaaaggcc acgacggact gtaccaggga ctcagcaccg ccaccaagga cacctatgac 1440

gctcttcaca tgcaggccct gccgcctcgg 1470

<210> 664
<211> 247
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 664
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 Ser Asn Tyr
            20                  25                  30

Gly Ile Thr Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
        35                  40                  45

Gly Trp Ile Ser Ala Tyr Asn Gly Asn Thr Asn Tyr Ala Gln Lys Phe
    50                  55                  60

Gln Gly Arg Val Thr Met Thr Arg Asn Thr Ser Ile Ser Thr Ala Tyr
65                  70                  75                  80

Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
                85                  90                  95

Ala Arg Gly Pro Tyr Tyr Tyr Tyr Met Asp Val Trp Gly Lys Gly Thr
            100                 105                 110

Met Val Thr Val Ser Ser Ala Ser Gly Gly Gly Gly Ser Gly Gly Arg
        115                 120                 125

Ala Ser Gly Gly Gly Gly Ser Glu Ile Val Met Thr Gln Ser Pro Leu
    130                 135                 140

Ser Leu Pro Val Thr Pro Gly Glu Pro Ala Ser Ile Ser Cys Arg Ser
145                 150                 155                 160

Ser Gln Ser Leu Leu Tyr Ser Asn Gly Tyr Asn Tyr Val Asp Trp Tyr
                165                 170                 175

Leu Gln Lys Pro Gly Gln Ser Pro Gln Leu Leu Ile Tyr Leu Gly Ser
            180                 185                 190

Asn Arg Ala Ser Gly Val Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly
        195                 200                 205

Thr Asp Phe Lys Leu Gln Ile Ser Arg Val Glu Ala Glu Asp Val Gly
    210                 215                 220
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Ile Tyr Tyr Cys Met Gln Gly Arg Gln Phe Pro Tyr Ser Phe Gly Gln
225 230 235 240

Gly Thr Lys Val Glu Ile Lys
245

<210> 665
<211> 741
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 665
caagtccaac tggtccagag cggtgcagaa gtgaagaagc ccggagcgag cgtgaaagtg 60

tcctgcaagg cttccgggta caccttctcc aactacggca tcacttgggt gcgccaggcc 120

ccgggacagg gcctggaatg gatggggtgg atttccgcgt acaacggcaa tacgaactac 180

gctcagaagt tccagggtag agtgaccatg actaggaaca cctccatttc caccgcctac 240

atggaactgt cctccctgcg gagcgaggac accgccgtgt actattgcgc ccggggacca 300

tactactact acatggatgt ctgggggaag gggactatgg tcaccgtgtc atccgcctcg 360

ggaggcggcg gatcaggagg acgcgcctct ggtggtggag gatcggagat cgtgatgacc 420

cagagccctc tctccttgcc cgtgactcct ggggagcccg catccatttc atgccggagc 480

tcccagtcac ttctctactc caacggctat aactacgtgg attggtacct ccaaaagccg 540

ggccagagcc cgcagctgct gatctacctg ggctcgaaca gggccagcgg agtgcctgac 600

cggttctccg ggtcgggaag cgggaccgac ttcaagctgc aaatctcgag agtggaggcc 660

gaggacgtgg gaatctacta ctgtatgcag ggccgccagt ttccgtactc gttcggacag 720

ggcaccaaag tggaaatcaa g 741

<210> 666
<211> 118
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic

polypeptide"

<400> 666
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 Ser Asn Tyr
20 25 30

Gly Ile Thr Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45

Gly Trp Ile Ser Ala Tyr Asn Gly Asn Thr Asn Tyr Ala Gln Lys Phe
50 55 60

Gln Gly Arg Val Thr Met Thr Arg Asn Thr Ser Ile Ser Thr Ala Tyr
65 70 75 80

Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Gly Pro Tyr Tyr Tyr Tyr Met Asp Val Trp Gly Lys Gly Thr
100 105 110

Met Val Thr Val Ser Ser
115

<210> 667
<211> 112
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 667
Glu Ile Val Met Thr Gln Ser Pro Leu Ser Leu Pro Val Thr Pro Gly
1 5 10 15

Glu Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Leu Tyr Ser
20 25 30

Asn Gly Tyr Asn Tyr Val 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 Lys Leu Gln Ile
65 70 75 80

Ser Arg Val Glu Ala Glu Asp Val Gly Ile Tyr Tyr Cys Met Gln Gly
85 90 95

Arg Gln Phe Pro Tyr Ser Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
100 105 110

<210> 668
<211> 491
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 668
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val
20 25 30

Lys Lys Pro Gly Ala Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr
35 40 45

Thr Phe Ser Asn Tyr Gly Ile Thr Trp Val Arg Gln Ala Pro Gly Gln
50 55 60

Gly Leu Glu Trp Met Gly Trp Ile Ser Ala Tyr Asn Gly Asn Thr Asn
65 70 75 80

Tyr Ala Gln Lys Phe Gln Gly Arg Val Thr Met Thr Arg Asn Thr Ser
85 90 95

```
Ile Ser Thr Ala Tyr Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr
            100                 105                 110

Ala Val Tyr Tyr Cys Ala Arg Gly Pro Tyr Tyr Tyr Tyr Met Asp Val
        115                 120                 125

Trp Gly Lys Gly Thr Met Val Thr Val Ser Ser Ala Ser Gly Gly Gly
    130                 135                 140

Gly Ser Gly Gly Arg Ala Ser Gly Gly Gly Gly Ser Glu Ile Val Met
145                 150                 155                 160

Thr Gln Ser Pro Leu Ser Leu Pro Val Thr Pro Gly Glu Pro Ala Ser
                165                 170                 175

Ile Ser Cys Arg Ser Ser Gln Ser Leu Leu Tyr Ser Asn Gly Tyr Asn
            180                 185                 190

Tyr Val Asp Trp Tyr Leu Gln Lys Pro Gly Gln Ser Pro Gln Leu Leu
        195                 200                 205

Ile Tyr Leu Gly Ser Asn Arg Ala Ser Gly Val Pro Asp Arg Phe Ser
    210                 215                 220

Gly Ser Gly Ser Gly Thr Asp Phe Lys Leu Gln Ile Ser Arg Val Glu
225                 230                 235                 240

Ala Glu Asp Val Gly Ile Tyr Tyr Cys Met Gln Gly Arg Gln Phe Pro
                245                 250                 255

Tyr Ser Phe Gly Gln Gly Thr Lys Val Glu Ile Lys Thr Thr Thr Pro
            260                 265                 270

Ala Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu
        275                 280                 285

Ser Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His
    290                 295                 300

Thr Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu
```

305 310 315 320

Ala Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr
325 330 335

Cys Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe
340 345 350

Met Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg
355 360 365

Phe Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser
370 375 380

Arg Ser Ala Asp Ala Pro Ala Tyr Lys Gln Gly Gln Asn Gln Leu Tyr
385 390 395 400

Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys
405 410 415

Arg Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn
420 425 430

Pro Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu
435 440 445

Ala Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly
450 455 460

His Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr
465 470 475 480

Asp Ala Leu His Met Gln Ala Leu Pro Pro Arg
485 490

<210> 669
<211> 1473
<212> DNA
<213> Artificial Sequence

<220>
<221> source

<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 669
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

ccccaagtcc aactggtcca gagcggtgca gaagtgaaga agcccggagc gagcgtgaaa 120

gtgtcctgca aggcttccgg gtacaccttc tccaactacg gcatcacttg ggtgcgccag 180

gccccgggac agggcctgga atggatgggg tggatttccg cgtacaacgg caatacgaac 240

tacgctcaga agttccaggg tagagtgacc atgactagga acacctccat ttccaccgcc 300

tacatggaac tgtcctccct gcggagcgag gacaccgccg tgtactattg cgcccgggga 360

ccatactact actacatgga tgtctggggg aaggggacta tggtcaccgt gtcatccgcc 420

tcgggaggcg gcggatcagg aggacgcgcc tctggtggtg gaggatcgga gatcgtgatg 480

acccagagcc ctctctcctt gcccgtgact cctggggagc ccgcatccat ttcatgccgg 540

agctcccagt cacttctcta ctccaacggc tataactacg tggattggta cctccaaaag 600

ccgggccaga gcccgcagct gctgatctac ctgggctcga acagggccag cggagtgcct 660

gaccggttct ccgggtcggg aagcgggacc gacttcaagc tgcaaatctc gagagtggag 720

gccgaggacg tgggaatcta ctactgtatg cagggccgcc agtttccgta ctcgttcgga 780

cagggcacca aagtggaaat caagaccact accccagcac cgaggccacc caccccggct 840

cctaccatcg cctcccagcc tctgtccctg cgtccggagg catgtagacc cgcagctggt 900

ggggccgtgc atacccgggg tcttgacttc gcctgcgata tctacatttg ggcccctctg 960

gctggtactt gcggggtcct gctgctttca ctcgtgatca ctctttactg taagcgcggt 1020

cggaagaagc tgctgtacat ctttaagcaa cccttcatga ggcctgtgca gactactcaa 1080

gaggaggacg gctgttcatg ccggttccca gaggaggagg aaggcggctg cgaactgcgc 1140

gtgaaattca gccgcagcgc agatgctcca gcctacaagc aggggcagaa ccagctctac 1200

aacgaactca atcttggtcg gagagaggag tacgacgtgc tggacaagcg gagaggacgg 1260

gacccagaaa tgggcgggaa gccgcgcaga aagaatcccc aagagggcct gtacaacgag 1320

ctccaaaagg ataagatggc agaagcctat agcgagattg gtatgaaagg ggaacgcaga 1380

agaggcaaag gccacgacgg actgtaccag ggactcagca ccgccaccaa ggacacctat 1440

gacgctcttc acatgcaggc cctgccgcct cgg 1473

<210> 670
<211> 238
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 670
Glu Val Gln Leu Leu Glu Thr Gly Gly Gly Leu Val Gln Pro Gly Gly
1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Val Ser Gly Phe Ala Leu Ser Asn His
20 25 30

Gly Met Ser Trp Val Arg Arg Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45

Ser Gly Ile Val Tyr Ser Gly Ser Thr Tyr Tyr Ala Ala Ser Val Lys
50 55 60

Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Arg Asn Thr Leu Tyr Leu
65 70 75 80

Gln Met Asn Ser Leu Arg Pro Glu Asp Thr Ala Ile Tyr Tyr Cys Ser
85 90 95

Ala His Gly Gly Glu Ser Asp Val Trp Gly Gln Gly Thr Thr Val Thr
100 105 110

Val Ser Ser Ala Ser Gly Gly Gly Gly Ser Gly Gly Arg Ala Ser Gly
115 120 125

Gly Gly Gly Ser Glu Ile Val Leu Thr Gln Ser Pro Ala Thr Leu Ser
130 135 140

Val Ser Pro Gly Glu Ser Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser
145 150 155 160

Val Ser Ser Asn Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro
165 170 175

Arg Leu Leu Ile Tyr Gly Ala Ser Thr Arg Ala Ser Gly Ile Pro Asp
180 185 190

Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser
195 200 205

Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln Gln Tyr Gly
210 215 220

Ser Ser Leu Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
225 230 235

<210> 671
<211> 714
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 671
gaagtgcaat tgctcgaaac tggaggaggt ctggtgcaac ctggaggatc acttcgcctg 60

tcctgcgccg tgtcgggctt tgccctgtcc aaccatggaa tgagctgggt ccgccgcgcg 120

ccggggaagg gcctcgaatg ggtgtccggc atcgtctact ccggctccac ctactacgcc 180

gcgtccgtga agggccggtt cacgatttca cgggacaact cgcggaacac cctgtacctc 240

caaatgaatt cccttcggcc ggaggatact gccatctact actgctccgc ccacggtggc 300

gaatccgacg tctggggcca gggaaccacc gtgaccgtgt ccagcgcgtc cgggggagga 360

ggaagcgggg gtagagcatc gggtggaggc ggatcagaga tcgtgctgac ccagtccccc 420

gccaccttga gcgtgtcacc aggagagtcc gccaccctgt catgccgcgc cagccagtcc 480

gtgtcctcca acctggcttg gtaccagcag aagccggggc aggcccctag actcctgatc 540

tatggggcgt cgacccgggc atctggaatt cccgataggt tcagcggatc gggctcgggc 600

actgacttca ctctgaccat ctcctcgctg caagccgagg acgtggctgt gtactactgt 660

cagcagtacg gaagctccct gactttcggt ggcgggacca aagtcgagat taag 714

<210> 672
<211> 115
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 672
Glu Val Gln Leu Leu Glu Thr Gly Gly Gly Leu Val Gln Pro Gly Gly
1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Val Ser Gly Phe Ala Leu Ser Asn His
20 25 30

Gly Met Ser Trp Val Arg Arg Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45

Ser Gly Ile Val Tyr Ser Gly Ser Thr Tyr Tyr Ala Ala Ser Val Lys
50 55 60

Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Arg Asn Thr Leu Tyr Leu
65 70 75 80

Gln Met Asn Ser Leu Arg Pro Glu Asp Thr Ala Ile Tyr Tyr Cys Ser
85 90 95

Ala His Gly Gly Glu Ser Asp Val Trp Gly Gln Gly Thr Thr Val Thr
100 105 110

Val Ser Ser
115

<210> 673
<211> 106
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 673

```
Glu Ile Val Leu Thr Gln Ser Pro Ala Thr Leu Ser Val Ser Pro Gly
1               5                   10                  15


Glu Ser 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 Ser Gly Ile Pro Asp Arg Phe Ser Gly
    50                  55                  60


Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Ala
65                  70                  75                  80


Glu Asp Val Ala Val Tyr Tyr Cys Gln Gln Tyr Gly Ser Ser Leu Thr
                85                  90                  95


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


<210> 674
<211> 482
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 674
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1               5                   10                  15


His Ala Ala Arg Pro Glu Val Gln Leu Leu Glu Thr Gly Gly Gly Leu
            20                  25                  30


Val Gln Pro Gly Gly Ser Leu Arg Leu Ser Cys Ala Val Ser Gly Phe
        35                  40                  45


Ala Leu Ser Asn His Gly Met Ser Trp Val Arg Arg Ala Pro Gly Lys
    50                  55                  60
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Gly Leu Glu Trp Val Ser Gly Ile Val Tyr Ser Gly Ser Thr Tyr Tyr
65                  70                  75                  80

Ala Ala Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Arg
                85                  90                  95

Asn Thr Leu Tyr Leu Gln Met Asn Ser Leu Arg Pro Glu Asp Thr Ala
            100                 105                 110

Ile Tyr Tyr Cys Ser Ala His Gly Gly Glu Ser Asp Val Trp Gly Gln
        115                 120                 125

Gly Thr Thr Val Thr Val Ser Ser Ala Ser Gly Gly Gly Gly Ser Gly
    130                 135                 140

Gly Arg Ala Ser Gly Gly Gly Gly Ser Glu Ile Val Leu Thr Gln Ser
145                 150                 155                 160

Pro Ala Thr Leu Ser Val Ser Pro Gly Glu Ser Ala Thr Leu Ser Cys
                165                 170                 175

Arg Ala Ser Gln Ser Val Ser Ser Asn Leu Ala Trp Tyr Gln Gln Lys
            180                 185                 190

Pro Gly Gln Ala Pro Arg Leu Leu Ile Tyr Gly Ala Ser Thr Arg Ala
        195                 200                 205

Ser Gly Ile Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe
    210                 215                 220

Thr Leu Thr Ile Ser Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr
225                 230                 235                 240

Cys Gln Gln Tyr Gly Ser Ser Leu Thr Phe Gly Gly Gly Thr Lys Val
                245                 250                 255

Glu Ile Lys Thr Thr Thr Pro Ala Pro Arg Pro Pro Thr Pro Ala Pro
            260                 265                 270

Thr Ile Ala Ser Gln Pro Leu Ser Leu Arg Pro Glu Ala Cys Arg Pro
```

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        275                 280                 285

Ala Ala Gly Gly Ala Val His Thr Arg Gly Leu Asp Phe Ala Cys Asp
    290                 295                 300

Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly Val Leu Leu Leu
305                 310                 315                 320

Ser Leu Val Ile Thr Leu Tyr Cys Lys Arg Gly Arg Lys Lys Leu Leu
                325                 330                 335

Tyr Ile Phe Lys Gln Pro Phe Met Arg Pro Val Gln Thr Thr Gln Glu
            340                 345                 350

Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu Glu Glu Glu Gly Gly Cys
        355                 360                 365

Glu Leu Arg Val Lys Phe Ser Arg Ser Ala Asp Ala Pro Ala Tyr Lys
    370                 375                 380

Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn Leu Gly Arg Arg Glu
385                 390                 395                 400

Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg Asp Pro Glu Met Gly
                405                 410                 415

Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu Tyr Asn Glu Leu
            420                 425                 430

Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile Gly Met Lys Gly
        435                 440                 445

Glu Arg Arg Arg Gly Lys Gly His Asp Gly Leu Tyr Gln Gly Leu Ser
    450                 455                 460

Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu His Met Gln Ala Leu Pro
465                 470                 475                 480

Pro Arg
```

<210> 675
<211> 1446
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 675
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

cccgaagtgc aattgctcga aactggagga ggtctggtgc aacctggagg atcacttcgc 120

ctgtcctgcg ccgtgtcggg ctttgccctg tccaaccatg gaatgagctg ggtccgccgc 180

gcgccgggga agggcctcga atgggtgtcc ggcatcgtct actccggctc cacctactac 240

gccgcgtccg tgaagggccg gttcacgatt tcacgggaca actcgcggaa caccctgtac 300

ctccaaatga attcccttcg gccggaggat actgccatct actactgctc cgcccacggt 360

ggcgaatccg acgtctgggg ccagggaacc accgtgaccg tgtccagcgc gtccggggga 420

ggaggaagcg ggggtagagc atcgggtgga ggcggatcag agatcgtgct gacccagtcc 480

cccgccacct tgagcgtgtc accaggagag tccgccaccc tgtcatgccg cgccagccag 540

tccgtgtcct ccaacctggc ttggtaccag cagaagccgg ggcaggcccc tagactcctg 600

atctatgggg cgtcgacccg ggcatctgga attcccgata ggttcagcgg atcgggctcg 660

ggcactgact tcactctgac catctcctcg ctgcaagccg aggacgtggc tgtgtactac 720

tgtcagcagt acggaagctc cctgactttc ggtggcggga ccaaagtcga gattaagacc 780

actaccccag caccgaggcc acccaccccg gctcctacca tcgcctccca gcctctgtcc 840

ctgcgtccgg aggcatgtag acccgcagct ggtggggccg tgcatacccg gggtcttgac 900

ttcgcctgcg atatctacat ttgggcccct ctggctggta cttgcggggt cctgctgctt 960

tcactcgtga tcactcttta ctgtaagcgc ggtcggaaga agctgctgta catctttaag 1020

caacccttca tgaggcctgt gcagactact caagaggagg acggctgttc atgccggttc 1080

ccagaggagg aggaaggcgg ctgcgaactg cgcgtgaaat tcagccgcag cgcagatgct 1140

ccagcctaca agcaggggca gaaccagctc tacaacgaac tcaatcttgg tcggagagag 1200

gagtacgacg tgctggacaa gcggagagga cgggacccag aaatgggcgg gaagccgcgc 1260

agaaagaatc cccaagaggg cctgtacaac gagctccaaa aggataagat ggcagaagcc 1320

tatagcgaga ttggtatgaa aggggaacgc agaagaggca aaggccacga cggactgtac 1380

cagggactca gcaccgccac caaggacacc tatgacgctc ttcacatgca ggccctgccg 1440

cctcgg 1446

<210> 676
<211> 239
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 676
Glu Val Gln Leu Val Glu Thr Gly Gly Gly Leu Val Gln Pro Gly Gly
1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Val Ser Gly Phe Ala Leu Ser Asn His
20 25 30

Gly Met Ser Trp Val Arg Arg Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45

Ser Gly Ile Val Tyr Ser Gly Ser Thr Tyr Tyr Ala Ala Ser Val Lys
50 55 60

Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Arg Asn Thr Leu Tyr Leu
65 70 75 80

Gln Met Asn Ser Leu Arg Pro Glu Asp Thr Ala Ile Tyr Tyr Cys Ser
85 90 95

Ala His Gly Gly Glu Ser Asp Val Trp Gly Gln Gly Thr Thr Val Thr
100 105 110

Val Ser Ser Ala Ser Gly Gly Gly Gly Ser Gly Gly Arg Ala Ser Gly
115 120 125

Gly Gly Gly Ser Glu Ile Val Met Thr Gln Ser Pro Ala Thr Leu Ser
130 135 140

```
Val Ser Pro Gly Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser
145                 150                 155                 160


Val Ser Ser Lys Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro
                165                 170                 175


Arg Leu Leu Met Tyr Gly Ala Ser Ile Arg Ala Thr Gly Ile Pro Asp
            180                 185                 190


Arg Phe Ser Gly Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser
        195                 200                 205


Ser Leu Glu Pro Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Gly
    210                 215                 220


Ser Ser Ser Trp Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
225                 230                 235


<210> 677
<211> 717
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polynucleotide"

<400> 677
gaagtgcaat tggtggaaac tggaggagga cttgtgcaac ctggaggatc attgagactg       60

agctgcgcag tgtcgggatt cgccctgagc aaccatggaa tgtcctgggt cagaagggcc      120

cctggaaaag gcctcgaatg ggtgtcaggg atcgtgtact ccggttccac ttactacgcc      180

gcctccgtga aggggcgctt cactatctca cgggataact cccgcaatac cctgtacctc      240

caaatgaaca gcctgcggcc ggaggatacc gccatctact actgttccgc ccacggtgga      300

gagtctgacg tctggggcca gggaactacc gtgaccgtgt cctccgcgtc cggcggtgga      360

gggagcggcg gccgcgccag cggcggcgga ggctccgaga tcgtgatgac ccagagcccc      420

gctactctgt cggtgtcgcc cggagaaagg gcgaccctgt cctgccgggc gtcgcagtcc      480

gtgagcagca agctggcttg gtaccagcag aagccgggcc aggcaccacg cctgcttatg      540
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tacggtgcct ccattcgggc caccggaatc ccggaccggt tctcggggtc ggggtccggt 600

accgagttca cactgaccat ttcctcgctc gagcccgagg actttgccgt ctattactgc 660

cagcagtacg gctcctcctc atggacgttc ggccagggga ccaaggtcga aatcaag 717

<210> 678
<211> 115
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 678
Glu Val Gln Leu Val Glu Thr Gly Gly Gly Leu Val Gln Pro Gly Gly
1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Val Ser Gly Phe Ala Leu Ser Asn His
20 25 30

Gly Met Ser Trp Val Arg Arg Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45

Ser Gly Ile Val Tyr Ser Gly Ser Thr Tyr Tyr Ala Ala Ser Val Lys
50 55 60

Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Arg Asn Thr Leu Tyr Leu
65 70 75 80

Gln Met Asn Ser Leu Arg Pro Glu Asp Thr Ala Ile Tyr Tyr Cys Ser
85 90 95

Ala His Gly Gly Glu Ser Asp Val Trp Gly Gln Gly Thr Thr Val Thr
100 105 110

Val Ser Ser
115

<210> 679
<211> 107
<212> PRT

<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 679
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 Lys
20 25 30

Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met
35 40 45

Tyr Gly Ala Ser Ile Arg Ala Thr Gly Ile Pro Asp Arg Phe Ser Gly
50 55 60

Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Glu Pro
65 70 75 80

Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Gly Ser Ser Ser Trp
85 90 95

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

<210> 680
<211> 483
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 680
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Glu Val Gln Leu Val Glu Thr Gly Gly Gly Leu
20 25 30

```
Val Gln Pro Gly Gly Ser Leu Arg Leu Ser Cys Ala Val Ser Gly Phe
        35                  40                  45

Ala Leu Ser Asn His Gly Met Ser Trp Val Arg Arg Ala Pro Gly Lys
    50                  55                  60

Gly Leu Glu Trp Val Ser Gly Ile Val Tyr Ser Gly Ser Thr Tyr Tyr
65                  70                  75                  80

Ala Ala Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Arg
                85                  90                  95

Asn Thr Leu Tyr Leu Gln Met Asn Ser Leu Arg Pro Glu Asp Thr Ala
            100                 105                 110

Ile Tyr Tyr Cys Ser Ala His Gly Gly Glu Ser Asp Val Trp Gly Gln
        115                 120                 125

Gly Thr Thr Val Thr Val Ser Ser Ala Ser Gly Gly Gly Gly Ser Gly
    130                 135                 140

Gly Arg Ala Ser Gly Gly Gly Gly Ser Glu Ile Val Met Thr Gln Ser
145                 150                 155                 160

Pro Ala Thr Leu Ser Val Ser Pro Gly Glu Arg Ala Thr Leu Ser Cys
                165                 170                 175

Arg Ala Ser Gln Ser Val Ser Ser Lys Leu Ala Trp Tyr Gln Gln Lys
            180                 185                 190

Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr Gly Ala Ser Ile Arg Ala
        195                 200                 205

Thr Gly Ile Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Glu Phe
    210                 215                 220

Thr Leu Thr Ile Ser Ser Leu Glu Pro Glu Asp Phe Ala Val Tyr Tyr
225                 230                 235                 240

Cys Gln Gln Tyr Gly Ser Ser Ser Trp Thr Phe Gly Gln Gly Thr Lys
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                245                 250                 255

Val Glu Ile Lys Thr Thr Thr Pro Ala Pro Arg Pro Pro Thr Pro Ala
            260                 265                 270

Pro Thr Ile Ala Ser Gln Pro Leu Ser Leu Arg Pro Glu Ala Cys Arg
        275                 280                 285

Pro Ala Ala Gly Gly Ala Val His Thr Arg Gly Leu Asp Phe Ala Cys
    290                 295                 300

Asp Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly Val Leu Leu
305                 310                 315                 320

Leu Ser Leu Val Ile Thr Leu Tyr Cys Lys Arg Gly Arg Lys Lys Leu
                325                 330                 335

Leu Tyr Ile Phe Lys Gln Pro Phe Met Arg Pro Val Gln Thr Thr Gln
            340                 345                 350

Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu Glu Glu Glu Gly Gly
        355                 360                 365

Cys Glu Leu Arg Val Lys Phe Ser Arg Ser Ala Asp Ala Pro Ala Tyr
    370                 375                 380

Lys Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn Leu Gly Arg Arg
385                 390                 395                 400

Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg Asp Pro Glu Met
                405                 410                 415

Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu Tyr Asn Glu
            420                 425                 430

Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile Gly Met Lys
        435                 440                 445

Gly Glu Arg Arg Arg Gly Lys Gly His Asp Gly Leu Tyr Gln Gly Leu
    450                 455                 460
```

Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu His Met Gln Ala Leu
465 470 475 480

Pro Pro Arg

<210> 681
<211> 1449
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 681
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

cccgaagtgc aattggtgga aactggagga ggacttgtgc aacctggagg atcattgaga 120

ctgagctgcg cagtgtcggg attcgccctg agcaaccatg gaatgtcctg ggtcagaagg 180

gcccctggaa aaggcctcga atgggtgtca gggatcgtgt actccggttc cacttactac 240

gccgcctccg tgaaggggcg cttcactatc tcacgggata actcccgcaa taccctgtac 300

ctccaaatga acagcctgcg gccggaggat accgccatct actactgttc cgcccacggt 360

ggagagtctg acgtctgggg ccagggaact accgtgaccg tgtcctccgc gtccggcggt 420

ggagggagcg gcggccgcgc cagcggcggc ggaggctccg agatcgtgat gacccagagc 480

cccgctactc tgtcggtgtc gcccggagaa agggcgaccc tgtcctgccg ggcgtcgcag 540

tccgtgagca gcaagctggc ttggtaccag cagaagccgg gccaggcacc acgcctgctt 600

atgtacggtg cctccattcg ggccaccgga atcccggacc ggttctcggg gtcggggtcc 660

ggtaccgagt tcacactgac catttcctcg ctcgagcccg aggactttgc cgtctattac 720

tgccagcagt acggctcctc ctcatggacg ttcggccagg ggaccaaggt cgaaatcaag 780

accactaccc cagcaccgag gccacccacc ccggctccta ccatcgcctc ccagcctctg 840

tccctgcgtc cggaggcatg tagacccgca gctggtgggg ccgtgcatac ccggggtctt 900

gacttcgcct gcgatatcta catttgggcc cctctggctg gtacttgcgg ggtcctgctg 960

ctttcactcg tgatcactct ttactgtaag cgcggtcgga agaagctgct gtacatcttt 1020

aagcaaccct tcatgaggcc tgtgcagact actcaagagg aggacggctg ttcatgccgg 1080

ttcccagagg aggaggaagg cggctgcgaa ctgcgcgtga aattcagccg cagcgcagat 1140

gctccagcct acaagcaggg gcagaaccag ctctacaacg aactcaatct tggtcggaga 1200

gaggagtacg acgtgctgga caagcggaga ggacgggacc cagaaatggg cgggaagccg 1260

cgcagaaaga atccccaaga gggcctgtac aacgagctcc aaaaggataa gatggcagaa 1320

gcctatagcg agattggtat gaaaggggaa cgcagaagag gcaaaggcca cgacggactg 1380

taccagggac tcagcaccgc caccaaggac acctatgacg ctcttcacat gcaggccctg 1440

ccgcctcgg 1449

<210> 682
<211> 241
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 682
Glu Val Gln Leu Val Glu Thr Gly Gly Gly Val Val Gln Pro Gly Gly
1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Val Ser Gly Phe Ala Leu Ser Asn His
20 25 30

Gly Met Ser Trp Val Arg Arg Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45

Ser Gly Ile Val Tyr Ser Gly Ser Thr Tyr Tyr Ala Ala Ser Val Lys
50 55 60

Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Arg Asn Thr Leu Tyr Leu
65 70 75 80

Gln Met Asn Ser Leu Arg Pro Glu Asp Thr Ala Ile Tyr Tyr Cys Ser
85 90 95

Ala His Gly Gly Glu Ser Asp Val Trp Gly Gln Gly Thr Thr Val Thr
100 105 110

```
Val Ser Ser Ala Ser Gly Gly Gly Gly Ser Gly Gly Arg Ala Ser Gly
        115                 120                 125


Gly Gly Gly Ser Glu Ile Val Leu Thr Gln Ser Pro Gly Thr Leu Ser
    130                 135                 140


Leu Ser Pro Gly Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser
145                 150                 155                 160


Val Gly Ser Thr Asn Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala
                165                 170                 175


Pro Arg Leu Leu Ile Tyr Asp Ala Ser Asn Arg Ala Thr Gly Ile Pro
            180                 185                 190


Asp Arg Phe Ser Gly Gly Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile
        195                 200                 205


Ser Arg Leu Glu Pro Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr
    210                 215                 220


Gly Ser Ser Pro Pro Trp Thr Phe Gly Gln Gly Thr Lys Val Glu Ile
225                 230                 235                 240


Lys
```

<210> 683
<211> 723
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 683
gaagtgcaat tggtggagac tggaggagga gtggtgcaac ctggaggaag cctgagactg 60

tcatgcgcgg tgtcgggctt cgccctctcc aaccacggaa tgtcctgggt ccgccgggcc 120

cctgggaaag gacttgaatg ggtgtccggc atcgtgtact cgggttccac ctactacgcg 180

gcctcagtga agggccggtt tactattagc cgcgacaact ccagaaacac actgtacctc 240

caaatgaact cgctgcggcc ggaagatacc gctatctact actgctccgc ccatggggga 300

gagtcggacg tctggggaca gggcaccact gtcactgtgt ccagcgcttc cggcggtggt 360

ggaagcgggg gacgggcctc aggaggcggt ggcagcgaga ttgtgctgac ccagtccccc 420

gggaccctga gcctgtcccc gggagaaagg gccaccctct cctgtcgggc atcccagtcc 480

gtggggtcta ctaaccttgc atggtaccag cagaagcccg gccaggcccc tcgcctgctg 540

atctacgacg cgtccaatag agccaccggc atcccggatc gcttcagcgg aggcggatcg 600

ggcaccgact tcaccctcac catttcaagg ctggaaccgg aggacttcgc cgtgtactac 660

tgccagcagt atggttcgtc cccaccctgg acgttcggcc aggggactaa ggtcgagatc 720

aag 723

<210> 684
<211> 115
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 684
Glu Val Gln Leu Val Glu Thr Gly Gly Gly Val Val Gln Pro Gly Gly
1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Val Ser Gly Phe Ala Leu Ser Asn His
20 25 30

Gly Met Ser Trp Val Arg Arg Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45

Ser Gly Ile Val Tyr Ser Gly Ser Thr Tyr Tyr Ala Ala Ser Val Lys
50 55 60

Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Arg Asn Thr Leu Tyr Leu
65 70 75 80

Gln Met Asn Ser Leu Arg Pro Glu Asp Thr Ala Ile Tyr Tyr Cys Ser

85 90 95

Ala His Gly Gly Glu Ser Asp Val Trp Gly Gln Gly Thr Thr Val Thr
100 105 110

Val Ser Ser
115

<210> 685
<211> 109
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 685
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 Gly Ser Thr
20 25 30

Asn Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu
35 40 45

Ile Tyr Asp Ala Ser Asn Arg Ala Thr Gly Ile Pro Asp Arg Phe Ser
50 55 60

Gly Gly 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

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

<210> 686
<211> 485
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 686
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Glu Val Gln Leu Val Glu Thr Gly Gly Gly Val
20 25 30

Val Gln Pro Gly Gly Ser Leu Arg Leu Ser Cys Ala Val Ser Gly Phe
35 40 45

Ala Leu Ser Asn His Gly Met Ser Trp Val Arg Arg Ala Pro Gly Lys
50 55 60

Gly Leu Glu Trp Val Ser Gly Ile Val Tyr Ser Gly Ser Thr Tyr Tyr
65 70 75 80

Ala Ala Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Arg
85 90 95

Asn Thr Leu Tyr Leu Gln Met Asn Ser Leu Arg Pro Glu Asp Thr Ala
100 105 110

Ile Tyr Tyr Cys Ser Ala His Gly Gly Glu Ser Asp Val Trp Gly Gln
115 120 125

Gly Thr Thr Val Thr Val Ser Ser Ala Ser Gly Gly Gly Gly Ser Gly
130 135 140

Gly Arg Ala Ser Gly Gly Gly Gly Ser Glu Ile Val Leu Thr Gln Ser
145 150 155 160

Pro Gly Thr Leu Ser Leu Ser Pro Gly Glu Arg Ala Thr Leu Ser Cys
165 170 175

Arg Ala Ser Gln Ser Val Gly Ser Thr Asn Leu Ala Trp Tyr Gln Gln
180 185 190

```
Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile Tyr Asp Ala Ser Asn Arg
        195                 200                 205

Ala Thr Gly Ile Pro Asp Arg Phe Ser Gly Gly Gly Ser Gly Thr Asp
    210                 215                 220

Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu Asp Phe Ala Val Tyr
225                 230                 235                 240

Tyr Cys Gln Gln Tyr Gly Ser Ser Pro Pro Trp Thr Phe Gly Gln Gly
                245                 250                 255

Thr Lys Val Glu Ile Lys Thr Thr Thr Pro Ala Pro Arg Pro Pro Thr
            260                 265                 270

Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser Leu Arg Pro Glu Ala
        275                 280                 285

Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr Arg Gly Leu Asp Phe
    290                 295                 300

Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly Val
305                 310                 315                 320

Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr Cys Lys Arg Gly Arg Lys
                325                 330                 335

Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met Arg Pro Val Gln Thr
            340                 345                 350

Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu Glu Glu Glu
        355                 360                 365

Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg Ser Ala Asp Ala Pro
    370                 375                 380

Ala Tyr Lys Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn Leu Gly
385                 390                 395                 400

Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg Asp Pro
```

405 410 415

Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu Tyr
420 425 430

Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile Gly
435 440 445

Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His Asp Gly Leu Tyr Gln
450 455 460

Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu His Met Gln
465 470 475 480

Ala Leu Pro Pro Arg
485

<210> 687
<211> 1455
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 687
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

cccgaagtgc aattggtgga gactggagga ggagtggtgc aacctggagg aagcctgaga 120

ctgtcatgcg cggtgtcggg cttcgccctc tccaaccacg gaatgtcctg ggtccgccgg 180

gcccctggga aaggacttga atgggtgtcc ggcatcgtgt actcgggttc cacctactac 240

gcggcctcag tgaagggccg gtttactatt agccgcgaca actccagaaa cacactgtac 300

ctccaaatga actcgctgcg gccggaagat accgctatct actactgctc cgcccatggg 360

ggagagtcgg acgtctgggg acagggcacc actgtcactg tgtccagcgc ttccggcggt 420

ggtggaagcg ggggacgggc ctcaggaggc ggtggcagcg agattgtgct gacccagtcc 480

cccgggaccc tgagcctgtc cccgggagaa agggccaccc tctcctgtcg ggcatcccag 540

tccgtggggt ctactaacct tgcatggtac cagcagaagc ccggccaggc ccctcgcctg 600

ctgatctacg acgcgtccaa tagagccacc ggcatcccgg atcgcttcag cggaggcgga 660

tcgggcaccg acttcaccct caccatttca aggctggaac cggaggactt cgccgtgtac 720

tactgccagc agtatggttc gtccccaccc tggacgttcg gccaggggac taaggtcgag 780

atcaagacca ctaccccagc accgaggcca cccaccccgg ctcctaccat cgcctcccag 840

cctctgtccc tgcgtccgga ggcatgtaga cccgcagctg gtggggccgt gcatacccgg 900

ggtcttgact tcgcctgcga tatctacatt tgggcccctc tggctggtac ttgcggggtc 960

ctgctgcttt cactcgtgat cactctttac tgtaagcgcg gtcggaagaa gctgctgtac 1020

atctttaagc aacccttcat gaggcctgtg cagactactc aagaggagga cggctgttca 1080

tgccggttcc cagaggagga ggaaggcggc tgcgaactgc gcgtgaaatt cagccgcagc 1140

gcagatgctc cagcctacaa gcaggggcag aaccagctct acaacgaact caatcttggt 1200

cggagagagg agtacgacgt gctggacaag cggagaggac gggacccaga aatgggcggg 1260

aagccgcgca gaaagaatcc ccaagagggc ctgtacaacg agctccaaaa ggataagatg 1320

gcagaagcct atagcgagat tggtatgaaa ggggaacgca gaagaggcaa aggccacgac 1380

ggactgtacc agggactcag caccgccacc aaggacacct atgacgctct tcacatgcag 1440

gccctgccgc ctcgg 1455

<210> 688
<211> 239
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 688
Gln Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Lys Pro Gly Gly
1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Asp Tyr
20 25 30

Tyr Met Ser Trp Ile Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45

```
Ser Tyr Ile Ser Ser Ser Gly Ser Thr 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 Ser Gly Asp Gly Met Asp Val Trp Gly Gln Gly Thr Thr
            100                 105                 110

Val Thr Val Ser Ser Ala Ser Gly Gly Gly Gly Ser Gly Gly Arg Ala
        115                 120                 125

Ser Gly Gly Gly Gly Ser Asp Ile Gln Met Thr Gln Ser Pro Ser Ser
    130                 135                 140

Leu Ser Ala Ser Val Gly Asp Arg Val Thr Ile Thr Cys Arg Ala Ser
145                 150                 155                 160

Gln Ser Ile Ser Ser Tyr Leu Asn Trp Tyr Gln Gln Lys Pro Gly Lys
                165                 170                 175

Ala Pro Lys Leu Leu Ile Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val
            180                 185                 190

Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr
        195                 200                 205

Ile Ser Ser Leu Gln Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln
    210                 215                 220

Ser Tyr Thr Leu Ala Phe Gly Gln Gly Thr Lys Val Asp Ile Lys
225                 230                 235
```

<210> 689
<211> 717
<212> DNA
<213> Artificial Sequence

<220>

<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 689
caagtgcaac tcgtggaatc tggtggagga ctcgtgaaac ctggaggatc attgagactg 60

tcatgcgcgg cctcgggatt cacgttctcc gattactaca tgagctggat tcgccaggct 120

ccggggaagg gactggaatg ggtgtcctac atttcctcat ccggctccac catctactac 180

gcggactccg tgaaggggag attcaccatt agccgcgata acgccaagaa cagcctgtac 240

cttcagatga actccctgcg ggctgaagat actgccgtct actactgcgc aagggagagc 300

ggagatggga tggacgtctg gggacagggt accactgtga ccgtgtcgtc ggcctccggc 360

ggagggggtt cgggtggaag ggccagcggc ggcggaggca gcgacatcca gatgacccag 420

tccccctcat cgctgtccgc ctccgtgggc gaccgcgtca ccatcacatg ccgggcctca 480

cagtcgatct cctcctacct caattggtat cagcagaagc ccggaaaggc ccctaagctt 540

ctgatctacg cagcgtcctc cctgcaatcc ggggtcccat ctcggttctc cggctcgggc 600

agcggtaccg acttcactct gaccatctcg agcctgcagc cggaggactt cgccacttac 660

tactgtcagc aaagctacac cctcgcgttt ggccagggca ccaaagtgga catcaag 717

<210> 690
<211> 117
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 690
Gln Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Lys Pro Gly Gly
1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Asp Tyr
20 25 30

Tyr Met Ser Trp Ile Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45

Ser Tyr Ile Ser Ser Ser Gly Ser Thr 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 Ser Gly Asp Gly Met Asp Val Trp Gly Gln Gly Thr Thr
            100                 105                 110

Val Thr Val Ser Ser
        115
```

<210> 691
<211> 105
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 691

```
Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
1               5                   10                  15

Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Ser Ser Tyr
            20                  25                  30

Leu Asn Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
        35                  40                  45

Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
    50                  55                  60

Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
65                  70                  75                  80

Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Ser Tyr Thr Leu Ala Phe
                85                  90                  95
```

Gly Gln Gly Thr Lys Val Asp Ile Lys
100 105

<210> 692
<211> 483
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 692
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Gln Val Gln Leu Val Glu Ser Gly Gly Gly Leu
20 25 30

Val Lys Pro Gly Gly Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe
35 40 45

Thr Phe Ser Asp Tyr Tyr Met Ser Trp Ile Arg Gln Ala Pro Gly Lys
50 55 60

Gly Leu Glu Trp Val Ser Tyr Ile Ser Ser Ser Gly Ser Thr Ile Tyr
65 70 75 80

Tyr Ala Asp Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala
85 90 95

Lys Asn Ser Leu Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr
100 105 110

Ala Val Tyr Tyr Cys Ala Arg Glu Ser Gly Asp Gly Met Asp Val Trp
115 120 125

Gly Gln Gly Thr Thr Val Thr Val Ser Ser Ala Ser Gly Gly Gly Gly
130 135 140

Ser Gly Gly Arg Ala Ser Gly Gly Gly Gly Ser Asp Ile Gln Met Thr
145 150 155 160

```
Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly Asp Arg Val Thr Ile
                165                 170                 175

Thr Cys Arg Ala Ser Gln Ser Ile Ser Ser Tyr Leu Asn Trp Tyr Gln
            180                 185                 190

Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile Tyr Ala Ala Ser Ser
        195                 200                 205

Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr
    210                 215                 220

Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro Glu Asp Phe Ala Thr
225                 230                 235                 240

Tyr Tyr Cys Gln Gln Ser Tyr Thr Leu Ala Phe Gly Gln Gly Thr Lys
                245                 250                 255

Val Asp Ile Lys Thr Thr Thr Pro Ala Pro Arg Pro Pro Thr Pro Ala
            260                 265                 270

Pro Thr Ile Ala Ser Gln Pro Leu Ser Leu Arg Pro Glu Ala Cys Arg
        275                 280                 285

Pro Ala Ala Gly Gly Ala Val His Thr Arg Gly Leu Asp Phe Ala Cys
    290                 295                 300

Asp Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly Val Leu Leu
305                 310                 315                 320

Leu Ser Leu Val Ile Thr Leu Tyr Cys Lys Arg Gly Arg Lys Lys Leu
                325                 330                 335

Leu Tyr Ile Phe Lys Gln Pro Phe Met Arg Pro Val Gln Thr Thr Gln
            340                 345                 350

Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu Glu Glu Glu Gly Gly
        355                 360                 365

Cys Glu Leu Arg Val Lys Phe Ser Arg Ser Ala Asp Ala Pro Ala Tyr
```

370 375 380

Lys Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn Leu Gly Arg Arg
385 390 395 400

Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg Asp Pro Glu Met
405 410 415

Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu Tyr Asn Glu
420 425 430

Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile Gly Met Lys
435 440 445

Gly Glu Arg Arg Arg Gly Lys Gly His Asp Gly Leu Tyr Gln Gly Leu
450 455 460

Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu His Met Gln Ala Leu
465 470 475 480

Pro Pro Arg

<210> 693
<211> 1449
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 693
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

ccccaagtgc aactcgtgga atctggtgga ggactcgtga aacctggagg atcattgaga 120

ctgtcatgcg cggcctcggg attcacgttc tccgattact acatgagctg gattcgccag 180

gctccgggga agggactgga atgggtgtcc tacatttcct catccggctc caccatctac 240

tacgcggact ccgtgaaggg gagattcacc attagccgcg ataacgccaa gaacagcctg 300

taccttcaga tgaactccct gcgggctgaa gatactgccg tctactactg cgcaagggag 360

agcggagatg ggatggacgt ctggggacag ggtaccactg tgaccgtgtc gtcggcctcc 420

ggcggagggg gttcgggtgg aagggccagc ggcggcggag gcagcgacat ccagatgacc 480

cagtccccct catcgctgtc cgcctccgtg ggcgaccgcg tcaccatcac atgccgggcc 540

tcacagtcga tctcctccta cctcaattgg tatcagcaga agcccggaaa ggcccctaag 600

cttctgatct acgcagcgtc ctccctgcaa tccggggtcc catctcggtt ctccggctcg 660

ggcagcggta ccgacttcac tctgaccatc tcgagcctgc agccggagga cttcgccact 720

tactactgtc agcaaagcta caccctcgcg tttggccagg gcaccaaagt ggacatcaag 780

accactaccc cagcaccgag gccacccacc ccggctccta ccatcgcctc ccagcctctg 840

tccctgcgtc cggaggcatg tagacccgca gctggtgggg ccgtgcatac ccggggtctt 900

gacttcgcct gcgatatcta catttgggcc cctctggctg gtacttgcgg ggtcctgctg 960

ctttcactcg tgatcactct ttactgtaag cgcggtcgga agaagctgct gtacatcttt 1020

aagcaaccct tcatgaggcc tgtgcagact actcaagagg aggacggctg ttcatgccgg 1080

ttcccagagg aggaggaagg cggctgcgaa ctgcgcgtga aattcagccg cagcgcagat 1140

gctccagcct acaagcaggg gcagaaccag ctctacaacg aactcaatct tggtcggaga 1200

gaggagtacg acgtgctgga caagcggaga ggacgggacc cagaaatggg cgggaagccg 1260

cgcagaaaga atccccaaga gggcctgtac aacgagctcc aaaaggataa gatggcagaa 1320

gcctatagcg agattggtat gaaaggggaa cgcagaagag gcaaaggcca cgacggactg 1380

taccagggac tcagcaccgc caccaaggac acctatgacg ctcttcacat gcaggccctg 1440

ccgcctcgg 1449

<210> 694
<211> 246
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 694
Gln Val Gln Leu Val Gln Ser Gly Gly Gly Leu Val Lys Pro Gly Gly
1 5 10 15

```
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Asp Tyr
            20                  25                  30

Tyr Met Ser Trp Ile Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35                  40                  45

Ser Tyr Ile Ser Ser Ser Gly Asn Thr 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 Ser Thr Met Val Arg Glu Asp Tyr Trp Gly Gln Gly Thr Leu
            100                 105                 110

Val Thr Val Ser Ser Ala Ser Gly Gly Gly Gly Ser Gly Gly Arg Ala
        115                 120                 125

Ser Gly Gly Gly Gly Ser Asp Ile Val Leu Thr Gln Ser Pro Leu Ser
    130                 135                 140

Leu Pro Val Thr Leu Gly Gln Pro Ala Ser Ile Ser Cys Lys Ser Ser
145                 150                 155                 160

Glu Ser Leu Val His Asn Ser Gly Lys Thr Tyr Leu Asn Trp Phe His
                165                 170                 175

Gln Arg Pro Gly Gln Ser Pro Arg Arg Leu Ile Tyr Glu Val Ser Asn
            180                 185                 190

Arg Asp Ser Gly Val Pro Asp Arg Phe Thr Gly Ser Gly Ser Gly Thr
        195                 200                 205

Asp Phe Thr Leu Lys Ile Ser Arg Val Glu Ala Glu Asp Val Gly Val
    210                 215                 220

Tyr Tyr Cys Met Gln Gly Thr His Trp Pro Gly Thr Phe Gly Gln Gly
225                 230                 235                 240
```

Thr Lys Leu Glu Ile Lys
245

<210> 695
<211> 738
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 695
caagtgcaac tggtgcaaag cggaggagga ttggtcaaac ccggaggaag cctgagactg 60

tcatgcgcgg cctctggatt caccttctcc gattactaca tgtcatggat cagacaggcc 120

ccggggaagg gcctcgaatg ggtgtcctac atctcgtcct ccgggaacac catctactac 180

gccgacagcg tgaagggccg ctttaccatt tcccgcgaca acgcaaagaa ctcgctgtac 240

cttcagatga attccctgcg ggctgaagat accgcggtgt actattgcgc ccggtccact 300

atggtccggg aggactactg gggacagggc acactcgtga ccgtgtccag cgcgagcggg 360

ggtggaggca gcggtggacg cgcctccggc ggcggcggtt cagacatcgt gctgactcag 420

tcgcccctgt cgctgccggt caccctgggc caaccggcct caattagctg caagtcctcg 480

gagagcctgg tgcacaactc aggaaagact tacctgaact ggttccatca gcggcctgga 540

cagtccccac ggaggctcat ctatgaagtg tccaacaggg attcgggggt gcccgaccgc 600

ttcactggct ccgggtccgg caccgacttc accttgaaaa tctccagagt ggaagccgag 660

gacgtgggcg tgtactactg tatgcagggt acccactggc ctggaacctt tggacaagga 720

actaagctcg agattaag 738

<210> 696
<211> 117
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 696
Gln Val Gln Leu Val Gln Ser Gly Gly Gly Leu Val Lys Pro Gly Gly
1   5   10   15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Asp Tyr
            20   25   30

Tyr Met Ser Trp Ile Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35   40   45

Ser Tyr Ile Ser Ser Ser Gly Asn Thr 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 Ser Thr Met Val Arg Glu Asp Tyr Trp Gly Gln Gly Thr Leu
            100   105   110

Val Thr Val Ser Ser
        115

<210> 697
<211> 112
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 697
Asp Ile Val Leu Thr Gln Ser Pro Leu Ser Leu Pro Val Thr Leu Gly
1   5   10   15

Gln Pro Ala Ser Ile Ser Cys Lys Ser Ser Glu Ser Leu Val His Asn
            20   25   30

Ser Gly Lys Thr Tyr Leu Asn Trp Phe His Gln Arg Pro Gly Gln Ser
        35   40   45

Pro Arg Arg Leu Ile Tyr Glu Val Ser Asn Arg Asp Ser Gly Val Pro
    50   55   60

Asp Arg Phe Thr 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 Gly Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
            100   105   110

<210> 698
<211> 490
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 698
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1   5   10   15

His Ala Ala Arg Pro Gln Val Gln Leu Val Gln Ser Gly Gly Gly Leu
            20   25   30

Val Lys Pro Gly Gly Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe
        35   40   45

Thr Phe Ser Asp Tyr Tyr Met Ser Trp Ile Arg Gln Ala Pro Gly Lys
    50   55   60

Gly Leu Glu Trp Val Ser Tyr Ile Ser Ser Ser Gly Asn Thr Ile Tyr
65   70   75   80

Tyr Ala Asp Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala
                85   90   95

Lys Asn Ser Leu Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr

```
            100                 105                 110

Ala Val Tyr Tyr Cys Ala Arg Ser Thr Met Val Arg Glu Asp Tyr Trp
        115                 120                 125

Gly Gln Gly Thr Leu Val Thr Val Ser Ser Ala Ser Gly Gly Gly Gly
    130                 135                 140

Ser Gly Gly Arg Ala Ser Gly Gly Gly Gly Ser Asp Ile Val Leu Thr
145                 150                 155                 160

Gln Ser Pro Leu Ser Leu Pro Val Thr Leu Gly Gln Pro Ala Ser Ile
                165                 170                 175

Ser Cys Lys Ser Ser Glu Ser Leu Val His Asn Ser Gly Lys Thr Tyr
            180                 185                 190

Leu Asn Trp Phe His Gln Arg Pro Gly Gln Ser Pro Arg Arg Leu Ile
        195                 200                 205

Tyr Glu Val Ser Asn Arg Asp Ser Gly Val Pro Asp Arg Phe Thr Gly
    210                 215                 220

Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile Ser Arg Val Glu Ala
225                 230                 235                 240

Glu Asp Val Gly Val Tyr Tyr Cys Met Gln Gly Thr His Trp Pro Gly
                245                 250                 255

Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys Thr Thr Thr Pro Ala
            260                 265                 270

Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser
        275                 280                 285

Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr
    290                 295                 300

Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala
305                 310                 315                 320
```

Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr Cys
325 330 335

Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met
340 345 350

Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe
355 360 365

Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg
370 375 380

Ser Ala Asp Ala Pro Ala Tyr Lys Gln Gly Gln Asn Gln Leu Tyr Asn
385 390 395 400

Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg
405 410 415

Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro
420 425 430

Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala
435 440 445

Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His
450 455 460

Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp
465 470 475 480

Ala Leu His Met Gln Ala Leu Pro Pro Arg
485 490

<210> 699
<211> 1470
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 699
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

ccccaagtgc aactggtgca aagcggagga ggattggtca aacccggagg aagcctgaga 120

ctgtcatgcg cggcctctgg attcaccttc tccgattact acatgtcatg gatcagacag 180

gccccgggga agggcctcga atgggtgtcc tacatctcgt cctccgggaa caccatctac 240

tacgccgaca gcgtgaaggg ccgctttacc atttcccgcg acaacgcaaa gaactcgctg 300

taccttcaga tgaattccct gcgggctgaa gataccgcgg tgtactattg cgcccggtcc 360

actatggtcc gggaggacta ctggggacag ggcacactcg tgaccgtgtc cagcgcgagc 420

gggggtggag gcagcggtgg acgcgcctcc ggcggcggcg gttcagacat cgtgctgact 480

cagtcgcccc tgtcgctgcc ggtcaccctg ggccaaccgg cctcaattag ctgcaagtcc 540

tcggagagcc tggtgcacaa ctcaggaaag acttacctga actggttcca tcagcggcct 600

ggacagtccc cacggaggct catctatgaa gtgtccaaca gggattcggg ggtgcccgac 660

cgcttcactg gctccgggtc cggcaccgac ttcaccttga aaatctccag agtggaagcc 720

gaggacgtgg gcgtgtacta ctgtatgcag ggtacccact ggcctggaac ctttggacaa 780

ggaactaagc tcgagattaa gaccactacc ccagcaccga ggccacccac cccggctcct 840

accatcgcct cccagcctct gtccctgcgt ccggaggcat gtagacccgc agctggtggg 900

gccgtgcata cccggggtct tgacttcgcc tgcgatatct acatttgggc ccctctggct 960

ggtacttgcg gggtcctgct gctttcactc gtgatcactc tttactgtaa gcgcggtcgg 1020

aagaagctgc tgtacatctt taagcaaccc ttcatgaggc ctgtgcagac tactcaagag 1080

gaggacggct gttcatgccg gttcccagag gaggaggaag gcggctgcga actgcgcgtg 1140

aaattcagcc gcagcgcaga tgctccagcc tacaagcagg ggcagaacca gctctacaac 1200

gaactcaatc ttggtcggag agaggagtac gacgtgctgg acaagcggag aggacgggac 1260

ccagaaatgg gcgggaagcc gcgcagaaag aatccccaag agggcctgta caacgagctc 1320

caaaaggata agatggcaga agcctatagc gagattggta tgaaaggggа acgcagaaga 1380

ggcaaaggcc acgacggact gtaccaggga ctcagcaccg ccaccaagga cacctatgac 1440

gctcttcaca tgcaggccct gccgcctcgg 1470

<210> 700

<211> 239
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 700
Gln Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Val Ser Gly Phe Ala Leu Ser Asn His
20 25 30

Gly Met Ser Trp Val Arg Arg Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45

Ser Gly Ile Val Tyr Ser Gly Ser Thr Tyr Tyr Ala Ala Ser Val Lys
50 55 60

Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Arg Asn Thr Leu Tyr Leu
65 70 75 80

Gln Met Asn Ser Leu Arg Pro Glu Asp Thr Ala Ile Tyr Tyr Cys Ser
85 90 95

Ala His Gly Gly Glu Ser Asp Val Trp Gly Gln Gly Thr Thr Val Thr
100 105 110

Val Ser Ser Ala Ser Gly Gly Gly Gly Ser Gly Gly Arg Ala Ser Gly
115 120 125

Gly Gly Gly Ser Asp Ile Arg Leu Thr Gln Ser Pro Ser Pro Leu Ser
130 135 140

Ala Ser Val Gly Asp Arg Val Thr Ile Thr Cys Gln Ala Ser Glu Asp
145 150 155 160

Ile Asn Lys Phe Leu Asn Trp Tyr His Gln Thr Pro Gly Lys Ala Pro
165 170 175

Lys Leu Leu Ile Tyr Asp Ala Ser Thr Leu Gln Thr Gly Val Pro Ser
180 185 190

Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Asn
195 200 205

Ser Leu Gln Pro Glu Asp Ile Gly Thr Tyr Tyr Cys Gln Gln Tyr Glu
210 215 220

Ser Leu Pro Leu Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
225 230 235

<210> 701
<211> 717
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 701
caagtgcaac tcgtggaatc tggtggagga ctcgtgcaac ccggtggaag ccttaggctg 60

tcgtgcgccg tcagcgggtt tgctctgagc aaccatggaa tgtcctgggt ccgccgggca 120

ccgggaaaag ggctggaatg ggtgtccggc atcgtgtaca gcgggtcaac ctattacgcc 180

gcgtccgtga agggcagatt cactatctca agagacaaca gccggaacac cctgtacttg 240

caaatgaatt ccctgcgccc cgaggacacc gccatctact actgctccgc ccacggagga 300

gagtcggacg tgtggggcca gggaacgact gtgactgtgt ccagcgcatc aggaggggt 360

ggttcgggcg gccgggcctc ggggggagga ggttccgaca ttcggctgac ccagtccccg 420

tccccactgt cggcctccgt cggcgaccgc gtgaccatca cttgtcaggc gtccgaggac 480

attaacaagt tcctgaactg gtaccaccag acccctggaa aggcccccaa gctgctgatc 540

tacgatgcct cgacccttca aactggagtg cctagccggt tctccgggtc cggctccggc 600

actgatttca ctctgaccat caactcattg cagccggaag atatcgggac ctactattgc 660

cagcagtacg aatccctccc gctcacattc ggcgggggaa ccaaggtcga gattaag 717

<210> 702
<211> 115

<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 702
Gln Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Val Ser Gly Phe Ala Leu Ser Asn His
20 25 30

Gly Met Ser Trp Val Arg Arg Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45

Ser Gly Ile Val Tyr Ser Gly Ser Thr Tyr Tyr Ala Ala Ser Val Lys
50 55 60

Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Arg Asn Thr Leu Tyr Leu
65 70 75 80

Gln Met Asn Ser Leu Arg Pro Glu Asp Thr Ala Ile Tyr Tyr Cys Ser
85 90 95

Ala His Gly Gly Glu Ser Asp Val Trp Gly Gln Gly Thr Thr Val Thr
100 105 110

Val Ser Ser
115

<210> 703
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 703
Asp Ile Arg Leu Thr Gln Ser Pro Ser Pro Leu Ser Ala Ser Val Gly
1 5 10 15

```
Asp Arg Val Thr Ile Thr Cys Gln Ala Ser Glu Asp Ile Asn Lys Phe
            20                  25                  30

Leu Asn Trp Tyr His Gln Thr Pro Gly Lys Ala Pro Lys Leu Leu Ile
        35                  40                  45

Tyr Asp Ala Ser Thr Leu Gln Thr Gly Val Pro Ser Arg Phe Ser Gly
    50                  55                  60

Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Asn Ser Leu Gln Pro
65                  70                  75                  80

Glu Asp Ile Gly Thr Tyr Tyr Cys Gln Gln Tyr Glu Ser Leu Pro Leu
                85                  90                  95

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

<210> 704
<211> 483
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 704

```
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1               5                   10                  15

His Ala Ala Arg Pro Gln Val Gln Leu Val Glu Ser Gly Gly Gly Leu
            20                  25                  30

Val Gln Pro Gly Gly Ser Leu Arg Leu Ser Cys Ala Val Ser Gly Phe
        35                  40                  45

Ala Leu Ser Asn His Gly Met Ser Trp Val Arg Arg Ala Pro Gly Lys
    50                  55                  60

Gly Leu Glu Trp Val Ser Gly Ile Val Tyr Ser Gly Ser Thr Tyr Tyr
```

```
65                  70                  75                  80

Ala Ala Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Arg
                85                  90                  95

Asn Thr Leu Tyr Leu Gln Met Asn Ser Leu Arg Pro Glu Asp Thr Ala
            100                 105                 110

Ile Tyr Tyr Cys Ser Ala His Gly Gly Glu Ser Asp Val Trp Gly Gln
        115                 120                 125

Gly Thr Thr Val Thr Val Ser Ser Ala Ser Gly Gly Gly Gly Ser Gly
    130                 135                 140

Gly Arg Ala Ser Gly Gly Gly Gly Ser Asp Ile Arg Leu Thr Gln Ser
145                 150                 155                 160

Pro Ser Pro Leu Ser Ala Ser Val Gly Asp Arg Val Thr Ile Thr Cys
                165                 170                 175

Gln Ala Ser Glu Asp Ile Asn Lys Phe Leu Asn Trp Tyr His Gln Thr
            180                 185                 190

Pro Gly Lys Ala Pro Lys Leu Leu Ile Tyr Asp Ala Ser Thr Leu Gln
        195                 200                 205

Thr Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe
    210                 215                 220

Thr Leu Thr Ile Asn Ser Leu Gln Pro Glu Asp Ile Gly Thr Tyr Tyr
225                 230                 235                 240

Cys Gln Gln Tyr Glu Ser Leu Pro Leu Thr Phe Gly Gly Gly Thr Lys
                245                 250                 255

Val Glu Ile Lys Thr Thr Thr Pro Ala Pro Arg Pro Pro Thr Pro Ala
            260                 265                 270

Pro Thr Ile Ala Ser Gln Pro Leu Ser Leu Arg Pro Glu Ala Cys Arg
        275                 280                 285
```

```
Pro Ala Ala Gly Gly Ala Val His Thr Arg Gly Leu Asp Phe Ala Cys
    290                 295                 300

Asp Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly Val Leu Leu
305                 310                 315                 320

Leu Ser Leu Val Ile Thr Leu Tyr Cys Lys Arg Gly Arg Lys Lys Leu
                325                 330                 335

Leu Tyr Ile Phe Lys Gln Pro Phe Met Arg Pro Val Gln Thr Thr Gln
            340                 345                 350

Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu Glu Glu Glu Gly Gly
        355                 360                 365

Cys Glu Leu Arg Val Lys Phe Ser Arg Ser Ala Asp Ala Pro Ala Tyr
    370                 375                 380

Lys Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn Leu Gly Arg Arg
385                 390                 395                 400

Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg Asp Pro Glu Met
                405                 410                 415

Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu Tyr Asn Glu
            420                 425                 430

Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile Gly Met Lys
        435                 440                 445

Gly Glu Arg Arg Arg Gly Lys Gly His Asp Gly Leu Tyr Gln Gly Leu
    450                 455                 460

Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu His Met Gln Ala Leu
465                 470                 475                 480

Pro Pro Arg
```

<210> 705

<211> 1449
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 705
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

ccccaagtgc aactcgtgga atctggtgga ggactcgtgc aacccggtgg aagccttagg 120

ctgtcgtgcg ccgtcagcgg gtttgctctg agcaaccatg gaatgtcctg ggtccgccgg 180

gcaccgggaa aagggctgga atgggtgtcc ggcatcgtgt acagcgggtc aacctattac 240

gccgcgtccg tgaagggcag attcactatc tcaagagaca acagccggaa caccctgtac 300

ttgcaaatga attccctgcg ccccgaggac accgccatct actactgctc cgcccacgga 360

ggagagtcgg acgtgtgggg ccagggaacg actgtgactg tgtccagcgc atcaggaggg 420

ggtggttcgg gcggccgggc ctcgggggga ggaggttccg acattcggct gacccagtcc 480

ccgtccccac tgtcggcctc cgtcggcgac cgcgtgacca tcacttgtca ggcgtccgag 540

gacattaaca agttcctgaa ctggtaccac cagacccctg gaaaggcccc caagctgctg 600

atctacgatg cctcgaccct tcaaactgga gtgcctagcc ggttctccgg gtccggctcc 660

ggcactgatt tcactctgac catcaactca ttgcagccgg aagatatcgg gacctactat 720

tgccagcagt acgaatccct cccgctcaca ttcggcgggg gaaccaaggt cgagattaag 780

accactaccc cagcaccgag gccacccacc ccggctccta ccatcgcctc ccagcctctg 840

tccctgcgtc cggaggcatg tagacccgca gctggtgggg ccgtgcatac ccggggtctt 900

gacttcgcct gcgatatcta catttgggcc cctctggctg gtacttgcgg ggtcctgctg 960

ctttcactcg tgatcactct ttactgtaag cgcggtcgga agaagctgct gtacatcttt 1020

aagcaaccct tcatgaggcc tgtgcagact actcaagagg aggacggctg ttcatgccgg 1080

ttcccagagg aggaggaagg cggctgcgaa ctgcgcgtga aattcagccg cagcgcagat 1140

gctccagcct acaagcaggg gcagaaccag ctctacaacg aactcaatct tggtcggaga 1200

gaggagtacg acgtgctgga caagcggaga ggacgggacc cagaaatggg cgggaagccg 1260

cgcagaaaga atccccaaga gggcctgtac aacgagctcc aaaaggataa gatggcagaa 1320

gcctatagcg agattggtat gaaaggggaa cgcagaagag gcaaaggcca cgacggactg 1380

taccagggac tcagcaccgc caccaaggac acctatgacg ctcttcacat gcaggccctg 1440

ccgcctcgg 1449

<210> 706
<211> 240
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 706
Glu Val Gln Leu Val Glu Thr Gly Gly Gly Leu Val Gln Pro Gly Gly
1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Val Ser Gly Phe Ala Leu Ser Asn His
20 25 30

Gly Met Ser Trp Val Arg Arg Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45

Ser Gly Ile Val Tyr Ser Gly Ser Thr Tyr Tyr Ala Ala Ser Val Lys
50 55 60

Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Arg Asn Thr Leu Tyr Leu
65 70 75 80

Gln Met Asn Ser Leu Arg Pro Glu Asp Thr Ala Ile Tyr Tyr Cys Ser
85 90 95

Ala His Gly Gly Glu Ser Asp Val Trp Gly Gln Gly Thr Thr Val Thr
100 105 110

Val Ser Ser Ala Ser Gly Gly Gly Gly Ser Gly Gly Arg Ala Ser Gly
115 120 125

Gly Gly Gly Ser Glu Thr Thr Leu Thr Gln Ser Pro Ala Thr Leu Ser
130 135 140

```
Val Ser Pro Gly Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser
145                 150                 155                 160


Val Gly Ser Asn Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Gly Pro
                165                 170                 175


Arg Leu Leu Ile Tyr Gly Ala Ser Thr Arg Ala Thr Gly Ile Pro Ala
            180                 185                 190


Arg Phe Ser Gly Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser
        195                 200                 205


Ser Leu Gln Pro Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Asn
    210                 215                 220


Asp Trp Leu Pro Val Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
225                 230                 235                 240


<210> 707
<211> 720
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polynucleotide"

<400> 707
gaagtgcaat tggtggaaac tggaggagga cttgtgcaac ctggaggatc attgcggctc       60

tcatgcgctg tctccggctt cgccctgtca aatcacggga tgtcgtgggt cagacgggcc      120

ccgggaaagg gtctggaatg ggtgtcgggg attgtgtaca gcggctccac ctactacgcc      180

gcttcggtca agggccgctt cactatttca cgggacaaca gccgcaacac cctctatctg      240

caaatgaact ctctccgccc ggaggatacc gccatctact actgctccgc acacggcggc      300

gaatccgacg tgtggggaca gggaaccact gtcaccgtgt cgtccgcatc cggtggcgga      360

ggatcgggtg gccgggcctc cgggggcggc ggcagcgaga ctaccctgac ccagtcccct      420

gccactctgt ccgtgagccc gggagagaga gccaccctta gctgccgggc cagccagagc      480

gtgggctcca acctggcctg gtaccagcag aagccaggac agggtcccag gctgctgatc      540

tacggagcct ccactcgcgc gaccggcatc cccgcgaggt tctccgggtc gggttccggg      600
```

accgagttca ccctgaccat ctcctccctc caaccggagg acttcgcggt gtactactgt 660

cagcagtaca acgattggct gcccgtgaca tttggacagg ggacgaaggt ggaaatcaaa 720

<210> 708
<211> 115
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 708
Glu Val Gln Leu Val Glu Thr Gly Gly Gly Leu Val Gln Pro Gly Gly
1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Val Ser Gly Phe Ala Leu Ser Asn His
20 25 30

Gly Met Ser Trp Val Arg Arg Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45

Ser Gly Ile Val Tyr Ser Gly Ser Thr Tyr Tyr Ala Ala Ser Val Lys
50 55 60

Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Arg Asn Thr Leu Tyr Leu
65 70 75 80

Gln Met Asn Ser Leu Arg Pro Glu Asp Thr Ala Ile Tyr Tyr Cys Ser
85 90 95

Ala His Gly Gly Glu Ser Asp Val Trp Gly Gln Gly Thr Thr Val Thr
100 105 110

Val Ser Ser
115

<210> 709
<211> 108
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 709
Glu Thr Thr Leu Thr Gln Ser Pro Ala Thr Leu Ser Val Ser Pro Gly
1 5 10 15

Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Gly Ser Asn
20 25 30

Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Gly 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 Pro
65 70 75 80

Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Asn Asp Trp Leu Pro
85 90 95

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

<210> 710
<211> 484
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 710
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Glu Val Gln Leu Val Glu Thr Gly Gly Gly Leu
20 25 30

Val Gln Pro Gly Gly Ser Leu Arg Leu Ser Cys Ala Val Ser Gly Phe

```
        35                  40                  45

Ala Leu Ser Asn His Gly Met Ser Trp Val Arg Arg Ala Pro Gly Lys
    50                  55                  60

Gly Leu Glu Trp Val Ser Gly Ile Val Tyr Ser Gly Ser Thr Tyr Tyr
65                  70                  75                  80

Ala Ala Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Arg
                85                  90                  95

Asn Thr Leu Tyr Leu Gln Met Asn Ser Leu Arg Pro Glu Asp Thr Ala
            100                 105                 110

Ile Tyr Tyr Cys Ser Ala His Gly Gly Glu Ser Asp Val Trp Gly Gln
        115                 120                 125

Gly Thr Thr Val Thr Val Ser Ser Ala Ser Gly Gly Gly Gly Ser Gly
    130                 135                 140

Gly Arg Ala Ser Gly Gly Gly Gly Ser Glu Thr Thr Leu Thr Gln Ser
145                 150                 155                 160

Pro Ala Thr Leu Ser Val Ser Pro Gly Glu Arg Ala Thr Leu Ser Cys
                165                 170                 175

Arg Ala Ser Gln Ser Val Gly Ser Asn Leu Ala Trp Tyr Gln Gln Lys
            180                 185                 190

Pro Gly Gln Gly Pro Arg Leu Leu Ile Tyr Gly Ala Ser Thr Arg Ala
        195                 200                 205

Thr Gly Ile Pro Ala Arg Phe Ser Gly Ser Gly Ser Gly Thr Glu Phe
    210                 215                 220

Thr Leu Thr Ile Ser Ser Leu Gln Pro Glu Asp Phe Ala Val Tyr Tyr
225                 230                 235                 240

Cys Gln Gln Tyr Asn Asp Trp Leu Pro Val Thr Phe Gly Gln Gly Thr
                245                 250                 255
```

```
Lys Val Glu Ile Lys Thr Thr Thr Pro Ala Pro Arg Pro Pro Thr Pro
            260                 265                 270

Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser Leu Arg Pro Glu Ala Cys
        275                 280                 285

Arg Pro Ala Ala Gly Gly Ala Val His Thr Arg Gly Leu Asp Phe Ala
    290                 295                 300

Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly Val Leu
305                 310                 315                 320

Leu Leu Ser Leu Val Ile Thr Leu Tyr Cys Lys Arg Gly Arg Lys Lys
                325                 330                 335

Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met Arg Pro Val Gln Thr Thr
            340                 345                 350

Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu Glu Glu Glu Gly
        355                 360                 365

Gly Cys Glu Leu Arg Val Lys Phe Ser Arg Ser Ala Asp Ala Pro Ala
    370                 375                 380

Tyr Lys Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn Leu Gly Arg
385                 390                 395                 400

Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg Asp Pro Glu
                405                 410                 415

Met Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu Tyr Asn
            420                 425                 430

Glu Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile Gly Met
        435                 440                 445

Lys Gly Glu Arg Arg Arg Gly Lys Gly His Asp Gly Leu Tyr Gln Gly
    450                 455                 460

Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu His Met Gln Ala
```

465 470 475 480

Leu Pro Pro Arg

<210> 711
<211> 1452
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 711
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

cccgaagtgc aattggtgga aactggagga ggacttgtgc aacctggagg atcattgcgg 120

ctctcatgcg ctgtctccgg cttcgccctg tcaaatcacg ggatgtcgtg ggtcagacgg 180

gccccgggaa agggtctgga atgggtgtcg gggattgtgt acagcggctc cacctactac 240

gccgcttcgg tcaagggccg cttcactatt tcacgggaca acagccgcaa caccctctat 300

ctgcaaatga actctctccg cccggaggat accgccatct actactgctc cgcacacggc 360

ggcgaatccg acgtgtgggg acagggaacc actgtcaccg tgtcgtccgc atccggtggc 420

ggaggatcgg gtggccgggc ctccgggggc ggcggcagcg agactaccct gacccagtcc 480

cctgccactc tgtccgtgag cccgggagag agagccaccc ttagctgccg ggccagccag 540

agcgtgggct ccaacctggc ctggtaccag cagaagccag gacagggtcc caggctgctg 600

atctacggag cctccactcg cgcgaccggc atccccgcga ggttctccgg gtcgggttcc 660

gggaccgagt tcaccctgac catctcctcc ctccaaccgg aggacttcgc ggtgtactac 720

tgtcagcagt acaacgattg gctgcccgtg acatttggac aggggacgaa ggtggaaatc 780

aaaaccacta ccccagcacc gaggccaccc accccggctc ctaccatcgc ctcccagcct 840

ctgtccctgc gtccggaggc atgtagaccc gcagctggtg gggccgtgca tacccggggt 900

cttgacttcg cctgcgatat ctacatttgg gcccctctgg ctggtacttg cggggtcctg 960

ctgctttcac tcgtgatcac tctttactgt aagcgcggtc ggaagaagct gctgtacatc 1020

tttaagcaac ccttcatgag gcctgtgcag actactcaag aggaggacgg ctgttcatgc 1080

cggttcccag aggaggagga aggcggctgc gaactgcgcg tgaaattcag ccgcagcgca 1140

gatgctccag cctacaagca ggggcagaac cagctctaca acgaactcaa tcttggtcgg 1200

agagaggagt acgacgtgct ggacaagcgg agaggacggg acccagaaat gggcgggaag 1260

ccgcgcagaa agaatcccca agagggcctg tacaacgagc tccaaaagga taagatggca 1320

gaagcctata gcgagattgg tatgaaaggg gaacgcagaa gaggcaaagg ccacgacgga 1380

ctgtaccagg gactcagcac cgccaccaag gacacctatg acgctcttca catgcaggcc 1440

ctgccgcctc gg 1452

<210> 712
<211> 241
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 712
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 Ala Leu Ser Asn His
20 25 30

Gly Met Ser Trp Val Arg Arg Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45

Ser Gly Ile Val Tyr Ser Gly Ser Thr Tyr Tyr Ala Ala Ser Val Lys
50 55 60

Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Arg Asn Thr Leu Tyr Leu
65 70 75 80

Gln Met Asn Ser Leu Arg Pro Glu Asp Thr Ala Ile Tyr Tyr Cys Ser
85 90 95

Ala His Gly Gly Glu Ser Asp Val Trp Gly Gln Gly Thr Thr Val Thr
100 105 110

Val Ser Ser Ala Ser Gly Gly Gly Gly Ser Gly Gly Arg Ala Ser Gly
        115   120   125

Gly Gly Gly Ser Glu Ile Val Leu Thr Gln Ser Pro Gly Thr Leu Ser
    130   135   140

Leu Ser Pro Gly Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser
145   150   155   160

Ile Gly Ser Ser Ser Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala
                165   170   175

Pro Arg Leu Leu Met Tyr Gly Ala Ser Ser Arg Ala Ser Gly Ile Pro
            180   185   190

Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile
        195   200   205

Ser Arg Leu Glu Pro Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr
    210   215   220

Ala Gly Ser Pro Pro Phe Thr Phe Gly Gln Gly Thr Lys Val Glu Ile
225   230   235   240

Lys

<210> 713
<211> 723
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polynucleotide"

<400> 713
gaagtgcaat tggtggaatc tggtggagga cttgtgcaac ctggaggatc actgagactg 60

tcatgcgcgg tgtccggttt tgccctgagc aatcatggga tgtcgtgggt ccggcgcgcc 120

cccggaaagg gtctggaatg ggtgtcgggt atcgtctact ccgggagcac ttactacgcc 180

gcgagcgtga agggccgctt caccatttcc cgcgataact cccgcaacac cctgtacttg 240

caaatgaact cgctccggcc tgaggacact gccatctact actgctccgc acacggagga 300

gaatccgacg tgtggggcca gggaactacc gtgaccgtca gcagcgcctc cggcggcggg 360

ggctcaggcg gacgggctag cggcggcggt ggctccgaga tcgtgctgac ccagtcgcct 420

ggcactctct cgctgagccc cggggaaagg gcaaccctgt cctgtcgggc cagccagtcc 480

attggatcat cctccctcgc ctggtatcag cagaaaccgg gacaggctcc gcggctgctt 540

atgtatgggg ccagctcaag agcctccggc attcccgacc ggttctccgg gtccggttcc 600

ggcaccgatt tcaccctgac tatctcgagg ctggagccag aggacttcgc cgtgtactac 660

tgccagcagt acgcggggtc cccgccgttc acgttcggac agggaaccaa ggtcgagatc 720

aag 723

<210> 714
<211> 115
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 714
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 Ala Leu Ser Asn His
20 25 30

Gly Met Ser Trp Val Arg Arg Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45

Ser Gly Ile Val Tyr Ser Gly Ser Thr Tyr Tyr Ala Ala Ser Val Lys
50 55 60

Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Arg Asn Thr Leu Tyr Leu
65 70 75 80

Gln Met Asn Ser Leu Arg Pro Glu Asp Thr Ala Ile Tyr Tyr Cys Ser
85 90 95

Ala His Gly Gly Glu Ser Asp Val Trp Gly Gln Gly Thr Thr Val Thr
100 105 110

Val Ser Ser
115

<210> 715
<211> 109
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 715
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 Ile Gly Ser Ser
20 25 30

Ser Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu
35 40 45

Met Tyr Gly Ala Ser Ser Arg Ala Ser 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 Ala Gly Ser Pro
85 90 95

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

<210> 716
<211> 485
<212> PRT
<213> Artificial Sequence

<220>

<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 716
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu
20 25 30

Val Gln Pro Gly Gly Ser Leu Arg Leu Ser Cys Ala Val Ser Gly Phe
35 40 45

Ala Leu Ser Asn His Gly Met Ser Trp Val Arg Arg Ala Pro Gly Lys
50 55 60

Gly Leu Glu Trp Val Ser Gly Ile Val Tyr Ser Gly Ser Thr Tyr Tyr
65 70 75 80

Ala Ala Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Arg
85 90 95

Asn Thr Leu Tyr Leu Gln Met Asn Ser Leu Arg Pro Glu Asp Thr Ala
100 105 110

Ile Tyr Tyr Cys Ser Ala His Gly Gly Glu Ser Asp Val Trp Gly Gln
115 120 125

Gly Thr Thr Val Thr Val Ser Ser Ala Ser Gly Gly Gly Gly Ser Gly
130 135 140

Gly Arg Ala Ser Gly Gly Gly Gly Ser Glu Ile Val Leu Thr Gln Ser
145 150 155 160

Pro Gly Thr Leu Ser Leu Ser Pro Gly Glu Arg Ala Thr Leu Ser Cys
165 170 175

Arg Ala Ser Gln Ser Ile Gly Ser Ser Ser Leu Ala Trp Tyr Gln Gln
180 185 190

Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr Gly Ala Ser Ser Arg

```
        195                 200                 205

Ala Ser Gly Ile Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp
    210                 215                 220

Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu Asp Phe Ala Val Tyr
225                 230                 235                 240

Tyr Cys Gln Gln Tyr Ala Gly Ser Pro Pro Phe Thr Phe Gly Gln Gly
                245                 250                 255

Thr Lys Val Glu Ile Lys Thr Thr Thr Pro Ala Pro Arg Pro Pro Thr
            260                 265                 270

Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser Leu Arg Pro Glu Ala
        275                 280                 285

Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr Arg Gly Leu Asp Phe
    290                 295                 300

Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly Val
305                 310                 315                 320

Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr Cys Lys Arg Gly Arg Lys
                325                 330                 335

Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met Arg Pro Val Gln Thr
            340                 345                 350

Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu Glu Glu Glu
        355                 360                 365

Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg Ser Ala Asp Ala Pro
    370                 375                 380

Ala Tyr Lys Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn Leu Gly
385                 390                 395                 400

Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg Asp Pro
                405                 410                 415
```

Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu Tyr
420 425 430

Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile Gly
435 440 445

Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His Asp Gly Leu Tyr Gln
450 455 460

Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu His Met Gln
465 470 475 480

Ala Leu Pro Pro Arg
485

<210> 717
<211> 1455
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 717
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

cccgaagtgc aattggtgga atctggtgga ggacttgtgc aacctggagg atcactgaga 120

ctgtcatgcg cggtgtccgg ttttgccctg agcaatcatg ggatgtcgtg ggtccggcgc 180

gcccccggaa agggtctgga atgggtgtcg ggtatcgtct actccgggag cacttactac 240

gccgcgagcg tgaagggccg cttcaccatt tcccgcgata actcccgcaa caccctgtac 300

ttgcaaatga actcgctccg gcctgaggac actgccatct actactgctc cgcacacgga 360

ggagaatccg acgtgtgggg ccagggaact accgtgaccg tcagcagcgc ctccggcggc 420

gggggctcag gcggacgggc tagcggcggc ggtggctccg agatcgtgct gacccagtcg 480

cctggcactc tctcgctgag ccccggggaa agggcaaccc tgtcctgtcg ggccagccag 540

tccattggat catcctccct cgcctggtat cagcagaaac cgggacaggc tccgcggctg 600

cttatgtatg gggccagctc aagagcctcc ggcattcccg accggttctc cgggtccggt 660

tccggcaccg atttcaccct gactatctcg aggctggagc cagaggactt cgccgtgtac 720

tactgccagc agtacgcggg gtccccgccg ttcacgttcg gacagggaac caaggtcgag 780

atcaagacca ctaccccagc accgaggcca cccaccccgg ctcctaccat cgcctcccag 840

cctctgtccc tgcgtccgga ggcatgtaga cccgcagctg gtggggccgt gcatacccgg 900

ggtcttgact tcgcctgcga tatctacatt tgggcccctc tggctggtac ttgcggggtc 960

ctgctgcttt cactcgtgat cactctttac tgtaagcgcg gtcggaagaa gctgctgtac 1020

atctttaagc aacccttcat gaggcctgtg cagactactc aagaggagga cggctgttca 1080

tgccggttcc cagaggagga ggaaggcggc tgcgaactgc gcgtgaaatt cagccgcagc 1140

gcagatgctc cagcctacaa gcaggggcag aaccagctct acaacgaact caatcttggt 1200

cggagagagg agtacgacgt gctggacaag cggagaggac gggacccaga aatgggcggg 1260

aagccgcgca gaaagaatcc ccaagagggc ctgtacaacg agctccaaaa ggataagatg 1320

gcagaagcct atagcgagat tggtatgaaa ggggaacgca gaagaggcaa aggccacgac 1380

ggactgtacc agggactcag caccgccacc aaggacacct atgacgctct tcacatgcag 1440

gccctgccgc ctcgg 1455

<210> 718
<211> 243
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 718
Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Glu
1 5 10 15

Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Gly Ser Ile Ser Ser Ser
20 25 30

Tyr Tyr Tyr Trp Gly Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu Glu
35 40 45

Trp Ile Gly Ser Ile Tyr Tyr Ser Gly Ser Ala Tyr Tyr Asn Pro Ser
50 55 60

```
Leu Lys Ser Arg Val Thr Ile Ser Val Asp Thr Ser Lys Asn Gln Phe
65                  70                  75                  80

Ser Leu Arg Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr
                85                  90                  95

Cys Ala Arg His Trp Gln Glu Trp Pro Asp Ala Phe Asp Ile Trp Gly
            100                 105                 110

Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly
        115                 120                 125

Gly Gly Ser Gly Gly Gly Gly Ser Glu Thr Thr Leu Thr Gln Ser Pro
    130                 135                 140

Ala Phe Met Ser Ala Thr Pro Gly Asp Lys Val Ile Ile Ser Cys Lys
145                 150                 155                 160

Ala Ser Gln Asp Ile Asp Asp Ala Met Asn Trp Tyr Gln Gln Lys Pro
                165                 170                 175

Gly Glu Ala Pro Leu Phe Ile Ile Gln Ser Ala Thr Ser Pro Val Pro
            180                 185                 190

Gly Ile Pro Pro Arg Phe Ser Gly Ser Gly Phe Gly Thr Asp Phe Ser
        195                 200                 205

Leu Thr Ile Asn Asn Ile Glu Ser Glu Asp Ala Ala Tyr Tyr Phe Cys
    210                 215                 220

Leu Gln His Asp Asn Phe Pro Leu Thr Phe Gly Gln Gly Thr Lys Leu
225                 230                 235                 240

Glu Ile Lys
```

<210> 719
<211> 729
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 719
caagtgcagc ttcaggaaag cggaccgggc ctggtcaagc catccgaaac tctctccctg 60

acttgcactg tgtctggcgg ttccatctca tcgtcgtact actactgggg ctggattagg 120

cagccgcccg gaaagggact ggagtggatc ggaagcatct actattccgg ctcggcgtac 180

tacaacccta gcctcaagtc gagagtgacc atctccgtgg atacctccaa gaaccagttt 240

tccctgcgcc tgagctccgt gaccgccgct gacaccgccg tgtactactg tgctcggcat 300

tggcaggaat ggcccgatgc cttcgacatt tggggccagg gcactatggt cactgtgtca 360

tccgggggtg gaggcagcgg gggaggaggg tccgggggggg gaggttcaga gacaaccttg 420

acccagtcac ccgcattcat gtccgccact ccgggagaca aggtcatcat ctcgtgcaaa 480

gcgtcccagg atatcgacga tgccatgaat tggtaccagc agaagcctgg cgaagcgccg 540

ctgttcatta tccaatccgc aacctcgccc gtgcctggaa tcccaccgcg gttcagcggc 600

agcggtttcg gaaccgactt ttccctgacc attaacaaca ttgagtccga ggacgccgcc 660

tactacttct gcctgcaaca cgacaacttc cctctcacgt tcggccaggg aaccaagctg 720

gaaatcaag 729

<210> 720
<211> 121
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 720
Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Glu
1 5 10 15

Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Gly Ser Ile Ser Ser Ser
20 25 30

Tyr Tyr Tyr Trp Gly Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu Glu

```
        35                  40                  45

Trp Ile Gly Ser Ile Tyr Tyr Ser Gly Ser Ala Tyr Tyr Asn Pro Ser
    50                  55                  60

Leu Lys Ser Arg Val Thr Ile Ser Val Asp Thr Ser Lys Asn Gln Phe
65                  70                  75                  80

Ser Leu Arg Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr
                85                  90                  95

Cys Ala Arg His Trp Gln Glu Trp Pro Asp Ala Phe Asp Ile Trp Gly
            100                 105                 110

Gln Gly Thr Met Val Thr Val Ser Ser
        115                 120


<210> 721
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 721
Glu Thr Thr Leu Thr Gln Ser Pro Ala Phe Met Ser Ala Thr Pro Gly
1               5                   10                  15

Asp Lys Val Ile Ile Ser Cys Lys Ala Ser Gln Asp Ile Asp Asp Ala
            20                  25                  30

Met Asn Trp Tyr Gln Gln Lys Pro Gly Glu Ala Pro Leu Phe Ile Ile
        35                  40                  45

Gln Ser Ala Thr Ser Pro Val Pro Gly Ile Pro Pro Arg Phe Ser Gly
    50                  55                  60

Ser Gly Phe Gly Thr Asp Phe Ser Leu Thr Ile Asn Asn Ile Glu Ser
65                  70                  75                  80
```

Glu Asp Ala Ala Tyr Tyr Phe Cys Leu Gln His Asp Asn Phe Pro Leu
85 90 95

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

<210> 722
<211> 487
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 722
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu
20 25 30

Val Lys Pro Ser Glu Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Gly
35 40 45

Ser Ile Ser Ser Ser Tyr Tyr Tyr Trp Gly Trp Ile Arg Gln Pro Pro
50 55 60

Gly Lys Gly Leu Glu Trp Ile Gly Ser Ile Tyr Tyr Ser Gly Ser Ala
65 70 75 80

Tyr Tyr Asn Pro Ser Leu Lys Ser Arg Val Thr Ile Ser Val Asp Thr
85 90 95

Ser Lys Asn Gln Phe Ser Leu Arg Leu Ser Ser Val Thr Ala Ala Asp
100 105 110

Thr Ala Val Tyr Tyr Cys Ala Arg His Trp Gln Glu Trp Pro Asp Ala
115 120 125

Phe Asp Ile Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly
130 135 140

```
Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Thr Thr
145                 150                 155                 160


Leu Thr Gln Ser Pro Ala Phe Met Ser Ala Thr Pro Gly Asp Lys Val
                165                 170                 175


Ile Ile Ser Cys Lys Ala Ser Gln Asp Ile Asp Asp Ala Met Asn Trp
            180                 185                 190


Tyr Gln Gln Lys Pro Gly Glu Ala Pro Leu Phe Ile Ile Gln Ser Ala
        195                 200                 205


Thr Ser Pro Val Pro Gly Ile Pro Pro Arg Phe Ser Gly Ser Gly Phe
    210                 215                 220


Gly Thr Asp Phe Ser Leu Thr Ile Asn Asn Ile Glu Ser Glu Asp Ala
225                 230                 235                 240


Ala Tyr Tyr Phe Cys Leu Gln His Asp Asn Phe Pro Leu Thr Phe Gly
                245                 250                 255


Gln Gly Thr Lys Leu Glu Ile Lys Thr Thr Thr Pro Ala Pro Arg Pro
            260                 265                 270


Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser Leu Arg Pro
        275                 280                 285


Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr Arg Gly Leu
    290                 295                 300


Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys
305                 310                 315                 320


Gly Val Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr Cys Lys Arg Gly
                325                 330                 335


Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met Arg Pro Val
            340                 345                 350


Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu Glu
```

```
        355                 360                 365

Glu Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg Ser Ala Asp
    370                 375                 380

Ala Pro Ala Tyr Lys Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn
385                 390                 395                 400

Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg
                405                 410                 415

Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly
            420                 425                 430

Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu
        435                 440                 445

Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His Asp Gly Leu
    450                 455                 460

Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu His
465                 470                 475                 480

Met Gln Ala Leu Pro Pro Arg
                485
```

<210> 723
<211> 1461
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 723
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

ccccaagtgc agcttcagga aagcggaccg ggcctggtca agccatccga aactctctcc 120

ctgacttgca ctgtgtctgg cggttccatc tcatcgtcgt actactactg gggctggatt 180

aggcagccgc ccggaaaggg actggagtgg atcggaagca tctactattc cggctcggcg 240

tactacaacc ctagcctcaa gtcgagagtg accatctccg tggatacctc caagaaccag 300

ttttccctgc gcctgagctc cgtgaccgcc gctgacaccg ccgtgtacta ctgtgctcgg 360

cattggcagg aatggcccga tgccttcgac atttggggcc agggcactat ggtcactgtg 420

tcatccgggg gtggaggcag cgggggagga gggtccgggg ggggaggttc agagacaacc 480

ttgacccagt cacccgcatt catgtccgcc actccgggag acaaggtcat catctcgtgc 540

aaagcgtccc aggatatcga cgatgccatg aattggtacc agcagaagcc tggcgaagcg 600

ccgctgttca ttatccaatc cgcaacctcg cccgtgcctg gaatcccacc gcggttcagc 660

ggcagcggtt tcggaaccga cttttccctg accattaaca acattgagtc cgaggacgcc 720

gcctactact tctgcctgca acacgacaac ttccctctca cgttcggcca gggaaccaag 780

ctggaaatca agaccactac cccagcaccg aggccaccca ccccggctcc taccatcgcc 840

tcccagcctc tgtccctgcg tccggaggca tgtagacccg cagctggtgg ggccgtgcat 900

acccggggtc ttgacttcgc ctgcgatatc tacatttggg cccctctggc tggtacttgc 960

ggggtcctgc tgctttcact cgtgatcact ctttactgta agcgcggtcg gaagaagctg 1020

ctgtacatct ttaagcaacc cttcatgagg cctgtgcaga ctactcaaga ggaggacggc 1080

tgttcatgcc ggttcccaga ggaggaggaa ggcggctgcg aactgcgcgt gaaattcagc 1140

cgcagcgcag atgctccagc ctacaagcag gggcagaacc agctctacaa cgaactcaat 1200

cttggtcgga gagaggagta cgacgtgctg gacaagcgga gaggacggga cccagaaatg 1260

ggcgggaagc cgcgcagaaa gaatccccaa gagggcctgt acaacgagct ccaaaaggat 1320

aagatggcag aagcctatag cgagattggt atgaaagggg aacgcagaag aggcaaaggc 1380

cacgacggac tgtaccaggg actcagcacc gccaccaagg acacctatga cgctcttcac 1440

atgcaggccc tgccgcctcg g 1461

<210> 724
<211> 244
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 724

```
Val Asn Leu Arg Glu Ser Gly Pro Ala Leu Val Lys Pro Thr Gln Thr
1               5                  10                  15

Leu Thr Leu Thr Cys Thr Phe Ser Gly Phe Ser Leu Arg Thr Ser Gly
            20                  25                  30

Met Cys Val Ser Trp Ile Arg Gln Pro Pro Gly Lys Ala Leu Glu Trp
        35                  40                  45

Leu Ala Arg Ile Asp Trp Asp Glu Asp Lys Phe Tyr Ser Thr Ser Leu
    50                  55                  60

Lys Thr Arg Leu Thr Ile Ser Lys Asp Thr Ser Asp Asn Gln Val Val
65                  70                  75                  80

Leu Arg Met Thr Asn Met Asp Pro Ala Asp Thr Ala Thr Tyr Tyr Cys
                85                  90                  95

Ala Arg Ser Gly Ala Gly Gly Thr Ser Ala Thr Ala Phe Asp Ile Trp
            100                 105                 110

Gly Pro Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly
        115                 120                 125

Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Gln Met Thr Gln Ser
    130                 135                 140

Pro Ser Ser Leu Ser Ala Ser Val Gly Asp Arg Val Thr Ile Thr Cys
145                 150                 155                 160

Arg Ala Ser Gln Asp Ile Tyr Asn Asn Leu Ala Trp Phe Gln Leu Lys
                165                 170                 175

Pro Gly Ser Ala Pro Arg Ser Leu Met Tyr Ala Ala Asn Lys Ser Gln
            180                 185                 190

Ser Gly Val Pro Ser Arg Phe Ser Gly Ser Ala Ser Gly Thr Asp Phe
        195                 200                 205

Thr Leu Thr Ile Ser Ser Leu Gln Pro Glu Asp Phe Ala Thr Tyr Tyr
    210                 215                 220
```

Cys Gln His Tyr Tyr Arg Phe Pro Tyr Ser Phe Gly Gln Gly Thr Lys
225 230 235 240

Leu Glu Ile Lys

<210> 725
<211> 735
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 725
caagtcaatc tgcgcgaatc cggccccgcc ttggtcaagc ctacccagac cctcactctg 60

acctgtactt tctccggctt ctccctgcgg acttccggga tgtgcgtgtc ctggatcaga 120

cagcctccgg gaaaggccct ggagtggctc gctcgcattg actgggatga ggacaagttc 180

tactccacct cactcaagac caggctgacc atcagcaaag atacctctga caaccaagtg 240

gtgctccgca tgaccaacat ggacccagcc gacactgcca cttactactg cgcgaggagc 300

ggagcgggcg gaacctccgc caccgccttc gatatttggg gcccgggtac catggtcacc 360

gtgtcaagcg gaggaggggg gtccgggggc ggcggttccg ggggaggcgg atcggacatt 420

cagatgactc agtcaccatc gtccctgagc gctagcgtgg gcgacagagt gacaatcact 480

tgccgggcat cccaggacat ctataacaac cttgcgtggt tccagctgaa gcctggttcc 540

gcaccgcggt cacttatgta cgccgccaac aagagccagt cgggagtgcc gtcccggttt 600

tccggttcgg cctcgggaac tgacttcacc ctgacgatct ccagcctgca acccgaggat 660

ttcgccacct actactgcca gcactactac cgctttccct actcgttcgg acagggaacc 720

aagctggaaa tcaag 735

<210> 726
<211> 123
<212> PRT
<213> Artificial Sequence

<220>

<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 726
Gln Val Asn Leu Arg Glu Ser Gly Pro Ala Leu Val Lys Pro Thr Gln
1 5 10 15

Thr Leu Thr Leu Thr Cys Thr Phe Ser Gly Phe Ser Leu Arg Thr Ser
20 25 30

Gly Met Cys Val Ser Trp Ile Arg Gln Pro Pro Gly Lys Ala Leu Glu
35 40 45

Trp Leu Ala Arg Ile Asp Trp Asp Glu Asp Lys Phe Tyr Ser Thr Ser
50 55 60

Leu Lys Thr Arg Leu Thr Ile Ser Lys Asp Thr Ser Asp Asn Gln Val
65 70 75 80

Val Leu Arg Met Thr Asn Met Asp Pro Ala Asp Thr Ala Thr Tyr Tyr
85 90 95

Cys Ala Arg Ser Gly Ala Gly Gly Thr Ser Ala Thr Ala Phe Asp Ile
100 105 110

Trp Gly Pro Gly Thr Met Val Thr Val Ser Ser
115 120

<210> 727
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 727
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 Tyr Asn Asn
20 25 30

Leu Ala Trp Phe Gln Leu Lys Pro Gly Ser Ala Pro Arg Ser Leu Met
35 40 45

Tyr Ala Ala Asn Lys Ser Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
50 55 60

Ser Ala Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
65 70 75 80

Glu Asp Phe Ala Thr Tyr Tyr Cys Gln His Tyr Tyr Arg Phe Pro Tyr
85 90 95

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

<210> 728
<211> 489
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 728
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Gln Val Asn Leu Arg Glu Ser Gly Pro Ala Leu
20 25 30

Val Lys Pro Thr Gln Thr Leu Thr Leu Thr Cys Thr Phe Ser Gly Phe
35 40 45

Ser Leu Arg Thr Ser Gly Met Cys Val Ser Trp Ile Arg Gln Pro Pro
50 55 60

Gly Lys Ala Leu Glu Trp Leu Ala Arg Ile Asp Trp Asp Glu Asp Lys
65 70 75 80

Phe Tyr Ser Thr Ser Leu Lys Thr Arg Leu Thr Ile Ser Lys Asp Thr

```
                85                  90                  95

Ser Asp Asn Gln Val Val Leu Arg Met Thr Asn Met Asp Pro Ala Asp
            100                 105                 110

Thr Ala Thr Tyr Tyr Cys Ala Arg Ser Gly Ala Gly Gly Thr Ser Ala
        115                 120                 125

Thr Ala Phe Asp Ile Trp Gly Pro Gly Thr Met Val Thr Val Ser Ser
    130                 135                 140

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp
145                 150                 155                 160

Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly Asp
                165                 170                 175

Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Asp Ile Tyr Asn Asn Leu
            180                 185                 190

Ala Trp Phe Gln Leu Lys Pro Gly Ser Ala Pro Arg Ser Leu Met Tyr
        195                 200                 205

Ala Ala Asn Lys Ser Gln Ser Gly Val Pro Ser Arg Phe Ser Gly Ser
    210                 215                 220

Ala Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro Glu
225                 230                 235                 240

Asp Phe Ala Thr Tyr Tyr Cys Gln His Tyr Tyr Arg Phe Pro Tyr Ser
                245                 250                 255

Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys Thr Thr Thr Pro Ala Pro
            260                 265                 270

Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser Leu
        275                 280                 285

Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr Arg
    290                 295                 300
```

```
Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala Gly
305                 310                 315                 320

Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr Cys Lys
                325                 330                 335

Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met Arg
            340                 345                 350

Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro
        355                 360                 365

Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg Ser
    370                 375                 380

Ala Asp Ala Pro Ala Tyr Lys Gln Gly Gln Asn Gln Leu Tyr Asn Glu
385                 390                 395                 400

Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg
                405                 410                 415

Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln
            420                 425                 430

Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr
        435                 440                 445

Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His Asp
    450                 455                 460

Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala
465                 470                 475                 480

Leu His Met Gln Ala Leu Pro Pro Arg
                485
```

<210> 729
<211> 1467
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 729
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

ccccaagtca atctgcgcga atccggcccc gccttggtca agcctaccca gaccctcact 120

ctgacctgta ctttctccgg cttctccctg cggacttccg ggatgtgcgt gtcctggatc 180

agacagcctc cgggaaaggc cctggagtgg ctcgctcgca ttgactggga tgaggacaag 240

ttctactcca cctcactcaa gaccaggctg accatcagca aagatacctc tgacaaccaa 300

gtggtgctcc gcatgaccaa catggaccca gccgacactg ccacttacta ctgcgcgagg 360

agcggagcgg gcggaacctc cgccaccgcc ttcgatattt ggggcccggg taccatggtc 420

accgtgtcaa gcggaggagg ggggtccggg ggcggcggtt ccgggggagg cggatcggac 480

attcagatga ctcagtcacc atcgtccctg agcgctagcg tgggcgacag agtgacaatc 540

acttgccggg catcccagga catctataac aaccttgcgt ggttccagct gaagcctggt 600

tccgcaccgc ggtcacttat gtacgccgcc aacaagagcc agtcgggagt gccgtcccgg 660

ttttccggtt cggcctcggg aactgacttc accctgacga tctccagcct gcaacccgag 720

gatttcgcca cctactactg ccagcactac taccgctttc cctactcgtt cggacaggga 780

accaagctgg aaatcaagac cactacccca gcaccgaggc cacccacccc ggctcctacc 840

atcgcctccc agcctctgtc cctgcgtccg gaggcatgta gacccgcagc tggtggggcc 900

gtgcataccc ggggtcttga cttcgcctgc gatatctaca tttgggcccc tctggctggt 960

acttgcgggg tcctgctgct ttcactcgtg atcactcttt actgtaagcg cggtcggaag 1020

aagctgctgt acatctttaa gcaacccttc atgaggcctg tgcagactac tcaagaggag 1080

gacggctgtt catgccggtt cccagaggag gaggaaggcg gctgcgaact gcgcgtgaaa 1140

ttcagccgca gcgcagatgc tccagcctac aagcaggggc agaaccagct ctacaacgaa 1200

ctcaatcttg gtcggagaga ggagtacgac gtgctggaca agcggagagg acgggaccca 1260

gaaatgggcg ggaagccgcg cagaaagaat ccccaagagg gcctgtacaa cgagctccaa 1320

aaggataaga tggcagaagc ctatagcgag attggtatga aaggggaacg cagaagaggc 1380

aaaggccacg acggactgta ccagggactc agcaccgcca ccaaggacac ctatgacgct 1440

cttcacatgc aggccctgcc gcctcgg 1467

<210> 730
<211> 246
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 730
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 Lys Thr Ile Ala Ala Val Tyr Ala Phe Asp Ile Trp Gly Gln Gly
100 105 110

Thr Thr Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly
115 120 125

Ser Gly Gly Gly Gly Ser Glu Ile Val Leu Thr Gln Ser Pro Leu Ser
130 135 140

Leu Pro Val Thr Pro Glu Glu Pro Ala Ser Ile Ser Cys Arg Ser Ser
145 150 155 160

```
Gln Ser Leu Leu His Ser Asn Gly Tyr Asn Tyr Leu Asp Trp Tyr Leu
                165                 170                 175

Gln Lys Pro Gly Gln Ser Pro Gln Leu Leu Ile Tyr Leu Gly Ser Asn
            180                 185                 190

Arg Ala Ser Gly Val Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr
        195                 200                 205

Asp Phe Thr Leu Lys Ile Ser Arg Val Glu Ala Glu Asp Val Gly Val
    210                 215                 220

Tyr Tyr Cys Met Gln Ala Leu Gln Thr Pro Tyr Thr Phe Gly Gln Gly
225                 230                 235                 240

Thr Lys Leu Glu Ile Lys
                245
```

<210> 731
<211> 738
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 731

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gaagtgcagc ttgtcgaatc cgggggggga ctggtcaagc cgggcggatc actgagactg       60

tcctgcgccg cgagcggctt cacgttctcc tcctactcca tgaactgggt ccgccaagcc      120

cccgggaagg gactggaatg ggtgtcctct atctcctcgt cgtcgtccta catctactac      180

gccgactccg tgaagggaag attcaccatt tcccgcgaca acgcaaagaa ctcactgtac      240

ttgcaaatga actcactccg ggccgaagat actgctgtgt actattgcgc caagactatt      300

gccgccgtct acgctttcga catctggggc cagggaacca ccgtgactgt gtcgtccggt      360

ggtggtggct cgggcggagg aggaagcggc ggcggggggt ccgagattgt gctgacccag      420

tcgccactga gcctccctgt gacccccgag gaacccgcca gcatcagctg ccggtccagc      480

cagtccctgc tccactccaa cggatacaat tacctcgatt ggtaccttca gaagcctgga      540

caaagcccgc agctgctcat ctacttggga tcaaaccgcg cgtcaggagt gcctgaccgg      600
```

ttctccggct cgggcagcgg taccgatttc accctgaaaa tctccagggt ggaggcagag 660

gacgtgggag tgtattactg tatgcaggcg ctgcagactc cgtacacatt tgggcagggc 720

accaagctgg agatcaag 738

<210> 732
<211> 119
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 732
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 Lys Thr Ile Ala Ala Val Tyr Ala Phe Asp Ile Trp Gly Gln Gly
100 105 110

Thr Thr Val Thr Val Ser Ser
115

<210> 733
<211> 112
<212> PRT

<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 733
Glu Ile Val Leu Thr Gln Ser Pro Leu Ser Leu Pro Val Thr Pro Glu
1 5 10 15

Glu Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Leu His Ser
20 25 30

Asn Gly Tyr Asn Tyr Leu Asp Trp Tyr Leu Gln Lys Pro Gly Gln Ser
35 40 45

Pro Gln Leu Leu Ile Tyr Leu Gly Ser Asn Arg Ala Ser Gly Val Pro
50 55 60

Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile
65 70 75 80

Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln Ala
85 90 95

Leu Gln Thr Pro Tyr Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
100 105 110

<210> 734
<211> 490
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 734
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu
20 25 30

```
Val Lys Pro Gly Gly Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe
        35                  40                  45

Thr Phe Ser Ser Tyr Ser Met Asn Trp Val Arg Gln Ala Pro Gly Lys
    50                  55                  60

Gly Leu Glu Trp Val Ser Ser Ile Ser Ser Ser Ser Ser Tyr Ile Tyr
65                  70                  75                  80

Tyr Ala Asp Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala
                85                  90                  95

Lys Asn Ser Leu Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr
            100                 105                 110

Ala Val Tyr Tyr Cys Ala Lys Thr Ile Ala Ala Val Tyr Ala Phe Asp
        115                 120                 125

Ile Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser Gly Gly Gly Gly
    130                 135                 140

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Ile Val Leu Thr
145                 150                 155                 160

Gln Ser Pro Leu Ser Leu Pro Val Thr Pro Glu Glu Pro Ala Ser Ile
                165                 170                 175

Ser Cys Arg Ser Ser Gln Ser Leu Leu His Ser Asn Gly Tyr Asn Tyr
            180                 185                 190

Leu Asp Trp Tyr Leu Gln Lys Pro Gly Gln Ser Pro Gln Leu Leu Ile
        195                 200                 205

Tyr Leu Gly Ser Asn Arg Ala Ser Gly Val Pro Asp Arg Phe Ser Gly
    210                 215                 220

Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile Ser Arg Val Glu Ala
225                 230                 235                 240

Glu Asp Val Gly Val Tyr Tyr Cys Met Gln Ala Leu Gln Thr Pro Tyr
```

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                245                 250                 255

Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys Thr Thr Thr Pro Ala
            260                 265                 270

Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser
        275                 280                 285

Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr
    290                 295                 300

Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala
305                 310                 315                 320

Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr Cys
                325                 330                 335

Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met
            340                 345                 350

Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe
        355                 360                 365

Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg
    370                 375                 380

Ser Ala Asp Ala Pro Ala Tyr Lys Gln Gly Gln Asn Gln Leu Tyr Asn
385                 390                 395                 400

Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg
                405                 410                 415

Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro
            420                 425                 430

Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala
        435                 440                 445

Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His
    450                 455                 460
```

Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp
465 470 475 480

Ala Leu His Met Gln Ala Leu Pro Pro Arg
485 490

<210> 735
<211> 1470
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 735
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

cccgaagtgc agcttgtcga atccgggggg ggactggtca agccgggcgg atcactgaga 120

ctgtcctgcg ccgcgagcgg cttcacgttc tcctcctact ccatgaactg ggtccgccaa 180

gcccccggga agggactgga atgggtgtcc tctatctcct cgtcgtcgtc ctacatctac 240

tacgccgact ccgtgaaggg aagattcacc atttcccgcg acaacgcaaa gaactcactg 300

tacttgcaaa tgaactcact ccgggccgaa gatactgctg tgtactattg cgccaagact 360

attgccgccg tctacgcttt cgacatctgg ggccagggaa ccaccgtgac tgtgtcgtcc 420

ggtggtggtg gctcgggcgg aggaggaagc ggcggcgggg ggtccgagat tgtgctgacc 480

cagtcgccac tgagcctccc tgtgaccccc gaggaacccg ccagcatcag ctgccggtcc 540

agccagtccc tgctccactc caacggatac aattacctcg attggtacct tcagaagcct 600

ggacaaagcc cgcagctgct catctacttg ggatcaaacc gcgcgtcagg agtgcctgac 660

cggttctccg gctcgggcag cggtaccgat ttcaccctga aaatctccag ggtggaggca 720

gaggacgtgg gagtgtatta ctgtatgcag gcgctgcaga ctccgtacac atttgggcag 780

ggcaccaagc tggagatcaa gaccactacc ccagcaccga ggccacccac cccggctcct 840

accatcgcct cccagcctct gtccctgcgt ccggaggcat gtagacccgc agctggtggg 900

gccgtgcata cccggggtct tgacttcgcc tgcgatatct acatttgggc ccctctggct 960

ggtacttgcg gggtcctgct gctttcactc gtgatcactc tttactgtaa gcgcggtcgg 1020

aagaagctgc tgtacatctt taagcaaccc ttcatgaggc ctgtgcagac tactcaagag 1080

gaggacggct gttcatgccg gttcccagag gaggaggaag gcggctgcga actgcgcgtg 1140

aaattcagcc gcagcgcaga tgctccagcc tacaagcagg ggcagaacca gctctacaac 1200

gaactcaatc ttggtcggag agaggagtac gacgtgctgg acaagcggag aggacgggac 1260

ccagaaatgg gcgggaagcc gcgcagaaag aatccccaag agggcctgta caacgagctc 1320

caaaaggata agatggcaga agcctatagc gagattggta tgaaaggggа acgcagaaga 1380

ggcaaaggcc acgacggact gtaccaggga ctcagcaccg ccaccaagga cacctatgac 1440

gctcttcaca tgcaggccct gccgcctcgg 1470

<210> 736
<211> 240
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 736
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 Asp Tyr
20 25 30

