SEQUENCE LISTING

<110> DNA TWOPOINTO INC.

<120> MODIFICATIONS OF CULTURED MAMMALIAN CELLS TO ALTER THE PROPERTIES OF SYNTHESIZED PROTEINS

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<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 63
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<211> 1976
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 64
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<400> 65
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<213> Artificial sequence

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<223> Synthetic

<400> 66
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<211> 1675
<212> DNA
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<223> Synthetic

<400> 67
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<210> 68
<211> 1248
<212> DNA

<213> Artificial sequence

<220>
<223> Synthetic

<400> 68
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<211> 969
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<213> Artificial sequence

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<210> 70
<211> 529
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<213> Artificial sequence

<220>
<223> Synthetic

<400> 70
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gcgcttctga agagctgctc tcacctctct gcatcccaat agatatcccc ctatgtgcat 660

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acccctttgc agtgacagaa gccatcgtcc gcacatgcct tctcaatgag actggcgacg 1320

agcccttcca atacaaaaac tggatccgct cagacatgat aagatacatt gatgagtttg 1380

gacaaaccac aactagaatg cagtgataat tagactttga gtgatcttga gcctttccta 1440

gttcatccca ccccgcccca gagagatctt tgtgaaggaa ccttacttct gtggtgtgac 1500

ataattggac aaactaccta cagagattta aagctctaag gtaaatataa aatttttaag 1560

tgtataatgt gttaaactac tgattctaat tgtttgtgta ttttagattc caacctatgg 1620

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tttcttgctg tccaatttct attaaaggtt cctttgttcc ctaagtccaa ctactaaact 1800

gggggatatt atgaagggcc ttgagcatct ggattctgcc taataaaaaa catttatttt 1860

cattgcaatg atgtatttaa attatttctg aatattttac taaaaaggga atgtgggagg 1920

tcagtgcatt taaaacataa agaaa 1945

<210> 709
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<213> Artificial sequence

<220>
<223> Synthetic

<400> 709
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<213> Artificial sequence

<220>
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<400> 710
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<210> 711
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<220>
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<400> 711
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<212> DNA
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<220>
<223> Synthetic

<400> 712
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<210> 713
<211> 14
<212> DNA
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<220>
<223> Synthetic

<400> 713
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<210> 714
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<400> 714
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<210> 715
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<220>
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<400> 715
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<210> 716
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<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 716
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<210> 717
<211> 39
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 717
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<210> 718
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<212> DNA
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<220>
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<400> 718
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<210> 719
<211> 40
<212> DNA
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<220>
<223> Synthetic

<400> 719
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<210> 720
<211> 38
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 720
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<210> 721
<211> 40
<212> DNA
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<220>
<223> Synthetic

<400> 721
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<210> 722
<211> 40
<212> DNA
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<220>
<223> Synthetic

<400> 722

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<210> 723
<211> 714
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 723
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ggaactgtca acaatcacca cttcaaatgc acctcagagg gcgagggaaa gccctacgaa 120

gggacccaga ccatgcgcat taaggtggtc gaaggcggac cactcccttt tgcattcgac 180

atcctggcta cctccttcat gtacggatcg cgcactttta tcaagtaccc gaaggggatc 240

ccggacttct tcaagcaatc cttccctgag ggattcactt gggaacgggt cacgacctac 300

gaagatggag gcgtggtgac cgtgatgcaa gacactagcc tggaagatgg ctgccttgtc 360

tacaacgtga agatcagagg tgtgaacttc ccatccaatg gccccgtgat gcagaaaaag 420

actctggggt gggaagccaa taccgaaatg ctctacccag cggacggagg actcgaaggc 480

cggtctgaca tggccctgaa gctggtcgga ggaggacatt tgtcgtgtag ctttgtgact 540

acgtaccggt cgaagaagcc ggccaaaaac ctgaagatgc cgggtatcca cgcggtggac 600

catagactgg aacgcctgga ggagagcgat aacgagatgt tcgtcgttca gagggaacac 660

gctgtggcac gatattgcga tctcccgtcg aagcttggtc acaagctcaa ttaa 714

<210> 724
<211> 708
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 724
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actgtcaaca atcaccactt caaatgcacc tcagagggcg agggaaagcc ctacgaaggg 120

acccagaccc ctcgcattaa ggtggtcgaa ggcggaccac tccctttgc attcgacatc 180

ctggctacct ccttccctta cggatcgcgc acttttatca agtacccgaa ggggatcccg 240

gacttcttca agcaatcctt ccctgaggga ttcacttggg aacgggtcac gacctacgaa 300

gatggaggcg tggtgaccgt gcctcaagac actagcctgg aagatggctg ccttgtctac 360

aacgtgaaga tcagaggtgt gaacttccca tccaatggcc ccgtgcctca gaaaaagact 420

ctggggtggg aagccaatac cgaacctctc tacccagcgg acggaggact cgaaggccgg 480

tctgaccctg ccctgaagct ggtcggagga ggacatttgt cgtgtagctt tgtgactacg 540

taccggtcga agaagccggc caaaaacctg aagatgccgg gtatccacgc ggtggaccat 600

agactggaac gcctggagga gagcgataac gagatgttcg tcgttcagag ggaacacgct 660

gtggcacgat attgcgatct cccgtcgaag cttggtcaca agctcaat 708

<210> 725
<211> 442
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 725
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gcaatgtcag cagtgcctgg aaaaacatcc attctcattc gtgaagccac agatggaatg 120

agaatagatg tttttcaaag taaggttgac catactctac tctagactag tggtgatagc 180

aatgtcagca gtgcctttaa attacataat gtggcagtgt gaagccacag atgactgcca 240

catcatgtaa tttacaagta aggttgacca tactctactc tagactagtg gtgatagcaa 300

tgtcagcagt gccttatttt actgtgcatg ggcttggtga agccacagat gcaagcccat 360

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tttcagtatt attgataatc tt 442

<210> 726
<211> 523
<212> DNA

<213> Artificial sequence

<220>
<223> Synthetic

<400> 726
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gcaatgtcag cagtgcctgg aaaaacatcc attctcattc gtgaagccac agatggaatg 120

agaatagatg tttttcaaag taaggttgac catactctac tctagttata ttctttaggc 180

acgaatgtgt gtttaaaaaa aataaaaact agtggtgata gcaatgtcag cagtgccttt 240

aaattacata atgtggcagt gtgaagccac agatgactgc cacatcatgt aatttacaag 300

taaggttgac catactctac tctagagttg tgttttaatg tatattaatg ttactaatgt 360

gtttactagt ggtgatagca atgtcagcag tgccttattt tactgtgcat gggcttggtg 420

aagccacaga tgcaagccca tgaacagtaa aatcaagtaa ggttgaccat actctactct 480

agtcagtttt attgatagtc ttttcagtat tattgataat ctt 523

<210> 727
<211> 681
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 727
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aaatactatc agtgctgcaa accaggaagg ggaagtgtgt ggtttaagtt gcatatccct 120

tatcctctgg ctgctggagg cttgctgaag gctgtatgct gtgaatctgt tgattgcagt 180

gagttttggc cactgactga ctcactgcac aacagattca caggacacaa ggcctgttac 240

tagcactcac atggaacaaa tggcccagat cctggaggct tgctgaaggc tgtatgctgc 300

tgagatggtc tgaactaaat gttttggcca ctgactgaca tttagttgac catctcagca 360

ggacacaagg cctgttacta gcactcacat ggaacaaatg gcccagatcc tggaggcttg 420

ctgaaggctg tatgctgaga tataggcacc atgtttgagt tttggccact gactgactca 480

aacattgcct atatctcagg acacaaggcc tgttactagc actcacatgg aacaaatggc 540

ccaggacaca aggcctgtta ctagcactca catggaacaa atggccaccg tgggaggatg 600

acaagtccaa gagtcaccct gctggatgaa cgtagatgtc agactctatc atttaatgtg 660

ctagtcataa cctggttact a 681

<210> 728
<211> 405
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 728
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gcaatgtcag cagtgcctgg aaaaacatcc attctcattc gtgaagccac agatggaatg 120

agaatagatg tttttcaaag taaggttgac catactctac tctagttata ttctttaggc 180

acgaatgtgt gtttaaaaaa aataaaaact agtggtgata gcaatgtcag cagtgccttt 240

aaattacata atgtggcagt gtgaagccac agatgactgc cacatcatgt aatttacaag 300

taaggttgac catactctac tctagagttg tgttttaatg tatattaatg ttactaatgt 360

gttttcagtt ttattgatag tcttttcagt attattgata atctt 405

<210> 729
<211> 245
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 729
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gcaatgtcag cagtgcctgg aaaaacatcc attctcattc gtgaagccac agatggaatg 120

agaatagatg tttttcaaag taaggttgac catactctac tctagagttg tgttttaatg 180

tatattaatg ttactaatgt gttttcagtt ttattgatag tcttttcagt attattgata 240

atctt 245

<210> 730
<211> 957
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 730
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aaatactatc agtgctgcaa accaggaagg ggaagtgtgt ggtttaagtt gcatatccct 120

tatcctctgg ctgctggagg cttgctgaag gctgtatgct gttaccagga aagaccctgg 180

ctgttttggc cactgactga cagccagggt ttcctggtaa caggacacaa ggcctgttac 240

tagcactcac atggaacaaa tggcccagat cctggaggct tgctgaaggc tgtatgctga 300

aacctgtggc ccagctctta gttttggcca ctgactgact aagagctgcc acaggtttca 360

ggacacaagg cctgttacta gcactcacat ggaacaaatg gcccagatcc tggaggcttg 420

ctgaaggctg tatgctgaaa tcattcagag gagcctttgt tttggccact gactgacaaa 480

ggctcctgaa tgatttcagg acacaaggcc tgttactagc actcacatgg aacaaatggc 540

ccagatcctg gaggcttgct gaaggctgta tgctgtgtag aagacatcac ttcatcgttt 600

tggccactga ctgacgatga agttgtcttc tacacaggac acaaggcctg ttactagcac 660

tcacatggaa caaatggccc agatcctgga ggcttgctga aggctgtatg ctgtgaatct 720

gttgattgca gtgagttttg gccactgact gactcactgc acaacagatt cacaggacac 780

aaggcctgtt actagcactc acatggaaca aatggcccag gacacaaggc ctgttactag 840

cactcacatg gaacaaatgg ccaccgtggg aggatgacaa gtccaagagt caccctgctg 900

gatgaacgta gatgtcagac tctatcattt aatgtgctag tcataacctg gttacta 957

<210> 731
<211> 839
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 731
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gcaatgtcag cagtgccttt aaacttcttg atttcccaaa gtgaagccac agatgtttgg 120

gaaataaaga agtttacaag taaggttgac catactctac tctagttata ttctttaggc 180

acgaatgtgt gtttaaaaaa aataaaaact agtggtgata gcaatgtcag cagtgccttc 240

ctcttagatc atattccaag gtgaagccac agatgcttgg aatataatct aagaggcaag 300

taaggttgac catactctac tctagagttg tgttttaatg tatattaatg ttactaatgt 360

gtttactagt ggtgatagca atgtcagcag tgcctttcaa gtaaaatgag tatgtgagtg 420

aagccacaga tgtcacatac tccttttact tgacaagtaa ggttgaccat actctactct 480

aggttatttt tagtatgatt ctgtaaaaat gaattaatac taactagtgg tgatagcaat 540

gtcagcagtg ccttcaatta gtgggatcac aacccgtgaa gccacagatg gggttgtgat 600

accactaatt gcatttttca gatgtatcat ctcttaaaat actgtaattg caactagtgg 660

tgatagcaat gtcagcagtg cctttaaatt acataatgtg gcagtgtgaa gccacagatg 720

actgccacat catgtaattt acaagtaagg ttgaccatac tctactctag aagtaaggtt 780

gaccatactc tactctagtc agttttattg atagtctttt cagtattatt gataatctt 839

<210> 732
<211> 681
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 732
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gcaatgtcag cagtgccttt aaacttcttg atttcccaaa gtgaagccac agatgtttgg 120

gaaataaaga agtttacaag taaggttgac catactctac tctagttata ttctttaggc 180

acgaatgtgt gtttaaaaaa aataaaaact agtggtgata gcaatgtcag cagtgccttc 240

ctcttagatc atattccaag gtgaagccac agatgcttgg aatataatct aagaggcaag 300

taaggttgac catactctac tctagagttg tgttttaatg tatattaatg ttactaatgt 360

gtttactagt ggtgatagca atgtcagcag tgcctttcaa gtaaaatgag tatgtgagtg 420

aagccacaga tgtcacatac tccttttact tgacaagtaa ggttgaccat actctactct 480

aggttatttt tagtatgatt ctgtaaaaat gaattaatac taactagtgg tgatagcaat 540

gtcagcagtg ccttcaatta gtgggatcac aacccgtgaa gccacagatg gggttgtgat 600

accactaatt gcaagtaagg ttgaccatac tctactctag tcagttttat tgatagtctt 660

ttcagtatta ttgataatct t 681

<210> 733
<211> 774
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 733
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aaatactatc agtgctgcaa accaggaagg ggaagtgtgt ggtttaagtt gcatatccct 120

tatcctctgg ctgctggagg cttgctgaag gctgtatgct gttaccagga aagaccctgg 180

ctgttttggc cactgactga cagccagggt ttcctggtaa caggacacaa ggcctgttac 240

tagcactcac atggaacaaa tggcccagat cctggaggct tgctgaaggc tgtatgctga 300

aacctgtggc ccagctctta gttttggcca ctgactgact aagagctgcc acaggtttca 360

ggacacaagg cctgttacta gcactcacat ggaacaaatg gcccagatcc tggaggcttg 420

ctgaaggctg tatgctgaaa tcattcagag gagcctttgt tttggccact gactgacaaa 480

ggctcctgaa tgatttcagg acacaaggcc tgttactagc actcacatgg aacaaatggc 540

ccagatcctg gaggcttgct gaaggctgta tgctgtgtag aagacatcac ttcatcgttt 600

tggccactga ctgacgatga agttgtcttc tacacaggac acaaggcctg ttactagcac 660

tcacatggaa caaatggcca ccgtgggagg atgacaagtc caagagtcac cctgctggat 720

gaacgtagat gtcagactct atcatttaat gtgctagtca taacctggtt acta 774

<210> 734
<211> 521
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 734
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gcaatgtcag cagtgccttt ggtcgtttat ctcttccatc gtgaagccac agatggatgg 120

aagagctaaa cgaccacaag taaggttgac catactctac tctagagttg tgttttaatg 180

tatattaatg ttactaatgt gtttactagt ggtgatagca atgtcagcag tgcctttcat 240

ctacagtttg gctgaaagtg aagccacaga tgtttcagcc aacctgtaga tgacaagtaa 300

ggttgaccat actctactct aggttatttt tagtatgatt ctgtaaaaat gaattaatac 360

taactagtgg tgatagcaat gtcagcagtg cctttaaatt acacaatatg gcagtgtgaa 420

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tcagttttat tgatagtctt ttcagtatta ttgataatct t 521

<210> 735
<211> 839
<212> DNA
<213> Artificial sequence

<220>
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<400> 735
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gcaatgtcag cagtgcctta aaacatcttg atttcacaaa gtgaagccac agatgtttgt 120

gaaataaaga tgttttcaag taaggttgac catactctac tctagttata ttctttaggc 180

acgaatgtgt gtttaaaaaa aataaaaact agtggtgata gcaatgtcag cagtgcctta 240

ttacttgtaa acactggttc gtgaagccac agatggaacc agtgtctaca agtaatcaag 300

taaggttgac catactctac tctagagttg tgttttaatg tatattaatg ttactaatgt 360

gtttactagt ggtgatagca atgtcagcag tgcctttcat ctacagtttg gctgaaagtg 420

aagccacaga tgtttcagcc aacctgtaga tgacaagtaa ggttgaccat actctactct 480

aggttatttt tagtatgatt ctgtaaaaat gaattaatac taactagtgg tgatagcaat 540

gtcagcagtg cctttgttgt gtaacaacat aatttgtgaa gccacagatg aaattatgtt 600

attacacaac acatttttca gatgtatcat ctcttaaaat actgtaattg caactagtgg 660

tgatagcaat gtcagcagtg cctttcacta ctgtgctggc cccgcgtgaa gccacagatg 720

gcggggccag aacagtagtg acaagtaagg ttgaccatac tctactctag aagtaaggtt 780

gaccatactc tactctagtc agttttattg atagtctttt cagtattatt gataatctt 839

<210> 736
<211> 681
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 736
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gcaatgtcag cagtgcctta aaacatcttg atttcacaaa gtgaagccac agatgtttgt 120

gaaataaaga tgttttcaag taaggttgac catactctac tctagttata ttctttaggc 180

acgaatgtgt gtttaaaaaa aataaaaact agtggtgata gcaatgtcag cagtgcctta 240

ttacttgtaa acactggttc gtgaagccac agatggaacc agtgtctaca agtaatcaag 300

taaggttgac catactctac tctagagttg tgttttaatg tatattaatg ttactaatgt 360

gtttactagt ggtgatagca atgtcagcag tgcctttcac tactgtgctg gccccgcgtg 420

aagccacaga tggcggggcc agaacagtag tgacaagtaa ggttgaccat actctactct 480

aggttatttt tagtatgatt ctgtaaaaat gaattaatac taactagtgg tgatagcaat 540

gtcagcagtg cctttgttgt gtaacaacat aatttgtgaa gccacagatg aaattatgtt 600

attacacaac acaagtaagg ttgaccatac tctactctag tcagttttat tgatagtctt 660

ttcagtatta ttgataatct t 681

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<211> 521
<212> DNA
<213> Artificial sequence

<220>
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<400> 737
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gcaatgtcag cagtgccttg aatcatcatg atagccgctt gtgaagccac agatgaagcg 120

gctataatga tgattccaag taaggttgac catactctac tctagagttg tgttttaatg 180

tatattaatg ttactaatgt gtttactagt ggtgatagca atgtcagcag tgccttcttg 240

tgtgttcatt atcctaggtg aagccacaga tgctaggata ataaacacac aagcaagtaa 300

ggttgaccat actctactct aggttatttt tagtatgatt ctgtaaaaat gaattaatac 360

taactagtgg tgatagcaat gtcagcagtg ccttatttct tcacaatgag cactcgtgaa 420

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<210> 738
<211> 681
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 738
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gcaatgtcag cagtgccttc atccatagaa aactcctcgg gtgaagccac agatgccgag 120

gagttctcta tggatgcaag taaggttgac catactctac tctagttata ttctttaggc 180

acgaatgtgt gtttaaaaaa aataaaaact agtggtgata gcaatgtcag cagtgccttg 240

aatcatcatg atagccgctt gtgaagccac agatgaagcg gctataatga tgattccaag 300

taaggttgac catactctac tctagagttg tgttttaatg tatattaatg ttactaatgt 360

gtttactagt ggtgatagca atgtcagcag tgccttcttg tgtgttcatt atcctaggtg 420

aagccacaga tgctaggata ataaacacac aagcaagtaa ggttgaccat actctactct 480

aggttatttt tagtatgatt ctgtaaaaat gaattaatac taactagtgg tgatagcaat 540

gtcagcagtg ccttatttct tcacaatgag cactcgtgaa gccacagatg gagtgctcat 600

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ttcagtatta ttgataatct t 681

<210> 739
<211> 839
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 739
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gcaatgtcag cagtgccttc atccatagaa aactcctcgg gtgaagccac agatgccgag 120

gagttctcta tggatgcaag taaggttgac catactctac tctagttata ttctttaggc 180

acgaatgtgt gtttaaaaaa aataaaaact agtggtgata gcaatgtcag cagtgccttg 240

aatcatcatg atagccgctt gtgaagccac agatgaagcg gctataatga tgattccaag 300

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tgatagcaat gtcagcagtg ccttgttttc agtgtatcca tgagggtgaa gccacagatg 720

cctcatggat ccactgaaaa ccaagtaagg ttgaccatac tctactctag aagtaaggtt 780

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<220>
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tatattaatg ttactaatgt gtttactagt ggtgatagca atgtcagcag tgccttacaa 240

catctactag atggcttgtg aagccacaga tgaagccatc taatagatgt tgtcaagtaa 300

ggttgaccat actctactct aggttatttt tagtatgatt ctgtaaaaat gaattaatac 360

taactagtgg tgatagcaat gtcagcagtg ccttttatgt cagagtctga ctggtgtgaa 420

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<400> 741
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tatattaatg ttactaatgt gtttactagt ggtgatagca atgtcagcag tgccttattc 240

tgaccaataa aagcaaggtg aagccacaga tgcttgcttt tactggtcag aatcaagtaa 300

ggttgaccat actctactct aggttatttt tagtatgatt ctgtaaaaat gaattaatac 360

taactagtgg tgatagcaat gtcagcagtg ccttttacc tgaagaacta gcagcgtgaa 420

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<400> 742
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tatattaatg ttactaatgt gtttactagt ggtgatagca atgtcagcag tgccttagag 240

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ggttgaccat actctactct aggttatttt tagtatgatt ctgtaaaaat gaattaatac 360

taactagtgg tgatagcaat gtcagcagtg cctttgttta gaattataca ggggcgtgaa 420

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tatattaatg ttactaatgt gtttactagt ggtgatagca atgtcagcag tgccttagtt 240

tcatataaac acccattgtg aagccacaga tgaatgggtg ttcatatgaa actcaagtaa 300

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ctt 363

<210> 744
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ttttactaga aaataccaag taaggttgac catactctac tctagagttg tgttttaatg 180

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ctacaaaaac attcacagtg aagccacaga tgtgtgaatg ttcttgtagc taacaagtaa 300

ggttgaccat actctactct agtcagtttt attgatagtc ttttcagtat tattgataat 360

ctt 363

<210> 745
<211> 363
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

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acattatttt tcttctcaag taaggttgac catactctac tctagagttg tgttttaatg 180

tatattaatg ttactaatgt gtttactagt ggtgatagca atgtcagcag tgccttattg 240

tgaaatcaat aaactgggtg aagccacaga tgccagttta ttaatttcac aatcaagtaa 300

ggttgaccat actctactct agtcagtttt attgatagtc ttttcagtat tattgataat 360

ctt 363

<210> 746
<211> 498
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 746
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tatcctctgg ctgctggagg cttgctgaag gctgtatgct gaaacacttc cctgaattcc 180

tcgttttggc cactgactga cgaggaattg ggaagtgttt caggacacaa ggcctgttac 240

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tgctaaggca gttactagag gttttggcca ctgactgacc tctagtatgc cttagcaaca 360

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agtccaagag tcaccctgct ggatgaacgt agatgtcaga ctctatcatt taatgtgcta 480

gtcataacct ggttacta 498

<210> 747
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<400> 747
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tatattaatg ttactaatgt gtttactagt ggtgatagca atgtcagcag tgcctttgag 240

gaagagactc agcccccgtg aagccacaga tgggggggctg agcctcttcc tcacaagtaa 300

ggttgaccat actctactct agtcagtttt attgatagtc ttttcagtat tattgataat 360

ctt 363

<210> 748
<211> 363
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 748
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gagagcgcag tgacaccaag taaggttgac catactctac tctagagttg tgttttaatg 180

tatattaatg ttactaatgt gtttactagt ggtgatagca atgtcagcag tgccttagtc 240

aactacttac acggaacgtg aagccacaga tggttccgtg tacgtagttg actcaagtaa 300

ggttgaccat actctactct agtcagtttt attgatagtc ttttcagtat tattgataat 360

ctt 363

<210> 749
<211> 363
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<220>
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cactgctcag agcctgaaag taaggttgac catactctac tctagagttg tgttttaatg 180

tatattaatg ttactaatgt gtttactagt ggtgatagca atgtcagcag tgccttgtgt 240

cactgctctc tccgatggtg aagccacaga tgcatcggag agcgcagtga caccaagtaa 300

ggttgaccat actctactct agtcagtttt attgatagtc ttttcagtat tattgataat 360

ctt 363

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<220>
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<400> 750
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tatcctctgg ctgctggagg cttgctgaag gctgtatgct gatgggtgtg tcactgctct 180

ctgttttggc cactgactga cagagagcag acacacccat caggacacaa ggcctgttac 240

tagcactcac atggaacaaa tggcccagat cctggaggct tgctgaaggc tgtatgctga 300

accgatgtgc acatctatgc gttttggcca ctgactgacg catagatgca catcggttca 360

ggacacaagg cctgttacta gcactcacat ggaacaaatg gccaccgtgg gaggatgaca 420

agtccaagag tcaccctgct ggatgaacgt agatgtcaga ctctatcatt taatgtgcta 480

gtcataacct ggttacta 498

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<220>
<223> Synthetic

<400> 751
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acattatttt tcttctcaag taaggttgac catactctac tctagttata ttctttaggc 180

acgaatgtgt gtttaaaaaa aataaaaact agtggtgata gcaatgtcag cagtgccttg 240

tgtcactgct ctctccgatg gtgaagccac agatgcatcg gagagcgcag tgacaccaag 300

taaggttgac catactctac tctagagttg tgttttaatg tatattaatg ttactaatgt 360

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aagccacaga tgctcggata aacgtcctgg attcaagtaa ggttgaccat actctactct 480

aggttatttt tagtatgatt ctgtaaaaat gaattaatac taactagtgg tgatagcaat 540

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ttcagtatta ttgataatct t 681

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<213> Artificial sequence

<220>
<223> Synthetic

<400> 752
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attgccttgt acagtccaag taaggttgac catactctac tctagttata ttctttaggc 180

acgaatgtgt gtttaaaaaa aataaaaact agtggtgata gcaatgtcag cagtgccttg 240

tattttctaa taaaatggag gtgaagccac agatgctcca ttttactaga aaataccaag 300

taaggttgac catactctac tctagagttg tgttttaatg tatattaatg ttactaatgt 360

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aagccacaga tgggggggctg agcctcttcc tcacaagtaa ggttgaccat actctactct 480

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<400> 753
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gtgtacgtag ttgactcaag taaggttgac catactctac tctagttata ttctttaggc 180

acgaatgtgt gtttaaaaaa aataaaaact agtggtgata gcaatgtcag cagtgcctta 240

gtttcatata aacacccatt gtgaagccac agatgaatgg gtgttcatat gaaactcaag 300

taaggttgac catactctac tctagagttg tgttttaatg tatattaatg ttactaatgt 360

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gtcagcagtg ccttttagct acaaaaacat tcacagtgaa gccacagatg tgtgaatgtt 600

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ttcagtatta ttgataatct t 681

<210> 754
<211> 774
<212> DNA
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tatcctctgg ctgctggagg cttgctgaag gctgtatgct gaaacacttc cctgaattcc 180

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ctgaaggctg tatgctgatg ggtgtgtcac tgctctctgt tttggccact gactgacaga 480

gagcagacac acccatcagg acacaaggcc tgttactagc actcacatgg aacaaatggc 540

ccagatcctg gaggcttgct gaaggctgta tgctgaaccg atgtgcacat ctatgcgttt 600

tggccactga ctgacgcata gatgcacatc ggttcaggac acaaggcctg ttactagcac 660

tcacatggaa caaatggcca ccgtgggagg atgacaagtc caagagtcac cctgctggat 720

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<213> Artificial sequence

<220>
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tatattaatg ttactaatgt gtttactagt ggtgatagca atgtcagcag tgccttgaag 240

cagtgactgc atctggcgtg aagccacaga tggccagatg caatcactgc ttccaagtaa 300

ggttgaccat actctactct agtcagtttt attgatagtc ttttcagtat tattgataat 360

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ggccatctcc aaccagcgtg aagccacaga tggctggttg gaaatggcct tggcaagtaa 300

ggttgaccat actctactct agtcagtttt attgatagtc ttttcagtat tattgataat 360

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ggttgaccat actctactct agtcagtttt attgatagtc ttttcagtat tattgataat 360

ctt 363

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<211> 498
<212> DNA

<213> Artificial sequence

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ttgagacatg agtcctgtgg gttttggcca ctgactgacc cacaggacat gtctcaatca 360

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agtccaagag tcaccctgct ggatgaacgt agatgtcaga ctctatcatt taatgtgcta 480

gtcataacct ggttacta 498

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<220>
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atgcaataca acctttagtg aagccacaga tgtaaaggtt gtcttgcata tatcaagtaa 300

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ctt 363

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tatagtcttc tccctcggtg aagccacaga tgcgagggag aaaactatat tgtcaagtaa 300

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ctt 363

<210> 761
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tttatattca aaccattgtg aagccacaga tgaatggttt gactataaac actcaagtaa 300

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caaggccatc tccaaccagc gtgaagccac agatggctgg ttggaaatgg ccttggcaag 300

taaggttgac catactctac tctagagttg tgttttaatg tatattaatg ttactaatgt 360

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ttcagtatta ttgataatct t 681

<210> 764
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<220>
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<400> 764
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tcacatggaa caaatggcca ccgtgggagg atgacaagtc caagagtcac cctgctggat 720

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ctt 363

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<220>
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ctt 363

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<220>
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ctt 363

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<213> Artificial sequence

<220>
<223> Synthetic

<400> 770
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tatcctctgg ctgctggagg cttgctgaag gctgtatgct gttcccatgt gagtcattat 180

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ctt 363

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ctt 363

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tctgaacaac aaactgagtg aagccacaga tgtcagtttg ttattcagaa gaacaagtaa 300

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ctt 363

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ggttgaccat actctactct agtcagtttt attgatagtc ttttcagtat tattgataat 360

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cagttatatt atcctttgtg aagccacaga tgaaaggata atctaactgt tttcaagtaa 300

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ctt 363

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aaataaacat agtgttagtg aagccacaga tgtaacacta tgcttattta ctacaagtaa 300

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aagttaagac ttctgacaag taaggttgac catactctac tctagagttg tgttttaatg 180

tatattaatg ttactaatgt gtttactagt ggtgatagca atgtcagcag tgcctttaaa 240

ttgtttaacc atccgctgtg aagccacaga tgagcggatg gtcaaacaat ttacaagtaa 300

ggttgaccat actctactct agtcagtttt attgatagtc ttttcagtat tattgataat 360

ctt 363

<210> 814
<211> 363
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<213> Artificial sequence

<220>
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<400> 814
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taaacctact tctaaacaag taaggttgac catactctac tctagagttg tgttttaatg 180

tatattaatg ttactaatgt gtttactagt ggtgatagca atgtcagcag tgcctttaaa 240

ttgtttaacc atccgctgtg aagccacaga tgagcggatg gtcaaacaat ttacaagtaa 300

ggttgaccat actctactct agtcagtttt attgatagtc ttttcagtat tattgataat 360

ctt 363

<210> 815
<211> 363
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 815
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ttttccttat ttagaacaag taaggttgac catactctac tctagagttg tgttttaatg 180

tatattaatg ttactaatgt gtttactagt ggtgatagca atgtcagcag tgcctttaaa 240

ttgtttaacc atccgctgtg aagccacaga tgagcggatg gtcaaacaat ttacaagtaa 300

ggttgaccat actctactct agtcagtttt attgatagtc ttttcagtat tattgataat 360

ctt 363

<210> 816
<211> 498
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 816
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aaatactatc agtgctgcaa accaggaagg ggaagtgtgt ggtttaagtt gcatatccct 120

tatcctctgg ctgctggagg cttgctgaag gctgtatgct gttcagaagt ctcaactttg 180

tggttttggc cactgactga ccacaaagta gacttctgaa caggacacaa ggcctgttac 240

tagcactcac atggaacaaa tggcccagat cctggaggct tgctgaaggc tgtatgctga 300

gaaagatgac acaggtacac gttttggcca ctgactgacg tgtacctgtc atctttctca 360

ggacacaagg cctgttacta gcactcacat ggaacaaatg gccaccgtgg gaggatgaca 420

agtccaagag tcaccctgct ggatgaacgt agatgtcaga ctctatcatt taatgtgcta 480

gtcataacct ggttacta 498

<210> 817
<211> 363
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 817
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tgttaagagt taataccaag taaggttgac catactctac tctagagttg tgttttaatg 180

tatattaatg ttactaatgt gtttactagt ggtgatagca atgtcagcag tgccttaatt 240

tttgtatttt tttgtaagtg aagccacaga tgttacaaaa aactacaaaa attcaagtaa 300

ggttgaccat actctactct agtcagtttt attgatagtc ttttcagtat tattgataat 360

ctt 363

<210> 818
<211> 363
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 818
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gcaatgtcag cagtgccttt aaaaaaaaaa aaaacctaat gtgaagccac agatgattag 120

gttttctttt tttttacaag taaggttgac catactctac tctagagttg tgttttaatg 180

tatattaatg ttactaatgt gtttactagt ggtgatagca atgtcagcag tgcctttatc 240

ttgagacaga gtcttgcgtg aagccacaga tggcaagact ctatctcaag atacaagtaa 300

ggttgaccat actctactct agtcagtttt attgatagtc ttttcagtat tattgataat 360

ctt 363

<210> 819
<211> 363
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 819
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tgttaagagt taataccaag taaggttgac catactctac tctagagttg tgttttaatg 180

tatattaatg ttactaatgt gtttactagt ggtgatagca atgtcagcag tgcctttatc 240

ttgagacaga gtcttgcgtg aagccacaga tggcaagact ctatctcaag atacaagtaa 300

ggttgaccat actctactct agtcagtttt attgatagtc ttttcagtat tattgataat 360

ctt 363

<210> 820
<211> 498
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 820
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tatcctctgg ctgctggagg cttgctgaag gctgtatgct gtgaacttct gacctcaagt 180

gagttttggc cactgactga ctcacttgat cagaagttca caggacacaa ggcctgttac 240

tagcactcac atggaacaaa tggcccagat cctggaggct tgctgaaggc tgtatgctga 300

atatatgcac acaccatcac gttttggcca ctgactgacg tgatggtgtg catatattca 360

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agtccaagag tcaccctgct ggatgaacgt agatgtcaga ctctatcatt taatgtgcta 480

gtcataacct ggttacta 498

<210> 821
<211> 363
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 821
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atgtccttgt tttcaccaag taaggttgac catactctac tctagagttg tgttttaatg 180

tatattaatg ttactaatgt gtttactagt ggtgatagca atgtcagcag tgccttcata 240

tagtatcaag tgaagtcgtg aagccacaga tggacttcac ttaatactat atgcaagtaa 300

ggttgaccat actctactct agtcagtttt attgatagtc ttttcagtat tattgataat 360

ctt 363

<210> 822
<211> 363
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 822
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gcaatgtcag cagtgcctaa aagttacagg atgttccatc gtgaagccac agatggatgg 120

aacatactgt aactttcaag taaggttgac catactctac tctagagttg tgttttaatg 180

tatattaatg ttactaatgt gtttactagt ggtgatagca atgtcagcag tgccttcata 240

tagtatcaag tgaagtcgtg aagccacaga tggacttcac ttaatactat atgcaagtaa 300

ggttgaccat actctactct agtcagtttt attgatagtc ttttcagtat tattgataat 360

ctt 363

<210> 823
<211> 363
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 823
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gcaatgtcag cagtgccttt acattaggat aaaaaagtgc gtgaagccac agatggcact 120

ttttctcct aatgtacaag taaggttgac catactctac tctagagttg tgttttaatg 180

tatattaatg ttactaatgt gtttactagt ggtgatagca atgtcagcag tgccttcata 240

tagtatcaag tgaagtcgtg aagccacaga tggacttcac ttaatactat atgcaagtaa 300

ggttgaccat actctactct agtcagtttt attgatagtc ttttcagtat tattgataat 360

ctt 363

<210> 824
<211> 498
<212> DNA
<213> Artificial sequence

<220>
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<400> 824
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aaatactatc agtgctgcaa accaggaagg ggaagtgtgt ggtttaagtt gcatatccct 120

tatcctctgg ctgctggagg cttgctgaag gctgtatgct gaattgtggc actttcctac 180

tggttttggc cactgactga ccagtaggag tgccacaatt caggacacaa ggcctgttac 240

tagcactcac atggaacaaa tggcccagat cctggaggct tgctgaaggc tgtatgctga 300

aacaatgaca tcccaaacca gttttggcca ctgactgact ggtttggtgt cattgtttca 360

ggacacaagg cctgttacta gcactcacat ggaacaaatg gccaccgtgg gaggatgaca 420

agtccaagag tcaccctgct ggatgaacgt agatgtcaga ctctatcatt taatgtgcta 480

gtcataacct ggttacta 498

<210> 825
<211> 681
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 825
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gcaatgtcag cagtgccttg tattaactcc taacacctaa gtgaagccac agatgttagg 120

tgttaagagt taataccaag taaggttgac catactctac tctagttata ttctttaggc 180

acgaatgtgt gtttaaaaaa aataaaaact agtggtgata gcaatgtcag cagtgccttt 240

atcttgagac agagtcttgc gtgaagccac agatggcaag actctatctc aagatacaag 300

taaggttgac catactctac tctagagttg tgttttaatg tatattaatg ttactaatgt 360

gtttactagt ggtgatagca atgtcagcag tgccttgtga aaacaatgac atcccaagtg 420

aagccacaga tgttgggatg tccttgtttt caccaagtaa ggttgaccat actctactct 480

aggttatttt tagtatgatt ctgtaaaaat gaattaatac taactagtgg tgatagcaat 540

gtcagcagtg ccttcatata gtatcaagtg aagtcgtgaa gccacagatg gacttcactt 600

aatactatat gcaagtaagg ttgaccatac tctactctag tcagttttat tgatagtctt 660

ttcagtatta ttgataatct t 681

<210> 826
<211> 774
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 826
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aaatactatc agtgctgcaa accaggaagg ggaagtgtgt ggtttaagtt gcatatccct 120

tatcctctgg ctgctggagg cttgctgaag gctgtatgct gtgaacttct gacctcaagt 180

gagttttggc cactgactga ctcacttgat cagaagttca caggacacaa ggcctgttac 240

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ggacacaagg cctgttacta gcactcacat ggaacaaatg gcccagatcc tggaggcttg 420

ctgaaggctg tatgctgaat tgtggcactt tcctactggt tttggccact gactgaccag 480

taggagtgcc acaattcagg acacaaggcc tgttactagc actcacatgg aacaaatggc 540

ccagatcctg gaggcttgct gaaggctgta tgctgaaaca atgacatccc aaaccagttt 600

tggccactga ctgactggtt tggtgtcatt gtttcaggac acaaggcctg ttactagcac 660

tcacatggaa caaatggcca ccgtgggagg atgacaagtc caagagtcac cctgctggat 720

gaacgtagat gtcagactct atcatttaat gtgctagtca taacctggtt acta 774

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<211> 363
<212> DNA
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<220>
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aaaaacattc taatgacaag taaggttgac catactctac tctagagttg tgttttaatg 180

tatattaatg ttactaatgt gtttactagt ggtgatagca atgtcagcag tgcctttgca 240

tcctaaggac aaactgtgtg aagccacaga tgacagtttg tcattaggat gcacaagtaa 300

ggttgaccat actctactct agtcagtttt attgatagtc ttttcagtat tattgataat 360

ctt 363

<210> 828
<211> 363
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 828
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gcaatgtcag cagtgcctta cattaatatt attcatccaa gtgaagccac agatgttgga 120

tgaatcatat taatgtcaag taaggttgac catactctac tctagagttg tgttttaatg 180

tatattaatg ttactaatgt gtttactagt ggtgatagca atgtcagcag tgccttaaaa 240

taccaatttc ttccaaagtg aagccacaga tgtttggaag aacttggtat tttcaagtaa 300

ggttgaccat actctactct agtcagtttt attgatagtc ttttcagtat tattgataat 360

ctt 363

<210> 829
<211> 363
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 829
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tatattaatg ttactaatgt gtttactagt ggtgatagca atgtcagcag tgccttaaaa 240

taccaatttc ttccaaagtg aagccacaga tgtttggaag aacttggtat tttcaagtaa 300

ggttgaccat actctactct agtcagtttt attgatagtc ttttcagtat tattgataat 360

ctt 363

<210> 830
<211> 498
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 830
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aaatactatc agtgctgcaa accaggaagg ggaagtgtgt ggtttaagtt gcatatccct 120

tatcctctgg ctgctggagg cttgctgaag gctgtatgct gatgaatgca atactgcaca 180

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ttaccaacag tacaacaagg gttttggcca ctgactgacc cttgttgctg ttggtaaaca 360

ggacacaagg cctgttacta gcactcacat ggaacaaatg gccaccgtgg gaggatgaca 420

agtccaagag tcaccctgct ggatgaacgt agatgtcaga ctctatcatt taatgtgcta 480

gtcataacct ggttacta 498

<210> 831
<211> 498
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 831
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tatcctctgg ctgctggagg cttgctgaag gctgtatgct gttcatttgc atcctaagga 180

cagttttggc cactgactga ctgtccttaa tgcaaatgaa caggacacaa ggcctgttac 240

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aatgctgcag actatgcaca gttttggcca ctgactgact gtgcatactg cagcatttca 360

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agtccaagag tcaccctgct ggatgaacgt agatgtcaga ctctatcatt taatgtgcta 480

gtcataacct ggttacta 498

<210> 832
<211> 498
<212> DNA
<213> Artificial sequence

<220>
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<400> 832
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tatcctctgg ctgctggagg cttgctgaag gctgtatgct gatgaatgca atactgcaca 180

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agtccaagag tcaccctgct ggatgaacgt agatgtcaga ctctatcatt taatgtgcta 480

gtcataacct ggttacta 498

<210> 833
<211> 363
<212> DNA
<213> Artificial sequence

<220>
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gcaatgtcag cagtgccttt aagaaacaaa ataagtgttt gtgaagccac agatgaaaca 120

cttatcttgt ttcttacaag taaggttgac catactctac tctagagttg tgttttaatg 180

tatattaatg ttactaatgt gtttactagt ggtgatagca atgtcagcag tgccttatat 240

atatatatat ggcctttgtg aagccacaga tgaaaggcca tacatatata tatcaagtaa 300

ggttgaccat actctactct agtcagtttt attgatagtc ttttcagtat tattgataat 360

ctt 363

<210> 834
<211> 363
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<220>
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ggttgaccat actctactct agtcagtttt attgatagtc ttttcagtat tattgataat 360

ctt 363

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<211> 363
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<220>
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cttatcttgt ttcttacaag taaggttgac catactctac tctagagttg tgttttaatg 180

tatattaatg ttactaatgt gtttactagt ggtgatagca atgtcagcag tgccttaact 240

ttggagttcc ttctttagtg aagccacaga tgtaaagaag gacctccaaa gttcaagtaa 300

ggttgaccat actctactct agtcagtttt attgatagtc ttttcagtat tattgataat 360

ctt 363

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tatcctctgg ctgctggagg cttgctgaag gctgtatgct gttatgtaca agccacttcc 180

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gtcataacct ggttacta 498

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<212> DNA
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<220>
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<400> 837
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tatcctctgg ctgctggagg cttgctgaag gctgtatgct gttatgtaca agccacttcc 180

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tagcactcac atggaacaaa tggcccagat cctggaggct tgctgaaggc tgtatgctgt 300

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agtccaagag tcaccctgct ggatgaacgt agatgtcaga ctctatcatt taatgtgcta 480

gtcataacct ggttacta 498

<210> 838
<211> 498
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<213> Artificial sequence

<220>
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tagcactcac atggaacaaa tggcccagat cctggaggct tgctgaaggc tgtatgctga 300

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tatattaatg ttactaatgt gtttactagt ggtgatagca atgtcagcag tgcctttaag 240

acccaagcac taacatggtg aagccacaga tgcatgttag tgattgggtc ttacaagtaa 300

ggttgaccat actctactct agtcagtttt attgatagtc ttttcagtat tattgataat 360

ctt 363

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gaattcttac tttagacaag taaggttgac catactctac tctagagttg tgttttaatg 180

tatattaatg ttactaatgt gtttactagt ggtgatagca atgtcagcag tgccttttcc 240

ctacaagtct ttccaatgtg aagccacaga tgattggaaa gaattgtagg gaacaagtaa 300

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ctt 363

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<220>
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ctcaaaagga tgtcaacaag taaggttgac catactctac tctagagttg tgttttaatg 180

tatattaatg ttactaatgt gtttactagt ggtgatagca atgtcagcag tgccttttcc 240

ctacaagtct ttccaatgtg aagccacaga tgattggaaa gaattgtagg gaacaagtaa 300

ggttgaccat actctactct agtcagtttt attgatagtc ttttcagtat tattgataat 360

ctt 363

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tcgttttggc cactgactga cgaactcaac tggcaagaaa caggacacaa ggcctgttac 240

tagcactcac atggaacaaa tggcccagat cctggaggct tgctgaaggc tgtatgctgt 300

cctatggacc cttaagaccc gttttggcca ctgactgacg ggtcttaggt ccataggaca 360

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gtcataacct ggttacta 498

<210> 843
<211> 498
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 843
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gggttttggc cactgactga cccaacagaa tgcatccata caggacacaa ggcctgttac 240

tagcactcac atggaacaaa tggcccagat cctggaggct tgctgaaggc tgtatgctga 300

atgatgtcaa catgctgatc gttttggcca ctgactgacc caacagaatg catccataca 360

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agtccaagag tcaccctgct ggatgaacgt agatgtcaga ctctatcatt taatgtgcta 480

gtcataacct ggttacta 498

<210> 844

<211> 498
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 844
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tatcctctgg ctgctggagg cttgctgaag gctgtatgct gtttcttgcc agtcttgagt 180

tcgttttggc cactgactga cgaactcaac tggcaagaaa caggacacaa ggcctgttac 240

tagcactcac atggaacaaa tggcccagat cctggaggct tgctgaaggc tgtatgctga 300

atgatgtcaa catgctgatc gttttggcca ctgactgacg atcagcattg acatcattca 360

ggacacaagg cctgttacta gcactcacat ggaacaaatg gccaccgtgg gaggatgaca 420

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gtcataacct ggttacta 498

<210> 845
<211> 363
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 845
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tgctgcttct catcctcaag taaggttgac catactctac tctagagttg tgttttaatg 180

tatattaatg ttactaatgt gtttactagt ggtgatagca atgtcagcag tgccttatct 240

tgctctgagc ctgcggagtg aagccacaga tgtccgcagg ctaagagcaa gatcaagtaa 300

ggttgaccat actctactct agtcagtttt attgatagtc ttttcagtat tattgataat 360

ctt 363

<210> 846
<211> 363
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 846
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aagaccgtgg cgaccacaag taaggttgac catactctac tctagagttg tgttttaatg 180

tatattaatg ttactaatgt gtttactagt ggtgatagca atgtcagcag tgccttccag 240

gtcagagctg ctccggcgtg aagccacaga tggccggagc agatctgacc tggcaagtaa 300

ggttgaccat actctactct agtcagtttt attgatagtc ttttcagtat tattgataat 360

ctt 363

<210> 847
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<220>
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<400> 847
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aagaccgtgg cgaccacaag taaggttgac catactctac tctagagttg tgttttaatg 180

tatattaatg ttactaatgt gtttactagt ggtgatagca atgtcagcag tgccttatct 240

tgctctgagc ctgcggagtg aagccacaga tgtccgcagg ctaagagcaa gatcaagtaa 300

ggttgaccat actctactct agtcagtttt attgatagtc ttttcagtat tattgataat 360

ctt 363

<210> 848

<211> 498
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 848
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tatcctctgg ctgctggagg cttgctgaag gctgtatgct gctagacagc tctgtgaagt 180

acgttttggc cactgactga cgtacttcag agctgtctag caggacacaa ggcctgttac 240

tagcactcac atggaacaaa tggcccagat cctggaggct tgctgaaggc tgtatgctgt 300

tcttgctcca gctcctctat gttttggcca ctgactgaca tagaggatgg agcaagaaca 360

ggacacaagg cctgttacta gcactcacat ggaacaaatg gccaccgtgg gaggatgaca 420

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gtcataacct ggttacta 498

<210> 849
<211> 498
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 849
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tatcctctgg ctgctggagg cttgctgaag gctgtatgct gatgagaaac agcaggaggt 180

gggttttggc cactgactga cccacctccc tgtttctcat caggacacaa ggcctgttac 240

tagcactcac atggaacaaa tggcccagat cctggaggct tgctgaaggc tgtatgctga 300

aaggtgaaag ccaaaggctc gttttggcca ctgactgacg agcctttctt tcacctttca 360

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agtccaagag tcaccctgct ggatgaacgt agatgtcaga ctctatcatt taatgtgcta 480

gtcataacct ggttacta 498

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<400> 850
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tatcctctgg ctgctggagg cttgctgaag gctgtatgct gctagacagc tctgtgaagt 180

acgttttggc cactgactga cgtacttcag agctgtctag caggacacaa ggcctgttac 240

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aaggtgaaag ccaaaggctc gttttggcca ctgactgacg agcctttctt tcacctttca 360

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gtcataacct ggttacta 498

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<211> 363
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 851
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atcttatgga agataccaag taaggttgac catactctac tctagagttg tgttttaatg 180

tatattaatg ttactaatgt gtttactagt ggtgatagca atgtcagcag tgccttatat 240

tcatctataa tagcaaagtg aagccacaga tgtttgctat tacagatgaa tatcaagtaa 300

ggttgaccat actctactct agtcagtttt attgatagtc ttttcagtat tattgataat 360

ctt 363

<210> 852
<211> 363
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 852
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gcaatgtcag cagtgccttg tatcttccag aagatgcctc gtgaagccac agatggaggc 120

atcttatgga agataccaag taaggttgac catactctac tctagagttg tgttttaatg 180

tatattaatg ttactaatgt gtttactagt ggtgatagca atgtcagcag tgccttacac 240

acacacacac acacgcagtg aagccacaga tgtgcgtgtg tgcgtgtgtg tgtcaagtaa 300

ggttgaccat actctactct agtcagtttt attgatagtc ttttcagtat tattgataat 360

ctt 363

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tattacagat gaatatcaag taaggttgac catactctac tctagagttg tgttttaatg 180

tatattaatg ttactaatgt gtttactagt ggtgatagca atgtcagcag tgccttacac 240

acacacacac acacgcagtg aagccacaga tgtgcgtgtg tgcgtgtgtg tgtcaagtaa 300

ggttgaccat actctactct agtcagtttt attgatagtc ttttcagtat tattgataat 360

ctt 363

<210> 854
<211> 498
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 854
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aaatactatc agtgctgcaa accaggaagg ggaagtgtgt ggtttaagtt gcatatccct 120

tatcctctgg ctgctggagg cttgctgaag gctgtatgct gtgtatcttc cagaagatgc 180

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agtccaagag tcaccctgct ggatgaacgt agatgtcaga ctctatcatt taatgtgcta 480

gtcataacct ggttacta 498

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<211> 498
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<220>
<223> Synthetic

<400> 855
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aaatactatc agtgctgcaa accaggaagg ggaagtgtgt ggtttaagtt gcatatccct 120

tatcctctgg ctgctggagg cttgctgaag gctgtatgct gaagtgtatc ttccagaaga 180

tggttttggc cactgactga ccatcttcta agatacactt caggacacaa ggcctgttac 240

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agtccaagag tcaccctgct ggatgaacgt agatgtcaga ctctatcatt taatgtgcta 480

gtcataacct ggttacta 498

<210> 856
<211> 498
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 856
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aaatactatc agtgctgcaa accaggaagg ggaagtgtgt ggtttaagtt gcatatccct 120

tatcctctgg ctgctggagg cttgctgaag gctgtatgct gcttacttat aacctgcctt 180

tggttttggc cactgactga ccaaaggcat tataagtaag caggacacaa ggcctgttac 240

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taactgtaag ttcttgaggg gttttggcca ctgactgacc cctcaagctt acagttaaca 360

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agtccaagag tcaccctgct ggatgaacgt agatgtcaga ctctatcatt taatgtgcta 480

gtcataacct ggttacta 498

<210> 857
<211> 363
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

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tcttccttat aattctcaag taaggttgac catactctac tctagagttg tgttttaatg 180

tatattaatg ttactaatgt gtttactagt ggtgatagca atgtcagcag tgcctttaac 240

tatcttaaca agctttggtg aagccacaga tgcaaagctt gtcaagatag ttacaagtaa 300

ggttgaccat actctactct agtcagtttt attgatagtc ttttcagtat tattgataat 360

ctt 363

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<213> Artificial sequence

<220>
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tataacaaat ttccaatgtg aagccacaga tgattggaaa ttcgttataa tgacaagtaa 300

ggttgaccat actctactct agtcagtttt attgatagtc ttttcagtat tattgataat 360

ctt 363

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tatattaatg ttactaatgt gtttactagt ggtgatagca atgtcagcag tgccttaaga 240

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ggttgaccat actctactct agtcagtttt attgatagtc ttttcagtat tattgataat 360

ctt 363

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<211> 498
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<220>
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gagttttggc cactgactga ctctaggagc tggcaactta caggacacaa ggcctgttac 240

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taaccacaac catgccttac gttttggcca ctgactgacg taaggcagtt gtggttaaca 360

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agtccaagag tcaccctgct ggatgaacgt agatgtcaga ctctatcatt taatgtgcta 480

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<210> 861
<211> 498
<212> DNA
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<220>
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gtcataacct ggttacta 498

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<220>
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ctccaggacc tagagcccaa gtgaagccac agatgttggg ctctaagtcc tggagacaag 300

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cacagatgcc cccaagtaag aaataggctc aagtaaggtt gaccatactc tactctagtc 960

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<211> 999
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<223> Synthetic

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cacagatgtc tgcttctcct ctcctacttc aagtaaggtt gaccatactc tactctagtc 960

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aatttctgat taagatcaag taaggttgac catactctac tctagttata ttctttaggc 180

acgaatgtgt gtttaaaaaa aataaaaact agtggtgata gcaatgtcag cagtgcctta 240

tttctttatg aacactatta gtgaagccac agatgtaata gtgttaataa agaaatcaag 300

taaggttgac catactctac tctagagttg tgttttaatg tatattaatg ttactaatgt 360

gtttactagt ggtgatagca atgtcagcag tgccttagaa gctcctaact ccacttcgtg 420

aagccacaga tggaagtgga gtcaggagct tctcaagtaa ggttgaccat actctactct 480

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gtcagcagtg ccttttagtc acttaggcat gctaagtgaa gccacagatg ttagcatgca 600

taagtgacta caaagtaagg ttgaccatac tctactctag atttttcaga tgtatcatct 660

cttaaaatac tgtaattgca actagtggtg atagcaatgt cagcagtgcc ttttaggaac 720

acagattggg agcgtgaagc cacagatggc tcccaatccg tgttcctaac aagtaaggtt 780

gaccatactc tactctagtt atattcttta ggcacgaatg tgtgtttaaa aaaaataaaa 840

actagtggtg atagcaatgt cagcagtgcc ttagcctatt tcgtacttgg ggggtgaagc 900

cacagatgcc cccaagtaag aaataggctc aagtaaggtt gaccatactc tactctagtc 960

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<210> 866
<211> 1095
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 866
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gcgttttggc cactgactga cgctgaagat gccaaacact caggacacaa ggcctgttac 240