Tyr Met Ser Trp Ile Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45

Ser Tyr Ile Ser Ser Ser Gly Ser Thr 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 Leu Arg Gly Ala Phe Asp Ile Trp Gly Gln Gly Thr Met
100 105 110

```
Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly
        115                 120                 125

Gly Gly Gly Ser Ser Tyr Val Leu Thr Gln Ser Pro Ser Val Ser Ala
    130                 135                 140

Ala Pro Gly Tyr Thr Ala Thr Ile Ser Cys Gly Gly Asn Asn Ile Gly
145                 150                 155                 160

Thr Lys Ser Val His Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Leu
                165                 170                 175

Leu Val Ile Arg Asp Asp Ser Val Arg Pro Ser Lys Ile Pro Gly Arg
            180                 185                 190

Phe Ser Gly Ser Asn Ser Gly Asn Met Ala Thr Leu Thr Ile Ser Gly
        195                 200                 205

Val Gln Ala Gly Asp Glu Ala Asp Phe Tyr Cys Gln Val Trp Asp Ser
    210                 215                 220

Asp Ser Glu His Val Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu
225                 230                 235                 240
```

<210> 737
<211> 720
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 737
gaagtccagc tcgtggagtc cggcggaggc cttgtgaagc ctggaggttc gctgagactg 60

tcctgcgccg cctccggctt caccttctcc gactactaca tgtcctggat cagacaggcc 120

ccgggaaagg gcctggaatg ggtgtcctac atctcgtcat cgggcagcac tatctactac 180

gcggactcag tgaaggggcg gttcaccatt tcccgggata acgcgaagaa ctcgctgtat 240

ctgcaaatga actcactgag ggccgaggac accgccgtgt actactgcgc ccgcgatctc 300

cgcggggcat ttgacatctg gggacaggga accatggtca cagtgtccag cggaggggga 360

ggatcgggtg gcggaggttc cgggggtgga ggctcctcct acgtgctgac tcagagccca 420

agcgtcagcg ctgcgcccgg ttacacggca accatctcct gtggcggaaa caacattggg 480

accaagtctg tgcactggta tcagcagaag ccgggccaag ctcccctgtt ggtgatccgc 540

gatgactccg tgcggcctag caaaattccg ggacggttct ccggctccaa cagcggcaat 600

atggccactc tcaccatctc gggagtgcag gccggagatg aagccgactt ctactgccaa 660

gtctgggact cagactccga gcatgtggtg ttcgggggcg gaaccaagct gactgtgctc 720

<210> 738
<211> 117
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 738
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 Asp Tyr
20 25 30

Tyr Met Ser Trp Ile Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45

Ser Tyr Ile Ser Ser Ser Gly Ser Thr 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 Leu Arg Gly Ala Phe Asp Ile Trp Gly Gln Gly Thr Met
100 105 110

Val Thr Val Ser Ser
        115

<210> 739
<211> 108
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 739
Ser Tyr Val Leu Thr Gln Ser Pro Ser Val Ser Ala Ala Pro Gly Tyr
1   5   10   15

Thr Ala Thr Ile Ser Cys Gly Gly Asn Asn Ile Gly Thr Lys Ser Val
            20   25   30

His Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Leu Leu Val Ile Arg
        35   40   45

Asp Asp Ser Val Arg Pro Ser Lys Ile Pro Gly Arg Phe Ser Gly Ser
    50   55   60

Asn Ser Gly Asn Met Ala Thr Leu Thr Ile Ser Gly Val Gln Ala Gly
65   70   75   80

Asp Glu Ala Asp Phe Tyr Cys Gln Val Trp Asp Ser Asp Ser Glu His
                85   90   95

Val Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu
            100   105

<210> 740
<211> 484
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 740
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1   5   10   15

His Ala Ala Arg Pro Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu
            20   25   30

Val Lys Pro Gly Gly Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe
        35   40   45

Thr Phe Ser Asp Tyr Tyr Met Ser Trp Ile Arg Gln Ala Pro Gly Lys
    50   55   60

Gly Leu Glu Trp Val Ser Tyr Ile Ser Ser Ser Gly Ser Thr Ile Tyr
65   70   75   80

Tyr Ala Asp Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala
                85   90   95

Lys Asn Ser Leu Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr
            100   105   110

Ala Val Tyr Tyr Cys Ala Arg Asp Leu Arg Gly Ala Phe Asp Ile Trp
        115   120   125

Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly
    130   135   140

Gly Gly Gly Ser Gly Gly Gly Gly Ser Ser Tyr Val Leu Thr Gln Ser
145   150   155   160

Pro Ser Val Ser Ala Ala Pro Gly Tyr Thr Ala Thr Ile Ser Cys Gly
                165   170   175

Gly Asn Asn Ile Gly Thr Lys Ser Val His Trp Tyr Gln Gln Lys Pro
            180   185   190

Gly Gln Ala Pro Leu Leu Val Ile Arg Asp Asp Ser Val Arg Pro Ser
        195   200   205

Lys Ile Pro Gly Arg Phe Ser Gly Ser Asn Ser Gly Asn Met Ala Thr

```
    210                 215                 220

Leu Thr Ile Ser Gly Val Gln Ala Gly Asp Glu Ala Asp Phe Tyr Cys
225                 230                 235                 240

Gln Val Trp Asp Ser Asp Ser Glu His Val Val Phe Gly Gly Gly Thr
                245                 250                 255

Lys Leu Thr Val Leu Thr Thr Thr Pro Ala Pro Arg Pro Pro Thr Pro
            260                 265                 270

Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser Leu Arg Pro Glu Ala Cys
        275                 280                 285

Arg Pro Ala Ala Gly Gly Ala Val His Thr Arg Gly Leu Asp Phe Ala
    290                 295                 300

Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly Val Leu
305                 310                 315                 320

Leu Leu Ser Leu Val Ile Thr Leu Tyr Cys Lys Arg Gly Arg Lys Lys
                325                 330                 335

Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met Arg Pro Val Gln Thr Thr
            340                 345                 350

Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu Glu Glu Glu Gly
        355                 360                 365

Gly Cys Glu Leu Arg Val Lys Phe Ser Arg Ser Ala Asp Ala Pro Ala
    370                 375                 380

Tyr Lys Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn Leu Gly Arg
385                 390                 395                 400

Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg Asp Pro Glu
                405                 410                 415

Met Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu Tyr Asn
            420                 425                 430
```

Glu Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile Gly Met
435 440 445

Lys Gly Glu Arg Arg Arg Gly Lys Gly His Asp Gly Leu Tyr Gln Gly
450 455 460

Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu His Met Gln Ala
465 470 475 480

Leu Pro Pro Arg

<210> 741
<211> 1452
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 741
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

cccgaagtcc agctcgtgga gtccggcgga ggccttgtga agcctggagg ttcgctgaga 120

ctgtcctgcg ccgcctccgg cttcaccttc tccgactact acatgtcctg gatcagacag 180

gccccgggaa agggcctgga atgggtgtcc tacatctcgt catcgggcag cactatctac 240

tacgcggact cagtgaaggg gcggttcacc atttcccggg ataacgcgaa gaactcgctg 300

tatctgcaaa tgaactcact gagggccgag gacaccgccg tgtactactg cgcccgcgat 360

ctccgcgggg catttgacat ctggggacag ggaaccatgg tcacagtgtc cagcggaggg 420

ggaggatcgg gtggcggagg ttccgggggt ggaggctcct cctacgtgct gactcagagc 480

ccaagcgtca gcgctgcgcc cggttacacg gcaaccatct cctgtggcgg aaacaacatt 540

gggaccaagt ctgtgcactg gtatcagcag aagccgggcc aagctcccct gttggtgatc 600

cgcgatgact ccgtgcggcc tagcaaaatt ccgggacggt tctccggctc caacagcggc 660

aatatggcca ctctcaccat ctcgggagtg caggccggag atgaagccga cttctactgc 720

caagtctggg actcagactc cgagcatgtg gtgttcgggg gcggaaccaa gctgactgtg 780

ctcaccacta ccccagcacc gaggccaccc accccggctc ctaccatcgc ctcccagcct 840

ctgtccctgc gtccggaggc atgtagaccc gcagctggtg gggccgtgca tacccggggt 900

cttgacttcg cctgcgatat ctacatttgg gcccctctgg ctggtacttg cggggtcctg 960

ctgctttcac tcgtgatcac tctttactgt aagcgcggtc ggaagaagct gctgtacatc 1020

tttaagcaac ccttcatgag gcctgtgcag actactcaag aggaggacgg ctgttcatgc 1080

cggttcccag aggaggagga aggcggctgc gaactgcgcg tgaaattcag ccgcagcgca 1140

gatgctccag cctacaagca ggggcagaac cagctctaca acgaactcaa tcttggtcgg 1200

agagaggagt acgacgtgct ggacaagcgg agaggacggg acccagaaat gggcgggaag 1260

ccgcgcagaa agaatcccca agagggcctg tacaacgagc tccaaaagga taagatggca 1320

gaagcctata gcgagattgg tatgaaaggg gaacgcagaa gaggcaaagg ccacgacgga 1380

ctgtaccagg gactcagcac cgccaccaag gacacctatg acgctcttca catgcaggcc 1440

ctgccgcctc gg 1452

<210> 742
<211> 241
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<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 Pro Ser Gly Tyr Thr Val Thr Ser His
20 25 30

Tyr Ile His Trp Val Arg Arg Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45

Gly Met Ile Asn Pro Ser Gly Gly Val Thr Ala Tyr Ser Gln Thr Leu
50 55 60

Gln Gly Arg Val Thr Met Thr Ser Asp Thr Ser Ser Ser Thr Val Tyr
65 70 75 80

```
Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Met Tyr Tyr Cys
                85                  90                  95

Ala Arg Glu Gly Ser Gly Ser Gly Trp Tyr Phe Asp Phe Trp Gly Arg
            100                 105                 110

Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly
        115                 120                 125

Gly Ser Gly Gly Gly Gly Ser Ser Tyr Val Leu Thr Gln Pro Pro Ser
    130                 135                 140

Val Ser Val Ser Pro Gly Gln Thr Ala Ser Ile Thr Cys Ser Gly Asp
145                 150                 155                 160

Gly Leu Ser Lys Lys Tyr Val Ser Trp Tyr Gln Gln Lys Ala Gly Gln
                165                 170                 175

Ser Pro Val Val Leu Ile Ser Arg Asp Lys Glu Arg Pro Ser Gly Ile
            180                 185                 190

Pro Asp Arg Phe Ser Gly Ser Asn Ser Ala Asp Thr Ala Thr Leu Thr
        195                 200                 205

Ile Ser Gly Thr Gln Ala Met Asp Glu Ala Asp Tyr Tyr Cys Gln Ala
    210                 215                 220

Trp Asp Asp Thr Thr Val Val Phe Gly Gly Gly Thr Lys Leu Thr Val
225                 230                 235                 240

Leu
```

<210> 743
<211> 723
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic

polynucleotide"

<400> 743
caagtgcagc tggtgcagag cggggccgaa gtcaagaagc cgggagcctc cgtgaaagtg 60

tcctgcaagc cttcgggata caccgtgacc tcccactaca ttcattgggt ccgccgcgcc 120

cccggccaag gactcgagtg gatgggcatg atcaacccta gcggcggagt gaccgcgtac 180

agccagacgc tgcagggacg cgtgactatg acctcggata cctcctcctc caccgtctat 240

atggaactgt ccagcctgcg gtccgaggat accgccatgt actactgcgc ccgggaagga 300

tcaggctccg ggtggtattt cgacttctgg ggaagaggca ccctcgtgac tgtgtcatct 360

gggggagggg gttccggtgg tggcggatcg ggaggaggcg gttcatccta cgtgctgacc 420

cagccaccct ccgtgtccgt gagccccggc cagactgcat cgattacatg tagcggcgac 480

ggcctctcca agaaatacgt gtcgtggtac cagcagaagg ccggacagag cccggtggtg 540

ctgatctcaa gagataagga gcggcctagc ggaatcccgg acaggttctc gggttccaac 600

tccgcggaca ctgctactct gaccatctcg gggacccagg ctatggacga agccgattac 660

tactgccaag cctgggacga cactactgtc gtgtttggag ggggcaccaa gttgaccgtc 720

ctt 723

<210> 744
<211> 120
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 744
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 Pro Ser Gly Tyr Thr Val Thr Ser His
20 25 30

Tyr Ile His Trp Val Arg Arg Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45

Gly Met Ile Asn Pro Ser Gly Gly Val Thr Ala Tyr Ser Gln Thr Leu

```
    50                  55                  60

Gln Gly Arg Val Thr Met Thr Ser Asp Thr Ser Ser Ser Thr Val Tyr
65                  70                  75                  80

Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Met Tyr Tyr Cys
                85                  90                  95

Ala Arg Glu Gly Ser Gly Ser Gly Trp Tyr Phe Asp Phe Trp Gly Arg
            100                 105                 110

Gly Thr Leu Val Thr Val Ser Ser
        115                 120
```

<210> 745
<211> 106
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 745

```
Ser Tyr Val Leu Thr Gln Pro Pro Ser Val Ser Val Ser Pro Gly Gln
1               5                   10                  15

Thr Ala Ser Ile Thr Cys Ser Gly Asp Gly Leu Ser Lys Lys Tyr Val
            20                  25                  30

Ser Trp Tyr Gln Gln Lys Ala Gly Gln Ser Pro Val Val Leu Ile Ser
        35                  40                  45

Arg Asp Lys Glu Arg Pro Ser Gly Ile Pro Asp Arg Phe Ser Gly Ser
    50                  55                  60

Asn Ser Ala Asp Thr Ala Thr Leu Thr Ile Ser Gly Thr Gln Ala Met
65                  70                  75                  80

Asp Glu Ala Asp Tyr Tyr Cys Gln Ala Trp Asp Asp Thr Thr Val Val
                85                  90                  95
```

Phe Gly Gly Gly Thr Lys Leu Thr Val Leu
100 105

<210> 746
<211> 485
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 746
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val
20 25 30

Lys Lys Pro Gly Ala Ser Val Lys Val Ser Cys Lys Pro Ser Gly Tyr
35 40 45

Thr Val Thr Ser His Tyr Ile His Trp Val Arg Arg Ala Pro Gly Gln
50 55 60

Gly Leu Glu Trp Met Gly Met Ile Asn Pro Ser Gly Gly Val Thr Ala
65 70 75 80

Tyr Ser Gln Thr Leu Gln Gly Arg Val Thr Met Thr Ser Asp Thr Ser
85 90 95

Ser Ser Thr Val Tyr Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr
100 105 110

Ala Met Tyr Tyr Cys Ala Arg Glu Gly Ser Gly Ser Gly Trp Tyr Phe
115 120 125

Asp Phe Trp Gly Arg Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly
130 135 140

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ser Tyr Val Leu
145 150 155 160

```
Thr Gln Pro Pro Ser Val Ser Val Ser Pro Gly Gln Thr Ala Ser Ile
                165                 170                 175

Thr Cys Ser Gly Asp Gly Leu Ser Lys Lys Tyr Val Ser Trp Tyr Gln
            180                 185                 190

Gln Lys Ala Gly Gln Ser Pro Val Val Leu Ile Ser Arg Asp Lys Glu
        195                 200                 205

Arg Pro Ser Gly Ile Pro Asp Arg Phe Ser Gly Ser Asn Ser Ala Asp
    210                 215                 220

Thr Ala Thr Leu Thr Ile Ser Gly Thr Gln Ala Met Asp Glu Ala Asp
225                 230                 235                 240

Tyr Tyr Cys Gln Ala Trp Asp Asp Thr Thr Val Val Phe Gly Gly Gly
                245                 250                 255

Thr Lys Leu Thr Val Leu Thr Thr Thr Pro Ala Pro Arg Pro Pro Thr
            260                 265                 270

Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser Leu Arg Pro Glu Ala
        275                 280                 285

Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr Arg Gly Leu Asp Phe
    290                 295                 300

Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly Val
305                 310                 315                 320

Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr Cys Lys Arg Gly Arg Lys
                325                 330                 335

Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met Arg Pro Val Gln Thr
            340                 345                 350

Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu Glu Glu Glu
        355                 360                 365

Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg Ser Ala Asp Ala Pro
```

370 375 380

Ala Tyr Lys Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn Leu Gly
385 390 395 400

Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg Asp Pro
405 410 415

Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu Tyr
420 425 430

Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile Gly
435 440 445

Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His Asp Gly Leu Tyr Gln
450 455 460

Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu His Met Gln
465 470 475 480

Ala Leu Pro Pro Arg
485

<210> 747
<211> 1455
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 747
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

ccccaagtgc agctggtgca gagcggggcc gaagtcaaga agccgggagc ctccgtgaaa 120

gtgtcctgca agccttcggg atacaccgtg acctcccact acattcattg ggtccgccgc 180

gcccccggcc aaggactcga gtggatgggc atgatcaacc ctagcggcgg agtgaccgcg 240

tacagccaga cgctgcaggg acgcgtgact atgacctcgg atacctcctc ctccaccgtc 300

tatatggaac tgtccagcct gcggtccgag gataccgcca tgtactactg cgcccgggaa 360

ggatcaggct ccgggtggta tttcgacttc tggggaagag gcaccctcgt gactgtgtca 420

tctgggggag ggggttccgg tggtggcgga tcgggaggag gcggttcatc ctacgtgctg 480

acccagccac cctccgtgtc cgtgagcccc ggccagactg catcgattac atgtagcggc 540

gacggcctct ccaagaaata cgtgtcgtgg taccagcaga aggccggaca gagcccggtg 600

gtgctgatct caagagataa ggagcggcct agcggaatcc cggacaggtt ctcgggttcc 660

aactccgcgg acactgctac tctgaccatc tcggggaccc aggctatgga cgaagccgat 720

tactactgcc aagcctggga cgacactact gtcgtgtttg gagggggcac caagttgacc 780

gtccttacca ctaccccagc accgaggcca cccaccccgg ctcctaccat cgcctcccag 840

cctctgtccc tgcgtccgga ggcatgtaga cccgcagctg gtggggccgt gcatacccgg 900

ggtcttgact tcgcctgcga tatctacatt tgggcccctc tggctggtac ttgcggggtc 960

ctgctgcttt cactcgtgat cactctttac tgtaagcgcg gtcggaagaa gctgctgtac 1020

atctttaagc aacccttcat gaggcctgtg cagactactc aagaggagga cggctgttca 1080

tgccggttcc cagaggagga ggaaggcggc tgcgaactgc gcgtgaaatt cagccgcagc 1140

gcagatgctc cagcctacaa gcaggggcag aaccagctct acaacgaact caatcttggt 1200

cggagagagg agtacgacgt gctggacaag cggagaggac gggacccaga aatgggcggg 1260

aagccgcgca gaaagaatcc ccaagagggc ctgtacaacg agctccaaaa ggataagatg 1320

gcagaagcct atagcgagat tggtatgaaa ggggaacgca gaagaggcaa aggccacgac 1380

ggactgtacc agggactcag caccgccacc aaggacacct atgacgctct tcacatgcag 1440

gccctgccgc ctcgg 1455

<210> 748
<211> 245
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 748
Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Gln
1 5 10 15

```
Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Gly Ser Ile Ser Ser Gly
            20                  25                  30

Gly Tyr Tyr Trp Ser Trp Ile Arg Gln His Pro Gly Lys Gly Leu Glu
        35                  40                  45

Trp Ile Gly Tyr Ile Tyr Tyr Ser Gly Ser Thr Tyr Tyr Asn Pro Ser
    50                  55                  60

Leu Lys Ser Arg Val Thr Ile Ser Val Asp Thr Ser Lys Asn Gln Phe
65                  70                  75                  80

Ser Leu Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr
                85                  90                  95

Cys Ala Arg Ala Gly Ile Ala Ala Arg Leu Arg Gly Ala Phe Asp Ile
            100                 105                 110

Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly Gly Ser
        115                 120                 125

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Val Met Thr Gln
    130                 135                 140

Ser Pro Ser Ser Val Ser Ala Ser Val Gly Asp Arg Val Ile Ile Thr
145                 150                 155                 160

Cys Arg Ala Ser Gln Gly Ile Arg Asn Trp Leu Ala Trp Tyr Gln Gln
                165                 170                 175

Lys Pro Gly Lys Ala Pro Asn Leu Leu Ile Tyr Ala Ala Ser Asn Leu
            180                 185                 190

Gln Ser Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly Ala Asp
        195                 200                 205

Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro Glu Asp Val Ala Thr Tyr
    210                 215                 220

Tyr Cys Gln Lys Tyr Asn Ser Ala Pro Phe Thr Phe Gly Pro Gly Thr
225                 230                 235                 240
```

Lys Val Asp Ile Lys
245

<210> 749
<211> 735
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 749
caagtgcagc ttcaggagag cggcccggga ctcgtgaagc cgtcccagac cctgtccctg 60

acttgcaccg tgtcgggagg aagcatctcg agcggaggct actattggtc gtggattcgg 120

cagcaccctg gaaagggcct ggaatggatc ggctacatct actactccgg ctcgacctac 180

tacaacccat cgctgaagtc cagagtgaca atctcagtgg acacgtccaa gaatcagttc 240

agcctgaagc tctcttccgt gactgcggcc gacaccgccg tgtactactg cgcacgcgct 300

ggaattgccg cccggctgag gggtgccttc gacatttggg gacagggcac catggtcacc 360

gtgtcctccg gcggcggagg ttccgggggt ggaggctcag gaggaggggg gtccgacatc 420

gtcatgactc agtcgccctc aagcgtcagc gcgtccgtcg gggacagagt gatcatcacc 480

tgtcgggcgt cccagggaat tcgcaactgg ctggcctggt atcagcagaa gcccggaaag 540

gcccccaacc tgttgatcta cgccgcctca aacctccaat ccggggtgcc gagccgcttc 600

agcggctccg gttcgggtgc cgatttcact ctgaccatct cctccctgca acctgaagat 660

gtggctacct actactgcca aaagtacaac tccgcacctt ttactttcgg accggggacc 720

aaagtggaca ttaag 735

<210> 750
<211> 123
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 750
Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Gln
1   5   10   15

Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Gly Ser Ile Ser Ser Gly
            20   25   30

Gly Tyr Tyr Trp Ser Trp Ile Arg Gln His Pro Gly Lys Gly Leu Glu
        35   40   45

Trp Ile Gly Tyr Ile Tyr Tyr Ser Gly Ser Thr Tyr Tyr Asn Pro Ser
    50   55   60

Leu Lys Ser Arg Val Thr Ile Ser Val Asp Thr Ser Lys Asn Gln Phe
65   70   75   80

Ser Leu Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr
                85   90   95

Cys Ala Arg Ala Gly Ile Ala Ala Arg Leu Arg Gly Ala Phe Asp Ile
            100   105   110

Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser
        115   120

<210> 751
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 751
Asp Ile Val Met Thr Gln Ser Pro Ser Ser Val Ser Ala Ser Val Gly
1   5   10   15

Asp Arg Val Ile Ile Thr Cys Arg Ala Ser Gln Gly Ile Arg Asn Trp
            20   25   30

Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Asn Leu Leu Ile
        35   40   45

Tyr Ala Ala Ser Asn Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
    50   55   60

Ser Gly Ser Gly Ala Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
65   70   75   80

Glu Asp Val Ala Thr Tyr Tyr Cys Gln Lys Tyr Asn Ser Ala Pro Phe
                85   90   95

Thr Phe Gly Pro Gly Thr Lys Val Asp Ile Lys
            100   105

<210> 752
<211> 489
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 752
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1   5   10   15

His Ala Ala Arg Pro Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu
            20   25   30

Val Lys Pro Ser Gln Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Gly
        35   40   45

Ser Ile Ser Ser Gly Gly Tyr Tyr Trp Ser Trp Ile Arg Gln His Pro
    50   55   60

Gly Lys Gly Leu Glu Trp Ile Gly Tyr Ile Tyr Tyr Ser Gly Ser Thr
65   70   75   80

Tyr Tyr Asn Pro Ser Leu Lys Ser Arg Val Thr Ile Ser Val Asp Thr
                85   90   95

Ser Lys Asn Gln Phe Ser Leu Lys Leu Ser Ser Val Thr Ala Ala Asp

```
            100                 105                 110

Thr Ala Val Tyr Tyr Cys Ala Arg Ala Gly Ile Ala Ala Arg Leu Arg
        115                 120                 125

Gly Ala Phe Asp Ile Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser
    130                 135                 140

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp
145                 150                 155                 160

Ile Val Met Thr Gln Ser Pro Ser Ser Val Ser Ala Ser Val Gly Asp
                165                 170                 175

Arg Val Ile Ile Thr Cys Arg Ala Ser Gln Gly Ile Arg Asn Trp Leu
            180                 185                 190

Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Asn Leu Leu Ile Tyr
        195                 200                 205

Ala Ala Ser Asn Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly Ser
    210                 215                 220

Gly Ser Gly Ala Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro Glu
225                 230                 235                 240

Asp Val Ala Thr Tyr Tyr Cys Gln Lys Tyr Asn Ser Ala Pro Phe Thr
                245                 250                 255

Phe Gly Pro Gly Thr Lys Val Asp Ile Lys Thr Thr Thr Pro Ala Pro
            260                 265                 270

Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser Leu
        275                 280                 285

Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr Arg
    290                 295                 300

Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala Gly
305                 310                 315                 320
```

```
Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr Cys Lys
                325                 330                 335

Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met Arg
            340                 345                 350

Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro
        355                 360                 365

Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg Ser
    370                 375                 380

Ala Asp Ala Pro Ala Tyr Lys Gln Gly Gln Asn Gln Leu Tyr Asn Glu
385                 390                 395                 400

Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg
                405                 410                 415

Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln
            420                 425                 430

Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr
        435                 440                 445

Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His Asp
    450                 455                 460

Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala
465                 470                 475                 480

Leu His Met Gln Ala Leu Pro Pro Arg
                485
```

<210> 753
<211> 1467
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 753
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

ccccaagtgc agcttcagga gagcggcccg ggactcgtga agccgtccca gaccctgtcc 120

ctgacttgca ccgtgtcggg aggaagcatc tcgagcggag gctactattg gtcgtggatt 180

cggcagcacc ctggaaaggg cctggaatgg atcggctaca tctactactc cggctcgacc 240

tactacaacc catcgctgaa gtccagagtg acaatctcag tggacacgtc caagaatcag 300

ttcagcctga agctctcttc cgtgactgcg gccgacaccg ccgtgtacta ctgcgcacgc 360

gctggaattg ccgcccggct gaggggtgcc ttcgacattt ggggacaggg caccatggtc 420

accgtgtcct ccggcggcgg aggttccggg ggtggaggct caggaggagg ggggtccgac 480

atcgtcatga ctcagtcgcc ctcaagcgtc agcgcgtccg tcggggacag agtgatcatc 540

acctgtcggg cgtcccaggg aattcgcaac tggctggcct ggtatcagca gaagcccgga 600

aaggccccca acctgttgat ctacgccgcc tcaaacctcc aatccggggt gccgagccgc 660

ttcagcggct ccggttcggg tgccgatttc actctgacca tctcctccct gcaacctgaa 720

gatgtggcta cctactactg ccaaaagtac aactccgcac cttttacttt cggaccgggg 780

accaaagtgg acattaagac cactacccca gcaccgaggc cacccacccc ggctcctacc 840

atcgcctccc agcctctgtc cctgcgtccg gaggcatgta gacccgcagc tggtggggcc 900

gtgcataccc ggggtcttga cttcgcctgc gatatctaca tttgggcccc tctggctggt 960

acttgcgggg tcctgctgct ttcactcgtg atcactcttt actgtaagcg cggtcggaag 1020

aagctgctgt acatctttaa gcaacccttc atgaggcctg tgcagactac tcaagaggag 1080

gacggctgtt catgccggtt cccagaggag gaggaaggcg gctgcgaact gcgcgtgaaa 1140

ttcagccgca gcgcagatgc tccagcctac aagcaggggc agaaccagct ctacaacgaa 1200

ctcaatcttg gtcggagaga ggagtacgac gtgctggaca agcggagagg acgggaccca 1260

gaaatgggcg ggaagccgcg cagaaagaat ccccaagagg gcctgtacaa cgagctccaa 1320

aaggataaga tggcagaagc ctatagcgag attggtatga aaggggaacg cagaagaggc 1380

aaaggccacg acggactgta ccagggactc agcaccgcca ccaaggacac ctatgacgct 1440

cttcacatgc aggccctgcc gcctcgg 1467

<210> 754

<211> 253
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 754
Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ser
1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Gly Thr Phe Ser Ser Tyr
20 25 30

Ala Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45

Gly Gly Ile Ile Pro Ile Phe Gly Thr Ala Asn Tyr Ala Gln Lys Phe
50 55 60

Gln Gly Arg Val Thr Ile Thr Ala Asp Glu Ser Thr Ser Thr Ala Tyr
65 70 75 80

Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Arg Gly Gly Tyr Gln Leu Leu Arg Trp Asp Val Gly Leu Leu
100 105 110

Arg Ser Ala Phe Asp Ile Trp Gly Gln Gly Thr Met Val Thr Val Ser
115 120 125

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
130 135 140

Ser Tyr Val Leu Thr Gln Pro Pro Ser Val Ser Val Ala Pro Gly Gln
145 150 155 160

Thr Ala Arg Ile Thr Cys Gly Gly Asn Asn Ile Gly Ser Lys Ser Val
165 170 175

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His Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Val Leu Val Leu Tyr
            180                 185                 190


Gly Lys Asn Asn Arg Pro Ser Gly Val Pro Asp Arg Phe Ser Gly Ser
        195                 200                 205


Arg Ser Gly Thr Thr Ala Ser Leu Thr Ile Thr Gly Ala Gln Ala Glu
    210                 215                 220


Asp Glu Ala Asp Tyr Tyr Cys Ser Ser Arg Asp Ser Ser Gly Asp His
225                 230                 235                 240


Leu Arg Val Phe Gly Thr Gly Thr Lys Val Thr Val Leu
                245                 250


<210> 755
<211> 759
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polynucleotide"

<400> 755
caagtgcagc tggtccagtc gggcgccgag gtcaagaagc ccgggagctc tgtgaaagtg       60

tcctgcaagg cctccggggg cacctttagc tcctacgcca tctcctgggt ccgccaagca      120

ccgggtcaag gcctggagtg gatgggggga attatcccta tcttcggcac tgccaactac      180

gcccagaagt tccagggacg cgtgaccatt accgcggacg aatccacctc caccgcttat      240

atggagctgt ccagcttgcg ctcggaagat accgccgtgt actactgcgc ccggaggggt      300

ggataccagc tgctgagatg ggacgtgggc ctcctgcggt cggcgttcga catctggggc      360

cagggcacta tggtcactgt gtccagcgga ggaggcggat cgggaggcgg cggatcaggg      420

ggaggcggtt ccagctacgt gcttactcaa ccccccttcgg tgtccgtggc cccgggacag      480

accgccagaa tcacttgcgg aggaaacaac attgggtcca agagcgtgca ttggtaccag      540

cagaagccag gacaggcccc tgtgctggtg ctctacggga agaacaatcg gcccagcgga      600

gtgccggaca ggttctcggg ttcacgctcc ggtacaaccg cttcactgac tatcaccggg      660

gcccaggcag aggatgaagc ggactactac tgttcctccc gggattcatc cggcgaccac      720
```

ctccgggtgt tcggaaccgg aacgaaggtc accgtgctg 759

<210> 756
<211> 129
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 756
Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ser
1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Gly Thr Phe Ser Ser Tyr
20 25 30

Ala Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45

Gly Gly Ile Ile Pro Ile Phe Gly Thr Ala Asn Tyr Ala Gln Lys Phe
50 55 60

Gln Gly Arg Val Thr Ile Thr Ala Asp Glu Ser Thr Ser Thr Ala Tyr
65 70 75 80

Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Arg Gly Gly Tyr Gln Leu Leu Arg Trp Asp Val Gly Leu Leu
100 105 110

Arg Ser Ala Phe Asp Ile Trp Gly Gln Gly Thr Met Val Thr Val Ser
115 120 125

Ser

<210> 757
<211> 109
<212> PRT

<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 757
Ser Tyr Val Leu Thr Gln Pro Pro Ser Val Ser Val Ala Pro Gly Gln
1 5 10 15

Thr Ala Arg Ile Thr Cys Gly Gly Asn Asn Ile Gly Ser Lys Ser Val
20 25 30

His Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Val Leu Val Leu Tyr
35 40 45

Gly Lys Asn Asn Arg Pro Ser Gly Val Pro Asp Arg Phe Ser Gly Ser
50 55 60

Arg Ser Gly Thr Thr Ala Ser Leu Thr Ile Thr Gly Ala Gln Ala Glu
65 70 75 80

Asp Glu Ala Asp Tyr Tyr Cys Ser Ser Arg Asp Ser Ser Gly Asp His
85 90 95

Leu Arg Val Phe Gly Thr Gly Thr Lys Val Thr Val Leu
100 105

<210> 758
<211> 497
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 758
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val
20 25 30

```
Lys Lys Pro Gly Ser Ser Val Lys Val Ser Cys Lys Ala Ser Gly Gly
        35                  40                  45

Thr Phe Ser Ser Tyr Ala Ile Ser Trp Val Arg Gln Ala Pro Gly Gln
    50                  55                  60

Gly Leu Glu Trp Met Gly Gly Ile Ile Pro Ile Phe Gly Thr Ala Asn
65                  70                  75                  80

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

Thr Ser Thr Ala Tyr Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr
            100                 105                 110

Ala Val Tyr Tyr Cys Ala Arg Arg Gly Gly Tyr Gln Leu Leu Arg Trp
        115                 120                 125

Asp Val Gly Leu Leu Arg Ser Ala Phe Asp Ile Trp Gly Gln Gly Thr
    130                 135                 140

Met Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
145                 150                 155                 160

Gly Gly Gly Gly Ser Ser Tyr Val Leu Thr Gln Pro Pro Ser Val Ser
                165                 170                 175

Val Ala Pro Gly Gln Thr Ala Arg Ile Thr Cys Gly Gly Asn Asn Ile
            180                 185                 190

Gly Ser Lys Ser Val His Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro
        195                 200                 205

Val Leu Val Leu Tyr Gly Lys Asn Asn Arg Pro Ser Gly Val Pro Asp
    210                 215                 220

Arg Phe Ser Gly Ser Arg Ser Gly Thr Thr Ala Ser Leu Thr Ile Thr
225                 230                 235                 240

Gly Ala Gln Ala Glu Asp Glu Ala Asp Tyr Tyr Cys Ser Ser Arg Asp
```

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               245                 250                 255

Ser Ser Gly Asp His Leu Arg Val Phe Gly Thr Gly Thr Lys Val Thr
            260                 265                 270

Val Leu Thr Thr Thr Pro Ala Pro Arg Pro Pro Thr Pro Ala Pro Thr
        275                 280                 285

Ile Ala Ser Gln Pro Leu Ser Leu Arg Pro Glu Ala Cys Arg Pro Ala
    290                 295                 300

Ala Gly Gly Ala Val His Thr Arg Gly Leu Asp Phe Ala Cys Asp Ile
305                 310                 315                 320

Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly Val Leu Leu Leu Ser
                325                 330                 335

Leu Val Ile Thr Leu Tyr Cys Lys Arg Gly Arg Lys Lys Leu Leu Tyr
            340                 345                 350

Ile Phe Lys Gln Pro Phe Met Arg Pro Val Gln Thr Thr Gln Glu Glu
        355                 360                 365

Asp Gly Cys Ser Cys Arg Phe Pro Glu Glu Glu Glu Gly Gly Cys Glu
    370                 375                 380

Leu Arg Val Lys Phe Ser Arg Ser Ala Asp Ala Pro Ala Tyr Lys Gln
385                 390                 395                 400

Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu
                405                 410                 415

Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg Asp Pro Glu Met Gly Gly
            420                 425                 430

Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu Tyr Asn Glu Leu Gln
        435                 440                 445

Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile Gly Met Lys Gly Glu
    450                 455                 460
```

Arg Arg Arg Gly Lys Gly His Asp Gly Leu Tyr Gln Gly Leu Ser Thr
465 470 475 480

Ala Thr Lys Asp Thr Tyr Asp Ala Leu His Met Gln Ala Leu Pro Pro
485 490 495

Arg

<210> 759
<211> 1491
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 759
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

ccccaagtgc agctggtcca gtcgggcgcc gaggtcaaga agcccgggag ctctgtgaaa 120

gtgtcctgca aggcctccgg gggcaccttt agctcctacg ccatctcctg ggtccgccaa 180

gcaccgggtc aaggcctgga gtggatgggg ggaattatcc ctatcttcgg cactgccaac 240

tacgcccaga agttccaggg acgcgtgacc attaccgcgg acgaatccac ctccaccgct 300

tatatggagc tgtccagctt gcgctcggaa gataccgccg tgtactactg cgcccggagg 360

ggtggatacc agctgctgag atgggacgtg ggcctcctgc ggtcggcgtt cgacatctgg 420

ggccagggca ctatggtcac tgtgtccagc ggaggaggcg gatcgggagg cggcggatca 480

gggggaggcg gttccagcta cgtgcttact caacccccctt cggtgtccgt ggccccggga 540

cagaccgcca gaatcacttg cggaggaaac aacattgggt ccaagagcgt gcattggtac 600

cagcagaagc caggacaggc ccctgtgctg gtgctctacg ggaagaacaa tcggcccagc 660

ggagtgccgg acaggttctc gggttcacgc tccggtacaa ccgcttcact gactatcacc 720

ggggcccagg cagaggatga agcggactac tactgttcct cccgggattc atccggcgac 780

cacctccggg tgttcggaac cggaacgaag gtcaccgtgc tgaccactac cccagcaccg 840

aggccaccca ccccggctcc taccatcgcc tcccagcctc tgtccctgcg tccggaggca 900

tgtagacccg cagctggtgg ggccgtgcat acccggggtc ttgacttcgc ctgcgatatc 960

tacatttggg cccctctggc tggtacttgc ggggtcctgc tgctttcact cgtgatcact 1020

ctttactgta agcgcggtcg gaagaagctg ctgtacatct ttaagcaacc cttcatgagg 1080

cctgtgcaga ctactcaaga ggaggacggc tgttcatgcc ggttcccaga ggaggaggaa 1140

ggcggctgcg aactgcgcgt gaaattcagc cgcagcgcag atgctccagc ctacaagcag 1200

gggcagaacc agctctacaa cgaactcaat cttggtcgga gagaggagta cgacgtgctg 1260

gacaagcgga gaggacggga cccagaaatg ggcgggaagc cgcgcagaaa gaatccccaa 1320

gagggcctgt acaacgagct ccaaaaggat aagatggcag aagcctatag cgagattggt 1380

atgaaagggg aacgcagaag aggcaaaggc cacgacggac tgtaccaggg actcagcacc 1440

gccaccaagg acacctatga cgctcttcac atgcaggccc tgccgcctcg g 1491

<210> 760
<211> 248
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 760
Glu Val Gln Leu Gln Gln Ser Gly Pro Gly Leu Val Lys Pro Ser Gln
1 5 10 15

Thr Leu Ser Leu Thr Cys Ala Ile Ser Gly Asp Ser Val Ser Ser Asn
20 25 30

Ser Ala Ala Trp Asn Trp Ile Arg Gln Ser Pro Ser Arg Gly Leu Glu
35 40 45

Trp Leu Gly Arg Thr Tyr Tyr Arg Ser Lys Trp Tyr Ser Phe Tyr Ala
50 55 60

Ile Ser Leu Lys Ser Arg Ile Ile Ile Asn Pro Asp Thr Ser Lys Asn
65 70 75 80

Gln Phe Ser Leu Gln Leu Lys Ser Val Thr Pro Glu Asp Thr Ala Val
85 90 95

```
Tyr Tyr Cys Ala Arg Ser Ser Pro Glu Gly Leu Phe Leu Tyr Trp Phe
            100                 105                 110


Asp Pro Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly Asp
        115                 120                 125


Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ser Ser Glu Leu
    130                 135                 140


Thr Gln Asp Pro Ala Val Ser Val Ala Leu Gly Gln Thr Ile Arg Ile
145                 150                 155                 160


Thr Cys Gln Gly Asp Ser Leu Gly Asn Tyr Tyr Ala Thr Trp Tyr Gln
                165                 170                 175


Gln Lys Pro Gly Gln Ala Pro Val Leu Val Ile Tyr Gly Thr Asn Asn
            180                 185                 190


Arg Pro Ser Gly Ile Pro Asp Arg Phe Ser Ala Ser Ser Ser Gly Asn
        195                 200                 205


Thr Ala Ser Leu Thr Ile Thr Gly Ala Gln Ala Glu Asp Glu Ala Asp
    210                 215                 220


Tyr Tyr Cys Asn Ser Arg Asp Ser Ser Gly His His Leu Leu Phe Gly
225                 230                 235                 240


Thr Gly Thr Lys Val Thr Val Leu
                245


<210> 761
<211> 744
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polynucleotide"

<400> 761
gaagtgcagc tccaacagtc aggaccgggg ctcgtgaagc catcccagac cctgtccctg       60
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acttgtgcca tctcgggaga tagcgtgtca tcgaactccg ccgcctggaa ctggattcgg 120

cagagcccgt cccgcggact ggagtggctt ggaaggacct actaccggtc caagtggtac 180

tctttctacg cgatctcgct gaagtcccgc attatcatta accctgatac ctccaagaat 240

cagttctccc tccaactgaa atccgtcacc cccgaggaca cagcagtgta ttactgcgca 300

cggagcagcc ccgaaggact gttcctgtat tggtttgacc cctggggcca ggggactctt 360

gtgaccgtgt cgagcggcgg agatgggtcc ggtggcggtg gttcgggggg cggcggatca 420

tcatccgaac tgacccagga cccggctgtg tccgtggcgc tgggacaaac catccgcatt 480

acgtgccagg gagactccct gggcaactac tacgccactt ggtaccagca gaagccgggc 540

caagcccctg tgttggtcat ctacgggacc aacaacagac cttccggcat ccccgaccgg 600

ttcagcgctt cgtcctccgg caacactgcc agcctgacca tcactggagc gcaggccgaa 660

gatgaggccg actactactg caacagcaga gactcctcgg gtcatcacct cttgttcgga 720

actggaacca aggtcaccgt gctg 744

<210> 762
<211> 125
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 762
Glu Val Gln Leu Gln Gln Ser Gly Pro Gly Leu Val Lys Pro Ser Gln
1 5 10 15

Thr Leu Ser Leu Thr Cys Ala Ile Ser Gly Asp Ser Val Ser Ser Asn
20 25 30

Ser Ala Ala Trp Asn Trp Ile Arg Gln Ser Pro Ser Arg Gly Leu Glu
35 40 45

Trp Leu Gly Arg Thr Tyr Tyr Arg Ser Lys Trp Tyr Ser Phe Tyr Ala
50 55 60

Ile Ser Leu Lys Ser Arg Ile Ile Ile Asn Pro Asp Thr Ser Lys Asn

65 70 75 80

Gln Phe Ser Leu Gln Leu Lys Ser Val Thr Pro Glu Asp Thr Ala Val
85 90 95

Tyr Tyr Cys Ala Arg Ser Ser Pro Glu Gly Leu Phe Leu Tyr Trp Phe
100 105 110

Asp Pro Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
115 120 125

<210> 763
<211> 108
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 763
Ser Ser Glu Leu Thr Gln Asp Pro Ala Val Ser Val Ala Leu Gly Gln
1 5 10 15

Thr Ile Arg Ile Thr Cys Gln Gly Asp Ser Leu Gly Asn Tyr Tyr Ala
20 25 30

Thr Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Val Leu Val Ile Tyr
35 40 45

Gly Thr Asn Asn Arg Pro Ser Gly Ile Pro Asp Arg Phe Ser Ala Ser
50 55 60

Ser Ser Gly Asn Thr Ala Ser Leu Thr Ile Thr Gly Ala Gln Ala Glu
65 70 75 80

Asp Glu Ala Asp Tyr Tyr Cys Asn Ser Arg Asp Ser Ser Gly His His
85 90 95

Leu Leu Phe Gly Thr Gly Thr Lys Val Thr Val Leu
100 105

<210> 764
<211> 492
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 764
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Glu Val Gln Leu Gln Gln Ser Gly Pro Gly Leu
20 25 30

Val Lys Pro Ser Gln Thr Leu Ser Leu Thr Cys Ala Ile Ser Gly Asp
35 40 45

Ser Val Ser Ser Asn Ser Ala Ala Trp Asn Trp Ile Arg Gln Ser Pro
50 55 60

Ser Arg Gly Leu Glu Trp Leu Gly Arg Thr Tyr Tyr Arg Ser Lys Trp
65 70 75 80

Tyr Ser Phe Tyr Ala Ile Ser Leu Lys Ser Arg Ile Ile Ile Asn Pro
85 90 95

Asp Thr Ser Lys Asn Gln Phe Ser Leu Gln Leu Lys Ser Val Thr Pro
100 105 110

Glu Asp Thr Ala Val Tyr Tyr Cys Ala Arg Ser Ser Pro Glu Gly Leu
115 120 125

Phe Leu Tyr Trp Phe Asp Pro Trp Gly Gln Gly Thr Leu Val Thr Val
130 135 140

Ser Ser Gly Gly Asp Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly
145 150 155 160

Ser Ser Ser Glu Leu Thr Gln Asp Pro Ala Val Ser Val Ala Leu Gly
165 170 175

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Gln Thr Ile Arg Ile Thr Cys Gln Gly Asp Ser Leu Gly Asn Tyr Tyr
            180                 185                 190

Ala Thr Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Val Leu Val Ile
        195                 200                 205

Tyr Gly Thr Asn Asn Arg Pro Ser Gly Ile Pro Asp Arg Phe Ser Ala
    210                 215                 220

Ser Ser Ser Gly Asn Thr Ala Ser Leu Thr Ile Thr Gly Ala Gln Ala
225                 230                 235                 240

Glu Asp Glu Ala Asp Tyr Tyr Cys Asn Ser Arg Asp Ser Ser Gly His
                245                 250                 255

His Leu Leu Phe Gly Thr Gly Thr Lys Val Thr Val Leu Thr Thr Thr
            260                 265                 270

Pro Ala Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro
        275                 280                 285

Leu Ser Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala Val
    290                 295                 300

His Thr Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro
305                 310                 315                 320

Leu Ala Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr Leu
                325                 330                 335

Tyr Cys Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro
            340                 345                 350

Phe Met Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys
        355                 360                 365

Arg Phe Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg Val Lys Phe
    370                 375                 380

Ser Arg Ser Ala Asp Ala Pro Ala Tyr Lys Gln Gly Gln Asn Gln Leu
```

385 390 395 400

Tyr Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp
405 410 415

Lys Arg Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys
420 425 430

Asn Pro Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala
435 440 445

Glu Ala Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys
450 455 460

Gly His Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr
465 470 475 480

Tyr Asp Ala Leu His Met Gln Ala Leu Pro Pro Arg
485 490

<210> 765
<211> 1476
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 765
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

cccgaagtgc agctccaaca gtcaggaccg gggctcgtga agccatccca gaccctgtcc 120

ctgacttgtg ccatctcggg agatagcgtg tcatcgaact ccgccgcctg gaactggatt 180

cggcagagcc cgtcccgcgg actggagtgg cttggaagga cctactaccg gtccaagtgg 240

tactctttct acgcgatctc gctgaagtcc cgcattatca ttaaccctga tacctccaag 300

aatcagttct ccctccaact gaaatccgtc acccccgagg acacagcagt gtattactgc 360

gcacggagca gccccgaagg actgttcctg tattggtttg acccctgggg ccaggggact 420

cttgtgaccg tgtcgagcgg cggagatggg tccggtggcg gtggttcggg gggcggcgga 480

tcatcatccg aactgaccca ggacccggct gtgtccgtgg cgctgggaca aaccatccgc 540

attacgtgcc agggagactc cctgggcaac tactacgcca cttggtacca gcagaagccg 600

ggccaagccc ctgtgttggt catctacggg accaacaaca gaccttccgg catccccgac 660

cggttcagcg cttcgtcctc cggcaacact gccagcctga ccatcactgg agcgcaggcc 720

gaagatgagg ccgactacta ctgcaacagc agagactcct cgggtcatca cctcttgttc 780

ggaactggaa ccaaggtcac cgtgctgacc actaccccag caccgaggcc acccaccccg 840

gctcctacca tcgcctccca gcctctgtcc ctgcgtccgg aggcatgtag acccgcagct 900

ggtggggccg tgcatacccg gggtcttgac ttcgcctgcg atatctacat ttgggcccct 960

ctggctggta cttgcggggt cctgctgctt tcactcgtga tcactcttta ctgtaagcgc 1020

ggtcggaaga agctgctgta catctttaag caacccttca tgaggcctgt gcagactact 1080

caagaggagg acggctgttc atgccggttc ccagaggagg aggaaggcgg ctgcgaactg 1140

cgcgtgaaat tcagccgcag cgcagatgct ccagcctaca agcaggggca gaaccagctc 1200

tacaacgaac tcaatcttgg tcggagagag gagtacgacg tgctggacaa gcggagagga 1260

cgggacccag aaatgggcgg gaagccgcgc agaaagaatc cccaagaggg cctgtacaac 1320

gagctccaaa aggataagat ggcagaagcc tatagcgaga ttggtatgaa aggggaacgc 1380

agaagaggca aaggccacga cggactgtac cagggactca gcaccgccac caaggacacc 1440

tatgacgctc ttcacatgca ggccctgccg cctcgg 1476

<210> 766
<211> 246
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 766
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr
20 25 30

```
Ala Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35                  40                  45

Ser Ala Ile Ser Gly Ser Gly Gly Ser Thr Tyr Tyr Ala Asp Ser Val
    50                  55                  60

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
65                  70                  75                  80

Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
                85                  90                  95

Ala Lys Val Glu Gly Ser Gly Ser Leu Asp Tyr Trp Gly Gln Gly Thr
            100                 105                 110

Leu Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
        115                 120                 125

Gly Gly Gly Gly Ser Glu Ile Val Met Thr Gln Ser Pro Gly Thr Leu
    130                 135                 140

Ser Leu Ser Pro Gly Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln
145                 150                 155                 160

Ser Val Ser Ser Ala Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln
                165                 170                 175

Pro Pro Arg Leu Leu Ile Ser Gly Ala Ser Thr Arg Ala Thr Gly Ile
            180                 185                 190

Pro Asp Arg Phe Gly Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr
        195                 200                 205

Ile Ser Arg Leu Glu Pro Glu Asp Phe Ala Val Tyr Tyr Cys Gln His
    210                 215                 220

Tyr Gly Ser Ser Phe Asn Gly Ser Ser Leu Phe Thr Phe Gly Gln Gly
225                 230                 235                 240

Thr Arg Leu Glu Ile Lys
                245
```

<210> 767
<211> 738
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 767
gaagtgcagc tcgtggagtc aggaggcggc ctggtccagc cgggagggtc ccttagactg 60

tcatgcgccg caagcggatt cactttctcc tcctatgcca tgagctgggt ccgccaagcc 120

cccggaaagg gactggaatg ggtgtccgcc atctcggggt ctggaggctc aacttactac 180

gctgactccg tgaagggacg gttcaccatt agccgcgaca actccaagaa caccctctac 240

ctccaaatga actccctgcg ggccgaggat accgccgtct actactgcgc caaagtggaa 300

ggttcaggat cgctggacta ctggggacag ggtactctcg tgaccgtgtc atcgggcgga 360

ggaggttccg gcggtggcgg ctccggcggc ggagggtcgg agatcgtgat gacccagagc 420

cctggtactc tgagcctttc gccgggagaa agggccaccc tgtcctgccg cgcttcccaa 480

tccgtgtcct ccgcgtactt ggcgtggtac cagcagaagc cgggacagcc ccctcggctg 540

ctgatcagcg gggccagcac ccgggcaacc ggaatcccag acagattcgg gggttccggc 600

agcggcacag atttcaccct gactatttcg aggttggagc ccgaggactt tgcggtgtat 660

tactgtcagc actacgggtc gtcctttaat ggctccagcc tgttcacgtt cggacagggg 720

acccgcctgg aaatcaag 738

<210> 768
<211> 118
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 768
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr
            20   25   30

Ala Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35   40   45

Ser Ala Ile Ser Gly Ser Gly Gly Ser Thr Tyr Tyr Ala Asp Ser Val
    50   55   60

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
65   70   75   80

Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
                85   90   95

Ala Lys Val Glu Gly Ser Gly Ser Leu Asp Tyr Trp Gly Gln Gly Thr
            100   105   110

Leu Val Thr Val Ser Ser
        115

<210> 769
<211> 113
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 769
Glu Ile Val Met 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 Ser Ala
            20   25   30

Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro Arg Leu Leu
        35   40   45

Ile Ser Gly Ala Ser Thr Arg Ala Thr Gly Ile Pro Asp Arg Phe Gly
    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 His Tyr Gly Ser Ser Phe
85 90 95

Asn Gly Ser Ser Leu Phe Thr Phe Gly Gln Gly Thr Arg Leu Glu Ile
100 105 110

Lys

<210> 770
<211> 490
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 770
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu
20 25 30

Val Gln Pro Gly Gly Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe
35 40 45

Thr Phe Ser Ser Tyr Ala Met Ser Trp Val Arg Gln Ala Pro Gly Lys
50 55 60

Gly Leu Glu Trp Val Ser Ala Ile Ser Gly Ser Gly Gly Ser Thr Tyr
65 70 75 80

Tyr Ala Asp Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser
85 90 95

Lys Asn Thr Leu Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr

```
            100                 105                 110

Ala Val Tyr Tyr Cys Ala Lys Val Glu Gly Ser Gly Ser Leu Asp Tyr
        115                 120                 125

Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly Gly Ser
    130                 135                 140

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Ile Val Met Thr Gln
145                 150                 155                 160

Ser Pro Gly Thr Leu Ser Leu Ser Pro Gly Glu Arg Ala Thr Leu Ser
                165                 170                 175

Cys Arg Ala Ser Gln Ser Val Ser Ser Ala Tyr Leu Ala Trp Tyr Gln
            180                 185                 190

Gln Lys Pro Gly Gln Pro Pro Arg Leu Leu Ile Ser Gly Ala Ser Thr
        195                 200                 205

Arg Ala Thr Gly Ile Pro Asp Arg Phe Gly Gly Ser Gly Ser Gly Thr
    210                 215                 220

Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu Asp Phe Ala Val
225                 230                 235                 240

Tyr Tyr Cys Gln His Tyr Gly Ser Ser Phe Asn Gly Ser Ser Leu Phe
                245                 250                 255

Thr Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Thr Thr Thr Pro Ala
            260                 265                 270

Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser
        275                 280                 285

Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr
    290                 295                 300

Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala
305                 310                 315                 320
```

Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr Cys
325 330 335

Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met
340 345 350

Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe
355 360 365

Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg
370 375 380

Ser Ala Asp Ala Pro Ala Tyr Lys Gln Gly Gln Asn Gln Leu Tyr Asn
385 390 395 400

Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg
405 410 415

Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro
420 425 430

Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala
435 440 445

Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His
450 455 460

Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp
465 470 475 480

Ala Leu His Met Gln Ala Leu Pro Pro Arg
485 490

<210> 771
<211> 1470
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 771
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

cccgaagtgc agctcgtgga gtcaggaggc ggcctggtcc agccgggagg gtcccttaga 120

ctgtcatgcg ccgcaagcgg attcactttc tcctcctatg ccatgagctg ggtccgccaa 180

gcccccggaa agggactgga atgggtgtcc gccatctcgg ggtctggagg ctcaacttac 240

tacgctgact ccgtgaaggg acggttcacc attagccgcg acaactccaa gaacaccctc 300

tacctccaaa tgaactccct gcgggccgag gataccgccg tctactactg cgccaaagtg 360

gaaggttcag gatcgctgga ctactgggga cagggtactc tcgtgaccgt gtcatcgggc 420

ggaggaggtt ccggcggtgg cggctccggc ggcggagggt cggagatcgt gatgacccag 480

agccctggta ctctgagcct ttcgccggga gaaagggcca ccctgtcctg ccgcgcttcc 540

caatccgtgt cctccgcgta cttggcgtgg taccagcaga agccgggaca gccccctcgg 600

ctgctgatca gcggggccag cacccgggca accggaatcc cagacagatt cgggggttcc 660

ggcagcggca cagatttcac cctgactatt tcgaggttgg agcccgagga ctttgcggtg 720

tattactgtc agcactacgg gtcgtccttt aatggctcca gcctgttcac gttcggacag 780

gggacccgcc tggaaatcaa gaccactacc ccagcaccga ggccacccac cccggctcct 840

accatcgcct cccagcctct gtccctgcgt ccggaggcat gtagacccgc agctggtggg 900

gccgtgcata cccggggtct tgacttcgcc tgcgatatct acatttgggc ccctctggct 960

ggtacttgcg gggtcctgct gctttcactc gtgatcactc tttactgtaa gcgcggtcgg 1020

aagaagctgc tgtacatctt taagcaaccc ttcatgaggc ctgtgcagac tactcaagag 1080

gaggacggct gttcatgccg gttcccagag gaggaggaag gcggctgcga actgcgcgtg 1140

aaattcagcc gcagcgcaga tgctccagcc tacaagcagg ggcagaacca gctctacaac 1200

gaactcaatc ttggtcggag agaggagtac gacgtgctgg acaagcggag aggacgggac 1260

ccagaaatgg gcgggaagcc gcgcagaaag aatccccaag agggcctgta caacgagctc 1320

caaaaggata agatggcaga agcctatagc gagattggta tgaaaggggа acgcagaaga 1380

ggcaaaggcc acgacggact gtaccaggga ctcagcaccg ccaccaagga cacctatgac 1440

gctcttcaca tgcaggccct gccgcctcgg 1470

<210> 772

<211> 241
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 772
Glu Val Gln Leu Val Glu Thr Gly Gly Gly Leu Val Gln Pro Gly Gly
1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Ile Thr Phe Ser Arg Tyr
20 25 30

Pro Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45

Ser Gly Ile Ser Asp Ser Gly Val Ser Thr Tyr Tyr Ala Asp Ser Ala
50 55 60

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Phe
65 70 75 80

Leu Gln Met Ser Ser Leu Arg Asp Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Val Thr Arg Ala Gly Ser Glu Ala Ser Asp Ile Trp Gly Gln Gly Thr
100 105 110

Met Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
115 120 125

Gly Gly Gly Gly Ser Glu Ile Val Leu Thr Gln Ser Pro Ala Thr Leu
130 135 140

Ser Leu Ser Pro Gly Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln
145 150 155 160

Ser Val Ser Asn Ser Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala
165 170 175

Pro Arg Leu Leu Ile Tyr Asp Ala Ser Ser Arg Ala Thr Gly Ile Pro
            180   185   190

Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile
        195   200   205

Ser Arg Leu Glu Pro Glu Asp Phe Ala Ile Tyr Tyr Cys Gln Gln Phe
    210   215   220

Gly Thr Ser Ser Gly Leu Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile
225   230   235   240

Lys

<210> 773
<211> 723
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polynucleotide"

<400> 773
gaagtgcaac tggtggaaac cggtggcggc ctggtgcagc ctggaggatc attgaggctg 60

tcatgcgcgg ccagcggtat taccttctcc cggtacccca tgtcctgggt cagacaggcc 120

ccggggaaag ggcttgaatg ggtgtccggg atctcggact ccggtgtcag cacttactac 180

gccgactccg ccaagggacg cttcaccatt tcccgggaca actcgaagaa caccctgttc 240

ctccaaatga gctccctccg ggacgaggat actgcagtgt actactgcgt gacccgcgcc 300

gggtccgagg cgtctgacat ttggggacag ggcactatgg tcaccgtgtc gtccggcgga 360

gggggctcgg gaggcggtgg cagcggagga ggagggtccg agatcgtgct gacccaatcc 420

ccggccaccc tctcgctgag ccctggagaa agggcaacct tgtcctgtcg cgcgagccag 480

tccgtgagca actccctggc ctggtaccag cagaagcccg gacaggctcc gagacttctg 540

atctacgacg cttcgagccg ggccactgga atccccgacc gcttttcggg gtccggctca 600

ggaaccgatt tcaccctgac aatctcacgg ctggagccag aggatttcgc catctattac 660

tgccagcagt tcggtacttc ctccggcctg actttcggag gcggcacgaa gctcgaaatc 720

<210> 774
<211> 118
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 774
Glu Val Gln Leu Val Glu Thr Gly Gly Gly Leu Val Gln Pro Gly Gly
1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Ile Thr Phe Ser Arg Tyr
20 25 30

Pro Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45

Ser Gly Ile Ser Asp Ser Gly Val Ser Thr Tyr Tyr Ala Asp Ser Ala
50 55 60

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Phe
65 70 75 80

Leu Gln Met Ser Ser Leu Arg Asp Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Val Thr Arg Ala Gly Ser Glu Ala Ser Asp Ile Trp Gly Gln Gly Thr
100 105 110

Met Val Thr Val Ser Ser
115

<210> 775
<211> 108
<212> PRT
<213> Artificial Sequence

<220>
<221> source

<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 775
Glu Ile Val Leu Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly
1 5 10 15

Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Asn Ser
20 25 30

Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile
35 40 45

Tyr Asp Ala Ser Ser Arg Ala Thr Gly Ile Pro Asp Arg Phe Ser Gly
50 55 60

Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro
65 70 75 80

Glu Asp Phe Ala Ile Tyr Tyr Cys Gln Gln Phe Gly Thr Ser Ser Gly
85 90 95

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

<210> 776
<211> 485
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 776
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Glu Val Gln Leu Val Glu Thr Gly Gly Gly Leu
20 25 30

Val Gln Pro Gly Gly Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Ile
35 40 45

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Thr Phe Ser Arg Tyr Pro Met Ser Trp Val Arg Gln Ala Pro Gly Lys
    50                  55                  60

Gly Leu Glu Trp Val Ser Gly Ile Ser Asp Ser Gly Val Ser Thr Tyr
65                  70                  75                  80

Tyr Ala Asp Ser Ala Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser
                85                  90                  95

Lys Asn Thr Leu Phe Leu Gln Met Ser Ser Leu Arg Asp Glu Asp Thr
            100                 105                 110

Ala Val Tyr Tyr Cys Val Thr Arg Ala Gly Ser Glu Ala Ser Asp Ile
        115                 120                 125

Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly Gly Ser
    130                 135                 140

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Ile Val Leu Thr Gln
145                 150                 155                 160

Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly Glu Arg Ala Thr Leu Ser
                165                 170                 175

Cys Arg Ala Ser Gln Ser Val Ser Asn Ser Leu Ala Trp Tyr Gln Gln
            180                 185                 190

Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile Tyr Asp Ala Ser Ser Arg
        195                 200                 205

Ala Thr Gly Ile Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp
    210                 215                 220

Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu Asp Phe Ala Ile Tyr
225                 230                 235                 240

Tyr Cys Gln Gln Phe Gly Thr Ser Ser Gly Leu Thr Phe Gly Gly Gly
                245                 250                 255

Thr Lys Leu Glu Ile Lys Thr Thr Thr Pro Ala Pro Arg Pro Pro Thr
```

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            260                 265                 270

Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser Leu Arg Pro Glu Ala
        275                 280                 285

Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr Arg Gly Leu Asp Phe
    290                 295                 300

Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly Val
305                 310                 315                 320

Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr Cys Lys Arg Gly Arg Lys
                325                 330                 335

Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met Arg Pro Val Gln Thr
            340                 345                 350

Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu Glu Glu Glu
        355                 360                 365

Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg Ser Ala Asp Ala Pro
    370                 375                 380

Ala Tyr Lys Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn Leu Gly
385                 390                 395                 400

Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg Asp Pro
                405                 410                 415

Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu Tyr
            420                 425                 430

Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile Gly
        435                 440                 445

Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His Asp Gly Leu Tyr Gln
    450                 455                 460

Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu His Met Gln
465                 470                 475                 480
```

Ala Leu Pro Pro Arg
485

<210> 777
<211> 1455
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 777
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

cccgaagtgc aactggtgga aaccggtggc ggcctggtgc agcctggagg atcattgagg 120

ctgtcatgcg cggccagcgg tattaccttc tcccggtacc ccatgtcctg ggtcagacag 180

gccccgggga aagggcttga atgggtgtcc gggatctcgg actccggtgt cagcacttac 240

tacgccgact ccgccaaggg acgcttcacc atttcccggg acaactcgaa gaacaccctg 300

ttcctccaaa tgagctccct ccgggacgag gatactgcag tgtactactg cgtgacccgc 360

gccgggtccg aggcgtctga catttgggga cagggcacta tggtcaccgt gtcgtccggc 420

ggagggggct cgggaggcgg tggcagcgga ggaggagggt ccgagatcgt gctgacccaa 480

tccccggcca ccctctcgct gagccctgga gaaagggcaa ccttgtcctg tcgcgcgagc 540

cagtccgtga gcaactccct ggcctggtac cagcagaagc ccggacaggc tccgagactt 600

ctgatctacg acgcttcgag ccgggccact ggaatccccg accgcttttc ggggtccggc 660

tcaggaaccg atttcaccct gacaatctca cggctggagc cagaggattt cgccatctat 720

tactgccagc agttcggtac ttcctccggc ctgactttcg gaggcggcac gaagctcgaa 780

atcaagacca ctaccccagc accgaggcca cccaccccgg ctcctaccat cgcctcccag 840

cctctgtccc tgcgtccgga ggcatgtaga cccgcagctg gtggggccgt gcatacccgg 900

ggtcttgact tcgcctgcga tatctacatt tgggcccctc tggctggtac ttgcggggtc 960

ctgctgcttt cactcgtgat cactctttac tgtaagcgcg gtcggaagaa gctgctgtac 1020

atctttaagc aacccttcat gaggcctgtg cagactactc aagaggagga cggctgttca 1080

tgccggttcc cagaggagga ggaaggcggc tgcgaactgc gcgtgaaatt cagccgcagc 1140

gcagatgctc cagcctacaa gcaggggcag aaccagctct acaacgaact caatcttggt 1200

cggagagagg agtacgacgt gctggacaag cggagaggac gggacccaga aatgggcggg 1260

aagccgcgca gaaagaatcc ccaagagggc ctgtacaacg agctccaaaa ggataagatg 1320

gcagaagcct atagcgagat tggtatgaaa ggggaacgca gaagaggcaa aggccacgac 1380

ggactgtacc agggactcag caccgccacc aaggacacct atgacgctct tcacatgcag 1440

gccctgccgc ctcgg 1455

<210> 778
<211> 248
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 778
Gln Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
1 5 10 15

Ser Leu Arg Leu Ser Cys 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 Ser Gly Gly Ser Thr 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 Ile Tyr Tyr Cys
85 90 95

Ala Arg Ala Thr Tyr Lys Arg Glu Leu Arg Tyr Tyr Tyr Gly Met Asp
100 105 110

Val Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly Gly
115 120 125

```
Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Ile Val Met Thr
    130                 135                 140

Gln Ser Pro Gly Thr Val Ser Leu Ser Pro Gly Glu Arg Ala Thr Leu
145                 150                 155                 160

Ser Cys Arg Ala Ser Gln Ser Val Ser Ser Ser Phe Leu Ala Trp Tyr
                165                 170                 175

Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile Tyr Gly Ala Ser
            180                 185                 190

Ser Arg Ala Thr Gly Ile Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly
        195                 200                 205

Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu Asp Ser Ala
    210                 215                 220

Val Tyr Tyr Cys Gln Gln Tyr His Ser Ser Pro Ser Trp Thr Phe Gly
225                 230                 235                 240

Gln Gly Thr Arg Leu Glu Ile Lys
                245
```

<210> 779
<211> 744
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 779
caagtgcagc tcgtggaatc gggtggcgga ctggtgcagc cgggggggctc acttagactg 60

tcctgcgcgg ccagcggatt cactttctcc tcctacgcca tgtcctgggt cagacaggcc 120

cctggaaagg gcctggaatg ggtgtccgca atcagcggca gcggcggctc gacctattac 180

gcggattcag tgaagggcag attcaccatt tcccgggaca acgccaagaa ctccttgtac 240

cttcaaatga actccctccg cgcggaagat accgcaatct actactgcgc tcgggccact 300

tacaagaggg aactgcgcta ctactacggg atggacgtct ggggccaggg aaccatggtc 360

accgtgtcca gcggaggagg aggatcggga ggaggcggta gcgggggtgg agggtcggag 420

atcgtgatga cccagtcccc cggcactgtg tcgctgtccc ccggcgaacg ggccaccctg 480

tcatgtcggg ccagccagtc agtgtcgtca agcttcctcg cctggtacca gcagaaaccg 540

ggacaagctc cccgcctgct gatctacgga gccagcagcc gggccaccgg tattcctgac 600

cggttctccg gttcggggtc cgggaccgac tttactctga ctatctctcg cctcgagcca 660

gaggactccg ccgtgtatta ctgccagcag taccactcct ccccgtcctg gacgttcgga 720

cagggcacaa ggctggagat taag 744

<210> 780
<211> 124
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 780
Gln Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
1 5 10 15

Ser Leu Arg Leu Ser Cys 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 Ser Gly Gly Ser Thr 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 Ile Tyr Tyr Cys
85 90 95

Ala Arg Ala Thr Tyr Lys Arg Glu Leu Arg Tyr Tyr Tyr Gly Met Asp

100 105 110

Val Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser
115 120

<210> 781
<211> 109
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 781
Glu Ile Val Met Thr Gln Ser Pro Gly Thr Val Ser Leu Ser Pro Gly
1 5 10 15

Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Ser Ser
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 Ser Ala Val Tyr Tyr Cys Gln Gln Tyr His Ser Ser Pro
85 90 95

Ser Trp Thr Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys
100 105

<210> 782
<211> 492
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic

polypeptide"

<400> 782

```
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1               5                  10                  15

His Ala Ala Arg Pro Gln Val Gln Leu Val Glu Ser Gly Gly Gly Leu
            20                  25                  30

Val Gln Pro Gly Gly Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe
        35                  40                  45

Thr Phe Ser Ser Tyr Ala Met Ser Trp Val Arg Gln Ala Pro Gly Lys
    50                  55                  60

Gly Leu Glu Trp Val Ser Ala Ile Ser Gly Ser Gly Gly Ser Thr Tyr
65                  70                  75                  80

Tyr Ala Asp Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala
                85                  90                  95

Lys Asn Ser Leu Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr
            100                 105                 110

Ala Ile Tyr Tyr Cys Ala Arg Ala Thr Tyr Lys Arg Glu Leu Arg Tyr
        115                 120                 125

Tyr Tyr Gly Met Asp Val Trp Gly Gln Gly Thr Met Val Thr Val Ser
    130                 135                 140

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
145                 150                 155                 160

Glu Ile Val Met Thr Gln Ser Pro Gly Thr Val Ser Leu Ser Pro Gly
                165                 170                 175

Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Ser Ser
            180                 185                 190

Phe Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu
        195                 200                 205
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Ile Tyr Gly Ala Ser Ser Arg Ala Thr Gly Ile Pro Asp Arg Phe Ser
    210                 215                 220

Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu
225                 230                 235                 240

Pro Glu Asp Ser Ala Val Tyr Tyr Cys Gln Gln Tyr His Ser Ser Pro
                245                 250                 255

Ser Trp Thr Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Thr Thr Thr
            260                 265                 270

Pro Ala Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro
        275                 280                 285

Leu Ser Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala Val
    290                 295                 300

His Thr Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro
305                 310                 315                 320

Leu Ala Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr Leu
                325                 330                 335

Tyr Cys Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro
            340                 345                 350

Phe Met Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys
        355                 360                 365

Arg Phe Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg Val Lys Phe
    370                 375                 380

Ser Arg Ser Ala Asp Ala Pro Ala Tyr Lys Gln Gly Gln Asn Gln Leu
385                 390                 395                 400

Tyr Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp
                405                 410                 415

Lys Arg Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys
```

420 425 430

Asn Pro Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala
435 440 445

Glu Ala Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys
450 455 460

Gly His Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr
465 470 475 480

Tyr Asp Ala Leu His Met Gln Ala Leu Pro Pro Arg
485 490

<210> 783
<211> 1476
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 783
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

ccccaagtgc agctcgtgga atcgggtggc ggactggtgc agccgggggg ctcacttaga 120

ctgtcctgcg cggccagcgg attcactttc tcctcctacg ccatgtcctg ggtcagacag 180

gcccctggaa agggcctgga atgggtgtcc gcaatcagcg gcagcggcgg ctcgacctat 240

tacgcggatt cagtgaaggg cagattcacc atttcccggg acaacgccaa gaactccttg 300

taccttcaaa tgaactccct ccgcgcggaa gataccgcaa tctactactg cgctcgggcc 360

acttacaaga gggaactgcg ctactactac gggatggacg tctggggcca gggaaccatg 420

gtcaccgtgt ccagcggagg aggaggatcg ggaggaggcg gtagcggggg tggagggtcg 480

gagatcgtga tgacccagtc ccccggcact gtgtcgctgt cccccggcga acgggccacc 540

ctgtcatgtc gggccagcca gtcagtgtcg tcaagcttcc tcgcctggta ccagcagaaa 600

ccgggacaag ctccccgcct gctgatctac ggagccagca gccgggccac cggtattcct 660

gaccggttct ccggttcggg gtccgggacc gactttactc tgactatctc tcgcctcgag 720

ccagaggact ccgccgtgta ttactgccag cagtaccact cctccccgtc ctggacgttc 780

ggacagggca caaggctgga gattaagacc actaccccag caccgaggcc acccaccccg 840

gctcctacca tcgcctccca gcctctgtcc ctgcgtccgg aggcatgtag acccgcagct 900

ggtggggccg tgcatacccg gggtcttgac ttcgcctgcg atatctacat ttgggcccct 960

ctggctggta cttgcggggt cctgctgctt tcactcgtga tcactcttta ctgtaagcgc 1020

ggtcggaaga agctgctgta catctttaag caacccttca tgaggcctgt gcagactact 1080

caagaggagg acggctgttc atgccggttc ccagaggagg aggaaggcgg ctgcgaactg 1140

cgcgtgaaat tcagccgcag cgcagatgct ccagcctaca agcaggggca gaaccagctc 1200

tacaacgaac tcaatcttgg tcggagagag gagtacgacg tgctggacaa gcggagagga 1260

cgggacccag aaatgggcgg gaagccgcgc agaaagaatc cccaagaggg cctgtacaac 1320

gagctccaaa aggataagat ggcagaagcc tatagcgaga ttggtatgaa aggggaacgc 1380

agaagaggca aaggccacga cggactgtac cagggactca gcaccgccac caaggacacc 1440

tatgacgctc ttcacatgca ggccctgccg cctcgg 1476

<210> 784
<211> 248
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 784
Glu Val Gln Leu Val Glu Thr 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 Ser Gly Gly Ser Thr Tyr Tyr Ala Asp Ser Val
50 55 60

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Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
65                  70                  75                  80

Leu Gln Met Asn Thr Leu Lys Ala Glu Asp Thr Ala Val Tyr Tyr Cys
                85                  90                  95

Ala Arg Ala Thr Tyr Lys Arg Glu Leu Arg Tyr Tyr Tyr Gly Met Asp
            100                 105                 110

Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser Gly Gly Gly Gly
        115                 120                 125

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Ile Val Leu Thr
    130                 135                 140

Gln Ser Pro Ser Thr Leu Ser Leu Ser Pro Gly Glu Ser Ala Thr Leu
145                 150                 155                 160

Ser Cys Arg Ala Ser Gln Ser Val Ser Thr Thr Phe Leu Ala Trp Tyr
                165                 170                 175

Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile Tyr Gly Ser Ser
            180                 185                 190

Asn Arg Ala Thr Gly Ile Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly
        195                 200                 205

Thr Asp Phe Thr Leu Thr Ile Arg Arg Leu Glu Pro Glu Asp Phe Ala
    210                 215                 220

Val Tyr Tyr Cys Gln Gln Tyr His Ser Ser Pro Ser Trp Thr Phe Gly
225                 230                 235                 240

Gln Gly Thr Lys Val Glu Ile Lys
                245
```

<210> 785
<211> 744
<212> DNA
<213> Artificial Sequence

<220>

<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 785
gaggtgcagc ttgtggaaac cggtggcgga ctggtgcagc ccggaggaag cctcaggctg 60

tcctgcgccg cgtccggctt caccttctcc tcgtacgcca tgtcctgggt ccgccaggcc 120

cccggaaagg gcctggaatg ggtgtccgcc atctctggaa gcggaggttc cacgtactac 180

gcggacagcg tcaagggaag gttcacaatc tcccgcgata attcgaagaa cactctgtac 240

cttcaaatga acaccctgaa ggccgaggac actgctgtgt actactgcgc acgggccacc 300

tacaagagag agctccggta ctactacgga atggacgtct ggggccaggg aactactgtg 360

accgtgtcct cgggaggggg tggctccggg gggggcggct ccggcggagg cggttccgag 420

attgtgctga cccagtcacc ttcaactctg tcgctgtccc cgggagagag cgctactctg 480

agctgccggg ccagccagtc cgtgtccacc accttcctcg cctggtatca gcagaagccg 540

gggcaggcac cacggctctt gatctacggg tcaagcaaca gagcgaccgg aattcctgac 600

cgcttctcgg ggagcggttc aggcaccgac ttcaccctga ctatccggcg cctggaaccc 660

gaagatttcg ccgtgtatta ctgtcaacag taccactcct cgccgtcctg gacctttggc 720

caaggaacca aagtggaaat caag 744

<210> 786
<211> 124
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 786
Glu Val Gln Leu Val Glu Thr 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 Ser Gly Gly Ser Thr Tyr Tyr Ala Asp Ser Val
    50   55   60

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
65   70   75   80

Leu Gln Met Asn Thr Leu Lys Ala Glu Asp Thr Ala Val Tyr Tyr Cys
                85   90   95

Ala Arg Ala Thr Tyr Lys Arg Glu Leu Arg Tyr Tyr Tyr Gly Met Asp
            100   105   110

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

<210> 787
<211> 109
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 787
Glu Ile Val Leu Thr Gln Ser Pro Ser Thr Leu Ser Leu Ser Pro Gly
1   5   10   15

Glu Ser Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Thr Thr
            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 Ser Ser Asn 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 Arg Arg Leu Glu
65   70   75   80

Pro Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr His Ser Ser Pro
                85   90   95

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

<210> 788
<211> 492
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 788
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Glu Val Gln Leu Val Glu Thr Gly Gly Gly Leu
20 25 30

Val Gln Pro Gly Gly Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe
35 40 45

Thr Phe Ser Ser Tyr Ala Met Ser Trp Val Arg Gln Ala Pro Gly Lys
50 55 60

Gly Leu Glu Trp Val Ser Ala Ile Ser Gly Ser Gly Gly Ser Thr Tyr
65 70 75 80

Tyr Ala Asp Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser
85 90 95

Lys Asn Thr Leu Tyr Leu Gln Met Asn Thr Leu Lys Ala Glu Asp Thr
100 105 110

Ala Val Tyr Tyr Cys Ala Arg Ala Thr Tyr Lys Arg Glu Leu Arg Tyr
115 120 125

Tyr Tyr Gly Met Asp Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser
130 135 140

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser

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145                 150                 155                 160

Glu Ile Val Leu Thr Gln Ser Pro Ser Thr Leu Ser Leu Ser Pro Gly
                165                 170                 175

Glu Ser Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Thr Thr
            180                 185                 190

Phe Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu
        195                 200                 205

Ile Tyr Gly Ser Ser Asn Arg Ala Thr Gly Ile Pro Asp Arg Phe Ser
    210                 215                 220

Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Arg Arg Leu Glu
225                 230                 235                 240

Pro Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr His Ser Ser Pro
                245                 250                 255

Ser Trp Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys Thr Thr Thr
            260                 265                 270

Pro Ala Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro
        275                 280                 285

Leu Ser Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala Val
    290                 295                 300

His Thr Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro
305                 310                 315                 320

Leu Ala Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr Leu
                325                 330                 335

Tyr Cys Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro
            340                 345                 350

Phe Met Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys
        355                 360                 365
```

```
Arg Phe Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg Val Lys Phe
    370                 375                 380

Ser Arg Ser Ala Asp Ala Pro Ala Tyr Lys Gln Gly Gln Asn Gln Leu
385                 390                 395                 400

Tyr Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp
                405                 410                 415

Lys Arg Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys
            420                 425                 430

Asn Pro Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala
        435                 440                 445

Glu Ala Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys
    450                 455                 460

Gly His Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr
465                 470                 475                 480

Tyr Asp Ala Leu His Met Gln Ala Leu Pro Pro Arg
                485                 490
```

<210> 789
<211> 1476
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 789

```
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg       60

cccgaggtgc agcttgtgga aaccggtggc ggactggtgc agcccggagg aagcctcagg      120

ctgtcctgcg ccgcgtccgg cttcaccttc tcctcgtacg ccatgtcctg ggtccgccag      180

gcccccggaa agggcctgga atgggtgtcc gccatctctg gaagcggagg ttccacgtac      240

tacgcggaca gcgtcaaggg aaggttcaca atctcccgcg ataattcgaa gaacactctg      300
```

```
taccttcaaa tgaacaccct gaaggccgag gacactgctg tgtactactg cgcacgggcc      360

acctacaaga gagagctccg gtactactac ggaatggacg tctggggcca gggaactact      420

gtgaccgtgt cctcgggagg gggtggctcc gggggggggcg gctccggcgg aggcggttcc      480

gagattgtgc tgacccagtc accttcaact ctgtcgctgt ccccgggaga gagcgctact      540

ctgagctgcc gggccagcca gtccgtgtcc accaccttcc tcgcctggta tcagcagaag      600

ccggggcagg caccacggct cttgatctac gggtcaagca acagagcgac cggaattcct      660

gaccgcttct cggggagcgg ttcaggcacc gacttcaccc tgactatccg gcgcctggaa      720

cccgaagatt tcgccgtgta ttactgtcaa cagtaccact cctcgccgtc ctggaccttt      780

ggccaaggaa ccaaagtgga aatcaagacc actaccccag caccgaggcc acccaccccg      840

gctcctacca tcgcctccca gcctctgtcc ctgcgtccgg aggcatgtag acccgcagct      900

ggtggggccg tgcatacccg gggtcttgac ttcgcctgcg atatctacat ttgggcccct      960

ctggctggta cttgcggggt cctgctgctt tcactcgtga tcactcttta ctgtaagcgc     1020

ggtcggaaga agctgctgta catctttaag caacccttca tgaggcctgt gcagactact     1080

caagaggagg acggctgttc atgccggttc ccagaggagg aggaaggcgg ctgcgaactg     1140

cgcgtgaaat tcagccgcag cgcagatgct ccagcctaca agcaggggca gaaccagctc     1200

tacaacgaac tcaatcttgg tcggagagag gagtacgacg tgctggacaa gcggagagga     1260

cgggacccag aaatgggcgg gaagccgcgc agaaagaatc cccaagaggg cctgtacaac     1320

gagctccaaa aggataagat ggcagaagcc tatagcgaga ttggtatgaa aggggaacgc     1380

agaagaggca aaggccacga cggactgtac cagggactca gcaccgccac caaggacacc     1440

tatgacgctc ttcacatgca ggccctgccg cctcgg                               1476
```

<210> 790
<211> 239
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 790

```
Glu Val Gln Leu Val Glu Thr 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 Ser Trp Asn Ser Gly Ser Ile Gly Tyr Ala Asp Ser Val
    50                  55                  60

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Ser Leu Tyr
65                  70                  75                  80

Leu Gln Met Asn Ser Leu Arg Asp Glu Asp Thr Ala Val Tyr Tyr Cys
                85                  90                  95

Ala Arg Val Gly Lys Ala Val Pro Asp Val Trp Gly Gln Gly Thr Thr
            100                 105                 110

Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly
        115                 120                 125

Gly Gly Gly Ser Asp Ile Val Met Thr Gln Thr Pro Ser Ser Leu Ser
    130                 135                 140

Ala Ser Val Gly Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Ser
145                 150                 155                 160

Ile Ser Ser Tyr Leu Asn Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro
                165                 170                 175

Lys Leu Leu Ile Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser
            180                 185                 190

Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser
        195                 200                 205

Ser Leu Gln Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Ser Tyr
    210                 215                 220
```

Ser Thr Pro Tyr Ser Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys
225 230 235

<210> 791
<211> 717
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 791
gaagtgcagc tcgtggaaac tggaggtgga ctcgtgcagc ctggacggtc gctgcggctg 60

agctgcgctg catccggctt caccttcgac gattatgcca tgcactgggt cagacaggcg 120

ccagggaagg gacttgagtg ggtgtccggt atcagctgga atagcggctc aatcggatac 180

gcggactccg tgaagggaag gttcaccatt tcccgcgaca acgccaagaa ctccctgtac 240

ttgcaaatga acagcctccg ggatgaggac actgccgtgt actactgcgc ccgcgtcgga 300

aaagctgtgc ccgacgtctg gggccaggga accactgtga ccgtgtccag cggcgggggt 360

ggatcgggcg gtggagggtc cggtggaggg ggctcagata ttgtgatgac ccagaccccc 420

tcgtccctgt ccgcctcggt cggcgaccgc gtgactatca catgtagagc ctcgcagagc 480

atctccagct acctgaactg gtatcagcag aagccgggga aggccccgaa gctcctgatc 540

tacgcggcat catcactgca atcgggagtg ccgagccggt tttccgggtc cggctccggc 600

accgacttca cgctgaccat ttcttccctg caacccgagg acttcgccac ttactactgc 660

cagcagtcct actccacccc ttactccttc ggccaaggaa ccaggctgga aatcaag 717

<210> 792
<211> 117
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 792
Glu Val Gln Leu Val Glu Thr 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 Ser Trp Asn Ser Gly Ser Ile Gly Tyr Ala Asp Ser Val
    50   55   60

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Ser Leu Tyr
65   70   75   80

Leu Gln Met Asn Ser Leu Arg Asp Glu Asp Thr Ala Val Tyr Tyr Cys
                85   90   95

Ala Arg Val Gly Lys Ala Val Pro Asp Val Trp Gly Gln Gly Thr Thr
            100   105   110

Val Thr Val Ser Ser
        115

<210> 793
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 793
Asp Ile Val Met Thr Gln Thr Pro Ser Ser Leu Ser Ala Ser Val Gly
1   5   10   15

Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Ser Ser Tyr
            20   25   30

Leu Asn Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
        35   40   45

Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
    50   55   60

```
Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
65                  70                  75                  80


Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Ser Tyr Ser Thr Pro Tyr
                85                  90                  95


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


<210> 794
<211> 483
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 794
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1               5                   10                  15


His Ala Ala Arg Pro Glu Val Gln Leu Val Glu Thr Gly Gly Gly Leu
            20                  25                  30


Val Gln Pro Gly Arg Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe
        35                  40                  45


Thr Phe Asp Asp Tyr Ala Met His Trp Val Arg Gln Ala Pro Gly Lys
    50                  55                  60


Gly Leu Glu Trp Val Ser Gly Ile Ser Trp Asn Ser Gly Ser Ile Gly
65                  70                  75                  80


Tyr Ala Asp Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala
                85                  90                  95


Lys Asn Ser Leu Tyr Leu Gln Met Asn Ser Leu Arg Asp Glu Asp Thr
            100                 105                 110


Ala Val Tyr Tyr Cys Ala Arg Val Gly Lys Ala Val Pro Asp Val Trp
```

```
        115                 120                 125

Gly Gln Gly Thr Thr Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly
    130                 135                 140

Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Val Met Thr Gln Thr
145                 150                 155                 160

Pro Ser Ser Leu Ser Ala Ser Val Gly Asp Arg Val Thr Ile Thr Cys
                165                 170                 175

Arg Ala Ser Gln Ser Ile Ser Ser Tyr Leu Asn Trp Tyr Gln Gln Lys
            180                 185                 190

Pro Gly Lys Ala Pro Lys Leu Leu Ile Tyr Ala Ala Ser Ser Leu Gln
        195                 200                 205

Ser Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe
    210                 215                 220

Thr Leu Thr Ile Ser Ser Leu Gln Pro Glu Asp Phe Ala Thr Tyr Tyr
225                 230                 235                 240

Cys Gln Gln Ser Tyr Ser Thr Pro Tyr Ser Phe Gly Gln Gly Thr Arg
                245                 250                 255

Leu Glu Ile Lys Thr Thr Thr Pro Ala Pro Arg Pro Pro Thr Pro Ala
            260                 265                 270

Pro Thr Ile Ala Ser Gln Pro Leu Ser Leu Arg Pro Glu Ala Cys Arg
        275                 280                 285

Pro Ala Ala Gly Gly Ala Val His Thr Arg Gly Leu Asp Phe Ala Cys
    290                 295                 300

Asp Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly Val Leu Leu
305                 310                 315                 320

Leu Ser Leu Val Ile Thr Leu Tyr Cys Lys Arg Gly Arg Lys Lys Leu
                325                 330                 335
```

Leu Tyr Ile Phe Lys Gln Pro Phe Met Arg Pro Val Gln Thr Thr Gln
340 345 350

Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu Glu Glu Glu Gly Gly
355 360 365

Cys Glu Leu Arg Val Lys Phe Ser Arg Ser Ala Asp Ala Pro Ala Tyr
370 375 380

Lys Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn Leu Gly Arg Arg
385 390 395 400

Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg Asp Pro Glu Met
405 410 415

Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu Tyr Asn Glu
420 425 430

Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile Gly Met Lys
435 440 445

Gly Glu Arg Arg Arg Gly Lys Gly His Asp Gly Leu Tyr Gln Gly Leu
450 455 460

Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu His Met Gln Ala Leu
465 470 475 480

Pro Pro Arg

<210> 795
<211> 1449
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 795
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

cccgaagtgc agctcgtgga aactggaggt ggactcgtgc agcctggacg gtcgctgcgg 120

ctgagctgcg ctgcatccgg cttcaccttc gacgattatg ccatgcactg ggtcagacag 180

gcgccaggga agggacttga gtgggtgtcc ggtatcagct ggaatagcgg ctcaatcgga 240

tacgcggact ccgtgaaggg aaggttcacc atttcccgcg acaacgccaa gaactccctg 300

tacttgcaaa tgaacagcct ccgggatgag gacactgccg tgtactactg cgcccgcgtc 360

ggaaaagctg tgcccgacgt ctggggccag ggaaccactg tgaccgtgtc cagcggcggg 420

ggtggatcgg gcggtggagg gtccggtgga gggggctcag atattgtgat gacccagacc 480

ccctcgtccc tgtccgcctc ggtcggcgac cgcgtgacta tcacatgtag agcctcgcag 540

agcatctcca gctacctgaa ctggtatcag cagaagccgg ggaaggcccc gaagctcctg 600

atctacgcgg catcatcact gcaatcggga gtgccgagcc ggttttccgg gtccggctcc 660

ggcaccgact tcacgctgac catttcttcc ctgcaacccg aggacttcgc cacttactac 720

tgccagcagt cctactccac cccttactcc ttcggccaag gaaccaggct ggaaatcaag 780

accactaccc cagcaccgag gccacccacc ccggctccta ccatcgcctc ccagcctctg 840

tccctgcgtc cggaggcatg tagacccgca gctggtgggg ccgtgcatac ccggggtctt 900

gacttcgcct gcgatatcta catttgggcc cctctggctg gtacttgcgg ggtcctgctg 960

ctttcactcg tgatcactct ttactgtaag cgcggtcgga agaagctgct gtacatcttt 1020

aagcaaccct tcatgaggcc tgtgcagact actcaagagg aggacggctg ttcatgccgg 1080

ttcccagagg aggaggaagg cggctgcgaa ctgcgcgtga aattcagccg cagcgcagat 1140

gctccagcct acaagcaggg gcagaaccag ctctacaacg aactcaatct tggtcggaga 1200

gaggagtacg acgtgctgga caagcggaga ggacgggacc cagaaatggg cgggaagccg 1260

cgcagaaaga atccccaaga gggcctgtac aacgagctcc aaaaggataa gatggcagaa 1320

gcctatagcg agattggtat gaaaggggaa cgcagaagag gcaaaggcca cgacggactg 1380

taccagggac tcagcaccgc caccaaggac acctatgacg ctcttcacat gcaggccctg 1440

ccgcctcgg 1449

<210> 796
<211> 246
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 796
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 Thr Ala Ser Gly Phe Thr Phe Asp Asp Tyr
20 25 30

Ala Met His Trp Val Arg Gln Arg Pro Gly Lys Gly Leu Glu Trp Val
35 40 45

Ala Ser Ile Asn Trp Lys Gly Asn Ser Leu Ala Tyr Gly Asp Ser Val
50 55 60

Lys Gly Arg Phe Ala Ile Ser Arg Asp Asn Ala Lys Asn Thr Val Phe
65 70 75 80

Leu Gln Met Asn Ser Leu Arg Thr Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Ser His Gln Gly Val Ala Tyr Tyr Asn Tyr Ala Met Asp Val Trp
100 105 110

Gly Arg Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly
115 120 125

Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Ile Val Leu Thr Gln Ser
130 135 140

Pro Gly Thr Leu Ser Leu Ser Pro Gly Glu Arg Ala Thr Leu Ser Cys
145 150 155 160

Arg Ala Thr Gln Ser Ile Gly Ser Ser Phe Leu Ala Trp Tyr Gln Gln
165 170 175

Arg Pro Gly Gln Ala Pro Arg Leu Leu Ile Tyr Gly Ala Ser Gln Arg
180 185 190

Ala Thr Gly Ile Pro Asp Arg Phe Ser Gly Arg Gly Ser Gly Thr Asp
195 200 205

Phe Thr Leu Thr Ile Ser Arg Val Glu Pro Glu Asp Ser Ala Val Tyr
210 215 220

Tyr Cys Gln His Tyr Glu Ser Ser Pro Ser Trp Thr Phe Gly Gln Gly
225 230 235 240

Thr Lys Val Glu Ile Lys
245

<210> 797
<211> 738
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 797
gaagtgcagc tcgtggagag cgggggagga ttggtgcagc ccggaaggtc cctgcggctc 60

tcctgcactg cgtctggctt caccttcgac gactacgcga tgcactgggt cagacagcgc 120

ccgggaaagg gcctggaatg ggtcgcctca atcaactgga agggaaactc cctggcctat 180

ggcgacagcg tgaagggccg cttcgccatt tcgcgcgaca acgccaagaa caccgtgttt 240

ctgcaaatga attccctgcg gaccgaggat accgctgtgt actactgcgc cagccaccag 300

ggcgtggcat actataacta cgccatggac gtgtggggaa gagggacgct cgtcaccgtg 360

tcctccgggg gcggtggatc gggtggagga ggaagcggtg gcgggggcag cgaaatcgtg 420

ctgactcaga gcccgggaac tctttcactg tccccgggag aacgggccac tctctcgtgc 480

cgggccaccc agtccatcgg ctcctccttc cttgcctggt accagcagag gccaggacag 540

gcgccccgcc tgctgatcta cggtgcttcc caacgcgcca ctggcattcc tgaccggttc 600

agcggcagag ggtcgggaac cgatttcaca ctgaccattt cccgggtgga gcccgaagat 660

tcggcagtct actactgtca gcattacgag tcctcccctt catggacctt cggtcaaggg 720

accaaagtgg agatcaag 738

<210> 798
<211> 122
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 798
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 Thr Ala Ser Gly Phe Thr Phe Asp Asp Tyr
20 25 30

Ala Met His Trp Val Arg Gln Arg Pro Gly Lys Gly Leu Glu Trp Val
35 40 45

Ala Ser Ile Asn Trp Lys Gly Asn Ser Leu Ala Tyr Gly Asp Ser Val
50 55 60

Lys Gly Arg Phe Ala Ile Ser Arg Asp Asn Ala Lys Asn Thr Val Phe
65 70 75 80

Leu Gln Met Asn Ser Leu Arg Thr Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Ser His Gln Gly Val Ala Tyr Tyr Asn Tyr Ala Met Asp Val Trp
100 105 110

Gly Arg Gly Thr Leu Val Thr Val Ser Ser
115 120

<210> 799
<211> 109
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 799

```
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 Thr Gln Ser Ile Gly Ser Ser
            20                  25                  30


Phe Leu Ala Trp Tyr Gln Gln Arg Pro Gly Gln Ala Pro Arg Leu Leu
        35                  40                  45


Ile Tyr Gly Ala Ser Gln Arg Ala Thr Gly Ile Pro Asp Arg Phe Ser
    50                  55                  60


Gly Arg Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Val Glu
65                  70                  75                  80


Pro Glu Asp Ser Ala Val Tyr Tyr Cys Gln His Tyr Glu Ser Ser Pro
                85                  90                  95


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


<210> 800
<211> 490
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 800
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1               5                   10                  15


His Ala Ala Arg Pro Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu
            20                  25                  30


Val Gln Pro Gly Arg Ser Leu Arg Leu Ser Cys Thr Ala Ser Gly Phe
        35                  40                  45


Thr Phe Asp Asp Tyr Ala Met His Trp Val Arg Gln Arg Pro Gly Lys
    50                  55                  60
```

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Gly Leu Glu Trp Val Ala Ser Ile Asn Trp Lys Gly Asn Ser Leu Ala
65                  70                  75                  80

Tyr Gly Asp Ser Val Lys Gly Arg Phe Ala Ile Ser Arg Asp Asn Ala
                85                  90                  95

Lys Asn Thr Val Phe Leu Gln Met Asn Ser Leu Arg Thr Glu Asp Thr
            100                 105                 110

Ala Val Tyr Tyr Cys Ala Ser His Gln Gly Val Ala Tyr Tyr Asn Tyr
        115                 120                 125

Ala Met Asp Val Trp Gly Arg Gly Thr Leu Val Thr Val Ser Ser Gly
    130                 135                 140

Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Ile
145                 150                 155                 160

Val Leu Thr Gln Ser Pro Gly Thr Leu Ser Leu Ser Pro Gly Glu Arg
                165                 170                 175

Ala Thr Leu Ser Cys Arg Ala Thr Gln Ser Ile Gly Ser Ser Phe Leu
            180                 185                 190

Ala Trp Tyr Gln Gln Arg Pro Gly Gln Ala Pro Arg Leu Leu Ile Tyr
        195                 200                 205

Gly Ala Ser Gln Arg Ala Thr Gly Ile Pro Asp Arg Phe Ser Gly Arg
    210                 215                 220

Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Val Glu Pro Glu
225                 230                 235                 240

Asp Ser Ala Val Tyr Tyr Cys Gln His Tyr Glu Ser Ser Pro Ser Trp
                245                 250                 255

Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys Thr Thr Thr Pro Ala
            260                 265                 270

Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser
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        275                 280                 285

Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr
    290                 295                 300

Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala
305                 310                 315                 320

Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr Cys
                325                 330                 335

Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met
            340                 345                 350

Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe
        355                 360                 365

Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg
    370                 375                 380

Ser Ala Asp Ala Pro Ala Tyr Lys Gln Gly Gln Asn Gln Leu Tyr Asn
385                 390                 395                 400

Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg
                405                 410                 415

Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro
            420                 425                 430

Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala
        435                 440                 445

Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His
    450                 455                 460

Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp
465                 470                 475                 480

Ala Leu His Met Gln Ala Leu Pro Pro Arg
                485                 490
```

<210> 801
<211> 1470
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 801
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

cccgaagtgc agctcgtgga gagcggggga ggattggtgc agcccggaag gtccctgcgg 120

ctctcctgca ctgcgtctgg cttcaccttc gacgactacg cgatgcactg ggtcagacag 180

cgcccgggaa agggcctgga atgggtcgcc tcaatcaact ggaagggaaa ctccctggcc 240

tatggcgaca gcgtgaaggg ccgcttcgcc atttcgcgcg acaacgccaa gaacaccgtg 300

tttctgcaaa tgaattccct gcggaccgag gataccgctg tgtactactg cgccagccac 360

cagggcgtgg catactataa ctacgccatg gacgtgtggg gaagagggac gctcgtcacc 420

gtgtcctccg ggggcggtgg atcgggtgga ggaggaagcg gtggcggggg cagcgaaatc 480

gtgctgactc agagcccggg aactctttca ctgtccccgg gagaacgggc cactctctcg 540

tgccgggcca cccagtccat cggctcctcc ttccttgcct ggtaccagca gaggccagga 600

caggcgcccc gcctgctgat ctacggtgct tcccaacgcg ccactggcat tcctgaccgg 660

ttcagcggca gagggtcggg aaccgatttc acactgacca tttcccgggt ggagcccgaa 720

gattcggcag tctactactg tcagcattac gagtcctccc cttcatggac cttcggtcaa 780

gggaccaaag tggagatcaa gaccactacc ccagcaccga ggccacccac cccggctcct 840

accatcgcct cccagcctct gtccctgcgt ccggaggcat gtagacccgc agctggtggg 900

gccgtgcata cccggggtct tgacttcgcc tgcgatatct acatttgggc ccctctggct 960

ggtacttgcg gggtcctgct gctttcactc gtgatcactc tttactgtaa gcgcggtcgg 1020

aagaagctgc tgtacatctt taagcaaccc ttcatgaggc ctgtgcagac tactcaagag 1080

gaggacggct gttcatgccg gttcccagag gaggaggaag gcggctgcga actgcgcgtg 1140

aaattcagcc gcagcgcaga tgctccagcc tacaagcagg ggcagaacca gctctacaac 1200

gaactcaatc ttggtcggag agaggagtac gacgtgctgg acaagcggag aggacgggac 1260

ccagaaatgg gcgggaagcc gcgcagaaag aatccccaag agggcctgta caacgagctc 1320

caaaaggata agatggcaga agcctatagc gagattggta tgaaagggga acgcagaaga 1380

ggcaaaggcc acgacggact gtaccaggga ctcagcaccg ccaccaagga cacctatgac 1440

gctcttcaca tgcaggccct gccgcctcgg 1470

<210> 802
<211> 241
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 802
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr
20 25 30

Ala Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45

Ser Ala Ile Ser Gly Ser Gly Gly Ser Thr Tyr Tyr Ala Asp Ser Val
50 55 60

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
65 70 75 80

Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Lys Val Val Arg Asp Gly Met Asp Val Trp Gly Gln Gly Thr Thr
100 105 110

Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly
115 120 125

Gly Gly Gly Ser Glu Ile Val Leu Thr Gln Ser Pro Ala Thr Leu Ser
130 135 140

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Leu Ser Pro Gly Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser
145                 150                 155                 160


Val Ser Ser Ser Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala
                165                 170                 175


Pro Arg Leu Leu Ile Tyr Gly Ala Ser Ser Arg Ala Thr Gly Ile Pro
            180                 185                 190


Asp Arg Phe Ser Gly Asn Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile
        195                 200                 205


Ser Arg Leu Glu Pro Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr
    210                 215                 220


Gly Ser Pro Pro Arg Phe Thr Phe Gly Pro Gly Thr Lys Val Asp Ile
225                 230                 235                 240


Lys
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<210> 803
<211> 723
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 803
gaggtgcagt tggtcgaaag cgggggcggg cttgtgcagc ctggcggatc actgcggctg 60

tcctgcgcgg catcaggctt cacgttttct tcctacgcca tgtcctgggt gcgccaggcc 120

cctggaaagg gactggaatg ggtgtccgcg atttcggggt ccggcgggag cacctactac 180

gccgattccg tgaagggccg cttcactatc tcgcgggaca actccaagaa caccctctac 240

ctccaaatga atagcctgcg ggccgaggat accgccgtct actattgcgc taaggtcgtg 300

cgcgacggaa tggacgtgtg gggacagggt accaccgtga cagtgtcctc gggggggaggc 360

ggtagcggcg gaggaggaag cggtggtgga ggttccgaga ttgtgctgac tcaatcaccc 420

gcgaccctga gcctgtcccc cggcgaaagg gccactctgt cctgtcgggc cagccaatca 480

gtctcctcct cgtacctggc ctggtaccag cagaagccag gacaggctcc gagactcctt 540

atctatggcg catcctcccg cgccaccgga atcccggata ggttctcggg aaacggatcg 600

gggaccgact tcactctcac catctcccgg ctggaaccgg aggacttcgc cgtgtactac 660

tgccagcagt acggcagccc gcctagattc actttcggcc ccggcaccaa agtggacatc 720

aag 723

<210> 804
<211> 117
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 804
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr
20 25 30

Ala Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45

Ser Ala Ile Ser Gly Ser Gly Gly Ser Thr Tyr Tyr Ala Asp Ser Val
50 55 60

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
65 70 75 80

Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Lys Val Val Arg Asp Gly Met Asp Val Trp Gly Gln Gly Thr Thr
100 105 110

Val Thr Val Ser Ser

115

<210> 805
<211> 109
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 805
Glu Ile Val Leu Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly
1 5 10 15

Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Ser Ser
20 25 30

Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu
35 40 45

Ile Tyr Gly Ala Ser Ser Arg Ala Thr Gly Ile Pro Asp Arg Phe Ser
50 55 60

Gly Asn 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 Pro Pro
85 90 95

Arg Phe Thr Phe Gly Pro Gly Thr Lys Val Asp Ile Lys
100 105

<210> 806
<211> 485
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 806
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu

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1               5                   10                  15

His Ala Ala Arg Pro Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu
            20                  25                  30

Val Gln Pro Gly Gly Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe
        35                  40                  45

Thr Phe Ser Ser Tyr Ala Met Ser Trp Val Arg Gln Ala Pro Gly Lys
    50                  55                  60

Gly Leu Glu Trp Val Ser Ala Ile Ser Gly Ser Gly Gly Ser Thr Tyr
65                  70                  75                  80

Tyr Ala Asp Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser
                85                  90                  95

Lys Asn Thr Leu Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr
            100                 105                 110

Ala Val Tyr Tyr Cys Ala Lys Val Val Arg Asp Gly Met Asp Val Trp
        115                 120                 125

Gly Gln Gly Thr Thr Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly
    130                 135                 140

Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Ile Val Leu Thr Gln Ser
145                 150                 155                 160

Pro Ala Thr Leu Ser Leu Ser Pro Gly Glu Arg Ala Thr Leu Ser Cys
                165                 170                 175

Arg Ala Ser Gln Ser Val Ser Ser Ser Tyr Leu Ala Trp Tyr Gln Gln
            180                 185                 190

Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile Tyr Gly Ala Ser Ser Arg
        195                 200                 205

Ala Thr Gly Ile Pro Asp Arg Phe Ser Gly Asn Gly Ser Gly Thr Asp
    210                 215                 220
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Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu Asp Phe Ala Val Tyr
225                 230                 235                 240

Tyr Cys Gln Gln Tyr Gly Ser Pro Pro Arg Phe Thr Phe Gly Pro Gly
                245                 250                 255

Thr Lys Val Asp Ile Lys Thr Thr Thr Pro Ala Pro Arg Pro Pro Thr
            260                 265                 270

Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser Leu Arg Pro Glu Ala
        275                 280                 285

Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr Arg Gly Leu Asp Phe
    290                 295                 300

Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly Val
305                 310                 315                 320

Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr Cys Lys Arg Gly Arg Lys
                325                 330                 335

Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met Arg Pro Val Gln Thr
            340                 345                 350

Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu Glu Glu Glu
        355                 360                 365

Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg Ser Ala Asp Ala Pro
    370                 375                 380

Ala Tyr Lys Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn Leu Gly
385                 390                 395                 400

Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg Asp Pro
                405                 410                 415

Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu Tyr
            420                 425                 430

Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile Gly
```

435 440 445

Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His Asp Gly Leu Tyr Gln
450 455 460

Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu His Met Gln
465 470 475 480

Ala Leu Pro Pro Arg
485

<210> 807
<211> 1455
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 807
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

cccgaggtgc agttggtcga aagcgggggc gggcttgtgc agcctggcgg atcactgcgg 120

ctgtcctgcg cggcatcagg cttcacgttt tcttcctacg ccatgtcctg ggtgcgccag 180

gcccctggaa agggactgga atgggtgtcc gcgatttcgg ggtccggcgg gagcacctac 240

tacgccgatt ccgtgaaggg ccgcttcact atctcgcggg acaactccaa gaacaccctc 300

tacctccaaa tgaatagcct gcgggccgag gataccgccg tctactattg cgctaaggtc 360

gtgcgcgacg gaatggacgt gtggggacag ggtaccaccg tgacagtgtc ctcgggggga 420

ggcggtagcg gcggaggagg aagcggtggt ggaggttccg agattgtgct gactcaatca 480

cccgcgaccc tgagcctgtc ccccggcgaa agggccactc tgtcctgtcg ggccagccaa 540

tcagtctcct cctcgtacct ggcctggtac cagcagaagc caggacaggc tccgagactc 600

cttatctatg gcgcatcctc ccgcgccacc ggaatcccgg ataggttctc gggaaacgga 660

tcggggaccg acttcactct caccatctcc cggctggaac cggaggactt cgccgtgtac 720

tactgccagc agtacggcag cccgcctaga ttcactttcg gccccggcac caaagtggac 780

atcaagacca ctaccccagc accgaggcca cccaccccgg ctcctaccat cgcctcccag 840

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cctctgtccc tgcgtccgga ggcatgtaga cccgcagctg gtggggccgt gcatacccgg      900

ggtcttgact tcgcctgcga tatctacatt tgggcccctc tggctggtac ttgcggggtc      960

ctgctgcttt cactcgtgat cactctttac tgtaagcgcg gtcggaagaa gctgctgtac     1020

atctttaagc aacccttcat gaggcctgtg cagactactc aagaggagga cggctgttca     1080

tgccggttcc cagaggagga ggaaggcggc tgcgaactgc gcgtgaaatt cagccgcagc     1140

gcagatgctc cagcctacaa gcaggggcag aaccagctct acaacgaact caatcttggt     1200

cggagagagg agtacgacgt gctggacaag cggagaggac gggacccaga aatgggcggg     1260

aagccgcgca gaaagaatcc ccaagagggc ctgtacaacg agctccaaaa ggataagatg     1320

gcagaagcct atagcgagat tggtatgaaa ggggaacgca gaagaggcaa aggccacgac     1380

ggactgtacc agggactcag caccgccacc aaggacacct atgacgctct tcacatgcag     1440

gccctgccgc ctcgg                                                      1455


<210> 808
<211> 242
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 808
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 Ser Gly Gly Ser Thr Tyr Tyr Ala Asp Ser Val
    50                  55                  60


Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
65                  70                  75                  80
```

```
Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
                85                  90                  95

Ala Lys Ile Pro Gln Thr Gly Thr Phe Asp Tyr Trp Gly Gln Gly Thr
            100                 105                 110

Leu Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
        115                 120                 125

Gly Gly Gly Gly Ser Glu Ile Val Leu Thr Gln Ser Pro Gly Thr Leu
    130                 135                 140

Ser Leu Ser Pro Gly Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln
145                 150                 155                 160

Ser Val Ser Ser Ser Tyr Leu Ala Trp Tyr Gln Gln Arg Pro Gly Gln
                165                 170                 175

Ala Pro Arg Leu Leu Ile Tyr Gly Ala Ser Ser Arg Ala Thr Gly Ile
            180                 185                 190

Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr
        195                 200                 205

Ile Ser Arg Leu Glu Pro Glu Asp Phe Ala Val Tyr Tyr Cys Gln His
    210                 215                 220