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gtggatagga gcttctcagg acacaaggcc tgttactagc actcacatgg aacaaatggc 540

ccagatcctg gaggcttgct gaaggctgta tgctgatatc tattgggatg cagagagttt 600

tggccactga ctgactctct gcaccaatag atatcaggac acaaggcctg ttactagcac 660

tcacatggaa caaatggccc agatcctgga ggcttgctga aggctgtatg ctgtgaggat 720

gaagaatgac ctgggttttg gccactgact gacccaggtc acttcatcct cacaggacac 780

aaggcctgtt actagcactc acatggaaca aatggcccag atcctggagg cttgctgaag 840

gctgtatgct gtggtttagc ctatttcgta ctgttttggc cactgactga cagtacgaaa 900

ggctaaacca caggacacaa ggcctgttac tagcactcac atggaacaaa tggcccagga 960

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<210> 867
<211> 1095
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 867
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ggacacaagg cctgttacta gcactcacat ggaacaaatg gcccagatcc tggaggcttg 420

ctgaaggctg tatgctgtat tgaaccatga cgggttaggt tttggccact gactgaccta 480

acccgatggt tcaatacagg acacaaggcc tgttactagc actcacatgg aacaaatggc 540

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tcacatggaa caaatggccc agatcctgga ggcttgctga aggctgtatg ctgtgaggat 720

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<210> 868
<211> 1095
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 868
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tcggcagcag gacatacaac gttttggcca ctgactgacg ttgtatgctg ctgccgatca 360

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gcaggtacag gagagttttg gccactgact gactctcctg tctgctccca atcaggacac 780

aaggcctgtt actagcactc acatggaaca aatggcccag atcctggagg cttgctgaag 840

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<210> 869
<211> 450
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic

<400> 869

Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
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Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Asn Ile Lys Asp Thr
20 25 30

Tyr Ile His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45

Ala Arg Ile Tyr Pro Thr Asn Gly Tyr Thr Arg Tyr Ala Asp Ser Val
50 55 60

Lys Gly Arg Phe Thr Ile Ser Ala Asp Thr Ser Lys Asn 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

Ser Arg Trp Gly Gly Asp Gly Phe Tyr Ala Met Asp Tyr Trp Gly Gln
            100                 105                 110

Gly Thr Leu Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val
        115                 120                 125

Phe Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala
    130                 135                 140

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

Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val
                165                 170                 175

Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro
            180                 185                 190

Ser Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys
        195                 200                 205

Pro Ser Asn Thr Lys Val Asp Lys Lys Val Glu Pro Lys Ser Cys Asp
    210                 215                 220

Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly
225                 230                 235                 240

Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile
                245                 250                 255

Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu
            260                 265                 270

Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His
```

```
        275                 280                 285

Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg
    290                 295                 300

Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys
305                 310                 315                 320

Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu
                325                 330                 335

Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr
            340                 345                 350

Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu
        355                 360                 365

Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp
    370                 375                 380

Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val
385                 390                 395                 400

Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp
                405                 410                 415

Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His
            420                 425                 430

Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro
        435                 440                 445

Gly Lys
    450
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<210> 870
<211> 214
<212> PRT

<213> Artificial sequence

<220>
<223> Synthetic

<400> 870

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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 Val Asn Thr Ala
            20                  25                  30


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


Tyr Ser Ala Ser Phe Leu Tyr Ser Gly Val Pro Ser Arg Phe Ser Gly
    50                  55                  60


Ser Arg 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 His Tyr Thr Thr Pro Pro
                85                  90                  95


Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys Arg Thr Val Ala Ala
            100                 105                 110


Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu Gln Leu Lys Ser Gly
        115                 120                 125


Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe Tyr Pro Arg Glu Ala
    130                 135                 140


Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln Ser Gly Asn Ser Gln
145                 150                 155                 160


Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr Tyr Ser Leu Ser
                165                 170                 175
```

Ser Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu Lys His Lys Val Tyr
            180   185   190

Ala Cys Glu Val Thr His Gln Gly Leu Ser Ser Pro Val Thr Lys Ser
        195   200   205

Phe Asn Arg Gly Glu Cys
    210

<210> 871
<211> 451
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic

<400> 871

Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
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Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Asn Ile Lys Asp Thr
            20   25   30

Tyr Ile His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35   40   45

Ala Arg Ile Tyr Pro Thr Asn Gly Tyr Thr Arg Tyr Ala Asp Ser Val
    50   55   60

Lys Gly Arg Phe Thr Ile Ser Ala Asp Thr Ser Lys Asn 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

Ser Arg Trp Gly Gly Asp Gly Phe Tyr Ala Met Asp Tyr Trp Gly Gln
            100   105   110

```
Gly Thr Leu Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val
        115                 120                 125

Phe Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala
    130                 135                 140

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

Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val
                165                 170                 175

Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro
            180                 185                 190

Ser Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys
        195                 200                 205

Pro Ser Asn Thr Lys Val Asp Lys Lys Val Glu Pro Pro Lys Ser Cys
    210                 215                 220

Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly
225                 230                 235                 240

Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met
                245                 250                 255

Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His
            260                 265                 270

Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val
        275                 280                 285

His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr
    290                 295                 300

Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly
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305 310 315 320

Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile
325 330 335

Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val
340 345 350

Tyr Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser
355 360 365

Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu
370 375 380

Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro
385 390 395 400

Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val
405 410 415

Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met
420 425 430

His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser
435 440 445

Pro Gly Lys
450

<210> 872
<211> 450
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic

<400> 872

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 Asn Ile Lys Asp Thr
            20                  25                  30

Tyr Ile His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35                  40                  45

Ala Arg Ile Tyr Pro Thr Asn Gly Tyr Thr Arg Tyr Ala Asp Ser Val
    50                  55                  60

Lys Gly Arg Phe Thr Ile Ser Ala Asp Thr Ser Lys Asn 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

Ser Arg Trp Gly Gly Asp Gly Phe Tyr Ala Met Asp Tyr Trp Gly Gln
            100                 105                 110

Gly Thr Leu Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val
        115                 120                 125

Phe Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala
    130                 135                 140

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

Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val
                165                 170                 175

Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro
            180                 185                 190

Ser Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys
        195                 200                 205
```

```
Pro Ser Asn Thr Lys Val Asp Lys Lys Val Glu Pro Lys Ser Cys Asp
    210                 215                 220

Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly
225                 230                 235                 240

Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile
                245                 250                 255

Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu
            260                 265                 270

Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His
        275                 280                 285

Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg
    290                 295                 300

Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys
305                 310                 315                 320

Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu
                325                 330                 335

Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr
            340                 345                 350

Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser Leu
        355                 360                 365

Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp
    370                 375                 380

Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val
385                 390                 395                 400

Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp
```

405 410 415

Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His
420 425 430

Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro
435 440 445

Gly Lys
450

<210> 873
<211> 9736
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 873
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tgtcgcgcct cccaagacgt gaacaccgct gtggcttggt accagcagaa gccgggaaag 180

gcccctaagc tgctgatcta ctctgcctcc ttcctgtact cgggcgtgcc gagccggttc 240

agcgggagcc ggtcgggaac cgatttcact ctgaccatct cgtcactgca acccgaggac 300

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aaggtcgaaa tcaagcgcac cgtggccgcc cctagcgtgt ttatcttccc tccctcggat 420

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aaggccgact acgagaagca caaggtctac gcctgcgaag tgacccatca ggggctttcc 660

tcgcccgtga ctaagagctt caatcggggc gaatgctaag gttaatcgag tacgatagcc 720

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cgatagcgct tatatcgttt acgggggatg gcgatagacg actttggtga cttgggcgat 1260

tctgtgtgtc gcaaatatcg cagtttcgat ataggtgaca gacgatatga ggctatatcg 1320

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gtaaatggcc cgcctggcat tatgcccagt acatgacctt atgggacttt cctacttggc 1860

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<210> 875
<211> 124
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic

<400> 875

Met Ala Lys Leu Thr Ser Ala Val Pro Val Leu Thr Ala Arg Asp Val
1 5 10 15

Ala Gly Ala Val Glu Phe Trp Thr Asp Arg Leu Gly Phe Ser Arg Asp
20 25 30

Phe Val Glu Asp Asp Phe Ala Gly Val Val Arg Asp Asp Val Thr Leu
35 40 45

Phe Ile Ser Ala Val Gln Asp Gln Val Val Pro Asp Asn Thr Leu Ala
50 55 60

Trp Val Trp Val Arg Gly Leu Asp Glu Leu Tyr Ala Glu Trp Ser Glu
65 70 75 80

Val Val Ser Thr Asn Phe Arg Asp Ala Ser Gly Pro Ala Met Thr Glu
85 90 95

Ile Gly Glu Gln Pro Trp Gly Arg Glu Phe Ala Leu Arg Asp Pro Ala
100 105 110

Gly Asn Cys Val His Phe Val Ala Glu Glu Gln Asp
115 120

<210> 876
<211> 152
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic

<400> 876

Met Val Ala Ile Ser Lys Asn Gly Val Ile Gly Asn Gly Pro Asp Ile
1 5 10 15

Pro Trp Ser Ala Lys Gly Glu Gln Leu Leu Phe Lys Ala Ile Thr Tyr
20 25 30

Asn Gln Trp Leu Leu Val Gly Arg Lys Thr Phe Glu Ser Met Gly Ala
35 40 45

Leu Pro Asn Arg Lys Tyr Ala Val Val Thr Arg Ser Ser Phe Thr Ser
50 55 60

Asp Asn Glu Asp Val Leu Ile Phe Pro Ser Ile Lys Asp Ala Leu Thr
65 70 75 80

Asn Leu Lys Lys Ile Thr Asp His Val Ile Val Ser Gly Gly Gly Glu
85 90 95

Ile Tyr Lys Ser Leu Ile Asp Gln Val Asp Thr Leu His Ile Ser Thr
100 105 110

Ile Asp Ile Glu Pro Glu Gly Asp Val Tyr Phe Pro Glu Ile Pro Ser
115 120 125

Asn Phe Arg Pro Val Phe Thr Gln Asp Phe Ala Ser Asn Ile Asn Tyr
130 135 140

Ser Tyr Gln Ile Trp Gln Lys Gly
145 150

<210> 877
<211> 187
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic

<400> 877

```
Met Val Arg Pro Leu Asn Cys Ile Val Ala Val Ser Gln Asn Met Gly
1               5                   10                  15


Ile Gly Lys Asn Gly Asp Leu Pro Trp Pro Pro Leu Arg Asn Glu Phe
            20                  25                  30


Lys Tyr Phe Gln Arg Met Thr Thr Thr Ser Ser Val Glu Gly Lys Gln
        35                  40                  45


Asn Leu Val Ile Met Gly Arg Lys Thr Trp Phe Ser Ile Pro Glu Lys
    50                  55                  60


Asn Arg Pro Leu Lys Asp Arg Ile Asn Ile Val Leu Ser Arg Glu Leu
65                  70                  75                  80


Lys Glu Pro Pro Arg Gly Ala His Phe Leu Ala Lys Ser Leu Asp Asp
                85                  90                  95


Ala Leu Arg Leu Ile Glu Gln Pro Glu Leu Ala Ser Lys Val Asp Met
            100                 105                 110


Val Trp Ile Val Gly Gly Ser Ser Val Tyr Gln Glu Ala Met Asn Gln
        115                 120                 125


Pro Gly His Leu Arg Leu Phe Val Thr Arg Ile Met Gln Glu Phe Glu
    130                 135                 140


Ser Asp Thr Phe Phe Pro Glu Ile Asp Leu Gly Lys Tyr Lys Leu Leu
145                 150                 155                 160


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


Lys Tyr Lys Phe Glu Val Tyr Glu Lys Lys Asp
            180                 185
```

<210> 878
<211> 264
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic

<400> 878

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Met Ile Glu Gln Asp Gly Leu His Ala Gly Ser Pro Ala Ala Trp Val
1               5                   10                  15


Glu Arg Leu Phe Gly Tyr Asp Trp Ala Gln Gln Thr Ile Gly Cys Ser
            20                  25                  30


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


Val Lys Thr Asp Leu Ser Gly Ala Leu Asn Glu Leu Gln Asp Glu Ala
    50                  55                  60


Ala Arg Leu Ser Trp Leu Ala Thr Thr Gly Val Pro Cys Ala Ala Val
65                  70                  75                  80


Leu Asp Val Val Thr Glu Ala Gly Arg Asp Trp Leu Leu Leu Gly Glu
                85                  90                  95


Val Pro Gly Gln Asp Leu Leu Ser Ser His Leu Ala Pro Ala Glu Lys
            100                 105                 110


Val Ser Ile Met Ala Asp Ala Met Arg Arg Leu His Thr Leu Asp Pro
        115                 120                 125


Ala Thr Cys Pro Phe Asp His Gln Ala Lys His Arg Ile Glu Arg Ala
    130                 135                 140


Arg Thr Arg Met Glu Ala Gly Leu Val Asp Gln Asp Asp Leu Asp Glu
145                 150                 155                 160
```

```
Glu His Gln Gly Leu Ala Pro Ala Glu Leu Phe Ala Arg Leu Lys Ala
                165                 170                 175


Ser Met Pro Asp Gly Glu Asp Leu Val Val Thr His Gly Asp Ala Cys
            180                 185                 190


Leu Pro Asn Ile Met Val Glu Asn Gly Arg Phe Ser Gly Phe Ile Asp
        195                 200                 205


Cys Gly Arg Leu Gly Val Ala Asp Arg Tyr Gln Asp Ile Ala Leu Ala
    210                 215                 220


Thr Arg Asp Ile Ala Glu Glu Leu Gly Gly Glu Trp Ala Asp Arg Phe
225                 230                 235                 240


Leu Val Leu Tyr Gly Ile Ala Ala Pro Asp Ser Gln Arg Ile Ala Phe
                245                 250                 255


Tyr Arg Leu Leu Asp Glu Phe Phe
            260
```

<210> 879
<211> 267
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic

<400> 879

```
Met Gly Ser Ala Ile Glu Gln Asp Gly Leu His Ala Gly Ser Pro Ala
1               5                   10                  15


Ala Trp Val Glu Arg Leu Phe Gly Tyr Asp Trp Ala Gln Gln Thr Ile
            20                  25                  30


Gly Cys Ser Asp Ala Ala Val Phe Arg Leu Ser Ala Gln Gly Arg Pro
        35                  40                  45
```

```
Val Leu Phe Val Lys Thr Asp Leu Ser Gly Ala Leu Asn Glu Leu Gln
    50                  55                  60

Asp Glu Ala Ala Arg Leu Ser Trp Leu Ala Thr Thr Gly Val Pro Cys
65                  70                  75                  80

Ala Ala Val Leu Asp Val Val Thr Glu Ala Gly Arg Asp Trp Leu Leu
                85                  90                  95

Leu Gly Glu Val Pro Gly Gln Asp Leu Leu Ser Ser His Leu Ala Pro
            100                 105                 110

Ala Glu Lys Val Ser Ile Met Ala Asp Ala Met Arg Arg Leu His Thr
        115                 120                 125

Leu Asp Pro Ala Thr Cys Pro Phe Asp His Gln Ala Lys His Arg Ile
    130                 135                 140

Glu Arg Ala Arg Thr Arg Met Glu Ala Gly Leu Val Asp Gln Asp Asp
145                 150                 155                 160

Leu Asp Glu Glu His Gln Gly Leu Ala Pro Ala Glu Leu Phe Ala Arg
                165                 170                 175

Leu Lys Ala Arg Met Pro Asp Gly Asp Asp Leu Val Val Thr His Gly
            180                 185                 190

Asp Ala Cys Leu Pro Asn Ile Met Val Glu Asn Gly Arg Phe Ser Gly
        195                 200                 205

Phe Ile Asp Cys Gly Arg Leu Gly Val Ala Asp Arg Tyr Gln Asp Ile
    210                 215                 220

Ala Leu Ala Thr Arg Asp Ile Ala Glu Glu Leu Gly Gly Glu Trp Ala
225                 230                 235                 240

Asp Arg Phe Leu Val Leu Tyr Gly Ile Ala Ala Pro Asp Ser Gln Arg
```

245 250 255

Ile Ala Phe Tyr Arg Leu Leu Asp Glu Phe Phe
260 265

<210> 880
<211> 264
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic

<400> 880

Met Ile Glu Gln Asp Gly Leu His Ala Gly Ser Pro Ala Ala Trp Val
1 5 10 15

Glu Arg Leu Phe Gly Tyr Asp Trp Ala Gln Gln Thr Ile Gly Cys Ser
20 25 30

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

Val Lys Thr Asp Leu Ser Gly Ala Leu Asn Glu Leu Gln Asp Glu Ala
50 55 60

Ala Arg Leu Ser Trp Leu Ala Thr Thr Gly Val Pro Cys Ala Ala Val
65 70 75 80

Leu Asp Val Val Thr Glu Ala Gly Arg Asp Trp Leu Leu Leu Gly Glu
85 90 95

Val Pro Gly Gln Asp Leu Leu Ser Ser His Leu Ala Pro Ala Glu Lys
100 105 110

Val Ser Ile Met Ala Asp Ala Met Arg Arg Leu His Thr Leu Asp Pro
115 120 125

Ala Thr Cys Pro Phe Asp His Gln Ala Lys His Arg Ile Glu Arg Ala

```
    130                 135                 140

Arg Thr Arg Met Glu Ala Gly Leu Val Asp Gln Asp Asp Leu Asp Glu
145                 150                 155                 160

Glu His Gln Gly Leu Ala Pro Ala Glu Leu Phe Ala Arg Leu Lys Ala
                165                 170                 175

Arg Met Pro Asp Gly Glu Asp Leu Val Val Thr His Gly Asp Ala Cys
            180                 185                 190

Leu Pro Asn Ile Met Val Glu Asn Gly Arg Phe Ser Gly Phe Ile Asp
        195                 200                 205

Cys Gly Arg Leu Gly Val Ala Asp Arg Tyr Gln Asp Ile Ala Leu Ala
    210                 215                 220

Thr Arg Asp Ile Ala Glu Glu Leu Gly Gly Glu Trp Ala Asp Arg Phe
225                 230                 235                 240

Leu Val Leu Tyr Gly Ile Ala Ala Pro Asp Ser Gln Arg Ile Ala Phe
                245                 250                 255

Tyr Arg Leu Leu Asp Glu Phe Phe
            260


<210>  881
<211>  264
<212>  PRT
<213>  Artificial sequence

<220>
<223>  Synthetic

<400>  881

Met Val Glu Gln Asp Gly Leu His Ala Gly Ser Pro Ala Ala Trp Val
1               5                   10                  15

Glu Arg Leu Phe Gly Tyr Asp Trp Ala Gln Gln Thr Ile Gly Cys Ser
```

```
            20                  25                  30

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

Val Lys Thr Asp Leu Ser Gly Ala Leu Asn Glu Leu Gln Asp Glu Ala
    50                  55                  60

Ala Arg Leu Ser Trp Leu Ala Thr Thr Gly Val Pro Cys Ala Ala Val
65                  70                  75                  80

Leu Asp Val Val Thr Glu Ala Gly Arg Asp Trp Leu Leu Leu Gly Glu
                85                  90                  95

Val Pro Gly Gln Asp Leu Leu Ser Ser His Leu Ala Pro Ala Glu Lys
            100                 105                 110

Val Ser Ile Met Ala Asp Ala Met Arg Arg Leu His Thr Leu Asp Pro
        115                 120                 125

Ala Thr Cys Pro Phe Asp His Gln Ala Lys His Arg Ile Glu Arg Ala
    130                 135                 140

Arg Thr Arg Met Glu Ala Gly Leu Val Asp Gln Asp Asp Leu Asp Glu
145                 150                 155                 160

Glu His Gln Gly Leu Ala Pro Ala Glu Leu Phe Ala Arg Leu Lys Ala
                165                 170                 175

Arg Met Pro Asp Gly Glu Asp Leu Val Val Thr His Gly Asp Ala Cys
            180                 185                 190

Leu Pro Asn Ile Met Val Glu Asn Gly Arg Phe Ser Gly Phe Ile Asp
        195                 200                 205

Cys Gly Arg Leu Gly Val Ala Asp Arg Tyr Gln Asp Ile Ala Leu Ala
    210                 215                 220
```

Thr Arg Asp Ile Ala Glu Glu Leu Gly Gly Glu Trp Ala Asp Arg Phe
225 230 235 240

Leu Val Leu Tyr Gly Ile Ala Ala Pro Asp Ser Gln Arg Ile Ala Phe
245 250 255

Tyr Arg Leu Leu Asp Glu Phe Phe
260

<210> 882
<211> 341
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic

<400> 882

Met Asp Arg Ser Gly Lys Pro Glu Leu Thr Ala Thr Ser Val Glu Lys
1 5 10 15

Phe Leu Ile Glu Lys Phe Asp Ser Val Ser Asp Leu Met Gln Leu Ser
20 25 30

Glu Gly Glu Glu Ser Arg Ala Phe Ser Phe Asp Val Gly Gly Arg Gly
35 40 45

Tyr Val Leu Arg Val Asn Ser Cys Ala Asp Gly Phe Tyr Lys Asp Arg
50 55 60

Tyr Val Tyr Arg His Phe Ala Ser Ala Ala Leu Pro Ile Pro Glu Val
65 70 75 80

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

Arg Ala Gln Gly Val Thr Leu Gln Asp Leu Pro Glu Thr Glu Leu Pro
100 105 110

```
Ala Val Leu Gln Pro Val Ala Glu Ala Met Asp Ala Ile Ala Ala Ala
        115                 120                 125

Asp Leu Ser Gln Thr Ser Gly Phe Gly Pro Phe Gly Pro Gln Gly Ile
    130                 135                 140

Gly Gln Tyr Thr Thr Trp Arg Asp Phe Ile Cys Ala Ile Ala Asp Pro
145                 150                 155                 160

His Val Tyr His Trp Gln Thr Val Met Asp Asp Thr Val Ser Ala Ser
                165                 170                 175

Val Ala Gln Ala Leu Asp Glu Leu Met Leu Trp Ala Glu Asp Cys Pro
            180                 185                 190

Glu Val Arg His Leu Val His Ala Asp Phe Gly Ser Asn Asn Val Leu
        195                 200                 205

Thr Asp Asn Gly Arg Ile Thr Ala Val Ile Asp Trp Ser Glu Ala Met
    210                 215                 220

Phe Gly Asp Ser Gln Tyr Glu Val Ala Asn Ile Phe Phe Trp Arg Pro
225                 230                 235                 240

Trp Leu Ala Cys Met Glu Gln Gln Thr Arg Tyr Phe Glu Arg Arg His
                245                 250                 255

Pro Glu Leu Ala Gly Ser Pro Arg Leu Arg Ala Tyr Met Leu Arg Ile
            260                 265                 270

Gly Leu Asp Gln Leu Tyr Gln Ser Leu Val Asp Gly Asn Phe Asp Asp
        275                 280                 285

Ala Ala Trp Ala Gln Gly Arg Cys Asp Ala Ile Val Arg Ser Gly Ala
    290                 295                 300

Gly Thr Val Gly Arg Thr Gln Ile Ala Arg Arg Ser Ala Ala Val Trp
```

305 310 315 320

Thr Asp Gly Cys Val Glu Val Leu Ala Asp Ser Gly Asn Arg Arg Pro
325 330 335

Ser Thr Arg Pro Arg
340

<210> 883
<211> 341
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic

<400> 883

Met Lys Lys Pro Glu Leu Thr Ala Thr Ser Val Glu Lys Phe Leu Ile
1 5 10 15

Glu Lys Phe Asp Ser Val Ser Asp Leu Met Gln Leu Ser Glu Gly Glu
20 25 30

Glu Ser Arg Ala Phe Ser Phe Asp Val Gly Gly Arg Gly Tyr Val Leu
35 40 45

Arg Val Asn Ser Cys Ala Asp Gly Phe Tyr Lys Asp Arg Tyr Val Tyr
50 55 60

Arg His Phe Ala Ser Ala Ala Leu Pro Ile Pro Glu Val Leu Asp Ile
65 70 75 80

Gly Glu Phe Ser Glu Ser Leu Thr Tyr Cys Ile Ser Arg Arg Ala Gln
85 90 95

Gly Val Thr Leu Gln Asp Leu Pro Glu Thr Glu Leu Pro Ala Val Leu
100 105 110

Gln Pro Val Ala Glu Ala Met Asp Ala Ile Ala Ala Ala Asp Leu Ser

```
        115                 120                 125

Gln Thr Ser Gly Phe Gly Pro Phe Gly Pro Gln Gly Ile Gly Gln Tyr
    130                 135                 140

Thr Thr Trp Arg Asp Phe Ile Cys Ala Ile Ala Asp Pro His Val Tyr
145                 150                 155                 160

His Trp Gln Thr Val Met Asp Asp Thr Val Ser Ala Ser Val Ala Gln
                165                 170                 175

Ala Leu Asp Glu Leu Met Leu Trp Ala Glu Asp Cys Pro Glu Val Arg
            180                 185                 190

His Leu Val His Ala Asp Phe Gly Ser Asn Asn Val Leu Thr Asp Asn
        195                 200                 205

Gly Arg Ile Thr Ala Val Ile Asp Trp Ser Glu Ala Met Phe Gly Asp
    210                 215                 220

Ser Gln Tyr Glu Val Ala Asn Ile Phe Phe Trp Arg Pro Trp Leu Ala
225                 230                 235                 240

Cys Met Glu Gln Gln Thr Arg Tyr Phe Glu Arg Arg His Pro Glu Leu
                245                 250                 255

Ala Gly Ser Pro Arg Leu Arg Ala Tyr Met Leu Arg Ile Gly Leu Asp
            260                 265                 270

Gln Leu Tyr Gln Ser Leu Val Asp Gly Asn Phe Asp Asp Ala Ala Trp
        275                 280                 285

Ala Gln Gly Arg Cys Asp Ala Ile Val Arg Ser Gly Ala Gly Thr Val
    290                 295                 300

Gly Arg Thr Gln Ile Ala Arg Arg Ser Ala Ala Val Trp Thr Asp Gly
305                 310                 315                 320
```

Cys Val Glu Val Leu Ala Asp Ser Gly Asn Arg Arg Pro Ser Thr Arg
325 330 335

Pro Arg Ala Lys Glu
340

<210> 884
<211> 199
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic

<400> 884

Met Thr Glu Tyr Lys Pro Thr Val Arg Leu Ala Thr Arg Asp Asp Val
1 5 10 15

Pro Arg Ala Val Arg Thr Leu Ala Ala Ala Phe Ala Asp Tyr Pro Ala
20 25 30

Thr Arg His Thr Val Asp Pro Asp Arg His Ile Glu Arg Val Thr Arg
35 40 45

Ala Ala Arg Thr Leu Pro His Ala Arg Arg Ala Arg His Arg Gln Gly
50 55 60

Val Gly Arg Ala Thr Arg Arg Arg Gly Gly Gly Leu Asp His Ala Gly
65 70 75 80

Glu Arg Arg Ser Gly Gly Gly Val Arg Arg Asp Arg Asn Ala His Gly
85 90 95

Arg Val Glu Arg Phe Pro Ala Gly Arg Ala Ala Thr Asp Gly Arg Pro
100 105 110

Pro Gly Ala Ala Pro Ala Gln Gly Ala Arg Val Val Pro Gly His Arg
115 120 125

```
Arg Arg Leu Ala Arg Pro Pro Gly Gln Gly Ser Gly Gln Arg Arg Arg
    130                 135                 140

Ala Pro Arg Ser Gly Gly Gly Arg Ala Arg Arg Gly Ala Arg Leu Pro
145                 150                 155                 160

Gly Asp Leu Arg Ala Pro Gln Pro Pro Phe Tyr Glu Arg Leu Gly Phe
                165                 170                 175

Thr Val Thr Ala Asp Val Glu Cys Pro Lys Asp Arg Ala Thr Trp Cys
            180                 185                 190

Met Thr Arg Lys Pro Gly Ala
        195
```

<210> 885
<211> 199
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic

<400> 885

```
Met Thr Glu Tyr Lys Pro Thr Val Arg Leu Ala Thr Arg Asp Asp Val
1               5                   10                  15

Pro Arg Ala Val Arg Thr Leu Ala Ala Ala Phe Ala Asp Tyr Pro Ala
            20                  25                  30

Thr Arg His Thr Val Asp Pro Asp Arg His Ile Glu Arg Val Thr Glu
        35                  40                  45

Leu Gln Glu Leu Phe Leu Thr Arg Val Gly Leu Asp Ile Gly Lys Val
    50                  55                  60

Trp Val Ala Asp Asp Gly Ala Ala Val Ala Val Trp Thr Thr Pro Glu
65                  70                  75                  80
```

```
Ser Val Glu Ala Gly Ala Val Phe Ala Glu Ile Gly Pro Arg Met Ala
                85                  90                  95


Glu Leu Ser Gly Ser Arg Leu Ala Ala Gln Gln Gln Met Glu Gly Leu
            100                 105                 110


Leu Ala Pro His Arg Pro Lys Glu Pro Ala Trp Phe Leu Ala Thr Val
        115                 120                 125


Gly Val Ser Pro Asp His Gln Gly Lys Gly Leu Gly Ser Ala Val Val
    130                 135                 140


Leu Pro Gly Val Glu Ala Ala Glu Arg Ala Gly Val Pro Ala Phe Leu
145                 150                 155                 160


Glu Thr Ser Ala Pro Arg Asn Leu Pro Phe Tyr Glu Arg Leu Gly Phe
                165                 170                 175


Thr Val Thr Ala Asp Val Glu Cys Pro Lys Asp Arg Ala Thr Trp Cys
            180                 185                 190


Met Thr Arg Lys Pro Gly Ala
        195


<210>  886
<211>  199
<212>  PRT
<213>  Artificial sequence

<220>
<223>  Synthetic

<400>  886

Met Thr Glu Tyr Lys Pro Thr Val Arg Leu Ala Thr Arg Asp Asp Val
1               5                   10                  15


Pro Arg Ala Val Arg Thr Leu Ala Ala Ala Phe Ala Asp Tyr Pro Ala
            20                  25                  30
```

```
Thr Arg His Thr Val Asp Pro Asp Arg His Ile Glu Arg Val Thr Glu
        35                  40                  45

Leu Gln Glu Leu Phe Leu Thr Arg Val Gly Leu Asp Ile Gly Lys Val
    50                  55                  60

Trp Val Ala Asp Asp Gly Ala Ala Val Ala Val Trp Thr Thr Pro Glu
65                  70                  75                  80

Ser Val Glu Ala Gly Ala Val Phe Ala Glu Ile Gly Pro Arg Met Ala
                85                  90                  95

Glu Leu Ser Gly Ser Arg Leu Ala Ala Gln Gln Gln Met Glu Gly Leu
            100                 105                 110

Leu Ala Pro His Arg Pro Lys Glu Pro Ala Trp Phe Leu Ala Thr Val
        115                 120                 125

Gly Val Ser Pro Asp His Gln Gly Lys Gly Leu Gly Ser Ala Val Val
    130                 135                 140

Leu Pro Gly Val Glu Ala Ala Glu Arg Ala Gly Val Pro Ala Phe Leu
145                 150                 155                 160

Glu Thr Ser Ala Pro Arg Asn Leu Pro Phe Tyr Glu Arg Leu Gly Phe
                165                 170                 175

Thr Val Thr Ala Asp Val Glu Val Pro Glu Gly Pro Arg Thr Trp Cys
            180                 185                 190

Met Thr Arg Lys Pro Gly Ala
        195
```

<210> 887
<211> 132
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic

<400> 887

Met Ala Lys Pro Leu Ser Gln Glu Glu Ser Thr Leu Ile Glu Arg Ala
1   5   10   15

Thr Ala Thr Ile Asn Ser Ile Pro Ile Ser Glu Asp Tyr Ser Val Ala
            20   25   30

Ser Ala Ala Leu Ser Ser Asp Gly Arg Ile Phe Thr Gly Val Asn Val
        35   40   45

Tyr His Phe Thr Gly Gly Pro Cys Ala Glu Leu Val Val Leu Gly Thr
    50   55   60

Ala Ala Ala Ala Ala Ala Gly Asn Leu Thr Cys Ile Val Ala Ile Gly
65   70   75   80

Asn Glu Asn Arg Gly Ile Leu Ser Pro Cys Gly Arg Cys Arg Gln Val
                85   90   95

Leu Leu Asp Leu His Pro Gly Ile Lys Ala Ile Val Lys Asp Ser Asp
            100   105   110

Gly Gln Pro Thr Ala Val Gly Ile Arg Glu Leu Leu Pro Ser Gly Tyr
        115   120   125

Val Trp Glu Gly
    130

<210> 888
<211> 373
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic

<400> 888

```
Met Ala Thr Ser Ala Ser Ser His Leu Asn Lys Asn Ile Lys Gln Met
1               5                  10                  15

Tyr Leu Cys Leu Pro Gln Gly Glu Lys Val Gln Ala Met Tyr Ile Trp
            20                  25                  30

Val Asp Gly Thr Gly Glu Gly Leu Arg Cys Lys Thr Arg Thr Leu Asp
        35                  40                  45

Cys Glu Pro Lys Cys Val Glu Glu Leu Pro Glu Trp Asn Phe Asp Gly
    50                  55                  60

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

Pro Val Ala Met Phe Arg Asp Pro Phe Arg Arg Asp Pro Asn Lys Leu
                85                  90                  95

Val Phe Cys Glu Val Phe Lys Tyr Asn Arg Lys Pro Ala Glu Thr Asn
            100                 105                 110

Leu Arg His Ser Cys Lys Arg Ile Met Asp Met Val Ser Asn Gln His
        115                 120                 125

Pro Trp Phe Gly Met Glu Gln Glu Tyr Thr Leu Met Gly Thr Asp Gly
    130                 135                 140

His Pro Phe Gly Trp Pro Ser Asn Gly Phe Pro Gly Pro Gln Gly Pro
145                 150                 155                 160

Tyr Tyr Cys Gly Val Gly Ala Asp Lys Ala Tyr Gly Arg Asp Ile Val
                165                 170                 175

Glu Ala His Tyr Arg Ala Cys Leu Tyr Ala Gly Val Lys Ile Thr Gly
            180                 185                 190

Thr Asn Ala Glu Val Met Pro Ala Gln Trp Glu Phe Gln Ile Gly Pro
```

```
        195                 200                 205

Cys Glu Gly Ile Arg Met Gly Asp His Leu Trp Val Ala Arg Phe Ile
    210                 215                 220

Leu His Arg Val Cys Glu Asp Phe Gly Val Ile Ala Thr Phe Asp Pro
225                 230                 235                 240

Lys Pro Ile Pro Gly Asn Trp Asn Gly Ala Gly Cys His Thr Asn Phe
                245                 250                 255

Ser Thr Lys Ala Met Arg Glu Glu Asn Gly Leu Lys His Ile Glu Glu
            260                 265                 270

Ala Ile Glu Lys Leu Ser Lys Arg His Arg Tyr His Ile Arg Ala Tyr
        275                 280                 285

Asp Pro Lys Gly Gly Leu Asp Asn Ala Arg Arg Leu Thr Gly Phe His
    290                 295                 300

Glu Thr Ser Asn Ile Asn Asp Phe Ser Ala Gly Val Ala Asn Arg Ser
305                 310                 315                 320

Ala Ser Ile Arg Ile Pro Arg Thr Val Gly Gln Glu Lys Lys Gly Tyr
                325                 330                 335

Phe Glu Asp Arg Arg Pro Ser Ala Asn Cys Asp Pro Phe Ala Val Thr
            340                 345                 350

Glu Ala Ile Val Arg Thr Cys Leu Leu Asn Glu Thr Gly Asp Glu Pro
        355                 360                 365

Phe Gln Tyr Lys Asn
    370
```

<210> 889
<211> 373
<212> PRT

<213> Artificial sequence

<220>
<223> Synthetic

<400> 889

Met Ala Thr Ser Ala Ser Ser His Leu Asn Lys Gly Ile Lys Gln Met
1 5 10 15

Tyr Met Asn Leu Pro Gln Gly Glu Lys Ile Gln Leu Met Tyr Ile Trp
20 25 30

Val Asp Gly Thr Gly Glu Gly Leu Arg Cys Lys Thr Arg Thr Leu Asp
35 40 45

Cys Asp Pro Lys Cys Val Glu Glu Leu Pro Glu Trp Asn Phe Asp Gly
50 55 60

Ser Ser Thr Phe Gln Ser Glu Gly Ser Asn Ser Asp Met Tyr Leu His
65 70 75 80

Pro Val Ala Met Phe Arg Asp Pro Phe Arg Arg Asp Pro Asn Lys Leu
85 90 95

Val Phe Cys Glu Val Phe Lys Tyr Asn Arg Lys Pro Ala Glu Thr Asn
100 105 110

Leu Arg His Ser Cys Lys Arg Ile Met Asp Met Val Ser Ser Gln His
115 120 125

Pro Trp Phe Gly Met Glu Gln Glu Tyr Thr Leu Met Gly Thr Asp Gly
130 135 140

His Pro Phe Gly Trp Pro Ser Asn Gly Phe Pro Gly Pro Gln Gly Pro
145 150 155 160

Tyr Tyr Cys Gly Val Gly Ala Asp Lys Ala Tyr Gly Arg Asp Ile Val
165 170 175

```
Glu Ala His Tyr Arg Ala Cys Leu Tyr Ala Gly Ile Lys Ile Thr Gly
            180                 185                 190

Thr Asn Ala Glu Val Met Pro Ala Gln Trp Glu Phe Gln Ile Gly Pro
        195                 200                 205

Cys Glu Gly Ile Arg Met Gly Asp His Leu Trp Val Ala Arg Phe Ile
    210                 215                 220

Leu His Arg Val Cys Glu Asp Phe Gly Val Ile Ala Thr Phe Asp Pro
225                 230                 235                 240

Lys Pro Ile Pro Gly Asn Trp Asn Gly Ala Gly Cys His Thr Asn Phe
                245                 250                 255

Ser Thr Lys Ala Met Arg Glu Glu Asn Gly Leu Arg Cys Ile Glu Glu
            260                 265                 270

Ala Ile Asp Lys Leu Ser Lys Arg His Gln Tyr His Ile Arg Ala Tyr
        275                 280                 285

Asp Pro Lys Gly Gly Leu Asp Asn Ala Arg Arg Leu Thr Gly Phe His
    290                 295                 300

Glu Thr Ser Asn Ile Asn Asp Phe Ser Ala Gly Val Ala Asn Arg Ser
305                 310                 315                 320

Ala Ser Ile Arg Ile Pro Arg Ile Val Gly Gln Glu Lys Lys Gly Tyr
                325                 330                 335

Phe Glu Asp Arg Arg Pro Ser Ala Asn Cys Asp Pro Tyr Ala Val Thr
            340                 345                 350

Glu Ala Ile Val Arg Thr Cys Leu Leu Asn Glu Thr Gly Asp Glu Pro
        355                 360                 365

Phe Gln Tyr Lys Asn
```

370

<210> 890
<211> 373
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic

<400> 890

Met Ala Thr Ser Ala Ser Ser His Leu Asn Lys Gly Ile Lys Gln Met
1 5 10 15

Tyr Met Ser Leu Pro Gln Gly Glu Lys Ile Gln Ala Met Tyr Ile Trp
20 25 30

Val Asp Gly Thr Gly Glu Gly Leu Arg Cys Lys Thr Arg Thr Leu Asp
35 40 45

Cys Asp Pro Lys Cys Val Glu Glu Leu Pro Glu Trp Asn Phe Asp Gly
50 55 60

Ser Ser Thr Phe Gln Ser Glu Gly Ser Asn Ser Asp Met Tyr Leu His
65 70 75 80

Pro Val Ala Met Phe Arg Asp Pro Phe Arg Lys Asp Pro Asn Lys Leu
85 90 95

Val Leu Cys Glu Val Phe Lys Tyr Asn Arg Lys Pro Ala Glu Thr Asn
100 105 110

Leu Arg His Ile Cys Lys Arg Ile Met Asp Met Val Ser Asn Gln His
115 120 125

Pro Trp Phe Gly Met Glu Gln Glu Tyr Thr Leu Met Gly Thr Asp Gly
130 135 140

His Pro Phe Gly Trp Pro Ser Asn Gly Phe Pro Gly Pro Gln Gly Pro

```
145                 150                 155                 160

Tyr Tyr Cys Gly Val Gly Ala Asp Lys Ala Tyr Gly Arg Asp Ile Val
                165                 170                 175

Glu Ala His Tyr Arg Ala Cys Leu Tyr Ala Gly Val Lys Ile Thr Gly
            180                 185                 190

Thr Asn Ala Glu Val Met Pro Ala Gln Trp Glu Phe Gln Ile Gly Pro
        195                 200                 205

Cys Glu Gly Ile Arg Met Gly Asp His Leu Trp Ile Ala Arg Phe Ile
    210                 215                 220

Leu His Arg Val Cys Glu Asp Phe Gly Val Ile Ala Thr Phe Asp Pro
225                 230                 235                 240

Lys Pro Ile Pro Gly Asn Trp Asn Gly Ala Gly Cys His Thr Asn Phe
                245                 250                 255

Ser Thr Lys Ala Met Arg Glu Glu Asn Gly Leu Lys Cys Ile Glu Glu
            260                 265                 270

Ala Ile Asp Lys Leu Ser Lys Arg His Gln Tyr His Ile Arg Ala Tyr
        275                 280                 285

Asp Pro Lys Gly Gly Leu Asp Asn Ala Arg Arg Leu Thr Gly Phe His
    290                 295                 300

Glu Thr Ser Asn Ile Asn Asp Phe Ser Ala Gly Val Ala Asn Arg Ser
305                 310                 315                 320

Ala Ser Ile Arg Ile Pro Arg Thr Val Gly Gln Glu Lys Lys Gly Tyr
                325                 330                 335

Phe Glu Asp Arg Arg Pro Ser Ala Asn Cys Asp Pro Tyr Ala Val Thr
            340                 345                 350
```

```
Glu Ala Ile Val Arg Thr Cys Leu Leu Asn Glu Thr Gly Asp Glu Pro
        355                 360                 365


Phe Gln Tyr Lys Asn
    370


<210>  891
<211>  373
<212>  PRT
<213>  Artificial sequence

<220>
<223>  Synthetic

<400>  891

Met Ala Thr Ser Ala Ser Ser His Leu Asn Lys Asn Ile Lys Gln Met
1               5                   10                  15


Tyr Leu Cys Leu Pro Gln Gly Glu Lys Val Gln Ala Met Tyr Ile Trp
            20                  25                  30


Val Asp Gly Thr Gly Glu Gly Leu Arg Cys Lys Thr Arg Thr Leu Asp
        35                  40                  45


Cys Glu Pro Lys Cys Val Glu Glu Leu Pro Glu Trp Asn Phe Asp Gly
    50                  55                  60


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


Pro Val Ala Met Phe Arg Asp Pro Phe Arg Arg Glu Pro Asn Lys Leu
                85                  90                  95


Val Phe Cys Glu Val Phe Lys Tyr Asn Arg Lys Pro Ala Glu Thr Asn
            100                 105                 110


Leu Arg His Ser Cys Lys Arg Ile Met Asp Met Val Ser Asn Gln His
        115                 120                 125
```

```
Pro Trp Phe Gly Met Glu Gln Glu Tyr Thr Leu Met Gly Thr Asp Gly
    130                 135                 140

His Pro Phe Gly Trp Pro Ser Asn Gly Phe Pro Gly Pro Gln Gly Pro
145                 150                 155                 160

Tyr Tyr Cys Gly Val Gly Ala Asp Lys Ala Tyr Gly Arg Asp Ile Val
                165                 170                 175

Glu Ala His Tyr Arg Ala Cys Leu Tyr Ala Gly Val Lys Ile Thr Gly
            180                 185                 190

Thr Asn Ala Glu Val Met Pro Ala Gln Trp Glu Phe Gln Ile Gly Pro
        195                 200                 205

Cys Glu Gly Ile His Met Gly Asp His Leu Trp Val Ala Arg Phe Ile
    210                 215                 220

Leu His Arg Val Cys Glu Asp Phe Gly Val Ile Ala Thr Phe Asp Pro
225                 230                 235                 240

Lys Pro Ile Pro Gly Asn Trp Asn Gly Ala Gly Cys His Thr Asn Phe
                245                 250                 255

Ser Thr Lys Ala Met Arg Glu Glu Asn Gly Leu Lys His Ile Glu Glu
            260                 265                 270

Ala Ile Glu Lys Leu Ser Lys Arg His Gln Tyr His Ile Arg Ala Tyr
        275                 280                 285

Asp Pro Lys Gly Gly Leu Asp Asn Ala Arg Arg Leu Thr Gly Phe His
    290                 295                 300

Glu Thr Ser Asn Ile Asn Asp Phe Ser Ala Gly Val Ala Asn Arg Ser
305                 310                 315                 320

Ala Ser Ile Arg Ile Pro Arg Thr Val Gly Gln Glu Lys Lys Gly Tyr
```

325 330 335

Phe Glu Asp Arg Arg Pro Ser Ala Asn Cys Asp Pro Phe Ala Val Thr
340 345 350

Glu Ala Ile Val Arg Thr Cys Leu Leu Asn Glu Thr Gly Asp Glu Pro
355 360 365

Phe Gln Tyr Lys Asn
370

<210> 892
<211> 394
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic

<400> 892

Met Ala Thr Ser Ala Ser Ser His Leu Asn Lys Asn Ile Lys Gln Met
1 5 10 15

Tyr Leu Cys Leu Pro Gln Gly Glu Lys Val Gln Ala Met Tyr Ile Trp
20 25 30

Val Asp Gly Thr Gly Glu Gly Leu Arg Cys Lys Thr Arg Thr Leu Asp
35 40 45

Cys Glu Pro Lys Cys Val Glu Glu Leu Pro Glu Trp Asn Phe Asp Gly
50 55 60

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

Pro Val Ala Met Phe Arg Asp Pro Phe Arg Arg Glu Pro Asn Lys Leu
85 90 95

Val Phe Cys Glu Val Phe Lys Tyr Asn Arg Lys Pro Ala Glu Thr Asn

```
            100                 105                 110

Leu Arg His Ser Cys Lys Arg Ile Met Asp Met Val Ser Asn Gln His
        115                 120                 125

Pro Trp Phe Gly Met Glu Gln Glu Tyr Thr Leu Met Gly Thr Asp Gly
    130                 135                 140

His Pro Phe Gly Trp Pro Ser Asn Gly Phe Pro Gly Pro Gln Gly Pro
145                 150                 155                 160

Tyr Tyr Cys Gly Val Gly Ala Asp Lys Ala Tyr Gly Arg Asp Ile Val
                165                 170                 175

Glu Ala His Tyr Arg Ala Cys Leu Tyr Ala Gly Val Lys Ile Thr Gly
            180                 185                 190

Thr Asn Ala Glu Val Met Pro Ala Gln Trp Glu Phe Gln Ile Gly Pro
        195                 200                 205

Cys Glu Gly Ile His Met Gly Asp His Leu Trp Val Ala Arg Phe Ile
    210                 215                 220

Leu His Arg Val Cys Glu Asp Phe Gly Val Ile Ala Thr Phe Asp Pro
225                 230                 235                 240

Lys Pro Ile Pro Gly Asn Trp Asn Gly Ala Gly Cys His Thr Asn Phe
                245                 250                 255

Ser Thr Lys Ala Met Arg Glu Glu Asn Gly Leu Lys His Ile Glu Glu
            260                 265                 270

Ala Ile Glu Lys Leu Ser Lys Arg His Gln Tyr His Ile Arg Ala Tyr
        275                 280                 285

Asp Pro Lys Gly Gly Leu Asp Asn Ala Arg Arg Leu Thr Gly Phe His
    290                 295                 300
```

```
Glu Thr Ser Asn Ile Asn Asp Phe Ser Ala Gly Val Ala Asn Arg Ser
305                 310                 315                 320

Ala Ser Ile Arg Ile Pro Arg Thr Val Gly Gln Glu Lys Lys Gly Tyr
                325                 330                 335

Phe Glu Asp Arg Arg Pro Ser Ala Asn Cys Asp Pro Phe Ala Val Thr
            340                 345                 350

Glu Ala Ile Val Arg Thr Cys Leu Leu Asn Glu Thr Gly Asp Glu Pro
        355                 360                 365

Phe Gln Tyr Lys Asn Trp Ile Arg Ser Asp Met Ile Arg Tyr Ile Asp
    370                 375                 380

Glu Phe Gly Gln Thr Thr Thr Arg Met Gln
385                 390
```

<210> 893
<211> 1185
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 893

```
atggccacct cagcaagttc ccacttgaac aaaaacatca agcaaatgta cctgtgcctg       60

ccccagggtg agaaagtcca agccatgtat atctgggttg atggtactgg agaaggactg      120

cgctgcaaaa cccgcaccct ggactgtgag cccaagtgtg tagaagagtt acctgagtgg      180

aattttgatg gctctagtac ctttcagtct gagggctcca acagtgacat gtatctcagc      240

cctgttgcca tgtttcggga ccccttccgc cgggagccca acaagctggt gttctgtgaa      300

gttttcaagt acaaccggaa gcctgcagag acaaatttaa ggcactcctg taaacggata      360

atggacatgg tgagcaacca gcacccctgg tttggaatgg aacaggagta tactctgatg      420

ggaacagatg ggcacccttt tggttggcct tccaatggct ttcctgggcc ccaaggtccg      480
```

tattactgtg gtgtgggcgc agacaaagcc tatggcaggg atatcgtgga ggctcactac 540

cgcgcctgct tgtatgctgg ggtcaagatt acaggaacaa atgctgaggt catgcctgcc 600

cagtgggagt tccaaatagg accctgtgaa ggaatccaca tgggagatca tctctgggtg 660

gcccgtttca tcttgcatcg agtatgtgag gactttgggg taatagcaac ctttgacccc 720

aagcccattc ctgggaactg gaatggtgca ggctgccata ccaactttag caccaaggcc 780

atgcgggagg agaatggtct gaagcacatc gaggaggcca tcgagaaact aagcaagcgg 840

caccagtacc acattcgagc ctacgatccc aaggggggcc tggacaatgc ccgtcgtctg 900

actgggttcc acgaaacgtc caacatcaac gacttttctg ctggtgtcgc caatcgcagt 960

gccagcatcc gcattccccg gactgtcggc caggagaaga aaggttactt tgaagatcgc 1020

cgcccctctg ccaattgtga ccccttttgca gtgacagaag ccatcgtccg cacatgcctt 1080

ctcaatgaga ctggcgacga gcccttccaa tacaaaaact ggatccgctc agacatgata 1140

agatacattg atgagtttgg acaaaccaca actagaatgc agtga 1185

<210> 894
<211> 178
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 894
gcacatcgcc cacagtcccc gagaagttgg ggggaggctc tggctgcagg taattgaacc 60

ggtgcctaga gaaggtggcg cggggtaaac tgggaaagtg atgtcgtgta ctggctccgc 120

ctttttcccg agggtggggg agaaccgtat ataagtgcag tagtcgccgt gaacgttc 178

<210> 895
<211> 369
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 895

acccgccccg accggagctg agagtaattc atacaaaagg actcgcccct gccttgggga 60

atcccaggga ccgtcgttaa actcccacta acgtagaacc cagagatcgc tgcgttcccg 120

ccccctcacc cgcccgctct cgtcatcact gaggtggaga atagcatgcg tgaggctccg 180

gtgcccgtca gtgggcagag cgcacatcgc ccacagtccc cgagaagttg ggaggggtcg 240

gcaattgaac cggtgcctag agaaggtggc gcggggtaaa ctgggaaagt gatgtcgtgt 300

actggctcag ccttttttccc gagggtgggg gagaaccgta tataagtgca gtagtcgccg 360

tgaacgttc 369

<210> 896
<211> 369
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 896
acccgccccg accggagctg agagtaattc atacaaaagg actcgcccct gccttgggga 60

atcccaggga ccgtcgttaa actcccacta acgtagaacc cagagatcgc tgcgttcccg 120

ccccctcacc cgcccgctct cgtcatcact gaggtggaga atagcatgcg tgaggctccg 180

gtgcccgtca gtgggcagag cgcacatcgc ccacagtccc cgagaagttg ggaggggtcg 240

gcaattgaac cggtgcctag agaaggtggc gcggggtaaa ctgggaaagt gatgtcgtgt 300

actggctccg ccttttttccc gagggtgggg gagaaccgta tataagtgca gtagtcgccg 360

tgaacgttc 369

<210> 897
<211> 372
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 897
acccgccccg accggagctg agagtaattc atacaaaagg actcgcccct gccttgggga 60

atcccaggga ccgtcgttaa actcccacta acgtagaacc cagagatcgc tgcgttcccg 120

ccccctcacc cgcccgctct cgtcatcact gaggtggaga atagcatgcg tgaggctccg 180

gtgcccgtca gtgggcagag cgcacatcgc ccacagtccc cgagaagttg gggggagggg 240

tcggcaattg aaccggtgcc tagagaaggt ggcgcggggt aaactgggaa agtgatgtcg 300

tgtactggct ccgccttttt cccgagggtg ggggagaacc gtatataagt gcagtagtcg 360

ccgtgaacgt tc 372

<210> 898
<211> 372
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 898
acccgccccg accggagctg agagtaattc atacaaaagg actcgcccct gccttgggga 60

atcccaggga ccgtcgttaa actcccacta acgtagaacc cagagatcgc tgcgttcccg 120

ccccctcacc cgcccgctct cgtcatcact gaggtggaga atagcatgcg tgaggctccg 180

gtgcccgtca gtgggcagag cgcacatcgc ccacagtccc cgagaagttg gggggagggg 240

tcggcaattg aacgggtgcc tagagaaggt ggcgcggggt aaactgggaa agtgatgtcg 300

tgtactggct ccgccttttt cccgagggtg ggggagaacc gtatataagt gcagtagtcg 360

ccgtgaacgt tc 372

<210> 899
<211> 372
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 899
acccgccccg accggagctg agagtaattc atacaaaagg actcgcccct gccttgggga 60

atcccaggga ccgtcgttaa actcccacta acgtagaacc cagagatcgc tgcgttcccg 120

ccccctcacc cgcccgctct cgtcatcact gaggtggaga atagcatgcg tgaggctccg 180

gtgcccgtca gtgggcagag cgcacatcgc ccacagtccc cgagaagttg gggggagggg 240

tcggcaattg atccggtgcc tagagaaggt ggcgcggggt aaactgggaa agtgatgtcg 300

tgtactggct ccgccttttt cccgagggtg ggggagaacc gtatataagt gcagtagtcg 360

ccgtgaacgt tc 372

<210> 900
<211> 570
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 900
ctgggctgag acccgcagag gaagacgctc tagggatttg tcccggacta gcgagatggc 60

aaggctgagg acgggaggct gattgagagg cgaaggtaca ccctaatctc aatacaacct 120

ttggagctaa gccagcaatg gtagagggaa gattctgcac gtcccttcca ggcggcctcc 180

ccgtcaccac ccccccccaac ccgccccgac cggagctgag agtaattcat acaaaaggac 240

tcgcccctgc cttggggaat cccagggacc gtcgttaaac tcccactaac gtagaaccca 300

gagatcgctg cgttcccgcc ccctcacccg cccgctctcg tcatcactga ggtggagaag 360

agcatgcgtg aggctccggt gcccgtcagt gggcagagcg cacatcgccc acagtccccg 420

agaagttggg gggaggggtc ggcaattgaa ccggtgccta gagaaggtgg cgcggggtaa 480

actgggaaag tgatgtcgtg tactggctcc gccttttcc cgagggtggg ggagaaccgt 540

atataagtgc agtagtcgcc gtgaacgttc 570

<210> 901
<211> 168
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 901

gcacatcgcc cacagtcccc gagaagttgg gaggggtcgg caattgaacc ggtgcctaga 60

gaaggtggcg cggggtaaac tgggaaagtg atgtcgtgta ctggctccgc ctttttcccg 120

agggtggggg agaaccgtat ataagtgcag tagtcgccgt gaacgttc 168

<210> 902
<211> 171
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 902
gcacatcgcc cacagtcccc gagaagttgg ggggaggggt cggcaattga accggtgcct 60

agagaaggtg gcgcggggta aactgggaaa gtgatgtcgt gtactggctc cgccttttc 120

ccgagggtgg gggagaaccg tatataagtg cagtagtcgc cgtgaacgtt c 171

<210> 903
<211> 171
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 903
gcacatcgcc cacagtcccc gagaagttgg ggggaggggt cggcaattga acgggtgcct 60

agagaaggtg gcgcggggta aactgggaaa gtgatgtcgt gtactggctc cgccttttc 120

ccgagggtgg gggagaaccg tatataagtg cagtagtcgc cgtgaacgtt c 171

<210> 904
<211> 168
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 904
gcacatcgcc cacagtcccc gagaagttgg gaggggtcgg caattgaacc ggtgcctaga 60

gaaggtggcg cggggtaaac tgggaaagtg atgtcgtgta ctggctcagc ctttttcccg 120

agggtggggg agaaccgtat ataagtgcag tagtcgccgt gaacgttc 168

<210> 905
<211> 171
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 905
gcacatcgcc cacagtcccc gagaagttgg ggggaggggt cggcaattga tccggtgcct 60

agagaaggtg gcgcggggta aactgggaaa gtgatgtcgt gtactggctc cgccttttc 120

ccgagggtgg gggagaaccg tatataagtg cagtagtcgc cgtgaacgtt c 171

<210> 906
<211> 440
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 906
agcggggctg acgtcgggag gtggcctccg tgggaaggga cacccggatc ttgacacagc 60

cttggcagcg gagtaaggaa gagtagggat agattctggc cgccctcttg gccagcttct 120

cgccgcccca ccctccgcta gggccaagag taattcatac aaaaggaggg atcgccttcg 180

caaggggaga gcccagggac cgtccctaaa ttctcacaga cccaaatccc tgtagccgcc 240

ccacgacagc gcgaggagca tgcgctcagg gctgagcgcg gggagagcag agcacacaag 300

ctcatagacc ctggtcgtgg gggggaggac cggggagctg gcgcggggca aactgggaaa 360

gcggtgtcgt gtgctggctc cgccctcttc ccgagggtgg gggagaacgg tatataagtg 420

cggcagtcgc cttggacgtt 440

<210> 907
<211> 480
<212> DNA

<213> Artificial sequence

<220>
<223> Synthetic

<400> 907
agcggggctg acgtcgggag gtggcctccg tgggaaggga cacccggatc ttgacacagc 60

cttggcagcg gagtaaggaa gagtagggat agattctggc cgccctcttg gccagcttct 120

cgccgcccca ccctccgcta gggccaagag taattcatac aaaaggaggg atcgccttcg 180

cctggggaag tcccagggac cgtcgctaaa ttctcataac ccataatccc ggtacccgcc 240

ccaccacagt gcgaggagca tgcgctcagg gctgagcgcg gggagagcag agcacacaag 300

ctcatagacc ctggtcgtgg ggggaggggc gcactgagcg gggggggggg gggtgatggg 360

ggggaggacc ggggagctgg cgcggggcaa actgggaaag cggtgtcgtg tgctggctcc 420

gccctcttcc cgagggtggg ggagaacggt atataagtgc ggcagtcgcc ttggacgttc 480

<210> 908
<211> 316
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 908
ggagccgaga gtaattcata caaaaggagg gatcgccttc gcaaggggag agcccaggga 60

ccgtccctaa attctcacag acccaaatcc ctgtagccgc cccacgacag cgcgaggagc 120

atgcgcccag ggctgagcgc gggtagatca gagcacacaa gctcacagtc cccggcggtg 180

gggggagggg cgcgctgagc gggggccagg gagctggcgc ggggcaaact gggaaagtgg 240

tgtcgtgtgc tggctccgcc ctcttcccga gggtggggga gaacggtata taagtgcggt 300

agtcgccttg gacgtt 316

<210> 909
<211> 503
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 909
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gtcgggaggt ggcctccgtg ggaaggacac ccggatcttg acacagcctt ggcagcggag 120

tcaggaagag taggggtagg ttctggacgc cctcttggcc agctcatcgc cgccccaccc 180

tctgctggag cacagagtaa ttcatacaaa aggagggatc gccttcgcaa ggggagagcc 240

cagggaccgt ccctaaattc tcacagaccc aaatccctgt agccgcccca cgacagcgcg 300

aggagcatgc gcccagggct gagcgcgggt agatcagagc acacaagctc acagtccccg 360

gcggtggggg gaggggcgcg ctgagcgggg gccagggagc tggcgcgggg caaactggga 420

aagtggtgtc gtgtgctggc tccgccctct tcccgagggt gggggagaac ggtatataag 480

tgcggtagtc gccttggacg ttc 503

<210> 910
<211> 503
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 910
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gtcgggaggt ggcctccgtg ggaaggacac ccggatcttg acacagcctt ggcagcggag 120

tcaggaagag taggggtagg ttctggacgc cctcttggcc agctcttcgc cgccccaccc 180

tctgctggag cacagagtaa ttcatacaaa aggagggatc gccttcgcaa ggggagagcc 240

cagggaccgt ccctaaattc tcacagaccc aaatccctgt agccgcccca cgacagcgcg 300

aggagcatgc gcccagggct gagcgcgggt agatcagagc acacaagctc acagtccccg 360

gcggtggggg gaggggcgcg ctgagcgggg gccagggagc tggcgcgggg caaactggga 420

aagtggtgtc gtgtgctggc tccgccctct tcccgagggt gggggagaac ggtatataag 480

tgcggtagtc gccttggacg ttc 503

<210> 911
<211> 301
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 911
ggagccgaga gtaattcata caaaaggagg gatcgccttc gcaaggggag agcccaggga 60

ccgtccctaa attctcacag acccaaatcc ctgtagccgc cccacgacag cgcgaggagc 120

atgcgctcag ggctgagcgc ggggagagca gagcacacaa gctcatagac cctggtcgtg 180

gggggagga ccggggagct ggcgcggggc aaactgggaa agcggtgtcg tgtgctggct 240

ccgccctctt cccgagggtg ggggagaacg gtatataagt gcggcagtcg ccttggacgt 300

t 301

<210> 912
<211> 459
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 912
ggcggggctg acgtcgggag gtggcctcca cgggaaggga cacccggatc tcgacacagc 60

cttggcagtg gagtcaggaa gggtaggaca gattctggac gccctcttgg ccagtcctca 120

ccgccccacc cccgatggag ccgagagtaa ttcatacaaa aggagggatc gccttcgccc 180

ctgggaatcc cagggaccgt cgctaaattc tggccggcct cccagcccgg aaccgctgtg 240

cccgcccagc gcggcgggag gagcctgcgc ctagggcgga tcgcgggtcg gcgggagagc 300

acaagcccac agtccccggc ggtgggggag gggcgcgctg agcgggggcc cgggagccag 360

cgcggggcaa actgggaaag tggtgtcgtg tgctggctcc gccctcttcc cgagggtggg 420

ggagaacggt ataaaagtgc ggtagtcgcg ttggacgtt 459

<210> 913

<211> 600
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 913
ggggactctg aaggcaaaga cggaggagga gcctgccccg ggcgcgtatg ggaccagcag 60

aagaagctgt tcaaggggtt tgtccaggac ccgcgagagg tcaaggctga ggacgggagg 120

cgtactgcgg ggtgaaggga taccccaacc tggataccat ctttgcaaag aaagcaggaa 180

cggtggaggg aagattctaa gcgtccccgc ctggccgtct actctccgcc ccacccccag 240

ctgcagctga gagtaattca tacaaaagga ggactcgcct tggcctcggg gaatcccagg 300

gaccgtcggt aaactcccac taacctagaa ccgagggctc gctcgtcccc gcctcccacc 360

ccgcgctctc gtcatcatcg gggtcgagag gagcatgcgc aaggcgacgg gtgcttttca 420

gtgggctgag cgcacatcgc ccacggtccc cgaaacgttg ggggagggga cggcgattga 480

acgggtgccc ggtggaggtg gcgcggggta aactgggaaa gtcgtgtcgt gtgctgactc 540

cgccctcttc ccgagggtgg gggaggaccg tatataagtg ccgtagtcct cttgaacgtt 600

<210> 914
<211> 451
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 914
gccaggggtg aggccaagac ccgcggcagg gcgaaggcac accccagtgt ccactcaacc 60

tctgtgctaa gccacgaaga aaaggaagat tctggactgc ctttctggcg attcctagcc 120

gccccacccc cggctggaac caggagtaat tcatacaaaa ggaggactcg cctctgccct 180

cgggaatccc agggaccgtc gataaattct cttaataccc gccccgcggc ctccgagtcg 240

aggagagcat gggccgccga actggttgcg gatcagggcg ccgagcccac agcatcacgg 300

tccccgaggg cgggggaggg gacggcaagg gagcaaggcc aggaggaggc ggcgcggggc 360

aaactgggaa agtggtgtcg tgtgctggct ccgccctctt tccgagggtg ggggagaacg 420

gtatataagt gccgtagtcg ccctggacgt t 451

<210> 915
<211> 525
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 915
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gcgacagggg aaagggacac ctcactcttg gcggctgagc caggaacggc agaggaacat 120

tctgggcgcc cctactggcc ttttcctcgc cgccccattc ccgggtgaag ctgagagtaa 180

ttcatacaga agaactcgcc tttgcctcgg ggaatcccag ggaccgtggt taaactccca 240

ctaacttaaa agcgaaggat ctccggggcc ccgcccccgg ctctcgtcaa cctcggggtc 300

gagaggagca tgcgcaagga gctgggtacg ggtcagtggg ctcagcgcac atcgcccatg 360

gtccccgaga actggttggg gggaggggag aggggcggtg attgaacgag tgcctactgg 420

aggttgcgcg gtgtaaactg ggaaagtggt gtcgtgtgcg ggctccgccc tcttcccgag 480

ggtgggggag aaccgtatat aagtgccgta gtcgccctgg acgtt 525

<210> 916
<211> 220
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 916
tggtgatgcg gttttggcag tacatcaatg ggcgtggata gcggtttgac tcacggggat 60

ttccaagtct ccaccccatt gacgtcaatg ggagtttgtt ttggcaccaa aatcaacggg 120

actttccaaa atgtcgtaac aactccgccc cattgacgca aatgggcggt aggcgtgtac 180

ggtgggaggt ctatataagc agagctcgtt tagtgaaccg 220

<210> 917
<211> 220
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 917
tgctgatgcg gttttggcag tacaccaatg ggcgtggata gcggtttgac tcacggggat 60

ttccaagtct ccaccccatt gacgtcaatg ggagtttgtt ttggcaccaa aatcaacggg 120

actttccaaa atgtcgtaat aaccccgccc cgttgacgca aatgggcggt aggcgtgtac 180

ggtgggaggt ctatataagc agagctcgtt tagtgaaccg 220

<210> 918
<211> 220
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 918
tagtgatgcg gttttggcag tacatcaatg ggcgtggata gcggtttgac tcacggggat 60

ttccaagtct ccaccccatt gacgtcaatg ggagtttgtt ttggcaccaa aatcaacggg 120

actttccaaa atgtcgtaac aactccgccc cattgacgca aatgggcggt aggcgtgtac 180

ggtgggaggt ctatataagc agagctcgtt tagtgaaccg 220

<210> 919
<211> 220
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 919
tggtgatgcg gttttggcag tacatcaatg ggcgtggata gcggtttgac tcacggggat 60

ttccaagtct ccaccccatt gacgtcaatg ggagtttgtt ttggcaccaa aatcaacggg 120

actttccaaa atgtcgtaac aactccgccc cattgacgca aatgggcggt aggcgtgtac 180

ggtgggaggt ctatataagc agcgcgcgtt tagtgaaccg 220

<210> 920
<211> 220
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 920
tggtgatgcg gttttggcag tacaccaatg ggcgtggata gcggtttgac tcacggggat 60

ttccaagtct ccaccccatt gacgtcaatg ggagtttgtt ttggcaccaa aatcaacggg 120

actttccaaa atgtcgtaat aaccccgccc cgttgacgca aatgggcggt aggcgtgtac 180

ggtgggaggt ctatataagc agagctcgtt tagtgaaccg 220

<210> 921
<211> 314
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 921
agtcattggg tttttccagc catttaatta aaacgccatg tactttccca ccattgacgt 60

caatgggcta ttgaaactaa tgcaacgtga cctttaaacg gtactttccc atagctgatt 120

aatgggaaag taccgttctc gagccaatac acgtcaatgg gaagtgaaag ggcagccaaa 180

acgtaacacc gccccggttt tcccctggaa attccatatt ggcactcatt ctattggctg 240

agctgcgttc tacgtgggta taagaggcgc gaccagcgtc ggtaccgtcg cagtcttcgg 300

tctgaccacc gtag 314

<210> 922
<211> 313
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 922
agtcattggg tttttccagc caatttataa aacgccatgt actttcccac cattgacgtc 60

aatgggctat tgaaactaat gcaacgtgac ctttaaacgg tactttccca tagctgatta 120

atgggaaagt accgttctcg agccaataca cgtcaatggg aagtgaaagg gcagccaaaa 180

cgtaacaccg ccccggtttt cccctggaaa ttccatattg gcacgcattc tattggctga 240

gctgcgttct acgtgggtat aagaggcgcg accagcgtcg gtaccgtcgc agtcttgggt 300

ctgaccaccg tag 313

<210> 923
<211> 315
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 923
agtcattggg tttttccagc caatttaatt aaaacgccat gtactttccc accattgacg 60

tcaatgggct attgaaacta atgcaacgtg acctttaaac ggtactttcc catagctgat 120

taatgggaaa gtaccgttct cgagccaata cacgtcaatg ggaagtgaaa gggcagccaa 180

aacgtaacac cgccccggtt ttcccctgga aattccatat tggcacgcat tctattggct 240

gagctgcgtt ctacgtgggt ataagaggcg cgaccagcgt cggtaccgtc gcagtcttcg 300

gtctgaccac cgtag 315

<210> 924
<211> 283
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 924
agtcattggg tttttccagc caatttataa aacgccatgt actttcccac cattgacgtc 60

aatgggctat tgaaactaat gcaacgtgac ctttaaacgg tactttccca tagctgatta 120

atgggaaagt accgttctcg agccaataca cgtcaatggg aagtgaaagg gcagccaaaa 180

cgtaacaccg ccccggtttt cccctggaaa ttccatattg gcacgcattc tattggctga 240

gctgcgttct acgtgggtat aagaggcgcg accagcgtcg gta 283

<210> 925
<211> 293
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 925
aaaggccatt gagtcaccac ccctatgctg ggaaatggtg aacgcccccc atgtggaaag 60

tccctatggg ccgccattag agtgcatgac cgtgctgatt catatgccat atgagtgtat 120

taggggggctt tccgcgtggg aaattgggta aaaagtcccc gtattactca catagggggc 180

gtttggcttt gcaaattagg ggatttcagt gcatttggca ttaaaaacta ttggttctag 240

tcataaaacg ggcggagtta accatataat tgctgtcccc catgccattc gag 293

<210> 926
<211> 238
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 926
tactaatggg gatttccaat gactaataca acgggcagta cgcccagtac gtatgactaa 60

tgggactttc cataatcccg ccccattgac gtcaatgggc atccgttctg gcaccaaaat 120

gaatgggaat ttccaatatg agtcataaac cccgccccat tgacgcacat tacacgtcaa 180

tgggcggtag gcgtgcccta tgggcggtct atataagcag agcccgttta gtgaaccg 238

<210> 927
<211> 220
<212> DNA

<213> Artificial sequence

<220>
<223> Synthetic

<400> 927
tgctgatgcg gttttggcag tacaccaatg ggcgtggata gcggtttgac tcacggggat 60

ttccaagtct ccaccccatt gacgtcaatg ggagtttgtt ttggcaccaa aatcaacggg 120

actttccaaa atgtcgtaat aaccccgccc cgttgacgca aatgggcggt aggcgtgtac 180

ggtgggaggt ctatataagc agagctcgtt tagtgaaccg 220

<210> 928
<211> 783
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 928
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cacggtccta attcttttag atgtctttag ttcgtttcac tctcccccaa acaatagggt 120

ggtattgatc acctccgagc aggtgaaatt gaggcacaga gaaatcctag tagctggtag 180

aagaacacgc agtgtggtca agctagcaag gtgtttggtc cactgctata tctacaaaac 240

ccctaacaat gcctggtgta tagatgctca gtatgcattt gtgggatcag tgattccgat 300

gcctgcttct tataaagttt ttatttagaa ataattacag gtaaggagtt gcaaaaacag 360

tatagtggga tcgagtgtcc tttttccctc ggcttctccc aggggtatcg tcttacgtaa 420

caatgtccaa acagggaaat tgacttgggt ataatccaca gactctattc accttgtaga 480

ttggttttaa tagaagtaac tggacaactt gtaagctaat atcgttgcta tggttctcgt 540

tctcagctaa aacggcgctc tttactttgt gcacctgaac actgcacacc gagggcgacc 600

accgcccccg agatgcccag cttctattct agagcgccgc gccggcgccg aatgggttaa 660

cgggcggggg gacacgcctc cgtgcgcttg cgcggcgtcc cttcgccccg ccttcgcagc 720

gcagtcacat gacccgccca accggcgtcc gcctataaaa agctgagtgt tgacgtcagc 780

gtt 783

<210> 929
<211> 335
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 929
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aggcaatcgc gttctgagcc acctcagctt tggcacacag cgcggggact gtcgcgaggg 120

gtttagggcc caagcaggac acaccccgaa atctccgcag ccacccccac cccacgcccc 180

cggctcttga gggttaaatc gcaggcgcag gttctcgcac gcgcacatca tcccgcaggc 240

gagccccagc acccagccca gggtgcgcgc gcgccgtcac gtgacacgcc caaccggcgt 300

cgccgtataa aagcgcgggc gttgacgtca gcggt 335

<210> 930
<211> 335
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 930
ggatccaact tctaagtccg ttttttattg atctaaaagg ccttttgcga atcatcttga 60

aggcaatcgc gttctgagcc acctcagctt tggcacacag cgcggggact gtcgcgaggg 120

gtttagggcc caagcaggac acaccccgaa atctccgcag ccacccccac cccacgcccc 180

cggctcttga gggttaaatc gcaggcgctg gttctcgcac gcgcacatca tcccgcaggc 240

gagccccagc acccagccca gggtgcgcgc gcgccgtcac gtgacacgcc caaccggcgt 300

cgccgtataa aagcgcgggc gttgacgtca gcgtt 335

<210> 931
<211> 343
<212> DNA

<213> Artificial sequence

<220>
<223> Synthetic

<400> 931
tgacttgggt ataatccaca gactctattc accttgtaga ttggttttaa tagaagtaac 60

tggacaactt gtaagctaat atcgttgcta tggttctcgt tctcagctaa aacggcgctc 120

tttactttgt gcacctgaac actgcacacc gagggcgacc accgcccccg agatgcccag 180

cttctattct agagcgccgc gccggcgccg aatgggttaa cgggcggggg gacacgcctc 240

cgtgcgcttg cgcggcgtcc cttcgccccg ccttcgcagc gcagtcacat gacccgccca 300

accggcgtcc gcctataaaa agctgagtgt tgacgtcagc gtt 343

<210> 932
<211> 329
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 932
cggtccgaat ttcaaagtct ttttcctatt gacctacaag gttttcaaga atcatgttgt 60

aagcaactgt gttctgagga atctatgttt aaaaacccat ccgtggatct tggcccaggg 120

tccagagact gagctagcca cgccccggcc gcgccgcagc cactcccacg gcagttcaag 180

tgttaagtcc caaagaccgc gctctgtgca tgcgcagacc cgtccacagc tggctcctag 240

ccaacccggc cggacgagca cccggcgccg tcacgtgacg cacccaaccg gcgtcgacct 300

ataaaaggcc gggcgttgac gtcagcggt 329

<210> 933
<211> 329
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 933

cggtccgaat ttcaaagtct ttttcctatt gacctacaag gttttcaaga atcatgttgt 60

aagcaactgt gttctgagga atctatgttt aaaaacccat ccgtggatct tggcccaggg 120

tccagagact gagctagcca cgccccggcc gcgccgcagc cactcccacg gcagttcaag 180

tgttaagtcc caaagaccgc gctctgtgca tgcgcagacc cgtccacagc tggctcctag 240

ccaacccggc cggacgagca cccggcgccg tcacgtgacg cacccaaccg gcgtcgacct 300

ataaaaggcc gggcgttgac gtcagcgtt 329

<210> 934
<211> 325
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 934
gggtccgaat ttcaaagtcc tttttattga cttacaaggt tttcaaggaa aatcttggaa 60

gtaactgtgt tccgaagaat ctacgtttaa aaaccgaccc ctggatcttt gccttgggtc 120

caaggaccga gctggccacg ccccagccgc gccgcagcca ctcccaaggc agttcaagtg 180

ttaagcccga aaggtagagc tctgcgcatg tgcacacccg tccatagctg ggtcccagcc 240

aaccaggccg gaggagcacc cgcgccgtca cgtgacgtgc ccaaccggcg tcgacctata 300

aaaggccggg cgttgacgtc agcgg 325

<210> 935
<211> 326
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 935
gggtccgaat ttcaaagtcc tttttattga cttacaaggt tttcaaggaa aatcttggaa 60

gtaactgtgt tccgaagaat ctacgtttaa aaaccgaccc ctggatcttt gccttgggtc 120

caaggaccga gctggccacg ccccagccgc gccgcagcca ctcccaaggc agttcaagtg 180

ttaagcccga aaggtagagc tctgcgcatg tgcacacccg tccatagctg ggtcccagcc 240

aaccaggccg gaggagcacc cgcgccgtca cgtgacgtgc ccaaccggcg tcgacctata 300

aaaggccggg cgttgacgtc agcgtt 326

<210> 936
<211> 169
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 936
ttcgccccgc cttcgcagcg cagtcacatg acccgcccaa ccggcgtccg cctataaaaa 60

gctgagtgtt gacgtcagcg ttctcttccg ccgtcgtcgc cgccatcctc ggcgcgactc 120

gcttctttcg gttctacctg ggagaatcca ccgccatccg ccaccacca 169

<210> 937
<211> 163
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 937
agcccagggt gcgcgcgcgc cgtcacgtga cacgcccaac cggcgtcgcc gtataaaagc 60

gcgggcgttg acgtcagcgt tctcttccgc cgcagccgcc gccatcgtcg gcgcccctcg 120

cacttctcct gtgcccgtga gaatccgtcg ccatccgcca cca 163

<210> 938
<211> 164
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 938
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gccgggcgtt gacgtcagcg ttctcttccg ccgcagccgc cgccatcgtc ggcgcgcttc 120

cctgttcacc tctgactctg agaatccgtc gccatccgcc acca 164

<210> 939
<211> 280
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 939
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caattttgta tttatttatt ttttaattat tttgtgcagc gatgggggcg gggggggggg 120

gggcgcgcgc caggcggggc ggggcggggc gaggggcggg gcggggcgag gcggagaggt 180

gcggcggcag ccaatcagag cggcgcgctc cgaaagtttc cttttatggc gaggcggcgg 240

cggcggcggc cctataaaaa gcgaagcgcg cggcgggcgg 280

<210> 940
<211> 282
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 940
tggtcgaggt gagccccacg ttctgcttca ctctccccat ctccccccccc tccccacccc 60

caattttgta tttatttatt ttttaattat tttgtgcagc gatgggggcg gggggggggg 120

gggggcgcgc gccaggcggg gcggggcggg gcgaggggcg gggcggggcg aggcggagag 180

gtgcggcggc agccaatcag agcggcgcgc tccgaaagtt tccttttatg gcgaggcggc 240

ggcggcggcg gccctataaa aagcgaagcg cgcggcgggc gg 282

<210> 941
<211> 280
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 941
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caattttgta tttatttatt ttttaattat tttgtgcagc gatgggggcg gggggggggg 120

gggcgcgcgc caggtggggc ggggcggggc gaggggcggg gcggggcgag gcggagaggt 180

gcggcggcag ccaatcagag cggcgcgctc cgaaagtttc cttttatggc gaggcggcgg 240

cggcggcggc cctataaaaa gcgaagcgcg cggcgggcgg   280

<210> 942
<211> 283
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 942
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ccaattttgt atttatttat tttttaatta ttttgtgcag cgatgggggc gggggggggg 120

ggggcgcgcg ccaggcgggg cggggcgggg cgaggggcgg ggcggggcga ggcggagagg 180

tgcggcggca gccaatcaga gcggcgcgct ccgaaagttt ccttttatgg cgaggcggcg 240

gcggcggcgg ccctataaaa agcgaagcgc gcggcgggcg gga   283

<210> 943
<211> 270
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 943
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aatgctgcac tgtgcggcta ggccggtgag tgagcggcgc ggagccaatc agcgctcgcc 120

gttccgaaag ttgcctttta tggctcgagt ggccgctgtg gcgtcctata aaacccggcg 180

gcgcaacgcg cagccactgt cgagtccgcg tccacccgcg agcacaggcc tttcgcagct 240

ctttcttcgc cgctccacac ccgccaccag 270

<210> 944
<211> 294
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 944
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aaaaggaggg gagagggggt aaaaaaatgc tgcactgtgc ggcgaggccg gtgagtgagc 120

gacgcggagc caatcagcgc ccgccgttcc gaaagttgcc ttttatggct cgagtggccg 180

ctgtggcgtc ctataaaacc cggcggcgca acgcgcagcc actgtcgagt cgcgtccacc 240

cgcgagcaca gcttctttgc agctccttcg ttgccggtcc acacccgcca ccag 294

<210> 945
<211> 230
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 945
tcaatctcgc tttctctctc gctttttttt ttttcttctt ctttttttt ttttttttca 60

aaaggagggg agaggggta aaaaaatgct gcactgtgcg gcgaggccgg tgagtgagcg 120

acgcggagcc aatcagcgcc cgccgttccg aaagttgcct tttatggctc gagtggccgc 180

tgtggcgtcc tataaaaccc ggcggcgcaa cgcgcagcca ctgtcgagtc 230

<210> 946
<211> 308
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 946
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ttttttttt ttttttttt tgcaaaagaa gggggtaaaa aaatgctgca ctgtcgggcg 120

aggccggtga gtgagcgagc cggagccaat cagcgcccgc cgttccgaaa ttgcctttta 180

tggctcgagt ggccgctgtg gcgtcctata aaacccggcg gcgcaacgcg cgccactgtc 240

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gccaccag 308

<210> 947
<211> 253
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 947
gcccagcacc ccaaggcggc caacgccaaa actctccctc ctcctcttcc tcaatctcgc 60

tctcgctctt ttttttttc gcaaaaggag gggagagggg gtaaaaaaat gctgcactgt 120

gcggcgaagc cggtgagtga gcggcgcggg gccaatcagc gtgcgccgtt ccgaaagttg 180

ccttttatgg ctcgagcggc cgcggcggcg ccctataaaa cccagcggcg cgacgcgcca 240

ccaccgccga gtc 253

<210> 948
<211> 61
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 948
ttgcctttta tggctcgagt ggccgctgtg gcgtcctata aaacccggcg gcgcaacgcg 60

c 61

<210> 949

<211> 494
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 949
atgacgtcga ggagaagttc cccaactttc ccgcctctca gcctttgaaa gaaagaaagg 60

ggaggggca ggccgcgtgc agccgcgagc ggtgctgggc tccggctcca attccccatc 120

tcagtcgttc ccaaagtcct cctgtttcat ccaagcgtgt aagggtcccc gtccttgact 180

ccctagtgtc ctgctgccca cagtccagtc ctgggaacca gcaccgatca cctcccatcg 240

ggccaatctc agtcccttcc cccctacgtc ggggcccaca cgctcggtgc gtgcccagtt 300

gaaccaggcg gctgcggaaa aaaaaaagcg gggagaaagt agggcccggc tactagcggt 360

tttacgggcg cacgtagctc aggcctcaag accttgggct gggactggct gagcctggcg 420

ggaggcgggg tccgagtcac cgcctgccgc cgcgcccccg gtttctataa attgagcccg 480

cagcctcccg cttc 494

<210> 950
<211> 486
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 950
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ctccgttgca actccgaacg acctgctggc aacgtaaaat tctccggggt aaaacttaaa 120

tgtggagtaa tggaaccaga aacatctctt cccttctctc tccttccacc gcccgttacc 180

gtccctagga aattttactc tgctggagag cttcttctac ggccccccttg cagcaatgca 240

cttcccagca ttacgttgcg ggtaaaacgg aggtcgtgta cccgacctag cagcccaggg 300

atggaaaagt cccggccgtc gctggcaata atagcgggcg gacgcatgtc atgagattat 360

tggaaaccac cagaatcgaa tataaaaggc gaacaccttt cccaattttg gtttctcctg 420

acccaaagac tttaaattta atttatttgt ccctatttca atcaattgaa caactatcaa 480

aacaca 486

<210> 951
<211> 486
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 951
tttttgtaga aatgtcttgg tgtcctcgtc caatcaggta gccatctctg aaatatctgg 60

ctccgttgca actccgaacg acctgctggc aacgtaaaat tctccggggt aaaacttaaa 120

tgtggagtaa tggaaccaga aacgtctctt cccttctctc tccttccacc gcccgttacc 180

gtccctagga aattttactc tgctggagag cttcttctac ggccccttg cagcaatgct 240

cttcccagca ttacgttgcg ggtaaaacgg aggtcgtgta cccgacctag cagcccaggg 300

atggaaaagt cccggccgtc gctggcaata atagcgggcg gacgcatgtc atgagattat 360

tggaaaccac cagaatcgaa tataaaaggc gaacaccttt cccaattttg gtttctcctg 420

acccaaagac tttaaattta atttatttgt ccctatttca atcaattgaa caactatcaa 480

aacaca 486

<210> 952
<211> 486
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 952
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ctccgttgca actccgaacg acctgctggc aacgtaaaat tctccggggt aaaacttaaa 120

tgtggagtaa tggaaccaga aacgtctctt cccttctctc tccttccacc gcccgttacc 180

gtccctagga aattttactc tgctggagag cttcttctac ggccccttg cagcaatgct 240

ctacccagca ttacgttgcg ggtaaaacgg aggtcgtgta cccgacctag cagcccaggg 300

atggaaaagt cccggccgtc gctggcaata atagcgggcg gacgcatgtc atgagattat 360

tggaaaccac cagaatcgaa tataaaaggc gaacaccttt cccaattttg gtttctcctg 420

acccaaagac tttaaattta atttatttgt ccctatttca atcaattgaa caactatcaa 480

aacaca 486

<210> 953
<211> 843
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 953
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ggaaaggggt ggcgcgtgct gtccccaggc gaccgggctc aggctccgac tccccatgcc 120

agccgctccc gggtcgtccg tgcggcccct tggcgcggcc tgggctcctg gacctctctg 180

gttcccacca ggatccccat ccccgagtct atagtggctt gcgtgcccat agtcccgtcc 240

cgggaacctt tagccatcac tgcccccgcg ggccacctcg gtcccctccc cctctcaggc 300

ctgggcccac atgcctggtg cgtgcactgg ggaacaaggc gggcccgcaa aaagaaaaac 360

gaggaggccc ggctactcgc gggtttacgg gcgcacgtag ctcaggcctc ctcgcccttg 420

ggctgggact gggcgagcag cacgggaggc ggggcgcacg tcacccacgc cccgccgccc 480

ccagtcccta taaattgagg ctgcgggttc ctccggtgct ctctgctccg ccccgttcga 540

caggcagccg cttcttctcg tgcagtgcta ggtgaccaag gcagaggccg tgggggcttg 600

ggggccggcg ggaggagggg gcgtgctggc cggggcttgg gcagccccga ggcggtgctg 660

ggcccccaga gcggagccgc cgggcggggt cccgcattgc aggggcgagc agagtacgtg 720

ccgtgccctg gggtgggaat ggaggccggg gggaggggcg ccgagggctc tggccgctgg 780

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acc 843

<210> 954
<211> 799
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 954
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acacacgcac ttctgctcaa cccgcccccc cccgcccccg ttcctgttcc ttcccaggtt 120

ctccccattt tatcggggcg gcaactttta ggtccctggg tcctggaagt ccttagtaca 180

cactcttcgt ccttaagtcc atagtctgta ttccctcggt cctatcctgt cccccatcac 240

cgggtcacct ccccagcgaa gcaatctcag ttcccctccc cctctcagcc ccgagcccac 300

acgtttggtg cgtgcacatt tcaaaaacga ggcgggtcca aagagagggg gtggggaggt 360

gccgagtggc ccagctactc gcggctttac gggtgcacgt agctcaggcc tcagcgccct 420

tgagctgtga ctggatggat gagcggggcg ggaggcgggg cgagcgtcct cggcgctccc 480

caccacccca gttcctataa atacggactg cagccctccc cggtgctctc tgctcctccc 540

tgttctagag acagccgcat ctttccgtgc agtgccaggt gaaaaccgca gagtgggccg 600

caggtggccg gggacggtcg gaaacgggga agggggcgc tcagcccggg actgcgggcg 660

ctggggcgag ctccactgcc cgagcccggg ctccgcattg cagaggctgg agggggaagg 720

gatgggggc gcggcggggg gcacgctgac ctctctttct tctctctccc tccgcagcct 780

cgctccggag actgccacc 799

<210> 955
<211> 163
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 955
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tgccgccgcg cccccggttt ctataaattg agcccgcagc ctcccgcttc gctctctgct 120

cctcctgttc gacagtcagc cgcatcttct tttgcgtcgc cag 163

<210> 956
<211> 185
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 956
ggagacggca cgtagctcag gcctcaagac cttgggctgg gactggctga gcctggcggg 60

aggcggggtc cgagtcaccg cctgccgccg cgcccccggt ttctataaat tgagcccgca 120

gcctcccgct tcgctctctg ctcctcctgt tcgacagtca gccgcatctt cttttgcgtc 180

gccag 185

<210> 957
<211> 224
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 957
ggagacgggg agaaagtagg gcccggctac tagcggtttt acgggcgcac gtagctcagg 60

cctcaagacc ttgggctggg actggctgag cctggcggga ggcggggtcc gagtcaccgc 120

ctgccgccgc gcccccggtt tctataaatt gagcccgcag cctcccgctt cgctctctgc 180

tcctcctgtt cgacagtcag ccgcatcttc ttttgcgtcg ccag 224

<210> 958
<211> 275
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 958

ggagacgacg ctcggtgcgt gcccagttga accaggcggc tgcggaaaaa aaaaagcggg 60

gagaaagtag ggcccggcta ctagcggttt tacgggcgca cgtagctcag gcctcaagac 120

cttgggctgg gactggctga gcctggcggg aggcggggtc cgagtcaccg cctgccgccg 180

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tcgacagtca gccgcatctt cttttgcgtc gccag 275

<210> 959
<211> 122
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 959
ggagacgcga gtcaccgcct gccgccgcgc ccccggtttc tataaattga gcccgcagcc 60

tcccgcttcg ctctctgctc ctcctgttcg acagtcagcc gcatcttctt ttgcgtcgcc 120

ag 122

<210> 960
<211> 167
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 960
ggagacgcag ctccccccac catccagttc ctataaatac ggactgcagc cctccctggt 60

gctctctgct cctccctgtt ctagagacag ccgcatcttc ttgtgcagtg ccaggctctc 120

tgctcctcct gttcgacagt cagccgcatc ttcttttgcg tcgccag 167

<210> 961
<211> 190
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 961
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tacggactgc agccctccct ggtgctctct gctcctccct gttctagaga cagccgcatc 120

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gcgtcgccag 190

<210> 962
<211> 211
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 962
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ccaccatcca gttcctataa atacggactg cagccctccc tggtgctctc tgctcctccc 120

tgttctagag acagccgcat cttcttgtgc agtgccaggc tctctgctcc tcctgttcga 180

cagtcagccg catcttcttt tgcgtcgcca g 211

<210> 963
<211> 239
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 963
ggagacggca cgtagctcag gcctctgcgc ccttgagctg ggactggatg agccgagcgg 60

gaggcggggc gcgcgtcatc agctcccccc accatccagt tcctataaat acggactgca 120

gccctccctg gtgctctctg ctcctccctg ttctagagac agccgcatct tcttgtgcag 180

tgccaggctc tctgctcctc ctgttcgaca gtcagccgca tcttcttttg cgtcgccag 239

<210> 964
<211> 278
<212> DNA

<213> Artificial sequence

<220>
<223> Synthetic

<400> 964
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cctctgcgcc cttgagctgg gactggatga gccgagcggg aggcggggcg cgcgtcatca 120

gctcccccca ccatccagtt cctataaata cggactgcag ccctccctgg tgctctctgc 180

tcctccctgt tctagagaca gccgcatctt cttgtgcagt gccaggctct ctgctcctcc 240

tgttcgacag tcagccgcat cttcttttgc gtcgccag 278

<210> 965
<211> 413
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 965
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cccctccccc tctcaggtcg gagcccacac gcttggtgcg tgcacatttc aaaaacgagg 120

cgggtccaaa aagagggagg gggggaatga gagaggccca gctactcgcg gctttacggg 180

tgcacgtagc tcaggcctct gcgcccttga gctgggactg gatgagccga gcgggaggcg 240

gggcgcgcgt catcagctcc ccccaccatc cagttcctat aaatacggac tgcagccctc 300

cctggtgctc tctgctcctc cctgttctag agacagccgc atcttcttgt gcagtgccag 360

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<210> 966
<211> 508
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 966

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cgctgggcac ttggcgctac acaagtggcc tctggcctcg cacacattcc acatccaccg 120

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tagtcaggaa gttcccccccc gccccgcagc tcgcgtcgtg caggacgtga caaatggaag 240

tagcacgact cactagtctc gtgcagatgg acagcaccgc tgagcaatgg aagcgggtag 300

gcctttgggg cagcggccaa tagcagcttt gctccttcgc tttctgggct cagaggctgg 360

gaaggggtgg gtccgggggc gggctcaggg gcgggctcag gggcggggcg ggcgcccgaa 420

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cctcttcctc atctccgggc ctttcgtc 508

<210> 967
<211> 460
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 967
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gctgggcact tggcgctaca caagtggcct ctggcctcgc acacattcca catccaccgg 120

taggcgccaa ccggctccgt tctttggtgg ccccttcgcg ccaccttcta ctcctcccct 180

agtcaggaag ttcccccccg ccccgcagct cgcgtcgtgc aggacgtgac aaatggaagt 240

agcacgactc actagtctcg tgcagatgga cagcaccgct gagcaatgga agcgggtagg 300

cctttggggc agcggccaat agcagctttg ctccttcgct ttctgggctc aggggcgggg 360

cgggcgcccg aaggtcctcc ggaggcccgg cattctgcac gcttcaaaag cgcacgtctg 420

ccgcgctgtt ctcctcttcc tcatctccgg gcctttcgtc 460

<210> 968
<211> 466
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 968
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ctgggcgtgg ttccgggaaa cgcagcggcg ccgaccctgg gcctcgcaca ttcttcacgt 120

ccgttcgcag cgtcacccgg atcttcgccg ctacccttgt gggccccccg gcgacgcttc 180

ctcgtccgcc cctaagtcgg gaaggttcct tgcggttcgc ggcgtgccgg acgtgacaaa 240

cggaagccgc acgtctcact agtaccctcg cagacggaca gcgccaggga gcaatggcag 300

cgcgccgacc gcgatgggct gtggccaata gcggctgctc agcagggcgc gccgagagca 360

gcggccggga aggggcggtg cgggaggcgg ggtgtggggc ggtagtgtgg gccctgttcc 420

tgcccgcgcg gtgttccgca ttctgcaagc ctccggagcg cacgtc   466

<210> 969
<211> 458
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 969
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cgctgggcac ttggcgctac acaagtggcc tctggcctcg cacacattcc acatccaccg 120

gtaggcgcca accggctccg ttctttggtg gcccccttcgc gccaccttct actcctcccc 180

tagtcaggaa gttccccccc gccccgcagc tcgcgtcgtg caggacgtga caaatggaag 240

tagcacgact cactagtctc gtgcagatgg acagcaccgc tgagcaatgg aagcgggtag 300

gcctttgggg cagcggccaa tagcagcttt gctccttcgc tttctgagag cagcggccgg 360

gaaggggcgg tgcgggaggc ggggtgtggg gcggtagtgt gggccctgtt cctgcccgcg 420

cggtgttccg cattctgcaa gcctccggag cgcacgtc   458

<210> 970
<211> 523
<212> DNA

<213> Artificial sequence

<220>
<223> Synthetic

<400> 970
cacgggtggg ggtgagcgct tttcctaagg cagcctagga ctaaagcagc gccacagata 60

ctttgggtgt ggctcctgaa ccgcggctgc agaagctacg ggcctctcaa actttccacg 120

tccaagtcgt agcacgacgc agctcccttc cgccccacct gcaggtcgct cgatgccgcc 180

tctcgctccg cccctagtca ggaaggttcc cccgcagctc gcagcgtgcc ggacgtgaca 240

aatggaagcc gcacgtccca ccagtaccct cgcagacgga cagcgccttg gagcaatggc 300

agcgagccgg ccccttgggg ccagggccaa tagcggccgc tctgcttggc gcgccctgag 360

ccgcggccgg gaaggggcgg tgcgggaggc ggggcgtcgg ggggcggtgc gggcgcgctc 420

ccggtgggcg aggtgctcag cattctgcac gcgtctggac agcgcgtcgg tcgcattatc 480

cttctctcag tctccaacct ctcgccctcg ccttattgcc acc 523

<210> 971
<211> 527
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 971
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ctctgggcgt ggttccggga aacgcagcgg cgccgacctt gggtcttgca cattcttcac 120

gtccgttcgc agcgtcaccc ggatcttcgc cgctaccctt gtgggccccc cggcgacgct 180

tcctgctccg cccctaagtc gggaaggttc cttgcggttc gcggcgtgcc ggacgtgaca 240

aacggaagcc gcacctctca ctagtaccct cgcagacgga cagcgccaag gagcaatggc 300

agcgcgccga ccgcgatggg ctgtggccaa tagcggctgc tcagcagggc gcgccgggag 360

cagcggccgg gaaggggcgg tgcgggaggc ggggtgtggg gcggtagtgt ggcccctgtt 420

cctgcccgcg cggtgttcgg cattctgcaa gcctccggag cggacgtcag cagtcggctc 480

cctcgttgac cgaatcaccg acctctctcc ccagctgtat tgccacc 527

<210> 972
<211> 660
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 972
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cgctgggcac ttggcgctac acaagtggcc tctggcctcg cacacattcc acatccaccg 120

gtaggcgcca accggctccg ttctttggtg gcccccttcgc gccaccttct actcctcccc 180

tagtcaggaa gttccccccc gccccgcagc tcgcgtcgtg caggacgtga caaatggaag 240

tagcacgact cactagtctc gtgcagatgg acagcaccgc tgagcaatgg aagcgggtag 300

gcctttgggg cagcggccaa tagcagcttt gctccttcgc tttctgggct caggggcggg 360

gcgggcgccc gaaggtcctc cggaggcccg gcattctgca cgcttcaaaa gcgcacgtct 420

gccgcgctgt tctcctcttc ctcatctccg ggcctttcgt caagcttgga cacaagacag 480

gcttgcgaga tatgtttgag aataccactt tatcccgcgt cagggagagg cagtgcgtaa 540

aaagacgcgg actcatgtga aatactggtt tttagtgcgc cagatctcta taatctcgcg 600

caacctattt tcccctcgaa cacttttaa gccgtagata aacaggctgg gacacttcac 660

<210> 973
<211> 655
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 973
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cgctgggcac ttggcgctac acaagtggcc tctggcctcg cacacattcc acatccaccg 120

gtaggcgcca accggctccg ttctttggtg gcccccttcgc gccaccttct actcctcccc 180

tagtcaggaa gttccccccc gccccgcagc tcgcgtcgtg caggacgtga caaatggaag 240

tagcacgact cactagtctc gtgcagatgg acagcaccgc tgagcaatgg aagcgggtag 300

gcctttgggg cagcggccaa tagcagcttt gctccttcgc tttctgggct caggggcggg 360

gcgggcgccc gaaggtcctc cggaggcccg gcattctgca cgcttcaaaa gcgcacgtct 420

gccgcgctgt tctcctcttc ctcatctccg ggcctttcgt cggacacaag acaggcttgc 480

gccaccatgg ttgagaatac cactttatcc cgcgtcaggg agaggcagtg cgtaaaaaga 540

cgcggaacca tgtgaaatac tggtttttag tgcgccagat ctctataatc tcgcgcaacc 600

tattttcccc tcgaacactt tttaagccgt agataaacag gctgggacac ttcac 655

<210> 974
<211> 653
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 974
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cgctgggcac ttggcgctac acaagtggcc tctggcctcg cacacattcc acatccaccg 120

gtaggcgcca accggctccg ttctttggtg gcccccttcgc gccaccttct actcctcccc 180

tagtcaggaa gttccccccc gccccgcagc tcgcgtcgtg caggacgtga caaatggaag 240

tagcacgact cactagtctc gtgcagatgg acagcaccgc tgagcaatgg aagcgggtag 300

gcctttgggg cagcggccaa tagcagcttt gctccttcgc tttctgggct caggggcggg 360

gcgggcgccc gaaggtcctc cggaggcccg gcattctgca cgcttcaaaa gcgcacgtct 420

gccgcgctgt tctcctcttc ctcatctccg ggcctttcgt cggacacaag acaggcttgc 480

gccaccatgg ttgagaatac cactttatcc cgcgtcaggg agaggcagtg cgtaaaaaga 540

cgcggaacca tgtgaaatac tggtttttag tgcgccagat ctctataatc tcgcgcaacc 600

tattttcccc tcgaacactt tttaagccgt agataaacag gctgggattt ttt 653

<210> 975

<211> 1092
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 975
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cttatatttt cctaaagaag gaagagaagc gcatagagga gaagggaaat aatttttag 120

gagcctttct tacggctatg aggaatttgg ggctcagttg aaaagcctaa actgcctctc 180

gggaggttgg gcgcggcgaa ctactttcag cggcgcacgc agacggcgtc tacgtgaggg 240

gtgataagtg acgcaacact cgttgcataa atttgcgctc cgccagcccg gagcatttag 300

gggcggttgg ctttgttggg tgagcttgtt tgtgtccctg tgggtggacg tggttggtga 360

ttggcaggat cctggtatcc gctacaggta ctggcccaca gccgtaaaga gctgcggggg 420

cgtgagaggg gggaatgggt gaggtcaagc tggaggcttc ttggggttgg gtgggccgct 480

gaggggaggg gagggcgagg tgacgcgaca cccggccttt ctgggagagt gggccttgtt 540

gacctaaggg gggcgagggc agttggcacg cgcacgcgcc gacagaaact aacagacatt 600

aaccaacagc gattccgtcg cgtttacttg ggaggaaggc ggaaaagagg tagtttgtgt 660

ggcttctgga aaccctaaat ttggaatccc agtatgagaa tggtgtccct tcttgtgttt 720

caatgggatt tttacttcgc gagtcttgtg ggtttggttt tgttttcagt ttgcctaaca 780

ccgtgcttag gtttgaggca gattggagtt cggtcggggg agtttgaata tccggaacag 840

ttagtgggga aagctgtgga cgcttggtaa gagagcgctc tggattttcc gctgttgacg 900

ttgaaacctt gaatgacgaa tttcgtatta agtgacttag ccttgtaaaa ttgaggggag 960

gcttgcggaa tattaacgta tttaaggcat tttgaaggaa tagttgctaa ttttgaagaa 1020

tattaggtgt aaaagcaaga aatacaatga tcctgaggtg acacgcttat gttttacttt 1080

taaactaggt ca 1092

<210> 976
<211> 215
<212> DNA

<213> Artificial sequence

<220>
<223> Synthetic

<400> 976
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atatttgcat gtctttagtt ctatgatgac acaaaccccg cccagcgtct tgtcattggc 120

gaaaacacgc agatgcagtc ggggcggcgc ggtcccaggt ccacttcgca tattaaggtg 180

acgcgtgtgg cctcgaacac agagcgactc tgcag 215

<210> 977
<211> 753
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 977
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gggggagggg gaaggaacga aacactctca ttcggaggcg gctcggggtt tggtcttggt 120

ggccacgggc acgcagaaga gcgccgcgat cctcttaagc acccccccgc cctccgtgga 180

ggcgggggtt tggtcggcgg gtggtaactg gcgggccgct gactcgggcg ggtcgcgcgc 240

cccagagtgt gacctttttcg gtctgctcgc agacccccgg gcggcgccgc cgcggcggcg 300

acgggctcgc tgggtcctag gctccatggg gaccgtatac gtggacaggc tctggagcat 360

ccgcacgact gcggtgatat taccggagac cttctgcggg acgagccggg tcacgcggct 420

gacgcggagc gtccgttggg cgacaaacac caggacgggg cacaggtaca ctatcttgtc 480

acccggaggc gcgagggact gcaggagctt cagggagtgg cgcagctgct tcatccccgt 540

ggcccgttgc tcgcgtttgc tggcggtgtc cccggaagaa atatatttgc atgtctttag 600

ttctatgatg acacaaaccc cgcccagcgt cttgtcattg gcgaattcga acacgcagat 660

gcagtcgggg cggcgcggtc ccaggtccac ttcgcatatt aaggtgacgc gtgtggcctc 720

gaacaccgag cgaccctgca gcgacccgct taa 753

<210> 978
<211> 270
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 978
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caatgtcgag cagtgtggtt ttgcaagagg aagcaaaaag cctctccacc caggcctgga 120

atgtttccac ccaatgtcga gcaaaccccg cccagcgtct tgtcattggc gaattcgaac 180

acgcagatgc agtcggggcg gcgcggtccc aggtccactt cgcatattaa ggtgacgcgt 240

gtggcctcga acaccgagcg accctgcagg 270

<210> 979
<211> 149
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 979
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ttatttatgc agaggccgag gccgcctcgg cctctgagct attccagaag tagtgaggag 120

gctttttgg aggtataggc ttttgcaaa 149

<210> 980
<211> 128
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 980
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ccgcctcggc ctctgagcta ttccagaagt agtgaggagg ctttttgga ggcctaggct 120

tttgcaaa 128

<210> 981
<211> 408
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 981
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atatttgcat gtctttagtt ctatgatgac acaaaccccg cccagcgtct tgtcattggc 120

gaaaacacgc agatgcagtc ggggcggcgc ggtcccaggt ccacttcgca tattaaggtg 180

acgcgtgtgg cctcgaacac agagcgactc tgcagggaca caagacaggc ttgcgagata 240

tgtttgagaa taccacttta tcccgcgtca gggagaggca gtgcgtaaaa agacgcggac 300

tcatgtgaaa tactggtttt tagtgcgcca gatctctata atctcgcgca acctattttc 360

ccctcgaaca ctttttaagc cgtagataaa caggctggga cacttcac 408

<210> 982
<211> 100
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 982
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aggtgacgcg tgtggcctcg aacacagagc gactctgcag 100

<210> 983
<211> 193
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 983

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aggcagtgcg taaaaagacg cggactcatg tgaaatactg gtttttagtg cgccagatct 120

ctataatctc gcgcaaccta ttttcccctc gaacactttt taagccgtag ataaacaggc 180

tgggacactt cac 193

<210> 984
<211> 318
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 984
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aactcttcgc ggtctttcca gtactcttgg atcggaaacc cgtcggcctc cgaacggtac 120

tccgccaccg agggacctga gcgagtccgc atcgaccgga tcggaaaacc tctcgagaaa 180

ggcgtctaac cagtcacagt cgcaaggtag gctgagcacc gtggcgggcg gcagcgggtg 240

gcggtcgggg ttgtttctgg cggaggtgct gctgatgatg taattaaagt aggcggtctt 300

gagagggcgg atggtcga 318

<210> 985
<211> 194
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 985
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gaggcagtgc gtaaaaagac gcggaaccat gtgaaatact ggtttttagt gcgccagatc 120

tctataatct cgcgcaacct attttcccct cgaacacttt ttaagccgta gataaacagg 180

ctgggacact tcac 194

<210> 986

<211> 192
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 986
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gaggcagtgc gtaaaaagac gcggaaccat gtgaaatact ggtttttagt gcgccagatc 120