Tyr Gly Ser Ser Pro Ser Trp Thr Phe Gly Gln Gly Thr Arg Leu Glu
225                 230                 235                 240

Ile Lys
```

<210> 809
<211> 726
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 809
gaagtgcagc tgctggagtc cggcggtgga ttggtgcaac cgggggggatc gctcagactg 60

tcctgtgcgg cgtcaggctt caccttctcg agctacgcca tgtcatgggt cagacaggcc 120

cctggaaagg gtctggaatg ggtgtccgcc atttccggga gcgggggatc tacatactac 180

gccgatagcg tgaagggccg cttcaccatt tcccgggaca actccaagaa cactctctat 240

ctgcaaatga actccctccg cgctgaggac actgccgtgt actactgcgc caaaatccct 300

cagaccggca ccttcgacta ctggggacag gggactctgg tcaccgtcag cagcggtggc 360

ggaggttcgg ggggaggagg aagcggcggc ggagggtccg agattgtgct gacccagtca 420

cccggcactt tgtccctgtc gcctggagaa agggccaccc tttcctgccg ggcatcccaa 480

tccgtgtcct cctcgtacct ggcctggtac cagcagaggc ccggacaggc cccacggctt 540

ctgatctacg gagcaagcag ccgcgcgacc ggtatcccgg accggttttc gggctcgggc 600

tcaggaactg acttcaccct caccatctcc cgcctggaac ccgaagattt cgctgtgtat 660

tactgccagc actacggcag ctccccgtcc tggacgttcg gccagggaac tcggctggag 720

atcaag 726

<210> 810
<211> 118
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 810
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 Ser Gly Gly Ser Thr Tyr Tyr Ala Asp Ser Val
50 55 60

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
65 70 75 80

Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Lys Ile Pro Gln Thr Gly Thr Phe Asp Tyr Trp Gly Gln Gly Thr
100 105 110

Leu Val Thr Val Ser Ser
115

<210> 811
<211> 109
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 811
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 Ser Ser
20 25 30

Tyr Leu Ala Trp Tyr Gln Gln Arg 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 His Tyr Gly Ser Ser Pro
85 90 95

Ser Trp Thr Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys
100 105

<210> 812
<211> 486
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 812
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Glu Val Gln Leu Leu Glu Ser Gly Gly Gly Leu
20 25 30

Val Gln Pro Gly Gly Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe
35 40 45

Thr Phe Ser Ser Tyr Ala Met Ser Trp Val Arg Gln Ala Pro Gly Lys
50 55 60

Gly Leu Glu Trp Val Ser Ala Ile Ser Gly Ser Gly Gly Ser Thr Tyr
65 70 75 80

Tyr Ala Asp Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser
85 90 95

Lys Asn Thr Leu Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr
100 105 110

Ala Val Tyr Tyr Cys Ala Lys Ile Pro Gln Thr Gly Thr Phe Asp Tyr
115 120 125

Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly Gly Ser
130 135 140

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Ile Val Leu Thr Gln
145 150 155 160

Ser Pro Gly Thr Leu Ser Leu Ser Pro Gly Glu Arg Ala Thr Leu Ser

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                165                 170                 175

Cys Arg Ala Ser Gln Ser Val Ser Ser Ser Tyr Leu Ala Trp Tyr Gln
            180                 185                 190

Gln Arg Pro Gly Gln Ala Pro Arg Leu Leu Ile Tyr Gly Ala Ser Ser
        195                 200                 205

Arg Ala Thr Gly Ile Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr
    210                 215                 220

Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu Asp Phe Ala Val
225                 230                 235                 240

Tyr Tyr Cys Gln His Tyr Gly Ser Ser Pro Ser Trp Thr Phe Gly Gln
                245                 250                 255

Gly Thr Arg Leu Glu Ile Lys Thr Thr Thr Pro Ala Pro Arg Pro Pro
            260                 265                 270

Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser Leu Arg Pro Glu
        275                 280                 285

Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr Arg Gly Leu Asp
    290                 295                 300

Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly
305                 310                 315                 320

Val Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr Cys Lys Arg Gly Arg
                325                 330                 335

Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met Arg Pro Val Gln
            340                 345                 350

Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu Glu Glu
        355                 360                 365

Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg Ser Ala Asp Ala
    370                 375                 380
```

Pro Ala Tyr Lys Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn Leu
385 390 395 400

Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg Asp
405 410 415

Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu
420 425 430

Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile
435 440 445

Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His Asp Gly Leu Tyr
450 455 460

Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu His Met
465 470 475 480

Gln Ala Leu Pro Pro Arg
485

<210> 813
<211> 1458
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 813
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

cccgaagtgc agctgctgga gtccggcggt ggattggtgc aaccgggggg atcgctcaga 120

ctgtcctgtg cggcgtcagg cttcaccttc tcgagctacg ccatgtcatg ggtcagacag 180

gcccctggaa agggtctgga atgggtgtcc gccatttccg ggagcggggg atctacatac 240

tacgccgata gcgtgaaggg ccgcttcacc atttcccggg acaactccaa gaacactctc 300

tatctgcaaa tgaactccct ccgcgctgag gacactgccg tgtactactg cgccaaaatc 360

cctcagaccg gcaccttcga ctactgggga caggggactc tggtcaccgt cagcagcggt 420

ggcggaggtt cgggggggagg aggaagcggc ggcggagggt ccgagattgt gctgacccag 480

tcacccggca ctttgtccct gtcgcctgga gaaagggcca ccctttcctg ccgggcatcc 540

caatccgtgt cctcctcgta cctggcctgg taccagcaga ggcccggaca ggccccacgg 600

cttctgatct acggagcaag cagccgcgcg accggtatcc cggaccggtt ttcgggctcg 660

ggctcaggaa ctgacttcac cctcaccatc tcccgcctgg aacccgaaga tttcgctgtg 720

tattactgcc agcactacgg cagctccccg tcctggacgt tcggccaggg aactcggctg 780

gagatcaaga ccactacccc agcaccgagg ccacccaccc cggctcctac catcgcctcc 840

cagcctctgt ccctgcgtcc ggaggcatgt agacccgcag ctggtggggc cgtgcatacc 900

cggggtcttg acttcgcctg cgatatctac atttgggccc ctctggctgg tacttgcggg 960

gtcctgctgc tttcactcgt gatcactctt tactgtaagc gcggtcggaa gaagctgctg 1020

tacatcttta agcaaccctt catgaggcct gtgcagacta ctcaagagga ggacggctgt 1080

tcatgccggt tcccagagga ggaggaaggc ggctgcgaac tgcgcgtgaa attcagccgc 1140

agcgcagatg ctccagccta caagcagggg cagaaccagc tctacaacga actcaatctt 1200

ggtcggagag aggagtacga cgtgctggac aagcggagag gacgggaccc agaaatgggc 1260

gggaagccgc gcagaaagaa tccccaagag ggcctgtaca acgagctcca aaaggataag 1320

atggcagaag cctatagcga gattggtatg aaaggggaac gcagaagagg caaaggccac 1380

gacggactgt accagggact cagcaccgcc accaaggaca cctatgacgc tcttcacatg 1440

caggccctgc cgcctcgg 1458

<210> 814
<211> 248
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 814
Glu Val Gln Leu Val Glu Thr 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 Ser Gly Gly Ser Thr Tyr Tyr Ala Asp Ser Val
    50                  55                  60

Lys Gly Arg Phe Thr Met Ser Arg Glu Asn Asp Lys Asn Ser Val Phe
65                  70                  75                  80

Leu Gln Met Asn Ser Leu Arg Val Glu Asp Thr Gly Val Tyr Tyr Cys
                85                  90                  95

Ala Arg Ala Asn Tyr Lys Arg Glu Leu Arg Tyr Tyr Tyr Gly Met Asp
            100                 105                 110

Val Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly Gly
        115                 120                 125

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Ile Val Met Thr
    130                 135                 140

Gln Ser Pro Gly Thr Leu Ser Leu Ser Pro Gly Glu Ser Ala Thr Leu
145                 150                 155                 160

Ser Cys Arg Ala Ser Gln Arg Val Ala Ser Asn Tyr Leu Ala Trp Tyr
                165                 170                 175

Gln His Lys Pro Gly Gln Ala Pro Ser Leu Leu Ile Ser Gly Ala Ser
            180                 185                 190

Ser Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly
        195                 200                 205

Thr Asp Phe Thr Leu Ala Ile Ser Arg Leu Glu Pro Glu Asp Ser Ala
    210                 215                 220

Val Tyr Tyr Cys Gln His Tyr Asp Ser Ser Pro Ser Trp Thr Phe Gly
225                 230                 235                 240
```

Gln Gly Thr Lys Val Glu Ile Lys
245

<210> 815
<211> 744
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 815
gaagtgcaac tggtggaaac cggtggagga ctcgtgcagc ctggcggcag cctccggctg 60

agctgcgccg cttcgggatt caccttttcc tcctacgcga tgtcttgggt cagacaggcc 120

cccggaaagg ggctggaatg ggtgtcagcc atctccggct ccggcggatc aacgtactac 180

gccgactccg tgaaaggccg gttcaccatg tcgcgcgaga atgacaagaa ctccgtgttc 240

ctgcaaatga actccctgag ggtggaggac accggagtgt actattgtgc gcgcgccaac 300

tacaagagag agctgcggta ctactacgga atggacgtct ggggacaggg aactatggtg 360

accgtgtcat ccggtggagg gggaagcggc ggtggaggca gcgggggcgg gggttcagaa 420

attgtcatga cccagtcccc gggaactctt tccctctccc ccggggaatc cgcgactttg 480

tcctgccggg ccagccagcg cgtggcctcg aactacctcg catggtacca gcataagcca 540

ggccaagccc cttccctgct gatttccggg gctagcagcc gcgccactgg cgtgccggat 600

aggttctcgg gaagcggctc gggtaccgat ttcaccctgg caatctcgcg gctggaaccg 660

gaggattcgg ccgtgtacta ctgccagcac tatgactcat ccccctcctg gacattcgga 720

cagggcacca aggtcgagat caag 744

<210> 816
<211> 124
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 816
Glu Val Gln Leu Val Glu Thr 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 Ser Gly Gly Ser Thr Tyr Tyr Ala Asp Ser Val
50 55 60

Lys Gly Arg Phe Thr Met Ser Arg Glu Asn Asp Lys Asn Ser Val Phe
65 70 75 80

Leu Gln Met Asn Ser Leu Arg Val Glu Asp Thr Gly Val Tyr Tyr Cys
85 90 95

Ala Arg Ala Asn Tyr Lys Arg Glu Leu Arg Tyr Tyr Tyr Gly Met Asp
100 105 110

Val Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser
115 120

<210> 817
<211> 109
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 817
Glu Ile Val Met Thr Gln Ser Pro Gly Thr Leu Ser Leu Ser Pro Gly
1 5 10 15

Glu Ser Ala Thr Leu Ser Cys Arg Ala Ser Gln Arg Val Ala Ser Asn
20 25 30

Tyr Leu Ala Trp Tyr Gln His Lys Pro Gly Gln Ala Pro Ser Leu Leu
35 40 45

```
Ile Ser Gly Ala Ser Ser Arg Ala Thr Gly Val Pro Asp Arg Phe Ser
    50                  55                  60

Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Ala Ile Ser Arg Leu Glu
65                  70                  75                  80

Pro Glu Asp Ser Ala Val Tyr Tyr Cys Gln His Tyr Asp Ser Ser Pro
                85                  90                  95

Ser Trp Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
            100                 105
```

<210> 818
<211> 492
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 818

```
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1               5                   10                  15

His Ala Ala Arg Pro Glu Val Gln Leu Val Glu Thr Gly Gly Gly Leu
            20                  25                  30

Val Gln Pro Gly Gly Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe
        35                  40                  45

Thr Phe Ser Ser Tyr Ala Met Ser Trp Val Arg Gln Ala Pro Gly Lys
    50                  55                  60

Gly Leu Glu Trp Val Ser Ala Ile Ser Gly Ser Gly Gly Ser Thr Tyr
65                  70                  75                  80

Tyr Ala Asp Ser Val Lys Gly Arg Phe Thr Met Ser Arg Glu Asn Asp
                85                  90                  95

Lys Asn Ser Val Phe Leu Gln Met Asn Ser Leu Arg Val Glu Asp Thr
            100                 105                 110
```

```
Gly Val Tyr Tyr Cys Ala Arg Ala Asn Tyr Lys Arg Glu Leu Arg Tyr
        115                 120                 125

Tyr Tyr Gly Met Asp Val Trp Gly Gln Gly Thr Met Val Thr Val Ser
    130                 135                 140

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
145                 150                 155                 160

Glu Ile Val Met Thr Gln Ser Pro Gly Thr Leu Ser Leu Ser Pro Gly
                165                 170                 175

Glu Ser Ala Thr Leu Ser Cys Arg Ala Ser Gln Arg Val Ala Ser Asn
            180                 185                 190

Tyr Leu Ala Trp Tyr Gln His Lys Pro Gly Gln Ala Pro Ser Leu Leu
        195                 200                 205

Ile Ser Gly Ala Ser Ser Arg Ala Thr Gly Val Pro Asp Arg Phe Ser
    210                 215                 220

Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Ala Ile Ser Arg Leu Glu
225                 230                 235                 240

Pro Glu Asp Ser Ala Val Tyr Tyr Cys Gln His Tyr Asp Ser Ser Pro
                245                 250                 255

Ser Trp Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys Thr Thr Thr
            260                 265                 270

Pro Ala Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro
        275                 280                 285

Leu Ser Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala Val
    290                 295                 300

His Thr Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro
305                 310                 315                 320

Leu Ala Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr Leu
```

```
                325                 330                 335

Tyr Cys Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro
            340                 345                 350

Phe Met Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys
        355                 360                 365

Arg Phe Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg Val Lys Phe
    370                 375                 380

Ser Arg Ser Ala Asp Ala Pro Ala Tyr Lys Gln Gly Gln Asn Gln Leu
385                 390                 395                 400

Tyr Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp
                405                 410                 415

Lys Arg Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys
            420                 425                 430

Asn Pro Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala
        435                 440                 445

Glu Ala Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys
    450                 455                 460

Gly His Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr
465                 470                 475                 480

Tyr Asp Ala Leu His Met Gln Ala Leu Pro Pro Arg
                485                 490
```

<210> 819
<211> 1476
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 819

atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

cccgaagtgc aactggtgga aaccggtgga ggactcgtgc agcctggcgg cagcctccgg 120

ctgagctgcg ccgcttcggg attcaccttt tcctcctacg cgatgtcttg ggtcagacag 180

gcccccggaa aggggctgga atgggtgtca gccatctccg gctccggcgg atcaacgtac 240

tacgccgact ccgtgaaagg ccggttcacc atgtcgcgcg agaatgacaa gaactccgtg 300

ttcctgcaaa tgaactccct gagggtggag gacaccggag tgtactattg tgcgcgcgcc 360

aactacaaga gagagctgcg gtactactac ggaatggacg tctggggaca gggaactatg 420

gtgaccgtgt catccggtgg agggggaagc ggcggtggag gcagcggggg cgggggttca 480

gaaattgtca tgacccagtc cccgggaact ctttccctct cccccgggga atccgcgact 540

ttgtcctgcc gggccagcca gcgcgtggcc tcgaactacc tcgcatggta ccagcataag 600

ccaggccaag ccccttccct gctgatttcc ggggctagca gccgcgccac tggcgtgccg 660

gataggttct cgggaagcgg ctcgggtacc gatttcaccc tggcaatctc gcggctggaa 720

ccggaggatt cggccgtgta ctactgccag cactatgact catccccctc ctggacattc 780

ggacagggca ccaaggtcga gatcaagacc actaccccag caccgaggcc acccaccccg 840

gctcctacca tcgcctccca gcctctgtcc ctgcgtccgg aggcatgtag acccgcagct 900

ggtggggccg tgcatacccg gggtcttgac ttcgcctgcg atatctacat ttgggccct 960

ctggctggta cttgcggggt cctgctgctt tcactcgtga tcactcttta ctgtaagcgc 1020

ggtcggaaga agctgctgta catctttaag caacccttca tgaggcctgt gcagactact 1080

caagaggagg acggctgttc atgccggttc ccagaggagg aggaaggcgg ctgcgaactg 1140

cgcgtgaaat tcagccgcag cgcagatgct ccagcctaca agcaggggca gaaccagctc 1200

tacaacgaac tcaatcttgg tcggagagag gagtacgacg tgctggacaa gcggagagga 1260

cgggacccag aaatgggcgg gaagccgcgc agaaagaatc cccaagaggg cctgtacaac 1320

gagctccaaa aggataagat ggcagaagcc tatagcgaga ttggtatgaa aggggaacgc 1380

agaagaggca aaggccacga cggactgtac cagggactca gcaccgccac caaggacacc 1440

tatgacgctc ttcacatgca ggccctgccg cctcgg 1476

<210> 820
<211> 244
<212> PRT

<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 820
Glu Val Gln Leu Leu Glu Thr Gly Gly Gly Leu Val Gln Pro Gly Gly
1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Ser 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 Ser Gly Gly Ser Thr Tyr Tyr Ala Asp Ser Val
50 55 60

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
65 70 75 80

Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Lys Ala Leu Val Gly Ala Thr Gly Ala Phe Asp Ile Trp Gly Gln
100 105 110

Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly
115 120 125

Gly Ser Gly Gly Gly Gly Ser Glu Ile Val Leu Thr Gln Ser Pro Gly
130 135 140

Thr Leu Ser Leu Ser Pro Gly Glu Arg Ala Thr Leu Ser Cys Arg Ala
145 150 155 160

Ser Gln Ser Leu Ser Ser Asn Phe Leu Ala Trp Tyr Gln Gln Lys Pro
165 170 175

Gly Gln Ala Pro Gly Leu Leu Ile Tyr Gly Ala Ser Asn Trp Ala Thr
180 185 190

Gly Thr Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr
195 200 205

Leu Thr Ile Thr Arg Leu Glu Pro Glu Asp Phe Ala Val Tyr Tyr Cys
210 215 220

Gln Tyr Tyr Gly Thr Ser Pro Met Tyr Thr Phe Gly Gln Gly Thr Lys
225 230 235 240

Val Glu Ile Lys

<210> 821
<211> 732
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 821
gaagtgcagc tgctcgaaac cggtggaggg ctggtgcagc agggggctc cctgaggctt 60

tcatgcgccg ctagcggatt ctccttctcc tcttacgcca tgtcgtgggt ccgccaagcc 120

cctggaaaag gcctggaatg ggtgtccgcg atttccggga gcggaggttc gacctattac 180

gccgactccg tgaagggccg ctttaccatc tcccgggata actccaagaa cactctgtac 240

ctccaaatga actcgctgag agccgaggac accgccgtgt attactgcgc gaaggcgctg 300

gtcggcgcga ctggggcatt cgacatctgg ggacagggaa ctcttgtgac cgtgtcgagc 360

ggaggcggcg gctccggcgg aggagggagc gggggcggtg gttccgaaat cgtgttgact 420

cagtccccgg gaaccctgag cttgtcaccc ggggagcggg ccactctctc ctgtcgcgcc 480

tcccaatcgc tctcatccaa tttcctggcc tggtaccagc agaagcccgg acaggccccg 540

ggcctgctca tctacggcgc ttcaaactgg gcaacgggaa cccctgatcg gttcagcgga 600

agcggatcgg gtactgactt taccctgacc atcaccagac tggaaccgga ggacttcgcc 660

gtgtactact gccagtacta cggcacctcc cccatgtaca cattcggaca gggtaccaag 720

gtcgagatta ag 732

<210> 822
<211> 120
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 822
Glu Val Gln Leu Leu Glu Thr Gly Gly Gly Leu Val Gln Pro Gly Gly
1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Ser 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 Ser Gly Gly Ser Thr Tyr Tyr Ala Asp Ser Val
50 55 60

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
65 70 75 80

Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Lys Ala Leu Val Gly Ala Thr Gly Ala Phe Asp Ile Trp Gly Gln
100 105 110

Gly Thr Leu Val Thr Val Ser Ser
115 120

<210> 823
<211> 109
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 823
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 Leu Ser Ser Asn
            20   25   30

Phe Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Gly Leu Leu
        35   40   45

Ile Tyr Gly Ala Ser Asn Trp Ala Thr Gly Thr Pro Asp Arg Phe Ser
    50   55   60

Gly Ser Gly 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 Tyr Tyr Gly Thr Ser Pro
                85   90   95

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

<210> 824
<211> 488
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 824
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1   5   10   15

His Ala Ala Arg Pro Glu Val Gln Leu Leu Glu Thr Gly Gly Gly Leu
            20   25   30

Val Gln Pro Gly Gly Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe
        35   40   45

Ser Phe Ser Ser Tyr Ala Met Ser Trp Val Arg Gln Ala Pro Gly Lys

```
    50                  55                  60

Gly Leu Glu Trp Val Ser Ala Ile Ser Gly Ser Gly Gly Ser Thr Tyr
65                  70                  75                  80

Tyr Ala Asp Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser
                85                  90                  95

Lys Asn Thr Leu Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr
            100                 105                 110

Ala Val Tyr Tyr Cys Ala Lys Ala Leu Val Gly Ala Thr Gly Ala Phe
        115                 120                 125

Asp Ile Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly
    130                 135                 140

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Ile Val Leu
145                 150                 155                 160

Thr Gln Ser Pro Gly Thr Leu Ser Leu Ser Pro Gly Glu Arg Ala Thr
                165                 170                 175

Leu Ser Cys Arg Ala Ser Gln Ser Leu Ser Ser Asn Phe Leu Ala Trp
            180                 185                 190

Tyr Gln Gln Lys Pro Gly Gln Ala Pro Gly Leu Leu Ile Tyr Gly Ala
        195                 200                 205

Ser Asn Trp Ala Thr Gly Thr Pro Asp Arg Phe Ser Gly Ser Gly Ser
    210                 215                 220

Gly Thr Asp Phe Thr Leu Thr Ile Thr Arg Leu Glu Pro Glu Asp Phe
225                 230                 235                 240

Ala Val Tyr Tyr Cys Gln Tyr Tyr Gly Thr Ser Pro Met Tyr Thr Phe
                245                 250                 255

Gly Gln Gly Thr Lys Val Glu Ile Lys Thr Thr Thr Pro Ala Pro Arg
            260                 265                 270
```

```
Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser Leu Arg
        275                 280                 285

Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr Arg Gly
    290                 295                 300

Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr
305                 310                 315                 320

Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr Cys Lys Arg
                325                 330                 335

Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met Arg Pro
            340                 345                 350

Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu
        355                 360                 365

Glu Glu Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg Ser Ala
    370                 375                 380

Asp Ala Pro Ala Tyr Lys Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu
385                 390                 395                 400

Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly
                405                 410                 415

Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu
            420                 425                 430

Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser
        435                 440                 445

Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His Asp Gly
    450                 455                 460

Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu
465                 470                 475                 480

His Met Gln Ala Leu Pro Pro Arg
```

<210> 825
<211> 1464
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 825
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

cccgaagtgc agctgctcga aaccggtgga gggctggtgc agccaggggg ctccctgagg 120

ctttcatgcg ccgctagcgg attctccttc tcctcttacg ccatgtcgtg ggtccgccaa 180

gcccctggaa aaggcctgga atgggtgtcc gcgatttccg ggagcggagg ttcgacctat 240

tacgccgact ccgtgaaggg ccgctttacc atctcccggg ataactccaa gaacactctg 300

tacctccaaa tgaactcgct gagagccgag gacaccgccg tgtattactg cgcgaaggcg 360

ctggtcggcg cgactggggc attcgacatc tggggacagg gaactcttgt gaccgtgtcg 420

agcggaggcg gcggctccgg cggaggaggg agcgggggcg gtggttccga aatcgtgttg 480

actcagtccc cgggaaccct gagcttgtca cccggggagc gggccactct ctcctgtcgc 540

gcctcccaat cgctctcatc caatttcctg gcctggtacc agcagaagcc cggacaggcc 600

ccgggcctgc tcatctacgg cgcttcaaac tgggcaacgg gaacccctga tcggttcagc 660

ggaagcggat cgggtactga ctttaccctg accatcacca gactggaacc ggaggacttc 720

gccgtgtact actgccagta ctacggcacc tcccccatgt acacattcgg acagggtacc 780

aaggtcgaga ttaagaccac taccccagca ccgaggccac ccaccccggc tcctaccatc 840

gcctcccagc ctctgtccct gcgtccggag gcatgtagac ccgcagctgg tggggccgtg 900

catacccggg gtcttgactt cgcctgcgat atctacattt gggcccctct ggctggtact 960

tgcggggtcc tgctgctttc actcgtgatc actctttact gtaagcgcgg tcggaagaag 1020

ctgctgtaca tctttaagca acccttcatg aggcctgtgc agactactca agaggaggac 1080

ggctgttcat gccggttccc agaggaggag gaaggcggct gcgaactgcg cgtgaaattc 1140

agccgcagcg cagatgctcc agcctacaag caggggcaga accagctcta caacgaactc 1200

aatcttggtc ggagagagga gtacgacgtg ctggacaagc ggagaggacg ggacccagaa 1260

atgggcggga agccgcgcag aaagaatccc caagagggcc tgtacaacga gctccaaaag 1320

gataagatgg cagaagccta tagcgagatt ggtatgaaag gggaacgcag aagaggcaaa 1380

ggccacgacg gactgtacca gggactcagc accgccacca aggacaccta tgacgctctt 1440

cacatgcagg ccctgccgcc tcgg 1464

<210> 826
<211> 244
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 826
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 Ser Gly Gly Ser Thr Tyr Tyr Ala Asp Ser Val
50 55 60

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
65 70 75 80

Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Val Leu Trp Phe Gly Glu Gly Phe Asp Pro Trp Gly Gln Gly Thr Leu
100 105 110

Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly
115 120 125

```
Gly Gly Gly Ser Asp Ile Val Leu Thr Gln Ser Pro Leu Ser Leu Pro
    130                 135                 140

Val Thr Pro Gly Glu Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser
145                 150                 155                 160

Leu Leu His Ser Asn Gly Tyr Asn Tyr Leu Asp Trp Tyr Leu Gln Lys
                165                 170                 175

Pro Gly Gln Ser Pro Gln Leu Leu Ile Tyr Leu Gly Ser Asn Arg Ala
            180                 185                 190

Ser Gly Val Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe
        195                 200                 205

Thr Leu Lys Ile Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr
    210                 215                 220

Cys Met Gln Ala Leu Gln Thr Pro Leu Thr Phe Gly Gly Gly Thr Lys
225                 230                 235                 240

Val Asp Ile Lys
```

<210> 827
<211> 733
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 827
gaagtgcagc tgcttgagag cggtggaggt ctggtgcagc ccgggggatc actgcgcctg 60

tcctgtgccg cgtccggttt cactttctcc tcgtacgcca tgtcgtgggt cagacaggca 120

ccgggaaagg gactggaatg ggtgtcagcc atttcgggtt cgggggcag cacctactac 180

gctgactccg tgaagggccg gttcaccatt tcccgcgaca actccaagaa caccttgtac 240

ctccaaatga actccctgcg ggccgaagat accgccgtgt attactgcgt gctgtggttc 300

ggagagggat tcgacccgtg gggacaagga acactcgtga ctgtgtcatc cggcggaggc 360

ggcagcggtg gcggcggttc cggcggcggc ggatctgaca tcgtgttgac ccagtcccct 420

ctgagcctgc cggtcactcc tggcgaacca gccagcatct cctgccggtc gagccagtcc 480

ctcctgcact ccaatgggta caactacctc gattggtatc tgcaaaagcc gggccagagc 540

ccccagctgc tgatctacct tgggtcaaac cgcgcttccg gggtgcctga tagattctcc 600

gggtccggga gcggaaccga ctttaccctg aaaatctcga gggtggaggc cgaggacgtc 660

ggagtgtact actgcatgca ggcgctccag actcccctga ccttcggagg aggaacgaag 720

gtcgacatca aga 733

<210> 828
<211> 117
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 828
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 Ser Gly Gly Ser Thr Tyr Tyr Ala Asp Ser Val
50 55 60

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
65 70 75 80

Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Val Leu Trp Phe Gly Glu Gly Phe Asp Pro Trp Gly Gln Gly Thr Leu
100 105 110

Val Thr Val Ser Ser
        115

<210> 829
<211> 112
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 829
Asp Ile Val Leu Thr Gln Ser Pro Leu Ser Leu Pro Val Thr Pro Gly
1   5   10   15

Glu Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Leu 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 Asp Ile Lys
            100   105   110

<210> 830
<211> 488
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 830
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1   5   10   15

His Ala Ala Arg Pro Glu Val Gln Leu Leu Glu Ser Gly Gly Gly Leu
            20   25   30

Val Gln Pro Gly Gly Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe
        35   40   45

Thr Phe Ser Ser Tyr Ala Met Ser Trp Val Arg Gln Ala Pro Gly Lys
    50   55   60

Gly Leu Glu Trp Val Ser Ala Ile Ser Gly Ser Gly Gly Ser Thr Tyr
65   70   75   80

Tyr Ala Asp Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser
                85   90   95

Lys Asn Thr Leu Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr
            100   105   110

Ala Val Tyr Tyr Cys Val Leu Trp Phe Gly Glu Gly Phe Asp Pro Trp
        115   120   125

Gly Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly
    130   135   140

Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Val Leu Thr Gln Ser
145   150   155   160

Pro Leu Ser Leu Pro Val Thr Pro Gly Glu Pro Ala Ser Ile Ser Cys
                165   170   175

Arg Ser Ser Gln Ser Leu Leu His Ser Asn Gly Tyr Asn Tyr Leu Asp
            180   185   190

Trp Tyr Leu Gln Lys Pro Gly Gln Ser Pro Gln Leu Leu Ile Tyr Leu
        195   200   205

Gly Ser Asn Arg Ala Ser Gly Val Pro Asp Arg Phe Ser Gly Ser Gly

```
    210                 215                 220

Ser Gly Thr Asp Phe Thr Leu Lys Ile Ser Arg Val Glu Ala Glu Asp
225                 230                 235                 240

Val Gly Val Tyr Tyr Cys Met Gln Ala Leu Gln Thr Pro Leu Thr Phe
                245                 250                 255

Gly Gly Gly Thr Lys Val Asp Ile Lys Thr Thr Thr Pro Ala Pro Arg
            260                 265                 270

Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser Leu Arg
        275                 280                 285

Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr Arg Gly
    290                 295                 300

Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr
305                 310                 315                 320

Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr Cys Lys Arg
                325                 330                 335

Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met Arg Pro
            340                 345                 350

Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu
        355                 360                 365

Glu Glu Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg Ser Ala
    370                 375                 380

Asp Ala Pro Ala Tyr Lys Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu
385                 390                 395                 400

Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly
                405                 410                 415

Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu
            420                 425                 430
```

Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser
435 440 445

Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His Asp Gly
450 455 460

Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu
465 470 475 480

His Met Gln Ala Leu Pro Pro Arg
485

<210> 831
<211> 1464
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 831
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

cccgaagtgc agctgcttga gagcggtgga ggtctggtgc agcccggggg atcactgcgc 120

ctgtcctgtg ccgcgtccgg tttcactttc tcctcgtacg ccatgtcgtg ggtcagacag 180

gcaccgggaa agggactgga atgggtgtca gccatttcgg gttcgggggg cagcacctac 240

tacgctgact ccgtgaaggg ccggttcacc atttcccgcg acaactccaa gaacaccttg 300

tacctccaaa tgaactccct gcgggccgaa gataccgccg tgtattactg cgtgctgtgg 360

ttcggagagg gattcgaccc gtggggacaa ggaacactcg tgactgtgtc atccggcgga 420

ggcggcagcg gtggcggcgg ttccggcggc ggcggatctg acatcgtgtt gacccagtcc 480

cctctgagcc tgccggtcac tcctggcgaa ccagccagca tctcctgccg gtcgagccag 540

tccctcctgc actccaatgg gtacaactac ctcgattggt atctgcaaaa gccgggccag 600

agcccccagc tgctgatcta ccttgggtca aaccgcgctt ccggggtgcc tgatagattc 660

tccgggtccg ggagcggaac cgactttacc ctgaaaatct cgagggtgga ggccgaggac 720

gtcggagtgt actactgcat gcaggcgctc cagactcccc tgaccttcgg aggaggaacg 780

aaggtcgaca tcaagaccac taccccagca ccgaggccac ccaccccggc tcctaccatc 840

gcctcccagc ctctgtccct gcgtccggag gcatgtagac ccgcagctgg tggggccgtg 900

catacccggg gtcttgactt cgcctgcgat atctacattt gggcccctct ggctggtact 960

tgcggggtcc tgctgctttc actcgtgatc actctttact gtaagcgcgg tcggaagaag 1020

ctgctgtaca tctttaagca acccttcatg aggcctgtgc agactactca agaggaggac 1080

ggctgttcat gccggttccc agaggaggag gaaggcggct gcgaactgcg cgtgaaattc 1140

agccgcagcg cagatgctcc agcctacaag caggggcaga accagctcta caacgaactc 1200

aatcttggtc ggagagagga gtacgacgtg ctggacaagc ggagaggacg ggacccagaa 1260

atgggcggga agccgcgcag aaagaatccc caagagggcc tgtacaacga gctccaaaag 1320

gataagatgg cagaagccta tagcgagatt ggtatgaaag gggaacgcag aagaggcaaa 1380

ggccacgacg gactgtacca gggactcagc accgccacca aggacaccta tgacgctctt 1440

cacatgcagg ccctgccgcc tcgg 1464

<210> 832
<211> 251
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 832
Gln Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
1 5 10 15

Ser Leu Arg Leu Ser Cys 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 Ser Gly Gly Ser Thr Tyr Tyr Ala Asp Ser Val
50 55 60

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
65 70 75 80

```
Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
                85                  90                  95

Ala Lys Val Gly Tyr Asp Ser Ser Gly Tyr Tyr Arg Asp Tyr Tyr Gly
            100                 105                 110

Met Asp Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser Gly Gly
        115                 120                 125

Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Ile Val
    130                 135                 140

Leu Thr Gln Ser Pro Gly Thr Leu Ser Leu Ser Pro Gly Glu Arg Ala
145                 150                 155                 160

Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Ser Ser Tyr Leu Ala
                165                 170                 175

Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile Tyr Gly
            180                 185                 190

Thr Ser Ser Arg Ala Thr Gly Ile Ser Asp Arg Phe Ser Gly Ser Gly
        195                 200                 205

Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu Asp
    210                 215                 220

Phe Ala Val Tyr Tyr Cys Gln His Tyr Gly Asn Ser Pro Pro Lys Phe
225                 230                 235                 240

Thr Phe Gly Pro Gly Thr Lys Leu Glu Ile Lys
                245                 250
```

<210> 833
<211> 753
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic

polynucleotide"

<400> 833
caagtgcagc tcgtggagtc aggcggagga ctggtgcagc ccgggggctc cctgagactt 60

tcctgcgcgg catcgggttt taccttctcc tcctatgcta tgtcctgggt gcgccaggcc 120

ccgggaaagg gactggaatg ggtgtccgca atcagcggta gcgggggctc aacatactac 180

gccgactccg tcaagggtcg cttcactatt tcccgggaca actccaagaa taccctgtac 240

ctccaaatga acagcctcag ggccgaggat actgccgtgt actactgcgc caaagtcgga 300

tacgatagct ccggttacta ccgggactac tacggaatgg acgtgtgggg acagggcacc 360

accgtgaccg tgtcaagcgg cggaggcggt tcaggagggg gaggctccgg cggtggaggg 420

tccgaaatcg tcctgactca gtcgcctggc actctgtcgt tgtccccggg ggagcgcgct 480

accctgtcgt gtcgggcgtc gcagtccgtg tcgagctcct acctcgcgtg gtaccagcag 540

aagcccggac aggcccctag acttctgatc tacggcactt cttcacgcgc caccgggatc 600

agcgacaggt tcagcggctc cggctccggg accgacttca ccctgaccat tagccggctg 660

gagcctgaag atttcgccgt gtattactgc caacactacg gaaactcgcc gccaaagttc 720

acgttcggac ccggaaccaa gctggaaatc aag 753

<210> 834
<211> 126
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 834
Gln Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
1 5 10 15

Ser Leu Arg Leu Ser Cys 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 Ser Gly Gly Ser Thr Tyr Tyr Ala Asp Ser Val

```
    50                  55                  60

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
65                  70                  75                  80

Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
                85                  90                  95

Ala Lys Val Gly Tyr Asp Ser Ser Gly Tyr Tyr Arg Asp Tyr Tyr Gly
            100                 105                 110

Met Asp Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser
        115                 120                 125


<210> 835
<211> 110
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 835
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 Ser Ser
            20                  25                  30

Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu
        35                  40                  45

Ile Tyr Gly Thr Ser Ser Arg Ala Thr Gly Ile Ser 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 His Tyr Gly Asn Ser Pro
                85                  90                  95
```

Pro Lys Phe Thr Phe Gly Pro Gly Thr Lys Leu Glu Ile Lys
100 105 110

<210> 836
<211> 495
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 836
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Gln Val Gln Leu Val Glu Ser Gly Gly Gly Leu
20 25 30

Val Gln Pro Gly Gly Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe
35 40 45

Thr Phe Ser Ser Tyr Ala Met Ser Trp Val Arg Gln Ala Pro Gly Lys
50 55 60

Gly Leu Glu Trp Val Ser Ala Ile Ser Gly Ser Gly Gly Ser Thr Tyr
65 70 75 80

Tyr Ala Asp Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser
85 90 95

Lys Asn Thr Leu Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr
100 105 110

Ala Val Tyr Tyr Cys Ala Lys Val Gly Tyr Asp Ser Ser Gly Tyr Tyr
115 120 125

Arg Asp Tyr Tyr Gly Met Asp Val Trp Gly Gln Gly Thr Thr Val Thr
130 135 140

Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly
145 150 155 160

```
Gly Ser Glu Ile Val Leu Thr Gln Ser Pro Gly Thr Leu Ser Leu Ser
                165                 170                 175

Pro Gly Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser
            180                 185                 190

Ser Ser Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg
        195                 200                 205

Leu Leu Ile Tyr Gly Thr Ser Ser Arg Ala Thr Gly Ile Ser Asp Arg
    210                 215                 220

Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg
225                 230                 235                 240

Leu Glu Pro Glu Asp Phe Ala Val Tyr Tyr Cys Gln His Tyr Gly Asn
                245                 250                 255

Ser Pro Pro Lys Phe Thr Phe Gly Pro Gly Thr Lys Leu Glu Ile Lys
            260                 265                 270

Thr Thr Thr Pro Ala Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala
        275                 280                 285

Ser Gln Pro Leu Ser Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly
    290                 295                 300

Gly Ala Val His Thr Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile
305                 310                 315                 320

Trp Ala Pro Leu Ala Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val
                325                 330                 335

Ile Thr Leu Tyr Cys Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe
            340                 345                 350

Lys Gln Pro Phe Met Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly
        355                 360                 365

Cys Ser Cys Arg Phe Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg
```

370 375 380

Val Lys Phe Ser Arg Ser Ala Asp Ala Pro Ala Tyr Lys Gln Gly Gln
385 390 395 400

Asn Gln Leu Tyr Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp
405 410 415

Val Leu Asp Lys Arg Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro
420 425 430

Arg Arg Lys Asn Pro Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp
435 440 445

Lys Met Ala Glu Ala Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg
450 455 460

Arg Gly Lys Gly His Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr
465 470 475 480

Lys Asp Thr Tyr Asp Ala Leu His Met Gln Ala Leu Pro Pro Arg
485 490 495

<210> 837
<211> 1485
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 837
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

ccccaagtgc agctcgtgga gtcaggcgga ggactggtgc agcccggggg ctccctgaga 120

ctttcctgcg cggcatcggg ttttaccttc tcctcctatg ctatgtcctg ggtgcgccag 180

gccccgggaa agggactgga atgggtgtcc gcaatcagcg gtagcggggg ctcaacatac 240

tacgccgact ccgtcaaggg tcgcttcact atttcccggg acaactccaa gaataccctg 300

tacctccaaa tgaacagcct cagggccgag gatactgccg tgtactactg cgccaaagtc 360

ggatacgata gctccggtta ctaccgggac tactacggaa tggacgtgtg gggacagggc 420

accaccgtga ccgtgtcaag cggcggaggc ggttcaggag ggggaggctc cggcggtgga 480

gggtccgaaa tcgtcctgac tcagtcgcct ggcactctgt cgttgtcccc gggggagcgc 540

gctaccctgt cgtgtcgggc gtcgcagtcc gtgtcgagct cctacctcgc gtggtaccag 600

cagaagcccg gacaggcccc tagacttctg atctacggca cttcttcacg cgccaccggg 660

atcagcgaca ggttcagcgg ctccggctcc gggaccgact tcaccctgac cattagccgg 720

ctggagcctg aagatttcgc cgtgtattac tgccaacact acggaaactc gccgccaaag 780

ttcacgttcg gacccggaac caagctggaa atcaagacca ctaccccagc accgaggcca 840

cccaccccgg ctcctaccat cgcctcccag cctctgtccc tgcgtccgga ggcatgtaga 900

cccgcagctg gtggggccgt gcatacccgg ggtcttgact tcgcctgcga tatctacatt 960

tgggcccctc tggctggtac ttgcggggtc ctgctgcttt cactcgtgat cactctttac 1020

tgtaagcgcg gtcggaagaa gctgctgtac atctttaagc aacccttcat gaggcctgtg 1080

cagactactc aagaggagga cggctgttca tgccggttcc cagaggagga ggaaggcggc 1140

tgcgaactgc gcgtgaaatt cagccgcagc gcagatgctc cagcctacaa gcaggggcag 1200

aaccagctct acaacgaact caatcttggt cggagagagg agtacgacgt gctggacaag 1260

cggagaggac gggacccaga aatgggcggg aagccgcgca gaaagaatcc ccaagagggc 1320

ctgtacaacg agctccaaaa ggataagatg gcagaagcct atagcgagat tggtatgaaa 1380

ggggaacgca gaagaggcaa aggccacgac ggactgtacc agggactcag caccgccacc 1440

aaggacacct atgacgctct tcacatgcag gccctgccgc ctcgg 1485

<210> 838
<211> 246
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 838
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
1 5 10 15

```
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr
            20                  25                  30

Ala Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35                  40                  45

Ser Ala Ile Ser Gly Ser Gly Gly Ser Thr Tyr Tyr Ala Asp Ser Val
    50                  55                  60

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
65                  70                  75                  80

Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
                85                  90                  95

Ala Lys Met Gly Trp Ser Ser Gly Tyr Leu Gly Ala Phe Asp Ile Trp
            100                 105                 110

Gly Gln Gly Thr Thr Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly
        115                 120                 125

Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Ile Val Leu Thr Gln Ser
    130                 135                 140

Pro Gly Thr Leu Ser Leu Ser Pro Gly Glu Arg Ala Thr Leu Ser Cys
145                 150                 155                 160

Arg Ala Ser Gln Ser Val Ala Ser Ser Phe Leu Ala Trp Tyr Gln Gln
                165                 170                 175

Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile Tyr Gly Ala Ser Gly Arg
            180                 185                 190

Ala Thr Gly Ile Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp
        195                 200                 205

Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu Asp Phe Ala Val Tyr
    210                 215                 220

Tyr Cys Gln His Tyr Gly Gly Ser Pro Arg Leu Thr Phe Gly Gly Gly
225                 230                 235                 240
```

Thr Lys Val Asp Ile Lys
245

<210> 839
<211> 739
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 839
gaagtccaac tggtggagtc cgggggaggg ctcgtgcagc ccggaggcag ccttcggctg 60

tcgtgcgccg cctccgggtt cacgttctca tcctacgcga tgtcgtgggt cagacaggca 120

ccaggaaagg gactggaatg ggtgtccgcc attagcggct ccggcggtag cacctactat 180

gccgactcag tgaagggaag gttcactatc tcccgcgaca acagcaagaa caccctgtac 240

ctccaaatga actctctgcg ggccgaggat accgcggtgt actattgcgc caagatgggt 300

tggtccagcg gatacttggg agccttcgac atttggggac agggcactac tgtgaccgtg 360

tcctccgggg gtggcggatc gggaggcggc ggctcgggtg gaggggttc cgaaatcgtg 420

ttgacccagt caccgggaac cctctcgctg tccccgggag aacgggctac actgtcatgt 480

agagcgtccc agtccgtggc ttcctcgttc ctggcctggt accagcagaa gccgggacag 540

gcaccccgcc tgctcatcta cggagccagc ggccgggcga ccggcatccc tgaccgcttc 600

tccggttccg gctcgggcac cgactttact ctgaccatta gcaggcttga gcccgaggat 660

tttgccgtgt actactgcca acactacggg gggagccctc gcctgacctt cggaggcgga 720

actaaggtcg atatcaaaa 739

<210> 840
<211> 122
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 840
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
1   5   10   15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr
            20   25   30

Ala Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35   40   45

Ser Ala Ile Ser Gly Ser Gly Gly Ser Thr Tyr Tyr Ala Asp Ser Val
    50   55   60

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
65   70   75   80

Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
                85   90   95

Ala Lys Met Gly Trp Ser Ser Gly Tyr Leu Gly Ala Phe Asp Ile Trp
            100   105   110

Gly Gln Gly Thr Thr Val Thr Val Ser Ser
        115   120

<210> 841
<211> 109
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 841
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 Ala Ser Ser
            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 Gly 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 His Tyr Gly Gly Ser Pro
85 90 95

Arg Leu Thr Phe Gly Gly Gly Thr Lys Val Asp Ile Lys
100 105

<210> 842
<211> 490
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 842
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu
20 25 30

Val Gln Pro Gly Gly Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe
35 40 45

Thr Phe Ser Ser Tyr Ala Met Ser Trp Val Arg Gln Ala Pro Gly Lys
50 55 60

Gly Leu Glu Trp Val Ser Ala Ile Ser Gly Ser Gly Gly Ser Thr Tyr
65 70 75 80

Tyr Ala Asp Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser
85 90 95

Lys Asn Thr Leu Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr

```
            100                 105                 110

Ala Val Tyr Tyr Cys Ala Lys Met Gly Trp Ser Ser Gly Tyr Leu Gly
        115                 120                 125

Ala Phe Asp Ile Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser Gly
    130                 135                 140

Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Ile
145                 150                 155                 160

Val Leu Thr Gln Ser Pro Gly Thr Leu Ser Leu Ser Pro Gly Glu Arg
                165                 170                 175

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ala Ser Ser Phe Leu
            180                 185                 190

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile Tyr
        195                 200                 205

Gly Ala Ser Gly Arg Ala Thr Gly Ile Pro Asp Arg Phe Ser Gly Ser
    210                 215                 220

Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu
225                 230                 235                 240

Asp Phe Ala Val Tyr Tyr Cys Gln His Tyr Gly Gly Ser Pro Arg Leu
                245                 250                 255

Thr Phe Gly Gly Gly Thr Lys Val Asp Ile Lys Thr Thr Thr Pro Ala
            260                 265                 270

Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser
        275                 280                 285

Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr
    290                 295                 300

Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala
305                 310                 315                 320
```

```
Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr Cys
                325                 330                 335

Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met
            340                 345                 350

Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe
        355                 360                 365

Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg
    370                 375                 380

Ser Ala Asp Ala Pro Ala Tyr Lys Gln Gly Gln Asn Gln Leu Tyr Asn
385                 390                 395                 400

Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg
                405                 410                 415

Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro
            420                 425                 430

Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala
        435                 440                 445

Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His
    450                 455                 460

Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp
465                 470                 475                 480

Ala Leu His Met Gln Ala Leu Pro Pro Arg
                485                 490
```

<210> 843
<211> 1470
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 843
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

cccgaagtcc aactggtgga gtccgggggа gggctcgtgc agcccggagg cagccttcgg 120

ctgtcgtgcg ccgcctccgg gttcacgttc tcatcctacg cgatgtcgtg ggtcagacag 180

gcaccaggaa agggactgga atgggtgtcc gccattagcg gctccggcgg tagcacctac 240

tatgccgact cagtgaaggg aaggttcact atctcccgcg acaacagcaa gaacaccctg 300

tacctccaaa tgaactctct gcgggccgag gataccgcgg tgtactattg cgccaagatg 360

ggttggtcca gcggatactt gggagccttc gacatttggg gacagggcac tactgtgacc 420

gtgtcctccg ggggtggcgg atcgggaggc ggcggctcgg gtggaggggg ttccgaaatc 480

gtgttgaccc agtcaccggg aaccctctcg ctgtccccgg gagaacgggc tacactgtca 540

tgtagagcgt cccagtccgt ggcttcctcg ttcctggcct ggtaccagca gaagccggga 600

caggcacccc gcctgctcat ctacggagcc agcggccggg cgaccggcat ccctgaccgc 660

ttctccggtt ccggctcggg caccgacttt actctgacca ttagcaggct tgagcccgag 720

gattttgccg tgtactactg ccaacactac ggggggagcc ctcgcctgac cttcggaggc 780

ggaactaagg tcgatatcaa aaccactacc ccagcaccga ggccacccac cccggctcct 840

accatcgcct cccagcctct gtccctgcgt ccggaggcat gtagacccgc agctggtggg 900

gccgtgcata cccggggtct tgacttcgcc tgcgatatct acatttgggc ccctctggct 960

ggtacttgcg gggtcctgct gctttcactc gtgatcactc tttactgtaa gcgcggtcgg 1020

aagaagctgc tgtacatctt taagcaaccc ttcatgaggc ctgtgcagac tactcaagag 1080

gaggacggct gttcatgccg gttcccagag gaggaggaag gcggctgcga actgcgcgtg 1140

aaattcagcc gcagcgcaga tgctccagcc tacaagcagg ggcagaacca gctctacaac 1200

gaactcaatc ttggtcggag agaggagtac gacgtgctgg acaagcggag aggacgggac 1260

ccagaaatgg gcgggaagcc gcgcagaaag aatccccaag agggcctgta caacgagctc 1320

caaaaggata agatggcaga agcctatagc gagattggta tgaaaggggа acgcagaaga 1380

ggcaaaggcc acgacggact gtaccaggga ctcagcaccg ccaccaagga cacctatgac 1440

gctcttcaca tgcaggccct gccgcctcgg 1470

<210> 844

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

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 844
Gln Ile Gln Leu Val Gln Ser Gly Pro Asp Leu Lys Lys Pro Gly Glu
1 5 10 15

Thr Val Lys Leu Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asn Phe
20 25 30

Gly Met Asn Trp Val Lys Gln Ala Pro Gly Lys Gly Phe Lys Trp Met
35 40 45

Ala Trp Ile Asn Thr Tyr Thr Gly Glu Ser Tyr Phe Ala Asp Asp Phe
50 55 60

Lys Gly Arg Phe Ala Phe Ser Val Glu Thr Ser Ala Thr Thr Ala Tyr
65 70 75 80

Leu Gln Ile Asn Asn Leu Lys Thr Glu Asp Thr Ala Thr Tyr Phe Cys
85 90 95

Ala Arg Gly Glu Ile Tyr Tyr Gly Tyr Asp Gly Gly Phe Ala Tyr Trp
100 105 110

Gly Gln Gly Thr Leu Val Thr Val Ser Ala
115 120

<210> 845
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 845
Asp Val Val Met Thr Gln Ser His Arg Phe Met Ser Thr Ser Val Gly

```
1               5                   10                  15

Asp Arg Val Ser Ile Thr Cys Arg Ala Ser Gln Asp Val Asn Thr Ala
            20                  25                  30

Val Ser Trp Tyr Gln Gln Lys Pro Gly Gln Ser Pro Lys Leu Leu Ile
        35                  40                  45

Phe Ser Ala Ser Tyr Arg Tyr Thr Gly Val Pro Asp Arg Phe Thr Gly
    50                  55                  60

Ser Gly Ser Gly Ala Asp Phe Thr Leu Thr Ile Ser Ser Val Gln Ala
65                  70                  75                  80

Glu Asp Leu Ala Val Tyr Tyr Cys Gln Gln His Tyr Ser Thr Pro Trp
                85                  90                  95

Thr Phe Gly Gly Gly Thr Lys Leu Asp Ile Lys
            100                 105
```

<210> 846
<211> 244
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 846

```
Gln Ile Gln Leu Val Gln Ser Gly Pro Asp Leu Lys Lys Pro Gly Glu
1               5                   10                  15

Thr Val Lys Leu Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asn Phe
            20                  25                  30

Gly Met Asn Trp Val Lys Gln Ala Pro Gly Lys Gly Phe Lys Trp Met
        35                  40                  45

Ala Trp Ile Asn Thr Tyr Thr Gly Glu Ser Tyr Phe Ala Asp Asp Phe
    50                  55                  60
```

```
Lys Gly Arg Phe Ala Phe Ser Val Glu Thr Ser Ala Thr Thr Ala Tyr
65                  70                  75                  80

Leu Gln Ile Asn Asn Leu Lys Thr Glu Asp Thr Ala Thr Tyr Phe Cys
                85                  90                  95

Ala Arg Gly Glu Ile Tyr Tyr Gly Tyr Asp Gly Gly Phe Ala Tyr Trp
            100                 105                 110

Gly Gln Gly Thr Leu Val Thr Val Ser Ala Gly Gly Gly Gly Ser Gly
        115                 120                 125

Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Val Val Met Thr Gln Ser
    130                 135                 140

His Arg Phe Met Ser Thr Ser Val Gly Asp Arg Val Ser Ile Thr Cys
145                 150                 155                 160

Arg Ala Ser Gln Asp Val Asn Thr Ala Val Ser Trp Tyr Gln Gln Lys
                165                 170                 175

Pro Gly Gln Ser Pro Lys Leu Leu Ile Phe Ser Ala Ser Tyr Arg Tyr
            180                 185                 190

Thr Gly Val Pro Asp Arg Phe Thr Gly Ser Gly Ser Gly Ala Asp Phe
        195                 200                 205

Thr Leu Thr Ile Ser Ser Val Gln Ala Glu Asp Leu Ala Val Tyr Tyr
    210                 215                 220

Cys Gln Gln His Tyr Ser Thr Pro Trp Thr Phe Gly Gly Gly Thr Lys
225                 230                 235                 240

Leu Asp Ile Lys
```

<210> 847
<211> 467
<212> PRT
<213> Artificial Sequence

<220>

<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 847
Gln Ile Gln Leu Val Gln Ser Gly Pro Asp Leu Lys Lys Pro Gly Glu
1 5 10 15

Thr Val Lys Leu Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asn Phe
20 25 30

Gly Met Asn Trp Val Lys Gln Ala Pro Gly Lys Gly Phe Lys Trp Met
35 40 45

Ala Trp Ile Asn Thr Tyr Thr Gly Glu Ser Tyr Phe Ala Asp Asp Phe
50 55 60

Lys Gly Arg Phe Ala Phe Ser Val Glu Thr Ser Ala Thr Thr Ala Tyr
65 70 75 80

Leu Gln Ile Asn Asn Leu Lys Thr Glu Asp Thr Ala Thr Tyr Phe Cys
85 90 95

Ala Arg Gly Glu Ile Tyr Tyr Gly Tyr Asp Gly Gly Phe Ala Tyr Trp
100 105 110

Gly Gln Gly Thr Leu Val Thr Val Ser Ala Gly Gly Gly Gly Ser Gly
115 120 125

Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Val Val Met Thr Gln Ser
130 135 140

His Arg Phe Met Ser Thr Ser Val Gly Asp Arg Val Ser Ile Thr Cys
145 150 155 160

Arg Ala Ser Gln Asp Val Asn Thr Ala Val Ser Trp Tyr Gln Gln Lys
165 170 175

Pro Gly Gln Ser Pro Lys Leu Leu Ile Phe Ser Ala Ser Tyr Arg Tyr
180 185 190

Thr Gly Val Pro Asp Arg Phe Thr Gly Ser Gly Ser Gly Ala Asp Phe

```
        195                 200                 205

Thr Leu Thr Ile Ser Ser Val Gln Ala Glu Asp Leu Ala Val Tyr Tyr
    210                 215                 220

Cys Gln Gln His Tyr Ser Thr Pro Trp Thr Phe Gly Gly Gly Thr Lys
225                 230                 235                 240

Leu Asp Ile Lys Thr Thr Thr Pro Ala Pro Arg Pro Pro Thr Pro Ala
                245                 250                 255

Pro Thr Ile Ala Ser Gln Pro Leu Ser Leu Arg Pro Glu Ala Cys Arg
            260                 265                 270

Pro Ala Ala Gly Gly Ala Val His Thr Arg Gly Leu Asp Phe Ala Cys
        275                 280                 285

Asp Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly Val Leu Leu
    290                 295                 300

Leu Ser Leu Val Ile Thr Leu Tyr Cys Lys Arg Gly Arg Lys Lys Leu
305                 310                 315                 320

Leu Tyr Ile Phe Lys Gln Pro Phe Met Arg Pro Val Gln Thr Thr Gln
                325                 330                 335

Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu Glu Glu Glu Gly Gly
            340                 345                 350

Cys Glu Leu Arg Val Lys Phe Ser Arg Ser Ala Asp Ala Pro Ala Tyr
        355                 360                 365

Lys Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn Leu Gly Arg Arg
    370                 375                 380

Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg Asp Pro Glu Met
385                 390                 395                 400

Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu Tyr Asn Glu
                405                 410                 415
```

Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile Gly Met Lys
420 425 430

Gly Glu Arg Arg Arg Gly Lys Gly His Asp Gly Leu Tyr Gln Gly Leu
435 440 445

Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu His Met Gln Ala Leu
450 455 460

Pro Pro Arg
465

<210> 848
<211> 117
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 848
Gln Ile Gln Leu Val Gln Ser Gly Pro Glu Leu Lys Lys Pro Gly Glu
1 5 10 15

Thr Val Lys Ile Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asp Tyr
20 25 30

Ser Ile Asn Trp Val Lys Arg Ala Pro Gly Lys Gly Leu Lys Trp Met
35 40 45

Gly Trp Ile Asn Thr Glu Thr Arg Glu Pro Ala Tyr Ala Tyr Asp Phe
50 55 60

Arg Gly Arg Phe Ala Phe Ser Leu Glu Thr Ser Ala Ser Thr Ala Tyr
65 70 75 80

Leu Gln Ile Asn Asn Leu Lys Tyr Glu Asp Thr Ala Thr Tyr Phe Cys
85 90 95

Ala Leu Asp Tyr Ser Tyr Ala Met Asp Tyr Trp Gly Gln Gly Thr Ser
100 105 110

Val Thr Val Ser Ser
        115

<210> 849
<211> 111
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 849
Asp Ile Val Leu Thr Gln Ser Pro Ala Ser Leu Ala Met Ser Leu Gly
1   5   10   15

Lys Arg Ala Thr Ile Ser Cys Arg Ala Ser Glu Ser Val Ser Val Ile
            20   25   30

Gly Ala His Leu Ile His Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro
        35   40   45

Lys Leu Leu Ile Tyr Leu Ala Ser Asn Leu Glu Thr Gly Val Pro Ala
    50   55   60

Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Asp
65   70   75   80

Pro Val Glu Glu Asp Asp Val Ala Ile Tyr Ser Cys Leu Gln Ser Arg
                85   90   95

Ile Phe Pro Arg Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys
            100   105   110

<210> 850
<211> 249
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 850
Gln Ile Gln Leu Val Gln Ser Gly Pro Glu Leu Lys Lys Pro Gly Glu
1   5   10   15

Thr Val Lys Ile Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asp Tyr
            20   25   30

Ser Ile Asn Trp Val Lys Arg Ala Pro Gly Lys Gly Leu Lys Trp Met
        35   40   45

Gly Trp Ile Asn Thr Glu Thr Arg Glu Pro Ala Tyr Ala Tyr Asp Phe
    50   55   60

Arg Gly Arg Phe Ala Phe Ser Leu Glu Thr Ser Ala Ser Thr Ala Tyr
65   70   75   80

Leu Gln Ile Asn Asn Leu Lys Tyr Glu Asp Thr Ala Thr Tyr Phe Cys
                85   90   95

Ala Leu Asp Tyr Ser Tyr Ala Met Asp Tyr Trp Gly Gln Gly Thr Ser
            100   105   110

Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly
        115   120   125

Gly Gly Gly Ser Gln Ile Gln Leu Val Gln Ser Gly Pro Glu Leu Lys
    130   135   140

Lys Pro Gly Glu Thr Val Lys Ile Ser Cys Lys Ala Ser Gly Tyr Thr
145   150   155   160

Phe Thr Asp Tyr Ser Ile Asn Trp Val Lys Arg Ala Pro Gly Lys Gly
                165   170   175

Leu Lys Trp Met Gly Trp Ile Asn Thr Glu Thr Arg Glu Pro Ala Tyr
            180   185   190

Ala Tyr Asp Phe Arg Gly Arg Phe Ala Phe Ser Leu Glu Thr Ser Ala
        195   200   205

```
Ser Thr Ala Tyr Leu Gln Ile Asn Asn Leu Lys Tyr Glu Asp Thr Ala
    210                 215                 220


Thr Tyr Phe Cys Ala Leu Asp Tyr Ser Tyr Ala Met Asp Tyr Trp Gly
225                 230                 235                 240


Gln Gly Thr Ser Val Thr Val Ser Ser
                245


<210> 851
<211> 472
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 851
Gln Ile Gln Leu Val Gln Ser Gly Pro Glu Leu Lys Lys Pro Gly Glu
1               5                   10                  15


Thr Val Lys Ile Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asp Tyr
            20                  25                  30


Ser Ile Asn Trp Val Lys Arg Ala Pro Gly Lys Gly Leu Lys Trp Met
        35                  40                  45


Gly Trp Ile Asn Thr Glu Thr Arg Glu Pro Ala Tyr Ala Tyr Asp Phe
    50                  55                  60


Arg Gly Arg Phe Ala Phe Ser Leu Glu Thr Ser Ala Ser Thr Ala Tyr
65                  70                  75                  80


Leu Gln Ile Asn Asn Leu Lys Tyr Glu Asp Thr Ala Thr Tyr Phe Cys
                85                  90                  95


Ala Leu Asp Tyr Ser Tyr Ala Met Asp Tyr Trp Gly Gln Gly Thr Ser
            100                 105                 110


Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly
        115                 120                 125
```

```
Gly Gly Gly Ser Gln Ile Gln Leu Val Gln Ser Gly Pro Glu Leu Lys
    130                 135                 140

Lys Pro Gly Glu Thr Val Lys Ile Ser Cys Lys Ala Ser Gly Tyr Thr
145                 150                 155                 160

Phe Thr Asp Tyr Ser Ile Asn Trp Val Lys Arg Ala Pro Gly Lys Gly
                165                 170                 175

Leu Lys Trp Met Gly Trp Ile Asn Thr Glu Thr Arg Glu Pro Ala Tyr
            180                 185                 190

Ala Tyr Asp Phe Arg Gly Arg Phe Ala Phe Ser Leu Glu Thr Ser Ala
        195                 200                 205

Ser Thr Ala Tyr Leu Gln Ile Asn Asn Leu Lys Tyr Glu Asp Thr Ala
    210                 215                 220

Thr Tyr Phe Cys Ala Leu Asp Tyr Ser Tyr Ala Met Asp Tyr Trp Gly
225                 230                 235                 240

Gln Gly Thr Ser Val Thr Val Ser Ser Thr Thr Thr Pro Ala Pro Arg
                245                 250                 255

Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser Leu Arg
            260                 265                 270

Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr Arg Gly
        275                 280                 285

Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr
    290                 295                 300

Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr Cys Lys Arg
305                 310                 315                 320

Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met Arg Pro
                325                 330                 335

Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu
```

340 345 350

Glu Glu Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg Ser Ala
355 360 365

Asp Ala Pro Ala Tyr Lys Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu
370 375 380

Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly
385 390 395 400

Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu
405 410 415

Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser
420 425 430

Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His Asp Gly
435 440 445

Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu
450 455 460

His Met Gln Ala Leu Pro Pro Arg
465 470

<210> 852
<211> 117
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 852
Gln Ile Gln Leu Val Gln Ser Gly Pro Glu Leu Lys Lys Pro Gly Glu
1 5 10 15

Thr Val Lys Ile Ser Cys Lys Ala Ser Gly Tyr Thr Phe Arg His Tyr
20 25 30

Ser Met Asn Trp Val Lys Gln Ala Pro Gly Lys Gly Leu Lys Trp Met
        35   40   45

Gly Arg Ile Asn Thr Glu Ser Gly Val Pro Ile Tyr Ala Asp Asp Phe
    50   55   60

Lys Gly Arg Phe Ala Phe Ser Val Glu Thr Ser Ala Ser Thr Ala Tyr
65   70   75   80

Leu Val Ile Asn Asn Leu Lys Asp Glu Asp Thr Ala Ser Tyr Phe Cys
                85   90   95

Ser Asn Asp Tyr Leu Tyr Ser Leu Asp Phe Trp Gly Gln Gly Thr Ala
            100   105   110

Leu Thr Val Ser Ser
        115

<210> 853
<211> 111
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 853
Asp Ile Val Leu Thr Gln Ser Pro Pro Ser Leu Ala Met Ser Leu Gly
1   5   10   15

Lys Arg Ala Thr Ile Ser Cys Arg Ala Ser Glu Ser Val Thr Ile Leu
            20   25   30

Gly Ser His Leu Ile Tyr Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro
        35   40   45

Thr Leu Leu Ile Gln Leu Ala Ser Asn Val Gln Thr Gly Val Pro Ala
    50   55   60

Arg Phe Ser Gly Ser Gly Ser Arg Thr Asp Phe Thr Leu Thr Ile Asp
65   70   75   80

Pro Val Glu Glu Asp Asp Val Ala Val Tyr Tyr Cys Leu Gln Ser Arg
85 90 95

Thr Ile Pro Arg Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys
100 105 110

<210> 854
<211> 243
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 854
Gln Ile Gln Leu Val Gln Ser Gly Pro Glu Leu Lys Lys Pro Gly Glu
1 5 10 15

Thr Val Lys Ile Ser Cys Lys Ala Ser Gly Tyr Thr Phe Arg His Tyr
20 25 30

Ser Met Asn Trp Val Lys Gln Ala Pro Gly Lys Gly Leu Lys Trp Met
35 40 45

Gly Arg Ile Asn Thr Glu Ser Gly Val Pro Ile Tyr Ala Asp Asp Phe
50 55 60

Lys Gly Arg Phe Ala Phe Ser Val Glu Thr Ser Ala Ser Thr Ala Tyr
65 70 75 80

Leu Val Ile Asn Asn Leu Lys Asp Glu Asp Thr Ala Ser Tyr Phe Cys
85 90 95

Ser Asn Asp Tyr Leu Tyr Ser Leu Asp Phe Trp Gly Gln Gly Thr Ala
100 105 110

Leu Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly
115 120 125

Gly Gly Gly Ser Asp Ile Val Leu Thr Gln Ser Pro Pro Ser Leu Ala
130 135 140

```
Met Ser Leu Gly Lys Arg Ala Thr Ile Ser Cys Arg Ala Ser Glu Ser
145                 150                 155                 160


Val Thr Ile Leu Gly Ser His Leu Ile Tyr Trp Tyr Gln Gln Lys Pro
                165                 170                 175


Gly Gln Pro Pro Thr Leu Leu Ile Gln Leu Ala Ser Asn Val Gln Thr
            180                 185                 190


Gly Val Pro Ala Arg Phe Ser Gly Ser Gly Ser Arg Thr Asp Phe Thr
        195                 200                 205


Leu Thr Ile Asp Pro Val Glu Glu Asp Asp Val Ala Val Tyr Tyr Cys
    210                 215                 220


Leu Gln Ser Arg Thr Ile Pro Arg Thr Phe Gly Gly Gly Thr Lys Leu
225                 230                 235                 240


Glu Ile Lys
```

<210> 855
<211> 466
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 855

```
Gln Ile Gln Leu Val Gln Ser Gly Pro Glu Leu Lys Lys Pro Gly Glu
1               5                   10                  15


Thr Val Lys Ile Ser Cys Lys Ala Ser Gly Tyr Thr Phe Arg His Tyr
            20                  25                  30


Ser Met Asn Trp Val Lys Gln Ala Pro Gly Lys Gly Leu Lys Trp Met
        35                  40                  45


Gly Arg Ile Asn Thr Glu Ser Gly Val Pro Ile Tyr Ala Asp Asp Phe
```

```
    50                  55                  60

Lys Gly Arg Phe Ala Phe Ser Val Glu Thr Ser Ala Ser Thr Ala Tyr
65                  70                  75                  80

Leu Val Ile Asn Asn Leu Lys Asp Glu Asp Thr Ala Ser Tyr Phe Cys
                85                  90                  95

Ser Asn Asp Tyr Leu Tyr Ser Leu Asp Phe Trp Gly Gln Gly Thr Ala
            100                 105                 110

Leu Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly
        115                 120                 125

Gly Gly Gly Ser Asp Ile Val Leu Thr Gln Ser Pro Pro Ser Leu Ala
    130                 135                 140

Met Ser Leu Gly Lys Arg Ala Thr Ile Ser Cys Arg Ala Ser Glu Ser
145                 150                 155                 160

Val Thr Ile Leu Gly Ser His Leu Ile Tyr Trp Tyr Gln Gln Lys Pro
                165                 170                 175

Gly Gln Pro Pro Thr Leu Leu Ile Gln Leu Ala Ser Asn Val Gln Thr
            180                 185                 190

Gly Val Pro Ala Arg Phe Ser Gly Ser Gly Ser Arg Thr Asp Phe Thr
        195                 200                 205

Leu Thr Ile Asp Pro Val Glu Glu Asp Asp Val Ala Val Tyr Tyr Cys
    210                 215                 220

Leu Gln Ser Arg Thr Ile Pro Arg Thr Phe Gly Gly Gly Thr Lys Leu
225                 230                 235                 240

Glu Ile Lys Thr Thr Thr Pro Ala Pro Arg Pro Pro Thr Pro Ala Pro
                245                 250                 255

Thr Ile Ala Ser Gln Pro Leu Ser Leu Arg Pro Glu Ala Cys Arg Pro
            260                 265                 270
```

```
Ala Ala Gly Gly Ala Val His Thr Arg Gly Leu Asp Phe Ala Cys Asp
        275                 280                 285

Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly Val Leu Leu Leu
    290                 295                 300

Ser Leu Val Ile Thr Leu Tyr Cys Lys Arg Gly Arg Lys Lys Leu Leu
305                 310                 315                 320

Tyr Ile Phe Lys Gln Pro Phe Met Arg Pro Val Gln Thr Thr Gln Glu
                325                 330                 335

Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu Glu Glu Glu Gly Gly Cys
            340                 345                 350

Glu Leu Arg Val Lys Phe Ser Arg Ser Ala Asp Ala Pro Ala Tyr Lys
        355                 360                 365

Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn Leu Gly Arg Arg Glu
    370                 375                 380

Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg Asp Pro Glu Met Gly
385                 390                 395                 400

Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu Tyr Asn Glu Leu
                405                 410                 415

Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile Gly Met Lys Gly
            420                 425                 430

Glu Arg Arg Arg Gly Lys Gly His Asp Gly Leu Tyr Gln Gly Leu Ser
        435                 440                 445

Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu His Met Gln Ala Leu Pro
    450                 455                 460

Pro Arg
465
```

<210> 856

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

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 856
Gln Ile Gln Leu Val Gln Ser Gly Pro Glu Leu Lys Lys Pro Gly Glu
1 5 10 15

Thr Val Lys Ile Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr His Tyr
20 25 30

Ser Met Asn Trp Val Lys Gln Ala Pro Gly Lys Gly Leu Lys Trp Met
35 40 45

Gly Arg Ile Asn Thr Glu Thr Gly Glu Pro Leu Tyr Ala Asp Asp Phe
50 55 60

Lys Gly Arg Phe Ala Phe Ser Leu Glu Thr Ser Ala Ser Thr Ala Tyr
65 70 75 80

Leu Val Ile Asn Asn Leu Lys Asn Glu Asp Thr Ala Thr Phe Phe Cys
85 90 95

Ser Asn Asp Tyr Leu Tyr Ser Cys Asp Tyr Trp Gly Gln Gly Thr Thr
100 105 110

Leu Thr Val Ser Ser
115

<210> 857
<211> 111
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 857
Asp Ile Val Leu Thr Gln Ser Pro Pro Ser Leu Ala Met Ser Leu Gly

1 5 10 15

Lys Arg Ala Thr Ile Ser Cys Arg Ala Ser Glu Ser Val Thr Ile Leu
20 25 30

Gly Ser His Leu Ile Tyr Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro
35 40 45

Thr Leu Leu Ile Gln Leu Ala Ser Asn Val Gln Thr Gly Val Pro Ala
50 55 60

Arg Phe Ser Gly Ser Gly Ser Arg Thr Asp Phe Thr Leu Thr Ile Asp
65 70 75 80

Pro Val Glu Glu Asp Asp Val Ala Val Tyr Tyr Cys Leu Gln Ser Arg
85 90 95

Thr Ile Pro Arg Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys
100 105 110

<210> 858
<211> 243
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 858
Gln Ile Gln Leu Val Gln Ser Gly Pro Glu Leu Lys Lys Pro Gly Glu
1 5 10 15

Thr Val Lys Ile Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr His Tyr
20 25 30

Ser Met Asn Trp Val Lys Gln Ala Pro Gly Lys Gly Leu Lys Trp Met
35 40 45

Gly Arg Ile Asn Thr Glu Thr Gly Glu Pro Leu Tyr Ala Asp Asp Phe
50 55 60

```
Lys Gly Arg Phe Ala Phe Ser Leu Glu Thr Ser Ala Ser Thr Ala Tyr
65                  70                  75                  80

Leu Val Ile Asn Asn Leu Lys Asn Glu Asp Thr Ala Thr Phe Phe Cys
                85                  90                  95

Ser Asn Asp Tyr Leu Tyr Ser Cys Asp Tyr Trp Gly Gln Gly Thr Thr
            100                 105                 110

Leu Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly
        115                 120                 125

Gly Gly Gly Ser Asp Ile Val Leu Thr Gln Ser Pro Pro Ser Leu Ala
    130                 135                 140

Met Ser Leu Gly Lys Arg Ala Thr Ile Ser Cys Arg Ala Ser Glu Ser
145                 150                 155                 160

Val Thr Ile Leu Gly Ser His Leu Ile Tyr Trp Tyr Gln Gln Lys Pro
                165                 170                 175

Gly Gln Pro Pro Thr Leu Leu Ile Gln Leu Ala Ser Asn Val Gln Thr
            180                 185                 190

Gly Val Pro Ala Arg Phe Ser Gly Ser Gly Ser Arg Thr Asp Phe Thr
        195                 200                 205

Leu Thr Ile Asp Pro Val Glu Glu Asp Asp Val Ala Val Tyr Tyr Cys
    210                 215                 220

Leu Gln Ser Arg Thr Ile Pro Arg Thr Phe Gly Gly Gly Thr Lys Leu
225                 230                 235                 240

Glu Ile Lys
```

<210> 859
<211> 466
<212> PRT
<213> Artificial Sequence

<220>

<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 859
Gln Ile Gln Leu Val Gln Ser Gly Pro Glu Leu Lys Lys Pro Gly Glu
1 5 10 15

Thr Val Lys Ile Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr His Tyr
20 25 30

Ser Met Asn Trp Val Lys Gln Ala Pro Gly Lys Gly Leu Lys Trp Met
35 40 45

Gly Arg Ile Asn Thr Glu Thr Gly Glu Pro Leu Tyr Ala Asp Asp Phe
50 55 60

Lys Gly Arg Phe Ala Phe Ser Leu Glu Thr Ser Ala Ser Thr Ala Tyr
65 70 75 80

Leu Val Ile Asn Asn Leu Lys Asn Glu Asp Thr Ala Thr Phe Phe Cys
85 90 95

Ser Asn Asp Tyr Leu Tyr Ser Cys Asp Tyr Trp Gly Gln Gly Thr Thr
100 105 110

Leu Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly
115 120 125

Gly Gly Gly Ser Asp Ile Val Leu Thr Gln Ser Pro Pro Ser Leu Ala
130 135 140

Met Ser Leu Gly Lys Arg Ala Thr Ile Ser Cys Arg Ala Ser Glu Ser
145 150 155 160

Val Thr Ile Leu Gly Ser His Leu Ile Tyr Trp Tyr Gln Gln Lys Pro
165 170 175

Gly Gln Pro Pro Thr Leu Leu Ile Gln Leu Ala Ser Asn Val Gln Thr
180 185 190

Gly Val Pro Ala Arg Phe Ser Gly Ser Gly Ser Arg Thr Asp Phe Thr

```
        195                 200                 205

Leu Thr Ile Asp Pro Val Glu Glu Asp Asp Val Ala Val Tyr Tyr Cys
    210                 215                 220

Leu Gln Ser Arg Thr Ile Pro Arg Thr Phe Gly Gly Gly Thr Lys Leu
225                 230                 235                 240

Glu Ile Lys Thr Thr Thr Pro Ala Pro Arg Pro Pro Thr Pro Ala Pro
                245                 250                 255

Thr Ile Ala Ser Gln Pro Leu Ser Leu Arg Pro Glu Ala Cys Arg Pro
            260                 265                 270

Ala Ala Gly Gly Ala Val His Thr Arg Gly Leu Asp Phe Ala Cys Asp
        275                 280                 285

Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly Val Leu Leu Leu
    290                 295                 300

Ser Leu Val Ile Thr Leu Tyr Cys Lys Arg Gly Arg Lys Lys Leu Leu
305                 310                 315                 320

Tyr Ile Phe Lys Gln Pro Phe Met Arg Pro Val Gln Thr Thr Gln Glu
                325                 330                 335

Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu Glu Glu Glu Gly Gly Cys
            340                 345                 350

Glu Leu Arg Val Lys Phe Ser Arg Ser Ala Asp Ala Pro Ala Tyr Lys
        355                 360                 365

Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn Leu Gly Arg Arg Glu
    370                 375                 380

Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg Asp Pro Glu Met Gly
385                 390                 395                 400

Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu Tyr Asn Glu Leu
                405                 410                 415
```

Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile Gly Met Lys Gly
420 425 430

Glu Arg Arg Arg Gly Lys Gly His Asp Gly Leu Tyr Gln Gly Leu Ser
435 440 445

Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu His Met Gln Ala Leu Pro
450 455 460

Pro Arg
465

<210> 860
<211> 246
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 860
Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Glu Pro Gly Ala
1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Pro Ala Asn Thr Phe Ser Asp His
20 25 30

Val Met His Trp Val Arg Gln Ala Pro Gly Gln Arg Phe Glu Trp Met
35 40 45

Gly Tyr Ile His Ala Ala Asn Gly Gly Thr His Tyr Ser Gln Lys Phe
50 55 60

Gln Asp Arg Val Thr Ile Thr Arg Asp Thr Ser Ala Asn Thr Val Tyr
65 70 75 80

Met Asp Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Gly Gly Tyr Asn Ser Asp Ala Phe Asp Ile Trp Gly Gln Gly
100 105 110

```
Thr Met Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly
        115                 120                 125

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Val Met Thr
    130                 135                 140

Gln Ser Pro Ser Ser Val Ser Ala Ser Val Gly Asp Arg Val Thr Ile
145                 150                 155                 160

Thr Cys Arg Ala Ser Gln Asp Ile Ser Ser Trp Leu Ala Trp Tyr Gln
                165                 170                 175

Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile Tyr Ala Ala Ser Ser
            180                 185                 190

Leu Gln Ser Gly Val Pro Ser Arg Phe Asn Gly Ser Gly Ser Gly Thr
        195                 200                 205

Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro Glu Asp Phe Ala Thr
    210                 215                 220

Tyr Tyr Cys Gln Gln Ser Tyr Ser Thr Pro Leu Thr Phe Gly Gly Gly
225                 230                 235                 240

Thr Lys Val Glu Ile Lys
                245
```

<210> 861
<211> 738
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 861
caagtgcaac tcgtccagtc cggtgcagaa gtcaaggaac ccggagcctc cgtgaaagtg 60

tcctgcaaag ctcctgccaa cactttctcg gaccacgtga tgcactgggt gcgccaggcg 120

ccgggccagc gcttcgaatg gatgggatac attcatgccg ccaatggcgg tacccactac 180

tcccaaaagt tccaggatag agtcaccatc acccgggaca ccagcgccaa caccgtgtat 240

atggatctgt ccagcctgag gtccgaggat accgccgtgt actactgcgc ccggggcgga 300

tacaactcag acgcgttcga catttgggga cagggtacta tggtcaccgt gtcatccggg 360

ggcggtggca gcgggggcgg aggctctggc ggaggcggat caggggggagg agggtccgac 420

atcgtgatga cccagtcccc gtcatcggtg tccgcgtccg tgggagacag agtgaccatc 480

acgtgtcgcg ccagccagga catctcctcg tggttggcat ggtaccagca gaagcctgga 540

aaggccccga agctgctcat ctacgccgcc tcctcccttc aatcgggagt gccctcgcgg 600

ttcaacggaa gcggaagcgg gacagatttt accctgacta ttagctcgct gcagcccgag 660

gacttcgcta cttactactg ccaacagagc tactccaccc cactgacttt cggcgggggt 720

accaaggtcg agatcaag 738

<210> 862
<211> 119
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 862
Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Glu Pro Gly Ala
1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Pro Ala Asn Thr Phe Ser Asp His
20 25 30

Val Met His Trp Val Arg Gln Ala Pro Gly Gln Arg Phe Glu Trp Met
35 40 45

Gly Tyr Ile His Ala Ala Asn Gly Gly Thr His Tyr Ser Gln Lys Phe
50 55 60

Gln Asp Arg Val Thr Ile Thr Arg Asp Thr Ser Ala Asn Thr Val Tyr
65 70 75 80

Met Asp Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys

85 90 95

Ala Arg Gly Gly Tyr Asn Ser Asp Ala Phe Asp Ile Trp Gly Gln Gly
100 105 110

Thr Met Val Thr Val Ser Ser
115

<210> 863
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 863
Asp Ile Val Met Thr Gln Ser Pro Ser Ser Val Ser Ala Ser Val Gly
1 5 10 15

Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Asp Ile Ser Ser Trp
20 25 30

Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
35 40 45

Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Asn Gly
50 55 60

Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
65 70 75 80

Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Ser Tyr Ser Thr Pro Leu
85 90 95

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

<210> 864
<211> 490
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 864
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val
20 25 30

Lys Glu Pro Gly Ala Ser Val Lys Val Ser Cys Lys Ala Pro Ala Asn
35 40 45

Thr Phe Ser Asp His Val Met His Trp Val Arg Gln Ala Pro Gly Gln
50 55 60

Arg Phe Glu Trp Met Gly Tyr Ile His Ala Ala Asn Gly Gly Thr His
65 70 75 80

Tyr Ser Gln Lys Phe Gln Asp Arg Val Thr Ile Thr Arg Asp Thr Ser
85 90 95

Ala Asn Thr Val Tyr Met Asp Leu Ser Ser Leu Arg Ser Glu Asp Thr
100 105 110

Ala Val Tyr Tyr Cys Ala Arg Gly Gly Tyr Asn Ser Asp Ala Phe Asp
115 120 125

Ile Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly Gly
130 135 140

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
145 150 155 160

Asp Ile Val Met Thr Gln Ser Pro Ser Ser Val Ser Ala Ser Val Gly
165 170 175

Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Asp Ile Ser Ser Trp
180 185 190

```
Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
        195                 200                 205

Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Asn Gly
    210                 215                 220

Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
225                 230                 235                 240

Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Ser Tyr Ser Thr Pro Leu
                245                 250                 255

Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Thr Thr Thr Pro Ala
            260                 265                 270

Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser
        275                 280                 285

Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr
    290                 295                 300

Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala
305                 310                 315                 320

Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr Cys
                325                 330                 335

Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met
            340                 345                 350

Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe
        355                 360                 365

Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg
    370                 375                 380

Ser Ala Asp Ala Pro Ala Tyr Lys Gln Gly Gln Asn Gln Leu Tyr Asn
385                 390                 395                 400

Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg
```

405 410 415

Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro
420 425 430

Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala
435 440 445

Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His
450 455 460

Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp
465 470 475 480

Ala Leu His Met Gln Ala Leu Pro Pro Arg
485 490

<210> 865
<211> 1470
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 865
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

ccccaagtgc aactcgtcca gtccggtgca gaagtcaagg aacccggagc ctccgtgaaa 120

gtgtcctgca aagctcctgc caacactttc tcggaccacg tgatgcactg ggtgcgccag 180

gcgccgggcc agcgcttcga atggatggga tacattcatg ccgccaatgg cggtacccac 240

tactcccaaa agttccagga tagagtcacc atcacccggg acaccagcgc caacaccgtg 300

tatatggatc tgtccagcct gaggtccgag gataccgccg tgtactactg cgcccggggc 360

ggatacaact cagacgcgtt cgacatttgg ggacagggta ctatggtcac cgtgtcatcc 420

gggggcggtg gcagcggggg cggaggctct ggcggaggcg gatcaggggg aggagggtcc 480

gacatcgtga tgacccagtc cccgtcatcg gtgtccgcgt ccgtgggaga cagagtgacc 540

atcacgtgtc gcgccagcca ggacatctcc tcgtggttgg catggtacca gcagaagcct 600

ggaaaggccc cgaagctgct catctacgcc gcctcctccc ttcaatcggg agtgccctcg 660

cggttcaacg gaagcggaag cgggacagat tttaccctga ctattagctc gctgcagccc 720

gaggacttcg ctacttacta ctgccaacag agctactcca ccccactgac tttcggcggg 780

ggtaccaagg tcgagatcaa gaccactacc ccagcaccga ggccacccac cccggctcct 840

accatcgcct cccagcctct gtccctgcgt ccggaggcat gtagacccgc agctggtggg 900

gccgtgcata cccggggtct tgacttcgcc tgcgatatct acatttgggc ccctctggct 960

ggtacttgcg gggtcctgct gctttcactc gtgatcactc tttactgtaa gcgcggtcgg 1020

aagaagctgc tgtacatctt taagcaaccc ttcatgaggc ctgtgcagac tactcaagag 1080

gaggacggct gttcatgccg gttcccagag gaggaggaag gcggctgcga actgcgcgtg 1140

aaattcagcc gcagcgcaga tgctccagcc tacaagcagg ggcagaacca gctctacaac 1200

gaactcaatc ttggtcggag agaggagtac gacgtgctgg acaagcggag aggacgggac 1260

ccagaaatgg gcgggaagcc gcgcagaaag aatccccaag agggcctgta caacgagctc 1320

caaaaggata agatggcaga agcctatagc gagattggta tgaaagggga acgcagaaga 1380

ggcaaaggcc acgacggact gtaccaggga ctcagcaccg ccaccaagga cacctatgac 1440

gctcttcaca tgcaggccct gccgcctcgg 1470

<210> 866
<211> 249
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 866
Gln Val Gln Leu Gln Glu Ser Gly Ala Gly Leu Leu Lys Pro Ser Glu
1 5 10 15

Thr Leu Ser Leu Thr Cys Ala Val Tyr Gly Gly Ser Phe Ser Gly Tyr
20 25 30

Tyr Trp Ser Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp Val
35 40 45

```
Gly Glu Ile Asn His Ser Gly Ser 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 Gly Ser Gly Leu Val Val Tyr Ala Ile Arg Val Gly Ser Gly Trp
            100                 105                 110

Phe Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly
        115                 120                 125

Gly Gly Ser Gly Gly Gly Gly Asp Ser Gly Gly Gly Gly Ser Asp Ile Gln
    130                 135                 140

Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly Asp Arg Val
145                 150                 155                 160

Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Ser Ser Tyr Leu Asn Trp
                165                 170                 175

Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Met Tyr Ala Ala
            180                 185                 190

Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser
        195                 200                 205

Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro Glu Asp Phe
    210                 215                 220

Ala Thr Tyr Tyr Cys Gln Gln Ser Tyr Ser Thr Pro Pro Trp Thr Phe
225                 230                 235                 240

Gly Gln Gly Thr Lys Val Asp Ile Lys
                245
```

<210> 867
<211> 747

<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 867
caagtgcaac ttcaagaatc aggcgcagga cttctcaagc catccgaaac actctccctc 60

acttgcgcgg tgtacggggg aagcttctcg ggatactact ggtcctggat taggcagcct 120

cccggcaaag gcctggaatg ggtcggggag atcaaccact ccggttcaac caactacaac 180

ccgtcgctga agtcccgcgt gaccatttcc gtggacacct ctaagaatca gttcagcctg 240

aagctctcgt ccgtgaccgc ggcggacacc gccgtctact actgcgctcg gggatcagga 300

ctggtggtgt acgccatccg cgtgggctcg ggctggttcg attactgggg ccagggaacc 360

ctggtcactg tgtcgtccgg cggaggaggt tcgggggggcg gagacagcgg tggaggggt 420

agcgacatcc agatgaccca gtccccgtcc tcgctgtccg cctccgtggg agatagagtg 480

accatcacct gtcgggcatc ccagagcatt tccagctacc tgaactggta tcagcagaag 540

cccggaaagg cccctaagct gttgatgtac gccgccagca gcttgcagtc gggcgtgccg 600

agccggtttt ccggttccgg ctccgggact gacttcaccc tgactatctc atccctgcaa 660

cccgaggact tcgccactta ttactgccag cagtcctact caacccctcc ctggacgttc 720

ggacagggca ccaaggtcga tatcaag 747

<210> 868
<211> 126
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 868
Gln Val Gln Leu Gln Glu Ser Gly Ala Gly Leu Leu Lys Pro Ser Glu
1 5 10 15

Thr Leu Ser Leu Thr Cys Ala Val Tyr Gly Gly Ser Phe Ser Gly Tyr
20 25 30

Tyr Trp Ser Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp Val
35 40 45

Gly Glu Ile Asn His Ser Gly Ser 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 Gly Ser Gly Leu Val Val Tyr Ala Ile Arg Val Gly Ser Gly Trp
100 105 110

Phe Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
115 120 125

<210> 869
<211> 108
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 869
Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
1 5 10 15

Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Ser Ser Tyr
20 25 30

Leu Asn Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Met
35 40 45

Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
50 55 60

Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
65 70 75 80

Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Ser Tyr Ser Thr Pro Pro
85 90 95

Trp Thr Phe Gly Gln Gly Thr Lys Val Asp Ile Lys
100 105

<210> 870
<211> 493
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 870
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Gln Val Gln Leu Gln Glu Ser Gly Ala Gly Leu
20 25 30

Leu Lys Pro Ser Glu Thr Leu Ser Leu Thr Cys Ala Val Tyr Gly Gly
35 40 45

Ser Phe Ser Gly Tyr Tyr Trp Ser Trp Ile Arg Gln Pro Pro Gly Lys
50 55 60

Gly Leu Glu Trp Val Gly Glu Ile Asn His Ser Gly Ser Thr Asn Tyr
65 70 75 80

Asn Pro Ser Leu Lys Ser Arg Val Thr Ile Ser Val Asp Thr Ser Lys
85 90 95

Asn Gln Phe Ser Leu Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala
100 105 110

Val Tyr Tyr Cys Ala Arg Gly Ser Gly Leu Val Val Tyr Ala Ile Arg
115 120 125

Val Gly Ser Gly Trp Phe Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr

```
    130                 135                 140

Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Asp Ser Gly Gly Gly
145                 150                 155                 160

Gly Ser Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser
                165                 170                 175

Val Gly Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Ser
            180                 185                 190

Ser Tyr Leu Asn Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu
        195                 200                 205

Leu Met Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe
    210                 215                 220

Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu
225                 230                 235                 240

Gln Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Ser Tyr Ser Thr
                245                 250                 255

Pro Pro Trp Thr Phe Gly Gln Gly Thr Lys Val Asp Ile Lys Thr Thr
            260                 265                 270

Thr Pro Ala Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln
        275                 280                 285

Pro Leu Ser Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala
    290                 295                 300

Val His Thr Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala
305                 310                 315                 320

Pro Leu Ala Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr
                325                 330                 335

Leu Tyr Cys Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln
            340                 345                 350
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```
Pro Phe Met Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser
        355                 360                 365

Cys Arg Phe Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg Val Lys
    370                 375                 380

Phe Ser Arg Ser Ala Asp Ala Pro Ala Tyr Lys Gln Gly Gln Asn Gln
385                 390                 395                 400

Leu Tyr Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu
                405                 410                 415

Asp Lys Arg Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg
            420                 425                 430

Lys Asn Pro Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met
        435                 440                 445

Ala Glu Ala Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly
    450                 455                 460

Lys Gly His Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp
465                 470                 475                 480

Thr Tyr Asp Ala Leu His Met Gln Ala Leu Pro Pro Arg
                485                 490
```

<210> 871
<211> 1479
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 871
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

ccccaagtgc aacttcaaga atcaggcgca ggacttctca agccatccga aacactctcc 120

ctcacttgcg cggtgtacgg gggaagcttc tcgggatact actggtcctg gattaggcag 180

cctcccggca aaggcctgga atgggtcggg gagatcaacc actccggttc aaccaactac 240

aacccgtcgc tgaagtcccg cgtgaccatt tccgtggaca cctctaagaa tcagttcagc 300

ctgaagctct cgtccgtgac cgcggcggac accgccgtct actactgcgc tcggggatca 360

ggactggtgg tgtacgccat ccgcgtgggc tcgggctggt tcgattactg gggccaggga 420

accctggtca ctgtgtcgtc cggcggagga ggttcggggg gcggagacag cggtggaggg 480

ggtagcgaca tccagatgac ccagtccccg tcctcgctgt ccgcctccgt gggagataga 540

gtgaccatca cctgtcgggc atcccagagc atttccagct acctgaactg gtatcagcag 600

aagcccggaa aggcccctaa gctgttgatg tacgccgcca gcagcttgca gtcgggcgtg 660

ccgagccggt tttccggttc cggctccggg actgacttca ccctgactat ctcatccctg 720

caacccgagg acttcgccac ttattactgc cagcagtcct actcaacccc tccctggacg 780

ttcggacagg gcaccaaggt cgatatcaag accactaccc cagcaccgag gccacccacc 840

ccggctccta ccatcgcctc ccagcctctg tccctgcgtc cggaggcatg tagacccgca 900

gctggtgggg ccgtgcatac ccggggtctt gacttcgcct gcgatatcta catttgggcc 960

cctctggctg gtacttgcgg ggtcctgctg ctttcactcg tgatcactct ttactgtaag 1020

cgcggtcgga agaagctgct gtacatcttt aagcaaccct tcatgaggcc tgtgcagact 1080

actcaagagg aggacggctg ttcatgccgg ttcccagagg aggaggaagg cggctgcgaa 1140

ctgcgcgtga aattcagccg cagcgcagat gctccagcct acaagcaggg gcagaaccag 1200

ctctacaacg aactcaatct tggtcggaga gaggagtacg acgtgctgga caagcggaga 1260

ggacgggacc cagaaatggg cgggaagccg cgcagaaaga atccccaaga gggcctgtac 1320

aacgagctcc aaaaggataa gatggcagaa gcctatagcg agattggtat gaaaggggaa 1380

cgcagaagag gcaaaggcca cgacggactg taccagggac tcagcaccgc caccaaggac 1440

acctatgacg ctcttcacat gcaggccctg ccgcctcgg 1479

<210> 872
<211> 248
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 872
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 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 Tyr Ile Ser Ser Ser Ser Ser Thr 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 Leu Ser Val Arg Ala Ile Asp Ala Phe Asp Ile Trp Gly
            100   105   110

Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly
        115   120   125

Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Val
    130   135   140

Leu Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly Asp Arg Val
145   150   155   160

Thr Ile Thr Cys Gln Ala Ser Gln Asp Ile Ser Asn Tyr Leu Asn Trp
                165   170   175

Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile Tyr Asp Ala
            180   185   190

Ser Asn Leu Glu Thr Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser
        195   200   205

Gly Thr Asp Phe Thr Phe Thr Ile Ser Ser Leu Gln Pro Glu Asp Phe
210 215 220

Ala Thr Tyr Tyr Cys Gln Gln Ala Tyr Ser Thr Pro Phe Thr Phe Gly
225 230 235 240

Pro Gly Thr Lys Val Glu Ile Lys
245

<210> 873
<211> 744
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 873
caagtgcaac ttgttcaatc cggtggaggt cttgtgcagc ccggaggatc actcagactg 60

tcgtgcgccg cctctgggtt cactttctcc tcatactcga tgaactgggt gcgccaggcg 120

ccgggaaagg gcctggaatg ggtgtcatac atctcctcct catcctccac catctactac 180

gccgattccg tgaagggccg cttcactatt tcccgggaca acgcgaaaaa ctcgctctat 240

ctgcaaatga actccctgcg cgccgaggac accgccgtgt actactgcgc ccgggacctg 300

agcgtgcggg ctattgatgc gttcgacatc tggggacagg gcaccatggt cacagtgtcc 360

agcggaggcg gcggcagcgg tggaggagga tcagggggag gaggttcggg gggcggtggc 420

tccgatatcg tgctgaccca gagcccgtcg agcctctccg cctccgtcgg cgacagagtg 480

accatcacgt gtcaggcatc ccaggacatt agcaactacc tgaattggta ccagcagaag 540

cctggaaagg cacccaagtt gctgatctac gacgcctcca acctggaaac cggagtgcca 600

tccaggttct cgggcagcgg ctcgggaacc gacttcactt ttactatctc ctccctgcaa 660

cccgaggatt tcgcgaccta ctactgccag caggcctaca gcaccccttt caccttcggg 720

ccgggaacta aggtcgaaat caag 744

<210> 874
<211> 121
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 874
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 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 Tyr Ile Ser Ser Ser Ser Ser Thr 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 Leu Ser Val Arg Ala Ile Asp Ala Phe Asp Ile Trp Gly
100 105 110

Gln Gly Thr Met Val Thr Val Ser Ser
115 120

<210> 875
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 875
Asp Ile Val Leu Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
1 5 10 15

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Asp Arg Val Thr Ile Thr Cys Gln Ala Ser Gln Asp Ile Ser Asn Tyr
            20                  25                  30

Leu Asn Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
        35                  40                  45

Tyr Asp Ala Ser Asn Leu Glu Thr Gly Val Pro Ser Arg Phe Ser Gly
    50                  55                  60

Ser Gly Ser Gly Thr Asp Phe Thr Phe Thr Ile Ser Ser Leu Gln Pro
65                  70                  75                  80

Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Ala Tyr Ser Thr Pro Phe
                85                  90                  95

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


<210> 876
<211> 492
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 876
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1               5                   10                  15

His Ala Ala Arg Pro Gln Val Gln Leu Val Gln Ser Gly Gly Gly Leu
            20                  25                  30

Val Gln Pro Gly Gly Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe
        35                  40                  45

Thr Phe Ser Ser Tyr Ser Met Asn Trp Val Arg Gln Ala Pro Gly Lys
    50                  55                  60

Gly Leu Glu Trp Val Ser Tyr Ile Ser Ser Ser Ser Ser Thr Ile Tyr
65                  70                  75                  80
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Tyr Ala Asp Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala
                85                  90                  95

Lys Asn Ser Leu Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr
            100                 105                 110

Ala Val Tyr Tyr Cys Ala Arg Asp Leu Ser Val Arg Ala Ile Asp Ala
        115                 120                 125

Phe Asp Ile Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly
    130                 135                 140

Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly
145                 150                 155                 160

Gly Ser Asp Ile Val Leu Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser
                165                 170                 175

Val Gly Asp Arg Val Thr Ile Thr Cys Gln Ala Ser Gln Asp Ile Ser
            180                 185                 190

Asn Tyr Leu Asn Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu
        195                 200                 205

Leu Ile Tyr Asp Ala Ser Asn Leu Glu Thr Gly Val Pro Ser Arg Phe
    210                 215                 220

Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Phe Thr Ile Ser Ser Leu
225                 230                 235                 240

Gln Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Ala Tyr Ser Thr
                245                 250                 255

Pro Phe Thr Phe Gly Pro Gly Thr Lys Val Glu Ile Lys Thr Thr Thr
            260                 265                 270

Pro Ala Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro
        275                 280                 285

Leu Ser Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala Val
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    290                 295                 300

His Thr Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro
305                 310                 315                 320

Leu Ala Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr Leu
                325                 330                 335

Tyr Cys Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro
            340                 345                 350

Phe Met Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys
        355                 360                 365

Arg Phe Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg Val Lys Phe
    370                 375                 380

Ser Arg Ser Ala Asp Ala Pro Ala Tyr Lys Gln Gly Gln Asn Gln Leu
385                 390                 395                 400

Tyr Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp
                405                 410                 415

Lys Arg Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys
            420                 425                 430

Asn Pro Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala
        435                 440                 445

Glu Ala Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys
    450                 455                 460

Gly His Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr
465                 470                 475                 480

Tyr Asp Ala Leu His Met Gln Ala Leu Pro Pro Arg
                485                 490

<210> 877
<211> 1476
<212> DNA
```

<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 877
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

ccccaagtgc aacttgttca atccggtgga ggtcttgtgc agcccggagg atcactcaga 120

ctgtcgtgcg ccgcctctgg gttcactttc tcctcatact cgatgaactg ggtgcgccag 180

gcgccgggaa agggcctgga atgggtgtca tacatctcct cctcatcctc caccatctac 240

tacgccgatt ccgtgaaggg ccgcttcact atttcccggg acaacgcgaa aaactcgctc 300

tatctgcaaa tgaactccct gcgcgccgag gacaccgccg tgtactactg cgcccgggac 360

ctgagcgtgc gggctattga tgcgttcgac atctggggac agggcaccat ggtcacagtg 420

tccagcggag gcggcggcag cggtggagga ggatcagggg gaggaggttc gggggggcggt 480

ggctccgata tcgtgctgac ccagagcccg tcgagcctct ccgcctccgt cggcgacaga 540

gtgaccatca cgtgtcaggc atcccaggac attagcaact acctgaattg gtaccagcag 600

aagcctggaa aggcacccaa gttgctgatc tacgacgcct ccaacctgga aaccggagtg 660

ccatccaggt tctcgggcag cggctcggga accgacttca cttttactat ctcctccctg 720

caacccgagg atttcgcgac ctactactgc cagcaggcct acagcacccc tttcaccttc 780

gggccgggaa ctaaggtcga aatcaagacc actaccccag caccgaggcc acccaccccg 840

gctcctacca tcgcctccca gcctctgtcc ctgcgtccgg aggcatgtag acccgcagct 900

ggtggggccg tgcatacccg gggtcttgac ttcgcctgcg atatctacat ttgggccct 960

ctggctggta cttgcggggt cctgctgctt tcactcgtga tcactcttta ctgtaagcgc 1020

ggtcggaaga agctgctgta catctttaag caacccttca tgaggcctgt gcagactact 1080

caagaggagg acggctgttc atgccggttc ccagaggagg aggaaggcgg ctgcgaactg 1140

cgcgtgaaat tcagccgcag cgcagatgct ccagcctaca agcaggggca gaaccagctc 1200

tacaacgaac tcaatcttgg tcggagagag gagtacgacg tgctggacaa gcggagagga 1260

cgggacccag aaatgggcgg gaagccgcgc agaaagaatc cccaagaggg cctgtacaac 1320

gagctccaaa aggataagat ggcagaagcc tatagcgaga ttggtatgaa aggggaacgc 1380

agaagaggca aaggccacga cggactgtac cagggactca gcaccgccac caaggacacc 1440

tatgacgctc ttcacatgca ggccctgccg cctcgg 1476

<210> 878
<211> 246
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 878
Glu Val Gln Leu Val Gln Ser Gly Gly Gly Val Val Arg Ser Gly Arg
1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Asn Ser Tyr
20 25 30

Gly Leu His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45

Ala Leu Ile Glu Tyr Asp Gly Ser Asn Lys Tyr Tyr Gly Asp Ser Val
50 55 60

Lys Gly Arg Phe Thr Ile Ser Arg Asp Lys Ser Lys Ser Thr Leu Tyr
65 70 75 80

Leu Gln Met Asp Asn Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Glu Gly Asn Glu Asp Leu Ala Phe Asp Ile Trp Gly Gln Gly
100 105 110

Thr Leu Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly
115 120 125

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Ile Val Leu Thr
130 135 140

Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly Asp Arg Val Thr Ile
145 150 155 160

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Thr Cys Gln Ala Ser Gln Phe Ile Lys Lys Asn Leu Asn Trp Tyr Gln
                165                 170                 175

His Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile Tyr Asp Ala Ser Ser
            180                 185                 190

Leu Gln Thr Gly Val Pro Ser Arg Phe Ser Gly Asn Arg Ser Gly Thr
        195                 200                 205

Thr Phe Ser Phe Thr Ile Ser Ser Leu Gln Pro Glu Asp Val Ala Thr
    210                 215                 220

Tyr Tyr Cys Gln Gln His Asp Asn Leu Pro Leu Thr Phe Gly Gly Gly
225                 230                 235                 240

Thr Lys Val Glu Ile Lys
                245
```

<210> 879
<211> 738
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 879
gaagtgcaat tggtgcaatc aggaggagga gtggtcagat ctggaagaag cctgagactg 60

tcatgcgcgg cttcgggctt taccttcaac tcctacggcc tccactgggt gcgccaggcc 120

cccggaaaag gcctcgaatg ggtcgcactg attgagtacg acgggtccaa caagtactac 180

ggagatagcg tgaagggccg cttcaccatc tcacgggaca agtccaagtc caccctgtat 240

ctgcaaatgg acaacctgag ggccgaggat actgccgtgt actactgcgc ccgcgaagga 300

aacgaagatc tggccttcga tatttggggc cagggtactc ttgtgaccgt gtcgagcgga 360

ggcggaggct ccggtggagg aggatcgggg ggtggtggtt ccggcggcgg ggggagcgaa 420

atcgtgctga cccagtcgcc ttcctccctc tccgcttccg tgggggaccg ggtcactatt 480

acgtgtcagg cgtcccaatt catcaagaag aatctgaact ggtaccagca caagccggga 540

aaggccccca aactgctcat ctacgacgcc agctcgctgc agactggcgt gccttcccgg 600

ttttccggga accggtcggg aaccaccttc tcattcacca tcagcagcct ccagccggag 660

gacgtggcga cctactactg ccagcagcat gacaaccttc cactgacttt cggcgggggc 720

accaaggtcg agattaag 738

<210> 880
<211> 119
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 880
Glu Val Gln Leu Val Gln Ser Gly Gly Gly Val Val Arg Ser Gly Arg
1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Asn Ser Tyr
20 25 30

Gly Leu His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45

Ala Leu Ile Glu Tyr Asp Gly Ser Asn Lys Tyr Tyr Gly Asp Ser Val
50 55 60

Lys Gly Arg Phe Thr Ile Ser Arg Asp Lys Ser Lys Ser Thr Leu Tyr
65 70 75 80

Leu Gln Met Asp Asn Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Glu Gly Asn Glu Asp Leu Ala Phe Asp Ile Trp Gly Gln Gly
100 105 110

Thr Leu Val Thr Val Ser Ser
115

<210> 881

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

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 881
Glu Ile Val Leu Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
1 5 10 15

Asp Arg Val Thr Ile Thr Cys Gln Ala Ser Gln Phe Ile Lys Lys Asn
20 25 30

Leu Asn Trp Tyr Gln His Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
35 40 45

Tyr Asp Ala Ser Ser Leu Gln Thr Gly Val Pro Ser Arg Phe Ser Gly
50 55 60

Asn Arg Ser Gly Thr Thr Phe Ser Phe Thr Ile Ser Ser Leu Gln Pro
65 70 75 80

Glu Asp Val Ala Thr Tyr Tyr Cys Gln Gln His Asp Asn Leu Pro Leu
85 90 95

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

<210> 882
<211> 490
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 882
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Glu Val Gln Leu Val Gln Ser Gly Gly Gly Val

```
            20                  25                  30

Val Arg Ser Gly Arg Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe
        35                  40                  45

Thr Phe Asn Ser Tyr Gly Leu His Trp Val Arg Gln Ala Pro Gly Lys
    50                  55                  60

Gly Leu Glu Trp Val Ala Leu Ile Glu Tyr Asp Gly Ser Asn Lys Tyr
65                  70                  75                  80

Tyr Gly Asp Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Lys Ser
                85                  90                  95

Lys Ser Thr Leu Tyr Leu Gln Met Asp Asn Leu Arg Ala Glu Asp Thr
            100                 105                 110

Ala Val Tyr Tyr Cys Ala Arg Glu Gly Asn Glu Asp Leu Ala Phe Asp
        115                 120                 125

Ile Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly Gly
    130                 135                 140

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
145                 150                 155                 160

Glu Ile Val Leu Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
                165                 170                 175

Asp Arg Val Thr Ile Thr Cys Gln Ala Ser Gln Phe Ile Lys Lys Asn
            180                 185                 190

Leu Asn Trp Tyr Gln His Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
        195                 200                 205

Tyr Asp Ala Ser Ser Leu Gln Thr Gly Val Pro Ser Arg Phe Ser Gly
    210                 215                 220

Asn Arg Ser Gly Thr Thr Phe Ser Phe Thr Ile Ser Ser Leu Gln Pro
225                 230                 235                 240
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Glu Asp Val Ala Thr Tyr Tyr Cys Gln Gln His Asp Asn Leu Pro Leu
                245                 250                 255

Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Thr Thr Thr Pro Ala
            260                 265                 270

Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser
        275                 280                 285

Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr
    290                 295                 300

Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala
305                 310                 315                 320

Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr Cys
                325                 330                 335

Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met
            340                 345                 350

Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe
        355                 360                 365

Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg
    370                 375                 380

Ser Ala Asp Ala Pro Ala Tyr Lys Gln Gly Gln Asn Gln Leu Tyr Asn
385                 390                 395                 400

Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg
                405                 410                 415

Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro
            420                 425                 430

Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala
        435                 440                 445

Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His
```

450 455 460

Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp
465 470 475 480

Ala Leu His Met Gln Ala Leu Pro Pro Arg
485 490

<210> 883
<211> 1470
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 883
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

cccgaagtgc aattggtgca atcaggagga ggagtggtca gatctggaag aagcctgaga 120

ctgtcatgcg cggcttcggg ctttaccttc aactcctacg gcctccactg ggtgcgccag 180

gcccccggaa aaggcctcga atgggtcgca ctgattgagt acgacgggtc caacaagtac 240

tacggagata gcgtgaaggg ccgcttcacc atctcacggg acaagtccaa gtccaccctg 300

tatctgcaaa tggacaacct gagggccgag gatactgccg tgtactactg cgcccgcgaa 360

ggaaacgaag atctggcctt cgatatttgg ggccagggta ctcttgtgac cgtgtcgagc 420

ggaggcggag gctccggtgg aggaggatcg gggggtggtg gttccggcgg cgggggggagc 480

gaaatcgtgc tgacccagtc gccttcctcc ctctccgctt ccgtgggggga ccgggtcact 540

attacgtgtc aggcgtccca attcatcaag aagaatctga actggtacca gcacaagccg 600

ggaaaggccc ccaaactgct catctacgac gccagctcgc tgcagactgg cgtgccttcc 660

cggttttccg ggaaccggtc gggaaccacc ttctcattca ccatcagcag cctccagccg 720

gaggacgtgg cgacctacta ctgccagcag catgacaacc ttccactgac tttcggcggg 780

ggcaccaagg tcgagattaa gaccactacc ccagcaccga ggccacccac cccggctcct 840

accatcgcct cccagcctct gtccctgcgt ccggaggcat gtagacccgc agctggtggg 900

gccgtgcata cccggggtct tgacttcgcc tgcgatatct acatttgggc ccctctggct 960

ggtacttgcg gggtcctgct gctttcactc gtgatcactc tttactgtaa gcgcggtcgg 1020

aagaagctgc tgtacatctt taagcaaccc ttcatgaggc ctgtgcagac tactcaagag 1080

gaggacggct gttcatgccg gttcccagag gaggaggaag gcggctgcga actgcgcgtg 1140

aaattcagcc gcagcgcaga tgctccagcc tacaagcagg ggcagaacca gctctacaac 1200

gaactcaatc ttggtcggag agaggagtac gacgtgctgg acaagcggag aggacgggac 1260

ccagaaatgg gcgggaagcc gcgcagaaag aatccccaag agggcctgta caacgagctc 1320

caaaaggata agatggcaga agcctatagc gagattggta tgaaaggggа acgcagaaga 1380

ggcaaaggcc acgacggact gtaccaggga ctcagcaccg ccaccaagga cacctatgac 1440

gctcttcaca tgcaggccct gccgcctcgg 1470

<210> 884
<211> 255
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 884
Gln Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Asn Val Ser Ser Asn
20 25 30

Tyr Met Thr Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45

Ser Val Ile Tyr Ser Gly Gly Ala Thr Tyr Tyr Gly Asp Ser Val Lys
50 55 60

Gly Arg Phe Thr Val Ser Arg Asp Asn Ser Lys Asn Thr Val Tyr Leu
65 70 75 80

Gln Met Asn Arg Leu Thr Ala Glu Asp Thr Ala Val Tyr Tyr Cys Ala
85 90 95