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ctgggatttt tt 192

<210> 987
<211> 300
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 987
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tttcccatga ttccttcata tttgcatata cgatacaagg ctgttagaga gataattaga 120

attaatttga ctgtaaacac aaagatatta gtacaaaata cgtgacgtag aaagtaataa 180

tttcttgggt agtttgcagt tttaaaatta tgttttaaaa tggactatca tatgcttacc 240

gtaacttgaa agtatttcga tttcttggct ttatatatct tgtggaaagg acgaaacacc 300

<210> 988
<211> 300
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 988
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tttgcatatt ggcacccaca atccaccgcg gctatgaggc cagtataagg cggtaaaatt 120

acgataagat atgggatttt acgtgatcga agacatcaaa gtaagcgtaa gcacgaaagt 180

tgttctgcaa cataccactg taggaaatta tgctaaatat gaaaccgacc ataagttatc 240

ctaaccaaaa gatgatttga ttgaagggct taaaataggt gtgacagtaa cccttgagtc 300

<210> 989
<211> 300
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 989
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cagggtgccc cgggcgctca tttgcatgtc ccacccaaca ggtaaacctg acagatcggt 120

cgcggccagg tacggcctgg cggtcagagc accaaactta cgagccttgt gatgagttcc 180

gttacatgaa attctcctaa aggctccaag atggacagga aagcgctcga ttcggttacc 240

gtaaggaaaa caaatgagaa actcccgtgc cttataagac ctggggacgg acttatttgc 300

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<211> 300
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 990
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agggtgcccc gggcgctcat ttgcatgtcc cacccaacag gtaaacctga caggtcatcg 120

cggccaggta cgacctggcg gtcagagcac caaacatacg agccttgtga tgagttccgt 180

tgcatgaaat tctcccaaag gctccaagat ggacaggaaa gggcgcggtt cggtcaccgt 240

aagtagaata ggtgaaagac tcccgtgcct tataaggcct gtgggtgact tcttctcaac 300

<210> 991
<211> 300
<212> DNA

<213> Artificial sequence

<220>
<223> Synthetic

<400> 991
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ttacacattg gaatagaggt taaatctcta ggtcatttaa gagaagtcgg cctatgtgta 240

cgctaatata agacatttgt tccaggggct ttaaatagct ggtggtggaa ctcaatattc 300

<210> 992
<211> 217
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 992
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acacccagcg cgcgtgcgcc ctggcaggaa gatggctgtg agggacaggg gagtggcgcc 120

ctgcaatatt tgcatgtcgc tatgtgttct gggaaatcac ataaacgtg aaatgtcttt 180

ggatttggga atcttataag ttctgtatga ggaccac 217

<210> 993
<211> 1296
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 993
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ctccccaccc cccacccccc acccccggaa aacgcgtcgt cccctgggct gggtggagac 180

ccccgtcccg cgaaacaccg ggccccgcgc agcgtccggg cctgacaccg ctccggcggc 240

tcgcctccta tgcgcccccg cgccaccgtc gcccgcccgc ccgggcccct gcagccgccc 300

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gacgctgagc gttccaggcg ggagggaagg cgggcagaga tggagagagg aacgggagac 420

ctagaggggc ggaaggacgg gcggagggac gttaggaggg agggagggag gcagggaggc 480

agggaggaac ggagggaaag acagagcgac gcagggactg ggggcgggcg ggagggagcc 540

ggggaacggg gggaggaagg cagggaggaa aagcggtcct cggcctccgg gagtagcggg 600

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cgccgcgccg gccggcgggg caccacccat tcgccccggt tccgtggccc agggagtggg 720

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actcaagact cccacggagg ttcagttcca cactcc 1296

<210> 994
<211> 1296
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 994
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ctccccaccc cccacccccc acccccggaa aacgcgtcgt cccctgggct gggtggtgac 180

ccccgtcccg cgaaacaccg ggccccgcgc agcgtccggg cctgacaccg ctccggcggc 240

tcgcctccta tgcgcccccg cgccaccgtc gcccgcccgc ccgggcccct gcagccgccc 300

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gacgctgagc gttccaggcg ggagggaagg cgggcagaga tggagagagg aacgggagtc 420

ctagaggggc ggaaggacgg gcggagggac gttaggaggg agggagggag gcagggaggc 480

agggaggaac ggagggaaag acagagcgac gcagggactg ggggcgggcg ggagggagcc 540

ggggaacggg gggaggaagg cagggaggaa aagcggtcct cggcctccgg gagtagcggg 600

acccccgccc tccgggaaaa cggtcagcgt ccggcgcggg ctgagggctg ggcccacagc 660

cgccgcgccg gccggcgggg caccacccat tcgccccggt tccgtggccc agggagtggg 720

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cgtcccggca acggcgacgc ccacaggcat tgcctccttc acggagagag ggcctggcac 1260

actcaagact cccacggagg ttcagttcca cactcc 1296

<210> 995
<211> 433
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 995
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acgggcggag ggacgttagg agggagggag ggaggcaggg aggcagggag gaacggaggg 120

aaagacagag cgacgcaggg actgggggcg ggcgggaggg agccggggaa cgggggggagg 180

aaggcaggga ggaaaagcgg tcctcggcct ccgggagtag cgggaccccc gccctccggg 240

aaaacggtca gcgtccggcg cgggctgagg gctgggccca cagccgccgc gccggccggc 300

ggggcaccac ccattcgccc cggttccgtg gcccagggag tgggcggttt cctccgggac 360

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ccccaggctg agc 433

<210> 996
<211> 433
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<220>
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acgggcggag ggacgttagg agggagggag ggaggcaggg aggcagggag gaacggaggg 120

aaagacagag cgacgcaggg actgggggcg ggcgggaggg agccggggaa cgggggggagg 180

aaggcaggga ggaaaagcgg tcctcggcct ccgggagtag cgggaccccc gccctccggg 240

aaaacggtca gcgtccggcg cgggctgagg gctgggccca cagccgccgc gccggccggc 300

ggggcaccac ccattcgccc cggttccgtg gcccagggag tgggcggttt cctccgggac 360

aaaagaccgg gactcgggtt gccgtcgggt gttcacccgc gcggttcaca gaccgcacat 420

ccccaggctg agc 433

<210> 997
<211> 65
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 997
agaggggcgg aagggacgtt aggagggagg cagggaggca gggaggcagg gaggaacgga 60

gggag 65

<210> 998
<211> 1213
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 998
gcgagctcac ggggacagcc ccccccccaaa gcccccaggg atgtaattac gtccctcccc 60

cgctaggggg cagcagcgag ccgcccgggg ctccgctccg gtccggcgct ccccccgcat 120

ccccgagccg gcagcgtgcg gggacagccc gggcacgggg aaggtggcac gggatcgctt 180

tcctctgaac gcttctcgct gctctttgag cctgcagaca cctgggggga tacggggaaa 240

aagctttagg ctgaaagaga gatttagaat gacagaatca tagaacggcc tgggttgcaa 300

aggagcacag tgctcatcca gatccaaccc cctgctatgt gcagggtcat caaccagcag 360

cccaggctgc ccagagccac atccagcctg gccttgaatg cctgcaggga tggggcatcc 420

acagcctcct tgggcaacct gttcagtgcg tcaccaccct ctgggggaaa aactgcctcc 480

tcatatccaa cccaaacctc ccctgtctca gtgtaaagcc attccccctt gtcctatcaa 540

gggggagttt gctgtgacat tgttggtctg gggtgacaca tgtttgccaa ttcagtgcat 600

cacggagagg cagatcttgg ggataaggaa gtgcaggaca gcatggacgt gggacatgct 660

ggtgttgagg gctctgggac actctccaag tcacagcgtt cagaacagcc ttaaggataa 720

gaagatagga tagaaggaca aagagcaagt taaaacccag catggagagg agcacaaaaa 780

ggccacagac actgctggtc cctgtgtctg agcctgcatg tttgatggtg tctggatgca 840

agcagaaggg gtggaagtgc ttgcctggag agatacagct gggtcagtag gactgggaca 900

ggcagctgga gaattgccat gtagatgttc atacaatcgt caaatcatga aggctggaaa 960

agccctccaa gatccccaag accaacccca acccacccac cgtgcccact ggccatgtcc 1020

ctcagtgcca catccccaca gttcttcatc acctccaggg acggtgaccc ccccacctcc 1080

gtgggcagct gtgccactgc agcaccgctc tttggagaag gtaaatcttg ctaaatccag 1140

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cagtgagaat att 1213

<210> 999
<211> 246
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 999
gcgagctcac ggggacagcc ccccccccaaa gcccccaggg atgtaattac gtccctcccc 60

cgctaggggg cagcagcgag ccgcccgggg ctccgctccg gtccggcgct ccccccgcat 120

ccccgagccg gcagcgtgcg gggacagccc gggcacgggg aaggtggcac gggatcgctt 180

tcctctgaac gcttctcgct gctctttgag cctgcagaca cctgggggga tacggggaaa 240

aagctt 246

<210> 1000
<211> 64
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1000
atcacgcatg ggatacgtcg tggcagtaaa agggcttaaa tgccaacgac gcgtcccata 60

cgtt 64

<210> 1001
<211> 82
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1001
atgacgcatg ggatacgtcg tggcagtaaa agggcttaaa tgccaacgac gcgtcccata 60

cgttgttggc attttaagtc tt 82

<210> 1002
<211> 106
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1002
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tcaaaaactg tctggcaata caagttccac tttgggacaa atcggc 106

<210> 1003
<211> 105
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1003
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tcaaaaactg tctggcaata caagttccac tttgaccaaa acggc 105

<210> 1004
<211> 14
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1004
ccytttbmct gcca 14

<210> 1005

<211> 14
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1005
tggcagkvaa argg 14

<210> 1006
<211> 14
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1006
ccctttgcct gcca 14

<210> 1007
<211> 14
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1007
tggcagtgaa aggg 14

<210> 1008
<211> 205
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1008
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acaacactag cgcgctcagt agctggaggc aggagcgtgc gggaggggat agtggcgtga 120

tcgcagtgtg gcacgggaca ccggcgagat attcgtgtgc aaacctgttt cgggtatgtt 180

ataccctgcc tcattgttga cgtat 205

<210> 1009
<211> 192
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1009
tttaagaaaa agattaataa ataataataa tttcataatt aaaaacttct ttcattgaat 60

gccattaaat aaaccattat tttacaaaat aagatcaaca taattgagta aataataata 120

agaacaatat tatagtacaa caaaatatgg gtatgtcata ccctgccaca ttcttgatgt 180

aacttttttt ca 192

<210> 1010
<211> 16
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1010
cccggcgagc atgagg 16

<210> 1011
<211> 16
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1011
cctcatgctc gccggg 16

<210> 1012
<211> 296
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1012
gtctgcgtaa aattgacgca tgcattcttg aaatattgct ctctctttct aaatagcgcg 60

aatccgtcgc tgtgcattta ggacatctca gtcgccgctt ggagctcccg tgaggcgtgc 120

ttgtcaatgc ggtaagtgtc actgattttg aactataacg accgcgtgag tcaaaatgac 180

gcatgattat cttttacgtg acttttaaga tttaactcat acgataatta tattgttatt 240

tcatgttcta cttacgtgat aacttattat atatatattt tcttgttata gatatc 296

<210> 1013
<211> 218
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1013
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aaataaattg tttgttgaat ttattattag tatgtaagtg taaatataat aaaacttaat 120

atctattcaa attaataaat aaacctcgat atacagaccg ataaaacaca tgcgtcaatt 180

ttacgcatga ttatctttaa cgtacgtcac aatatgat 218

<210> 1014
<211> 13
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1014
ccctagaaag ata 13

<210> 1015
<211> 13
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1015
tatctttcta ggg 13

<210> 1016
<211> 15
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1016
cacttggatt gcggg 15

<210> 1017
<211> 15
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1017
cccgacaccg tagtg 15

<210> 1018
<211> 262
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1018
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ttcatataga tttgcggtgg agtgcgggaa acgtgtaaac tcgggccgat tgtaactgcg 120

tattaccaaa tatttgtttc caagcttggt accgagctcg gatcccgtac gctgcaggtc 180

gacggatccc cgggttaatt aaggcgcgcc agatctgttt agcttgcctc gtccccgccg 240

ggtcacccgg ccagcgacat gg 262

<210> 1019
<211> 227
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1019
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aaaatgtctg tgattgaata aattttcatt ttttacacaa gaaaccgaaa atttcatttc 120

aatcgaaccc atacttcaaa agatataggc attttaaact aactctgatt ttgcgcggga 180

aacctaaata attgcccgcg ccatcttata ttttggcggg aaattca 227

<210> 1020
<211> 297
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1020
gggtttatta gacccaccac tttgaaaaac ctatgatatt tttttaaatt gaaggctatt 60

gttgacgtgt gttatagtag cttcgcgcaa taaaccggcg gccattttga cgagcgaact 120

tcagtctcac gtgagcgtgc gtgcgagtag cacgtgtgta aagtgcgcgc gggcccgtgg 180

gaccctacca ggcatacaac gtaacattct gtcggtaaga atattttctt tatttttgg 240

catttctttg tttaatgtgt taaattataa tacgaaaaaa atattgttgc agtagaa 297

<210> 1021
<211> 337
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1021
atcttttcga ttatccaaag ataatagtat tttagttgat ttattagtgc cttaaattaa 60

tgaaagtctg acttcgatct ctgcattata tgtaagattg ttaattatag aactaagagt 120

ttaatttctg ttaattaaaa ttaagcgatt ttgaataatt gttaaataaa gatattttca 180

catacattta catattttat ttattatctg taataataat acattctaaa agacataaat 240

ataaaacaaa attttcctag cttgttcatt tgtgtaaaac atgtattttc aatatcgggt 300

ttgacagacc caccaggcat gccgtgtgat ttttatg 337

<210> 1022
<211> 18
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1022
cccttgrcat gcctggta 18

<210> 1023
<211> 18
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1023
taccaggcat gycaaggg 18

<210> 1024
<211> 273
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1024
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aaacccgtaa cttctagtag cttcgatgtt agttgcgcct aggccgtcag aagcttcgca 120

cgtgttttcg tgcgcaattc ggtaagtaaa ttcaatttga aatttgtcgc gggcttctta 180

ggccccacct cagtgtttac gtaacttttt tgtaaatagt ttcgattaag ttattgtgtt 240

tttttttgc agtagcttga aaacgtttga aaa 273

<210> 1025
<211> 370
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1025
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gctaaaaaga ctgttaaaaa ttaatatttt atgtaagttt gttgattatt tctaatattt 120

taatgaatac tttgtgattt ttgatctcat gtgattttgc caaaaatttt gctaagtgtt 180

ttttaaaaac actcaaaagt taattataaa taaaaaaatt aaacaaaaaa cattttattt 240

tatttaaaat ctatccacaa aagcttatta ttatacaata aaacctaaaa accccaaata 300

ttttaaaata tgaacattta tatacacggg ccgcggaggc ccccacgtca gtacttacgt 360

gaaaataatt 370

<210> 1026
<211> 19
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1026
cctttarctr ctgaggtgg 19

<210> 1027
<211> 19
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1027

ccacctcagy agytaaagg 19

<210> 1028
<211> 401
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1028
aagggtcaat ttgacccatt tcagtttttg gtttgaccaa agaactggtt atcctttctt 60

tttcttcacg aaagttggtg acttttcctc atctagggtc atgaacttgt gtgtaaaatc 120

tggatactgt gaagtgtcgt ggaatgtctg tgaacagttt gtatacaaag atgatgttgc 180

gggtcatttt gacccacaca ctttgatgtg agcaagtagc tgtccagatc cgaaataaac 240

atgtctcttt gatgcacttt attttgattg ctaaattatt tatattttga ctgtctctga 300

atagaccttc agatcagaga cccaggtgtg tgtgggggag gagctttctc tcccttgtcc 360

ttgtcactgt tctcgtgtca tctctttgag aaacagcaaa a 401

<210> 1029
<211> 247
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1029
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ttgtgaagga aaaaaatatt aaatatagtg ttggaataaa aaaatagtat tgtttgtctc 120

tttcctaaat gttgaaatat tctaaaataa agttgatatc agtttaacct gttttttat 180

tgttttgagt ggatttacac agtatgggtc aaaatgaccc gcaacataat caaggtaatt 240

tttttc 247

<210> 1030
<211> 15
<212> DNA

<213> Artificial sequence

<220>
<223> Synthetic

<400> 1030
ccctcrtatt atgtt 15

<210> 1031
<211> 15
<212> DNA
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<220>
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<400> 1031
aacataatay gaggg 15

<210> 1032
<211> 15
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<220>
<223> Synthetic

<400> 1032
ccctcatatt atgtt 15

<210> 1033
<211> 15
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1033
aacataatac gaggg 15

<210> 1034
<211> 303
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1034
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attcccgcta acttcggaac caactcagta gccattgaga actcccagga cacagttgcg 120

tcatctcggt aagtgccgcc attttgttgt aatagacagg ttgcacgtca ttttgacgta 180

taattgggct ttgtgtaact tttgaaatta tttataattt ttattgatgt gatttatttg 240

agttaatcgt attgtttcgt tacatttttc atatgatatt aatattttca gattgaatat 300

aaa 303

<210> 1035
<211> 347
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

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agactgtttt ttttaaaagg cttataaagt attactattg cgtgatttaa ttttataaaa 60

atatttaaaa ccagttgatt tttttaataa ttacctaatt ttaagaaaaa atgttagaag 120

cttgatattt ttgttgattt ttttctaaga tttgattaaa aggccataat tgtattaata 180

aagagtattt ttaacttcaa atttatttta tttattaatt aaaacttcaa ttatgataat 240

acatgcaaaa atatagttca tcaacagaaa aatataggaa aactctaata gttttatttt 300

tacacgtcat ttttacgtat gattgggctt tatagctagt caaatat 347

<210> 1036
<211> 16
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1036
ccctagaagc ccaatc 16

<210> 1037
<211> 16
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1037
gattgggctt ctaggg 16

<210> 1038
<211> 304
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1038
tacgtaaatt tgacgtatac cgcggcgaaa tatctctgtt actttcacgt ttaacgtcgg 60

atcgccgcta acttctgaac caactcagta gccattggga cctcgcagga cacagttgca 120

tcatctcggt aagtgccgcc attttgttgt aatagagagg ttgcacgtca ttttgacgta 180

taattgggct ttgtgtaact tttgaaattg tttaaatttt tttaaatttg tgatttattt 240

gagttaatcg tattgtttcg ttacatttta catgtaatat taatattttc aggttgaata 300

caaa 304

<210> 1039
<211> 370
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1039
tgtttgtcaa gactgtatat aaagactgtt tttttctaag aaacttataa aatattatta 60

caagttgatt taattttatg aaaaaattta aaactagttg attttttta taattacata 120

attttaagaa aaagtgttag aggcttgatt tttttgtttt ttttttcta aggtttgatt 180

gaaatgccat aatagtatta ataaagagta ttttttaact taaaatctat tttatttatt 240

aattaaaact tcaattatga taactcatgc aaaaatatag ttcattaaca gaaaaatctt 300

ggaaaactct gaagttttat ttttacacgt cattttacg tatgattggg ctttataact 360

agttaaatat 370

<210> 1040
<211> 16
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1040
ccctagaagc ccaatc 16

<210> 1041
<211> 16
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1041
gattgggctt ctaggg 16

<210> 1042
<211> 227
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1042
cagttgaagt cggaagttta catacactta agttggagtc attaaaactc gtttttcaac 60

tacaccacaa atttcttgtt aacaaacaat agttttggca agtcagttag gacatctact 120

ttgtgcatga cacaagtcat ttttccaaca attgtttaca gacagattat ttcacttata 180

attcactgta tcacaattcc agtgggtcag aagtttacat acactaa 227

<210> 1043
<211> 229
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1043
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gaatcattct ctctactatt attctgatat ttcacattct taaaataaag tggtgatcct 120

aactgacctt aagacaggga atctttactc ggattaaatg tcaggaattg tgaaaaagtg 180

agtttaaatg tatttggcta aggtgtatgt aaacttccga cttcaactg 229

<210> 1044
<211> 32
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1044
cagttgaagt cggaagttta catacactta ag 32

<210> 1045
<211> 32
<212> DNA
<213> Artificial sequence

<220>
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<400> 1045
ctaaggtgta tgtaaacttc cgacttcaac tg 32

<210> 1046
<211> 567
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1046

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Leu Ser Asn Tyr Ser Cys Asp Ser Asp Leu Glu Asn Ala Ser Thr Ser
            20                  25                  30


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


Arg Arg Arg Arg Ile Ser Ser Ser Ser Ser Asp Ser Glu Ser Asp Ile
    50                  55                  60


Glu Gly Gly Arg Glu Glu Trp Ser His Val Asp Asn Pro Pro Val Leu
65                  70                  75                  80


Glu Asp Phe Leu Gly His Gln Gly Leu Asn Thr Asp Ala Val Ile Asn
                85                  90                  95


Asn Ile Glu Asp Ala Val Lys Leu Phe Ile Gly Asp Asp Phe Phe Glu
            100                 105                 110


Phe Leu Val Glu Glu Ser Asn Arg Tyr Tyr Asn Gln Asn Arg Asn Asn
        115                 120                 125


Phe Lys Leu Ser Lys Lys Ser Leu Lys Trp Lys Asp Ile Thr Pro Gln
    130                 135                 140


Glu Met Lys Lys Phe Leu Gly Leu Ile Val Leu Met Gly Gln Val Arg
145                 150                 155                 160


Lys Asp Arg Arg Asp Asp Tyr Trp Thr Thr Glu Pro Trp Thr Glu Thr
                165                 170                 175


Pro Tyr Phe Gly Lys Thr Met Thr Arg Asp Arg Phe Arg Gln Ile Trp
            180                 185                 190
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Lys Ala Trp His Phe Asn Asn Asn Ala Asp Ile Val Asn Glu Ser Asp
        195                 200                 205

Arg Leu Cys Lys Val Arg Pro Val Leu Asp Tyr Phe Val Pro Lys Phe
    210                 215                 220

Ile Asn Ile Tyr Lys Pro His Gln Gln Leu Ser Leu Asp Glu Gly Ile
225                 230                 235                 240

Val Pro Trp Arg Gly Arg Leu Phe Phe Arg Val Tyr Asn Ala Gly Lys
                245                 250                 255

Ile Val Lys Tyr Gly Ile Leu Val Arg Leu Leu Cys Glu Ser Asp Thr
            260                 265                 270

Gly Tyr Ile Cys Asn Met Glu Ile Tyr Cys Gly Glu Gly Lys Arg Leu
        275                 280                 285

Leu Glu Thr Ile Gln Thr Trp Ser Pro Tyr Thr Asp Ser Trp Tyr His
    290                 295                 300

Ile Tyr Met Asp Asn Tyr Tyr Asn Ser Val Ala Asn Cys Glu Ala Leu
305                 310                 315                 320

Met Lys Asn Lys Phe Arg Ile Cys Gly Thr Ile Arg Lys Asn Arg Gly
                325                 330                 335

Ile Pro Lys Asp Phe Gln Thr Ile Ser Leu Lys Lys Gly Glu Thr Lys
            340                 345                 350

Phe Ile Arg Lys Asn Asp Ile Leu Leu Gln Val Trp Gln Ser Lys Lys
        355                 360                 365

Pro Val Tyr Leu Ile Ser Ser His Ser Ala Glu Met Glu Glu Ser Gln
    370                 375                 380

Asn Ile Asp Arg Thr Ser Lys Lys Lys Ile Val Lys Pro Asn Ala Leu
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385 390 395 400

Ile Asp Tyr Asn Lys His Met Lys Gly Val Asp Arg Ala Asp Gln Tyr
405 410 415

Leu Ser Tyr Tyr Ser Ile Leu Arg Arg Trp Lys Trp Thr Lys Arg Leu
420 425 430

Ala Met Tyr Met Ile Asn Cys Ala Leu Phe Asn Ser Tyr Ala Val Tyr
435 440 445

Lys Ser Val Arg Gln Arg Lys Met Gly Phe Lys Met Phe Leu Lys Gln
450 455 460

Thr Ala His Trp Leu Thr Asp Asp Ile Pro Glu Asp Met Asp Ile Val
465 470 475 480

Pro Asp Leu Gln Pro Val Pro Ser Thr Ser Gly Met Arg Ala Lys Pro
485 490 495

Pro Thr Ser Asp Pro Pro Cys Arg Leu Ser Met Asp Met Arg Lys His
500 505 510

Thr Leu Gln Ala Ile Val Gly Ser Gly Lys Lys Lys Asn Ile Leu Arg
515 520 525

Arg Cys Arg Val Cys Ser Val His Lys Leu Arg Ser Glu Thr Arg Tyr
530 535 540

Met Cys Lys Phe Cys Asn Ile Pro Leu His Lys Gly Ala Cys Phe Glu
545 550 555 560

Lys Tyr His Thr Leu Lys Asn
565

<210> 1047
<211> 594
<212> PRT

<213> Artificial sequence

<220>
<223> Synthetic

<400> 1047

Met Gly Ser Ser Leu Asp Asp Glu His Ile Leu Ser Ala Leu Leu Gln
1 5 10 15

Ser Asp Asp Glu Leu Val Gly Glu Asp Ser Asp Ser Glu Val Ser Asp
20 25 30

His Val Ser Glu Asp Asp Val Gln Ser Asp Thr Glu Glu Ala Phe Ile
35 40 45

Asp Glu Val His Glu Val Gln Pro Thr Ser Ser Gly Ser Glu Ile Leu
50 55 60

Asp Glu Gln Asn Val Ile Glu Gln Pro Gly Ser Ser Leu Ala Ser Asn
65 70 75 80

Arg Ile Leu Thr Leu Pro Gln Arg Thr Ile Arg Gly Lys Asn Lys His
85 90 95

Cys Trp Ser Thr Ser Lys Ser Thr Arg Arg Ser Arg Val Ser Ala Leu
100 105 110

Asn Ile Val Arg Ser Gln Arg Gly Pro Thr Arg Met Cys Arg Asn Ile
115 120 125

Tyr Asp Pro Leu Leu Cys Phe Lys Leu Phe Phe Thr Asp Glu Ile Ile
130 135 140

Ser Glu Ile Val Lys Trp Thr Asn Ala Glu Ile Ser Leu Lys Arg Arg
145 150 155 160

Glu Ser Met Thr Ser Ala Thr Phe Arg Asp Thr Asn Glu Asp Glu Ile
165 170 175

```
Tyr Ala Phe Phe Gly Ile Leu Val Met Thr Ala Val Arg Lys Asp Asn
            180                 185                 190

His Met Ser Thr Asp Asp Leu Phe Asp Arg Ser Leu Ser Met Val Tyr
        195                 200                 205

Val Ser Val Met Ser Arg Asp Arg Phe Asp Phe Leu Ile Arg Cys Leu
    210                 215                 220

Arg Met Asp Asp Lys Ser Ile Arg Pro Thr Leu Arg Glu Asn Asp Val
225                 230                 235                 240

Phe Thr Pro Val Arg Lys Ile Trp Asp Leu Phe Ile His Gln Cys Ile
                245                 250                 255

Gln Asn Tyr Thr Pro Gly Ala His Leu Thr Ile Asp Glu Gln Leu Leu
            260                 265                 270

Gly Phe Arg Gly Arg Cys Pro Phe Arg Val Tyr Ile Pro Asn Lys Pro
        275                 280                 285

Ser Lys Tyr Gly Ile Lys Ile Leu Met Met Cys Asp Ser Gly Thr Lys
    290                 295                 300

Tyr Met Ile Asn Gly Met Pro Tyr Leu Gly Arg Gly Thr Gln Thr Asn
305                 310                 315                 320

Gly Val Pro Leu Gly Glu Tyr Tyr Val Lys Glu Leu Ser Lys Pro Val
                325                 330                 335

His Gly Ser Cys Arg Asn Ile Thr Cys Asp Asn Trp Phe Thr Ser Ile
            340                 345                 350

Pro Leu Ala Lys Asn Leu Leu Gln Glu Pro Tyr Lys Leu Thr Ile Val
        355                 360                 365

Gly Thr Val Arg Ser Asn Lys Arg Glu Ile Pro Glu Val Leu Lys Asn
```

```
    370                 375                 380

Ser Arg Ser Arg Pro Val Gly Thr Ser Met Phe Cys Phe Asp Gly Pro
385                 390                 395                 400

Leu Thr Leu Val Ser Tyr Lys Pro Lys Pro Ala Lys Met Val Tyr Leu
                405                 410                 415

Leu Ser Ser Cys Asp Glu Asp Ala Ser Ile Asn Glu Ser Thr Gly Lys
            420                 425                 430

Pro Gln Met Val Met Tyr Tyr Asn Gln Thr Lys Gly Gly Val Asp Thr
        435                 440                 445

Leu Asp Gln Met Cys Ser Val Met Thr Cys Ser Arg Lys Thr Asn Arg
    450                 455                 460

Trp Pro Met Ala Leu Leu Tyr Gly Met Ile Asn Ile Ala Cys Ile Asn
465                 470                 475                 480

Ser Phe Ile Ile Tyr Ser His Asn Val Ser Ser Lys Gly Glu Lys Val
                485                 490                 495

Gln Ser Arg Lys Lys Phe Met Arg Asn Leu Tyr Met Ser Leu Thr Ser
            500                 505                 510

Ser Phe Met Arg Lys Arg Leu Glu Ala Pro Thr Leu Lys Arg Tyr Leu
        515                 520                 525

Arg Asp Asn Ile Ser Asn Ile Leu Pro Lys Glu Val Pro Gly Thr Ser
    530                 535                 540

Asp Asp Ser Thr Glu Glu Pro Val Met Lys Lys Arg Thr Tyr Cys Thr
545                 550                 555                 560

Tyr Cys Pro Ser Lys Ile Arg Arg Lys Ala Asn Ala Ser Cys Lys Lys
                565                 570                 575
```

Cys Lys Lys Val Ile Cys Arg Glu His Asn Ile Asp Met Cys Gln Ser
580 585 590

Cys Phe

<210> 1048
<211> 340
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1048

Met Gly Lys Ser Lys Glu Ile Ser Gln Asp Leu Arg Lys Arg Ile Val
1 5 10 15

Asp Leu His Lys Ser Gly Ser Ser Leu Gly Ala Ile Ser Lys Arg Leu
20 25 30

Ala Val Pro Arg Ser Ser Val Gln Thr Ile Val Arg Lys Tyr Lys His
35 40 45

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

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

Arg Thr Thr Ala Lys Asp Leu Val Lys Met Leu Glu Glu Thr Gly Thr
85 90 95

Lys Val Ser Ile Ser Thr Val Lys Arg Val Leu Tyr Arg His Asn Leu
100 105 110

Lys Gly His Ser Ala Arg Lys Lys Pro Leu Leu Gln Asn Arg His Lys
115 120 125

```
Lys Ala Arg Leu Arg Phe Ala Thr Ala His Gly Asp Lys Asp Arg Thr
    130                 135                 140

Phe Trp Arg Asn Val Leu Trp Ser Asp Glu Thr Lys Ile Glu Leu Phe
145                 150                 155                 160

Gly His Asn Asp His Arg Tyr Val Trp Arg Lys Lys Gly Glu Ala Cys
                165                 170                 175

Lys Pro Lys Asn Thr Ile Pro Thr Val Lys His Gly Gly Gly Ser Ile
            180                 185                 190

Met Leu Trp Gly Cys Phe Ala Ala Gly Gly Thr Gly Ala Leu His Lys
        195                 200                 205

Ile Asp Gly Ile Met Asp Lys Glu Asn Tyr Val Asp Ile Leu Lys Gln
    210                 215                 220

His Leu Lys Thr Ser Val Arg Lys Leu Lys Leu Gly Arg Lys Trp Val
225                 230                 235                 240

Phe Gln His Asp Asn Asp Pro Lys His Thr Ser Lys Val Val Ala Lys
                245                 250                 255

Trp Leu Lys Asp Asn Lys Val Lys Val Leu Glu Trp Pro Ser Gln Ser
            260                 265                 270

Pro Asp Leu Asn Pro Ile Glu Asn Leu Trp Ala Glu Leu Lys Lys Arg
        275                 280                 285

Val Arg Ala Arg Arg Pro Thr Asn Leu Thr Gln Leu His Gln Leu Cys
    290                 295                 300

Gln Glu Glu Trp Ala Lys Ile His Pro Asn Tyr Cys Gly Lys Leu Val
305                 310                 315                 320

Glu Gly Tyr Pro Lys Arg Leu Thr Gln Val Lys Gln Phe Lys Gly Asn
```

325 330 335

Ala Thr Lys Tyr
340

<210> 1049
<211> 589
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1049

Met Ala Lys Arg Phe Tyr Ser Ala Glu Glu Ala Ala Ala His Cys Met
1 5 10 15

Ala Ser Ser Ser Glu Glu Phe Ser Gly Ser Asp Ser Glu Tyr Val Pro
20 25 30

Pro Ala Ser Glu Ser Asp Ser Ser Thr Glu Glu Ser Trp Cys Ser Ser
35 40 45

Ser Thr Val Ser Ala Leu Glu Glu Pro Met Glu Val Asp Glu Asp Val
50 55 60

Asp Asp Leu Glu Asp Gln Glu Ala Gly Asp Arg Ala Asp Ala Ala Ala
65 70 75 80

Gly Gly Glu Pro Ala Trp Gly Pro Pro Cys Asn Phe Pro Pro Glu Ile
85 90 95

Pro Pro Phe Thr Thr Val Pro Gly Val Lys Val Asp Thr Ser Asn Phe
100 105 110

Glu Pro Ile Asn Phe Phe Gln Leu Phe Met Thr Glu Ala Ile Leu Gln
115 120 125

Asp Met Val Leu Tyr Thr Asn Val Tyr Ala Glu Gln Tyr Leu Thr Gln

```
    130                 135                 140

Asn Pro Leu Pro Arg Tyr Ala Arg Ala His Ala Trp His Pro Thr Asp
145                 150                 155                 160

Ile Ala Glu Met Lys Arg Phe Val Gly Leu Thr Leu Ala Met Gly Leu
                165                 170                 175

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

Ser Ile Pro Val Phe Ser Ala Thr Met Ser Arg Asn Arg Tyr Gln Leu
        195                 200                 205

Leu Leu Arg Phe Leu His Phe Asn Asn Asn Ala Thr Ala Val Pro Pro
    210                 215                 220

Asp Gln Pro Gly His Asp Arg Leu His Lys Leu Arg Pro Leu Ile Asp
225                 230                 235                 240

Ser Leu Ser Glu Arg Phe Ala Ala Val Tyr Thr Pro Cys Gln Asn Ile
                245                 250                 255

Cys Ile Asp Glu Ser Leu Leu Leu Phe Lys Gly Arg Leu Gln Phe Arg
            260                 265                 270

Gln Tyr Ile Pro Ser Lys Arg Ala Arg Tyr Gly Ile Lys Phe Tyr Lys
        275                 280                 285

Leu Cys Glu Ser Ser Ser Gly Tyr Thr Ser Tyr Phe Leu Ile Tyr Glu
    290                 295                 300

Gly Lys Asp Ser Lys Leu Asp Pro Pro Gly Cys Pro Pro Asp Leu Thr
305                 310                 315                 320

Val Ser Gly Lys Ile Val Trp Glu Leu Ile Ser Pro Leu Leu Gly Gln
                325                 330                 335
```

```
Gly Phe His Leu Tyr Val Asp Asn Phe Tyr Ser Ser Ile Pro Leu Phe
            340                 345                 350

Thr Ala Leu Tyr Cys Leu Asp Thr Pro Ala Cys Gly Thr Ile Asn Arg
        355                 360                 365

Asn Arg Lys Gly Leu Pro Arg Ala Leu Leu Asp Lys Lys Leu Asn Arg
    370                 375                 380

Gly Glu Thr Tyr Ala Leu Arg Lys Asn Glu Leu Leu Ala Ile Lys Phe
385                 390                 395                 400

Phe Asp Lys Lys Asn Val Phe Met Leu Thr Ser Ile His Asp Glu Ser
                405                 410                 415

Val Ile Arg Glu Gln Arg Val Gly Arg Pro Pro Lys Asn Lys Pro Leu
            420                 425                 430

Cys Ser Lys Glu Tyr Ser Lys Tyr Met Gly Gly Val Asp Arg Thr Asp
        435                 440                 445

Gln Leu Gln His Tyr Tyr Asn Ala Thr Arg Lys Thr Arg Ala Trp Tyr
    450                 455                 460

Lys Lys Val Gly Ile Tyr Leu Ile Gln Met Ala Leu Arg Asn Ser Tyr
465                 470                 475                 480

Ile Val Tyr Lys Ala Ala Val Pro Gly Pro Lys Leu Ser Tyr Tyr Lys
                485                 490                 495

Tyr Gln Leu Gln Ile Leu Pro Ala Leu Leu Phe Gly Gly Val Glu Glu
            500                 505                 510

Gln Thr Val Pro Glu Met Pro Pro Ser Asp Asn Val Ala Arg Leu Ile
        515                 520                 525

Gly Lys His Phe Ile Asp Thr Leu Pro Pro Thr Pro Gly Lys Gln Arg
```

530 535 540

Pro Gln Lys Gly Cys Lys Val Cys Arg Lys Arg Gly Ile Arg Arg Asp
545 550 555 560

Thr Arg Tyr Tyr Cys Pro Lys Cys Pro Arg Asn Pro Gly Leu Cys Phe
565 570 575

Lys Pro Cys Phe Glu Ile Tyr His Thr Gln Leu His Tyr
580 585

<210> 1050
<211> 589
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1050

Met Ala Lys Arg Phe Tyr Ser Ala Glu Glu Ala Ala Ala His Cys Met
1 5 10 15

Ala Pro Ser Ser Glu Glu Phe Ser Gly Ser Asp Ser Glu Tyr Val Pro
20 25 30

Pro Ala Ser Glu Ser Asp Ser Ser Thr Glu Glu Ser Trp Cys Ser Ser
35 40 45

Ser Thr Val Ser Ala Leu Glu Glu Pro Met Glu Val Asp Glu Asp Val
50 55 60

Asp Asp Leu Glu Asp Gln Glu Ala Gly Asp Arg Ala Asp Ala Ala Ala
65 70 75 80

Gly Gly Glu Pro Ala Trp Gly Pro Pro Cys Asn Phe Pro Pro Glu Ile
85 90 95

Pro Pro Phe Thr Thr Val Pro Gly Val Lys Val Asp Thr Ser Asn Phe

```
            100                 105                 110

Glu Pro Ile Asn Phe Phe Gln Leu Phe Met Thr Glu Ala Ile Leu Gln
        115                 120                 125

Asp Met Val Leu Tyr Thr Asn Val Tyr Ala Glu Gln Tyr Leu Thr Gln
    130                 135                 140

Asn Pro Leu Pro Arg Tyr Ala Arg Ala His Ala Trp His Pro Thr Asp
145                 150                 155                 160

Ile Ala Glu Met Lys Arg Phe Val Gly Leu Thr Leu Ala Met Gly Leu
                165                 170                 175

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

Ser Ile Pro Val Phe Ser Ala Thr Met Ser Arg Asn Arg Tyr Gln Leu
        195                 200                 205

Leu Leu Arg Phe Leu His Phe Asn Asn Asn Ala Thr Ala Val Pro Pro
    210                 215                 220

Asp Gln Pro Asp His Asp Arg Leu His Lys Leu Arg Pro Leu Ile Asp
225                 230                 235                 240

Ser Leu Ser Glu Arg Phe Ala Ala Val Tyr Thr Pro Cys Gln Asn Ile
                245                 250                 255

Cys Ile Asp Glu Ser Leu Leu Leu Phe Lys Gly Arg Leu Arg Phe Arg
            260                 265                 270

Gln Tyr Ile Pro Ser Lys Arg Ala Arg Tyr Gly Ile Lys Phe Tyr Lys
        275                 280                 285

Leu Cys Glu Ser Ser Ser Gly Tyr Thr Ser Tyr Phe Leu Ile Tyr Glu
    290                 295                 300
```

```
Gly Lys Asp Ser Lys Leu Asp Pro Pro Gly Cys Pro Pro Asp Leu Thr
305                 310                 315                 320

Val Ser Gly Lys Ile Val Trp Glu Leu Ile Ser Pro Leu Leu Gly Gln
                325                 330                 335

Gly Phe His Leu Tyr Val Asp Asn Phe Tyr Ser Ser Ile Pro Leu Phe
            340                 345                 350

Thr Ala Leu Tyr Cys Leu Asp Thr Pro Ala Cys Gly Thr Ile Asn Arg
        355                 360                 365

Thr Arg Lys Gly Leu Pro Arg Ala Leu Leu Asp Lys Lys Leu Asn Arg
    370                 375                 380

Gly Glu Thr Tyr Ala Leu Arg Lys Asn Glu Leu Leu Ala Ile Lys Phe
385                 390                 395                 400

Phe Asp Lys Lys Asn Val Phe Met Leu Thr Ser Ile His Asp Glu Ser
                405                 410                 415

Val Ile Arg Glu Gln Arg Val Gly Arg Pro Pro Lys Asn Lys Pro Leu
            420                 425                 430

Cys Ser Lys Glu Tyr Ser Lys Tyr Met Gly Gly Val Asp Arg Thr Asp
        435                 440                 445

Gln Leu Gln His Tyr Tyr Asn Ala Thr Arg Lys Thr Ser Ala Trp Tyr
    450                 455                 460

Lys Lys Val Gly Ile Tyr Leu Ile Gln Met Ala Leu Arg Asn Ser Tyr
465                 470                 475                 480

Ile Val Tyr Lys Ala Ala Val Pro Gly Pro Lys Leu Ser Tyr Tyr Lys
                485                 490                 495

Tyr Gln Leu Gln Ile Leu Pro Ala Leu Leu Phe Gly Gly Val Glu Glu
```

```
            500                 505                 510

Gln Thr Val Pro Glu Met Leu Pro Ser Asp Asn Val Ala Arg Leu Ile
        515                 520                 525

Gly Lys His Phe Ile Asp Thr Leu Pro Pro Thr Pro Gly Lys Gln Arg
    530                 535                 540

Pro Gln Lys Gly Cys Lys Val Cys Arg Lys Arg Gly Ile Arg Arg Asp
545                 550                 555                 560

Thr Arg Tyr Tyr Cys Pro Lys Cys Pro Arg Asn Pro Gly Leu Cys Phe
                565                 570                 575

Lys Pro Cys Phe Glu Ile Tyr His Thr Gln Leu His Tyr
            580                 585
```

<210> 1051
<211> 589
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1051

```
Met Ala Lys Arg Phe Tyr Ser Ala Glu Glu Ala Ala Ala His Cys Met
1               5                   10                  15

Ala Ser Ser Ser Glu Glu Phe Ser Gly Ser Asp Ser Glu Tyr Val Pro
            20                  25                  30

Pro Ala Ser Glu Ser Asp Ser Ser Thr Glu Glu Ser Trp Cys Ser Ser
        35                  40                  45

Ser Thr Val Ser Ala Leu Glu Glu Pro Met Glu Val Asp Glu Asp Val
    50                  55                  60

Asp Asp Leu Glu Asp Gln Glu Ala Gly Asp Arg Ala Asp Ala Ala Ala
```

```
65                  70                  75                  80

Gly Gly Glu Pro Ala Trp Gly Pro Pro Cys Asn Phe Pro Pro Glu Ile
                85                  90                  95

Pro Pro Phe Thr Thr Val Pro Gly Val Lys Val Asp Thr Ser Asn Tyr
            100                 105                 110

Glu Pro Ile Asn Phe Phe Gln Leu Phe Met Thr Glu Ala Ile Leu Gln
        115                 120                 125

Asp Met Val Leu Tyr Thr Asn Val Tyr Ala Glu Gln Tyr Leu Thr Gln
    130                 135                 140

Asn Pro Leu Pro Arg Tyr Ala Arg Ala His Ala Trp His Pro Thr Asp
145                 150                 155                 160

Ile Ala Glu Met Lys Arg Phe Val Gly Leu Thr Leu Ala Met Gly Leu
                165                 170                 175

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

Ser Ile Pro Val Phe Ser Ala Thr Met Ser Arg Asn Arg Tyr Gln Leu
        195                 200                 205

Leu Leu Arg Phe Leu His Phe Asn Asn Asn Ala Thr Ala Val Pro Pro
    210                 215                 220

Asp Gln Pro Gly His Asp Arg Leu His Lys Leu Arg Pro Leu Ile Asp
225                 230                 235                 240

Ser Leu Ser Glu Arg Phe Ala Ala Val Tyr Thr Pro Cys Gln Asn Ile
                245                 250                 255

Cys Ile Asp Glu Ser Leu Leu Leu Phe Lys Gly Arg Leu Gln Phe Arg
            260                 265                 270
```

```
Gln Tyr Ile Pro Ser Lys Arg Ala Arg Tyr Gly Ile Lys Phe Tyr Lys
        275                 280                 285

Leu Cys Glu Ser Ser Ser Gly Tyr Thr Ser Tyr Phe Leu Ile Tyr Glu
    290                 295                 300

Gly Lys Asp Ser Lys Leu Asp Pro Pro Gly Cys Pro Pro Asp Leu Thr
305                 310                 315                 320

Val Ser Gly Lys Ile Val Trp Glu Leu Ile Ser Pro Leu Leu Gly Gln
                325                 330                 335

Gly Phe His Leu Tyr Val Asp Asn Phe Tyr Ser Ser Ile Pro Leu Phe
            340                 345                 350

Thr Ala Leu Tyr Cys Leu Asp Thr Pro Ala Cys Gly Thr Ile Asn Arg
        355                 360                 365

Asn Arg Lys Gly Leu Pro Arg Ala Leu Leu Asp Lys Lys Leu Asn Arg
    370                 375                 380

Gly Glu Thr Tyr Ala Leu Arg Lys Asn Glu Leu Leu Ala Ile Lys Phe
385                 390                 395                 400

Phe Asp Lys Lys Asn Val Phe Met Leu Thr Ser Ile His Asp Glu Ser
                405                 410                 415

Val Ile Arg Glu Gln Arg Val Gly Arg Pro Pro Lys Asn Lys Pro Leu
            420                 425                 430

Cys Ser Lys Glu Tyr Ser Lys Tyr Met Gly Gly Val Asp Arg Thr Asp
        435                 440                 445

Gln Leu Gln His Tyr Tyr Asn Ala Thr Arg Lys Thr Arg Ala Trp Tyr
    450                 455                 460

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

```
465                 470                 475                 480

Ile Val Tyr Lys Ala Ala Val Pro Gly Pro Lys Leu Ser Tyr Tyr Lys
                485                 490                 495

Tyr Gln Leu Gln Ile Leu Pro Ala Leu Leu Phe Gly Gly Val Glu Glu
            500                 505                 510

Gln Thr Val Pro Glu Met Pro Pro Ser Asp Asn Val Ala Arg Leu Ile
        515                 520                 525

Gly Lys His Phe Ile Asp Thr Leu Pro Pro Thr Pro Gly Lys Gln Arg
    530                 535                 540

Pro Gln Lys Gly Cys Lys Val Cys Arg Lys Arg Gly Ile Arg Arg Asp
545                 550                 555                 560

Thr Arg Tyr Tyr Cys Pro Lys Cys Pro Arg Asn Pro Gly Leu Cys Phe
                565                 570                 575

Lys Pro Cys Phe Glu Ile Tyr His Thr Gln Leu His Tyr
            580                 585
```

<210> 1052
<211> 589
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1052

```
Met Ala Lys Arg Phe Tyr Ser Ala Glu Glu Ala Ala Ala His Cys Met
1               5                   10                  15

Ala Ser Ser Ser Glu Glu Phe Ser Gly Ser Asp Ser Glu Tyr Val Pro
            20                  25                  30

Pro Ala Ser Glu Ser Asp Ser Ser Thr Glu Glu Ser Trp Cys Ser Ser
```

```
        35                  40                  45

Ser Thr Val Ser Ala Leu Glu Glu Pro Met Glu Val Asp Glu Asp Val
    50                  55                  60

Asp Asp Leu Glu Asp Gln Glu Ala Gly Asp Arg Ala Asp Ala Ala Ala
65                  70                  75                  80

Gly Gly Glu Pro Ala Trp Gly Pro Pro Cys Asn Phe Pro Pro Glu Ile
                85                  90                  95

Pro Pro Phe Thr Thr Val Pro Gly Val Lys Val Asp Thr Ser Asn Phe
            100                 105                 110

Glu Pro Ile Asn Phe Phe Gln Leu Phe Met Thr Glu Ala Ile Leu Gln
        115                 120                 125

Asp Met Val Leu Tyr Thr Asn Val Tyr Ala Glu Gln Tyr Leu Thr Gln
    130                 135                 140

Val Pro Leu Pro Arg Tyr Ala Arg Ala His Ala Trp His Pro Thr Asp
145                 150                 155                 160

Ile Ala Glu Met Lys Arg Phe Val Gly Leu Thr Leu Ala Met Gly Leu
                165                 170                 175

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

Asn Ile Pro Val Phe Ser Ala Thr Met Ser Arg Asn Arg Tyr Gln Leu
        195                 200                 205

Leu Leu Arg Phe Leu Glu Phe Asn Asn Glu Ala Thr Ala Val Pro Pro
    210                 215                 220

Asp Gln Pro Gly His Asp Arg Leu His Lys Leu Arg Pro Leu Ile Asp
225                 230                 235                 240
```

```
Ser Leu Ser Glu Arg Phe Ala Ala Val Tyr Thr Pro Cys Gln Asn Ile
                245                 250                 255

Cys Ile Asp Glu Ser Leu Leu Leu Phe Lys Gly Arg Leu Gln Phe Arg
            260                 265                 270

Gln Tyr Ile Pro Ser Lys Arg Ala Arg Tyr Gly Ile Lys Phe Tyr Lys
        275                 280                 285

Leu Cys Glu Ser Ser Ser Gly Tyr Thr Ser Tyr Phe Leu Ile Tyr Glu
    290                 295                 300

Gly Lys Asp Ser Lys Leu Asp Pro Pro Gly Cys Pro Pro Asp Leu Thr
305                 310                 315                 320

Val Ser Gly Lys Ile Val Trp Glu Leu Ile Ser Pro Leu Leu Gly Gln
                325                 330                 335

Gly Phe His Leu Tyr Val Asp Asn Phe Tyr Ser Ser Ile Pro Leu Phe
            340                 345                 350

Thr Ala Leu Tyr Cys Leu Asp Thr Pro Ala Cys Gly Thr Ile Asn Arg
        355                 360                 365

Asn Arg Lys Gly Leu Pro Arg Ala Leu Leu Asp Lys Lys Leu Asn Arg
    370                 375                 380

Gly Glu Thr Tyr Ala Leu Arg Lys Asn Glu Leu Leu Ala Ile Lys Phe
385                 390                 395                 400

Phe Asp Lys Lys Asn Val Phe Met Leu Thr Ser Ile His Asp Glu Ser
                405                 410                 415

Val Ile Arg Glu Gln Arg Val Gly Arg Pro Pro Lys Asn Lys Pro Leu
            420                 425                 430

Cys Ser Lys Glu Tyr Ser Lys Tyr Met Gly Gly Val Asp Arg Thr Asp
```

```
        435                 440                 445

Gln Leu Gln His Tyr Tyr Asn Ala Thr Arg Lys Thr Arg Ala Trp Tyr
    450                 455                 460

Lys Lys Val Gly Ile Tyr Leu Ile Gln Met Ala Leu Arg Asn Ser Tyr
465                 470                 475                 480

Ile Val Tyr Lys Ala Ala Val Pro Gly Pro Lys Leu Ser Tyr Tyr Lys
                485                 490                 495

Tyr Gln Leu Gln Ile Leu Pro Ala Leu Leu Phe Gly Gly Val Glu Glu
            500                 505                 510

Gln Thr Val Pro Glu Met Pro Pro Ser Asp Asn Val Ala Arg Leu Ile
        515                 520                 525

Gly Lys His Phe Ile Asp Thr Leu Pro Pro Thr Pro Gly Lys Gln Arg
    530                 535                 540

Pro Gln Lys Gly Cys Lys Val Cys Arg Lys Arg Gly Ile Arg Arg Asp
545                 550                 555                 560

Thr Arg Tyr Tyr Cys Pro Lys Cys Pro Arg Asn Pro Gly Leu Cys Phe
                565                 570                 575

Lys Pro Cys Phe Glu Ile Tyr His Thr Gln Leu His Tyr
            580                 585
```

<210> 1053
<211> 589
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1053

```
Met Ala Lys Arg Phe Tyr Ser Ala Glu Glu Ala Ala Ala His Cys Met
```

```
1               5                   10                  15

Ala Ser Ser Gln Glu Glu Phe Ser Gly Ser Asp Ser Glu Tyr Val Pro
            20                  25                  30

Pro Ala Ser Glu Ser Asp Ser Ser Thr Glu Glu Ser Trp Cys Ser Ser
        35                  40                  45

Ser Thr Val Ser Ala Leu Glu Glu Pro Met Glu Val Asp Glu Asp Val
    50                  55                  60

Asp Asp Leu Glu Asp Gln Glu Ala Gly Asp Arg Ala Asp Ala Ala Ala
65                  70                  75                  80

Gly Gly Glu Pro Ala Trp Gly Pro Pro Cys Asn Phe Pro Pro Glu Ile
                85                  90                  95

Pro Pro Phe Thr Thr Val Pro Gly Val Lys Val Asp Thr Ser Asn Phe
            100                 105                 110

Glu Pro Ile Asn Phe Phe Gln Leu Phe Met Thr Glu Ala Ile Leu Gln
        115                 120                 125

Asp Met Val Leu Tyr Thr Asn Val Tyr Ala Glu Gln Tyr Leu Thr Gln
    130                 135                 140

Asn Pro Leu Thr Arg Tyr Ala Arg Ala His Ala Trp His Pro Thr Asp
145                 150                 155                 160

Ile Ala Glu Met Lys Arg Phe Val Gly Leu Thr Leu Ala Met Gly Leu
                165                 170                 175

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

Ser Ile Pro Val Phe Gly Ala Thr Met Ser Arg Asn Arg Tyr Gln Leu
        195                 200                 205
```

```
Leu Leu Arg Phe Leu His Phe Asn Asn Asn Ala Thr Ala Val Pro Pro
    210                 215                 220

Asp Gln Pro Gly His Asp Arg Leu His Lys Leu Arg Pro Leu Ile Asp
225                 230                 235                 240

Ser Leu Ser Glu Arg Phe Ala Asn Val Tyr Thr Pro Cys Gln Asn Ile
                245                 250                 255

Cys Ile Asp Glu Ser Leu Leu Leu Phe Lys Gly Arg Leu Gln Phe Lys
            260                 265                 270

Gln Tyr Ile Pro Ser Lys Arg Ala Arg Tyr Gly Ile Lys Phe Tyr Lys
        275                 280                 285

Leu Cys Glu Ser Ser Ser Gly Tyr Thr Ser Tyr Phe Leu Ile Tyr Glu
    290                 295                 300

Gly Lys Asp Ser Lys Leu Asp Pro Pro Gly Cys Pro Pro Asp Leu Thr
305                 310                 315                 320

Val Ser Gly Lys Ile Val Trp Glu Leu Ile Ser Pro Leu Leu Gly Gln
                325                 330                 335

Gly Phe His Leu Tyr Val Asp Asn Phe Tyr Ser Ser Ile Pro Leu Phe
            340                 345                 350

Thr Ala Leu Tyr Cys Leu Asn Thr Pro Ala Cys Gly Thr Ile Asn Arg
        355                 360                 365

Asn Arg Lys Gly Leu Pro Arg Ala Leu Leu Asp Lys Lys Leu Asn Arg
    370                 375                 380

Gly Glu Thr Tyr Ala Leu Arg Lys Asn Glu Leu Leu Ala Ile Lys Phe
385                 390                 395                 400

Phe Asp Lys Lys Asn Val Phe Met Leu Thr Ser Ile His Asp Glu Ser
```

```
                405                 410                 415

Val Ile Arg Glu Gln Arg Val Gly Arg Pro Pro Lys Asn Lys Pro Leu
            420                 425                 430

Cys Ser Lys Glu Tyr Ser Lys Tyr Met Gly Gly Val Asp Arg Thr Asp
        435                 440                 445

Gln Leu Gln His Tyr Tyr Asn Ala Thr Arg Lys Thr Arg His Trp Tyr
    450                 455                 460