```
Arg Asp Arg Leu Tyr Cys Gly Asn Asn Cys Tyr Leu Tyr Tyr Tyr Tyr
            100                 105                 110

Gly Met Asp Val Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Gly
        115                 120                 125

Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly
    130                 135                 140

Gly Gly Ser Asp Ile Gln Val Thr Gln Ser Pro Ser Ser Leu Ser Ala
145                 150                 155                 160

Ser Val Gly Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile
                165                 170                 175

Ser Ser Tyr Leu Asn Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys
            180                 185                 190

Leu Leu Ile Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg
        195                 200                 205

Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser
    210                 215                 220

Leu Gln Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Ser Tyr Ser
225                 230                 235                 240

Thr Pro Pro Leu Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
                245                 250                 255
```

<210> 885
<211> 765
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 885
caagtgcaac tcgtggaatc aggcggagga ctcgtgcaac ccggaggttc ccttagactg 60

tcatgtgccg cttccgggtt caatgtgtcc agcaactaca tgacctgggt cagacaggcg 120

ccgggaaagg gacttgaatg ggtgtccgtg atctactccg gtggagcaac atactacgga 180

gactccgtga aaggccgctt taccgtgtcc cgcgataact cgaagaacac cgtgtacttg 240

cagatgaaca ggctgactgc cgaggacacc gccgtgtatt attgcgcccg ggacaggctg 300

tactgtggaa acaactgcta cctgtactac tactacggga tggacgtgtg gggacagggc 360

actctcgtca ctgtgtcatc cgggggggggc ggtagcggtg gcggagggtc cggcggagga 420

ggctcagggg gaggcggaag cgatatccag gtcacccagt ctccctcctc gctgtccgcc 480

tccgtgggcg accgcgtcac cattacttgc cgggcgtcgc agtcgatcag ctcctacctg 540

aactggtacc agcagaagcc tggaaaggcc ccgaagctgc tgatctacgc ggcctcgtcc 600

ctgcaaagcg gcgtcccgtc gcggttcagc ggttccggtt cgggaaccga cttcaccctg 660

actatttcct ccctgcaacc cgaggatttc gccacttact actgccagca gtcctactcc 720

accccacctc tgaccttcgg ccaaggaacc aaggtcgaaa tcaag 765

<210> 886
<211> 127
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 886
Gln Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Asn Val Ser Ser Asn
20 25 30

Tyr Met Thr Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45

Ser Val Ile Tyr Ser Gly Gly Ala Thr Tyr Tyr Gly Asp Ser Val Lys
50 55 60

Gly Arg Phe Thr Val Ser Arg Asp Asn Ser Lys Asn Thr Val Tyr Leu
65 70 75 80

Gln Met Asn Arg Leu Thr Ala Glu Asp Thr Ala Val Tyr Tyr Cys Ala
85 90 95

Arg Asp Arg Leu Tyr Cys Gly Asn Asn Cys Tyr Leu Tyr Tyr Tyr Tyr
100 105 110

Gly Met Asp Val Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
115 120 125

<210> 887
<211> 108
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 887
Asp Ile Gln Val Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
1 5 10 15

Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Ser Ser Tyr
20 25 30

Leu Asn Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
35 40 45

Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
50 55 60

Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
65 70 75 80

Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Ser Tyr Ser Thr Pro Pro
85 90 95

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

<210> 888
<211> 499

<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 888
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Gln Val Gln Leu Val Glu Ser Gly Gly Gly Leu
20 25 30

Val Gln Pro Gly Gly Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe
35 40 45

Asn Val Ser Ser Asn Tyr Met Thr Trp Val Arg Gln Ala Pro Gly Lys
50 55 60

Gly Leu Glu Trp Val Ser Val Ile Tyr Ser Gly Gly Ala Thr Tyr Tyr
65 70 75 80

Gly Asp Ser Val Lys Gly Arg Phe Thr Val Ser Arg Asp Asn Ser Lys
85 90 95

Asn Thr Val Tyr Leu Gln Met Asn Arg Leu Thr Ala Glu Asp Thr Ala
100 105 110

Val Tyr Tyr Cys Ala Arg Asp Arg Leu Tyr Cys Gly Asn Asn Cys Tyr
115 120 125

Leu Tyr Tyr Tyr Tyr Gly Met Asp Val Trp Gly Gln Gly Thr Leu Val
130 135 140

Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly
145 150 155 160

Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Gln Val Thr Gln Ser Pro
165 170 175

Ser Ser Leu Ser Ala Ser Val Gly Asp Arg Val Thr Ile Thr Cys Arg

```
            180                 185                 190

Ala Ser Gln Ser Ile Ser Ser Tyr Leu Asn Trp Tyr Gln Gln Lys Pro
        195                 200                 205

Gly Lys Ala Pro Lys Leu Leu Ile Tyr Ala Ala Ser Ser Leu Gln Ser
    210                 215                 220

Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr
225                 230                 235                 240

Leu Thr Ile Ser Ser Leu Gln Pro Glu Asp Phe Ala Thr Tyr Tyr Cys
                245                 250                 255

Gln Gln Ser Tyr Ser Thr Pro Pro Leu Thr Phe Gly Gln Gly Thr Lys
            260                 265                 270

Val Glu Ile Lys Thr Thr Thr Pro Ala Pro Arg Pro Pro Thr Pro Ala
        275                 280                 285

Pro Thr Ile Ala Ser Gln Pro Leu Ser Leu Arg Pro Glu Ala Cys Arg
    290                 295                 300

Pro Ala Ala Gly Gly Ala Val His Thr Arg Gly Leu Asp Phe Ala Cys
305                 310                 315                 320

Asp Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly Val Leu Leu
                325                 330                 335

Leu Ser Leu Val Ile Thr Leu Tyr Cys Lys Arg Gly Arg Lys Lys Leu
            340                 345                 350

Leu Tyr Ile Phe Lys Gln Pro Phe Met Arg Pro Val Gln Thr Thr Gln
        355                 360                 365

Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu Glu Glu Glu Gly Gly
    370                 375                 380

Cys Glu Leu Arg Val Lys Phe Ser Arg Ser Ala Asp Ala Pro Ala Tyr
385                 390                 395                 400
```

Lys Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn Leu Gly Arg Arg
405 410 415

Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg Asp Pro Glu Met
420 425 430

Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu Tyr Asn Glu
435 440 445

Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile Gly Met Lys
450 455 460

Gly Glu Arg Arg Arg Gly Lys Gly His Asp Gly Leu Tyr Gln Gly Leu
465 470 475 480

Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu His Met Gln Ala Leu
485 490 495

Pro Pro Arg

<210> 889
<211> 1497
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 889
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

ccccaagtgc aactcgtgga atcaggcgga ggactcgtgc aacccggagg ttcccttaga 120

ctgtcatgtg ccgcttccgg gttcaatgtg tccagcaact acatgacctg ggtcagacag 180

gcgccgggaa agggacttga atgggtgtcc gtgatctact ccggtggagc aacatactac 240

ggagactccg tgaaaggccg ctttaccgtg tcccgcgata actcgaagaa caccgtgtac 300

ttgcagatga acaggctgac tgccgaggac accgccgtgt attattgcgc ccgggacagg 360

ctgtactgtg gaaacaactg ctacctgtac tactactacg ggatggacgt gtggggacag 420

ggcactctcg tcactgtgtc atccgggggg ggcggtagcg gtggcggagg gtccggcgga 480

ggaggctcag ggggaggcgg aagcgatatc caggtcaccc agtctccctc ctcgctgtcc 540

gcctccgtgg gcgaccgcgt caccattact tgccgggcgt cgcagtcgat cagctcctac 600

ctgaactggt accagcagaa gcctggaaag gccccgaagc tgctgatcta cgcggcctcg 660

tccctgcaaa gcggcgtccc gtcgcggttc agcggttccg gttcgggaac cgacttcacc 720

ctgactattt cctccctgca acccgaggat ttcgccactt actactgcca gcagtcctac 780

tccaccccac ctctgacctt cggccaagga accaaggtcg aaatcaagac cactacccca 840

gcaccgaggc cacccacccc ggctcctacc atcgcctccc agcctctgtc cctgcgtccg 900

gaggcatgta gacccgcagc tggtggggcc gtgcataccc ggggtcttga cttcgcctgc 960

gatatctaca tttgggcccc tctggctggt acttgcgggg tcctgctgct ttcactcgtg 1020

atcactcttt actgtaagcg cggtcggaag aagctgctgt acatctttaa gcaacccttc 1080

atgaggcctg tgcagactac tcaagaggag gacggctgtt catgccggtt cccagaggag 1140

gaggaaggcg gctgcgaact gcgcgtgaaa ttcagccgca gcgcagatgc tccagcctac 1200

aagcaggggc agaaccagct ctacaacgaa ctcaatcttg gtcggagaga ggagtacgac 1260

gtgctggaca agcggagagg acgggaccca gaaatgggcg ggaagccgcg cagaaagaat 1320

ccccaagagg gcctgtacaa cgagctccaa aaggataaga tggcagaagc ctatagcgag 1380

attggtatga aaggggaacg cagaagaggc aaaggccacg acggactgta ccagggactc 1440

agcaccgcca ccaaggacac ctatgacgct cttcacatgc aggccctgcc gcctcgg 1497

<210> 890
<211> 247
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 890
Glu Val Gln Leu Gln Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ser
1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Gly Thr Phe Ser Ser Tyr
20 25 30

```
Ala Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
        35                  40                  45

Gly Gly Ile Ile Pro Ile Phe Gly Thr Ala Asn Tyr Ala Gln Lys Phe
    50                  55                  60

Gln Gly Arg Val Thr Ile Thr Ala Asp Glu Ser Thr Ser Thr Ala Tyr
65                  70                  75                  80

Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
                85                  90                  95

Ala Arg Asp Leu Glu Met Ala Thr Ile Met Gly Gly Tyr Trp Gly Gln
            100                 105                 110

Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly
        115                 120                 125

Gly Ser Gly Gly Gly Gly Ser Gln Ser Ala Leu Thr Gln Pro Ala Ser
    130                 135                 140

Val Ser Gly Ser Pro Gly Gln Ser Ile Thr Ile Ser Cys Thr Gly Thr
145                 150                 155                 160

Ser Ser Asp Val Gly Gly Tyr Asn Tyr Val Ser Trp Tyr Gln Gln His
                165                 170                 175

Pro Gly Lys Ala Pro Lys Leu Met Ile Tyr Asp Val Ser Asn Arg Pro
            180                 185                 190

Ser Gly Val Ser Asn Arg Phe Ser Gly Ser Lys Ser Gly Asn Thr Ala
        195                 200                 205

Ser Leu Thr Ile Ser Gly Leu Gln Ala Glu Asp Glu Ala Asp Tyr Tyr
    210                 215                 220

Cys Ser Ser Tyr Thr Ser Ser Ser Thr Leu Asp Val Val Phe Gly Gly
225                 230                 235                 240
```

Gly Thr Lys Leu Thr Val Leu
245

<210> 891
<211> 741
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 891
gaagtgcaac tccaacagtc aggcgcagaa gtcaagaagc ccggatcgtc agtgaaagtg 60

tcctgcaaag cctccggcgg aaccttcagc tcctacgcaa tcagctgggt gcggcaggcg 120

cccggacagg gactggagtg gatgggcggt atcattccga tctttggcac cgccaattac 180

gcccagaagt tccagggacg cgtcacaatc accgccgacg aatcgacttc caccgcctac 240

atggagctgt cgtccttgag gagcgaagat accgccgtgt actactgcgc tcgggatctg 300

gagatggcca ctatcatggg gggttactgg ggccagggga ccctggtcac tgtgtcctcg 360

ggaggagggg gatcaggcgg cggcggttcc gggggaggag gaagccagtc cgcgctgact 420

cagccagctt ccgtgtctgg ttcgccggga cagtccatca ctattagctg taccggcacc 480

agcagcgacg tgggcggcta caactatgtg tcatggtacc agcagcaccc ggggaaggcg 540

cctaagctga tgatctacga cgtgtccaac cgccctagcg gagtgtccaa cagattctcc 600

ggttcgaagt cagggaacac tgcctccctc acgattagcg ggctgcaagc cgaggatgaa 660

gccgactact actgctcctc ctatacctcc tcctcgaccc tggacgtggt gttcggagga 720

ggcaccaagc tcaccgtcct t 741

<210> 892
<211> 120
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 892
Glu Val Gln Leu Gln Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ser

1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Gly Thr Phe Ser Ser Tyr
20 25 30

Ala Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45

Gly Gly Ile Ile Pro Ile Phe Gly Thr Ala Asn Tyr Ala Gln Lys Phe
50 55 60

Gln Gly Arg Val Thr Ile Thr Ala Asp Glu Ser Thr Ser Thr Ala Tyr
65 70 75 80

Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Asp Leu Glu Met Ala Thr Ile Met Gly Gly Tyr Trp Gly Gln
100 105 110

Gly Thr Leu Val Thr Val Ser Ser
115 120

<210> 893
<211> 112
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 893
Gln Ser Ala Leu Thr Gln Pro Ala Ser Val Ser Gly Ser Pro Gly Gln
1 5 10 15

Ser Ile Thr Ile Ser Cys Thr Gly Thr Ser Ser Asp Val Gly Gly Tyr
20 25 30

Asn Tyr Val Ser Trp Tyr Gln Gln His Pro Gly Lys Ala Pro Lys Leu
35 40 45

Met Ile Tyr Asp Val Ser Asn Arg Pro Ser Gly Val Ser Asn Arg Phe
    50   55   60

Ser Gly Ser Lys Ser Gly Asn Thr Ala Ser Leu Thr Ile Ser Gly Leu
65   70   75   80

Gln Ala Glu Asp Glu Ala Asp Tyr Tyr Cys Ser Ser Tyr Thr Ser Ser
                85   90   95

Ser Thr Leu Asp Val Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu
            100   105   110

<210> 894
<211> 491
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 894
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1   5   10   15

His Ala Ala Arg Pro Glu Val Gln Leu Gln Gln Ser Gly Ala Glu Val
            20   25   30

Lys Lys Pro Gly Ser Ser Val Lys Val Ser Cys Lys Ala Ser Gly Gly
        35   40   45

Thr Phe Ser Ser Tyr Ala Ile Ser Trp Val Arg Gln Ala Pro Gly Gln
    50   55   60

Gly Leu Glu Trp Met Gly Gly Ile Ile Pro Ile Phe Gly Thr Ala Asn
65   70   75   80

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

Thr Ser Thr Ala Tyr Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr
            100   105   110

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Ala Val Tyr Tyr Cys Ala Arg Asp Leu Glu Met Ala Thr Ile Met Gly
        115                 120                 125

Gly Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly
    130                 135                 140

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gln Ser Ala Leu
145                 150                 155                 160

Thr Gln Pro Ala Ser Val Ser Gly Ser Pro Gly Gln Ser Ile Thr Ile
                165                 170                 175

Ser Cys Thr Gly Thr Ser Ser Asp Val Gly Gly Tyr Asn Tyr Val Ser
            180                 185                 190

Trp Tyr Gln Gln His Pro Gly Lys Ala Pro Lys Leu Met Ile Tyr Asp
        195                 200                 205

Val Ser Asn Arg Pro Ser Gly Val Ser Asn Arg Phe Ser Gly Ser Lys
    210                 215                 220

Ser Gly Asn Thr Ala Ser Leu Thr Ile Ser Gly Leu Gln Ala Glu Asp
225                 230                 235                 240

Glu Ala Asp Tyr Tyr Cys Ser Ser Tyr Thr Ser Ser Ser Thr Leu Asp
                245                 250                 255

Val Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu Thr Thr Thr Pro
            260                 265                 270

Ala Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu
        275                 280                 285

Ser Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His
    290                 295                 300

Thr Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu
305                 310                 315                 320

Ala Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr
```

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                325                 330                 335

Cys Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe
            340                 345                 350

Met Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg
        355                 360                 365

Phe Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser
    370                 375                 380

Arg Ser Ala Asp Ala Pro Ala Tyr Lys Gln Gly Gln Asn Gln Leu Tyr
385                 390                 395                 400

Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys
                405                 410                 415

Arg Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn
            420                 425                 430

Pro Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu
        435                 440                 445

Ala Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly
    450                 455                 460

His Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr
465                 470                 475                 480

Asp Ala Leu His Met Gln Ala Leu Pro Pro Arg
                485                 490
```

<210> 895
<211> 1473
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 895

atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

cccgaagtgc aactccaaca gtcaggcgca gaagtcaaga agcccggatc gtcagtgaaa 120

gtgtcctgca aagcctccgg cggaaccttc agctcctacg caatcagctg ggtgcggcag 180

gcgcccggac agggactgga gtggatgggc ggtatcattc cgatctttgg caccgccaat 240

tacgcccaga agttccaggg acgcgtcaca atcaccgccg acgaatcgac ttccaccgcc 300

tacatggagc tgtcgtcctt gaggagcgaa gataccgccg tgtactactg cgctcgggat 360

ctggagatgg ccactatcat ggggggttac tggggccagg ggaccctggt cactgtgtcc 420

tcgggaggag ggggatcagg cggcggcggt tccgggggag gaggaagcca gtccgcgctg 480

actcagccag cttccgtgtc tggttcgccg ggacagtcca tcactattag ctgtaccggc 540

accagcagcg acgtgggcgg ctacaactat gtgtcatggt accagcagca cccggggaag 600

gcgcctaagc tgatgatcta cgacgtgtcc aaccgcccta gcggagtgtc caacagattc 660

tccggttcga agtcagggaa cactgcctcc ctcacgatta gcgggctgca agccgaggat 720

gaagccgact actactgctc ctcctatacc tcctcctcga ccctggacgt ggtgttcgga 780

ggaggcacca agctcaccgt ccttaccact accccagcac cgaggccacc caccccggct 840

cctaccatcg cctcccagcc tctgtccctg cgtccggagg catgtagacc cgcagctggt 900

ggggccgtgc atacccgggg tcttgacttc gcctgcgata tctacatttg ggcccctctg 960

gctggtactt gcggggtcct gctgctttca ctcgtgatca ctctttactg taagcgcggt 1020

cggaagaagc tgctgtacat ctttaagcaa cccttcatga ggcctgtgca gactactcaa 1080

gaggaggacg gctgttcatg ccggttccca gaggaggagg aaggcggctg cgaactgcgc 1140

gtgaaattca gccgcagcgc agatgctcca gcctacaagc aggggcagaa ccagctctac 1200

aacgaactca atcttggtcg gagagaggag tacgacgtgc tggacaagcg gagaggacgg 1260

gacccagaaa tgggcgggaa gccgcgcaga aagaatcccc aagagggcct gtacaacgag 1320

ctccaaaagg ataagatggc agaagcctat agcgagattg gtatgaaagg ggaacgcaga 1380

agaggcaaag gccacgacgg actgtaccag ggactcagca ccgccaccaa ggacacctat 1440

gacgctcttc acatgcaggc cctgccgcct cgg 1473

<210> 896
<211> 245
<212> PRT

<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 896
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Gly
1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe 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 Leu Ile Ser Gly Asp 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 Val Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Val Phe Asp Ser Tyr Tyr Met Asp Val Trp Gly Lys Gly Thr
100 105 110

Thr Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
115 120 125

Gly Ser Gly Gly Ser Glu Ile Val Leu Thr Gln Ser Pro Leu Ser Leu
130 135 140

Pro Val Thr Pro Gly Gln Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln
145 150 155 160

Ser Leu Val Tyr Thr Asp Gly Asn Thr Tyr Leu Asn Trp Phe Gln Gln
165 170 175

Arg Pro Gly Gln Ser Pro Arg Arg Leu Ile Tyr Lys Val Ser Asn Arg
180 185 190

Asp Ser Gly Val Pro Asp Arg Phe Ser Gly Ser Gly Ser Asp Thr Asp
195 200 205

Phe Thr Leu Lys Ile Ser Arg Val Glu Ala Glu Asp Val Gly Ile Tyr
210 215 220

Tyr Cys Met Gln Gly Thr His Trp Ser Phe Thr Phe Gly Gln Gly Thr
225 230 235 240

Arg Leu Glu Ile Lys
245

<210> 897
<211> 735
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 897
gaagtgcaat tggtggaaag cggaggagga gtggtgcaac ctggaggaag cctgagactg 60

tcatgtgccg cctcgggatt cactttcgat gactacgcaa tgcactgggt ccgccaggcc 120

cccggaaagg gtctggaatg ggtgtccctc atctccggcg atgggggttc cacttactat 180

gcggattctg tgaagggccg cttcacaatc tcccgggaca attccaagaa cactctgtac 240

cttcaaatga actccctgag ggtggaggac accgctgtgt actactgcgc gagagtgttt 300

gactcgtact atatggacgt ctggggaaag ggcaccaccg tgaccgtgtc cagcggtggc 360

ggtggatcgg ggggcggcgg ctccgggagc ggaggttccg agattgtgct gactcagtcg 420

ccgttgtcac tgcctgtcac ccccgggcag ccggcctcca tttcatgccg gtccagccag 480

tccctggtct acaccgatgg gaacacttac ctcaactggt tccagcagcg cccaggacag 540

tccccgcgga ggctgatcta caaagtgtca aaccgggact ccggcgtccc cgatcggttc 600

tcgggaagcg gcagcgacac cgacttcacg ctgaagattt cccgcgtgga agccgaggac 660

gtgggcatct actactgtat gcagggcacc cactggtcgt ttaccttcgg acaaggaact 720

aggctcgaga tcaag 735

<210> 898
<211> 118
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 898
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Gly
1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe 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 Leu Ile Ser Gly Asp 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 Val Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Val Phe Asp Ser Tyr Tyr Met Asp Val Trp Gly Lys Gly Thr
100 105 110

Thr Val Thr Val Ser Ser
115

<210> 899
<211> 112
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 899
Glu Ile Val Leu Thr Gln Ser Pro Leu Ser Leu Pro Val Thr Pro Gly
1   5   10   15

Gln Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Val Tyr Thr
            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 Asp 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 Gly
                85   90   95

Thr His Trp Ser Phe Thr Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys
            100   105   110

<210> 900
<211> 489
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 900
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1   5   10   15

His Ala Ala Arg Pro Glu Val Gln Leu Val Glu Ser Gly Gly Gly Val
            20   25   30

Val Gln Pro Gly Gly Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe
        35   40   45

Thr Phe Asp Asp Tyr Ala Met His Trp Val Arg Gln Ala Pro Gly Lys

```
    50                  55                  60

Gly Leu Glu Trp Val Ser Leu Ile Ser Gly Asp Gly Gly Ser Thr Tyr
65                  70                  75                  80

Tyr Ala Asp Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser
                85                  90                  95

Lys Asn Thr Leu Tyr Leu Gln Met Asn Ser Leu Arg Val Glu Asp Thr
            100                 105                 110

Ala Val Tyr Tyr Cys Ala Arg Val Phe Asp Ser Tyr Tyr Met Asp Val
        115                 120                 125

Trp Gly Lys Gly Thr Thr Val Thr Val Ser Ser Gly Gly Gly Gly Ser
    130                 135                 140

Gly Gly Gly Gly Ser Gly Ser Gly Gly Ser Glu Ile Val Leu Thr Gln
145                 150                 155                 160

Ser Pro Leu Ser Leu Pro Val Thr Pro Gly Gln Pro Ala Ser Ile Ser
                165                 170                 175

Cys Arg Ser Ser Gln Ser Leu Val Tyr Thr Asp Gly Asn Thr Tyr Leu
            180                 185                 190

Asn Trp Phe Gln Gln Arg Pro Gly Gln Ser Pro Arg Arg Leu Ile Tyr
        195                 200                 205

Lys Val Ser Asn Arg Asp Ser Gly Val Pro Asp Arg Phe Ser Gly Ser
    210                 215                 220

Gly Ser Asp Thr Asp Phe Thr Leu Lys Ile Ser Arg Val Glu Ala Glu
225                 230                 235                 240

Asp Val Gly Ile Tyr Tyr Cys Met Gln Gly Thr His Trp Ser Phe Thr
                245                 250                 255

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Thr Thr Thr Pro Ala Pro
            260                 265                 270
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Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser Leu
        275                 280                 285

Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr Arg
    290                 295                 300

Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala Gly
305                 310                 315                 320

Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr Cys Lys
                325                 330                 335

Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met Arg
            340                 345                 350

Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro
        355                 360                 365

Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg Ser
    370                 375                 380

Ala Asp Ala Pro Ala Tyr Lys Gln Gly Gln Asn Gln Leu Tyr Asn Glu
385                 390                 395                 400

Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg
                405                 410                 415

Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln
            420                 425                 430

Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr
        435                 440                 445

Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His Asp
    450                 455                 460

Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala
465                 470                 475                 480

Leu His Met Gln Ala Leu Pro Pro Arg
```

<210> 901
<211> 1467
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 901
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

cccgaagtgc aattggtgga aagcggagga ggagtggtgc aacctggagg aagcctgaga 120

ctgtcatgtg ccgcctcggg attcactttc gatgactacg caatgcactg ggtccgccag 180

gcccccggaa agggtctgga atgggtgtcc ctcatctccg gcgatggggg ttccacttac 240

tatgcggatt ctgtgaaggg ccgcttcaca atctcccggg acaattccaa gaacactctg 300

taccttcaaa tgaactccct gagggtggag gacaccgctg tgtactactg cgcgagagtg 360

tttgactcgt actatatgga cgtctgggga aagggcacca ccgtgaccgt gtccagcggt 420

ggcggtggat cgggggggcgg cggctccggg agcggaggtt ccgagattgt gctgactcag 480

tcgccgttgt cactgcctgt caccccgggg cagccggcct ccatttcatg ccggtccagc 540

cagtccctgg tctacaccga tgggaacact tacctcaact ggttccagca gcgcccagga 600

cagtccccgc ggaggctgat ctacaaagtg tcaaaccggg actccggcgt ccccgatcgg 660

ttctcgggaa gcggcagcga caccgacttc acgctgaaga tttcccgcgt ggaagccgag 720

gacgtgggca tctactactg tatgcagggc acccactggt cgtttacctt cggacaagga 780

actaggctcg agatcaagac cactacccca gcaccgaggc cacccacccc ggctcctacc 840

atcgcctccc agcctctgtc cctgcgtccg gaggcatgta gacccgcagc tggtggggcc 900

gtgcataccc ggggtcttga cttcgcctgc gatatctaca tttgggcccc tctggctggt 960

acttgcgggg tcctgctgct ttcactcgtg atcactcttt actgtaagcg cggtcggaag 1020

aagctgctgt acatctttaa gcaacccttc atgaggcctg tgcagactac tcaagaggag 1080

gacggctgtt catgccggtt cccagaggag gaggaaggcg gctgcgaact gcgcgtgaaa 1140

ttcagccgca gcgcagatgc tccagcctac aagcaggggc agaaccagct ctacaacgaa 1200

ctcaatcttg gtcggagaga ggagtacgac gtgctggaca agcggagagg acgggaccca 1260

gaaatgggcg ggaagccgcg cagaaagaat ccccaagagg gcctgtacaa cgagctccaa 1320

aaggataaga tggcagaagc ctatagcgag attggtatga aaggggaacg cagaagaggc 1380

aaaggccacg acggactgta ccagggactc agcaccgcca ccaaggacac ctatgacgct 1440

cttcacatgc aggccctgcc gcctcgg 1467

<210> 902
<211> 247
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 902
Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Glu
1 5 10 15

Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Gly Ser Ile Ser Ser Ser
20 25 30

Ser Tyr Tyr Trp Gly Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu Glu
35 40 45

Trp Ile Gly Ser Ile Tyr Tyr Ser Gly Ser Thr Tyr Tyr Asn Pro Ser
50 55 60

Leu Lys Ser Arg Val Ser Ile Ser Val Asp Thr Ser Lys Asn Gln Phe
65 70 75 80

Ser Leu Lys Leu Lys Tyr Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr
85 90 95

Cys Ala Thr Pro Gly Thr Tyr Tyr Asp Phe Leu Ser Gly Tyr Tyr Pro
100 105 110

Phe Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly
115 120 125

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Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Val Met
    130                 135                 140

Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly Asp Arg Val Thr
145                 150                 155                 160

Ile Thr Cys Arg Ala Ser Gln Gly Ile Ser Ser Tyr Leu Ala Trp Tyr
                165                 170                 175

Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile Tyr Ala Ala Ser
            180                 185                 190

Thr Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly
        195                 200                 205

Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro Glu Asp Phe Ala
    210                 215                 220

Thr Tyr Tyr Cys Gln Gln Leu Asn Ser Tyr Pro Tyr Thr Phe Gly Gln
225                 230                 235                 240

Gly Thr Lys Leu Glu Ile Lys
                245
```

<210> 903
<211> 741
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 903
caagtgcagc ttcaagaaag cggtccagga ctcgtcaagc catcagaaac tctttccctc 60

acttgtaccg tgtcgggagg cagcatctcc tcgagctcct actactgggg ttggattaga 120

cagcccccgg gaaaggggtt ggagtggatc ggttccatct actactccgg gtcgacctac 180

tacaaccctt ccctgaaatc tcgggtgtcc atctccgtcg acacctccaa gaaccagttc 240

agcctgaagc tgaaatatgt gaccgcggcc gatactgccg tgtactattg cgccaccccg 300

ggaacctact acgacttcct ctcggggtac tacccgtttt actggggaca ggggactctc 360

gtgaccgtgt cctcgggcgg cggaggttca ggcggtggcg gatcgggggg aggaggctca 420

gacattgtga tgacccagag cccgtccagc ctgagcgcct ccgtgggcga tagggtcacg 480

attacttgcc gggcgtccca gggaatctca agctacctgg cctggtacca acagaagccc 540

ggaaaggcac ccaagttgct gatctatgcc gctagcactc tgcagtccgg ggtgccttcc 600

cgcttctccg gctccggctc gggcaccgac ttcaccctga ccatttcctc actgcaaccc 660

gaggacttcg ccacttacta ctgccagcag ctgaactcct acccttacac attcggacag 720

ggaaccaagc tggaaatcaa g 741

<210> 904
<211> 125
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 904
Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Glu
1 5 10 15

Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Gly Ser Ile Ser Ser Ser
20 25 30

Ser Tyr Tyr Trp Gly Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu Glu
35 40 45

Trp Ile Gly Ser Ile Tyr Tyr Ser Gly Ser Thr Tyr Tyr Asn Pro Ser
50 55 60

Leu Lys Ser Arg Val Ser Ile Ser Val Asp Thr Ser Lys Asn Gln Phe
65 70 75 80

Ser Leu Lys Leu Lys Tyr Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr
85 90 95

Cys Ala Thr Pro Gly Thr Tyr Tyr Asp Phe Leu Ser Gly Tyr Tyr Pro
100 105 110

Phe Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
        115   120   125

<210> 905
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 905
Asp Ile Val Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
1   5   10   15

Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln 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 Ala Ala Ser Thr Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
    50   55   60

Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
65   70   75   80

Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Leu Asn Ser Tyr Pro Tyr
                85   90   95

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

<210> 906
<211> 491
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 906
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1   5   10   15

His Ala Ala Arg Pro Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu
            20   25   30

Val Lys Pro Ser Glu Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Gly
        35   40   45

Ser Ile Ser Ser Ser Ser Tyr Tyr Trp Gly Trp Ile Arg Gln Pro Pro
    50   55   60

Gly Lys Gly Leu Glu Trp Ile Gly Ser Ile Tyr Tyr Ser Gly Ser Thr
65   70   75   80

Tyr Tyr Asn Pro Ser Leu Lys Ser Arg Val Ser Ile Ser Val Asp Thr
                85   90   95

Ser Lys Asn Gln Phe Ser Leu Lys Leu Lys Tyr Val Thr Ala Ala Asp
            100   105   110

Thr Ala Val Tyr Tyr Cys Ala Thr Pro Gly Thr Tyr Tyr Asp Phe Leu
        115   120   125

Ser Gly Tyr Tyr Pro Phe Tyr Trp Gly Gln Gly Thr Leu Val Thr Val
    130   135   140

Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly
145   150   155   160

Ser Asp Ile Val Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val
                165   170   175

Gly Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Gly Ile Ser Ser
            180   185   190

Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu
        195   200   205

Ile Tyr Ala Ala Ser Thr Leu Gln Ser Gly Val Pro Ser Arg Phe Ser

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    210                 215                 220

Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln
225                 230                 235                 240

Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Leu Asn Ser Tyr Pro
                245                 250                 255

Tyr Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys Thr Thr Thr Pro
            260                 265                 270

Ala Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu
        275                 280                 285

Ser Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His
    290                 295                 300

Thr Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu
305                 310                 315                 320

Ala Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr
                325                 330                 335

Cys Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe
            340                 345                 350

Met Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg
        355                 360                 365

Phe Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser
    370                 375                 380

Arg Ser Ala Asp Ala Pro Ala Tyr Lys Gln Gly Gln Asn Gln Leu Tyr
385                 390                 395                 400

Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys
                405                 410                 415

Arg Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn
            420                 425                 430
```

Pro Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu
        435   440   445

Ala Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly
    450   455   460

His Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr
465   470   475   480

Asp Ala Leu His Met Gln Ala Leu Pro Pro Arg
                485   490

<210> 907
<211> 1473
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polynucleotide"

<400> 907
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

ccccaagtgc agcttcaaga aagcggtcca ggactcgtca agccatcaga aactctttcc 120

ctcacttgta ccgtgtcggg aggcagcatc tcctcgagct cctactactg gggttggatt 180

agacagcccc cgggaaaggg gttggagtgg atcggttcca tctactactc cgggtcgacc 240

tactacaacc cttccctgaa atctcgggtg tccatctccg tcgacacctc caagaaccag 300

ttcagcctga agctgaaata tgtgaccgcg gccgatactg ccgtgtacta ttgcgccacc 360

ccgggaacct actacgactt cctctcgggg tactacccgt tttactgggg acaggggact 420

ctcgtgaccg tgtcctcggg cggcggaggt tcaggcggtg gcggatcggg gggaggaggc 480

tcagacattg tgatgaccca gagcccgtcc agcctgagcg cctccgtggg cgatagggtc 540

acgattactt gccgggcgtc ccagggaatc tcaagctacc tggcctggta ccaacagaag 600

cccggaaagg cacccaagtt gctgatctat gccgctagca ctctgcagtc cggggtgcct 660

tcccgcttct ccggctccgg ctcgggcacc gacttcaccc tgaccatttc ctcactgcaa 720

cccgaggact tcgccactta ctactgccag cagctgaact cctaccctta cacattcgga 780

cagggaacca agctggaaat caagaccact accccagcac cgaggccacc caccccggct 840

cctaccatcg cctcccagcc tctgtccctg cgtccggagg catgtagacc cgcagctggt 900

ggggccgtgc atacccgggg tcttgacttc gcctgcgata tctacatttg ggcccctctg 960

gctggtactt gcggggtcct gctgctttca ctcgtgatca ctctttactg taagcgcggt 1020

cggaagaagc tgctgtacat ctttaagcaa cccttcatga ggcctgtgca gactactcaa 1080

gaggaggacg gctgttcatg ccggttccca gaggaggagg aaggcggctg cgaactgcgc 1140

gtgaaattca gccgcagcgc agatgctcca gcctacaagc aggggcagaa ccagctctac 1200

aacgaactca atcttggtcg gagagaggag tacgacgtgc tggacaagcg gagaggacgg 1260

gacccagaaa tgggcgggaa gccgcgcaga aagaatcccc aagagggcct gtacaacgag 1320

ctccaaaagg ataagatggc agaagcctat agcgagattg gtatgaaagg ggaacgcaga 1380

agaggcaaag gccacgacgg actgtaccag ggactcagca ccgccaccaa ggacacctat 1440

gacgctcttc acatgcaggc cctgccgcct cgg 1473

<210> 908
<211> 239
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 908
Gln Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr
20 25 30

Trp Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45

Ala Asn Ile Asn Glu Asp Gly Ser Ala Lys Phe 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

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Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Phe Cys
                85                  90                  95

Ala Arg Asp Leu Arg Ser Gly Arg Tyr Trp Gly Gln Gly Thr Leu Val
            100                 105                 110

Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly
        115                 120                 125

Gly Gly Ser Glu Ile Val Leu Thr Gln Ser Pro Gly Thr Leu Ser Leu
    130                 135                 140

Ser Pro Gly Gly Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Ile
145                 150                 155                 160

Ser Gly Ser Phe Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro
                165                 170                 175

Arg Leu Leu Ile Tyr Gly Ala Ser Ser Arg Ala Thr Gly Ile Pro Asp
            180                 185                 190

Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser
        195                 200                 205

Arg Leu Glu Pro Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Gly
    210                 215                 220

Ser Ser Pro Pro Thr Phe Gly Leu Gly Thr Lys Leu Glu Ile Lys
225                 230                 235


<210> 909
<211> 717
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polynucleotide"

<400> 909
caagtgcaac tcgtggaatc tggtggagga ctcgtgcaac ccggaggatc attgcgactc       60
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tcgtgtgcgg catccggctt tacctttca tcctactgga tgtcctgggt cagacaggcc 120

cccgggaagg gactggaatg ggtcgcgaac atcaacgagg acggctcggc caagttctac 180

gtggactccg tgaagggccg cttcacgatc tcacgggata acgccaagaa ttccctgtat 240

ctgcaaatga acagcctgag ggccgaggac actgcggtgt acttctgcgc acgcgacctg 300

aggtccggga gatactgggg acagggcacc ctcgtgaccg tgtcgagcgg aggaggggg 360

tcgggcggcg gcggttccgg tggcggcggt agcgaaattg tgttgaccca gtcccctgga 420

accctgagcc tgtcacctgg aggacgcgcc accctgtcct gccgggccag ccagagcatc 480

tcagggtcct tcctggcttg gtaccagcag aagccgggac aggctccgag acttctgatc 540

tacggcgcct cctcgcgggc gaccggaatc ccggatcggt tctccggctc gggaagcgga 600

actgacttca ctcttaccat ttcccgcctg gagccggaag atttcgccgt gtactactgc 660

cagcagtacg ggtcatcccc tccaaccttc ggcctgggaa ctaagctgga aatcaaa 717

<210> 910
<211> 116
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 910
Gln Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr
20 25 30

Trp Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45

Ala Asn Ile Asn Glu Asp Gly Ser Ala Lys Phe 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 Phe Cys
85 90 95

Ala Arg Asp Leu Arg Ser Gly Arg Tyr Trp Gly Gln Gly Thr Leu Val
100 105 110

Thr Val Ser Ser
115

<210> 911
<211> 108
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 911
Glu Ile Val Leu Thr Gln Ser Pro Gly Thr Leu Ser Leu Ser Pro Gly
1 5 10 15

Gly Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Ile Ser Gly Ser
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 Gln Tyr Gly Ser Ser Pro
85 90 95

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

<210> 912
<211> 483

<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 912
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Gln Val Gln Leu Val Glu Ser Gly Gly Gly Leu
20 25 30

Val Gln Pro Gly Gly Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe
35 40 45

Thr Phe Ser Ser Tyr Trp Met Ser Trp Val Arg Gln Ala Pro Gly Lys
50 55 60

Gly Leu Glu Trp Val Ala Asn Ile Asn Glu Asp Gly Ser Ala Lys Phe
65 70 75 80

Tyr Val Asp Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala
85 90 95

Lys Asn Ser Leu Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr
100 105 110

Ala Val Tyr Phe Cys Ala Arg Asp Leu Arg Ser Gly Arg Tyr Trp Gly
115 120 125

Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly
130 135 140

Gly Gly Ser Gly Gly Gly Gly Ser Glu Ile Val Leu Thr Gln Ser Pro
145 150 155 160

Gly Thr Leu Ser Leu Ser Pro Gly Gly Arg Ala Thr Leu Ser Cys Arg
165 170 175

Ala Ser Gln Ser Ile Ser Gly Ser Phe Leu Ala Trp Tyr Gln Gln Lys

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            180                 185                 190

Pro Gly Gln Ala Pro Arg Leu Leu Ile Tyr Gly Ala Ser Ser Arg Ala
        195                 200                 205

Thr Gly Ile Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe
    210                 215                 220

Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu Asp Phe Ala Val Tyr Tyr
225                 230                 235                 240

Cys Gln Gln Tyr Gly Ser Ser Pro Pro Thr Phe Gly Leu Gly Thr Lys
                245                 250                 255

Leu Glu Ile Lys Thr Thr Thr Pro Ala Pro Arg Pro Pro Thr Pro Ala
            260                 265                 270

Pro Thr Ile Ala Ser Gln Pro Leu Ser Leu Arg Pro Glu Ala Cys Arg
        275                 280                 285

Pro Ala Ala Gly Gly Ala Val His Thr Arg Gly Leu Asp Phe Ala Cys
    290                 295                 300

Asp Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly Val Leu Leu
305                 310                 315                 320

Leu Ser Leu Val Ile Thr Leu Tyr Cys Lys Arg Gly Arg Lys Lys Leu
                325                 330                 335

Leu Tyr Ile Phe Lys Gln Pro Phe Met Arg Pro Val Gln Thr Thr Gln
            340                 345                 350

Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu Glu Glu Glu Gly Gly
        355                 360                 365

Cys Glu Leu Arg Val Lys Phe Ser Arg Ser Ala Asp Ala Pro Ala Tyr
    370                 375                 380

Lys Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn Leu Gly Arg Arg
385                 390                 395                 400
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Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg Asp Pro Glu Met
405 410 415

Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu Tyr Asn Glu
420 425 430

Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile Gly Met Lys
435 440 445

Gly Glu Arg Arg Arg Gly Lys Gly His Asp Gly Leu Tyr Gln Gly Leu
450 455 460

Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu His Met Gln Ala Leu
465 470 475 480

Pro Pro Arg

<210> 913
<211> 1449
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 913
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

ccccaagtgc aactcgtgga atctggtgga ggactcgtgc aacccggagg atcattgcga 120

ctctcgtgtg cggcatccgg ctttaccttt tcatcctact ggatgtcctg ggtcagacag 180

gcccccggga agggactgga atgggtcgcg aacatcaacg aggacggctc ggccaagttc 240

tacgtggact ccgtgaaggg ccgcttcacg atctcacggg ataacgccaa gaattccctg 300

tatctgcaaa tgaacagcct gagggccgag gacactgcgg tgtacttctg cgcacgcgac 360

ctgaggtccg ggagatactg gggacagggc accctcgtga ccgtgtcgag cggaggaggg 420

gggtcgggcg gcggcggttc cggtggcggc ggtagcgaaa ttgtgttgac ccagtcccct 480

ggaaccctga gcctgtcacc tggaggacgc gccaccctgt cctgccgggc cagccagagc 540

atctcagggt ccttcctggc ttggtaccag cagaagccgg gacaggctcc gagacttctg 600

atctacggcg cctcctcgcg ggcgaccgga atcccggatc ggttctccgg ctcgggaagc 660

ggaactgact tcactcttac catttcccgc ctggagccgg aagatttcgc cgtgtactac 720

tgccagcagt acgggtcatc ccctccaacc ttcggcctgg gaactaagct ggaaatcaaa 780

accactaccc cagcaccgag gccacccacc ccggctccta ccatcgcctc ccagcctctg 840

tccctgcgtc cggaggcatg tagacccgca gctggtgggg ccgtgcatac ccggggtctt 900

gacttcgcct gcgatatcta catttgggcc cctctggctg gtacttgcgg ggtcctgctg 960

ctttcactcg tgatcactct ttactgtaag cgcggtcgga agaagctgct gtacatcttt 1020

aagcaaccct tcatgaggcc tgtgcagact actcaagagg aggacggctg ttcatgccgg 1080

ttcccagagg aggaggaagg cggctgcgaa ctgcgcgtga aattcagccg cagcgcagat 1140

gctccagcct acaagcaggg gcagaaccag ctctacaacg aactcaatct tggtcggaga 1200

gaggagtacg acgtgctgga caagcggaga ggacgggacc cagaaatggg cgggaagccg 1260

cgcagaaaga atccccaaga gggcctgtac aacgagctcc aaaaggataa gatggcagaa 1320

gcctatagcg agattggtat gaaaggggaa cgcagaagag gcaaaggcca cgacggactg 1380

taccagggac tcagcaccgc caccaaggac acctatgacg ctcttcacat gcaggccctg 1440

ccgcctcgg 1449

<210> 914
<211> 245
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 914
Glu Val Gln Leu Gln Gln Ser Gly Pro Gly Leu Val Arg Pro Ser Glu
1 5 10 15

Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Gly Pro Val Arg Ser Gly
20 25 30

Ser His Tyr Trp Asn Trp Ile Arg Gln Pro Pro Gly Arg Gly Leu Glu
35 40 45

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Trp Ile Gly Tyr Ile Tyr Tyr Ser Gly Ser Thr Asn Tyr Asn Pro Ser
    50                  55                  60

Leu Glu Asn Arg Val Thr Ile Ser Ile Asp Thr Ser Asn Asn His Phe
65                  70                  75                  80

Ser Leu Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Leu Tyr Phe
                85                  90                  95

Cys Ala Arg Gly Thr Ala Thr Phe Asp Trp Asn Phe Pro Phe Asp Ser
            100                 105                 110

Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly Gly Ser
        115                 120                 125

Gly Gly Gly Gly Ser Gly Ser Gly Gly Ser Asp Ile Gln Met Thr Gln
    130                 135                 140

Ser Pro Ser Ser Leu Ser Ala Ser Ile Gly Asp Arg Val Thr Ile Thr
145                 150                 155                 160

Cys Arg Ala Ser Gln Ser Ile Ser Ser Tyr Leu Asn Trp Tyr Gln Gln
                165                 170                 175

Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile Tyr Ala Ala Ser Ser Leu
            180                 185                 190

Gln Ser Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp
        195                 200                 205

Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro Glu Asp Phe Ala Thr Tyr
    210                 215                 220

Tyr Cys Gln Gln Ser Tyr Ser Thr Pro Trp Thr Phe Gly Gln Gly Thr
225                 230                 235                 240

Lys Leu Glu Ile Lys
                245
```

<210> 915
<211> 735
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 915
gaagtgcaac tccaacaatc cggtccagga ctcgtcagac cctccgaaac tctctcgctt 60

acatgcactg tgtccggcgg ccctgtgcgg tccggctctc attactggaa ctggattcgc 120

cagcccccgg gacgcggact ggagtggatc ggctacatct attactcggg gtcgactaac 180

tacaacccga gcctggaaaa tagagtgacc atctcaatcg acacgtccaa caaccacttc 240

tcgctgaagt tgtcctccgt gactgccgcc gatactgccc tgtacttctg tgctcgcgga 300

accgccacct tcgactggaa cttccctttt gactcatggg gccaggggac ccttgtgacc 360

gtgtccagcg gaggaggagg ctccggtggt ggcgggagcg gtagcggcgg aagcgacatc 420

cagatgaccc agtcaccgtc ctcgctgtcc gcatccattg gggatcgggt cactattact 480

tgccgggcgt cccagtccat ctcgtcctac ctgaactggt atcagcagaa gccagggaaa 540

gcccccaagc tgctgatcta cgcggccagc agcctgcagt caggagtgcc ttcaaggttt 600

agcggcagcg gatcgggaac cgacttcacc ctgaccattt cctccctcca acccgaggat 660

ttcgccacct actactgcca gcagtcctac tccaccccgt ggaccttcgg acagggaacc 720

aagctggaga tcaag 735

<210> 916
<211> 123
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 916
Glu Val Gln Leu Gln Gln Ser Gly Pro Gly Leu Val Arg Pro Ser Glu
1 5 10 15

Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Gly Pro Val Arg Ser Gly

```
            20                  25                  30

Ser His Tyr Trp Asn Trp Ile Arg Gln Pro Pro Gly Arg Gly Leu Glu
        35                  40                  45

Trp Ile Gly Tyr Ile Tyr Tyr Ser Gly Ser Thr Asn Tyr Asn Pro Ser
    50                  55                  60

Leu Glu Asn Arg Val Thr Ile Ser Ile Asp Thr Ser Asn Asn His Phe
65                  70                  75                  80

Ser Leu Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Leu Tyr Phe
                85                  90                  95

Cys Ala Arg Gly Thr Ala Thr Phe Asp Trp Asn Phe Pro Phe Asp Ser
            100                 105                 110

Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
        115                 120


<210> 917
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 917
Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Ile Gly
1               5                   10                  15

Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Ser Ser Tyr
            20                  25                  30

Leu Asn Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
        35                  40                  45

Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
    50                  55                  60
```

Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
65 70 75 80

Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Ser Tyr Ser Thr Pro Trp
85 90 95

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

<210> 918
<211> 489
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 918
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Glu Val Gln Leu Gln Gln Ser Gly Pro Gly Leu
20 25 30

Val Arg Pro Ser Glu Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Gly
35 40 45

Pro Val Arg Ser Gly Ser His Tyr Trp Asn Trp Ile Arg Gln Pro Pro
50 55 60

Gly Arg Gly Leu Glu Trp Ile Gly Tyr Ile Tyr Tyr Ser Gly Ser Thr
65 70 75 80

Asn Tyr Asn Pro Ser Leu Glu Asn Arg Val Thr Ile Ser Ile Asp Thr
85 90 95

Ser Asn Asn His Phe Ser Leu Lys Leu Ser Ser Val Thr Ala Ala Asp
100 105 110

Thr Ala Leu Tyr Phe Cys Ala Arg Gly Thr Ala Thr Phe Asp Trp Asn
115 120 125

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Phe Pro Phe Asp Ser Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
    130                 135                 140

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Ser Gly Gly Ser Asp
145                 150                 155                 160

Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Ile Gly Asp
                165                 170                 175

Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Ser Ser Tyr Leu
            180                 185                 190

Asn Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile Tyr
        195                 200                 205

Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly Ser
    210                 215                 220

Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro Glu
225                 230                 235                 240

Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Ser Tyr Ser Thr Pro Trp Thr
                245                 250                 255

Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys Thr Thr Thr Pro Ala Pro
            260                 265                 270

Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser Leu
        275                 280                 285

Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr Arg
    290                 295                 300

Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala Gly
305                 310                 315                 320

Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr Cys Lys
                325                 330                 335

Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met Arg
```

```
            340                 345                 350

Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro
        355                 360                 365

Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg Ser
    370                 375                 380

Ala Asp Ala Pro Ala Tyr Lys Gln Gly Gln Asn Gln Leu Tyr Asn Glu
385                 390                 395                 400

Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg
                405                 410                 415

Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln
            420                 425                 430

Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr
        435                 440                 445

Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His Asp
    450                 455                 460

Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala
465                 470                 475                 480

Leu His Met Gln Ala Leu Pro Pro Arg
                485
```

<210> 919
<211> 1467
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 919
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

cccgaagtgc aactccaaca atccggtcca ggactcgtca gaccctccga aactctctcg 120

cttacatgca ctgtgtccgg cggccctgtg cggtccggct ctcattactg gaactggatt 180

cgccagcccc cgggacgcgg actggagtgg atcggctaca tctattactc ggggtcgact 240

aactacaacc cgagcctgga aaatagagtg accatctcaa tcgacacgtc caacaaccac 300

ttctcgctga agttgtcctc cgtgactgcc gccgatactg ccctgtactt ctgtgctcgc 360

ggaaccgcca ccttcgactg gaacttccct tttgactcat ggggccaggg gacccttgtg 420

accgtgtcca gcggaggagg aggctccggt ggtggcggga gcggtagcgg cggaagcgac 480

atccagatga cccagtcacc gtcctcgctg tccgcatcca ttggggatcg ggtcactatt 540

acttgccggg cgtcccagtc catctcgtcc tacctgaact ggtatcagca gaagccaggg 600

aaagccccca agctgctgat ctacgcggcc agcagcctgc agtcaggagt gccttcaagg 660

tttagcggca gcggatcggg aaccgacttc accctgacca tttcctccct ccaacccgag 720

gatttcgcca cctactactg ccagcagtcc tactccaccc cgtggacctt cggacaggga 780

accaagctgg agatcaagac cactacccca gcaccgaggc cacccacccc ggctcctacc 840

atcgcctccc agcctctgtc cctgcgtccg gaggcatgta gacccgcagc tggtggggcc 900

gtgcataccc ggggtcttga cttcgcctgc gatatctaca tttgggcccc tctggctggt 960

acttgcgggg tcctgctgct ttcactcgtg atcactcttt actgtaagcg cggtcggaag 1020

aagctgctgt acatctttaa gcaacccttc atgaggcctg tgcagactac tcaagaggag 1080

gacggctgtt catgccggtt cccagaggag gaggaaggcg gctgcgaact gcgcgtgaaa 1140

ttcagccgca gcgcagatgc tccagcctac aagcaggggc agaaccagct ctacaacgaa 1200

ctcaatcttg gtcggagaga ggagtacgac gtgctggaca agcggagagg acgggaccca 1260

gaaatgggcg ggaagccgcg cagaaagaat ccccaagagg gcctgtacaa cgagctccaa 1320

aaggataaga tggcagaagc ctatagcgag attggtatga aaggggaacg cagaagaggc 1380

aaaggccacg acggactgta ccagggactc agcaccgcca ccaaggacac ctatgacgct 1440

cttcacatgc aggccctgcc gcctcgg 1467

<210> 920
<211> 255
<212> PRT
<213> Artificial Sequence

<220>
<221> source

<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 920

```
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 Asp Pro Ser Ser Ser Gly Ser Tyr Tyr Met Glu Asp Ser Tyr
            100                 105                 110


Tyr Tyr Gly Met Asp Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser
        115                 120                 125


Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
    130                 135                 140


Asn Phe Met Leu Thr Gln Pro His Ser Val Ser Glu Ser Pro Gly Lys
145                 150                 155                 160


Thr Val Thr Ile Ser Cys Thr Gly Ser Ser Gly Ser Ile Ala Ser Asn
                165                 170                 175


Tyr Val Gln Trp Tyr Gln Gln Arg Pro Gly Ser Ala Pro Thr Thr Val
            180                 185                 190