Lys Lys Val Gly Val Tyr Leu Ile Gln Met Ala Leu Arg Asn Ser Tyr
465                 470                 475                 480

Ile Val Tyr Lys Ala Ala Val Pro Gly Pro Lys Leu Ser Tyr Tyr Lys
                485                 490                 495

Tyr Gln Leu Gln Ile Leu Pro Ala Leu Leu Phe Gly Gly Val Glu Glu
            500                 505                 510

Gln Thr Val Pro Glu Met Pro Asp Ser Asp Asn Val Ala Arg Leu Ile
        515                 520                 525

Gly Lys His Phe Ile Asp Thr Leu Pro Pro Thr Pro Gly Lys Gln Arg
    530                 535                 540

Pro Gln Lys Gly Cys Lys Val Cys Arg Lys Arg Gly Ile Arg Arg Asp
545                 550                 555                 560

Thr Arg Tyr Tyr Cys Pro Lys Cys Pro Arg Asn Pro Gly Leu Cys Arg
                565                 570                 575

Lys Pro Cys Phe Glu Ile Tyr His Thr Gln Leu His Tyr
            580                 585
```

<210> 1054
<211> 589
<212> PRT

<213> Artificial sequence

<220>
<223> Synthetic

<400> 1054

```
Met Ala Lys Arg Phe Tyr Ser Ala Glu Glu Ala Ala Ala His Cys Met
1               5                  10                  15


Ala Ser Ser Ser Glu Glu Phe Ser Gly Ser Asp Ser Glu Tyr Val Pro
            20                  25                  30


Pro Ala Ser Glu Ser Asp Ser Ser Thr Glu Glu Ser Trp Cys Ser Ser
        35                  40                  45


Ser Thr Val Ser Ala Leu Glu Glu Pro Met Glu Val Asp Glu Asp Val
    50                  55                  60


Asp Asp Leu Glu Asp Gln Glu Ala Gly Asp Arg Ala Asp Ala Ala Ala
65                  70                  75                  80


Gly Gly Glu Pro Ala Trp Gly Pro Pro Cys Asn Phe Pro Pro Glu Ile
                85                  90                  95


Pro Pro Phe Thr Thr Val Pro Gly Val Lys Val Asp Thr Ser Asn Phe
            100                 105                 110


Glu Pro Ile Asn Phe Phe Gln Leu Phe Met Thr Glu Ala Ile Leu Gln
        115                 120                 125


Asp Met Val Leu Tyr Thr Asn Val Tyr Ala Glu Gln Tyr Leu Thr Gln
    130                 135                 140


Asn Pro Leu Thr Arg Tyr Ala Arg Ala His Ala Trp His Pro Thr Asp
145                 150                 155                 160


Ile Cys Glu Met Lys Arg Phe Val Gly Leu Thr Leu Ala Met Gly Leu
                165                 170                 175
```

```
Ile Lys Ala Asn Ser Leu Glu Ser Tyr Trp Asp Thr Thr Thr Val Leu
            180                 185                 190

Ser Ile Pro Val Phe Gly Ala Thr Met Ser Arg Asn Arg Tyr Gln Leu
        195                 200                 205

Leu Leu Arg Phe Leu His Phe Asn Asn Asn Ala Thr Ala Val Pro Pro
    210                 215                 220

Asp Gln Pro Gly His Asp Arg Leu His Lys Leu Arg Pro Leu Ile Asp
225                 230                 235                 240

Ser Leu Ser Glu Arg Phe Ala Asn Val Tyr Thr Pro Cys Gln Asn Ile
                245                 250                 255

Cys Ile Asp Glu Ser Leu Leu Leu Phe Lys Gly Arg Leu Gln Phe Arg
            260                 265                 270

Gln Tyr Ile Pro Ser Lys Arg Ala Arg Tyr Gly Ile Lys Phe Tyr Lys
        275                 280                 285

Leu Cys Glu Ser Ser Thr Gly Tyr Thr Ser Tyr Phe Leu Ile Tyr Glu
    290                 295                 300

Gly Lys Asp Ser Lys Leu Asp Pro Pro Gly Cys Pro Pro Asp Leu Thr
305                 310                 315                 320

Val Ser Gly Lys Ile Val Trp Glu Leu Ile Ser Pro Leu Leu Gly Gln
                325                 330                 335

Gly Phe His Leu Tyr Val Asp Asn Phe Tyr Ser Ser Ile Pro Leu Phe
            340                 345                 350

Thr Ala Leu Tyr Cys Leu Asn Thr Pro Ala Cys Gly Thr Ile Asn Arg
        355                 360                 365

Asn Arg Lys Gly Leu Pro Arg Ala Leu Leu Asp Lys Lys Leu Asn Arg
```

```
    370                 375                 380

Gly Glu Thr Tyr Ala Leu Arg Lys Asn Glu Leu Leu Ala Ile Lys Phe
385                 390                 395                 400

Phe Asp Lys Lys Asn Val Phe Met Leu Thr Ser Ile His Asp Glu Ser
                405                 410                 415

Val Ile Arg Glu Gln Arg Val Gly Arg Pro Pro Lys Asn Lys Pro Leu
            420                 425                 430

Cys Ser Lys Glu Tyr Ser Lys Tyr Met Gly Gly Val Asp Arg Thr Asp
        435                 440                 445

Gln Leu Gln His Tyr Tyr Asn Ala Thr Arg Lys Thr Arg His Trp Tyr
    450                 455                 460

Lys Lys Val Gly Val Tyr Leu Ile Gln Met Ala Leu Arg Asn Ser Tyr
465                 470                 475                 480

Ile Val Tyr Lys Ala Ala Val Pro Gly Pro Lys Leu Ser Tyr Tyr Lys
                485                 490                 495

Tyr Gln Leu Gln Ile Leu Pro Ala Leu Leu Phe Gly Gly Val Glu Glu
            500                 505                 510

Gln Thr Val Pro Glu Met Pro Asp Ser Asp Asn Val Ala Arg Leu Ile
        515                 520                 525

Gly Lys His Phe Ile Asp Thr Leu Pro Pro Thr Pro Gly Lys Gln Arg
    530                 535                 540

Pro Gln Lys Gly Cys Lys Val Cys Arg Lys Arg Gly Ile Arg Arg Asp
545                 550                 555                 560

Thr Arg Tyr Tyr Cys Pro Lys Cys Pro Arg Asn Pro Gly Leu Cys Arg
                565                 570                 575
```

Lys Pro Cys Phe Glu Ile Tyr His Thr Gln Leu His Tyr
580 585

<210> 1055
<211> 589
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1055

Met Ala Lys Arg Phe Tyr Ser Ala Glu Glu Ala Ala Ala His Cys Met
1 5 10 15

Ala Ser Ser Ser Glu Gln Thr Ser Gly Ser Asp Ser Glu Tyr Val Pro
20 25 30

Pro Ala Ser Glu Ser Asp Ser Ser Thr Glu Glu Ser Trp Cys Ser Ser
35 40 45

Ser Thr Val Ser Ala Leu Glu Glu Pro Met Glu Val Asp Glu Asp Val
50 55 60

Asp Asp Leu Glu Asp Gln Glu Ala Gly Asp Arg Ala Asp Ala Ala Ala
65 70 75 80

Gly Gly Glu Pro Ala Trp Gly Pro Pro Cys Asn Phe Pro Pro Glu Ile
85 90 95

Pro Pro Phe Thr Thr Val Pro Gly Val Lys Val Asp Thr Ser Asn Phe
100 105 110

Glu Pro Ile Asn Phe Phe Gln Leu Phe Met Thr Glu Ala Ile Leu Gln
115 120 125

Asp Met Val Leu Tyr Thr Asn Val Tyr Ala Glu Gln Tyr Leu Thr Gln
130 135 140

```
Asn Pro Leu Thr Arg Tyr Ala Arg Ala His Ala Trp His Pro Thr Asp
145                 150                 155                 160

Ile Ala Glu Met Lys Arg Phe Val Gly Leu Thr Leu Ala Met Gly Leu
                165                 170                 175

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

Ser Ile Pro Val Phe Gly Ala Thr Met Ser Arg Asn Arg Tyr Gln Leu
        195                 200                 205

Leu Leu Arg Phe Leu His Phe Asn Asn Asn Ala Thr Ala Val Pro Pro
    210                 215                 220

Asp Gln Pro Gly His Asp Arg Leu His Lys Leu Arg Pro Leu Ile Asp
225                 230                 235                 240

Ser Leu Ser Glu Arg Phe Ala Asn Val Tyr Thr Pro Cys Gln Asn Ile
                245                 250                 255

Cys Ile Asp Glu Ser Leu Leu Leu Phe Lys Gly Arg Leu Gln Phe Arg
            260                 265                 270

Gln Tyr Ile Pro Ser Lys Arg Ala Arg Tyr Gly Ile Lys Phe Tyr Lys
        275                 280                 285

Leu Cys Glu Ser Ser Ser Gly Tyr Thr Ser Tyr Phe Leu Ile Tyr Glu
    290                 295                 300

Gly Lys Asp Ser Lys Leu Asp Pro Pro Gly Cys Pro Pro Asp Leu Thr
305                 310                 315                 320

Val Ser Gly Lys Ile Val Trp Glu Leu Ile Ser Pro Leu Leu Gly Gln
                325                 330                 335

Gly Phe His Leu Tyr Val Asp Asn Phe Tyr Ser Ser Ile Pro Leu Phe
```

```
            340                 345                 350

Thr Ala Leu Tyr Cys Leu Asn Thr Pro Ala Cys Gly Thr Ile Asn Arg
        355                 360                 365

Asn Arg Lys Gly Leu Pro Arg Ala Leu Leu Asp Lys Lys Leu Asn Arg
    370                 375                 380

Gly Glu Thr Tyr Ala Leu Arg Lys Asn Glu Leu Leu Ala Ile Lys Phe
385                 390                 395                 400

Phe Asp Lys Lys Asn Val Phe Met Leu Thr Ser Ile His Asp Glu Ser
                405                 410                 415

Val Ile Arg Glu Gln Arg Val Gly Arg Lys Pro Lys Asn Lys Pro Leu
            420                 425                 430

Cys Ser Lys Glu Tyr Ser Lys Tyr Met Gly Gly Val Asp Arg Thr Asp
        435                 440                 445

Gln Leu Gln His Tyr Tyr Asn Ala Thr Arg Lys Thr Arg His Trp Tyr
    450                 455                 460

Lys Lys Val Gly Ile Tyr Leu Ile Gln Met Ala Leu Arg Asn Ser Tyr
465                 470                 475                 480

Ile Val Tyr Lys Ala Ala Val Pro Gly Pro Lys Leu Ser Tyr Tyr Lys
                485                 490                 495

Tyr Gln Leu Gln Ile Leu Pro Ala Leu Leu Phe Gly Gly Val Glu Glu
            500                 505                 510

Gln Thr Val Pro Glu Met Pro Pro Ser Asp Asn Val Ala Arg Leu Ile
        515                 520                 525

Gly Lys His Phe Ile Asp Thr Leu Pro Pro Thr Pro Gly Lys Gln Arg
    530                 535                 540
```

```
Pro Gln Lys Gly Cys Lys Val Cys Arg Lys Arg Gly Ile Arg Arg Asp
545                 550                 555                 560


Thr Arg Tyr Tyr Cys Pro Lys Cys Pro Arg Asn Pro Gly Leu Cys Arg
                565                 570                 575


Lys Pro Cys Phe Glu Ile Tyr His Thr Gln Leu His Tyr
            580                 585
```

<210> 1056
<211> 589
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1056

```
Met Ala Lys Arg Phe Tyr Ser Ala Glu Glu Ala Ala Ala His Cys Ser
1               5                   10                  15


Ala Ser Ser Ser Glu Glu Phe Ser Gly Ser Asp Ser Glu Tyr Val Pro
            20                  25                  30


Pro Ala Ser Glu Ser Asp Ser Ser Thr Glu Glu Ser Trp Cys Ser Ser
        35                  40                  45


Ser Thr Val Ser Ala Leu Glu Glu Pro Met Glu Val Asp Glu Asp Val
    50                  55                  60


Asp Asp Leu Glu Asp Gln Glu Ala Gly Asp Arg Ala Asp Ala Ala Ala
65                  70                  75                  80


Gly Gly Glu Pro Ala Trp Gly Pro Pro Cys Asn Phe Pro Pro Glu Ile
                85                  90                  95


Pro Pro Phe Thr Thr Val Pro Gly Val Lys Val Asp Thr Ser Asn Phe
            100                 105                 110
```

```
Glu Pro Ile Asn Phe Phe Gln Leu Phe Met Thr Glu Ala Ile Leu Gln
        115                 120                 125

Asp Met Val Leu Tyr Thr Asn Val Tyr Ala Glu Gln Tyr Leu Thr Gln
    130                 135                 140

Asn Pro Leu Thr Arg Gly Ala Arg Ala His Ala Trp His Pro Thr Asp
145                 150                 155                 160

Ile Ala Glu Met Lys Arg Phe Val Gly Leu Thr Leu Ala Met Gly Leu
                165                 170                 175

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

Ser Ile Pro Val Phe Gly Ala Thr Met Ser Arg Asn Arg Tyr Gln Leu
        195                 200                 205

Leu Leu Arg Phe Leu His Phe Asn Asn Asn Ala Thr Ala Val Pro Pro
    210                 215                 220

Asp Gln Pro Gly His Asp Arg Leu His Lys Leu Arg Pro Leu Ile Asp
225                 230                 235                 240

Ser Leu Ser Glu Arg Phe Ala Asn Val Tyr Thr Pro Cys Gln Asn Ile
                245                 250                 255

Cys Ile Asp Glu Ser Leu Met Leu Phe Lys Gly Arg Leu Gln Phe Arg
            260                 265                 270

Gln Tyr Ile Pro Ser Lys Arg Ala Arg Tyr Gly Ile Lys Phe Tyr Lys
        275                 280                 285

Leu Cys Glu Ser Ser Thr Gly Tyr Thr Ser Tyr Phe Leu Ile Tyr Glu
    290                 295                 300

Gly Lys Asp Ser Lys Leu Asp Pro Pro Gly Cys Pro Pro Asp Leu Thr
```

```
305                 310                 315                 320

Val Ser Gly Lys Ile Val Trp Glu Leu Ile Ser Pro Leu Leu Gly Gln
                325                 330                 335

Gly Phe His Leu Tyr Val Asp Asn Phe Tyr Ser Ser Ile Pro Leu Phe
            340                 345                 350

Thr Ala Leu Tyr Cys Leu Asn Thr Pro Ala Cys Gly Thr Ile Asn Arg
        355                 360                 365

Asn Arg Lys Gly Leu Pro Arg Ala Leu Leu Asp Lys Lys Leu Asn Arg
    370                 375                 380

Gly Glu Thr Tyr Ala Leu Arg Lys Asn Glu Leu Leu Ala Ile Lys Phe
385                 390                 395                 400

Phe Asp Lys Lys Asn Val Phe Met Leu Thr Ser Ile His Asp Glu Ser
                405                 410                 415

Val Ile Arg Glu Gln Arg Val Gly Arg Pro Pro Lys Asn Lys Pro Leu
            420                 425                 430

Cys Ser Lys Glu Tyr Ser Lys Tyr Met Gly Gly Val Asp Arg Thr Asp
        435                 440                 445

Gln Leu Gln His Tyr Tyr Asn Ala Thr Arg Lys Thr Arg His Trp Tyr
    450                 455                 460

Lys Lys Val Gly Ile Tyr Leu Ile Gln Met Ala Leu Arg Asn Ser Tyr
465                 470                 475                 480

Ile Val Tyr Lys Ala Ala Val Pro Gly Pro Lys Leu Ser Tyr Tyr Lys
                485                 490                 495

Tyr Gln Leu Gln Ile Leu Pro Ala Leu Leu Phe Gly Gly Val Glu Glu
            500                 505                 510
```

```
Gln Thr Val Pro Glu Met Pro Pro Ser Asp Asn Val Ala Arg Leu Ile
        515                 520                 525

Gly Lys His Phe Ile Asp Thr Leu Pro Pro Thr Pro Gly Lys Gln Arg
    530                 535                 540

Pro Gln Lys Gly Cys Lys Val Cys Arg Lys Arg Gly Ile Arg Arg Asp
545                 550                 555                 560

Thr Arg Tyr Tyr Cys Pro Lys Cys Pro Arg Asn Pro Gly Leu Cys Arg
                565                 570                 575

Lys Pro Cys Phe Glu Ile Tyr His Thr Gln Leu His Tyr
            580                 585
```

<210> 1057
<211> 589
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1057

```
Met Ala Lys Arg Phe Tyr Ser Ala Glu Glu Ala Ala Ala His Cys Ser
1               5                   10                  15

Ala Ser Ser Ser Glu Glu Phe Ser Gly Ser Asp Ser Glu Tyr Val Pro
            20                  25                  30

Pro Ala Ser Glu Ser Asp Ser Ser Thr Glu Glu Ser Trp Cys Ser Ser
        35                  40                  45

Ser Thr Val Ser Ala Leu Glu Glu Pro Met Glu Val Asp Glu Asp Val
    50                  55                  60

Asp Asp Leu Glu Asp Gln Glu Ala His Asp Arg Ala Asp Ala Ala Ala
65                  70                  75                  80
```

```
Gly Gly Glu Pro Ala Trp Gly Pro Pro Cys Asn Phe Pro Pro Glu Ile
                85                  90                  95

Pro Pro Phe Thr Thr Val Pro Gly Val Lys Val Asp Thr Ser Asn Phe
            100                 105                 110

Glu Pro Ile Asn Phe Phe Gln Leu Phe Met Thr Glu Ala Ile Leu Gln
        115                 120                 125

Asp Met Val Leu Tyr Thr Asn Val Tyr Ala Glu Gln Tyr Leu Thr Gln
    130                 135                 140

Asn Pro Leu Thr Arg Gly Ala Arg Ala His Ala Trp His Pro Thr Asp
145                 150                 155                 160

Ile Ala Glu Met Lys Arg Phe Val Gly Leu Thr Leu Ala Met Gly Leu
                165                 170                 175

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

Ser Ile Pro Val Phe Gly Ala Thr Met Ser Arg Asn Arg Tyr Gln Leu
        195                 200                 205

Leu His Arg Phe Leu His Phe Asn Asn Asn Ala Thr Ala Val Pro Pro
    210                 215                 220

Asp Gln Pro Gly His Asp Arg Leu His Lys Leu Arg Pro Leu Ile Asp
225                 230                 235                 240

Ser Leu Ser Glu Arg Phe Ala Asn Val Tyr Thr Pro Cys Gln Asn Ile
                245                 250                 255

Cys Ile Asp Glu Ser Leu Met Leu Phe Lys Gly Arg Leu Gln Phe Arg
            260                 265                 270

Gln Tyr Ile Pro Ser Lys Arg Ala Arg Tyr Gly Ile Lys Phe Tyr Lys
```

```
        275                 280                 285

Leu Cys Glu Ser Ser Thr Gly Tyr Thr Ser Tyr Phe Leu Ile Tyr Glu
    290                 295                 300

Gly Lys Asp Ser Lys Leu Asp Pro Pro Gly Cys Pro Pro Asp Leu Thr
305                 310                 315                 320

Val Ser Gly Lys Ile Val Trp Glu Leu Ile Ser Pro Leu Leu Gly Gln
                325                 330                 335

Gly Phe His Leu Tyr Val Asp Asn Phe Tyr Ser Ser Ile Pro Leu Phe
            340                 345                 350

Thr Ala Leu Tyr Cys Leu Asn Thr Pro Ala Cys Gly Thr Ile Asn Arg
        355                 360                 365

Asn Arg Lys Gly Leu Pro Arg Ala Leu Leu Asp Lys Lys Leu Asn Arg
    370                 375                 380

Gly Glu Thr Tyr Ala Leu Arg Lys Asn Glu Leu Leu Ala Ile Lys Phe
385                 390                 395                 400

Phe Asp Lys Lys Asn Val Phe Met Leu Thr Ser Ile His Asp Glu Ser
                405                 410                 415

Val Ile Arg Glu Gln Arg Val Gly Arg Pro Pro Lys Asn Lys Pro Leu
            420                 425                 430

Cys Ser Lys Glu Tyr Ser Lys Tyr Met Gly Gly Val Asp Arg Thr Asp
        435                 440                 445

Gln Leu Gln His Tyr Tyr Asn Ala Thr Arg Lys Thr Arg His Trp Tyr
    450                 455                 460

Lys Lys Val Gly Ile Tyr Leu Ile Gln Met Ala Leu Arg Asn Ser Tyr
465                 470                 475                 480
```

```
Ile Val Tyr Lys Ala Ala Val Pro Gly Pro Lys Leu Ser Tyr Tyr Lys
                485                 490                 495


Tyr Gln Leu Gln Ile Leu Pro Ala Leu Leu Phe Gly Gly Val Glu Glu
            500                 505                 510


Gln Thr Val Pro Glu Met Pro Pro Ser Asp Ser Val Ala Arg Leu Ile
        515                 520                 525


Gly Lys His Phe Ile Asp Thr Leu Pro Pro Thr Pro Gly Lys Gln Arg
    530                 535                 540


Pro Gln Lys Gly Cys Lys Val Cys Arg Lys Arg Gly Ile Arg Arg Asp
545                 550                 555                 560


Thr Arg Tyr Tyr Cys Pro Lys Cys Pro Arg Asn Pro Gly Leu Cys Arg
                565                 570                 575


Lys Pro Cys Phe Glu Ile Tyr His Thr Gln Leu His Tyr
            580                 585
```

<210> 1058
<211> 589
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1058

```
Met Ala Lys Arg Phe Tyr Ser Ala Glu Glu Ala Ala Ala His Cys Ser
1               5                   10                  15


Ala Ser Ser Ser Glu Glu Phe Ser Gly Ser Asp Ser Glu Tyr Val Pro
            20                  25                  30


Pro Ala Ser Glu Ser Asp Ser Ser Thr Glu Glu Ser Trp Cys Ser Ser
        35                  40                  45
```

```
Ser Thr Val Ser Ala Leu Glu Glu Pro Met Glu Val Asp Glu Asp Val
    50                  55                  60

Asp Asp Leu Glu Asp Gln Glu Ala Gly Asp Arg Ala Asp Ala Ala Ala
65                  70                  75                  80

Gly Gly Glu Pro Ala Trp Gly Pro Pro Cys Asn Phe Pro Pro Glu Ile
                85                  90                  95

Pro Pro Phe Thr Thr Val Pro Gly Val Lys Val Asp Thr Ser Asn Phe
            100                 105                 110

Glu Pro Ile Asn Phe Phe Gln Leu Phe Met Thr Glu Ala Ile Leu Gln
        115                 120                 125

Asp Met Val Leu Tyr Thr Asn Val Tyr Ala Glu Gln Tyr Leu Thr Gln
    130                 135                 140

Asn Pro Leu Thr Arg Gly Ala Arg Ala His Ala Trp His Pro Thr Asp
145                 150                 155                 160

Ile Ala Glu Met Lys Arg Phe Val Gly Leu Thr Leu Ala Met Gly Leu
                165                 170                 175

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

Ser Ile Pro Val Phe Gly Ala Thr Met Ser Arg Asn Arg Tyr Gln Leu
        195                 200                 205

Leu Leu Arg Phe Leu His Phe Asn Asn Asn Ala Thr Ala Val Pro Pro
    210                 215                 220

Asp Gln Pro Gly His Asp Arg Leu His Lys Leu Arg Pro Leu Ile Asp
225                 230                 235                 240

Ser Leu Ser Glu Arg Phe Ala Asn Val Tyr Thr Pro Cys Gln Asn Ile
```

```
                245                 250                 255

Cys Ile Asp Glu Ser Leu Met Leu Phe Lys Gly Arg Leu Gln Phe Arg
            260                 265                 270

Gln Tyr Ile Pro Ser Lys Arg Ala Arg Tyr Gly Ile Lys Phe Tyr Lys
        275                 280                 285

Leu Cys Glu Ser Ser Thr Gly Tyr Thr Ser Tyr Phe Leu Ile Tyr Glu
    290                 295                 300

Gly Lys Asp Ser Lys Leu Asp Pro Pro Gly Cys Pro Pro Asp Leu Thr
305                 310                 315                 320

Val Ser Gly Lys Ile Val Trp Glu Leu Ile Ser Pro Leu Leu Gly Gln
                325                 330                 335

Gly Phe His Leu Tyr Val Asp Asn Phe Tyr Ser Ser Ile Pro Leu Phe
            340                 345                 350

Thr Ala Leu Tyr Cys Leu Asn Thr Pro Ala Cys Gly Thr Ile Asn Arg
        355                 360                 365

Asn Arg Lys Gly Leu Pro Arg Ala Leu Leu Asp Lys Lys Leu Asn Arg
    370                 375                 380

Gly Glu Thr Tyr Ala Leu Arg Lys Asn Glu Leu Leu Ala Ile Lys Phe
385                 390                 395                 400

Phe Asp Lys Lys Asn Val Phe Met Leu Thr Ser Ile His Asp Glu Ser
                405                 410                 415

Val Ile Arg Glu Gln Arg Val Gly Arg Pro Pro Lys Asn Lys Pro Leu
            420                 425                 430

Cys Ser Lys Glu Tyr Ser Lys Tyr Met Gly Gly Val Asp Arg Thr Asp
        435                 440                 445
```

```
Gln Leu Gln His Tyr Tyr Asn Ala Thr Arg Lys Thr Arg His Trp Tyr
    450                 455                 460

Lys Lys Val Gly Ile Tyr Leu Ile Gln Met Ala Leu Arg Asn Ser Tyr
465                 470                 475                 480

Ile Val Tyr Lys Ala Ala Val Pro Gly Pro Lys Leu Ser Tyr Tyr Lys
                485                 490                 495

Tyr Gln Leu Gln Ile Leu Pro Ala Leu Leu Phe Gly Gly Val Glu Glu
            500                 505                 510

Gln Thr Val Pro Glu Met Pro Asp Ser Asp Asn Val Ala Arg Leu Ile
        515                 520                 525

Gly Lys His Phe Ile Asp Thr Leu Pro Pro Thr Pro Gly Lys Gln Arg
    530                 535                 540

Pro Gln Lys Gly Cys Lys Val Cys Arg Lys Arg Gly Ile Arg Arg Asp
545                 550                 555                 560

Thr Arg Tyr Tyr Cys Pro Lys Cys Pro Arg Asn Pro Gly Leu Cys Arg
                565                 570                 575

Lys Pro Cys Phe Glu Ile Tyr His Thr Gln Leu His Tyr
            580                 585
```

<210> 1059
<211> 589
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1059

```
Met Ala Lys Arg Phe Tyr Ser Ala Glu Glu Ala Ala Ala His Cys Ser
1               5                   10                  15
```

```
Ala Ser Ser Ser Glu Gln Phe Ser Gly Ser Asp Ser Glu Tyr Val Pro
            20                  25                  30

Pro Ala Ser Glu Ser Asp Ser Ser Thr Glu Glu Ser Trp Cys Ser Ser
        35                  40                  45

Ser Thr Val Ser Ala Leu Glu Glu Pro Met Glu Val Asp Glu Asp Val
    50                  55                  60

Asp Asp Leu Glu Asp Gln Glu Ala Gly Asp Arg Ala Asp Ala Ala Ala
65                  70                  75                  80

Gly Gly Glu Pro Ala Trp Gly Pro Pro Cys Asn Phe Pro Pro Glu Ile
                85                  90                  95

Pro Pro Phe Thr Thr Val Pro Gly Val Lys Val Asp Thr Ser Asn Phe
            100                 105                 110

Glu Pro Ile Asn Phe Phe Gln Leu Phe Met Thr Glu Ala Ile Leu Gln
        115                 120                 125

Asp Met Val Leu Tyr Thr Asn Val Tyr Ala Glu Gln Tyr Leu Thr Gln
    130                 135                 140

Asn Pro Leu Thr Arg Gly Ala Arg Ala His Ala Trp Tyr Pro Thr Asp
145                 150                 155                 160

Ile Ala Glu Met Lys Arg Phe Val Gly Leu Thr Leu Ala Met Gly Leu
                165                 170                 175

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

Ser Ile Pro Val Phe Gly Ala Thr Met Ser Arg Asn Arg Tyr Gln Leu
        195                 200                 205

Leu Leu Arg Phe Leu His Phe Asn Asn Asn Ala Thr Ala Val Pro Pro
```

```
    210                 215                 220

Asp Gln Pro Gly His Asp Arg Leu His Lys Leu Arg Pro Leu Ile Asp
225                 230                 235                 240

Ser Leu Ser Glu Arg Phe Ala Asn Val Tyr Thr Pro Cys Gln Asn Ile
                245                 250                 255

Cys Ile Asp Glu Ser Leu Met Leu Phe Lys Gly Arg Leu Gln Phe Arg
            260                 265                 270

Gln Tyr Ile Pro Ser Lys Arg Ala Arg Tyr Gly Ile Lys Phe Tyr Lys
        275                 280                 285

Leu Cys Glu Ser Ser Thr Gly Tyr Thr Ser Tyr Phe Leu Ile Tyr Glu
    290                 295                 300

Gly Lys Asp Ser Lys Leu Asp Pro Pro Gly Cys Pro Pro Asp Leu Thr
305                 310                 315                 320

Val Ser Gly Lys Ile Val Trp Glu Leu Ile Ser Pro Leu Leu Gly Gln
                325                 330                 335

Gly Phe His Leu Tyr Val Asp Asn Phe Tyr Ser Ser Ile Pro Leu Phe
            340                 345                 350

Thr Ala Leu Tyr Cys Leu Asn Thr Pro Ala Cys Gly Thr Ile Asn Arg
        355                 360                 365

Asn Arg Lys Gly Leu Pro Arg Ala Leu Leu Asp Lys Lys Leu Asn Arg
    370                 375                 380

Gly Glu Thr Tyr Ala Leu Arg Lys Asn Glu Leu Leu Ala Ile Lys Phe
385                 390                 395                 400

Phe Asp Lys Lys Asn Val Phe Met Leu Thr Ser Ile His Asp Glu Ser
                405                 410                 415
```

```
Val Ile Arg Glu Gln Arg Val Gly Arg Pro Pro Lys Asn Lys Pro Leu
            420                 425                 430

Cys Ser Lys Glu Tyr Ser Lys Tyr Met Gly Gly Val Asp Arg Gly Asp
        435                 440                 445

Gln Leu Gln His Tyr Tyr Asn Ala Thr Arg Lys Thr Arg His Trp Tyr
    450                 455                 460

Lys Lys Val Gly Ile Tyr Leu Ile Gln Met Ala Leu Arg Asn Ser Tyr
465                 470                 475                 480

Ile Val Tyr Lys Ala Ala Val Pro Gly Pro Lys Leu Ser Tyr Tyr Lys
                485                 490                 495

Tyr Gln Leu Gln Ile Leu Pro Ala Leu Leu Phe Gly Gly Val Glu Glu
            500                 505                 510

Gln Thr Val Pro Glu Met Pro Pro Ser Asp Asn Val Ala Arg Leu Ile
        515                 520                 525

Gly Lys His Phe Ile Asp Thr Leu Pro Pro Thr Pro Gly Lys Gln Arg
    530                 535                 540

Pro Gln Lys Gly Cys Lys Val Cys Arg Lys Arg Gly Ile Arg Arg Asp
545                 550                 555                 560

Thr Arg Tyr Tyr Cys Pro Lys Cys Pro Arg Asn Pro Gly Leu Cys Arg
                565                 570                 575

Lys Pro Cys Phe Glu Ile Tyr His Thr Gln Leu His Tyr
            580                 585
```

<210> 1060
<211> 589
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1060

Met Ala Lys Arg Phe Tyr Ser Ala Glu Glu Ala Ala Ala His Cys Ser
1   5   10   15

Ala Ser Ser Ser Glu Glu Phe Ser Gly Ser Asp Ser Glu Tyr Val Pro
            20   25   30

Pro Ala Ser Glu Ser Asp Ser Ser Thr Glu Glu Ser Trp Cys Ser Ser
        35   40   45

Ser Thr Val Ser Ala Leu Glu Glu Pro Met Glu Val Asp Glu Asp Val
    50   55   60

Asp Asp Leu Glu Asp Gln Glu Ala Gly Asp Arg Ala Asp Ala Ala Ala
65   70   75   80

Gly Gly Glu Pro Ala Trp Gly Pro Pro Cys Asn Phe Pro Pro Glu Ile
                85   90   95

Pro Pro Phe Thr Thr Val Pro Gly Val Lys Val Asp Thr Ser Asn Phe
            100   105   110

Glu Pro Ile Asn Phe Phe Gln Leu Phe Met Thr Glu Ala Ile Leu Gln
        115   120   125

Asp Met Val Leu Tyr Thr Asn Val Tyr Ala Glu Gln Tyr Leu Thr Gln
    130   135   140

Asn Pro Leu Thr Arg Gly Ala Arg Ala His Ala Trp His Pro Thr Asp
145   150   155   160

Ile Ala Glu Met Lys Arg Phe Val Gly Leu Thr Leu Ala Met Gly Leu
                165   170   175

Ile Lys Ala Asn Ser Ile Glu Ser Tyr Trp Asp Thr Thr Thr Val Leu

```
            180                 185                 190

Ser Ile Pro Val Phe Gly Ala Thr Met Ser Arg Asn Arg Tyr Gln Leu
        195                 200                 205

Leu Leu Arg Phe Leu His Phe Asn Asn Asn Ala Thr Ala Val Pro Pro
    210                 215                 220

Asp Gln Pro Gly His Asp Arg Leu His Lys Leu Arg Pro Leu Ile Asp
225                 230                 235                 240

Ser Leu Ser Glu Arg Phe Ala Asn Val Tyr Thr Pro Cys Gln Asn Ile
                245                 250                 255

Cys Ile Asp Glu Ser Leu Met Leu Phe Lys Gly Arg Leu Gln Phe Arg
            260                 265                 270

Gln Tyr Ile Pro Ser Lys Arg Ala Arg Tyr Gly Ile Lys Phe Tyr Lys
        275                 280                 285

Leu Cys Glu Ser Ser Thr Gly Tyr Met Ser Tyr Phe Leu Ile Tyr Glu
    290                 295                 300

Gly Lys Asp Ser Lys Leu Asp Pro Pro Gly Cys Pro Pro Asp Leu Thr
305                 310                 315                 320

Val Ser Gly Lys Ile Val Trp Glu Leu Ile Ser Pro Leu Leu Gly Gln
                325                 330                 335

Gly Phe His Leu Tyr Val Asp Asn Phe Tyr Ser Ser Ile Pro Leu Phe
            340                 345                 350

Thr Ala Leu Tyr Cys Leu Asn Thr Pro Ala Cys Gly Thr Ile Asn Arg
        355                 360                 365

Asn Arg Lys Gly Leu Pro Arg Ala Leu Leu Asp Lys Lys Leu Asn Arg
    370                 375                 380
```

```
Gly Glu Thr Tyr Ala Leu Arg Lys Asn Glu Leu Leu Ala Ile Lys Phe
385                 390                 395                 400

Phe Asp Lys Lys Asn Val Phe Met Leu Thr Ser Ile His Asp Glu Ser
                405                 410                 415

Val Ile Arg Glu Gln Arg Val Gly Arg Lys Pro Lys Asn Lys Pro Leu
            420                 425                 430

Cys Ser Lys Glu Tyr Ser Lys Tyr Met Gly Gly Val Asp Arg Thr Asp
        435                 440                 445

Gln Leu Gln His Tyr Tyr Asn Ala Thr Arg Lys Thr Arg His Trp Tyr
    450                 455                 460

Lys Lys Val Gly Ile Tyr Leu Ile Gln Met Ala Leu Arg Asn Ser Tyr
465                 470                 475                 480

Ile Val Tyr Lys Ala Ala Val Pro Gly Pro Lys Leu Ser Tyr Tyr Lys
                485                 490                 495

Tyr Gln Leu Gln Ile Leu Pro Ala Leu Leu Phe Gly Gly Val Glu Glu
            500                 505                 510

Gln Thr Val Pro Glu Met Pro Pro Ser Asp Ser Val Ala Arg Leu Ile
        515                 520                 525

Gly Lys His Phe Ile Asp Thr Leu Pro Pro Thr Pro Gly Lys Gln Arg
    530                 535                 540

Pro Gln Lys Gly Cys Lys Val Cys Arg Lys Arg Gly Ile Arg Arg Asp
545                 550                 555                 560

Thr Arg Tyr Tyr Cys Pro Lys Cys Pro Arg Asn Pro Gly Leu Cys Arg
                565                 570                 575

Lys Pro Cys Phe Glu Ile Tyr His Thr Gln Leu His Tyr
```

580 585

<210> 1061
<211> 589
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1061

Met Ala Lys Arg Phe Tyr Ser Ala Glu Glu Ala Ala Ala His Cys Met
1 5 10 15

Ala Ser Ser Ser Glu Glu Phe Tyr Gly Ser Asp Ser Glu Tyr Val Pro
20 25 30

Pro Ala Ser Glu Ser Asp Ser Ser Thr Glu Glu Ser Trp Cys Ser Ser
35 40 45

Ser Thr Val Ser Ala Leu Glu Glu Pro Met Glu Val Asp Glu Asp Val
50 55 60

Asp Asp Leu Glu Asp Gln Glu Ala Gly Asp Arg Ala Asp Ala Ala Ala
65 70 75 80

Gly Gly Glu Pro Ala Trp Gly Pro Pro Cys Asn Phe Pro Pro Glu Ile
85 90 95

Pro Pro Phe Thr Thr Val Pro Gly Val Lys Val Asp Thr Ser Asn Phe
100 105 110

Glu Pro Ile Asn Phe Phe Gln Leu Phe Met Thr Glu Ala Ile Leu Gln
115 120 125

Asp Met Val Leu Tyr Thr Asn Val Tyr Ala Glu Gln Tyr Leu Thr Gln
130 135 140

Asn Pro Leu Thr Arg Tyr Ala Arg Ala His Ala Trp His Pro Thr Asp

```
145                 150                 155                 160

Ile Ala Glu Met Lys Arg Phe Val Gly Leu Thr Leu Ala Met Gly Leu
                165                 170                 175

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

Ser Ile Pro Val Phe Gly Ala Thr Met Ser Arg Asn Arg Tyr Gln Leu
        195                 200                 205

Leu Leu Arg Phe Leu His Phe Asn Asn Asn Ala Thr Ala Val Pro Pro
    210                 215                 220

Asp Gln Pro Gly His Asp Arg Leu His Lys Leu Arg Pro Leu Ile Asp
225                 230                 235                 240

Ser Leu Ser Glu Arg Phe Ala Asn Val Tyr Thr Pro Cys Gln Asn Ile
                245                 250                 255

Cys Ile Asp Glu Ser Leu Leu Leu Phe Lys Gly Arg Leu Gln Phe Lys
            260                 265                 270

Gln Tyr Ile Pro Ser Lys Arg Ala Arg Tyr Gly Ile Lys Phe Tyr Lys
        275                 280                 285

Leu Cys Glu Ser Ser Ser Gly Tyr Thr Ser Tyr Phe Leu Ile Tyr Glu
    290                 295                 300

Gly Lys Asp Ser Lys Leu Asp Pro Pro Gly Cys Pro Pro Asp Leu Thr
305                 310                 315                 320

Val Ser Gly Lys Ile Val Trp Glu Leu Ile Ser Pro Leu Leu Gly Gln
                325                 330                 335

Gly Phe His Leu Tyr Val Asp Asn Phe Tyr Ser Ser Ile Pro Leu Phe
            340                 345                 350
```

```
Thr Ala Leu Tyr Cys Leu Asn Thr Pro Ala Cys Gly Thr Ile Asn Arg
        355                 360                 365

Asn Arg Lys Gly Leu Pro Arg Ala Leu Leu Asp Lys Lys Leu Asn Arg
    370                 375                 380

Gly Glu Thr Tyr Ala Leu Arg Lys Asn Glu Leu Leu Ala Ile Lys Phe
385                 390                 395                 400

Phe Asp Lys Lys Asn Val Phe Met Leu Thr Ser Ile His Asp Glu Ser
                405                 410                 415

Val Ile Arg Glu Gln Arg Val Gly Arg Pro Pro Lys Asn Lys Pro Leu
            420                 425                 430

Cys Ser Lys Glu Tyr Ser Lys Tyr Met Gly Gly Val Asp Arg Thr Asp
        435                 440                 445

Gln Leu Gln His Tyr Tyr Asn Ala Thr Arg Lys Thr Arg His Trp Tyr
    450                 455                 460

Lys Lys Val Gly Ile Tyr Leu Ile Gln Met Ala Leu Arg Asn Ser Tyr
465                 470                 475                 480

Ile Val Tyr Lys Ala Ala Val Pro Gly Pro Lys Leu Ser Tyr Tyr Lys
                485                 490                 495

Tyr Gln Leu Gln Ile Leu Pro Ala Leu Leu Phe Gly Gly Val Glu Glu
            500                 505                 510

Gln Thr Val Pro Glu Met Pro Asp Ser Asp Asn Val Ala Arg Leu Ile
        515                 520                 525

Gly Lys His Phe Ile Asp Thr Leu Pro Pro Thr Pro Gly Lys Gln Arg
    530                 535                 540

Pro Gln Lys Gly Cys Lys Val Cys Arg Lys Arg Gly Ile Arg Arg Asp
```

545 550 555 560

Thr Arg Tyr Tyr Cys Pro Lys Cys Pro Arg Asn Pro Gly Leu Cys Arg
565 570 575

Ile Pro Cys Phe Glu Ile Tyr His Thr Gln Leu His Tyr
580 585

<210> 1062
<211> 589
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1062

Met Ala Lys Arg Phe Tyr Ser Ala Glu Glu Ala Ala Ala His Cys Ser
1 5 10 15

Ala Ser Ser Ser Glu Glu Phe Ser Gly Ser Asp Ser Glu Tyr Val Pro
20 25 30

Pro Ala Ser Glu Ser Asp Ser Ser Thr Glu Glu Ser Trp Cys Ser Ser
35 40 45

Ser Thr Val Ser Ala Leu Glu Glu Pro Met Glu Val Asp Glu Asp Val
50 55 60

Asp Asp Leu Glu Asp Gln Glu Ala Gly Asp Arg Ala Asp Ala Ala Ala
65 70 75 80

Gly Gly Glu Pro Ala Trp Gly Pro Pro Cys Asn Phe Pro Pro Glu Ile
85 90 95

Pro Pro Phe Thr Thr Val Pro Gly Val Lys Val Asp Thr Ser Asn Phe
100 105 110

Glu Pro Ile Asn Phe Phe Gln Leu Phe Met Thr Glu Ala Ile Leu Gln

```
        115                 120                 125

Asp Met Val Leu Tyr Thr Asn Val Tyr Ala Glu Gln Tyr Leu Thr Gln
    130                 135                 140

Asn Pro Leu Thr Arg Tyr Ala Arg Ala His Ala Trp His Pro Thr Asp
145                 150                 155                 160

Ile Cys Glu Met Lys Arg Phe Val Gly Leu Thr Leu Ala Met Gly Leu
                165                 170                 175

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

Ser Ile Pro Val Phe Gly Ala Thr Met Ser Arg Asn Arg Tyr Gln Leu
        195                 200                 205

Leu Leu Arg Phe Leu His Phe Asn Asn Asn Ala Thr Ala Val Pro Pro
    210                 215                 220

Asp Gln Pro Gly His Asp Arg Leu His Lys Leu Arg Pro Leu Ile Asp
225                 230                 235                 240

Ser Leu Ser Glu Arg Phe Ala Asn Val Tyr Thr Pro Cys Gln Asn Ile
                245                 250                 255

Cys Ile Asp Glu Ser Leu Met Leu Phe Lys Gly Arg Leu Gln Phe Arg
            260                 265                 270

Gln Tyr Ile Pro Ser Lys Arg Ala Arg Tyr Gly Ile Lys Phe Tyr Lys
        275                 280                 285

Leu Cys Glu Ser Ser Thr Gly Tyr Thr Ser Tyr Phe Leu Ile Tyr Glu
    290                 295                 300

Gly Lys Asp Ser Lys Leu Asp Pro Pro Gly Cys Pro Pro Asp Leu Thr
305                 310                 315                 320
```

```
Val Ser Gly Lys Ile Val Trp Glu Leu Ile Ser Pro Leu Leu Gly Gln
                325                 330                 335

Gly Phe His Leu Tyr Val Asp Asn Phe Tyr Ser Ser Ile Pro Leu Phe
            340                 345                 350

Thr Ala Leu Tyr Val Leu Asn Thr Pro Ala Cys Gly Thr Ile Asn Arg
        355                 360                 365

Asn Arg Lys Gly Leu Pro Arg Ala Leu Leu Asp Lys Lys Leu Asn Arg
    370                 375                 380

Gly Glu Thr Tyr Ala Leu Arg Lys Asn Glu Leu Leu Ala Ile Lys Phe
385                 390                 395                 400

Phe Asp Lys Lys Asn Val Phe Met Leu Thr Ser Ile His Asp Glu Ser
                405                 410                 415

Val Ile Arg Glu Gln Arg Val Gly Arg Pro Pro Lys Asn Lys Pro Leu
            420                 425                 430

Cys Ser Lys Glu Tyr Ser Lys Tyr Met Gly Gly Val Asp Arg Thr Asp
        435                 440                 445

Gln Leu Gln His Tyr Tyr Asn Ala Thr Arg Lys Thr Arg His Trp Tyr
    450                 455                 460

Lys Lys Val Gly Ile Tyr Leu Ile Gln Met Ala Leu Arg Asn Ser Tyr
465                 470                 475                 480

Ile Val Tyr Lys Ala Ala Val Pro Gly Pro Lys Leu Ser Tyr Tyr Lys
                485                 490                 495

Tyr Gln Leu Gln Ile Leu Pro Ala Leu Leu Phe Gly Gly Val Glu Glu
            500                 505                 510

Gln Thr Val Pro Glu Met Pro Pro Ser Asp Asn Val Ala Arg Leu Ile
```

```
        515                 520                 525

Gly Lys His Phe Ile Asp Thr Leu Pro Pro Thr Pro Gly Lys Gln Arg
    530                 535                 540

Pro Gln Lys Gly Cys Lys Val Cys Arg Lys Arg Gly Ile Arg Arg Asp
545                 550                 555                 560

Thr Arg Tyr Tyr Cys Pro Lys Cys Pro Arg Asn Pro Gly Leu Cys Arg
                565                 570                 575

Lys Pro Cys Phe Glu Ile Tyr His Thr Gln Leu His Tyr
            580                 585
```

<210> 1063
<211> 589
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1063

```
Met Ala Lys Arg Phe Tyr Ser Ala Glu Glu Ala Ala Ala His Cys Ser
1               5                   10                  15

Ala Ser Ser Ser Glu Glu Phe Ser Gly Ser Asp Ser Glu Tyr Val Pro
            20                  25                  30

Pro Ala Ser Glu Ser Asp Ser Ser Thr Glu Glu Ser Trp Cys Ser Ser
        35                  40                  45

Ser Thr Val Ser Ala Leu Glu Glu Pro Met Glu Val Asp Glu Asp Val
    50                  55                  60

Asp Asp Leu Glu Asp Gln Glu Ala Gly Asp Arg Ala Asp Ala Ala Ala
65                  70                  75                  80

Gly Gly Glu Pro Ala Trp Gly Pro Pro Cys Asn Phe Pro Pro Glu Ile
```

```
                85                  90                  95

Pro Pro Phe Thr Thr Val Pro Gly Val Lys Val Asp Thr Ser Asn Phe
            100                 105                 110

Glu Pro Ile Asn Phe Phe Gln Leu Phe Met Thr Glu Ala Ile Leu Gln
        115                 120                 125

Asp Met Val Leu Tyr Thr Asn Val Tyr Ala Glu Gln Tyr Leu Thr Gln
    130                 135                 140

Asn Pro Leu Thr Arg Tyr Ala Arg Ala His Ala Trp Tyr Pro Thr Asp
145                 150                 155                 160

Ile Ala Glu Met Lys Arg Phe Val Gly Leu Thr Leu Ala Met Gly Leu
                165                 170                 175

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

Ser Ile Pro Val Phe Gly Ala Thr Met Ser Arg Asn Arg Tyr Gln Leu
        195                 200                 205

Leu Leu Arg Phe Leu His Phe Asn Asn Asn Ala Thr Ala Val Pro Pro
    210                 215                 220

Asp Gln Pro Gly His Asp Arg Leu His Lys Leu Arg Pro Leu Ile Asp
225                 230                 235                 240

Ser Leu Ser Glu Arg Phe Ala Asn Val Tyr Thr Pro Cys Gln Asn Ile
                245                 250                 255

Cys Ile Asp Glu Ser Leu Met Leu Phe Lys Gly Arg Leu Gln Phe Arg
            260                 265                 270

Gln Tyr Ile Pro Ser Lys Arg Ala Arg Tyr Gly Ile Lys Phe Tyr Lys
        275                 280                 285
```

```
Leu Cys Glu Ser Ser Thr Gly Tyr Thr Ser Tyr Phe Leu Ile Tyr Glu
    290                 295                 300

Gly Lys Asp Ser Lys Leu Asp Pro Pro Gly Cys Pro Pro Asp Leu Thr
305                 310                 315                 320

Val Ser Gly Lys Ile Val Trp Glu Leu Ile Ser Pro Leu Leu Gly Gln
                325                 330                 335

Gly Phe His Leu Tyr Val Asp Asn Phe Tyr Ser Ser Ile Pro Leu Phe
            340                 345                 350

Thr Ala Leu Tyr Cys Leu Asn Thr Pro Ala Cys Gly Thr Ile Asn Arg
        355                 360                 365

Asn Arg Lys Gly Leu Pro Arg Ala Leu Leu Asp Lys Lys Leu Asn Arg
    370                 375                 380

Gly Glu Thr Tyr Ala Leu Arg Lys Asn Glu Leu Leu Ala Ile Lys Phe
385                 390                 395                 400

Phe Asp Lys Lys Asn Val Phe Met Leu Thr Ser Ile His Asp Glu Ser
                405                 410                 415

Val Ile Arg Glu Gln Arg Val Gly Arg Pro Pro Lys Asn Lys Pro Leu
            420                 425                 430

Cys Ser Lys Glu Tyr Ser Lys Tyr Met Gly Gly Val Asp Arg Thr Asp
        435                 440                 445

Gln Leu Gln His Tyr Tyr Asn Ala Thr Arg Lys Thr Arg His Trp Tyr
    450                 455                 460

Lys Lys Val Gly Ile Tyr Leu Ile Gln Met Ala Leu Arg Asn Ser Tyr
465                 470                 475                 480

Ile Val Tyr Lys Ala Ala Val Pro Gly Pro Lys Leu Ser Tyr Tyr Lys
```

485 490 495

Tyr Gln Leu Gln Ile Leu Pro Ala Leu Leu Phe Gly Gly Val Glu Glu
500 505 510

Gln Thr Val Pro Glu Met Pro Pro Ser Asp Asn Val Ala Arg Leu Ile
515 520 525

Gly Lys His Phe Ile Asp Thr Leu Pro Pro Thr Pro Gly Lys Gln Arg
530 535 540

Pro Gln Lys Gly Cys Lys Val Cys Arg Lys Arg Gly Ile Arg Arg Asp
545 550 555 560

Thr Arg Tyr Tyr Cys Pro Lys Cys Pro Arg Asn Pro Gly Leu Cys Arg
565 570 575

Lys Pro Cys Phe Glu Ile Tyr His Thr Gln Leu His Tyr
580 585

<210> 1064
<211> 589
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1064

Met Ala Lys Arg Phe Tyr Ser Ala Glu Glu Ala Ala Ala His Cys Ser
1 5 10 15

Ala Ser Ser Ser Asp Glu Phe Ser Gly Ser Asp Ser Glu Tyr Val Pro
20 25 30

Pro Ala Ser Glu Ser Asp Ser Ser Thr Glu Glu Ser Trp Cys Ser Ser
35 40 45

Ser Thr Val Ser Ala Leu Glu Glu Pro Met Glu Val Asp Glu Asp Val

```
    50                  55                  60

Asp Asp Leu Glu Asp Gln Glu Ala Gly Asp Arg Ala Asp Ala Ala Ala
65                  70                  75                  80

Gly Gly Glu Pro Ala Trp Gly Pro Pro Cys Asn Phe Pro Pro Glu Ile
                85                  90                  95

Pro Pro Phe Thr Thr Val Pro Gly Val Lys Val Asp Thr Ser Asn Phe
            100                 105                 110

Glu Pro Ile Asn Phe Phe Gln Leu Phe Met Thr Glu Ala Ile Leu Gln
        115                 120                 125

Asp Met Val Leu Tyr Thr Asn Val Tyr Ala Glu Gln Tyr Leu Thr Gln
    130                 135                 140

Asn Pro Leu Thr Arg Gly Ala Arg Ala His Ala Trp Tyr Pro Thr Asp
145                 150                 155                 160

Ile Ala Glu Met Lys Arg Phe Val Gly Leu Thr Leu Ala Met Gly Leu
                165                 170                 175

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

Ser Ile Pro Val Phe Gly Ala Thr Met Ser Arg Asn Arg Tyr Gln Leu
        195                 200                 205

Leu Leu Arg Phe Leu His Phe Asn Asn Asn Ala Thr Ala Val Pro Pro
    210                 215                 220

Asp Gln Pro Gly His Asp Arg Leu His Lys Leu Arg Pro Leu Ile Asp
225                 230                 235                 240

Ser Leu Ser Glu Arg Phe Ala Asn Val Tyr Thr Pro Cys Gln Asn Ile
                245                 250                 255
```

```
Cys Ile Asp Glu Ser Leu Met Leu Phe Lys Gly Arg Leu Gln Phe Arg
            260                 265                 270

Gln Tyr Ile Pro Ser Lys Arg Ala Arg Tyr Gly Ile Lys Phe Tyr Lys
        275                 280                 285

Leu Cys Glu Ser Ser Thr Gly Tyr Thr Ser Tyr Phe Leu Ile Tyr Glu
    290                 295                 300

Gly Lys Asp Ser Lys Leu Asp Pro Pro Gly Cys Pro Pro Asp Leu Thr
305                 310                 315                 320

Val Ser Gly Lys Ile Val Trp Glu Leu Ile Ser Pro Leu Leu Gly Gln
                325                 330                 335

Gly Phe His Leu Tyr Val Asp Asn Phe Tyr Ser Ser Ile Pro Leu Phe
            340                 345                 350

Thr Ala Leu Tyr Cys Leu Asn Thr Pro Ala Cys Gly Thr Ile Asn Arg
        355                 360                 365

Asn Arg Lys Gly Leu Pro Arg Ala Leu Leu Asp Lys Lys Leu Asn Arg
    370                 375                 380

Gly Glu Thr Tyr Ala Leu Arg Lys Asn Glu Leu Leu Ala Ile Lys Phe
385                 390                 395                 400

Phe Asp Lys Lys Asn Val Phe Met Leu Thr Ser Ile His Asp Glu Ser
                405                 410                 415

Val Ile Arg Glu Gln Arg Val Gly Arg Lys Pro Lys Asn Lys Pro Leu
            420                 425                 430

Cys Ser Lys Glu Tyr Ser Lys Tyr Met Gly Gly Val Asp Arg Thr Asp
        435                 440                 445

Gln Leu Gln His Tyr Tyr Asn Ala Thr Arg Lys Thr Arg His Trp Tyr
```

```
    450                 455                 460

Lys Lys Val Gly Ile Tyr Leu Ile Gln Met Ala Leu Arg Asn Ser Tyr
465                 470                 475                 480

Ile Val Tyr Lys Ala Ala Val Pro Gly Pro Lys Leu Ser Tyr Tyr Lys
                485                 490                 495

Tyr Gln Leu Gln Ile Leu Pro Ala Leu Leu Phe Gly Gly Val Glu Glu
            500                 505                 510

Gln Thr Val Pro Glu Met Pro Pro Ser Asp Ser Val Ala Arg Leu Ile
        515                 520                 525

Gly Lys His Phe Ile Asp Thr Leu Pro Pro Thr Pro Gly Lys Gln Arg
    530                 535                 540

Pro Gln Lys Gly Cys Lys Val Cys Arg Lys Arg Gly Ile Arg Arg Asp
545                 550                 555                 560

Thr Arg Tyr Tyr Cys Pro Lys Cys Pro Arg Asn Pro Gly Leu Cys Arg
                565                 570                 575

Lys Pro Cys Phe Glu Ile Tyr His Thr Gln Leu His Tyr
            580                 585
```

<210> 1065
<211> 589
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1065

```
Met Ala Lys Arg Phe Tyr Ser Ala Glu Glu Ala Ala Ala His Cys Met
1               5                   10                  15

Ala Ser Ser Ser Glu Glu Phe Ser Gly Ser Asp Ser Glu Tyr Val Pro
```

```
            20                  25                  30

Pro Ala Ser Glu Ser Asp Ser Ser Thr Glu Glu Ser Trp Cys Ser Ser
        35                  40                  45

Ser Thr Val Ser Ala Leu Glu Glu Pro Met Glu Val Asp Glu Asp Val
    50                  55                  60

Asp Asp Leu Glu Asp Gln Glu Ala Gly Asp Arg Ala Asp Ala Ala Ala
65                  70                  75                  80

Gly Gly Glu Pro Ala Trp Gly Pro Pro Cys Asn Phe Pro Pro Glu Ile
                85                  90                  95

Pro Pro Phe Thr Thr Val Pro Gly Val Lys Val Asp Thr Ser Asn Phe
            100                 105                 110

Glu Pro Ile Asn Phe Phe Gln Leu Phe Met Thr Glu Ala Ile Leu Gln
        115                 120                 125

Asp Met Val Leu Tyr Thr Asn Val Tyr Ala Glu Gln Tyr Leu Thr Gln
    130                 135                 140

Asn Pro Leu Thr Arg Tyr Ala Arg Ala His Ala Trp His Pro Thr Asp
145                 150                 155                 160

Ile Ala Glu Met Lys Arg Phe Val Gly Leu Thr Leu Ala Met Gly Leu
                165                 170                 175

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

Ser Ile Pro Val Phe Gly Ala Thr Met Ser Arg Asn Arg Tyr Gln Leu
        195                 200                 205

Leu Leu Arg Phe Leu His Phe Asn Asn Asn Ala Thr Ala Val Pro Pro
    210                 215                 220
```

```
Asp Gln Pro Gly His Asp Arg Leu His Lys Leu Arg Pro Leu Ile Asp
225                 230                 235                 240

Ser Leu Ser Glu Arg Phe Ala Asn Val Tyr Thr Pro Cys Gln Asn Ile
                245                 250                 255

Cys Ile Asp Glu Ser Leu Leu Leu Phe Lys Gly Arg Leu Gln Phe Arg
            260                 265                 270

Gln Tyr Ile Pro Ser Lys Arg Ala Arg Tyr Gly Ile Lys Phe Tyr Lys
        275                 280                 285

Leu Cys Glu Ser Ser Ser Gly Tyr Thr Ser Tyr Phe Leu Ile Tyr Glu
    290                 295                 300

Gly Lys Asp Ser Lys Leu Asp Pro Pro Gly Cys Pro Pro Asp Leu Thr
305                 310                 315                 320

Val Ser Gly Lys Ile Val Trp Glu Leu Ile Ser Pro Leu Leu Gly Gln
                325                 330                 335

Gly Phe His Leu Tyr Val Asp Asn Phe Tyr Ser Ser Ile Pro Leu Phe
            340                 345                 350

Thr Ala Leu Tyr Cys Leu Asn Thr Pro Ala Cys Gly Thr Ile Asn Arg
        355                 360                 365

Asn Arg Lys Gly Leu Pro Arg Ala Leu Leu Asp Lys Lys Leu Asn Arg
    370                 375                 380

Gly Glu Thr Tyr Ala Leu Arg Lys Asn Glu Leu Leu Ala Ile Lys Phe
385                 390                 395                 400

Phe Asp Lys Lys Asn Val Phe Met Leu Thr Ser Ile His Asp Glu Ser
                405                 410                 415

Val Ile Arg Glu Gln Arg Val Gly Arg Pro Pro Lys Asn Lys Pro Leu
```

```
            420                 425                 430

Cys Ser Lys Glu Tyr Ser Lys Tyr Met Gly Gly Val Asp Arg Thr Asp
        435                 440                 445

Gln Leu Gln His Tyr Tyr Asn Ala Thr Arg Lys Thr Arg His Trp Tyr
    450                 455                 460

Lys Lys Val Gly Ile Tyr Leu Ile Gln Met Ala Leu Arg Asn Ser Tyr
465                 470                 475                 480

Ile Val Tyr Lys Ala Ala Val Pro Gly Pro Lys Leu Ser Tyr Tyr Lys
                485                 490                 495

Tyr Gln Leu Gln Ile Leu Pro Ala Leu Leu Phe Gly Gly Val Glu Glu
            500                 505                 510

Gln Thr Val Pro Glu Met Pro Pro Ser Asp Asn Val Ala Arg Leu Ile
        515                 520                 525

Gly Lys His Phe Ile Asp Thr Leu Pro Pro Thr Pro Gly Lys Gln Arg
    530                 535                 540

Pro Gln Lys Gly Cys Lys Val Cys Arg Lys Arg Gly Ile Arg Arg Asp
545                 550                 555                 560

Thr Arg Tyr Tyr Cys Pro Lys Cys Pro Arg Asn Pro Gly Leu Cys Arg
                565                 570                 575

Lys Pro Cys Phe Glu Ile Tyr His Thr Gln Leu His Tyr
            580                 585
```

<210> 1066
<211> 589
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1066

```
Met Ala Lys Arg Phe Tyr Ser Ala Glu Glu Ala Ala Ala His Cys Met
1               5                  10                  15

Ala Ser Ser Ser Glu Glu Thr Ser Gly Ser Asp Ser Glu Tyr Val Pro
            20                  25                  30

Pro Ala Ser Glu Ser Asp Ser Ser Thr Glu Glu Ser Trp Cys Ser Ser
        35                  40                  45

Ser Thr Val Ser Ala Leu Glu Glu Pro Met Glu Val Asp Glu Asp Val
    50                  55                  60

Asp Asp Leu Glu Asp Gln Glu Ala Gly Asp Arg Ala Asp Ala Ala Ala
65                  70                  75                  80

Gly Gly Glu Pro Ala Trp Gly Pro Pro Cys Asn Phe Pro Pro Glu Ile
                85                  90                  95

Pro Pro Phe Thr Thr Val Pro Gly Val Lys Val Asp Thr Ser Asn Phe
            100                 105                 110

Glu Pro Ile Asn Phe Phe Gln Leu Phe Met Thr Glu Ala Ile Leu Gln
        115                 120                 125

Asp Met Val Leu Tyr Thr Asn Val Tyr Ala Glu Gln Tyr Leu Thr Gln
    130                 135                 140

Asn Pro Leu Thr Arg Tyr Ala Arg Ala His Ala Trp His Pro Thr Asp
145                 150                 155                 160

Ile Ala Glu Met Lys Arg Phe Val Gly Leu Thr Leu Ala Met Gly Leu
                165                 170                 175

Ile Lys Ala Asn Ser Leu Glu Ser Tyr Trp Asp Thr Thr Thr Val Leu
            180                 185                 190
```

```
Ser Ile Pro Val Phe Ser Ala Thr Met Ser Arg Asn Arg Tyr Gln Leu
        195                 200                 205

Leu Leu Arg Phe Leu His Phe Asn Asn Asn Ala Thr Ala Val Pro Pro
    210                 215                 220

Asp Gln Pro Gly His Asp Arg Leu His Lys Leu Arg Pro Leu Ile Asp
225                 230                 235                 240

Ser Leu Ser Glu Arg Phe Ala Ala Val Tyr Thr Pro Cys Gln Asn Ile
                245                 250                 255

Cys Ile Asp Glu Ser Leu Leu Leu Phe Lys Gly Arg Leu Gln Phe Arg
            260                 265                 270

Gln Tyr Ile Pro Ser Lys Arg Ala Arg Tyr Gly Ile Lys Phe Tyr Lys
        275                 280                 285

Leu Cys Glu Ser Ser Ser Gly Tyr Thr Ser Tyr Phe Leu Ile Tyr Glu
    290                 295                 300

Gly Lys Asp Ser Lys Leu Asp Pro Pro Gly Cys Pro Pro Asp Leu Thr
305                 310                 315                 320

Val Ser Gly Lys Ile Val Trp Glu Leu Ile Ser Pro Leu Leu Gly Gln
                325                 330                 335

Gly Phe His Leu Tyr Val Asp Asn Phe Tyr Ser Ser Ile Pro Leu Phe
            340                 345                 350

Thr Ala Leu Tyr Cys Leu Asn Thr Pro Ala Cys Gly Thr Ile Asn Arg
        355                 360                 365

Asn Arg Lys Gly Leu Pro Arg Ala Leu Leu Asp Lys Lys Leu Asn Arg
    370                 375                 380

Gly Glu Thr Tyr Ala Leu Arg Lys Asn Glu Leu Leu Ala Ile Lys Phe
```

```
385                 390                 395                 400

Phe Asp Lys Lys Asn Val Phe Met Leu Thr Ser Ile His Asp Glu Ser
                405                 410                 415

Val Ile Arg Glu Gln Arg His Gly Arg Pro Pro Lys Asn Lys Pro Leu
            420                 425                 430

Cys Ser Lys Glu Tyr Ser Lys Tyr Met Gly Gly Val Asp Arg Ala Asp
        435                 440                 445

Gln Leu Gln His Tyr Tyr Asn Ala Thr Arg Lys Thr Arg His Trp Tyr
    450                 455                 460

Lys Lys Val Gly Ile Tyr Leu Ile Gln Met Ala Leu Arg Asn Ser Tyr
465                 470                 475                 480

Ile Val Tyr Lys Ala Ala Val Pro Gly Pro Lys Leu Ser Tyr Tyr Lys
                485                 490                 495

Tyr Gln Leu Gln Ile Leu Pro Ala Leu Leu Phe Gly Gly Val Glu Glu
            500                 505                 510

Gln Thr Val Pro Glu Met Pro Pro Ser Asp Asn Val Ala Arg Leu Ile
        515                 520                 525

Gly Lys His Phe Ile Asp Thr Leu Pro Pro Thr Pro Gly Lys Gln Arg
    530                 535                 540

Pro Gln Lys Gly Cys Lys Val Cys Arg Lys Arg Gly Ile Arg Arg Asp
545                 550                 555                 560

Thr Arg Tyr Tyr Cys Pro Lys Cys Pro Arg Asn Pro Gly Leu Cys Arg
                565                 570                 575

Lys Pro Cys Phe Glu Ile Tyr His Thr Gln Leu His Tyr
            580                 585
```

<210> 1067
<211> 589
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1067

```
Met Ala Lys Arg Phe Tyr Ser Ala Glu Glu Ala Ala Ala His Cys Met
1               5                   10                  15


Ala Ser Ser Ser Glu Glu Phe Ser Gly Ser Asp Ser Glu Tyr Val Pro
            20                  25                  30


Pro Ala Ser Glu Ser Asp Ser Ser Thr Glu Glu Ser Trp Cys Ser Ser
        35                  40                  45


Ser Thr Val Ser Ala Leu Glu Glu Pro Met Glu Val Asp Glu Asp Val
    50                  55                  60


Asp Asp Leu Glu Asp Gln Glu Ala Gly Asp Arg Ala Asp Ala Ala Ala
65                  70                  75                  80


Gly Gly Glu Pro Ala Trp Gly Pro Pro Cys Asn Phe Pro Pro Glu Ile
                85                  90                  95


Pro Pro Phe Thr Thr Val Pro Gly Val Lys Val Asp Thr Ser Asn Phe
            100                 105                 110


Glu Pro Ile Asn Phe Phe Gln Leu Phe Met Thr Glu Ala Ile Leu Gln
        115                 120                 125


Asp Met Val Leu Tyr Thr Asn Val Tyr Ala Glu Gln Tyr Leu Thr Gln
    130                 135                 140


Asn Pro Leu Thr Arg Tyr Ala Arg Ala His Ala Trp His Pro Thr Asp
145                 150                 155                 160
```

```
Ile Ala Glu Met Lys Arg Phe Val Gly Leu Thr Leu Ala Met Gly Leu
                165                 170                 175

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

Ser Ile Pro Val Phe Ser Ala Thr Met Ser Arg Asn Arg Tyr Gln Leu
        195                 200                 205

Leu Leu Arg Phe Leu His Phe Asn Asn Glu Ala Thr Ala Val Pro Pro
    210                 215                 220

Asp Gln Pro Gly His Asp Arg Leu His Lys Leu Arg Pro Leu Ile Asp
225                 230                 235                 240

Ser Leu Ser Glu Arg Phe Ala Ala Val Tyr Thr Pro Cys Gln Asn Ile
                245                 250                 255

Cys Ile Asp Glu Ser Leu Leu Leu Phe Lys Gly Arg Leu Gln Phe Arg
            260                 265                 270

Gln Tyr Ile Pro Ser Lys Arg Ala Arg Tyr Gly Ile Lys Phe Tyr Lys
        275                 280                 285

Leu Cys Glu Ser Ser Ser Gly Tyr Thr Ser Tyr Phe Leu Ile Tyr Glu
    290                 295                 300

Gly Lys Asp Ser Lys Leu Asp Pro Pro Gly Cys Pro Pro Asp Leu Thr
305                 310                 315                 320

Val Ser Gly Lys Ile Val Trp Glu Leu Ile Ser Pro Leu Leu Gly Gln
                325                 330                 335

Gly Phe His Leu Tyr Val Asp Asn Phe Tyr Ser Ser Ile Pro Leu Phe
            340                 345                 350

Thr Ala Leu Tyr Cys Leu Asn Thr Pro Ala Cys Gly Thr Ile Asn Arg
```

```
        355                 360                 365

Asn Arg Lys Gly Leu Pro Arg Ala Leu Leu Asp Lys Lys Leu Asn Arg
    370                 375                 380

Gly Glu Thr Tyr Ala Leu Arg Lys Asn Glu Leu Leu Ala Ile Lys Phe
385                 390                 395                 400

Phe Asp Lys Lys Asn Val Phe Met Leu Thr Ser Ile His Asp Glu Ser
                405                 410                 415

Val Ile Arg Glu Gln Arg Val Gly Arg Pro Pro Lys Asn Lys Pro Leu
            420                 425                 430

Cys Ser Lys Glu Tyr Ser Lys Tyr Met Gly Gly Val Asp Arg Thr Asp
        435                 440                 445

Gln Leu Gln His Tyr Tyr Asn Ala Thr Arg Lys Thr Arg His Trp Tyr
    450                 455                 460

Lys Lys Val Gly Ile Tyr Leu Ile Gln Met Ala Leu Arg Asn Ser Tyr
465                 470                 475                 480

Ile Val Tyr Lys Ala Ala Val Pro Gly Pro Lys Leu Ser Tyr Tyr Lys
                485                 490                 495

Tyr Gln Leu Gln Ile Leu Pro Ala Leu Leu Phe Gly Gly Val Glu Glu
            500                 505                 510

Gln Thr Val Pro Glu Met Pro Pro Ser Asp Asn Val Ala Arg Leu Ile
        515                 520                 525

Gly Lys His Phe Ile Asp Thr Leu Pro Pro Thr Pro Gly Lys Gln Arg
    530                 535                 540

Pro Gln Lys Gly Cys Lys Val Cys Arg Lys Arg Gly Ile Arg Arg Asp
545                 550                 555                 560
```

Thr Arg Tyr Tyr Cys Pro Lys Cys Pro Arg Asn Pro Gly Leu Cys Arg
565 570 575

Lys Pro Cys Phe Glu Ile Tyr His Thr Gln Leu His Tyr
580 585

<210> 1068
<211> 589
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1068

Met Ala Lys Arg Phe Tyr Ser Ala Glu Glu Ala Ala Ala His Cys Met
1 5 10 15

Ala Ser Ser Ser Glu Glu Phe Ser Gly Ser Asp Ser Glu Tyr Val Pro
20 25 30

Pro Ala Ser Glu Ser Asp Ser Ser Thr Glu Glu Ser Trp Cys Ser Ser
35 40 45

Ser Thr Val Ser Ala Leu Glu Glu Pro Met Glu Val Asp Glu Asp Val
50 55 60

Asp Asp Leu Glu Asp Gln Glu Ala Gly Asp Arg Ala Asp Ala Ala Ala
65 70 75 80

Gly Gly Glu Pro Ala Trp Gly Pro Pro Cys Asn Phe Pro Pro Glu Ile
85 90 95

Pro Pro Phe Thr Thr Val Pro Gly Val Lys Val Asp Thr Ser Asn Phe
100 105 110

Glu Pro Ile Asn Phe Phe Gln Leu Phe Met Thr Glu Ala Ile Leu Gln
115 120 125

```
Asp Met Val Leu Tyr Thr Asn Val Tyr Ala Glu Gln Tyr Leu Thr Gln
    130                 135                 140

Asn Pro Leu Thr Arg Tyr Ala Arg Ala His Ala Trp His Pro Thr Asp
145                 150                 155                 160

Ile Ala Glu Met Lys Arg Phe Val Gly Leu Thr Leu Ala Met Gly Leu
                165                 170                 175

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

Ser Ile Pro Val Phe Ser Ala Thr Met Ser Arg Asn Arg Tyr Gln Leu
        195                 200                 205

Leu Leu Arg Phe Leu His Phe Asn Asn Asn Ala Thr Ala Val Pro Pro
    210                 215                 220

Asp Gln Pro Gly His Asp Arg Leu His Lys Leu Arg Pro Leu Ile Asp
225                 230                 235                 240

Ser Leu Ser Glu Arg Phe Ala Ala Val Tyr Thr Pro Cys Gln Asn Ile
                245                 250                 255

Cys Ile Asp Glu Ser Leu Leu Leu Phe Lys Gly Arg Leu Gln Phe Arg
            260                 265                 270

Gln Tyr Ile Pro Ser Lys Arg Ala Arg Tyr Gly Ile Lys Phe Tyr Lys
        275                 280                 285

Leu Cys Glu Ser Ser Ser Gly Tyr Thr Ser Tyr Phe Leu Ile Tyr Glu
    290                 295                 300

Gly Lys Asp Ser Lys Leu Asp Pro Pro Gly Cys Pro Pro Asp Leu Thr
305                 310                 315                 320

Val Ser Gly Lys Ile Val Trp Glu Leu Ile Ser Pro Leu Leu Gly Gln
```

```
                325                 330                 335

Gly Phe His Leu Tyr Val Asp Asn Phe Tyr Ser Ser Ile Pro Leu Phe
            340                 345                 350

Thr Ala Leu Tyr Cys Leu Asn Thr Pro Ala Cys Gly Thr Ile Asn Arg
        355                 360                 365

Asn Arg Lys Gly Leu Pro Arg Ala Leu Leu Asp Lys Lys Leu Asn Arg
    370                 375                 380

Gly Glu Thr Tyr Ala Leu Arg Lys Asn Glu Leu Leu Ala Ile Lys Phe
385                 390                 395                 400

Phe Asp Lys Lys Asn Val Phe Met Leu Thr Ser Ile His Asp Glu Ser
                405                 410                 415

Val Ile Arg Glu Gln Arg Val Gly Arg Pro Pro Lys Asn Lys Pro Leu
            420                 425                 430

Cys Ser Lys Glu Tyr Ser Lys Tyr Met Gly Gly Val Asp Arg Thr Asp
        435                 440                 445

Gln Leu Gln His Tyr Tyr Asn Ala Thr Arg Lys Thr Arg Ala Trp Tyr
    450                 455                 460

Lys Lys Val Gly Ile Tyr Leu Ile Gln Met Ala Leu Arg Asn Ser Tyr
465                 470                 475                 480

Ile Val Tyr Lys Ala Ala Val Pro Gly Pro Lys Leu Ser Tyr Tyr Lys
                485                 490                 495

Tyr Gln Leu Gln Ile Leu Pro Ala Leu Leu Phe Gly Gly Val Glu Glu
            500                 505                 510

Gln Thr Val Pro Glu Met Pro Pro Ser Asp Asn Val Ala Arg Leu Ile
        515                 520                 525
```

```
Gly Lys His Phe Ile Asp Thr Leu Pro Pro Thr Pro Gly Lys Gln Arg
    530                 535                 540

Pro Gln Lys Gly Cys Lys Val Cys Arg Lys Arg Gly Ile Arg Arg Asp
545                 550                 555                 560

Thr Arg Tyr Tyr Cys Pro Lys Cys Pro Arg Asn Pro Gly Leu Cys Arg
                565                 570                 575

Lys Pro Cys Phe Glu Ile Tyr His Thr Gln Leu His Tyr
            580                 585
```

<210> 1069
<211> 589
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1069

```
Met Ala Lys Arg Phe Tyr Ser Ala Glu Glu Ala Ala Ala His Cys Met
1               5                   10                  15

Ala Ser Ser Ser Glu Glu Phe Ser Gly Ser Asp Ser Glu Tyr Val Pro
            20                  25                  30

Pro Ala Ser Glu Ser Asp Ser Ser Thr Glu Glu Ser Trp Cys Ser Ser
        35                  40                  45

Ser Thr Val Ser Ala Leu Glu Glu Pro Met Glu Val Asp Glu Asp Val
    50                  55                  60

Asp Asp Leu Glu Asp Gln Glu Ala Gly Asp Arg Ala Asp Ala Ala Ala
65                  70                  75                  80

Gly Gly Glu Pro Ala Trp Gly Pro Pro Cys Asn Phe Pro Pro Glu Ile
                85                  90                  95
```

```
Pro Pro Phe Thr Thr Val Pro Gly Val Lys Val Asp Thr Ser Asn Phe
            100                 105                 110

Glu Pro Ile Asn Phe Phe Gln Leu Phe Met Thr Glu Ala Ile Leu Gln
        115                 120                 125

Asp Met Val Leu Tyr Thr Asn Val Tyr Ala Glu Gln Tyr Leu Thr Gln
    130                 135                 140

Asn Pro Leu Thr Arg Tyr Ala Arg Ala His Ala Trp His Pro Thr Asp
145                 150                 155                 160

Ile Ala Glu Met Lys Arg Phe Val Gly Leu Thr Leu Ala Met Gly Leu
                165                 170                 175

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

Ser Ile Pro Val Phe Ser Ala Thr Met Ser Arg Asn Arg Tyr Gln Leu
        195                 200                 205

Leu Leu Arg Phe Leu His Phe Asn Asn Asn Ala Thr Ala Val Pro Pro
    210                 215                 220

Asp Gln Pro Gly His Asp Arg Leu His Lys Leu Arg Pro Leu Ile Asp
225                 230                 235                 240

Ser Leu Ser Glu Arg Phe Ala Ala Val Tyr Thr Pro Cys Gln Asn Ile
                245                 250                 255

Cys Ile Asp Glu Ser Leu Leu Leu Phe Lys Gly Arg Leu Gln Phe Arg
            260                 265                 270

Gln Tyr Ile Pro Ser Lys Arg Ala Arg Tyr Gly Ile Lys Phe Tyr Lys
        275                 280                 285

Leu Cys Glu Ser Ser Ser Gly Tyr Thr Ser Tyr Phe Leu Ile Tyr Glu
```

```
    290                 295                 300

Gly Lys Asp Ser Lys Leu Asp Pro Pro Gly Cys Pro Pro Asp Leu Thr
305                 310                 315                 320

Val Ser Gly Lys Ile Val Trp Glu Leu Ile Ser Pro Leu Leu Gly Gln
                325                 330                 335

Gly Phe His Leu Tyr Val Asp Asn Phe Tyr Ser Ser Ile Pro Leu Phe
            340                 345                 350

Thr Ala Leu Tyr Cys Leu Asn Thr Pro Ala Cys Gly Thr Ile Asn Arg
        355                 360                 365

Asn Arg Lys Gly Leu Pro Arg Ala Leu Leu Asp Lys Lys Leu Asn Arg
    370                 375                 380

Gly Glu Thr Tyr Ala Leu Arg Lys Asn Glu Leu Leu Ala Ile Lys Phe
385                 390                 395                 400

Phe Asp Lys Lys Asn Val Phe Met Leu Thr Ser Ile His Asp Glu Ser
                405                 410                 415

Val Ile Arg Glu Gln Arg Val Gly Arg Pro Pro Lys Asn Lys Pro Leu
            420                 425                 430

Cys Ser Lys Glu Tyr Ser Lys Tyr Met Gly Gly Val Asp Arg Thr Asp
        435                 440                 445

Gln Leu Gln His Tyr Tyr Asn Ala Thr Arg Lys Thr Arg His Trp Tyr
    450                 455                 460

Lys Lys Val Gly Ile Tyr Leu Ile Gln Met Ala Leu Arg Asn Ser Tyr
465                 470                 475                 480

Ile Val Tyr Lys Ala Ala Val Pro Gly Pro Lys Leu Ser Tyr Tyr Lys
                485                 490                 495
```

```
Tyr Gln Leu Gln Ile Leu Pro Ala Leu Leu Phe Gly Gly Val Glu Glu
            500                 505                 510

Gln Thr Val Pro Glu Met Pro Pro Ser Asp Asn Val Ala Arg Leu Ile
        515                 520                 525

Gly Lys His Phe Ile Asp Thr Leu Pro Pro Thr Pro Gly Lys Gln Arg
    530                 535                 540

Pro Gln Lys Gly Cys Lys Val Cys Arg Lys Arg Gly Ile Arg Arg Asp
545                 550                 555                 560

Thr Arg Tyr Tyr Cys Pro Lys Cys Pro Arg Asn Pro Gly Leu Cys Arg
                565                 570                 575

Lys Pro Cys Phe Glu Ile Tyr His Thr Gln Leu His Tyr
            580                 585
```

<210> 1070
<211> 589
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1070

```
Met Ala Lys Arg Phe Tyr Ser Ala Glu Glu Ala Ala Ala His Cys Met
1               5                   10                  15

Ala Ser Ser Ser Glu Glu Phe Ser Gly Ser Asp Ser Glu Tyr Val Pro
            20                  25                  30

Pro Ala Ser Glu Ser Asp Ser Ser Thr Glu Glu Ser Trp Cys Ser Ser
        35                  40                  45

Ser Thr Val Ser Ala Leu Glu Glu Pro Met Glu Val Asp Glu Asp Val
    50                  55                  60
```

```
Asp Asp Leu Glu Asp Gln Glu Ala Gly Asp Arg Ala Asp Ala Ala Ala
65                  70                  75                  80

Gly Gly Glu Pro Ala Trp Gly Pro Pro Cys Asn Phe Pro Pro Glu Ile
                85                  90                  95

Pro Pro Phe Thr Thr Val Pro Gly Val Lys Val Asp Thr Ser Asn Phe
            100                 105                 110

Glu Pro Ile Asn Phe Phe Gln Leu Phe Met Thr Glu Ala Ile Leu Gln
        115                 120                 125

Asp Met Val Leu Tyr Thr Asn Val Tyr Ala Glu Gln Tyr Leu Thr Gln
    130                 135                 140

Asn Pro Leu Pro Arg Tyr Ala Arg Ala His Ala Trp His Pro Thr Asp
145                 150                 155                 160

Ile Ala Glu Met Lys Arg Phe Val Gly Leu Thr Leu Ala Met Gly Leu
                165                 170                 175

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

Lys Ile Pro Val Phe Ser Ala Thr Met Ser Arg Asn Arg Tyr Gln Leu
        195                 200                 205

Leu Leu Arg Phe Leu His Phe Asn Asn Asn Ala Thr Ala Val Pro Pro
    210                 215                 220

Asp Gln Pro Gly His Asp Arg Leu His Lys Leu Arg Pro Leu Ile Asp
225                 230                 235                 240

Ser Leu Ser Glu Arg Phe Ala Ala Val Tyr Thr Pro Cys Gln Asn Ile
                245                 250                 255

Cys Ile Asp Glu Ser Leu Leu Leu Phe Lys Gly Arg Leu Gln Phe Arg
```

```
            260                 265                 270

Gln Tyr Ile Pro Ser Lys Arg Ala Arg Tyr Gly Ile Lys Phe Tyr Lys
        275                 280                 285

Leu Cys Glu Ser Ser Ser Gly Tyr Thr Ser Tyr Phe Leu Ile Tyr Glu
    290                 295                 300

Gly Lys Asp Ser Lys Leu Asp Pro Pro Gly Cys Pro Pro Asp Leu Thr
305                 310                 315                 320

Val Ser Gly Lys Ile Val Trp Glu Leu Ile Ser Pro Leu Leu Gly Gln
                325                 330                 335

Gly Phe His Leu Tyr Val Asp Asn Phe Tyr Ser Ser Ile Pro Leu Phe
            340                 345                 350

Thr Ala Leu Tyr Cys Leu Asn Thr Pro Ala Cys Gly Thr Ile Asn Arg
        355                 360                 365

Asn Arg Lys Gly Leu Pro Arg Ala Leu Leu Asp Lys Lys Leu Asn Arg
    370                 375                 380

Gly Glu Thr Tyr Ala Leu Arg Lys Asn Glu Leu Leu Ala Ile Lys Phe
385                 390                 395                 400

Phe Asp Lys Lys Asn Val Phe Met Leu Thr Ser Ile His Asp Glu Ser
                405                 410                 415

Val Ile Arg Glu Gln Arg Val Gly Arg Pro Pro Lys Asn Lys Pro Leu
            420                 425                 430

Cys Ser Lys Glu Tyr Ser Lys Tyr Met Gly Gly Val Asp Arg Thr Asp
        435                 440                 445

Gln Leu Gln His Tyr Tyr Asn Ala Thr Arg Lys Thr Arg His Trp Tyr
    450                 455                 460
```

```
Lys Lys Val Gly Ile Tyr Leu Ile Gln Met Ala Leu Arg Asn Ser Tyr
465                 470                 475                 480


Ile Val Tyr Lys Ala Ala Val Pro Gly Pro Lys Leu Ser Tyr Tyr Lys
                485                 490                 495


Tyr Gln Leu Gln Ile Leu Pro Ala Leu Leu Phe Gly Gly Val Glu Glu
            500                 505                 510


Gln Thr Val Pro Glu Met Pro Pro Ser Asp Asn Val Ala Arg Leu Ile
        515                 520                 525


Gly Lys His Phe Ile Asp Thr Leu Pro Pro Thr Pro Gly Lys Gln Arg
    530                 535                 540


Pro Gln Lys Gly Cys Lys Val Cys Arg Lys Arg Gly Ile Arg Arg Asp
545                 550                 555                 560


Thr Arg Tyr Tyr Cys Pro Lys Cys Pro Arg Asn Pro Gly Leu Cys Phe
                565                 570                 575


Lys Pro Cys Phe Glu Ile Tyr His Thr Gln Leu His Tyr
            580                 585


<210>  1071
<211>  589
<212>  PRT
<213>  Artificial sequence

<220>
<223>  Synthetic

<400>  1071

Met Ala Lys Arg Phe Tyr Ser Ala Glu Glu Ala Ala Ala His Cys Met
1               5                   10                  15


Ala Ser Ser Ser Glu Glu Phe Ser Gly Ser Asp Ser Glu Tyr Val Pro
            20                  25                  30
```

```
Pro Ala Ser Glu Ser Asp Ser Ser Thr Glu Glu Ser Trp Cys Ser Ser
        35                  40                  45

Ser Thr Val Ser Ala Leu Glu Glu Pro Met Glu Val Asp Glu Asp Val
    50                  55                  60

Asp Asp Leu Glu Asp Gln Glu Ala Gly Asp Arg Ala Asp Ala Ala Ala
65                  70                  75                  80

Gly Gly Glu Pro Ala Trp Gly Pro Pro Cys Asn Phe Pro Pro Glu Ile
                85                  90                  95

Pro Pro Phe Thr Thr Val Pro Gly Val Lys Val Asp Thr Ser Asn Phe
            100                 105                 110

Glu Pro Ile Asn Phe Phe Gln Leu Phe Met Thr Glu Ala Ile Leu Gln
        115                 120                 125

Asp Met Val Leu Tyr Thr Asn Val Tyr Ala Glu Gln Gln Leu Thr Gln
    130                 135                 140

Asn Pro Leu Pro Arg Tyr Ala Arg Ala His Ala Trp His Pro Thr Asp
145                 150                 155                 160

Ile Ala Glu Met Lys Arg Phe Val Gly Leu Thr Leu Ala Met Gly Leu
                165                 170                 175

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

Ser Ile Pro Val Phe Ser Ala Thr Met Ser Arg Asn Arg Tyr Gln Leu
        195                 200                 205

Leu Leu Arg Phe Leu His Phe Asn Asn Asn Ala Thr Ala Val Pro Pro
    210                 215                 220

Asp Gln Pro Gly His Asp Arg Leu His Lys Leu Arg Pro Leu Ile Asp
```

```
225                 230                 235                 240

Ser Leu Ser Glu Arg Phe Ala Ala Val Tyr Thr Pro Cys Gln Asn Ile
                245                 250                 255

Cys Ile Asp Glu Ser Leu Leu Leu Phe Lys Gly Arg Leu Gln Phe Arg
            260                 265                 270

Gln Tyr Ile Pro Ser Lys Arg Ala Arg Tyr Gly Ile Lys Phe Tyr Lys
        275                 280                 285

Leu Cys Glu Ser Ser Ser Gly Tyr Thr Ser Tyr Phe Leu Ile Tyr Glu
    290                 295                 300

Gly Lys Asp Arg Lys Leu Asp Pro Pro Gly Cys Pro Pro Asp Leu Thr
305                 310                 315                 320

Val Ser Gly Lys Ile Val Trp Glu Leu Ile Ser Pro Leu Leu Gly Gln
                325                 330                 335

Gly Phe His Leu Tyr Val Asp Asn Phe Tyr Ser Ser Ile Pro Leu Phe
            340                 345                 350

Thr Ala Leu Tyr Cys Leu Asp Thr Pro Ala Cys Gly Thr Ile Asn Arg
        355                 360                 365

Asn Arg Lys Gly Leu Pro Arg Ala Leu Leu Asp Lys Lys Leu Asn Arg
    370                 375                 380

Gly Glu Thr Tyr Ala Leu Arg Lys Asn Glu Leu Leu Ala Ile Lys Phe
385                 390                 395                 400

Phe Asp Lys Lys Asn Val Phe Met Leu Thr Ser Ile His Asp Glu Ser
                405                 410                 415

Val Ile Arg Glu Gln Arg Val Gly Arg Pro Pro Lys Asn Lys Pro Leu
            420                 425                 430
```

```
Cys Ser Lys Glu Tyr Ser Lys Tyr Met Gly Gly Val Asp Arg Thr Asp
        435                 440                 445

Gln Leu Gln His Tyr Tyr Asn Ala Thr Arg Lys Thr Arg Ala Trp Tyr
    450                 455                 460

Lys Lys Val Gly Ile Tyr Leu Ile Gln Met Ala Leu Arg Asn Ser Tyr
465                 470                 475                 480

Ile Val Tyr Lys Ala Ala Val Pro Gly Pro Lys Leu Ser Tyr Tyr Lys
                485                 490                 495

Tyr Gln Leu Gln Ile Leu Pro Ala Leu Leu Phe Gly Gly Val Glu Glu
            500                 505                 510

Gln Thr Val Pro Glu Met Pro Pro Ser Asp Asn Val Ala Arg Leu Ile
        515                 520                 525

Gly Lys His Phe Ile Asp Thr Leu Pro Pro Thr Pro Gly Lys Gln Arg
    530                 535                 540

Pro Gln Lys Gly Cys Lys Val Cys Arg Lys Arg Gly Ile Arg Arg Asp
545                 550                 555                 560

Thr Arg Tyr Tyr Cys Pro Lys Cys Pro Arg Asn Pro Gly Leu Cys Phe
                565                 570                 575

Lys Pro Cys Phe Glu Ile Tyr His Thr Gln Tyr His Tyr
            580                 585
```

<210> 1072
<211> 589
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1072

```
Met Ala Lys Arg Phe Tyr Ser Ala Glu Glu Ala Ala Ala His Cys Met
1               5                  10                  15

Ala Ser Ser Ser Glu Glu Pro Ser Gly Ser Asp Ser Glu Tyr Val Pro
            20                  25                  30

Pro Ala Ser Glu Ser Asp Ser Ser Thr Glu Glu Ser Trp Cys Ser Ser
        35                  40                  45

Ser Thr Val Ser Ala Leu Glu Glu Pro Met Glu Val Asp Glu Asp Val
    50                  55                  60

Asp Asp Leu Glu Asp Gln Glu Ala Gly Asp Arg Ala Asp Ala Ala Ala
65                  70                  75                  80

Gly Gly Glu Pro Ala Trp Gly Pro Pro Cys Asn Phe Pro Pro Glu Ile
                85                  90                  95

Pro Pro Phe Thr Thr Val Pro Gly Val Lys Val Asp Thr Ser Asn Phe
            100                 105                 110

Glu Pro Ile Asn Phe Phe Gln Leu Phe Met Thr Glu Ala Ile Leu Gln
        115                 120                 125

Asp Met Val Leu Tyr Thr Asn Val Tyr Ala Glu Gln Tyr Leu Thr Gln
    130                 135                 140

Asn Pro Leu Pro Arg Tyr Ala Arg Ala His Ala Trp His Pro Thr Asp
145                 150                 155                 160

Ile Ala Glu Met Lys Arg Phe Val Gly Leu Thr Leu Ala Met Gly Leu
                165                 170                 175

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

Ser Ile Pro Val Phe Ser Ala Thr Met Ser Arg Asn Arg Tyr Gln Leu
```

```
        195                 200                 205

Leu Leu Arg Phe Leu His Phe Asn Asn Asn Ala Thr Ala Val Pro Pro
    210                 215                 220

Asp Gln Pro Gly His Asp Arg Leu His Lys Leu Arg Pro Leu Ile Asp
225                 230                 235                 240

Ser Leu Ser Glu Arg Phe Ala Ala Val Tyr Thr Pro Cys Gln Asn Ile
                245                 250                 255

Cys Ile Asp Glu Ser Leu Leu Leu Phe Lys Gly Arg Leu Gln Phe Arg
            260                 265                 270

Gln Tyr Ile Pro Ser Lys Arg Ala Arg Tyr Gly Ile Lys Phe Tyr Lys
        275                 280                 285

Leu Cys Glu Ser Ser Ser Gly Tyr Thr Ser Tyr Phe Leu Ile Tyr Glu
    290                 295                 300

Gly Lys Asp Ser Lys Leu Asp Pro Pro Gly Cys Pro Pro Asp Leu Thr
305                 310                 315                 320

Val Ser Gly Lys Ile Val Trp Glu Leu Ile Ser Pro Leu Leu Gly Gln
                325                 330                 335

Gly Phe His Leu Tyr Val Asp Asn Phe Tyr Ser Ser Ile Pro Leu Phe
            340                 345                 350

Thr His Leu Tyr Cys Leu Asp Thr Pro Ala Cys Gly Thr Ile Asn Arg
        355                 360                 365

Asn Arg Lys Gly Leu Pro Arg Ala Leu Leu Asp Lys Lys Leu Asn Arg
    370                 375                 380

Gly Glu Thr Tyr Ala Leu Arg Lys Asn Glu Leu Leu Ala Ile Lys Phe
385                 390                 395                 400
```

```
Phe Asp Lys Lys Asn Val Phe Met Leu Thr Ser Ile His Asp Glu Ser
                405                 410                 415

Val Ile Arg Glu Gln Arg Val Gly Arg Pro Pro Lys Asn Lys Pro Leu
            420                 425                 430

Cys Ser Lys Glu Tyr Ser Lys Tyr Met Gly Gly Val Asp Arg Thr Asp
        435                 440                 445

Gln Leu Gln His Tyr Tyr Asn Ala Thr Arg Lys Thr Arg Ala Trp Tyr
    450                 455                 460

Lys Lys Val Gly Ile Tyr Leu Ile Gln Met Ala Leu Arg Asn Ser Tyr
465                 470                 475                 480

Ile Val Tyr Lys Ala Ala Val Pro Gly Pro Lys Leu Ser Tyr Tyr Lys
                485                 490                 495

Tyr Gln Leu Gln Ile Leu Pro Ala Leu Leu Phe Gly Gly Val Glu Glu
            500                 505                 510

Gln Thr Val Pro Glu Met Pro Pro Ser Asp Asn Val Ala Arg Leu Ile
        515                 520                 525

Gly Lys His Phe Ile Asp Thr Leu Pro Pro Thr Pro Gly Lys Gln Arg
    530                 535                 540

Pro Gln Lys Gly Cys Lys Val Cys Arg Lys Arg Gly Ile Arg Arg Asp
545                 550                 555                 560

Thr Arg Tyr Tyr Cys Pro Lys Cys Pro Arg Asn Pro Gly Leu Cys Phe
                565                 570                 575

Lys Pro Cys Phe Glu Ile Tyr His Thr Gln Tyr His Tyr
            580                 585
```

<210> 1073

<211> 592
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1073

Met Ala Lys Arg Phe Tyr Ser Ala Glu Glu Ala Ala Ala His Cys Met
1 5 10 15

Ala Ser Ser Gln Glu Glu Phe Ser Gly Ser Asp Ser Glu Tyr Val Pro
20 25 30

Pro Ala Ser Glu Ser Asp Ser Ser Thr Glu Glu Ser Trp Cys Ser Ser
35 40 45

Ser Thr Val Ser Ala Leu Glu Glu Pro Met Glu Val Asp Glu Asp Val
50 55 60

Asp Asp Leu Glu Asp Gln Glu Ala Gly Asp Arg Val Asp Ala Ala Ala
65 70 75 80

Gly Gly Glu Pro Ala Trp Gly Pro Pro Cys Asn Phe Pro Pro Glu Ile
85 90 95

Pro Pro Phe Thr Thr Val Pro Gly Val Lys Val Asp Thr Ser Asn Phe
100 105 110

Glu Pro Ile Asn Phe Phe Gln Leu Phe Met Thr Glu Ala Ile Leu Gln
115 120 125

Asp Met Val Leu Tyr Thr Asn Val Tyr Ala Glu Gln Tyr Leu Thr Gln
130 135 140

Asn Pro Leu Pro Arg Tyr Ala Arg Ala His Ala Trp His Pro Thr Asp
145 150 155 160

Ile Ala Glu Met Lys Arg Phe Val Gly Leu Thr Leu Ala Met Gly Leu

```
                165                 170                 175

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

Ser Ile Pro Val Phe Ser Ala Thr Met Ser Arg Asn Arg Tyr Gln Leu
        195                 200                 205

Leu Leu Arg Phe Leu His Phe Asn Asn Asn Ala Thr Ala Val Pro Pro
    210                 215                 220

Asp Gln Pro Gly His Asp Arg Leu His Lys Leu Arg Pro Leu Ile Asp
225                 230                 235                 240

Ser Leu Ser Glu Arg Phe Ala Ala Val Tyr Thr Pro Cys Gln Asn Ile
                245                 250                 255

Cys Ile Asp Glu Ser Leu Leu Leu Phe Lys Gly Arg Leu Gln Phe Arg
            260                 265                 270

Gln Tyr Ile Pro Ser Lys Arg Ala Arg Tyr Gly Ile Lys Phe Tyr Lys
        275                 280                 285

Leu Cys Glu Ser Ser Ser Gly Tyr Thr Ser Tyr Phe Leu Ile Tyr Glu
    290                 295                 300

Gly Lys Asp Ser Lys Leu Asp Pro Pro Gly Cys Pro Pro Asp Leu Thr
305                 310                 315                 320

Val Ser Gly Lys Ile Val Trp Glu Leu Ile Ser Pro Leu Leu Gly Gln
                325                 330                 335

Gly Phe His Leu Tyr Val Asp Asn Phe Tyr Ser Ser Ile Pro Leu Phe
            340                 345                 350

Thr Ala Leu Tyr Cys Leu Asp Thr Pro Ala Cys Gly Thr Ile Asn Arg
        355                 360                 365
```

```
Asn Arg Lys Gly Leu Pro Arg Ala Leu Leu Asp Lys Lys Leu Asn Arg
    370                 375                 380

Gly Glu Thr Tyr Ala Leu Arg Lys Asn Glu Leu Leu Ala Ile Lys Phe
385                 390                 395                 400

Phe Asp Lys Lys Asn Val Phe Met Leu Thr Ser Ile His Asp Glu Ser
                405                 410                 415

Val Ile Arg Glu Gln Arg Val Gly Arg Pro Pro Lys Asn Lys Pro Leu
            420                 425                 430

Cys Ser Lys Glu Tyr Ser Lys Tyr Met Gly Gly Val Asp Arg Thr Asp
        435                 440                 445

Gln Leu Gln His Tyr Tyr Asn Ala Thr Arg Lys Thr Arg Ala Trp Tyr
    450                 455                 460

Lys Lys Val Gly Ile Tyr Leu Ile Gln Met Ala Leu Arg Asn Ser Tyr
465                 470                 475                 480

Ile Val Tyr Lys Ala Ala Val Pro Gly Pro Lys Leu Ser Tyr Tyr Lys
                485                 490                 495

Tyr Gln Leu Gln Ile Leu Pro Ala Leu Leu Phe Gly Gly Val Glu Glu
            500                 505                 510

Gln Thr Val Pro Glu Met Pro Pro Ser Asp Asn Val Ala Arg Leu Ile
        515                 520                 525

Gly Lys His Phe Ile Asp Thr Leu Pro Pro Thr Pro Gly Lys Gln Arg
    530                 535                 540

Pro Gln Lys Gly Cys Lys Val Cys Arg Lys Arg Gly Ile Arg Arg Asp
545                 550                 555                 560

Thr Arg Tyr Tyr Cys Pro Lys Cys Pro Arg Asn Pro Gly Leu Cys Phe
```

565 570 575

Lys Pro Cys Phe Glu Ile Tyr His Thr Gln Leu His Tyr Gly Arg Arg
580 585 590

<210> 1074
<211> 592
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1074

Met Ala Lys Arg Phe Tyr Ser Ala Glu Glu Ala Ala Ala His Cys Met
1 5 10 15

Ala Ser Ser Ser Glu Glu Phe Ser Gly Ser Asp Ser Glu Tyr Val Pro
20 25 30

Pro Ala Ser Glu Ser Asp Ser Ser Thr Glu Glu Ser Trp Cys Ser Ser
35 40 45

Ser Thr Val Ser Ala Leu Glu Glu Pro Met Glu Val Asp Glu Asp Val
50 55 60

Asp Asp Leu Glu Asp Gln Glu Ala Gly Asp Arg Ala Asp Ala Ala Ala
65 70 75 80

Gly Gly Glu Pro Ala Trp Gly Pro Pro Cys Asn Phe Pro Pro Glu Ile
85 90 95

Pro Pro Phe Thr Thr Val Pro Gly Val Lys Val Asp Thr Ser Asn Phe
100 105 110

Glu Pro Ile Asn Phe Phe Gln Leu Phe Met Thr Glu Ala Ile Leu Gln
115 120 125

Asp Met Val Leu Tyr Thr Asn Val Tyr Ala Glu Gln Tyr Leu Thr Gln

```
    130                 135                 140

Asn Lys Leu Pro Arg Tyr Ala Arg Ala His Ala Trp His Pro Thr Asp
145                 150                 155                 160

Ile Ala Glu Met Lys Arg Phe Val Gly Leu Thr Leu Ala Met Gly Leu
                165                 170                 175

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

Ser Ile Pro Val Phe Ser Ala Thr Met Ser Arg Asn Arg Tyr Gln Leu
        195                 200                 205

Leu Leu Arg Phe Leu His Phe Asn Asn Asn Ala Thr Ala Val Pro Pro
    210                 215                 220

Asp Gln Pro Gly His Asp Arg Leu His Lys Leu Arg Pro Leu Ile Asp
225                 230                 235                 240

Ser Leu Ser Glu Arg Phe Ala Ala Val Tyr Thr Pro Cys Gln Asn Ile
                245                 250                 255

Cys Ile Asp Glu Ser Leu Leu Leu Phe Lys Gly Arg Leu Gln Phe Arg
            260                 265                 270

Gln Tyr Ile Pro Ser Lys Arg Ala Arg Tyr Gly Ile Lys Phe Tyr Lys
        275                 280                 285

Leu Cys Glu Ser Ser Ser Gly Tyr Thr Ser Tyr Phe Leu Ile Tyr Glu
    290                 295                 300

Gly Lys Asp Ser Lys Leu Asp Pro Pro Gly Cys Pro Pro Asp Leu Thr
305                 310                 315                 320

Val Ser Gly Lys Ile Val Trp Glu Leu Ile Ser Pro Leu Leu Gly Gln
                325                 330                 335
```

```
Gly Phe His Leu Tyr Val Asp Asn Phe Tyr Ser Ser Ile Pro Leu Phe
            340                 345                 350

Thr Ala Leu Tyr Cys Leu Asp Thr Pro Ala Cys Gly Thr Ile Asn Arg
        355                 360                 365

Asn Arg Lys Gly Leu Pro Arg Ala Leu Leu Asp Lys Lys Leu Asn Arg
    370                 375                 380

Gly Glu Thr Tyr Ala Leu Arg Lys Asn Glu Leu Leu Ala Ile Lys Phe
385                 390                 395                 400

Phe Asp Lys Lys Asn Val Phe Met Leu Thr Ser Ile His Asp Glu Ser
                405                 410                 415

Val Ile Arg Glu Gln Arg Val Gly Arg Pro Pro Lys Asn Lys Pro Leu
            420                 425                 430

Cys Ser Lys Glu Tyr Ser Lys Tyr Met Gly Gly Val Asp Arg Thr Asp
        435                 440                 445

Gln Leu Gln His Tyr Tyr Asn Ala Thr Arg Lys Thr Arg Ala Trp Tyr
    450                 455                 460

Lys Lys Val Gly Ile Tyr Leu Ile Gln Met Ala Leu Arg Asn Ser Tyr
465                 470                 475                 480

Ile Val Tyr Lys Ala Ala Val Pro Gly Pro Lys Leu Ser Tyr Tyr Lys
                485                 490                 495

Tyr Gln Leu Gln Ile Leu Pro Ala Leu Leu Phe Gly Gly Val Glu Glu
            500                 505                 510

Gln Thr Val Pro Glu Met Pro Pro Ser Asp Asn Val Ala Arg Leu Ile
        515                 520                 525

Gly Lys His Phe Ile Asp Thr Leu Pro Pro Thr Pro Gly Lys Gln Arg
```

530 535 540

Pro Gln Lys Gly Cys Lys Val Cys Arg Lys Arg Gly Ile Arg Arg Asp
545 550 555 560

Thr Arg Tyr Tyr Cys Pro Lys Cys Pro Arg Asn Pro Gly Leu Cys Phe
565 570 575

Lys Pro Cys Phe Glu Ile Tyr His Thr Gln Leu His Tyr Gly Arg Arg
580 585 590

<210> 1075
<211> 592
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1075

Met Ala Lys Arg Phe Cys Ser Ala Glu Glu Ala Ala Ala His Cys Met
1 5 10 15

Ala Ser Ser Ser Glu Glu Phe Ser Gly Ser Asp Ser Glu Tyr Val Pro
20 25 30

Pro Ala Ser Glu Ser Asp Ser Ser Thr Glu Glu Ser Trp Cys Ser Ser
35 40 45

Ser Thr Val Ser Ala Leu Glu Glu Pro Met Glu Val Asp Glu Asp Val
50 55 60

Asp Asp Leu Glu Asp Gln Glu Ala Gly Asp Arg Ala Asp Ala Ala Ala
65 70 75 80

Gly Gly Glu Pro Ala Trp Gly Pro Pro Cys Asn Phe Pro Pro Glu Ile
85 90 95

Pro Pro Phe Thr Thr Val Pro Gly Val Lys Val Asp Thr Ser Asn Phe

```
            100                 105                 110

Glu Pro Ile Asn Phe Phe Gln Leu Phe Met Thr Glu Ala Ile Leu Gln
        115                 120                 125

Asp Met Val Leu Tyr Thr Asn Val Tyr Ala Glu Gln Tyr Leu Thr Gln
    130                 135                 140

Asn Pro Leu Thr Arg Tyr Ala Arg Ala His Ala Trp His Pro Thr Asp
145                 150                 155                 160

Ile Ala Glu Met Lys Arg Phe Val Gly Leu Thr Leu Ala Met Gly Leu
                165                 170                 175

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

Ser Ile Pro Val Phe Ser Ala Thr Met Ser Arg Asn Arg Tyr Gln Leu
        195                 200                 205

Leu Leu Arg Phe Leu His Phe Asn Asn Asn Ala Thr Ala Val Pro Pro
    210                 215                 220

Asp Gln Pro Gly His Asp Arg Leu His Lys Leu Arg Pro Leu Ile Asp
225                 230                 235                 240

Ser Leu Ser Glu Arg Phe Ala Ala Val Tyr Thr Pro Cys Gln Asn Ile
                245                 250                 255

Cys Ile Asp Glu Ser Leu Leu Leu Phe Lys Gly Arg Leu Gln Phe Arg
            260                 265                 270

Gln Tyr Ile Pro Ser Lys Arg Ala Arg Tyr Gly Ile Lys Phe Tyr Lys
        275                 280                 285

Leu Cys Glu Ser Ser Ser Gly Tyr Thr Ser Tyr Phe Leu Ile Tyr Glu
    290                 295                 300
```

```
Gly Lys Asp Ser Lys Leu Asp Pro Pro Gly Cys Pro Pro Asp Leu Thr
305                 310                 315                 320

Val Ser Gly Lys Ile Val Trp Glu Leu Ile Ser Pro Leu Leu Gly Gln
                325                 330                 335