Ile Tyr Glu Asp Asn Gln Arg Pro Ser Gly Val Pro Asp Arg Phe Ser
        195                 200                 205
```

Gly Ser Ile Asp Ser Ser Ser Asn Ser Ala Ser Leu Thr Ile Ser Gly
210 215 220

Leu Lys Thr Glu Asp Glu Ala Asp Tyr Tyr Cys Gln Ser Tyr Asp Ser
225 230 235 240

Ser Asn Gln Val Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu
245 250 255

<210> 921
<211> 765
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 921
gaagtgcaat tggtggaatc tggaggagga cttgtgaaac ctggtggaag cctgagactt 60

tcctgtgcgg cctcgggatt cactttctcc tcctactcca tgaactgggt cagacaggcc 120

cctgggaagg gactggaatg ggtgtcatcc atctcctcct catcgtcgta catctactac 180

gccgatagcg tgaaggggcg gttcaccatt tcccgggaca acgctaagaa cagcctctat 240

ctgcaaatga attccctccg cgccgaggac actgccgtgt actactgcgc gagggacccc 300

tcatcaagcg gcagctacta catggaggac tcgtattact acggaatgga cgtctggggc 360

cagggaacca ctgtgacggt gtcctccggt ggaggggct ccgggggcgg gggatctggc 420

ggaggaggct ccaacttcat gctgacccag ccgcactccg tgtccgaaag ccccggaaag 480

accgtgacaa tttcctgcac cgggtcctcc ggctcgatcg catcaaacta cgtgcagtgg 540

taccagcagc gcccgggcag cgcccccacc actgtcatct acgaggataa ccagcggccg 600

tcgggtgtcc cagaccggtt ttccggttcg atcgatagca gcagcaacag cgcctccctg 660

accatttccg gcctcaagac cgaggatgag gctgactact actgccagtc gtatgactcc 720

tcgaaccaag tggtgttcgg tggcggcacc aagctgactg tgctg 765

<210> 922
<211> 129

<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 922
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 Asp Pro Ser Ser Ser Gly Ser Tyr Tyr Met Glu Asp Ser Tyr
100 105 110

Tyr Tyr Gly Met Asp Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser
115 120 125

Ser

<210> 923
<211> 111
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 923
Asn Phe Met Leu Thr Gln Pro His Ser Val Ser Glu Ser Pro Gly Lys
1   5   10   15

Thr Val Thr Ile Ser Cys Thr Gly Ser Ser Gly Ser Ile Ala Ser Asn
            20   25   30

Tyr Val Gln Trp Tyr Gln Gln Arg Pro Gly Ser Ala Pro Thr Thr Val
        35   40   45

Ile Tyr Glu Asp Asn Gln Arg Pro Ser Gly Val Pro Asp Arg Phe Ser
    50   55   60

Gly Ser Ile Asp Ser Ser Ser Asn Ser Ala Ser Leu Thr Ile Ser Gly
65   70   75   80

Leu Lys Thr Glu Asp Glu Ala Asp Tyr Tyr Cys Gln Ser Tyr Asp Ser
                85   90   95

Ser Asn Gln Val Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu
            100   105   110

<210> 924
<211> 499
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 924
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1   5   10   15

His Ala Ala Arg Pro Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu
            20   25   30

Val Lys Pro Gly Gly Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe
        35   40   45

Thr Phe Ser Ser Tyr Ser Met Asn Trp Val Arg Gln Ala Pro Gly Lys

```
    50                  55                  60

Gly Leu Glu Trp Val Ser Ser Ile Ser Ser Ser Ser Ser Tyr Ile Tyr
65                  70                  75                  80

Tyr Ala Asp Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala
                85                  90                  95

Lys Asn Ser Leu Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr
            100                 105                 110

Ala Val Tyr Tyr Cys Ala Arg Asp Pro Ser Ser Ser Gly Ser Tyr Tyr
        115                 120                 125

Met Glu Asp Ser Tyr Tyr Tyr Gly Met Asp Val Trp Gly Gln Gly Thr
    130                 135                 140

Thr Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
145                 150                 155                 160

Gly Gly Gly Gly Ser Asn Phe Met Leu Thr Gln Pro His Ser Val Ser
                165                 170                 175

Glu Ser Pro Gly Lys Thr Val Thr Ile Ser Cys Thr Gly Ser Ser Gly
            180                 185                 190

Ser Ile Ala Ser Asn Tyr Val Gln Trp Tyr Gln Gln Arg Pro Gly Ser
        195                 200                 205

Ala Pro Thr Thr Val Ile Tyr Glu Asp Asn Gln Arg Pro Ser Gly Val
    210                 215                 220

Pro Asp Arg Phe Ser Gly Ser Ile Asp Ser Ser Ser Asn Ser Ala Ser
225                 230                 235                 240

Leu Thr Ile Ser Gly Leu Lys Thr Glu Asp Glu Ala Asp Tyr Tyr Cys
                245                 250                 255

Gln Ser Tyr Asp Ser Ser Asn Gln Val Val Phe Gly Gly Gly Thr Lys
            260                 265                 270
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```
Leu Thr Val Leu Thr Thr Thr Pro Ala Pro Arg Pro Pro Thr Pro Ala
        275                 280                 285

Pro Thr Ile Ala Ser Gln Pro Leu Ser Leu Arg Pro Glu Ala Cys Arg
    290                 295                 300

Pro Ala Ala Gly Gly Ala Val His Thr Arg Gly Leu Asp Phe Ala Cys
305                 310                 315                 320

Asp Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly Val Leu Leu
                325                 330                 335

Leu Ser Leu Val Ile Thr Leu Tyr Cys Lys Arg Gly Arg Lys Lys Leu
            340                 345                 350

Leu Tyr Ile Phe Lys Gln Pro Phe Met Arg Pro Val Gln Thr Thr Gln
        355                 360                 365

Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu Glu Glu Glu Gly Gly
    370                 375                 380

Cys Glu Leu Arg Val Lys Phe Ser Arg Ser Ala Asp Ala Pro Ala Tyr
385                 390                 395                 400

Lys Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn Leu Gly Arg Arg
                405                 410                 415

Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg Asp Pro Glu Met
            420                 425                 430

Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu Tyr Asn Glu
        435                 440                 445

Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile Gly Met Lys
    450                 455                 460

Gly Glu Arg Arg Arg Gly Lys Gly His Asp Gly Leu Tyr Gln Gly Leu
465                 470                 475                 480

Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu His Met Gln Ala Leu
```

485 490 495

Pro Pro Arg

<210> 925
<211> 1497
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 925
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

cccgaagtgc aattggtgga atctggagga ggacttgtga aacctggtgg aagcctgaga 120

ctttcctgtg cggcctcggg attcactttc tcctcctact ccatgaactg ggtcagacag 180

gcccctggga agggactgga atgggtgtca tccatctcct cctcatcgtc gtacatctac 240

tacgccgata gcgtgaaggg gcggttcacc atttcccggg acaacgctaa gaacagcctc 300

tatctgcaaa tgaattccct ccgcgccgag gacactgccg tgtactactg cgcgagggac 360

ccctcatcaa gcggcagcta ctacatggag gactcgtatt actacggaat ggacgtctgg 420

ggccagggaa ccactgtgac ggtgtcctcc ggtggagggg gctccggggg cgggggatct 480

ggcggaggag gctccaactt catgctgacc cagccgcact ccgtgtccga aagccccgga 540

aagaccgtga caatttcctg caccgggtcc tccggctcga tcgcatcaaa ctacgtgcag 600

tggtaccagc agcgcccggg cagcgccccc accactgtca tctacgagga taaccagcgg 660

ccgtcgggtg tcccagaccg gttttccggt tcgatcgata gcagcagcaa cagcgcctcc 720

ctgaccattt ccggcctcaa gaccgaggat gaggctgact actactgcca gtcgtatgac 780

tcctcgaacc aagtggtgtt cggtggcggc accaagctga ctgtgctgac cactacccca 840

gcaccgaggc cacccacccc ggctcctacc atcgcctccc agcctctgtc cctgcgtccg 900

gaggcatgta gacccgcagc tggtggggcc gtgcataccc ggggtcttga cttcgcctgc 960

gatatctaca tttgggcccc tctggctggt acttgcgggg tcctgctgct ttcactcgtg 1020

atcactcttt actgtaagcg cggtcggaag aagctgctgt acatctttaa gcaacccttc 1080

atgaggcctg tgcagactac tcaagaggag gacggctgtt catgccggtt cccagaggag 1140

gaggaaggcg gctgcgaact gcgcgtgaaa ttcagccgca gcgcagatgc tccagcctac 1200

aagcaggggc agaaccagct ctacaacgaa ctcaatcttg gtcggagaga ggagtacgac 1260

gtgctggaca agcggagagg acgggaccca gaaatgggcg ggaagccgcg cagaaagaat 1320

ccccaagagg gcctgtacaa cgagctccaa aaggataaga tggcagaagc ctatagcgag 1380

attggtatga aaggggaacg cagaagaggc aaaggccacg acggactgta ccagggactc 1440

agcaccgcca ccaaggacac ctatgacgct cttcacatgc aggccctgcc gcctcgg 1497

<210> 926
<211> 239
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 926
Gln Val Asn Leu Arg 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

Glu Met Asn Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45

Ser Tyr Ile Ser Ser Ser Gly Ser Thr 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 Ala Leu Gly Ser Ser Trp Glu Trp Gly Gln Gly Thr Thr
100 105 110

```
Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly
        115                 120                 125


Gly Gly Gly Ser Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser
    130                 135                 140


Ala Ser Val Gly Asp Arg Val Thr Ile Thr Cys Gln Ala Ser Gln Asp
145                 150                 155                 160


Ile Ser Asn Tyr Leu Asn Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro
                165                 170                 175


Lys Leu Leu Ile Tyr Asp Ala Ser Asn Leu Glu Thr Gly Val Pro Ser
            180                 185                 190


Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Phe Thr Ile Ser
        195                 200                 205


Ser Leu Gln Pro Glu Asp Ile Ala Thr Tyr Tyr Cys Gln Gln Tyr Asp
    210                 215                 220


Asn Leu Pro Leu Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys
225                 230                 235


<210> 927
<211> 717
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polynucleotide"

<400> 927
caagtgaacc tgagagaaag cggcggagga cttgtgcaac ctggaggaag cctgagactg       60

tcatgtgccg cgtccggctt caccttctcg tcctacgaga tgaactgggt ccgccaggca      120

ccgggcaaag gactggaatg ggtgtcctac atttcctcgt ccgggtccac catctattac      180

gccgactccg tgaagggacg gttcaccatc tcccgggaca acgccaagaa ctccctctac      240

ctccaaatga actcactgag ggcagaggac actgcggtct actactgcgc ccgcgaagct      300

ttgggtagct cctgggagtg gggccaggga accactgtga ccgtgtcctc gggtggaggg      360
```

ggctccggtg gcgggggttc agggggtggc ggaagcgata tccagatgac tcagtcacca 420

agctccctga gcgcctcagt gggagatcgg gtcacaatca cgtgccaggc gtcccaggac 480

atttctaact acctcaattg gtaccagcag aagccgggga aggcccccaa gcttctgatc 540

tacgatgcct ccaacctgga aaccggcgtg ccctcccgct tctcgggatc gggcagcggc 600

actgacttca cctttaccat ctcgtccctg caacctgagg acatcgccac ctattactgc 660

cagcagtacg ataacctccc gctgactttc ggaggcggaa ctaagctgga gattaag 717

<210> 928
<211> 117
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 928
Gln Val Asn Leu Arg 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

Glu Met Asn Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45

Ser Tyr Ile Ser Ser Ser Gly Ser Thr 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 Ala Leu Gly Ser Ser Trp Glu Trp Gly Gln Gly Thr Thr
100 105 110

Val Thr Val Ser Ser

115

<210> 929
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 929
Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
1 5 10 15

Asp Arg Val Thr Ile Thr Cys Gln Ala Ser Gln Asp Ile Ser Asn Tyr
20 25 30

Leu Asn Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
35 40 45

Tyr Asp Ala Ser Asn Leu Glu Thr Gly Val Pro Ser Arg Phe Ser Gly
50 55 60

Ser Gly Ser Gly Thr Asp Phe Thr Phe Thr Ile Ser Ser Leu Gln Pro
65 70 75 80

Glu Asp Ile Ala Thr Tyr Tyr Cys Gln Gln Tyr Asp Asn Leu Pro Leu
85 90 95

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

<210> 930
<211> 483
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 930
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu

```
1               5                   10                  15

His Ala Ala Arg Pro Gln Val Asn Leu Arg Glu Ser Gly Gly Gly Leu
            20                  25                  30

Val Gln Pro Gly Gly Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe
        35                  40                  45

Thr Phe Ser Ser Tyr Glu Met Asn Trp Val Arg Gln Ala Pro Gly Lys
    50                  55                  60

Gly Leu Glu Trp Val Ser Tyr Ile Ser Ser Ser Gly Ser Thr Ile Tyr
65                  70                  75                  80

Tyr Ala Asp Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala
                85                  90                  95

Lys Asn Ser Leu Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr
            100                 105                 110

Ala Val Tyr Tyr Cys Ala Arg Glu Ala Leu Gly Ser Ser Trp Glu Trp
        115                 120                 125

Gly Gln Gly Thr Thr Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly
    130                 135                 140

Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Gln Met Thr Gln Ser
145                 150                 155                 160

Pro Ser Ser Leu Ser Ala Ser Val Gly Asp Arg Val Thr Ile Thr Cys
                165                 170                 175

Gln Ala Ser Gln Asp Ile Ser Asn Tyr Leu Asn Trp Tyr Gln Gln Lys
            180                 185                 190

Pro Gly Lys Ala Pro Lys Leu Leu Ile Tyr Asp Ala Ser Asn Leu Glu
        195                 200                 205

Thr Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe
    210                 215                 220
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Thr Phe Thr Ile Ser Ser Leu Gln Pro Glu Asp Ile Ala Thr Tyr Tyr
225                 230                 235                 240


Cys Gln Gln Tyr Asp Asn Leu Pro Leu Thr Phe Gly Gly Gly Thr Lys
                245                 250                 255


Leu Glu Ile Lys Thr Thr Thr Pro Ala Pro Arg Pro Pro Thr Pro Ala
            260                 265                 270


Pro Thr Ile Ala Ser Gln Pro Leu Ser Leu Arg Pro Glu Ala Cys Arg
        275                 280                 285


Pro Ala Ala Gly Gly Ala Val His Thr Arg Gly Leu Asp Phe Ala Cys
    290                 295                 300


Asp Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly Val Leu Leu
305                 310                 315                 320


Leu Ser Leu Val Ile Thr Leu Tyr Cys Lys Arg Gly Arg Lys Lys Leu
                325                 330                 335


Leu Tyr Ile Phe Lys Gln Pro Phe Met Arg Pro Val Gln Thr Thr Gln
            340                 345                 350


Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu Glu Glu Glu Gly Gly
        355                 360                 365


Cys Glu Leu Arg Val Lys Phe Ser Arg Ser Ala Asp Ala Pro Ala Tyr
    370                 375                 380


Lys Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn Leu Gly Arg Arg
385                 390                 395                 400


Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg Asp Pro Glu Met
                405                 410                 415


Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu Tyr Asn Glu
            420                 425                 430


Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile Gly Met Lys
```

435 440 445

Gly Glu Arg Arg Arg Gly Lys Gly His Asp Gly Leu Tyr Gln Gly Leu
450 455 460

Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu His Met Gln Ala Leu
465 470 475 480

Pro Pro Arg

<210> 931
<211> 1449
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 931
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

ccccaagtga acctgagaga aagcggcgga ggacttgtgc aacctggagg aagcctgaga 120

ctgtcatgtg ccgcgtccgg cttcaccttc tcgtcctacg agatgaactg ggtccgccag 180

gcaccgggca aaggactgga atgggtgtcc tacatttcct cgtccgggtc caccatctat 240

tacgccgact ccgtgaaggg acggttcacc atctcccggg acaacgccaa gaactccctc 300

tacctccaaa tgaactcact gagggcagag gacactgcgg tctactactg cgcccgcgaa 360

gctttgggta gctcctggga gtggggccag ggaaccactg tgaccgtgtc ctcgggtgga 420

gggggctccg gtggcggggg ttcagggggt ggcggaagcg atatccagat gactcagtca 480

ccaagctccc tgagcgcctc agtgggagat cgggtcacaa tcacgtgcca ggcgtcccag 540

gacatttcta actacctcaa ttggtaccag cagaagccgg ggaaggcccc caagcttctg 600

atctacgatg cctccaacct ggaaaccggc gtgccctccc gcttctcggg atcgggcagc 660

ggcactgact tcacctttac catctcgtcc ctgcaacctg aggacatcgc cacctattac 720

tgccagcagt acgataacct cccgctgact ttcggaggcg gaactaagct ggagattaag 780

accactaccc cagcaccgag gccacccacc ccggctccta ccatcgcctc ccagcctctg 840

tccctgcgtc cggaggcatg tagacccgca gctggtgggg ccgtgcatac ccggggtctt 900

gacttcgcct gcgatatcta catttgggcc cctctggctg gtacttgcgg ggtcctgctg 960

ctttcactcg tgatcactct ttactgtaag cgcggtcgga agaagctgct gtacatcttt 1020

aagcaaccct tcatgaggcc tgtgcagact actcaagagg aggacggctg ttcatgccgg 1080

ttcccagagg aggaggaagg cggctgcgaa ctgcgcgtga aattcagccg cagcgcagat 1140

gctccagcct acaagcaggg gcagaaccag ctctacaacg aactcaatct tggtcggaga 1200

gaggagtacg acgtgctgga caagcggaga ggacgggacc cagaaatggg cgggaagccg 1260

cgcagaaaga atccccaaga gggcctgtac aacgagctcc aaaaggataa gatggcagaa 1320

gcctatagcg agattggtat gaaaggggaa cgcagaagag gcaaaggcca cgacggactg 1380

taccagggac tcagcaccgc caccaaggac acctatgacg ctcttcacat gcaggccctg 1440

ccgcctcgg 1449

<210> 932
<211> 247
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 932
Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Ser Gly Ala
1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Pro Phe Thr Gly Tyr
20 25 30

Tyr Ile Gln Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45

Gly Trp Ile Asp Pro Asn Ser Gly Asn Thr Gly Tyr Ala Gln Lys Phe
50 55 60

Gln Gly Arg Val Thr Met Thr Arg Asn Thr Ser Ile Ser Thr Ala Tyr
65 70 75 80

```
Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
                85                  90                  95

Ala Ser Asp Ser Tyr Gly Tyr Tyr Tyr Gly Met Asp Val Trp Gly Gln
            100                 105                 110

Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly
        115                 120                 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Gln Met
    130                 135                 140

Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly Asp Arg Val Thr
145                 150                 155                 160

Phe Thr Cys Arg Ala Ser Gln Gly Ile Ser Ser Ala Leu Ala Trp Tyr
                165                 170                 175

Gln Gln Lys Pro Gly Lys Pro Pro Lys Leu Leu Ile Tyr Asp Ala Ser
            180                 185                 190

Ser Leu Glu Ser Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly
        195                 200                 205

Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro Glu Asp Phe Ala
    210                 215                 220

Thr Tyr Tyr Cys Gln Gln Phe Asn Asn Tyr Pro Leu Thr Phe Gly Gly
225                 230                 235                 240

Gly Thr Lys Val Glu Ile Lys
                245
```

<210> 933
<211> 741
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 933
caagtgcaac tcgtccagtc cggtgcagaa gtgaaaaaga gcggagcctc agtgaaagtg 60

tcctgcaagg cctccggtta ccccttcact ggatactaca ttcagtgggt ccgccaagcc 120

ccgggacagg gtctggagtg gatggggtgg attgacccta actcgggaaa tacgggatac 180

gcgcagaagt tccagggccg cgtgaccatg accaggaaca cctcgatcag caccgcctac 240

atggaactgt cctccctgcg gtcggaggat actgccgtgt actactgcgc ctccgattcc 300

tatgggtact actacggaat ggacgtctgg ggacagggca ccctcgtgac cgtgtcctcg 360

ggaggcggag ggagcggcgg gggtggatcg ggaggaggcg gctccggcgg cggcggtagc 420

gacatccaga tgacccagtc accatcaagc cttagcgcct ccgtgggcga cagagtgaca 480

ttcacttgtc gggcgtccca gggaatctcc tccgctctgg cttggtatca gcagaagcct 540

gggaagcctc cgaagctgtt gatctacgac gcgagcagcc tggaatcagg ggtgccctcc 600

cggttttccg ggtccggttc tggcaccgat ttcaccctga ccatttcgtc cctccaaccc 660

gaggacttcg ccacttacta ctgccagcag ttcaacaact acccgctgac cttcggagga 720

ggcactaagg tcgagatcaa g 741

<210> 934
<211> 120
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 934
Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Ser Gly Ala
1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Pro Phe Thr Gly Tyr
20 25 30

Tyr Ile Gln Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45

Gly Trp Ile Asp Pro Asn Ser Gly Asn Thr Gly Tyr Ala Gln Lys Phe
50 55 60

```
Gln Gly Arg Val Thr Met Thr Arg Asn Thr Ser Ile Ser Thr Ala Tyr
65                  70                  75                  80


Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
                85                  90                  95


Ala Ser Asp Ser Tyr Gly Tyr Tyr Tyr Gly Met Asp Val Trp Gly Gln
            100                 105                 110


Gly Thr Leu Val Thr Val Ser Ser
        115                 120


<210> 935
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 935
Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
1               5                   10                  15


Asp Arg Val Thr Phe Thr Cys Arg Ala Ser Gln Gly Ile Ser Ser Ala
            20                  25                  30


Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Pro Pro Lys Leu Leu Ile
        35                  40                  45


Tyr Asp Ala Ser Ser Leu Glu Ser Gly Val Pro Ser Arg Phe Ser Gly
    50                  55                  60


Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
65                  70                  75                  80


Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Phe Asn Asn Tyr Pro Leu
                85                  90                  95


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

<210> 936
<211> 491
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 936
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val
20 25 30

Lys Lys Ser Gly Ala Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr
35 40 45

Pro Phe Thr Gly Tyr Tyr Ile Gln Trp Val Arg Gln Ala Pro Gly Gln
50 55 60

Gly Leu Glu Trp Met Gly Trp Ile Asp Pro Asn Ser Gly Asn Thr Gly
65 70 75 80

Tyr Ala Gln Lys Phe Gln Gly Arg Val Thr Met Thr Arg Asn Thr Ser
85 90 95

Ile Ser Thr Ala Tyr Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr
100 105 110

Ala Val Tyr Tyr Cys Ala Ser Asp Ser Tyr Gly Tyr Tyr Tyr Gly Met
115 120 125

Asp Val Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly
130 135 140

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly
145 150 155 160

Ser Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val

```
                165                 170                 175

Gly Asp Arg Val Thr Phe Thr Cys Arg Ala Ser Gln Gly Ile Ser Ser
            180                 185                 190

Ala Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Pro Pro Lys Leu Leu
        195                 200                 205

Ile Tyr Asp Ala Ser Ser Leu Glu Ser Gly Val Pro Ser Arg Phe Ser
    210                 215                 220

Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln
225                 230                 235                 240

Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Phe Asn Asn Tyr Pro
                245                 250                 255

Leu Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Thr Thr Thr Pro
            260                 265                 270

Ala Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu
        275                 280                 285

Ser Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His
    290                 295                 300

Thr Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu
305                 310                 315                 320

Ala Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr
                325                 330                 335

Cys Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe
            340                 345                 350

Met Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg
        355                 360                 365

Phe Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser
    370                 375                 380
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Arg Ser Ala Asp Ala Pro Ala Tyr Lys Gln Gly Gln Asn Gln Leu Tyr
385                 390                 395                 400


Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys
                405                 410                 415


Arg Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn
            420                 425                 430


Pro Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu
        435                 440                 445


Ala Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly
    450                 455                 460


His Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr
465                 470                 475                 480


Asp Ala Leu His Met Gln Ala Leu Pro Pro Arg
                485                 490


<210> 937
<211> 1473
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polynucleotide"

<400> 937
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg       60

ccccaagtgc aactcgtcca gtccggtgca gaagtgaaaa agagcggagc ctcagtgaaa      120

gtgtcctgca aggcctccgg ttacccccttc actggatact acattcagtg ggtccgccaa      180

gccccgggac agggtctgga gtggatgggg tggattgacc ctaactcggg aaatacggga      240

tacgcgcaga agttccaggg ccgcgtgacc atgaccagga acacctcgat cagcaccgcc      300

tacatggaac tgtcctccct gcggtcggag gatactgccg tgtactactg cgcctccgat      360

tcctatgggt actactacgg aatggacgtc tggggacagg gcaccctcgt gaccgtgtcc      420
```

tcgggaggcg gagggagcgg cgggggtgga tcgggaggag gcggctccgg cggcggcggt 480

agcgacatcc agatgaccca gtcaccatca agccttagcg cctccgtggg cgacagagtg 540

acattcactt gtcgggcgtc ccagggaatc tcctccgctc tggcttggta tcagcagaag 600

cctgggaagc ctccgaagct gttgatctac gacgcgagca gcctggaatc aggggtgccc 660

tcccggtttt ccgggtccgg ttctggcacc gatttcaccc tgaccatttc gtccctccaa 720

cccgaggact tcgccactta ctactgccag cagttcaaca actacccgct gaccttcgga 780

ggaggcacta aggtcgagat caagaccact accccagcac cgaggccacc caccccggct 840

cctaccatcg cctcccagcc tctgtccctg cgtccggagg catgtagacc cgcagctggt 900

ggggccgtgc atacccgggg tcttgacttc gcctgcgata tctacatttg ggcccctctg 960

gctggtactt gcggggtcct gctgctttca ctcgtgatca ctctttactg taagcgcggt 1020

cggaagaagc tgctgtacat ctttaagcaa cccttcatga ggcctgtgca gactactcaa 1080

gaggaggacg gctgttcatg ccggttccca gaggaggagg aaggcggctg cgaactgcgc 1140

gtgaaattca gccgcagcgc agatgctcca gcctacaagc aggggcagaa ccagctctac 1200

aacgaactca atcttggtcg gagagaggag tacgacgtgc tggacaagcg gagaggacgg 1260

gacccagaaa tgggcgggaa gccgcgcaga aagaatcccc aagagggcct gtacaacgag 1320

ctccaaaagg ataagatggc agaagcctat agcgagattg gtatgaaagg ggaacgcaga 1380

agaggcaaag gccacgacgg actgtaccag ggactcagca ccgccaccaa ggacacctat 1440

gacgctcttc acatgcaggc cctgccgcct cgg 1473

<210> 938
<211> 122
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 938
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr
20 25 30

Glu Met Asn Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35   40   45

Ser Tyr Ile Ser Ser Ser Gly Ser Thr 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 Pro Tyr Ser Ser Ser Trp His Asp Ala Phe Asp Ile Trp
            100   105   110

Gly Gln Gly Thr Met Val Thr Val Ser Ser
        115   120

<210> 939
<211> 108
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 939
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 Ser Ser
            20   25   30

Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu
        35   40   45

Ile Tyr Gly Ala Ser Ser Arg Ala Thr Gly Ile Pro Asp Arg Phe Ser
    50   55   60

Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu

65 70 75 80

Pro Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Gly Ser Ser Pro
85 90 95

Leu Thr Phe Gly Gly Gly Thr Lys Val Asp Ile Lys
100 105

<210> 940
<211> 489
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 940
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu
20 25 30

Val Gln Pro Gly Gly Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe
35 40 45

Thr Phe Ser Ser Tyr Glu Met Asn Trp Val Arg Gln Ala Pro Gly Lys
50 55 60

Gly Leu Glu Trp Val Ser Tyr Ile Ser Ser Ser Gly Ser Thr Ile Tyr
65 70 75 80

Tyr Ala Asp Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala
85 90 95

Lys Asn Ser Leu Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr
100 105 110

Ala Val Tyr Tyr Cys Ala Arg Asp Pro Tyr Ser Ser Ser Trp His Asp
115 120 125

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Ala Phe Asp Ile Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly
    130                 135                 140

Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Ile
145                 150                 155                 160

Val Leu Thr Gln Ser Pro Gly Thr Leu Ser Leu Ser Pro Gly Glu Arg
                165                 170                 175

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Ser Ser Tyr Leu
            180                 185                 190

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile Tyr
        195                 200                 205

Gly Ala Ser Ser Arg Ala Thr Gly Ile Pro Asp Arg Phe Ser Gly Ser
    210                 215                 220

Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu
225                 230                 235                 240

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Gly Ser Ser Pro Leu Thr
                245                 250                 255

Phe Gly Gly Gly Thr Lys Val Asp Ile Lys Thr Thr Thr Pro Ala Pro
            260                 265                 270

Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser Leu
        275                 280                 285

Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr Arg
    290                 295                 300

Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala Gly
305                 310                 315                 320

Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr Cys Lys
                325                 330                 335

Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met Arg
            340                 345                 350
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Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro
        355                 360                 365

Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg Ser
    370                 375                 380

Ala Asp Ala Pro Ala Tyr Lys Gln Gly Gln Asn Gln Leu Tyr Asn Glu
385                 390                 395                 400

Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg
                405                 410                 415

Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln
            420                 425                 430

Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr
        435                 440                 445

Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His Asp
    450                 455                 460

Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala
465                 470                 475                 480

Leu His Met Gln Ala Leu Pro Pro Arg
                485
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<210> 941
<211> 1467
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 941
atggccctcc ctgtcaccgc cctgctgctt ccgctggctc ttctgctcca cgccgctcgg 60

cccgaagtgc aactcgtgga aagcggtgga ggtcttgtgc aacctggagg ttccttgcgc 120

ctgtcatgtg cagcttccgg cttcactttc tcctcgtacg agatgaattg ggtgcggcag 180

gcgcctggaa aggggctgga atgggtgtcc tacatctcaa gctccggctc gaccatctac 240

tacgcggaca gcgtgaaggg gcggttcacg atttcgaggg acaacgccaa gaactcgctc 300

tatctgcaaa tgaactccct gagagccgag gacaccgctg tgtattactg cgcccgggac 360

ccctactcct cctcatggca cgacgccttt gatatctggg gccagggaac catggtcacc 420

gtcagcagcg ggggcggagg ttccgggggа gggggctccg gcggaggagg ctccgagatt 480

gtgttgactc agagcccggg taccctgtcg ctgagccccg gagagcgggc cacccttтca 540

tgccgcgcca gccagtccgt gtcctcatcc tacctcgcgt ggtaccagca gaaacctggc 600

caggccccgc ggctgctgat ctacggcgcc tcctcgcgcg caaccggaat ccccgaccgg 660

ttctccgggt ctggcagcgg aaccgacttc actctcacca tttcgaggct ggagccggaa 720

gatttcgccg tgtactactg ccagcagtac ggctcctcgc cactgacttt cggcggagga 780

accaaggtcg atatcaagac cactacccca gcaccgaggc cacccacccc ggctcctacc 840

atcgcctccc agcctctgtc cctgcgtccg gaggcatgta gacccgcagc tggtggggcc 900

gtgcataccc ggggtcttga cttcgcctgc gatatctaca tttgggcccc tctggctggt 960

acttgcgggg tcctgctgct ttcactcgtg atcactcttt actgtaagcg cggtcggaag 1020

aagctgctgt acatctttaa gcaacccttc atgaggcctg tgcagactac tcaagaggag 1080

gacggctgtt catgccggtt cccagaggag gaggaaggcg gctgcgaact gcgcgtgaaa 1140

ttcagccgca gcgcagatgc tccagcctac aagcaggggc agaaccagct ctacaacgaa 1200

ctcaatcttg gtcggagaga ggagtacgac gtgctggaca agcggagagg acgggaccca 1260

gaaatgggcg ggaagccgcg cagaaagaat ccccaagagg gcctgtacaa cgagctccaa 1320

aaggataaga tggcagaagc ctatagcgag attggtatga aaggggaacg cagaagaggc 1380

aaaggccacg acggactgta ccagggactc agcaccgcca ccaaggacac ctatgacgct 1440

cttcacatgc aggccctgcc gcctcgg 1467

<210> 942
<211> 354
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic

polynucleotide"

<400> 942
gagcagctga aggagtccgg gggaggtctc ttcaagccaa cggataccct gacactcacc 60

tgcacagtct ctggattctc cctcagttac tatggagtga actgggtccg ccaggctcca 120

gggaacgggc tggaatggat cggaaccatt ggtggtagtg gtgacacata ctacgcgagc 180

tgggcgaaga gccgatccac catcatcaga aacaccaacg agaacacggt gactctgaaa 240

atgaccagtc tgacagccgc ggacacggcc acctatttct gtgtgagata tgctaatatt 300

ggttatgagt actttaacgt ctggggtcca ggcaccctgg tcaccgtctc ttca 354

<210> 943
<211> 118
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 943
Glu Gln Leu Lys Glu Ser Gly Gly Gly Leu Phe Lys Pro Thr Asp Thr
1 5 10 15

Leu Thr Leu Thr Cys Thr Val Ser Gly Phe Ser Leu Ser Tyr Tyr Gly
20 25 30

Val Asn Trp Val Arg Gln Ala Pro Gly Asn Gly Leu Glu Trp Ile Gly
35 40 45

Thr Ile Gly Gly Ser Gly Asp Thr Tyr Tyr Ala Ser Trp Ala Lys Ser
50 55 60

Arg Ser Thr Ile Ile Arg Asn Thr Asn Glu Asn Thr Val Thr Leu Lys
65 70 75 80

Met Thr Ser Leu Thr Ala Ala Asp Thr Ala Thr Tyr Phe Cys Val Arg
85 90 95

Tyr Ala Asn Ile Gly Tyr Glu Tyr Phe Asn Val Trp Gly Pro Gly Thr
100 105 110

Leu Val Thr Val Ser Ser
        115

<210> 944
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      oligonucleotide"

<400> 944
ggattctccc tcagttacta tgga   24

<210> 945
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      peptide"

<400> 945
Gly Phe Ser Leu Ser Tyr Tyr Gly
1   5

<210> 946
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      oligonucleotide"

<400> 946
attggtggta gtggtgacac a   21

<210> 947
<211> 7
<212> PRT
<213> Artificial Sequence

<220>

<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 947
Ile Gly Gly Ser Gly Asp Thr
1 5

<210> 948
<211> 39
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
oligonucleotide"

<400> 948
gtgagatatg ctaatattgg ttatgagtac tttaacgtc 39

<210> 949
<211> 13
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 949
Val Arg Tyr Ala Asn Ile Gly Tyr Glu Tyr Phe Asn Val
1 5 10

<210> 950
<211> 333
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 950
cagtttgtgc tgactcagtc gccctctgca tctgctgccc tgggagcctc ggccaagctc 60

acctgcaccc tgagcagtgc ccacaagacc tacaccattg actggtatca gcagcagaaa 120

gggaaggccc ctcgctacct gatacaagtt aagagtgatg gaacctacac caaggcgacc 180

ggggtccctg atcgcttctc gggctccagc tctggggctg accgctacct gatcatcccc 240

agcgtccagg ctgatgacga agccgactac tattgtggta cagattatac cggtgggtat 300

gtgttcggcg gggggaccca gctgaccgtc aca 333

<210> 951
<211> 111
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 951
Gln Phe Val Leu Thr Gln Ser Pro Ser Ala Ser Ala Ala Leu Gly Ala
1 5 10 15

Ser Ala Lys Leu Thr Cys Thr Leu Ser Ser Ala His Lys Thr Tyr Thr
20 25 30

Ile Asp Trp Tyr Gln Gln Gln Lys Gly Lys Ala Pro Arg Tyr Leu Ile
35 40 45

Gln Val Lys Ser Asp Gly Thr Tyr Thr Lys Ala Thr Gly Val Pro Asp
50 55 60

Arg Phe Ser Gly Ser Ser Ser Gly Ala Asp Arg Tyr Leu Ile Ile Pro
65 70 75 80

Ser Val Gln Ala Asp Asp Glu Ala Asp Tyr Tyr Cys Gly Thr Asp Tyr
85 90 95

Thr Gly Gly Tyr Val Phe Gly Gly Gly Thr Gln Leu Thr Val Thr
100 105 110

<210> 952
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<221> source

<223> /note="Description of Artificial Sequence: Synthetic
oligonucleotide"

<400> 952
agtgcccaca agacctacac c 21

<210> 953
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 953
Ser Ala His Lys Thr Tyr Thr
1 5

<210> 954
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
oligonucleotide"

<400> 954
gttaagagtg atggaaccta c 21

<210> 955
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 955
Val Lys Ser Asp Gly Thr Tyr
1 5

<210> 956
<211> 27
<212> DNA

<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
oligonucleotide"

<400> 956
ggtacagatt ataccggtgg gtatgtg 27

<210> 957
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 957
Gly Thr Asp Tyr Thr Gly Gly Tyr Val
1 5

<210> 958
<211> 744
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 958
ggatccgagc agctgaagga gtccggggga ggtctcttca agccaacgga taccctgaca 60

ctcacctgca cagtctctgg attctccctc agttactatg gagtgaactg ggtccgccag 120

gctccaggga acgggctgga atggatcgga accattggtg gtagtggtga cacatactac 180

gcgagctggg cgaagagccg atccaccatc atcagaaaca ccaacgagaa cacggtgact 240

ctgaaaatga ccagtctgac agccgcggac acggccacct atttctgtgt gagatatgct 300

aatattggtt atgagtactt taacgtctgg ggtccaggca ccctggtcac cgtctcttca 360

ggtggaggcg gttcaggcgg cggtggctct agcggtggtg gatcgcagtt tgtgctgact 420

cagtcgccct ctgcatctgc tgccctggga gcctcggcca agctcacctg caccctgagc 480

agtgcccaca gacctacac cattgactgg tatcagcagc agaaagggaa ggcccctcgc 540

tacctgatac aagttaagag tgatggaacc tacaccaagg cgaccggggt ccctgatcgc 600

ttctcgggct ccagctctgg ggctgaccgc tacctgatca tccccagcgt ccaggctgat 660

gacgaagccg actactattg tggtacagat ataccggtg ggtatgtgtt cggcgggggg 720

acccagctga ccgtcacagc tagc 744

<210> 959
<211> 744
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 959
ggatccgagc agctgaagga gtccggcgga ggcctgttta agcccaccga caccctgaca 60

ctgacctgca cagtgtccgg cttcagcctg agctactatg gcgtgaactg ggtgagacag 120

gcccctggca acggactgga gtggatcggc accattggcg gcagcggaga cacctactac 180

gccagctggg ccaagtccag gagcaccatc atcagaaaca ccaacgagaa caccgtgacc 240

ctgaagatga cctccctgac agccgccgac accgccacct acttctgcgt gaggtacgcc 300

aacatcggct acgagtactt caacgtgtgg ggccctggca ccctggtgac agtgtccagc 360

ggcggaggag gaagcggcgg cggcggctcc agcggaggcg gcagccagtt tgtgctgacc 420

cagagcccta gcgcttccgc cgccctgggc gccagcgcca agctcacctg taccctgagc 480

agcgcccaca agacctatac catcgactgg taccagcagc agaagggcaa ggcccccagg 540

tacctgatcc aggtgaagtc cgacggcacc tacaccaaag ccaccggcgt gcccgacaga 600

tttagcggca gcagctccgg cgccgacagg tatctgatca tcccttccgt gcaggccgac 660

gacgaggccg actactactg cggaaccgac tacaccggcg gatacgtgtt cggaggcggc 720

acccagctga ccgtgaccgc tagc 744

<210> 960
<211> 248
<212> PRT
<213> Artificial Sequence

<220>

<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 960
Gly Ser Glu Gln Leu Lys Glu Ser Gly Gly Gly Leu Phe Lys Pro Thr
1 5 10 15

Asp Thr Leu Thr Leu Thr Cys Thr Val Ser Gly Phe Ser Leu Ser Tyr
20 25 30

Tyr Gly Val Asn Trp Val Arg Gln Ala Pro Gly Asn Gly Leu Glu Trp
35 40 45

Ile Gly Thr Ile Gly Gly Ser Gly Asp Thr Tyr Tyr Ala Ser Trp Ala
50 55 60

Lys Ser Arg Ser Thr Ile Ile Arg Asn Thr Asn Glu Asn Thr Val Thr
65 70 75 80

Leu Lys Met Thr Ser Leu Thr Ala Ala Asp Thr Ala Thr Tyr Phe Cys
85 90 95

Val Arg Tyr Ala Asn Ile Gly Tyr Glu Tyr Phe Asn Val Trp Gly Pro
100 105 110

Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly
115 120 125

Gly Ser Ser Gly Gly Gly Ser Gln Phe Val Leu Thr Gln Ser Pro Ser
130 135 140

Ala Ser Ala Ala Leu Gly Ala Ser Ala Lys Leu Thr Cys Thr Leu Ser
145 150 155 160

Ser Ala His Lys Thr Tyr Thr Ile Asp Trp Tyr Gln Gln Gln Lys Gly
165 170 175

Lys Ala Pro Arg Tyr Leu Ile Gln Val Lys Ser Asp Gly Thr Tyr Thr
180 185 190

Lys Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser Ser Ser Gly Ala

195 200 205

Asp Arg Tyr Leu Ile Ile Pro Ser Val Gln Ala Asp Asp Glu Ala Asp
210 215 220

Tyr Tyr Cys Gly Thr Asp Tyr Thr Gly Gly Tyr Val Phe Gly Gly Gly
225 230 235 240

Thr Gln Leu Thr Val Thr Ala Ser
245

<210> 961
<211> 244
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 961
Glu Gln Leu Lys Glu Ser Gly Gly Gly Leu Phe Lys Pro Thr Asp Thr
1 5 10 15

Leu Thr Leu Thr Cys Thr Val Ser Gly Phe Ser Leu Ser Tyr Tyr Gly
20 25 30

Val Asn Trp Val Arg Gln Ala Pro Gly Asn Gly Leu Glu Trp Ile Gly
35 40 45

Thr Ile Gly Gly Ser Gly Asp Thr Tyr Tyr Ala Ser Trp Ala Lys Ser
50 55 60

Arg Ser Thr Ile Ile Arg Asn Thr Asn Glu Asn Thr Val Thr Leu Lys
65 70 75 80

Met Thr Ser Leu Thr Ala Ala Asp Thr Ala Thr Tyr Phe Cys Val Arg
85 90 95

Tyr Ala Asn Ile Gly Tyr Glu Tyr Phe Asn Val Trp Gly Pro Gly Thr
100 105 110

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Leu Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
        115                 120                 125


Ser Gly Gly Gly Ser Gln Phe Val Leu Thr Gln Ser Pro Ser Ala Ser
    130                 135                 140


Ala Ala Leu Gly Ala Ser Ala Lys Leu Thr Cys Thr Leu Ser Ser Ala
145                 150                 155                 160


His Lys Thr Tyr Thr Ile Asp Trp Tyr Gln Gln Gln Lys Gly Lys Ala
                165                 170                 175


Pro Arg Tyr Leu Ile Gln Val Lys Ser Asp Gly Thr Tyr Thr Lys Ala
            180                 185                 190


Thr Gly Val Pro Asp Arg Phe Ser Gly Ser Ser Ser Gly Ala Asp Arg
        195                 200                 205


Tyr Leu Ile Ile Pro Ser Val Gln Ala Asp Asp Glu Ala Asp Tyr Tyr
    210                 215                 220


Cys Gly Thr Asp Tyr Thr Gly Gly Tyr Val Phe Gly Gly Gly Thr Gln
225                 230                 235                 240


Leu Thr Val Thr
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<210> 962
<211> 369
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 962
cagtcagtga aggagtccga gggaggtctc ttcaagccaa cggataccct gacactcacc 60

tgcacggtct ctggattctc cctcagtaga catgcactga cctgggtccg ccaggctcca 120

gggaacgggc tggaatggat cggagccatt gataacgctg gtaccacata ctacgcgagc 180

tgggcgaaaa gccgctccac catcaccaga aacaccgacc tgcacacggt gactctgaaa 240

atgaccagtc tgacagcctc ggacacggct acctatttct gtgcgagagt cttttatgat 300

attaatagtg gttattatct ggacggcatg gacctctggg gcccagggac cctcgtcacc 360

gtctcttca 369

<210> 963
<211> 123
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 963
Gln Ser Val Lys Glu Ser Glu Gly Gly Leu Phe Lys Pro Thr Asp Thr
1 5 10 15

Leu Thr Leu Thr Cys Thr Val Ser Gly Phe Ser Leu Ser Arg His Ala
20 25 30

Leu Thr Trp Val Arg Gln Ala Pro Gly Asn Gly Leu Glu Trp Ile Gly
35 40 45

Ala Ile Asp Asn Ala Gly Thr Thr Tyr Tyr Ala Ser Trp Ala Lys Ser
50 55 60

Arg Ser Thr Ile Thr Arg Asn Thr Asp Leu His Thr Val Thr Leu Lys
65 70 75 80

Met Thr Ser Leu Thr Ala Ser Asp Thr Ala Thr Tyr Phe Cys Ala Arg
85 90 95

Val Phe Tyr Asp Ile Asn Ser Gly Tyr Tyr Leu Asp Gly Met Asp Leu
100 105 110

Trp Gly Pro Gly Thr Leu Val Thr Val Ser Ser
115 120

<210> 964
<211> 24
<212> DNA

<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
oligonucleotide"

<400> 964
ggattctccc tcagtagaca tgca 24

<210> 965
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 965
Gly Phe Ser Leu Ser Arg His Ala
1 5

<210> 966
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
oligonucleotide"

<400> 966
attgataacg ctggtaccac a 21

<210> 967
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 967
Ile Asp Asn Ala Gly Thr Thr
1 5

<210> 968
<211> 54
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
oligonucleotide"

<400> 968
gcgagagtct tttatgatat taatagtggt tattatctgg acggcatgga cctc 54

<210> 969
<211> 18
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 969
Ala Arg Val Phe Tyr Asp Ile Asn Ser Gly Tyr Tyr Leu Asp Gly Met
1 5 10 15

Asp Leu

<210> 970
<211> 333
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 970
cagtttgtgc tgactcagtc gccctctgtg tctgccgccc tgggagcctc tgccaagctc 60

acctgcaccc tgagcagtgc ccacaagacc tacaccattg actggtatca gcagcagcaa 120

ggggaggccc ctcggtacct gatgcaagtt aagagtgatg gaagctacac caaggggacc 180

ggggtccctg atcgcttctc gggctccagc tctggggctg accgctactt gatcatcccc 240

agcgtccagg ctgatgacga agccggctac gtttgtggtg cagatgataa cggtgggtat 300

gtgttcggcg gagggaccca gctgaccgtc aca 333

<210> 971
<211> 111
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 971
Gln Phe Val Leu Thr Gln Ser Pro Ser Val Ser Ala Ala Leu Gly Ala
1 5 10 15

Ser Ala Lys Leu Thr Cys Thr Leu Ser Ser Ala His Lys Thr Tyr Thr
20 25 30

Ile Asp Trp Tyr Gln Gln Gln Gln Gly Glu Ala Pro Arg Tyr Leu Met
35 40 45

Gln Val Lys Ser Asp Gly Ser Tyr Thr Lys Gly Thr Gly Val Pro Asp
50 55 60

Arg Phe Ser Gly Ser Ser Ser Gly Ala Asp Arg Tyr Leu Ile Ile Pro
65 70 75 80

Ser Val Gln Ala Asp Asp Glu Ala Gly Tyr Val Cys Gly Ala Asp Asp
85 90 95

Asn Gly Gly Tyr Val Phe Gly Gly Gly Thr Gln Leu Thr Val Thr
100 105 110

<210> 972
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic oligonucleotide"

<400> 972

agtgcccaca agacctacac c 21

<210> 973
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 973
Ser Ala His Lys Thr Tyr Thr
1 5

<210> 974
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic oligonucleotide"

<400> 974
gttaagagtg atggaagcta c 21

<210> 975
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 975
Val Lys Ser Asp Gly Ser Tyr
1 5

<210> 976
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<221> source

<223> /note="Description of Artificial Sequence: Synthetic
oligonucleotide"

<400> 976
ggtgcagatg ataacggtgg gtatgtg 27

<210> 977
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 977
Gly Ala Asp Asp Asn Gly Gly Tyr Val
1 5

<210> 978
<211> 759
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 978
ggatcccagt cagtgaagga gtccgaggga ggtctcttca agccaacgga taccctgaca 60

ctcacctgca cggtctctgg attctccctc agtagacatg cactgacctg ggtccgccag 120

gctccaggga acgggctgga atggatcgga gccattgata acgctggtac cacatactac 180

gcgagctggg cgaaaagccg ctccaccatc accagaaaca ccgacctgca cacggtgact 240

ctgaaaatga ccagtctgac agcctcggac acggctacct atttctgtgc gagagtcttt 300

tatgatatta atagtggtta ttatctggac ggcatggacc tctggggccc agggaccctc 360

gtcaccgtct cttcaggtgg aggcggttca ggcggcggtg gctctagcgg tggtggatcg 420

cagtttgtgc tgactcagtc gccctctgtg tctgccgccc tgggagcctc tgccaagctc 480

acctgcaccc tgagcagtgc ccacaagacc tacaccattg actggtatca gcagcagcaa 540

ggggaggccc ctcggtacct gatgcaagtt aagagtgatg gaagctacac caaggggacc 600

ggggtccctg atcgcttctc gggctccagc tctggggctg accgctactt gatcatcccc 660

agcgtccagg ctgatgacga agccggctac gtttgtggtg cagatgataa cggtgggtat 720

gtgttcggcg gagggaccca gctgaccgtc acagctagc 759

<210> 979
<211> 759
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 979
ggatcccagt ccgtgaagga gagcgagggc ggcctgttca agcccaccga caccctgacc 60

ctgacctgca cagtgagcgg cttcagcctg tccagacacg ccctgacatg ggtgagacag 120

gcccctggca acggcctgga atggatcggc gccatcgaca acgccggcac cacctactac 180

gccagctggg ccaagtccag gtccaccatc accaggaaca ccgacctcca caccgtgacc 240

ctgaagatga caagcctgac cgcctccgac accgccacct acttctgcgc cagggtgttc 300

tacgacatca acagcggcta ctacctggat ggcatggacc tgtggggacc tggcacactg 360

gtgaccgtga gcagcggagg cggcggcagc ggcggcggcg gcagcagcgg cggcggaagc 420

cagttcgtgc tgacacagag ccctagcgtg agcgccgccc tgggagcctc cgctaaactg 480

acctgcaccc tgagcagcgc ccacaagacc tacaccatcg actggtacca acagcagcag 540

ggcgaggccc ccaggtatct gatgcaggtg aagtccgacg gcagctacac caaaggcacc 600

ggcgtgcctg acaggttcag cggcagctcc agcggagccg acaggtacct gatcatcccc 660

tccgtgcagg ccgacgacga ggctggctac gtgtgtggcg ccgacgacaa tggcggctac 720

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<210> 980
<211> 253
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 980
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Asp Thr Leu Thr Leu Thr Cys Thr Val Ser Gly Phe Ser Leu Ser Arg
            20   25   30

His Ala Leu Thr Trp Val Arg Gln Ala Pro Gly Asn Gly Leu Glu Trp
        35   40   45

Ile Gly Ala Ile Asp Asn Ala Gly Thr Thr Tyr Tyr Ala Ser Trp Ala
    50   55   60

Lys Ser Arg Ser Thr Ile Thr Arg Asn Thr Asp Leu His Thr Val Thr
65   70   75   80

Leu Lys Met Thr Ser Leu Thr Ala Ser Asp Thr Ala Thr Tyr Phe Cys
                85   90   95

Ala Arg Val Phe Tyr Asp Ile Asn Ser Gly Tyr Tyr Leu Asp Gly Met
            100   105   110

Asp Leu Trp Gly Pro Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly
        115   120   125

Gly Ser Gly Gly Gly Gly Ser Ser Gly Gly Gly Ser Gln Phe Val Leu
    130   135   140

Thr Gln Ser Pro Ser Val Ser Ala Ala Leu Gly Ala Ser Ala Lys Leu
145   150   155   160

Thr Cys Thr Leu Ser Ser Ala His Lys Thr Tyr Thr Ile Asp Trp Tyr
                165   170   175

Gln Gln Gln Gln Gly Glu Ala Pro Arg Tyr Leu Met Gln Val Lys Ser
            180   185   190

Asp Gly Ser Tyr Thr Lys Gly Thr Gly Val Pro Asp Arg Phe Ser Gly
        195   200   205

Ser Ser Ser Gly Ala Asp Arg Tyr Leu Ile Ile Pro Ser Val Gln Ala

210 215 220

Asp Asp Glu Ala Gly Tyr Val Cys Gly Ala Asp Asp Asn Gly Gly Tyr
225 230 235 240

Val Phe Gly Gly Gly Thr Gln Leu Thr Val Thr Ala Ser
245 250

<210> 981
<211> 249
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

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Leu Thr Leu Thr Cys Thr Val Ser Gly Phe Ser Leu Ser Arg His Ala
20 25 30

Leu Thr Trp Val Arg Gln Ala Pro Gly Asn Gly Leu Glu Trp Ile Gly
35 40 45

Ala Ile Asp Asn Ala Gly Thr Thr Tyr Tyr Ala Ser Trp Ala Lys Ser
50 55 60

Arg Ser Thr Ile Thr Arg Asn Thr Asp Leu His Thr Val Thr Leu Lys
65 70 75 80

Met Thr Ser Leu Thr Ala Ser Asp Thr Ala Thr Tyr Phe Cys Ala Arg
85 90 95

Val Phe Tyr Asp Ile Asn Ser Gly Tyr Tyr Leu Asp Gly Met Asp Leu
100 105 110

Trp Gly Pro Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly Gly Ser
115 120 125

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Gly Gly Gly Gly Ser Ser Gly Gly Gly Ser Gln Phe Val Leu Thr Gln
    130                 135                 140

Ser Pro Ser Val Ser Ala Ala Leu Gly Ala Ser Ala Lys Leu Thr Cys
145                 150                 155                 160

Thr Leu Ser Ser Ala His Lys Thr Tyr Thr Ile Asp Trp Tyr Gln Gln
                165                 170                 175

Gln Gln Gly Glu Ala Pro Arg Tyr Leu Met Gln Val Lys Ser Asp Gly
            180                 185                 190

Ser Tyr Thr Lys Gly Thr Gly Val Pro Asp Arg Phe Ser Gly Ser Ser
        195                 200                 205

Ser Gly Ala Asp Arg Tyr Leu Ile Ile Pro Ser Val Gln Ala Asp Asp
    210                 215                 220

Glu Ala Gly Tyr Val Cys Gly Ala Asp Asp Asn Gly Gly Tyr Val Phe
225                 230                 235                 240

Gly Gly Gly Thr Gln Leu Thr Val Thr
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<210> 982
<211> 521
<212> DNA
<213> Homo sapiens

<400> 982
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ccgaacgtct tacgccttgt ggcgcgcccg tccttgtccc gggtgtgatg gcggggtgtg 120

gggcggaggg cgtggcgggg aagggccggc gacgagagcc gcgcgggacg actcgtcggc 180

gataaccggt gtcgggtagc gccagccgcg cgacggtaac gagggaccgc gacaggcaga 240

cgctcccatg atcactctgc acgccgaagg caaatagtgc aggccgtgcg gcgcttggcg 300

ttccttggaa gggctgaatc cccgcctcgt ccttcgcagc ggcccccggg gtgttcccat 360

cgccgcttct aggcccactg cgacgcttgc ctgcacttct tacacgctct gggtcccagc 420

cgcggcgacg caaagggcct tggtgcgggt ctcgtcggcg cagggacgcg tttgggtccc 480

gacggaacct tttccgcgtt ggggttgggg caccataagc t 521

<210> 983
<211> 118
<212> DNA
<213> Homo sapiens

<400> 983
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ccgaacgtct tacgccttgt ggcgcgcccg tccttgtccc gggtgtgatg gcggggtg 118

<210> 984
<211> 221
<212> DNA
<213> Homo sapiens

<400> 984
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ccgaacgtct tacgccttgt ggcgcgcccg tccttgtccc gggtgtgatg gcggggtgtg 120

gggcggaggg cgtggcgggg aagggccggc gacgagagcc gcgcgggacg actcgtcggc 180

gataaccggt gtcgggtagc gccagccgcg cgacggtaac g 221

<210> 985
<211> 324
<212> DNA
<213> Homo sapiens

<400> 985
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ccgaacgtct tacgccttgt ggcgcgcccg tccttgtccc gggtgtgatg gcggggtgtg 120

gggcggaggg cgtggcgggg aagggccggc gacgagagcc gcgcgggacg actcgtcggc 180

gataaccggt gtcgggtagc gccagccgcg cgacggtaac gagggaccgc gacaggcaga 240

cgctcccatg atcactctgc acgccgaagg caaatagtgc aggccgtgcg gcgcttggcg 300

ttccttggaa gggctgaatc cccg 324

<210> 986
<211> 422
<212> DNA
<213> Homo sapiens

<400> 986

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gggcggaggg cgtggcgggg aagggccggc gacgagagcc gcgcgggacg actcgtcggc      180
gataaccggt gtcgggtagc gccagccgcg cgacggtaac gagggaccgc gacaggcaga      240
cgctcccatg atcactctgc acgccgaagg caaatagtgc aggccgtgcg gcgcttggcg      300
ttccttggaa gggctgaatc cccgcctcgt ccttcgcagc ggcccccccgg gtgttcccat      360
cgccgcttct aggcccactg cgacgcttgc ctgcacttct tacacgctct gggtcccagc      420
cg                                                                     422
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