Gly Phe His Leu Tyr Val Asp Asn Phe Tyr Ser Ser Ile Pro Leu Phe
            340                 345                 350

Thr Ala Leu Tyr Cys Leu Asp Thr Pro Ala Cys Gly Thr Ile Asn Arg
        355                 360                 365

Asn Arg Lys Gly Leu Pro Arg Ala Leu Leu Asp Lys Lys Leu Asn Arg
    370                 375                 380

Gly Glu Thr Tyr Ala Leu Arg Lys Asn Glu Leu Leu Ala Ile Lys Phe
385                 390                 395                 400

Phe Asp Lys Lys Asn Val Phe Met Leu Thr Ser Ile His Asp Glu Ser
                405                 410                 415

Val Ile Arg Glu Gln Arg Val Gly Arg Pro Pro Lys Asn Lys Pro Leu
            420                 425                 430

Cys Ser Lys Glu Tyr Ser Lys Tyr Met Gly Gly Val Asp Arg Thr Asp
        435                 440                 445

Gln Leu Gln His Tyr Tyr Asn Ala Thr Arg Lys Thr Arg Ala Trp Tyr
    450                 455                 460

Lys Lys Val Gly Ile Tyr Leu Ile Gln Met Ala Leu Arg Asn Ser Tyr
465                 470                 475                 480

Ile Val Tyr Lys Ala Ala Val Pro Gly Pro Lys Leu Ser Tyr Tyr Lys
                485                 490                 495

Tyr Gln Leu Gln Ile Leu Pro Ala Leu Leu Phe Gly Gly Val Glu Glu
```

```
            500                 505                 510

Gln Thr Val Pro Glu Met Pro Pro Ser Asp Asn Val Ala Arg Leu Ile
        515                 520                 525

Gly Lys His Phe Ile Ala Thr Leu Pro Pro Thr Pro Gly Lys Gln Arg
    530                 535                 540

Pro Gln Lys Gly Cys Lys Val Cys Arg Lys Arg Gly Ile Arg Arg Asp
545                 550                 555                 560

Thr Arg Tyr Tyr Cys Pro Lys Cys Pro Arg Asn Pro Gly Leu Cys Phe
                565                 570                 575

Lys Pro Cys Phe Glu Ile Tyr His Thr Gln Leu His Tyr Gly Arg Arg
            580                 585                 590
```

<210> 1076
<211> 592
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1076

```
Met Ala Lys Arg Phe Tyr Ser Ala Glu Glu Ala Ala Ala His Cys Met
1               5                   10                  15

Ala Ser Ser Ser Glu Glu Phe Ser Gly Ser Asp Ser Glu Tyr Val Pro
            20                  25                  30

Pro Ala Ser Glu Ser Asp Ser Ser Thr Glu Glu Ser Trp Cys Ser Ser
        35                  40                  45

Ser Thr Val Ser Ala Leu Glu Glu Pro Met Glu Val Asp Glu Asp Val
    50                  55                  60

Asp Asp Leu Glu Asp Gln Glu Ala Gly Asp Arg Ala Asp Ala Ala Ala
```

```
65                  70                  75                  80

Gly Gly Glu Pro Ala Trp Gly Pro Pro Cys Asn Phe Pro Pro Glu Ile
                85                  90                  95

Pro Pro Phe Thr Thr Val Pro Gly Val Lys Val Asp Thr Ser Asn Phe
            100                 105                 110

Glu Pro Ile Asn Phe Phe Gln Leu Phe Met Thr Glu Ala Ile Leu Gln
        115                 120                 125

Asp Met Val Leu Tyr Thr Asn Val Tyr Ala Glu Gln Tyr Leu Thr Gln
    130                 135                 140

Val Pro Leu Thr Arg Tyr Ala Arg Ala His Ala Trp His Pro Thr Asp
145                 150                 155                 160

Ile Ala Glu Met Lys Arg Phe Val Gly Leu Thr Leu Ala Met Gly Leu
                165                 170                 175

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

Ser Ile Pro Val Phe Ser Ala Thr Met Ser Arg Asn Arg Tyr Gln Leu
        195                 200                 205

Leu Leu Arg Phe Leu His Phe Asn Asn Asn Ala Thr Ala Val Pro Pro
    210                 215                 220

Asp Gln Pro Gly His Asp Arg Leu His Lys Leu Arg Pro Leu Ile Asp
225                 230                 235                 240

Ser Leu Ser Glu Arg Phe Ala Ala Val Tyr Thr Pro Cys Gln Asn Ile
                245                 250                 255

Cys Ile Asp Glu Ser Leu Leu Leu Phe Lys Gly Arg Leu Gln Phe Arg
            260                 265                 270
```

```
Gln Tyr Ile Pro Ser Lys Arg Ala Arg Tyr Gly Ile Lys Phe Tyr Lys
        275                 280                 285

Leu Cys Glu Ser Ser Ser Gly Tyr Thr Ser Tyr Phe Leu Ile Tyr Glu
    290                 295                 300

Gly Lys Asp Ser Lys Leu Asp Pro Pro Gly Cys Pro Pro Asp Leu Thr
305                 310                 315                 320

Val Ser Gly Lys Ile Val Trp Glu Leu Ile Ser Pro Leu Leu Gly Gln
                325                 330                 335

Gly Phe His Leu Tyr Val Asp Asn Phe Tyr Ser Ser Ile Pro Leu Phe
            340                 345                 350

Thr Ala Leu Tyr Cys Leu Asp Thr Pro Ala Cys Gly Thr Ile Asn Arg
        355                 360                 365

Asn Arg Lys Gly Leu Pro Arg Ala Leu Leu Asp Lys Lys Leu Asn Arg
    370                 375                 380

Gly Glu Thr Tyr Ala Leu Arg Lys Asn Glu Leu Leu Ala Ile Lys Phe
385                 390                 395                 400

Phe Asp Lys Lys Asn Val Phe Met Leu Thr Ser Ile His Asp Glu Ser
                405                 410                 415

Val Ile Arg Glu Gln Arg Val Gly Arg Pro Pro Lys Asn Lys Pro Leu
            420                 425                 430

Cys Ser Lys Glu Tyr Ser Lys Tyr Met Gly Gly Val Asp Arg Thr Asp
        435                 440                 445

Gln Leu Gln His Tyr Tyr Asn Ala Thr Arg Lys Thr Arg Ala Trp Tyr
    450                 455                 460

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

```
465                 470                 475                 480

Ile Val Tyr Lys Ala Ala Val Pro Gly Pro Lys Leu Ser Tyr Tyr Lys
                485                 490                 495

Tyr Gln Leu Gln Ile Leu Pro Ala Leu Leu Phe Gly Gly Val Glu Glu
            500                 505                 510

Gln Thr Val Pro Glu Met Pro Pro Ser Asp Asn Val Ala Arg Leu Ile
        515                 520                 525

Gly Lys His Phe Ile Asp Thr Leu Pro Pro Thr Pro Gly Lys Gln Arg
    530                 535                 540

Pro Gln Lys Gly Cys Lys Val Cys Arg Lys Arg Gly Ile Arg Arg Asp
545                 550                 555                 560

Thr Arg Tyr Tyr Cys Pro Lys Cys Pro Arg Asn Pro Gly Leu Cys Phe
                565                 570                 575

Lys Pro Cys Phe Glu Ile Tyr His Thr Gln Leu His Tyr Gly Arg Arg
            580                 585                 590
```

<210> 1077
<211> 592
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1077

```
Met Ala Lys Arg Phe Tyr Ser Ala Glu Glu Ala Ala Ala His Cys Met
1               5                   10                  15

Ala Ser Ser Ser Glu Glu Phe Ser Gly Ser Asp Gln Glu Tyr Val Pro
            20                  25                  30

Pro Ala Ser Glu Ser Asp Ser Ser Thr Glu Glu Ser Trp Cys Ser Ser
```

```
        35                  40                  45

Ser Thr Val Ser Ala Leu Glu Glu Pro Met Glu Val Asp Glu Asp Val
    50                  55                  60

Asp Asp Leu Glu Asp Gln Glu Ala Gly Asp Arg Ala Asp Ala Ala Ala
65                  70                  75                  80

Gly Gly Glu Pro Ala Trp Gly Pro Pro Cys Asn Phe Pro Pro Glu Ile
                85                  90                  95

Pro Pro Phe Thr Thr Val Pro Gly Val Lys Val Asp Thr Ser Asn Phe
            100                 105                 110

Glu Pro Ile Asn Phe Phe Gln Leu Phe Met Thr Glu Ala Ile Leu Gln
        115                 120                 125

Asp Met Val Leu Tyr Thr Asn Val Tyr Ala Glu Gln Tyr Leu Thr Gln
    130                 135                 140

Asn Lys Leu Thr Arg Tyr Ala Arg Ala His Ala Trp His Pro Thr Asp
145                 150                 155                 160

Ile Ala Glu Met Lys Arg Phe Val Gly Leu Thr Leu Ala Met Gly Leu
                165                 170                 175

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

Ser Ile Pro Val Phe Ser Ala Thr Met Ser Arg Asn Arg Tyr Gln Leu
        195                 200                 205

Leu Leu Arg Phe Leu His Phe Asn Asn Asn Ala Thr Ala Val Pro Pro
    210                 215                 220

Asp Gln Pro Gly His Asp Arg Leu His Lys Leu Arg Pro Leu Ile Asp
225                 230                 235                 240
```

```
Ser Leu Ser Glu Arg Phe Ala Ala Val Tyr Thr Pro Cys Gln Asn Ile
                245                 250                 255

Cys Ile Asp Glu Ser Leu Leu Leu Phe Lys Gly Arg Leu Gln Phe Arg
            260                 265                 270

Gln Tyr Ile Pro Ser Lys Arg Ala Arg Tyr Gly Ile Lys Phe Tyr Lys
        275                 280                 285

Leu Cys Glu Ser Ser Ser Gly Tyr Thr Ser Tyr Phe Leu Ile Tyr Glu
    290                 295                 300

Gly Lys Asp Ser Lys Leu Asp Pro Pro Gly Cys Pro Pro Asp Leu Thr
305                 310                 315                 320

Val Ser Gly Lys Ile Val Trp Glu Leu Ile Ser Pro Leu Leu Gly Gln
                325                 330                 335

Gly Phe His Leu Tyr Val Asp Asn Phe Tyr Ser Ser Ile Pro Leu Phe
            340                 345                 350

Thr Ala Leu Tyr Cys Leu Asp Thr Pro Ala Cys Gly Thr Ile Asn Arg
        355                 360                 365

Asn Arg Lys Gly Leu Pro Arg Ala Leu Leu Asp Lys Lys Leu Asn Arg
    370                 375                 380

Gly Glu Thr Tyr Ala Leu Arg Lys Asn Glu Leu Leu Ala Ile Lys Phe
385                 390                 395                 400

Phe Asp Lys Lys Asn Val Phe Met Leu Thr Ser Ile His Asp Glu Ser
                405                 410                 415

Val Ile Arg Glu Gln Arg Val Gly Arg Pro Pro Lys Asn Lys Pro Leu
            420                 425                 430

Cys Ser Lys Glu Tyr Ser Lys Tyr Met Gly Gly Val Asp Arg Thr Asp
```

```
        435                 440                 445

Gln Leu Gln His Tyr Tyr Asn Ala Thr Arg Lys Thr Arg Ala Trp Tyr
    450                 455                 460

Lys Lys Val Gly Ile Tyr Leu Ile Gln Met Ala Leu Arg Asn Ser Tyr
465                 470                 475                 480

Ile Val Tyr Lys Ala Ala Val Pro Gly Pro Lys Leu Ser Tyr Tyr Lys
                485                 490                 495

Tyr Gln Leu Gln Ile Leu Pro Ala Leu Leu Phe Gly Gly Val Glu Glu
            500                 505                 510

Gln Thr Val Pro Glu Met Pro Pro Ser Asp Asn Val Ala Arg Leu Ile
        515                 520                 525

Gly Lys His Phe Ile Asp Thr Leu Pro Pro Thr Pro Gly Lys Gln Arg
    530                 535                 540

Pro Gln Lys Gly Cys Lys Val Cys Arg Lys Arg Gly Ile Arg Arg Asp
545                 550                 555                 560

Thr Arg Tyr Tyr Cys Pro Lys Cys Pro Arg Asn Pro Gly Leu Cys Phe
                565                 570                 575

Lys Pro Cys Phe Glu Ile Tyr His Thr Gln Leu His Tyr Gly Arg Arg
            580                 585                 590


<210>  1078
<211>  592
<212>  PRT
<213>  Artificial sequence

<220>
<223>  Synthetic

<400>  1078

Met Ala Lys Arg Phe Tyr Ser Ala Glu Glu Ala Ala Ala His Cys Met
```

```
1               5                   10                  15

Ala Ser Ser Ser Glu Glu Phe Ser Gly Ser Asp Ser Glu Tyr Val Pro
            20                  25                  30

Pro Ala Ser Glu Ser Asp Ser Ser Thr Glu Glu Ser Trp Cys Ser Ser
        35                  40                  45

Ser Thr Val Ser Ala Leu Glu Glu Pro Met Glu Val Asp Glu Asp Val
    50                  55                  60

Asp Asp Leu Glu Asp Gln Glu Ala Gly Asp Arg Ala Asp Ala Ala Ala
65                  70                  75                  80

Gly Gly Glu Pro Ala Trp Gly Pro Pro Cys Asn Phe Pro Pro Glu Ile
                85                  90                  95

Pro Pro Phe Thr Thr Val Pro Gly Val Lys Val Asp Thr Ser Asn Phe
            100                 105                 110

Glu Pro Ile Asn Phe Phe Gln Leu Phe Met Thr Glu Ala Ile Leu Gln
        115                 120                 125

Asp Met Val Leu Tyr Thr Asn Val Tyr Ala Glu Gln Tyr Leu Thr Gln
    130                 135                 140

Asn Val Leu Pro Arg Tyr Ala Arg Ala His Ala Trp His Pro Thr Asp
145                 150                 155                 160

Ile Ala Glu Met Lys Arg Phe Val Gly Leu Thr Leu Ala Met Gly Leu
                165                 170                 175

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

Ser Ile Pro Val Phe Ser Ala Thr Met Ser Arg Asn Arg Tyr Gln Leu
        195                 200                 205
```

```
Leu Leu Arg Phe Leu His Phe Asn Asn Asp Ala Thr Ala Val Pro Pro
    210                 215                 220

Asp Gln Pro Gly His Asp Arg Leu His Lys Leu Arg Pro Leu Ile Asp
225                 230                 235                 240

Ser Leu Thr Glu Arg Phe Ala Ala Val Tyr Thr Pro Cys Gln Asn Ile
                245                 250                 255

Cys Ile Asp Glu Ser Leu Leu Leu Phe Lys Gly Arg Leu Gln Phe Arg
            260                 265                 270

Gln Tyr Ile Pro Ser Lys Arg Ala Arg Tyr Gly Ile Lys Phe Tyr Lys
        275                 280                 285

Leu Cys Glu Ser Ser Ser Gly Tyr Thr Ser Tyr Phe Leu Ile Tyr Glu
    290                 295                 300

Gly Lys Asp Ser Lys Leu Asp Pro Pro Gly Cys Pro Pro Asp Leu Thr
305                 310                 315                 320

Val Ser Gly Lys Ile Val Trp Glu Leu Ile Ser Pro Leu Leu Gly Gln
                325                 330                 335

Gly Phe His Leu Tyr Val Asp Asn Phe Tyr Ser Ser Ile Pro Leu Phe
            340                 345                 350

Thr Ala Leu Tyr Cys Leu Asp Thr Pro Ala Cys Gly Thr Ile Asn Arg
        355                 360                 365

Asn Arg Lys Gly Leu Pro Arg Ala Leu Leu Asp Lys Lys Leu Asn Arg
    370                 375                 380

Gly Glu Thr Tyr Ala Leu Arg Lys Asn Glu Leu Leu Ala Ile Lys Phe
385                 390                 395                 400

Phe Asp Lys Lys Asn Val Phe Met Leu Thr Ser Ile His Asp Glu Ser
```

```
                405                 410                 415

Val Ile Arg Glu Gln Arg Val Gly Arg Pro Pro Lys Asn Lys Pro Leu
            420                 425                 430

Cys Ser Lys Glu Tyr Ser Lys Tyr Met Gly Gly Val Asp Arg Thr Asp
        435                 440                 445

Gln Leu Gln His Tyr Tyr Asn Ala Thr Arg Lys Thr Arg Ala Trp Tyr
    450                 455                 460

Lys Lys Val Gly Ile Tyr Leu Ile Gln Met Ala Leu Arg Asn Ser Tyr
465                 470                 475                 480

Ile Val Tyr Lys Ala Ala Val Pro Gly Pro Lys Leu Ser Tyr Tyr Lys
                485                 490                 495

Tyr Gln Leu Gln Ile Leu Pro Ala Leu Leu Phe Gly Gly Val Glu Glu
            500                 505                 510

Gln Thr Val Pro Glu Met Pro Pro Ser Asp Asn Val Ala Arg Leu Ile
        515                 520                 525

Gly Lys His Phe Ile Asp Thr Leu Pro Pro Thr Pro Gly Lys Gln Arg
    530                 535                 540

Pro Gln Lys Gly Cys Lys Val Cys Arg Lys Arg Gly Ile Arg Arg Asp
545                 550                 555                 560

Thr Arg Tyr Tyr Cys Pro Lys Cys Pro Arg Asn Pro Gly Leu Cys Phe
                565                 570                 575

Lys Pro Cys Phe Glu Ile Tyr His Thr Gln Leu His Tyr Gly Arg Arg
            580                 585                 590
```

<210> 1079
<211> 592
<212> PRT

<213> Artificial sequence

<220>
<223> Synthetic

<400> 1079

```
Met Ala Lys Arg Phe Tyr Ser Ala Glu Glu Ala Ala Ala His Cys Met
1               5                  10                  15


Ala Ser Ser Ser Glu Glu Phe Ser Gly Ser Asp Ser Glu Tyr Val Pro
            20                  25                  30


Pro Ala Ser Glu Ser Asp Ser Ser Thr Glu Glu Ser Trp Cys Ser Ser
        35                  40                  45


Ser Thr Val Ser Ala Leu Glu Glu Pro Met Glu Val Asp Glu Asp Val
    50                  55                  60


Asp Asp Leu Glu Asp Gln Glu Ala Gly Asp Arg Ala Asp Ala Ala Pro
65                  70                  75                  80


Gly Gly Glu Pro Ala Trp Gly Pro Pro Cys Asn Phe Pro Pro Glu Ile
                85                  90                  95


Pro Pro Phe Thr Thr Val Pro Gly Val Lys Val Asp Thr Ser Asn Phe
            100                 105                 110


Glu Pro Ile Asn Phe Phe Gln Leu Phe Met Thr Glu Ala Ile Leu Gln
        115                 120                 125


Asp Met Val Leu Tyr Thr Asn Val Tyr Ala Glu Gln Tyr Leu Thr Gln
    130                 135                 140


Val Pro Leu Pro Arg Tyr Ala Arg Ala His Ala Trp His Pro Thr Asp
145                 150                 155                 160


Ile Ala Glu Met Lys Arg Phe Val Gly Leu Thr Leu Ala Met Gly Leu
                165                 170                 175
```

```
Ile Lys Ala Asn Ser Leu Glu Ser Tyr Trp Asp Thr Thr Thr Val Leu
            180                 185                 190

Ser Ile Pro Val Phe Ser Ala Thr Met Ser Arg Asn Arg Tyr Gln Leu
        195                 200                 205

Leu Leu Arg Phe Leu His Phe Asn Asn Glu Ala Thr Ala Val Pro Pro
    210                 215                 220

Asp Gln Pro Gly His Asp Arg Leu His Lys Leu Arg Pro Leu Ile Asp
225                 230                 235                 240

Ser Leu Ser Glu Arg Phe Ala Ala Val Tyr Thr Pro Cys Gln Asn Ile
                245                 250                 255

Cys Ile Asp Glu Ser Leu Leu Leu Phe Lys Gly Arg Leu Gln Phe Arg
            260                 265                 270

Gln Tyr Ile Pro Ser Lys Arg Ala Arg Tyr Gly Ile Lys Phe Tyr Lys
        275                 280                 285

Leu Cys Glu Ser Ser Ser Gly Tyr Thr Ser Tyr Phe Leu Ile Tyr Glu
    290                 295                 300

Gly Lys Asp Ser Lys Leu Asp Pro Pro Gly Cys Pro Pro Asp Leu Thr
305                 310                 315                 320

Val Ser Gly Lys Ile Val Trp Glu Leu Ile Ser Pro Leu Leu Gly Gln
                325                 330                 335

Gly Phe His Leu Tyr Val Asp Asn Phe Tyr Ser Ser Ile Pro Leu Phe
            340                 345                 350

Thr Ala Leu Tyr Cys Leu Asp Thr Pro Ala Cys Gly Thr Ile Asn Arg
        355                 360                 365

Asn Arg Lys Gly Leu Pro Arg Ala Leu Leu Asp Lys Lys Leu Asn Arg
```

```
    370                 375                 380

Gly Glu Thr Tyr Ala Leu Arg Lys Asn Glu Leu Leu Ala Ile Lys Phe
385                 390                 395                 400

Phe Asp Lys Lys Asn Val Phe Met Leu Thr Ser Ile His Asp Glu Ser
                405                 410                 415

Val Ile Arg Glu Gln Arg Val Gly Arg Pro Pro Lys Asn Lys Pro Leu
            420                 425                 430

Cys Ser Lys Glu Tyr Ser Lys Tyr Met Gly Gly Val Asp Arg Thr Asp
        435                 440                 445

Gln Leu Gln His Tyr Tyr Asn Ala Thr Arg Lys Thr Arg Ala Trp Tyr
    450                 455                 460

Lys Lys Val Gly Ile Tyr Leu Ile Gln Met Ala Leu Arg Asn Ser Tyr
465                 470                 475                 480

Ile Val Tyr Lys Ala Ala Val Pro Gly Pro Lys Leu Ser Tyr Tyr Lys
                485                 490                 495

Tyr Gln Leu Gln Ile Leu Pro Ala Leu Leu Phe Gly Gly Val Glu Glu
            500                 505                 510

Gln Thr Val Pro Glu Met Pro Pro Ser Asp Asn Val Ala Arg Leu Ile
        515                 520                 525

Gly Lys His Phe Ile Asp Thr Leu Pro Pro Thr Pro Gly Lys Gln Arg
    530                 535                 540

Pro Gln Lys Gly Cys Lys Val Cys Arg Lys Arg Gly Ile Arg Arg Asp
545                 550                 555                 560

Thr Arg Tyr Tyr Cys Pro Lys Cys Pro Arg Asn Pro Gly Leu Cys Phe
                565                 570                 575
```

Lys Pro Cys Phe Glu Ile Tyr His Thr Gln Leu His Tyr Gly Arg Arg
580 585 590

<210> 1080
<211> 592
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1080

Met Ala Lys Arg Phe Tyr Ser Ala Glu Glu Ala Ala Ala His Cys Met
1 5 10 15

Ala Ser Ser Ser Glu Glu Phe Ser Gly Ser Asp Ser Glu Tyr Val Pro
20 25 30

Pro Ala Ser Glu Ser Asp Ser Ser Thr Glu Glu Ser Trp Cys Ser Ser
35 40 45

Ser Thr Val Ser Ala Leu Glu Glu Pro Met Glu Val Asp Glu Asp Val
50 55 60

Asp Asp Leu Glu Asp Gln Glu Ala Gly Asp Arg Val Asp Ala Ala Ala
65 70 75 80

Gly Gly Glu Pro Ala Trp Gly Pro Pro Cys Asn Phe Pro Pro Glu Ile
85 90 95

Pro Pro Phe Thr Thr Val Pro Gly Val Lys Val Asp Thr Ser Asn Phe
100 105 110

Glu Pro Ile Asn Phe Phe Gln Leu Phe Met Thr Glu Ala Ile Leu Gln
115 120 125

Asp Met Val Leu Tyr Thr Asn Val Tyr Ala Glu Gln Tyr Leu Thr Gln
130 135 140

```
Asn Pro Leu Pro Arg Tyr Ala Arg Ala His Ala Trp His Pro Thr Asp
145                 150                 155                 160

Ile Ala Glu Met Lys Arg Phe Val Gly Leu Thr Leu Ala Met Gly Leu
                165                 170                 175

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

Ser Ile Pro Val Phe Ser Ala Thr Met Ser Arg Asn Arg Tyr Gln Leu
        195                 200                 205

Leu Leu Lys Phe Leu His Phe Asn Asn Glu Ala Thr Ala Val Pro Pro
    210                 215                 220

Asp Gln Pro Gly His Asp Arg Leu His Lys Leu Arg Pro Leu Ile Asp
225                 230                 235                 240

Ser Leu Ser Glu Arg Phe Ala Ala Val Tyr Thr Pro Cys Gln Asn Ile
                245                 250                 255

Cys Ile Asp Glu Ser Leu Leu Leu Phe Lys Gly Arg Leu Gln Phe Arg
            260                 265                 270

Gln Tyr Ile Pro Ser Lys Arg Ala Arg Tyr Gly Ile Lys Phe Tyr Lys
        275                 280                 285

Leu Cys Glu Ser Ser Ser Gly Tyr Thr Ser Tyr Phe Leu Ile Tyr Glu
    290                 295                 300

Gly Lys Asp Ser Lys Leu Asp Pro Pro Gly Cys Pro Pro Asp Leu Thr
305                 310                 315                 320

Val Ser Gly Lys Ile Val Trp Glu Leu Ile Ser Pro Leu Leu Gly Gln
                325                 330                 335

Gly Phe His Leu Tyr Val Asp Asn Phe Tyr Ser Ser Ile Pro Leu Phe
```

```
            340                 345                 350

Thr Ala Leu Tyr Cys Leu Asp Thr Pro Ala Cys Gly Thr Ile Asn Arg
        355                 360                 365

Asn Arg Lys Gly Leu Pro Arg Ala Leu Leu Asp Lys Lys Leu Asn Arg
    370                 375                 380

Gly Glu Thr Tyr Ala Leu Arg Lys Asn Glu Leu Leu Ala Ile Lys Phe
385                 390                 395                 400

Phe Asp Lys Lys Asn Val Phe Met Leu Thr Ser Ile His Asp Glu Ser
                405                 410                 415

Val Ile Arg Glu Gln Arg Val Gly Arg Pro Pro Lys Asn Lys Pro Leu
            420                 425                 430

Cys Ser Lys Glu Tyr Ser Lys Tyr Met Gly Gly Val Asp Arg Thr Asp
        435                 440                 445

Gln Leu Gln His Tyr Tyr Asn Ala Thr Arg Lys Thr Arg Ala Trp Tyr
    450                 455                 460

Lys Lys Val Gly Ile Tyr Leu Ile Gln Met Ala Leu Arg Asn Ser Tyr
465                 470                 475                 480

Ile Val Tyr Lys Ala Ala Val Pro Gly Pro Lys Leu Ser Tyr Tyr Lys
                485                 490                 495

Tyr Gln Leu Gln Ile Leu Pro Ala Leu Leu Phe Gly Gly Val Glu Glu
            500                 505                 510

Gln Thr Val Pro Glu Met Pro Pro Ser Asp Asn Val Ala Arg Leu Ile
        515                 520                 525

Gly Lys His Phe Ile Asp Thr Leu Pro Pro Thr Pro Gly Lys Gln Arg
    530                 535                 540
```

```
Pro Gln Lys Gly Cys Lys Val Cys Arg Lys Arg Gly Ile Arg Arg Asp
545                 550                 555                 560


Thr Arg Tyr Tyr Cys Pro Lys Cys Pro Arg Asn Pro Gly Leu Cys Phe
                565                 570                 575


Lys Pro Cys Phe Glu Ile Tyr His Thr Gln Leu His Tyr Gly Arg Arg
            580                 585                 590


<210>  1081
<211>  592
<212>  PRT
<213>  Artificial sequence

<220>
<223>  Synthetic

<400>  1081

Met Ala Lys Arg Phe Tyr Ser Ala Glu Glu Ala Ala Ala His Cys Met
1               5                   10                  15


Ala Ser Ser Ser Glu Glu Phe Ser Gly Ser Asp Ser Glu Tyr Val Pro
            20                  25                  30


Pro Ala Ser Glu Ser Asp Ser Ser Thr Glu Glu Ser Trp Cys Ser Ser
        35                  40                  45


Ser Thr Val Ser Ala Leu Glu Glu Pro Met Glu Val Asp Glu Asp Val
    50                  55                  60


Asp Asp Leu Glu Asp Gln Glu Ala Gly Asp Arg Ala Asp Ala Ala Ala
65                  70                  75                  80


Gly Gly Glu Pro Ala Trp Gly Pro Pro Cys Asn Phe Pro Pro Glu Ile
                85                  90                  95


Pro Pro Phe Thr Thr Val Pro Gly Val Lys Val Asp Thr Ser Asn Phe
            100                 105                 110
```

```
Glu Pro Ile Asn Phe Phe Gln Leu Phe Met Thr Glu Ala Ile Leu Gln
        115                 120                 125

Asp Met Val Leu Tyr Thr Asn Val Tyr Ala Glu Gln Tyr Leu Thr Gln
    130                 135                 140

Val Pro Leu Pro Arg Tyr Ala Arg Ala His Ala Trp His Pro Thr Asp
145                 150                 155                 160

Ile Ala Glu Met Lys Arg Phe Val Gly Leu Thr Leu Ala Met Gly Leu
                165                 170                 175

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

Asn Ile Pro Val Phe Ser Ala Thr Met Ser Arg Asn Arg Tyr Gln Leu
        195                 200                 205

Leu Leu Arg Phe Leu Glu Phe Asn Asn Asn Ala Thr Ala Val Pro Pro
    210                 215                 220

Asp Gln Pro Gly His Asp Arg Leu His Lys Leu Arg Pro Leu Ile Asp
225                 230                 235                 240

Ser Leu Ser Glu Arg Phe Ala Ala Val Tyr Thr Pro Cys Gln Asn Ile
                245                 250                 255

Cys Ile Asp Glu Ser Leu Leu Leu Phe Lys Gly Arg Leu Gln Phe Arg
            260                 265                 270

Gln Tyr Ile Pro Ser Lys Arg Ala Arg Tyr Gly Ile Lys Phe Tyr Lys
        275                 280                 285

Leu Cys Glu Ser Ser Ser Gly Tyr Thr Ser Tyr Phe Leu Ile Tyr Glu
    290                 295                 300

Gly Lys Asp Ser Lys Leu Asp Pro Pro Gly Cys Pro Pro Asp Leu Thr
```

```
305                 310                 315                 320

Val Ser Gly Lys Ile Val Trp Glu Leu Ile Ser Pro Leu Leu Gly Gln
                325                 330                 335

Gly Phe His Leu Tyr Val Asp Asn Phe Tyr Ser Ser Ile Pro Leu Phe
            340                 345                 350

Thr Ala Leu Tyr Cys Leu Asp Thr Pro Ala Cys Gly Thr Ile Asn Arg
        355                 360                 365

Asn Arg Lys Gly Leu Pro Arg Ala Leu Leu Asp Lys Lys Leu Asn Arg
    370                 375                 380

Gly Glu Thr Tyr Ala Leu Arg Lys Asn Glu Leu Leu Ala Ile Lys Phe
385                 390                 395                 400

Phe Asp Lys Lys Asn Val Phe Met Leu Thr Ser Ile His Asp Glu Ser
                405                 410                 415

Val Ile Arg Glu Gln Arg Val Gly Arg Pro Pro Lys Asn Lys Pro Leu
            420                 425                 430

Cys Ser Lys Glu Tyr Ser Lys Tyr Met Gly Gly Val Asp Arg Thr Asp
        435                 440                 445

Gln Leu Gln His Tyr Tyr Asn Ala Thr Arg Lys Thr Arg Ala Trp Tyr
    450                 455                 460

Lys Lys Val Gly Ile Tyr Leu Ile Gln Met Ala Leu Arg Asn Ser Tyr
465                 470                 475                 480

Ile Val Tyr Lys Ala Ala Val Pro Gly Pro Lys Leu Ser Tyr Tyr Lys
                485                 490                 495

Tyr Gln Leu Gln Ile Leu Pro Ala Leu Leu Phe Gly Gly Val Glu Glu
            500                 505                 510
```

```
Gln Thr Val Pro Glu Met Pro Pro Ser Asp Asn Val Ala Arg Leu Ile
        515                 520                 525

Gly Lys His Phe Ile Asp Thr Leu Pro Pro Thr Pro Gly Lys Gln Arg
    530                 535                 540

Pro Gln Lys Gly Cys Lys Val Cys Arg Lys Arg Gly Ile Arg Arg Asp
545                 550                 555                 560

Thr Arg Tyr Tyr Cys Pro Lys Cys Pro Arg Asn Pro Gly Leu Cys Phe
                565                 570                 575

Lys Pro Cys Phe Glu Ile Tyr His Thr Gln Leu His Tyr Gly Arg Arg
            580                 585                 590
```

<210> 1082
<211> 610
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1082

```
Met Asp Ile Glu Arg Gln Glu Glu Arg Ile Arg Ala Met Leu Glu Glu
1               5                   10                  15

Glu Leu Ser Asp Tyr Ser Asp Glu Ser Ser Ser Glu Asp Glu Thr Asp
            20                  25                  30

His Cys Ser Glu His Glu Val Asn Tyr Asp Thr Glu Glu Glu Arg Ile
        35                  40                  45

Asp Ser Val Asp Val Pro Ser Asn Ser Arg Gln Glu Glu Ala Asn Ala
    50                  55                  60

Ile Ile Ala Asn Glu Ser Asp Ser Asp Pro Asp Asp Asp Leu Pro Leu
65                  70                  75                  80
```

```
Ser Leu Val Arg Gln Arg Ala Ser Ala Ser Arg Gln Val Ser Gly Pro
                85                  90                  95

Phe Tyr Thr Ser Lys Asp Gly Thr Lys Trp Tyr Lys Asn Cys Gln Arg
            100                 105                 110

Pro Asn Val Arg Leu Arg Ser Glu Asn Ile Val Thr Glu Gln Ala Gln
        115                 120                 125

Val Lys Asn Ile Ala Arg Asp Ala Ser Thr Glu Tyr Glu Cys Trp Asn
    130                 135                 140

Ile Phe Val Thr Ser Asp Met Leu Gln Glu Ile Leu Thr His Thr Asn
145                 150                 155                 160

Ser Ser Ile Arg His Arg Gln Thr Lys Thr Ala Ala Glu Asn Ser Ser
                165                 170                 175

Ala Glu Thr Ser Phe Tyr Met Gln Glu Thr Thr Leu Cys Glu Leu Lys
            180                 185                 190

Ala Leu Ile Ala Leu Leu Tyr Leu Ala Gly Leu Ile Lys Ser Asn Arg
        195                 200                 205

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

Phe Arg Thr Thr Met Ser Leu Gln Arg Phe Gln Phe Leu Gln Asn Asn
225                 230                 235                 240

Ile Arg Phe Asp Asp Lys Ser Thr Arg Asp Glu Arg Lys Gln Thr Asp
                245                 250                 255

Asn Met Ala Ala Phe Arg Ser Ile Phe Asp Gln Phe Val Gln Cys Cys
            260                 265                 270

Gln Asn Ala Tyr Ser Pro Ser Glu Phe Leu Thr Ile Asp Glu Met Leu
```

```
        275                 280                 285

Leu Ser Phe Arg Gly Arg Cys Leu Phe Arg Val Tyr Ile Pro Asn Lys
    290                 295                 300

Pro Ala Lys Tyr Gly Ile Lys Ile Leu Ala Leu Val Asp Ala Lys Asn
305                 310                 315                 320

Phe Tyr Val Val Asn Leu Glu Val Tyr Ala Gly Lys Gln Pro Ser Gly
                325                 330                 335

Pro Tyr Ala Val Ser Asn Arg Pro Phe Glu Val Val Glu Arg Leu Ile
            340                 345                 350

Gln Pro Val Ala Arg Ser His Arg Asn Val Thr Phe Asp Asn Trp Phe
        355                 360                 365

Thr Gly Tyr Glu Leu Met Leu His Leu Leu Asn Glu Tyr Arg Leu Thr
    370                 375                 380

Ser Val Gly Thr Val Arg Lys Asn Lys Arg Gln Ile Pro Glu Ser Phe
385                 390                 395                 400

Ile Arg Thr Asp Arg Gln Pro Asn Ser Ser Val Phe Gly Phe Gln Lys
                405                 410                 415

Asp Ile Thr Leu Val Ser Tyr Ala Pro Lys Lys Asn Lys Val Val Val
            420                 425                 430

Val Met Ser Thr Met His His Asp Asn Ser Ile Asp Glu Ser Thr Gly
        435                 440                 445

Glu Lys Gln Lys Pro Glu Met Ile Thr Phe Tyr Asn Ser Thr Lys Ala
    450                 455                 460

Gly Val Asp Val Val Asp Glu Leu Cys Ala Asn Tyr Asn Val Ser Arg
465                 470                 475                 480
```

```
Asn Ser Lys Arg Trp Pro Met Thr Leu Phe Tyr Gly Val Leu Asn Met
                485                 490                 495

Ala Ala Ile Asn Ala Cys Ile Ile Tyr Arg Thr Asn Lys Asn Val Thr
            500                 505                 510

Ile Lys Arg Thr Glu Phe Ile Arg Ser Leu Gly Leu Ser Met Ile Tyr
        515                 520                 525

Glu His Leu His Ser Arg Asn Lys Lys Lys Asn Ile Pro Thr Tyr Leu
    530                 535                 540

Arg Gln Arg Ile Glu Lys Gln Leu Gly Glu Pro Ser Pro Arg His Val
545                 550                 555                 560

Asn Val Pro Gly Arg Tyr Val Arg Cys Gln Asp Cys Pro Tyr Lys Lys
                565                 570                 575

Asp Arg Lys Thr Lys Arg Ser Cys Asn Ala Cys Ala Lys Pro Ile Cys
            580                 585                 590

Met Glu His Ala Lys Phe Leu Cys Glu Asn Cys Ala Glu Leu Asp Ser
        595                 600                 605

Ser Leu
    610
```

<210> 1083
<211> 610
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1083

```
Met Asp Ile Glu Arg Gln Glu Glu Arg Ile Arg Ala Met Leu Glu Glu
1               5                   10                  15
```

```
Glu Leu Ser Asp Tyr Ser Asp Glu Ser Ser Ser Glu Asp Glu Thr Asp
            20                  25                  30

His Cys Ser Glu His Glu Val Asn Tyr Asp Thr Glu Glu Glu Arg Ile
        35                  40                  45

Asp Ser Val Asp Val Pro Ser Asn Ser Arg Gln Glu Glu Ala Asn Ala
    50                  55                  60

Ile Ile Ala Asn Glu Ser Asp Ser Asp Pro Asp Asp Asp Leu Pro Leu
65                  70                  75                  80

Ser Leu Val Arg Gln Arg Ala Ser Ala Ser Arg Gln Val Ser Gly Pro
                85                  90                  95

Phe Tyr Thr Ser Lys Asp Gly Thr Lys Trp Tyr Lys Asn Cys Gln Arg
            100                 105                 110

Pro Asn Val Arg Leu Arg Ser Glu Asn Ile Val Thr Glu Gln Ala Gln
        115                 120                 125

Val Lys Asn Ile Ala Arg Asp Ala Ser Thr Glu Tyr Glu Cys Trp Asn
    130                 135                 140

Ile Phe Val Thr Ser Asp Met Leu Gln Glu Ile Leu Thr His Thr Asn
145                 150                 155                 160

Ser Ser Ile Arg Trp Arg Gln Thr Lys Thr Ala Ala Glu Asn Ser Ser
                165                 170                 175

Ala Glu Thr Ser Phe Tyr Met Gln Glu Thr Thr Leu Cys Glu Leu Lys
            180                 185                 190

Ala Leu Ile Gly Leu Leu Tyr Ile Ala Gly Leu Ile Lys Ser Asn Arg
        195                 200                 205

Gln Ser Leu Lys Asp Leu Trp Arg Thr Asp Gly Thr Gly Val Asp Ile
```

```
    210                 215                 220

Phe Arg Thr Thr Met Ser Leu Gln Arg Phe Gln Phe Leu Leu Asn Asn
225                 230                 235                 240

Ile Arg Phe Asp Asp Lys Ser Thr Arg Asp Glu Arg Lys Gln Thr Asp
                245                 250                 255

Asn Met Ala Ala Phe Arg Ser Ile Phe Asp Gln Phe Val Gln Ser Cys
            260                 265                 270

Gln Asn Ala Tyr Ser Pro Ser Glu Phe Leu Thr Ile Asp Glu Met Leu
        275                 280                 285

Leu Ser Phe Arg Gly Arg Cys Leu Phe Arg Val Tyr Ile Pro Asn Lys
    290                 295                 300

Pro Ala Lys Tyr Gly Ile Lys Ile Leu Ala Leu Val Asp Ala Lys Asn
305                 310                 315                 320

Phe Tyr Val His Asn Leu Glu Val Tyr Ala Gly Lys Gln Pro Ser Gly
                325                 330                 335

Pro Tyr Ala Val Ser Asn Arg Pro Phe Glu Val Val Glu Arg Leu Ile
            340                 345                 350

Gln Pro Val Ala Arg Ser His Arg Asn Val Thr Phe Asp Asn Trp Phe
        355                 360                 365

Thr Gly Tyr Glu Val Met Leu His Leu Leu Asn Glu Tyr Arg Leu Thr
    370                 375                 380

Ser Val Gly Thr Val Arg Lys Asn Lys Arg Gln Ile Pro Glu Ser Phe
385                 390                 395                 400

Ile Arg Thr Asp Arg Gln Pro Asn Ser Ser Val Phe Gly Phe Gln Lys
                405                 410                 415
```

```
Asp Ile Thr Leu Val Ser Tyr Ala Pro Lys Lys Asn Lys Val Val Val
            420                 425                 430

Val Met Ser Thr Met His His Asp Asn Ser Ile Asp Glu Ser Thr Gly
        435                 440                 445

Glu Lys Gln Lys Pro Glu Met Ile Thr Phe Tyr Asn Ser Thr Lys Ala
    450                 455                 460

Gly Val Asp Val Val Asp Glu Leu Cys Ala Asn Tyr Asn Val Ser Arg
465                 470                 475                 480

Asn Ser Lys Arg Trp Pro Met Thr Leu Phe Tyr Gly Val Leu Asn Met
                485                 490                 495

Ala Ala Ile Asn Ala Cys Ile Ile Tyr Arg Thr Asn Lys Asn Val Thr
            500                 505                 510

Ile Lys Arg Thr Glu Phe Ile Arg Ser Leu Gly Leu Ser Met Ile Tyr
        515                 520                 525

Glu His Leu His Ser Arg Asn Lys Lys Lys Asn Ile Pro Thr Tyr Leu
    530                 535                 540

Arg Gln Arg Ile Glu Lys Gln Leu Gly Glu Pro Ser Pro Arg His Val
545                 550                 555                 560

Asn Val Pro Gly Arg Tyr Val Arg Cys Gln Asp Cys Pro Tyr Lys Lys
                565                 570                 575

Asp Arg Lys Thr Lys Arg Ser Cys Asn Ala Cys Ala Lys Pro Ile Cys
            580                 585                 590

Met Glu His Ala Lys Phe Leu Cys Glu Asn Cys Ala His Leu Asp Ser
        595                 600                 605

Ser Leu
```

610

<210> 1084
<211> 610
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1084

```
Met Asp Ile Glu Arg Gln Glu Glu Arg Ile Arg Ala Met Leu Glu Glu
1               5                  10                  15


Glu Leu Ser Asp Tyr Ser Asp Glu Ser Ser Ser Glu Asp Glu Thr Asp
            20                  25                  30


His Cys Ser Glu His Glu Val Asn Tyr Asp Thr Glu Glu Glu Arg Ile
        35                  40                  45


Asp Ser Val Asp Val Pro Ser Asn Ser Arg Gln Glu Glu Ala Asn Ala
    50                  55                  60


Ile Ile Ala Asn Glu Ser Asp Ser Asp Pro Asp Asp Asp Leu Pro Leu
65                  70                  75                  80


Ser Leu Val Arg Glu Arg Ala Ser Ala Ser Arg Gln Val Ser Gly Pro
                85                  90                  95


Phe Tyr Thr Ser Lys Asp Gly Thr Lys Trp Tyr Lys Asn Cys Gln Arg
            100                 105                 110


Pro Asn Val Arg Leu Arg Ser Glu Asn Ile Val Thr Glu Gln Ala Gln
        115                 120                 125


Val Lys Asn Ile Ala Arg Asp Ala Ser Thr Glu Tyr Glu Cys Trp Asn
    130                 135                 140


Ile Phe Val Thr Ser Asp Met Leu Gln Glu Ile Leu Thr His Thr Asn
```

```
145                 150                 155                 160

Ser Ser Ile Arg Trp Arg Gln Thr Lys Thr Ala Ala Glu Asn Ser Ser
                165                 170                 175

Ala Glu Thr Ser Phe Tyr Met Gln Glu Thr Thr Leu Cys Glu Leu Lys
            180                 185                 190

Ala Leu Ile Gly Leu Leu Tyr Ile Ala Gly Leu Ile Lys Ser Asn Arg
        195                 200                 205

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

Phe Arg Thr Thr Met Ser Leu Gln Arg Phe Gln Phe Leu Gln Asn Asn
225                 230                 235                 240

Ile Arg Phe Asp Asp Lys Ser Thr Arg Asp Glu Arg Lys Gln Thr Asp
                245                 250                 255

Asn Met Ala Ala Phe Arg Ser Ile Phe Asp Gln Phe Val Gln Ser Cys
            260                 265                 270

Gln Asn Ala Tyr Ser Pro Ser Glu Phe Leu Thr Ile Asp Glu Met Leu
        275                 280                 285

Leu Ser Phe Arg Gly Arg Cys Leu Phe Arg Val Tyr Ile Pro Asn Lys
    290                 295                 300

Pro Ala Lys Tyr Gly Ile Lys Ile Leu Ala Leu Val Asp Ala Lys Asn
305                 310                 315                 320

Phe Tyr Val Lys Asn Leu Glu Val Tyr Ala Gly Lys Gln Pro Ser Gly
                325                 330                 335

Pro Tyr Ala Val Ser Asn Arg Pro Phe Glu Val Val Glu Arg Leu Ile
            340                 345                 350
```

```
Gln Pro Val Ala Arg Ser His Arg Asn Val Thr Phe Asp Asn Trp Phe
        355                 360                 365

Thr Gly Tyr Glu Leu Met Leu His Leu Leu Asn Glu Tyr Arg Leu Thr
    370                 375                 380

Ser Val Gly Thr Val Arg Lys Asn Lys Arg Gln Ile Pro Glu Ser Phe
385                 390                 395                 400

Ile Arg Thr Asp Arg Gln Pro Asn Ser Ser Val Phe Gly Phe Gln Lys
                405                 410                 415

Asp Ile Thr Leu Val Ser Tyr Ala Pro Lys Lys Asn Lys Val Val Val
            420                 425                 430

Val Met Ser Thr Met His His Asp Asn Ser Ile Asp Glu Ser Thr Gly
        435                 440                 445

Glu Lys Gln Lys Pro Glu Met Ile Thr Phe Tyr Asn Ser Thr Lys Ala
    450                 455                 460

Gly Val Asp Val Val Asp Glu Leu Gln Ala Asn Tyr Asn Val Ser Arg
465                 470                 475                 480

Asn Ser Lys Arg Trp Pro Met Thr Leu Phe Tyr Gly Val Leu Asn Met
                485                 490                 495

Ala Ala Ile Asn Ala Cys Ile Ile Tyr Arg Thr Asn Lys Asn Val Thr
            500                 505                 510

Ile Lys Arg Thr Glu Phe Ile Arg Ser Leu Gly Leu Ser Met Ile Lys
        515                 520                 525

Glu His Leu His Ser Arg Asn Lys Lys Lys Asn Ile Pro Thr Tyr Leu
    530                 535                 540

Arg Gln Arg Ile Glu Lys Gln Leu Gly Glu Pro Ser Pro Arg His Val
```

545 550 555 560

Asn Val Pro Gly Arg Tyr Val Arg Cys Gln Asp Cys Pro Tyr Lys Lys
565 570 575

Asp Arg Lys Thr Lys Arg Ser Cys Asn Ala Cys Ala Lys Pro Ile Cys
580 585 590

Met Glu His Ala Lys Phe Leu Cys Glu Asn Cys Ala Glu Leu Asp Ser
595 600 605

Ser Ile
610

<210> 1085
<211> 610
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1085

Met Asp Ile Glu Arg Gln Glu Glu Arg Ile Arg Ala Met Leu Glu Glu
1 5 10 15

Glu Leu Ser Asp Tyr Ser Asp Glu Ser Ser Ser Glu Asp Glu Thr Asp
20 25 30

His Cys Ser Glu His Glu Val Asn Tyr Asp Thr Glu Glu Glu Arg Ile
35 40 45

Asp Ser Val Asp Val Pro Ser Asn Ser Arg Gln Glu Glu Ala Asn Ala
50 55 60

Ile Ile Ala Asn Glu Ser Asp Ser Asp Pro Asp Asp Asp Leu Pro Leu
65 70 75 80

Ser Leu Val Arg Gln Arg Ala Ser Ala Ser Arg Ala Val Ser Gly Pro

```
                85                  90                  95

Phe Tyr Thr Ser Lys Asp Gly Thr Lys Trp Tyr Lys Asn Cys Gln Arg
            100                 105                 110

Pro Asn Val Arg Leu Arg Ser Glu Asn Ile Val Thr Glu Gln Ala Gln
        115                 120                 125

Val Lys Asn Ile Ala Arg Asp Ala Ser Thr Glu Tyr Glu Cys Trp Asn
    130                 135                 140

Ile Phe Val Thr Ser Asp Met Leu Gln Glu Ile Leu Thr His Thr Asn
145                 150                 155                 160

Ser Ser Ile Arg His Arg Gln Thr Lys Thr Ala Ala Glu Asn Ser Ser
                165                 170                 175

Ala Glu Thr Ser Phe Tyr Met Gln Glu Thr Thr Leu Cys Glu Leu Lys
            180                 185                 190

Ala Leu Ile Gly Leu Leu Tyr Ile Ala Gly Leu Ile Lys Ser Asn Arg
        195                 200                 205

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

Phe Arg Thr Thr Met Ser Leu Gln Arg Phe Gln Phe Leu Leu Asn Asn
225                 230                 235                 240

Ile Arg Phe Asp Asp Lys Ser Thr Arg Asp Glu Arg Lys Gln Thr Asp
                245                 250                 255

Asn Met Ala Ala Phe Arg Ser Ile Phe Asp Gln Phe Val Gln Ser Cys
            260                 265                 270

Gln Asn Ala Tyr Ser Pro Ser Glu Phe Leu Thr Ile Asp Glu Met Leu
        275                 280                 285
```

```
Leu Ser Phe Arg Gly Arg Cys Leu Phe Arg Val Tyr Ile Pro Asn Lys
    290                 295                 300

Pro Ala Lys Tyr Gly Ile Lys Ile Leu Ala Leu Val Asp Ala Lys Asn
305                 310                 315                 320

Phe Tyr Val Lys Asn Leu Glu Val Tyr Ala Gly Lys Gln Pro Ser Gly
                325                 330                 335

Pro Tyr Ala Val Ser Asn Arg Pro Phe Glu Val Val Glu Arg Leu Ile
            340                 345                 350

Gln Pro Val Ala Arg Ser His Arg Asn Val Thr Phe Asp Asn Trp Phe
        355                 360                 365

Thr Gly Tyr Glu Leu Met Leu His Leu Leu Asn Glu Tyr Arg Leu Thr
    370                 375                 380

Ser Val Gly Thr Val Arg Lys Asn Lys Arg Gln Ile Pro Glu Ser Phe
385                 390                 395                 400

Ile Arg Thr Asp Arg Gln Pro Asn Ser Ser Val Phe Gly Phe Gln Lys
                405                 410                 415

Asp Ile Thr Leu Val Ser Tyr Ala Pro Lys Lys Asn Lys Val Val Val
            420                 425                 430

Val Met Ser Thr Met His His Asp Asn Ser Ile Asp Glu Ser Thr Gly
        435                 440                 445

Glu Lys Gln Lys Pro Glu Met Ile Thr Phe Tyr Asn Ser Thr Lys Ala
    450                 455                 460

Gly Val Asp Val Val Asp Glu Leu Cys Ala Asn Tyr Asn Val Ser Arg
465                 470                 475                 480

Asn Ser Lys Arg Trp Pro Met Thr Leu Phe Tyr Gly Val Leu Asn Met
```

```
                485                 490                 495

Ala Ala Ile Asn Ala Cys Ile Ile Tyr Arg Cys Asn Lys Asn Val Thr
            500                 505                 510

Ile Lys Arg Thr Glu Phe Ile Arg Ser Leu Gly Leu Ser Met Ile Tyr
        515                 520                 525

Glu His Leu His Ser Arg Asn Lys Lys Lys Asn Ile Pro Thr Tyr Leu
    530                 535                 540

Arg Gln Arg Ile Glu Lys Gln Leu Gly Glu Pro Ser Pro Arg His Val
545                 550                 555                 560

Asn Val Pro Gly Arg Tyr Val Arg Cys Gln Asp Cys Pro Tyr Lys Lys
                565                 570                 575

Asp Arg Lys Thr Lys Arg Ser Cys Asn Ala Cys Ala Lys Pro Ile Cys
            580                 585                 590

Met Glu His Ala Lys Phe Leu Cys Glu Asn Cys Ala Glu Leu Asp Ser
        595                 600                 605

Ser Leu
    610
```

<210> 1086
<211> 610
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1086

```
Met Asp Ile Glu Arg Gln Glu Glu Arg Ile Arg Ala Met Leu Glu Glu
1               5                   10                  15

Glu Leu Ser Asp Tyr Ser Asp Glu Ser Ser Ser Glu Asp Glu Thr Asp
```

```
            20                  25                  30

His Cys Ser Glu His Glu Val Asn Tyr Asp Thr Glu Glu Glu Arg Ile
        35                  40                  45

Asp Ser Val Asp Val Pro Ser Asn Ser Arg Gln Glu Glu Ala Asn Ala
    50                  55                  60

Ile Ile Ala Asn Glu Ser Asp Ser Asp Pro Asp Asp Asp Leu Pro Leu
65                  70                  75                  80

Ser Leu Val Arg Gln Arg Ala Ser Ala Ser Arg Gln Met Ser Gly Pro
                85                  90                  95

His Tyr Thr Ser Lys Asp Gly Thr Lys Trp Tyr Lys Asn Cys Gln Arg
            100                 105                 110

Pro Asn Val Arg Leu Arg Ser Glu Asn Ile Val Thr Glu Gln Ala Gln
        115                 120                 125

Val Lys Asn Ile Ala Arg Asp Ala Ser Thr Glu Tyr Glu Cys Trp Asn
    130                 135                 140

Ile Phe Val Thr Ser Asp Met Leu Gln Glu Ile Leu Thr His Thr Asn
145                 150                 155                 160

Ser Ser Ile Arg Trp Arg Gln Thr Lys Thr Ala Ala Glu Asn Ser Ser
                165                 170                 175

Ala Ser Thr Ser Phe Tyr Met Gln Glu Thr Thr Leu Cys Glu Leu Lys
            180                 185                 190

Ala Leu Ile Gly Leu Leu Tyr Ile Ala Gly Leu Ile Lys Ser Asn Arg
        195                 200                 205

Gln Ser Leu Lys Asp Leu Trp Arg Thr Asp Gly Thr Gly Val Asp Ile
    210                 215                 220
```

```
Phe Arg Thr Thr Met Ser Leu Gln Arg Phe Gln Phe Leu Gln Asn Asn
225                 230                 235                 240

Ile Arg Phe Asp Asp Lys Ser Thr Arg Asp Glu Arg Lys Gln Thr Asp
                245                 250                 255

Asn Met Ala Ala Phe Arg Ser Ile Phe Asp Gln Phe Val Gln Ser Cys
            260                 265                 270

Gln Asn Ala Tyr Ser Pro Ser Glu Phe Leu Thr Ile Asp Glu Met Leu
        275                 280                 285

Leu Ser Phe Arg Gly Arg Cys Leu Phe Arg Val Tyr Ile Pro Asn Lys
    290                 295                 300

Pro Ala Lys Tyr Gly Ile Lys Ile Leu Ala Leu Val Asp Ala Lys Asn
305                 310                 315                 320

Phe Tyr Val Lys Asn Leu Glu Val Tyr Ala Gly Lys Gln Pro Ser Gly
                325                 330                 335

Pro Tyr Ala Val Ser Asn Arg Pro Phe Glu Val Val Glu Arg Leu Ile
            340                 345                 350

Gln Pro Val Ala Arg Ser His Arg Asn Val Thr Phe Asp Asn Trp Phe
        355                 360                 365

Thr Gly Tyr Glu Leu Met Leu His Leu Leu Asn Glu Tyr Arg Leu Thr
    370                 375                 380

Ser Val Gly Thr Val Arg Lys Asn Lys Arg Gln Ile Pro Glu Ser Phe
385                 390                 395                 400

Ile Arg Thr Asp Arg Gln Pro Asn Ser Ser Val Phe Gly Phe Gln Lys
                405                 410                 415

Asp Ile Thr Leu Val Ser Tyr Ala Pro Lys Lys Asn Lys Val Val Val
```

```
            420                 425                 430

Val Met Ser Thr Met His His Asp Asn Ser Ile Asp Glu Ser Thr Gly
        435                 440                 445

Glu Lys Gln Lys Pro Glu Met Ile Thr Phe Tyr Asn Ser Thr Lys Ala
    450                 455                 460

Gly Val Asp Val Val Asp Glu Leu Cys Ala Asn Tyr Asn Val Ser Arg
465                 470                 475                 480

Asn Ser Lys Arg Trp Pro Met Thr Leu Phe Tyr Gly Val Leu Asn Met
                485                 490                 495

Ala Ala Ile Asn Ala Cys Ile Ile Tyr Arg Thr Asn Lys Asn Val Thr
            500                 505                 510

Ile Lys Arg Thr Glu Phe Ile Arg Ser Leu Gly Leu Ser Met Ile Tyr
        515                 520                 525

Glu His Leu His Ser Arg Asn Lys Lys Lys Asn Ile Pro Thr Tyr Leu
    530                 535                 540

Arg Gln Arg Ile Glu Lys Gln Leu Gly Glu Pro Ser Pro Arg His Val
545                 550                 555                 560

Asn Val Pro Gly Arg Tyr Val Arg Cys Gln Asp Cys Pro Tyr Lys Lys
                565                 570                 575

Asp Arg Lys Thr Lys Arg Ser Cys Asn Ala Cys Ala Lys Pro Ile Cys
            580                 585                 590

Met Glu His Ala Lys Phe Leu Cys Glu Asn Cys Ala Glu Leu Asp Ser
        595                 600                 605

His Leu
    610
```

<210> 1087
<211> 610
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1087

```
Met Asp Ile Glu Arg Gln Glu Glu Arg Ile Arg Ala Met Leu Glu Glu
1               5                  10                  15


Glu Leu Ser Asp Tyr Ser Asp Glu Ser Ser Ser Glu Asp Glu Thr Asp
            20                  25                  30


His Cys Ser Glu His Glu Val Asn Tyr Asp Thr Glu Glu Glu Arg Ile
        35                  40                  45


Asp Ser Val Asp Val Pro Ser Asn Ser Arg Gln Glu Glu Ala Asn Ala
    50                  55                  60


Ile Ile Ala Asn Glu Ser Asp Ser Asp Pro Asp Asp Asp Leu Pro Leu
65                  70                  75                  80


Ser Leu Val Arg Gln Arg Ala Ser Ala Ser Arg Gln Val Ser Gly Pro
                85                  90                  95


Phe Tyr Thr Ser Lys Asp Gly Thr Lys Trp Tyr Lys Asn Cys Gln Arg
            100                 105                 110


Pro Asn Val Arg Leu Arg Ser Glu Asn Ile Val Thr Glu Gln Ala Gln
        115                 120                 125


Val Lys Asn Ile Ala Arg Asp Ala Ser Thr Glu Tyr Glu Cys Trp Asn
    130                 135                 140


Ile Phe Val Thr Ser Asp Met Leu Gln Glu Ile Leu Thr His Thr Asn
145                 150                 155                 160
```

```
Ser Ser Ile Arg Trp Arg Gln Thr Lys Thr Ala Ala Glu Asn Ser Ser
                165                 170                 175

Ala Ser Thr Ser Phe Tyr Met Gln Glu Thr Thr Leu Cys Glu Leu Lys
            180                 185                 190

Ala Leu Ile Gly Leu Leu Tyr Ile Ala Gly Leu Ile Lys Ser Asn Arg
        195                 200                 205

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

Phe Arg Thr Thr Met Ser Leu Gln Arg Phe Gln Phe Leu Leu Asn Asn
225                 230                 235                 240

Ile Arg Phe Asp Asp Lys Ser Thr Arg Asp Glu Arg Lys Gln Thr Asp
                245                 250                 255

Asn Met Ala Ala Phe Arg Ser Ile Phe Asp Gln Phe Val Gln Ser Cys
            260                 265                 270

Gln Asn Ala Tyr Ser Pro Ser Glu Phe Leu Thr Ile Asp Glu Met Leu
        275                 280                 285

Leu Ser Phe Arg Gly Arg Cys Leu Phe Arg Val Tyr Ile Pro Asn Lys
    290                 295                 300

Pro Ala Lys Tyr Gly Ile Lys Ile Leu Ala Leu Val Asp Ala Lys Asn
305                 310                 315                 320

Phe Tyr Val Lys Asn Leu Glu Val Tyr Ala Gly Lys Gln Pro Ser Gly
                325                 330                 335

Pro Tyr Ala Val Ser Asn Arg Pro Phe Glu Val Val Glu Arg Leu Ile
            340                 345                 350

Gln Pro Val Ala Arg Ser His Arg Asn Val Thr Phe Asp Asn Trp Phe
```

```
        355                 360                 365

Thr Gly Tyr Glu Leu Met Leu His Leu Leu Asn Glu Tyr Arg Leu Thr
    370                 375                 380

Ser Val Gly Thr Val Arg Lys Asn Lys Arg Gln Ile Pro Glu Ser Phe
385                 390                 395                 400

Ile Arg Thr Asp Arg Gln Pro Asn Ser Ser Val Phe Gly Phe Gln Lys
                405                 410                 415

Asp Ile Thr Leu Val Ser Tyr Ala Pro Lys Lys Asn Lys Val Val Val
            420                 425                 430

Val Met Ser Thr Met His His Asp Asn Ser Ile Asp Glu Ser Thr Gly
        435                 440                 445

Glu Lys Gln Lys Pro Glu Met Ile Thr Phe Tyr Asn Ser Thr Lys Ala
    450                 455                 460

Gly Val Asp Val Val Asp Glu Leu Cys Ala Asn Tyr Asn Val Ser Arg
465                 470                 475                 480

Asn Ser Lys Arg Trp Pro Met Thr Leu Phe Tyr Gly Val Leu Asn Met
                485                 490                 495

Ala Ala Ile Asn Ala Cys Ile Ile Tyr Arg Thr Asn Lys Asn Val Thr
            500                 505                 510

Ile Lys Arg Thr Glu Phe Ile Arg Ser Leu Gly Leu Ser Met Ile Tyr
        515                 520                 525

Glu His Leu His Ser Arg Asn Lys Lys Lys Asn Ile Pro Thr Tyr Leu
    530                 535                 540

Arg Gln Arg Ile Ala Met Gln Leu Gly Glu Pro Ser Pro Arg His Val
545                 550                 555                 560
```

```
Asn Val Pro Gly Arg Tyr Val Arg Cys Gln Asp Cys Pro Tyr Lys Lys
                565                 570                 575


Asp Arg Lys Thr Lys Arg Ser Cys Asn Ala Cys Ala Lys Pro Ile Cys
            580                 585                 590


Met Glu His Ala Lys Phe Leu Cys Glu Asn Cys Ala Glu Leu Asp Ser
        595                 600                 605


Ser Leu
    610
```

<210> 1088
<211> 610
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1088

```
Met Asp Ile Glu Arg Gln Glu Glu Arg Ile Arg Ala Met Leu Glu Glu
1               5                   10                  15


Glu Leu Ser Asp Tyr Ser Asp Glu Ser Ser Ser Glu Asp Glu Thr Asp
            20                  25                  30


His Cys Ser Glu His Glu Val Asn Tyr Asp Thr Glu Glu Glu Arg Ile
        35                  40                  45


Asp Ser Val Asp Val Pro Ser Asn Ser Arg Gln Glu Glu Ala Asn Ala
    50                  55                  60


Ile Ile Ala Asn Glu Ser Asp Ser Asp Pro Asp Asp Asp Leu Pro Leu
65                  70                  75                  80


Ser Leu Val Arg Gln Arg Ala Ser Ala Ser Arg Gln Val Ser Gly Pro
                85                  90                  95
```

```
Phe Tyr Thr Ser Lys Asp Gly Thr Lys Trp Tyr Lys Asn Cys Gln Arg
            100                 105                 110

Pro Asn Val Arg Leu Arg Ser Glu Asn Ile Val Thr Glu Gln Ala Gln
        115                 120                 125

Val Lys Asn Ile Ala Arg Asp Ala Ser Thr Glu Tyr Glu Cys Trp Asn
    130                 135                 140

Ile Phe Val Thr Ser Asp Met Leu Gln Glu Ile Leu Thr His Thr Asn
145                 150                 155                 160

Ser Ser Ile Arg Trp Arg Gln Thr Lys Thr Ala Ala Glu Asn Ser Ser
                165                 170                 175

Ala Glu Thr Ser Phe Tyr Met Gln Glu Thr Thr Leu Cys Glu Leu Lys
            180                 185                 190

Ala Leu Ile Gly Leu Leu Tyr Ile Ala Gly Leu Ile Lys Ser Asn Arg
        195                 200                 205

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

Phe Arg Thr Thr Met Ser Leu Gln Arg Phe Gln Phe Leu Leu Asn Asn
225                 230                 235                 240

Ile Arg Phe Asp Asp Lys Ser Thr Arg Asp Glu Arg Lys Gln Thr Asp
                245                 250                 255

Asn Met Ala Ala Phe Arg Ser Ile Phe Asp Gln Phe Val Gln Ser Cys
            260                 265                 270

Gln Asn Ala Tyr Ser Pro Ser Glu Phe Leu Thr Ile Asp Glu Met Leu
        275                 280                 285

Leu Ser Phe Arg Gly Arg Cys Leu Phe Arg Val Tyr Ile Pro Asn Lys
```

```
    290                 295                 300

Pro Ala Lys Tyr Gly Ile Lys Ile Leu Ala Leu Val Asp Ala Lys Asn
305                 310                 315                 320

Phe Tyr Val Lys Asn Leu Glu Val Tyr Ala Gly Lys Gln Pro Ser Gly
                325                 330                 335

Pro Tyr Ala Val Ser Asn Arg Pro Phe Glu Val Val Glu Arg Leu Ile
            340                 345                 350

Gln Pro Val Ala Arg Ser His Arg Asn Val Thr Phe Asp Asn Trp Phe
        355                 360                 365

Thr Gly Tyr Glu Leu Met Leu His Leu Leu Asn Glu Tyr Arg Leu Thr
    370                 375                 380

Ser Val Gly Thr Val Arg Lys Asn Lys Thr Gln Ile Pro Glu Asn Phe
385                 390                 395                 400

Ile Arg Thr Asp Arg Gln Pro Asn Ser Ser Val Phe Gly Phe Gln Lys
                405                 410                 415

Asp Ile Thr Leu Val Ser Tyr Ala Pro Lys Lys Asn Lys Val Val Val
            420                 425                 430

Val Met Ser Thr Met His His Asp Asn Ser Ile Asp Glu Ser Thr Gly
        435                 440                 445

Glu Lys Gln Lys Pro Glu Met Ile Thr Phe Tyr Asn Ser Thr Lys Ala
    450                 455                 460

Gly Val Asp Val Val Asp Glu Leu Gln Ala Asn Tyr Asn Val Ser Arg
465                 470                 475                 480

Asn Ser Lys Arg Trp Pro Met Thr Leu Phe Tyr Gly Val Leu Asn Met
                485                 490                 495
```

```
Ala Ala Ile Asn Ala Cys Ile Ile Tyr Arg Thr Asn Lys Asn Val Thr
            500                 505                 510

Ile Lys Arg Thr Glu Phe Ile Arg Ser Leu Gly Leu Ser Met Ile Tyr
        515                 520                 525

Glu His Leu His Ser Arg Asn Lys Lys Lys Asn Ile Pro Thr Tyr Leu
    530                 535                 540

Arg Gln Arg Ile Glu Lys Gln Leu Gly Glu Pro Ser Pro Arg His Val
545                 550                 555                 560

Asn Val Pro Gly Arg Tyr Val Arg Cys Gln Asp Cys Pro Tyr Lys Lys
                565                 570                 575

Asp Arg Lys Thr Lys Arg Ser Cys Asn Ala Cys Ala Lys Pro Ile Cys
            580                 585                 590

Met Glu His Ala Lys Phe Leu Cys Glu Asn Cys Ala Glu Leu Asp Ser
        595                 600                 605

Ser Leu
    610
```

<210> 1089
<211> 610
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1089

```
Met Asp Ile Glu Arg Gln Glu Glu Arg Ile Arg Ala Met Leu Glu Glu
1               5                   10                  15

Glu Leu Ser Asp Tyr Ser Asp Glu Ser Ser Ser Glu Asp Glu Thr Asp
            20                  25                  30
```

```
His Cys Ser Glu His Glu Val Asn Tyr Asp Thr Glu Glu Glu Arg Ile
        35                  40                  45

Asp Ser Val Asp Val Pro Ser Asn Ser Arg Gln Glu Glu Ala Asn Ala
    50                  55                  60

Ile Ile Ala Asn Glu Ser Asp Ser Asp Pro Asp Asp Asp Leu Pro Leu
65                  70                  75                  80

Ser Leu Val Arg Gln Arg Ala Ser Ala Ser Arg Gln Val Ser Gly Pro
                85                  90                  95

Phe Tyr Thr Ser Lys Asp Gly Thr Lys Trp Tyr Lys Asn Cys Gln Arg
            100                 105                 110

Pro Asn Val Arg Leu Arg Ser Glu Asn Ile Val Thr Glu Gln Ala Gln
        115                 120                 125

Val Lys Asn Ile Ala Arg Asp Ala Ser Thr Glu Tyr Glu Cys Trp Asn
    130                 135                 140

Ile Phe Val Thr Ser Asp Met Leu Gln Glu Ile Leu Thr His Thr Asn
145                 150                 155                 160

Ser Ser Ile Arg Trp Arg Gln Thr Lys Thr Ala Ala Glu Asn Ser Ser
                165                 170                 175

Ala Glu Thr Ser Phe Tyr Met Gln Glu Thr Thr Leu Cys Glu Leu Lys
            180                 185                 190

Ala Leu Ile Gly Leu Leu Tyr Leu Ala Gly Leu Ile Lys Ser Asn Arg
        195                 200                 205

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

Phe Arg Thr Thr Met Ser Leu Gln Arg Phe Gln Phe Leu Gln Asn Asn
```

```
225                 230                 235                 240

Ile Arg Phe Asp Asp Lys Ser Thr Arg Asp Glu Arg Lys Gln Thr Asp
                245                 250                 255

Asn Met Ala Ala Phe Arg Ser Ile Phe Asp Gln Phe Val Gln Ser Cys
            260                 265                 270

Gln Asn Ala Tyr Ser Pro Ser Glu Phe Leu Thr Ile Asp Glu Met Leu
        275                 280                 285

Leu Ser Phe Arg Gly Arg Cys Leu Phe Arg Val Tyr Ile Pro Asn Lys
    290                 295                 300

Pro Ala Lys Tyr Gly Ile Lys Ile Leu Ala Leu Val Asp Ala Lys Asn
305                 310                 315                 320

Phe Tyr Val Val Asn Leu Glu Val Tyr Ala Gly Lys Gln Pro Ser Gly
                325                 330                 335

Pro Tyr Ala Val Ser Asn Arg Pro Phe Glu Val Val Glu Arg Leu Ile
            340                 345                 350

Gln Pro Val Ala Arg Ser His Arg Asn Val Thr Phe Asp Asn Trp Phe
        355                 360                 365

Thr Gly Tyr Glu Leu Met Leu His Leu Leu Asn Glu Tyr Arg Leu Thr
    370                 375                 380

Ser Val Gly Thr Val Arg Lys Asn Lys Arg Gln Ile Pro Glu Ser Phe
385                 390                 395                 400

Ile Arg Thr Asp Arg Gln Pro Asn Ser Ser Val Phe Gly Phe Gln Lys
                405                 410                 415

Asp Ile Thr Leu Val Ser Tyr Ala Pro Lys Lys Asn Lys Val Val Val
            420                 425                 430
```

```
Val Met Ser Thr Met His His Asp Asn Ser Ile Asp Glu Ser Thr Gly
        435                 440                 445

Glu Lys Gln Lys Pro Glu Met Ile Thr Phe Tyr Asn Ser Thr Lys Ala
    450                 455                 460

Gly Val Asp Val Val Asp Glu Leu Gln Ala Asn Tyr Asn Val Ser Arg
465                 470                 475                 480

Asn Ser Lys Arg Trp Pro Met Thr Leu Phe Tyr Gly Val Leu Asn Met
                485                 490                 495

Ala Ala Ile Asn Ala Cys Ile Ile Tyr Arg Thr Asn Lys Asn Val Thr
            500                 505                 510

Ile Lys Arg Thr Glu Phe Ile Arg Ser Leu Gly Leu Ser Met Ile Lys
        515                 520                 525

Glu His Leu His Ser Arg Asn Lys Lys Lys Asn Ile Pro Thr Tyr Leu
    530                 535                 540

Arg Gln Arg Ile Glu Lys Gln Leu Gly Glu Pro Ser Pro Arg His Val
545                 550                 555                 560

Asn Tyr Pro Gly Arg Tyr Val Arg Cys Gln Asp Cys Pro Tyr Lys Lys
                565                 570                 575

Asp Arg Lys Thr Lys Arg Ser Cys Asn Ala Cys Ala Lys Pro Ile Cys
            580                 585                 590

Met Glu His Ala Lys Phe Leu Cys Glu Asn Cys Ala Glu Leu Asp Ser
        595                 600                 605

Ser Leu
    610
```

<210> 1090

<211> 610
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1090

```
Met Asp Ile Glu Arg Gln Glu Glu Arg Ile Arg Ala Met Leu Glu Glu
1               5                  10                  15


Glu Leu Ser Asp Tyr Ser Asp Glu Ser Ser Ser Glu Asp Glu Thr Asp
            20                  25                  30


His Cys Ser Glu His Glu Val Asn Tyr Asp Thr Glu Glu Glu Arg Ile
        35                  40                  45


Asp Ser Val Asp Val Pro Ser Asn Ser Arg Gln Glu Glu Ala Asn Ala
    50                  55                  60


Ile Ile Ala Asn Glu Ser Asp Ser Asp Pro Asp Asp Asp Leu Pro Leu
65                  70                  75                  80


Ser Leu Val Arg Gln Arg Ala Ser Ala Ser Arg Gln Val Ser Gly Pro
                85                  90                  95


Phe Tyr Thr Ser Lys Asp Gly Thr Lys Trp Tyr Lys Asn Cys Gln Arg
            100                 105                 110


Pro Asn Val Arg Leu Arg Ser Glu Asn Ile Val Thr Glu Gln Ala Gln
        115                 120                 125


Val Lys Asn Ile Ala Arg Asp Ala Ser Thr Glu Tyr Glu Cys Trp Asn
    130                 135                 140


Ile Phe Val Thr Ser Asp Met Leu Gln Glu Ile Leu Thr His Thr Asn
145                 150                 155                 160


Ser Ser Ile Arg Trp Arg Gln Thr Lys Thr Ala Ala Glu Asn Ser Ser
```

```
                165                 170                 175

Ala Glu Thr Ser Phe Tyr Met Gln Glu Thr Thr Leu Cys Glu Leu Lys
            180                 185                 190

Ala Leu Ile Gly Leu Leu Tyr Ile Ala Gly Leu Ile Lys Ser Asn Arg
        195                 200                 205

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

Phe Arg Thr Thr Met Ser Leu Gln Arg Phe Gln Phe Leu Gln Asn Asn
225                 230                 235                 240

Ile Arg Phe Asp Asp Lys Ser Thr Arg Asp Glu Arg Lys Gln Thr Asp
                245                 250                 255

Asn Met Ala Ala Phe Arg Ser Ile Phe Asp Gln Phe Val Gln Ser Cys
            260                 265                 270

Gln Asn Ala Tyr Ser Pro Ser Glu Phe Leu Thr Ile Asp Glu Met Leu
        275                 280                 285

Leu Ser Phe Arg Gly Arg Cys Leu Phe Arg Val Tyr Ile Pro Asn Lys
    290                 295                 300

Pro Ala Lys Tyr Gly Ile Lys Ile Leu Ala Leu Val Asp Ala Lys Asn
305                 310                 315                 320

Phe Tyr Val Lys Asn Leu Glu Val Tyr Ala Gly Lys Gln Pro Ser Gly
                325                 330                 335

Pro Tyr Ala Val Ser Asn Arg Pro Phe Glu Val Val Glu Arg Leu Ile
            340                 345                 350

Gln Pro Val Ala Arg Ser His Arg Asn Val Thr Phe Asp Asn Trp Phe
        355                 360                 365
```

```
Thr Gly Tyr Glu Leu Met Leu His Leu Leu Asn Glu Tyr Arg Leu Thr
    370                 375                 380

Ser Val Gly Thr Val Arg Lys Asn Lys Arg Gln Ile Pro Glu Ser Phe
385                 390                 395                 400

Ile Arg Thr Asp Arg Gln Pro Asn Ser Ser Val Phe Gly Phe Gln Lys
                405                 410                 415

Asp Ile Thr Leu Val Ser Tyr Ala Pro Lys Lys Asn Lys Val Val Val
            420                 425                 430

Val Met Ser Thr Met His His Asp Asn Ser Ile Asp Glu Ser Thr Gly
        435                 440                 445

Glu Lys Gln Lys Pro Glu Met Ile Thr Phe Tyr Asn Ser Thr Lys Ala
    450                 455                 460

Gly Val Asp Val Val Asp Glu Leu Cys Ala Asn Tyr Asn Val Ser Arg
465                 470                 475                 480

Asn Ser Lys Arg Trp Pro Met Thr Leu Phe Tyr Gly Val Leu Asn Met
                485                 490                 495

Ala Ala Ile Asn Ala Cys Ile Ile Tyr Arg Thr Asn Lys Asn Val Thr
            500                 505                 510

Ile Lys Arg Thr Glu Phe Ile Arg Ser Leu Gly Leu Ser Met Ile Tyr
        515                 520                 525

Glu His Leu His Ser Arg Asn Lys Lys Lys Asn Ile Pro Thr Tyr Leu
    530                 535                 540

Arg Gln Arg Ile Glu Lys Gln Leu Gly Glu Pro Ser Pro Arg His Val
545                 550                 555                 560

Asn Val Pro Gly Arg Tyr Val Arg Cys Gln Asp Cys Pro Tyr Lys Lys
```

565 570 575

Asp Arg Lys Thr Lys Arg Ser Cys Asn Ala Cys Ala Lys Pro Ile Cys
580 585 590

Met Glu His Ala Lys Phe Leu Cys Glu Asn Cys Ala Glu Leu Asp Ser
595 600 605

Ser Leu
610

<210> 1091
<211> 610
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1091

Met Asp Ile Glu Arg Gln Glu Glu Arg Ile Arg Ala Met Leu Glu Glu
1 5 10 15

Glu Leu Ser Asp Tyr Ser Asp Glu Ser Ser Ser Glu Asp Glu Thr Asp
20 25 30

His Cys Ser Glu His Glu Val Asn Tyr Asp Thr Glu Glu Glu Arg Ile
35 40 45

Asp Ser Val Asp Val Pro Ser Asn Ser Arg Gln Glu Glu Ala Asn Ala
50 55 60

Ile Ile Ala Asn Glu Ser Asp Ser Asp Pro Asp Asp Asp Leu Pro Leu
65 70 75 80

Ser Leu Val Arg Gln Arg Ala Ser Ala Ser Arg Gln Val Ser Gly Pro
85 90 95

Phe Tyr Thr Ser Lys Asp Gly Thr Lys Trp Tyr Lys Asn Cys Gln Arg

```
            100                 105                 110

Pro Asn Val Arg Leu Arg Ser Glu Asn Ile Val Thr Glu Gln Ala Gln
        115                 120                 125

Val Lys Asn Ile Ala Arg Asp Ala Ser Thr Glu Tyr Glu Cys Trp Asn
    130                 135                 140

Ile Phe Val Thr Ser Asp Met Leu Gln Glu Ile Leu Thr His Thr Asn
145                 150                 155                 160

Ser Ser Ile Arg Trp Arg Gln Thr Lys Thr Ala Ala Glu Asn Ser Ser
                165                 170                 175

Ala Glu Thr Ser Phe Tyr Met Gln Glu Thr Thr Leu Cys Glu Leu Lys
            180                 185                 190

Ala Leu Ile Gly Leu Leu Tyr Leu Ala Gly Leu Ile Lys Ser Asn Arg
        195                 200                 205

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

Phe Arg Thr Thr Met Ser Leu Gln Arg Phe Gln Phe Leu Gln Asn Asn
225                 230                 235                 240

Ile Arg Phe Asp Asp Lys Ser Thr Arg Asp Glu Arg Lys Gln Thr Asp
                245                 250                 255

Asn Met Ala Ala Phe Arg Ser Ile Phe Asp Gln Phe Val Gln Ser Cys
            260                 265                 270

Gln Asn Ala Tyr Ser Pro Ser Glu Phe Leu Thr Ile Asp Glu Met Leu
        275                 280                 285

Leu Ser Phe Arg Gly Arg Cys Leu Phe Arg Val Tyr Ile Pro Asn Lys
    290                 295                 300
```

```
Pro Ala Lys Tyr Gly Ile Lys Ile Leu Ala Leu Val Asp Ala Lys Asn
305                 310                 315                 320

Phe Tyr Val Val Asn Leu Glu Val Tyr Ala Gly Lys Gln Pro Ser Gly
                325                 330                 335

Pro Tyr Ala Val Ser Asn Arg Pro Phe Glu Val Val Glu Arg Leu Ile
            340                 345                 350

Gln Pro Val Ala Arg Ser His Arg Asn Val Thr Phe Asp Asn Trp Phe
        355                 360                 365

Thr Gly Tyr Glu Leu Met Leu His Leu Leu Asn Glu Tyr Arg Leu Thr
    370                 375                 380

Ser Val Gly Thr Val Arg Lys Asn Lys Arg Gln Ile Pro Glu Ser Phe
385                 390                 395                 400

Ile Arg Thr Asp Arg Gln Pro Asn Ser Ser Val Phe Gly Phe Gln Lys
                405                 410                 415

Asp Ile Thr Leu Val Ser Tyr Ala Pro Lys Lys Asn Lys Val Val Val
            420                 425                 430

Val Met Ser Thr Met His His Asp Asn Ser Ile Asp Glu Ser Thr Gly
        435                 440                 445

Glu Lys Gln Lys Pro Glu Met Ile Thr Phe Tyr Asn Ser Thr Lys Ala
    450                 455                 460

Gly Val Asp Val Val Asp Glu Leu Cys Ala Asn Tyr Asn Val Ser Arg
465                 470                 475                 480

Asn Ser Lys Arg Trp Pro Met Thr Leu Phe Tyr Gly Val Leu Asn Met
                485                 490                 495

Ala Ala Ile Asn Ala Cys Ile Ile Tyr Arg Thr Asn Lys Asn Val Thr
```

```
            500                 505                 510

Ile Lys Arg Thr Glu Phe Ile Arg Ser Leu Gly Leu Ser Met Ile Lys
        515                 520                 525

Glu His Leu His Ser Arg Asn Lys Lys Lys Asn Ile Pro Thr Tyr Leu
    530                 535                 540

Arg Gln Arg Ile Glu Lys Gln Leu Gly Glu Pro Ser Pro Arg His Val
545                 550                 555                 560

Asn Tyr Pro Gly Arg Tyr Val Arg Cys Gln Asp Cys Pro Tyr Lys Lys
                565                 570                 575

Asp Arg Lys Thr Lys Arg Ser Cys Asn Ala Cys Ala Lys Pro Ile Cys
            580                 585                 590

Met Glu His Ala Lys Phe Leu Cys Glu Asn Cys Ala Glu Leu His Ser
        595                 600                 605

Ser Leu
    610
```

<210> 1092
<211> 610
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1092

```
Met Asp Ile Glu Arg Gln Glu Glu Arg Ile Arg Ala Met Leu Glu Glu
1               5                   10                  15

Glu Leu Ser Asp Tyr Ser Asp Glu Ser Ser Ser Glu Asp Glu Thr Asp
            20                  25                  30

His Cys Ser Glu His Glu Val Asn Tyr Asp Thr Glu Glu Glu Arg Ile
```

```
        35                  40                  45

Asp Ser Val Asp Val Pro Ser Asn Ser Arg Gln Glu Glu Ala Asn Ala
    50                  55                  60

Ile Ile Ala Asn Glu Ser Asp Ser Asp Pro Asp Asp Asp Leu Pro Leu
65                  70                  75                  80

Ser Leu Val Arg Gln Arg Ala Ser Ala Ser Arg Gln Val Ser Gly Pro
                85                  90                  95

Phe Tyr Thr Ser Lys Asp Gly Thr Lys Trp Tyr Lys Asn Cys Gln Arg
            100                 105                 110

Pro Asn Val Arg Leu Arg Ser Glu Asn Ile Val Thr Glu Gln Ala Gln
        115                 120                 125

Val Lys Asn Ile Ala Arg Asp Ala Ser Thr Glu Tyr Glu Cys Trp Asn
    130                 135                 140

Ile Phe Val Thr Ser Asp Met Leu Gln Glu Ile Leu Thr His Thr Asn
145                 150                 155                 160

Ser Ser Ile Arg His Arg Gln Thr Lys Thr Ala Ala Glu Asn Ser Ser
                165                 170                 175

Ala Glu Thr Ser Phe Tyr Met Gln Glu Thr Thr Leu Cys Glu Leu Lys
            180                 185                 190

Ala Leu Ile Gly Leu Leu Tyr Leu Ala Gly Leu Ile Lys Ser Asn Arg
        195                 200                 205

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

Phe Arg Thr Thr Met Ser Leu Gln Arg Phe Gln Phe Leu Gln Asn Asn
225                 230                 235                 240
```

```
Ile Arg Phe Asp Asp Lys Ser Thr Arg Asp Glu Arg Lys Gln Thr Asp
                245                 250                 255

Asn Met Ala Ala Phe Arg Ser Ile Phe Asp Gln Phe Val Gln Ser Cys
            260                 265                 270

Gln Asn Ala Tyr Ser Pro Ser Glu Phe Leu Thr Ile Asp Glu Met Leu
        275                 280                 285

Leu Ser Phe Arg Gly Arg Cys Leu Phe Arg Val Tyr Ile Pro Asn Lys
    290                 295                 300

Pro Ala Lys Tyr Gly Ile Lys Ile Leu Ala Leu Val Asp Ala Lys Asn
305                 310                 315                 320

Phe Tyr Val Lys Asn Leu Glu Val Tyr Ala Gly Lys Gln Pro Ser Gly
                325                 330                 335

Pro Tyr Ala Val Ser Asn Arg Pro Phe Glu Val Val Glu Arg Leu Ile
            340                 345                 350

Gln Pro Val Ala Arg Ser His Arg Asn Val Thr Phe Asp Asn Trp Phe
        355                 360                 365

Thr Gly Tyr Glu Leu Met Leu His Leu Leu Asn Glu Tyr Arg Leu Thr
    370                 375                 380

Ser Val Gly Thr Val Arg Lys Asn Lys Arg Gln Ile Pro Glu Ser Phe
385                 390                 395                 400

Ile Arg Thr Ser Arg Gln Pro Asn Ser Ser Val Phe Gly Phe Gln Lys
                405                 410                 415

Asp Ile Thr Leu Val Ser Tyr Ala Pro Lys Lys Asn Lys Val Val Val
            420                 425                 430

Val Met Ser Thr Met His His Asp Asn Ser Ile Asp Glu Ser Thr Gly
```

```
        435                 440                 445

Glu Lys Gln Lys Pro Glu Met Ile Thr Phe Tyr Asn Ser Thr Lys Ala
    450                 455                 460

Gly Val Asp Val Val Asp Glu Leu Cys Ala Asn Tyr Asn Val Ser Arg
465                 470                 475                 480

Asn Ser Lys Arg Trp Pro Met Thr Leu Phe Tyr Gly Val Leu Asn Met
                485                 490                 495

Ala Ala Ile Asn Ala Cys Ile Ile Tyr Arg Thr Asn Lys Asn Val Thr
            500                 505                 510

Ile Lys Arg Thr Glu Phe Ile Arg Ser Leu Gly Leu Ser Met Ile Tyr
        515                 520                 525

Glu His Leu His Ser Arg Asn Lys Lys Lys Asn Ile Pro Thr Tyr Leu
    530                 535                 540

Arg Gln Arg Ile Glu Lys Gln Leu Gly Glu Pro Ser Pro Arg His Val
545                 550                 555                 560

Asn Val Pro Gly Arg Tyr Val Arg Cys Gln Asp Cys Pro Tyr Lys Lys
                565                 570                 575

Asp Arg Lys Thr Lys Arg Ser Cys Asn Ala Cys Ala Lys Pro Ile Cys
            580                 585                 590

Met Glu His Ala Lys Phe Leu Cys Glu Asn Cys Ala Glu Leu Asp Ser
        595                 600                 605

Ser Leu
    610
```

<210> 1093
<211> 610
<212> PRT

<213> Artificial sequence

<220>
<223> Synthetic

<400> 1093

```
Met Asp Ile Glu Arg Gln Glu Glu Arg Ile Arg Ala Met Leu Glu Glu
1               5                  10                  15


Glu Leu Ser Asp Tyr Ser Asp Glu Ser Ser Ser Glu Asp Glu Thr Asp
            20                  25                  30


His Cys Ser Glu His Glu Val Asn Tyr Asp Thr Glu Glu Glu Arg Ile
        35                  40                  45


Asp Ser Val Asp Val Pro Ser Asn Ser Arg Gln Glu Glu Ala Asn Ala
    50                  55                  60


Ile Ile Ala Asn Glu Ser Asp Ser Asp Pro Asp Asp Asp Leu Pro Leu
65                  70                  75                  80


Ser Leu Val Arg Gln Arg Ala Ser Ala Ser Arg Gln Val Ser Gly Pro
                85                  90                  95


Phe Tyr Thr Ser Lys Asp Gly Thr Lys Trp Tyr Lys Asn Cys Gln Arg
            100                 105                 110


Pro Asn Val Arg Leu Arg Ser Glu Asn Ile Val Thr Glu Gln Ala Gln
        115                 120                 125


Val Lys Asn Ile Ala Arg Asp Ala Ser Thr Glu Tyr Glu Cys Trp Asn
    130                 135                 140


Ile Phe Val Thr Ser Asp Met Leu Gln Glu Ile Leu Thr His Thr Asn
145                 150                 155                 160


Ser Ser Ile Arg His Arg Gln Thr Lys Thr Ala Ala Glu Asn Ser Ser
                165                 170                 175
```

```
Ala Glu Thr Ser Phe Tyr Met Gln Glu Thr Thr Leu Cys Glu Leu Lys
            180                 185                 190

Ala Leu Ile Gly Leu Leu Tyr Ile Ala Gly Leu Ile Lys Ser Asn Arg
        195                 200                 205

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

Phe Arg Thr Thr Met Ser Leu Gln Arg Phe Gln Phe Leu Gln Asn Asn
225                 230                 235                 240

Ile Arg Phe Asp Asp Lys Ser Thr Arg Asp Glu Arg Lys Gln Thr Asp
                245                 250                 255

Asn Met Ala Ala Phe Arg Ser Ile Phe Asp Gln Phe Val Gln Ser Cys
            260                 265                 270

Gln Asn Ala Tyr Ser Pro Ser Glu Phe Leu Thr Ile Asp Glu Met Leu
        275                 280                 285

Leu Ser Phe Arg Gly Arg Cys Leu Phe Arg Val Tyr Ile Pro Asn Lys
    290                 295                 300

Pro Ala Lys Tyr Gly Ile Lys Ile Leu Ala Leu Val Asp Ala Lys Asn
305                 310                 315                 320

Phe Tyr Val Lys Asn Leu Glu Val Tyr Ala Gly Lys Gln Pro Ser Gly
                325                 330                 335

Pro Tyr Ala Val Ser Asn Arg Pro Phe Glu Val Val Glu Arg Leu Ile
            340                 345                 350

Gln Pro Val Ala Arg Ser His Arg Asn Val Thr Phe Asp Asn Trp Phe
        355                 360                 365

Thr Gly Tyr Glu Leu Met Leu His Leu Leu Asn Glu Tyr Arg Leu Thr
```

```
    370                 375                 380

Ser Val Gly Thr Val Arg Lys Asn Lys Arg Gln Ile Pro Glu Ser Phe
385                 390                 395                 400

Ile Arg Thr Asp Arg Gln Pro Asn Ser Ser Val Phe Gly Phe Gln Lys
                405                 410                 415

Asp Ile Thr Leu Val Ser Tyr Ala Pro Lys Lys Asn Lys Val Val Val
            420                 425                 430

Val Met Ser Thr Met His His Asp Asn Ser Ile Asp Glu Ser Thr Gly
        435                 440                 445

Glu Lys Gln Lys Pro Glu Met Ile Thr Phe Tyr Asn Ser Thr Lys Ala
    450                 455                 460

Gly Val Asp Val Val Asp Glu Leu Cys Ala Asn Tyr Asn Val Ser Arg
465                 470                 475                 480

Asn Ser Lys Arg Trp Pro Met Thr Leu Phe Tyr Gly Val Leu Asn Met
                485                 490                 495

Ala Ala Ile Asn Ala Cys Ile Ile Tyr Arg Thr Asn Lys Asn Val Thr
            500                 505                 510

Ile Lys Arg Thr Glu Phe Ile Arg Ser Leu Gly Leu Ser Met Ile Tyr
        515                 520                 525

Glu His Leu His Ser Arg Asn Lys Lys Lys Asn Ile Pro Thr Tyr Leu
    530                 535                 540

Arg Gln Arg Ile Glu Lys Gln Leu Gly Glu Pro Ser Pro Arg His Val
545                 550                 555                 560

Asn Val Pro Gly Arg Tyr Val Arg Cys Gln Asp Cys Pro Tyr Lys Lys
                565                 570                 575
```

Asp Arg Lys Thr Lys Arg Ser Cys Asn Ala Cys Ala Lys Pro Ile Cys
580 585 590

Met Glu His Ala Lys Phe Leu Cys Glu Asn Cys Ala Glu Leu Asp Ser
595 600 605

Ser Leu
610

<210> 1094
<211> 610
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1094

Met Asp Ile Glu Arg Gln Glu Glu Arg Ile Arg Ala Met Leu Glu Glu
1 5 10 15

Glu Leu Ser Asp Tyr Ser Asp Glu Ser Ser Ser Glu Asp Glu Thr Asp
20 25 30

His Cys Ser Glu His Glu Val Asn Tyr Asp Thr Glu Glu Glu Arg Ile
35 40 45

Asp Ser Val Asp Val Pro Ser Asn Ser Arg Gln Glu Glu Ala Asn Ala
50 55 60

Ile Ile Ala Asn Glu Ser Asp Ser Asp Pro Asp Asp Asp Leu Pro Leu
65 70 75 80

Ser Leu Val Arg Gln Arg Ala Ser Ala Ser Arg Gln Val Ser Gly Pro
85 90 95

Phe Tyr Thr Ser Lys Asp Gly Thr Lys Trp Tyr Lys Asn Cys Gln Arg
100 105 110

```
Pro Asn Val Arg Leu Arg Ser Glu Asn Ile Val Thr Glu Gln Ala Gln
        115                 120                 125

Val Lys Asn Ile Ala Arg Asp Ala Ser Thr Glu Tyr Glu Cys Trp Asn
    130                 135                 140

Ile Phe Val Thr Ser Asp Met Leu Gln Glu Ile Leu Thr His Thr Asn
145                 150                 155                 160

Ser Ser Ile Arg His Arg Gln Thr Lys Thr Ala Ala Glu Asn Ser Ser
                165                 170                 175

Ala Glu Thr Ser Phe Tyr Met Gln Glu Thr Thr Leu Cys Glu Leu Lys
            180                 185                 190

Ala Leu Ile Gly Leu Leu Tyr Ile Ala Gly Leu Ile Lys Ser Asn Arg
        195                 200                 205

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

Phe Arg Thr Thr Met Ser Leu Gln Arg Phe Gln Phe Leu Gln Asn Asn
225                 230                 235                 240

Ile Arg Phe Asp Asp Lys Ser Thr Arg Asp Glu Arg Lys Gln Thr Asp
                245                 250                 255

Asn Met Ala Ala Phe Arg Ser Ile Phe Asp Gln Phe Val Gln Ser Cys
            260                 265                 270

Gln Asn Ala Tyr Ser Pro Ser Glu Phe Leu Thr Ile Asp Glu Met Leu
        275                 280                 285

Leu Ser Phe Arg Gly Arg Cys Leu Phe Arg Val Tyr Ile Pro Asn Lys
    290                 295                 300

Pro Ala Lys Tyr Gly Ile Lys Ile Leu Ala Leu Val Asp Ala Lys Asn
```

```
305                 310                 315                 320

Phe Tyr Val Val Asn Leu Glu Val Tyr Ala Gly Lys Gln Pro Ser Gly
                325                 330                 335

Pro Tyr Ala Val Ser Asn Arg Pro Phe Glu Val Val Glu Arg Leu Ile
            340                 345                 350

Gln Pro Val Ala Arg Ser His Arg Asn Val Thr Phe Asp Asn Trp Phe
        355                 360                 365

Thr Gly Tyr Glu Leu Met Leu His Leu Leu Asn Glu Tyr Arg Leu Thr
    370                 375                 380

Ser Val Gly Thr Val Arg Lys Asn Lys Arg Gln Ile Pro Glu Ser Phe
385                 390                 395                 400

Ile Arg Thr Asp Arg Gln Pro Asn Ser Ser Val Phe Gly Phe Gln Lys
                405                 410                 415

Asp Ile Thr Leu Val Ser Tyr Ala Pro Lys Lys Asn Lys Val Val Val
            420                 425                 430

Val Met Ser Thr Met His His Asp Asn Ser Ile Asp Glu Ser Thr Gly
        435                 440                 445

Glu Lys Gln Lys Pro Glu Met Ile Thr Phe Tyr Asn Ser Thr Lys Ala
    450                 455                 460

Gly Val Asp Val Val Asp Glu Leu Gln Ala Asn Tyr Asn Val Ser Arg
465                 470                 475                 480

Asn Ser Lys Arg Trp Pro Met Thr Leu Phe Tyr Gly Val Leu Asn Met
                485                 490                 495

Ala Ala Ile Asn Ala Cys Ile Ile Tyr Arg Thr Asn Lys Asn Val Thr
            500                 505                 510
```

```
Ile Lys Arg Thr Glu Phe Ile Arg Ser Leu Gly Leu Ser Met Ile Tyr
        515                 520                 525


Glu His Leu His Ser Arg Asn Lys Lys Lys Asn Ile Pro Thr Tyr Leu
    530                 535                 540


Arg Gln Arg Ile Glu Lys Gln Leu Gly Glu Pro Ser Pro Arg His Val
545                 550                 555                 560


Asn Tyr Pro Gly Arg Tyr Val Arg Cys Gln Asp Cys Pro Tyr Lys Lys
                565                 570                 575


Asp Arg Lys Thr Lys Arg Ser Cys Asn Ala Cys Ala Lys Pro Ile Cys
            580                 585                 590


Met Glu His Ala Lys Phe Leu Cys Glu Asn Cys Ala Glu Leu Asp Ser
        595                 600                 605


Ser Leu
    610


<210>  1095
<211>  610
<212>  PRT
<213>  Artificial sequence

<220>
<223>  Synthetic

<400>  1095

Met Asp Ile Glu Arg Gln Glu Glu Arg Ile Arg Ala Met Leu Glu Glu
1               5                   10                  15


Glu Leu Ser Asp Tyr Ser Asp Glu Ser Ser Ser Glu Asp Glu Thr Asp
            20                  25                  30


His Cys Ser Glu His Glu Val Asn Tyr Asp Thr Glu Glu Glu Arg Ile
        35                  40                  45
```

```
Asp Ser Val Asp Val Pro Ser Asn Ser Arg Gln Glu Glu Ala Asn Ala
    50                  55                  60

Ile Ile Ala Asn Glu Ser Asp Ser Asp Pro Asp Asp Asp Leu Pro Leu
65                  70                  75                  80

Ser Leu Val Arg Gln Arg Ala Ser Ala Ser Arg Gln Val Ser Gly Pro
                85                  90                  95

Phe Tyr Thr Ser Lys Asp Gly Thr Lys Trp Tyr Lys Asn Cys Gln Arg
            100                 105                 110

Pro Asn Val Arg Leu Arg Ser Glu Asn Ile Val Thr Glu Gln Ala Gln
        115                 120                 125

Val Lys Asn Ile Ala Arg Asp Ala Ser Thr Glu Tyr Glu Cys Trp Asn
    130                 135                 140

Ile Phe Val Thr Ser Asp Met Leu Gln Glu Ile Leu Thr His Thr Asn
145                 150                 155                 160

Ser Ser Ile Arg His Arg Gln Thr Lys Thr Ala Ala Glu Asn Ser Ser
                165                 170                 175

Ala Glu Thr Ser Phe Tyr Met Gln Glu Thr Thr Leu Cys Glu Leu Lys
            180                 185                 190

Ala Leu Ile Ala Leu Leu Tyr Ile Ala Gly Leu Ile Lys Ser Asn Arg
        195                 200                 205

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

Phe Arg Thr Thr Met Ser Leu Gln Arg Phe Gln Phe Leu Leu Asn Asn
225                 230                 235                 240

Ile Arg Phe Asp Asp Ile Ser Thr Arg Asp Glu Arg Lys Gln Thr Asp
```

```
                245                 250                 255

Asn Met Ala Ala Phe Arg Ser Ile Phe Asp Gln Phe Val Gln Cys Cys
            260                 265                 270

Gln Asn Ala Tyr Ser Pro Ser Glu Phe Leu Thr Ile Asp Glu Met Leu
        275                 280                 285

Leu Ser Phe Arg Gly Arg Cys Leu Phe Arg Val Tyr Ile Pro Asn Lys
    290                 295                 300

Pro Ala Lys Tyr Gly Ile Lys Ile Leu Ala Leu Val Asp Ala Lys Asn
305                 310                 315                 320

Phe Tyr Val His Asn Leu Glu Val Tyr Ala Gly Lys Gln Pro Ser Gly
                325                 330                 335

Pro Tyr Ala Val Ser Asn Arg Pro Phe Glu Val Val Glu Arg Leu Ile
            340                 345                 350

Gln Pro Val Ala Arg Ser His Arg Asn Val Thr Phe Asp Asn Trp Phe
        355                 360                 365

Thr Gly Tyr Glu Leu Met Leu His Leu Leu Asn Glu Tyr Arg Leu Thr
    370                 375                 380

Ser Val Gly Thr Val Arg Lys Asn Lys Arg Gln Ile Pro Glu Ser Phe
385                 390                 395                 400

Ile Arg Thr Asp Arg Gln Pro Asn Ser Ser Val Phe Gly Phe Gln Lys
                405                 410                 415

Asp Ile Thr Leu Val Ser Tyr Ala Pro Lys Lys Asn Lys Val Val Val
            420                 425                 430

Val Met Ser Thr Met His His Asp Asn Ser Ile Asp Glu Ser Thr Gly
        435                 440                 445
```

```
Glu Lys Gln Lys Pro Glu Met Ile Thr Phe Tyr Asn Ser Thr Lys Ala
    450                 455                 460

Gly Val Asp Val Val Asp Glu Leu Cys Ala Asn Tyr Asn Val Ser Arg
465                 470                 475                 480

Asn Ser Lys Lys Trp Pro Met Thr Leu Phe Tyr Gly Val Leu Asn Met
                485                 490                 495

Ala Ala Ile Asn Ala Cys Ile Ile Tyr Arg Thr Asn Lys Asn Val Thr
            500                 505                 510

Ile Lys Arg Thr Glu Phe Ile Arg Ser Leu Gly Leu Ser Met Ile Tyr
        515                 520                 525

Glu His Leu His Ser Arg Asn Lys Lys Lys Asn Ile Pro Thr Tyr Leu
    530                 535                 540

Arg Gln Arg Ile Glu Lys Gln Leu Gly Glu Pro Ser Pro Arg His Val
545                 550                 555                 560

Asn Val Pro Gly Arg Tyr Val Arg Cys Gln Asp Cys Pro Tyr Lys Lys
                565                 570                 575

Asp Arg Lys Thr Lys Arg Ser Cys Asn Ala Cys Ala Lys Pro Ile Cys
            580                 585                 590

Met Glu His Ala Lys Phe Leu Cys Glu Asn Cys Ala Glu Leu Asp Ser
        595                 600                 605

Ser Leu
    610
```

<210> 1096
<211> 610
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1096

```
Met Asp Ile Glu Arg Gln Glu Glu Arg Ile Arg Ala Met Leu Glu Glu
1               5                  10                  15


Glu Leu Ser Asp Tyr Ser Asp Glu Ser Ser Ser Glu Asp Glu Thr Asp
            20                  25                  30


His Cys Ser Glu His Glu Val Asn Tyr Asp Thr Glu Glu Glu Arg Ile
        35                  40                  45


Asp Ser Val Asp Val Pro Ser Asn Ser Arg Gln Glu Glu Ala Asn Ala
    50                  55                  60


Ile Ile Ala Asn Glu Ser Asp Ser Asp Pro Asp Asp Asp Leu Pro Leu
65                  70                  75                  80


Ser Leu Val Arg Gln Arg Ala Ser Ala Ser Arg Gln Val Ser Gly Pro
                85                  90                  95


Phe Tyr Thr Ser Lys Asp Gly Thr Lys Trp Tyr Lys Asn Cys Gln Arg
            100                 105                 110


Pro Asn Val Arg Leu Arg Ser Glu Asn Ile Val Thr Glu Gln Ala Gln
        115                 120                 125


Val Lys Asn Ile Ala Arg Asp Ala Ser Thr Glu Tyr Glu Cys Trp Asn
    130                 135                 140


Ile Phe Val Thr Ser Asp Met Leu Gln Glu Ile Leu Thr His Thr Asn
145                 150                 155                 160


Ser Ser Ile Arg His Arg Gln Thr Lys Thr Ala Ala Glu Asn Ser Ser
                165                 170                 175


Ala Glu Thr Ser Phe Tyr Met Gln Glu Thr Thr Leu Cys Glu Leu Lys
```

```
            180                 185                 190

Ala Leu Ile Ala Leu Leu Tyr Ile Ala Gly Leu Ile Lys Ser Asn Arg
        195                 200                 205

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

Phe Arg Thr Thr Met Ser Leu Gln Arg Phe Gln Phe Leu Ile Asn Asn
225                 230                 235                 240

Ile Arg Phe Asp Asp Lys Ser Thr Arg Asp Glu Arg Lys Gln Thr Asp
                245                 250                 255

Asn Met Ala Ala Phe Arg Ser Ile Phe Asp Gln Phe Val Gln Cys Cys
            260                 265                 270

Gln Asn Ala Tyr Ser Pro Ser Glu Phe Leu Thr Ile Asp Glu Met Leu
        275                 280                 285

Leu Ser Phe Arg Gly Arg Cys Leu Phe Arg Val Tyr Ile Pro Asn Lys
    290                 295                 300

Pro Ala Lys Tyr Gly Ile Lys Ile Leu Ala Leu Val Asp Ala Lys Asn
305                 310                 315                 320

Trp Tyr Val Val Asn Leu Glu Val Tyr Ala Gly Lys Gln Pro Ser Gly
                325                 330                 335

Pro Tyr Ala Val Ser Asn Arg Pro Phe Glu Val Val Glu Arg Leu Ile
            340                 345                 350

Gln Pro Val Ala Arg Ser His Arg Asn Val Thr Phe Asp Asn Trp Phe
        355                 360                 365

Thr Gly Tyr Glu Leu Met Leu His Leu Leu Asn Glu Tyr Arg Leu Thr
    370                 375                 380
```

```
Ser Val Gly Thr Val Arg Lys Asn Lys Arg Gln Ile Pro Glu Ser Phe
385                 390                 395                 400

Ile Arg Thr Asp Arg Gln Pro Asn Ser Ser Val Phe Gly Phe Gln Lys
                405                 410                 415

Asp Ile Thr Leu Val Ser Tyr Ala Pro Lys Lys Asn Lys Val Val Val
            420                 425                 430

Val Met Ser Thr Met His His Asp Asn Ser Ile Asp Glu Ser Thr Gly
        435                 440                 445

Glu Lys Gln Lys Pro Glu Met Ile Thr Phe Tyr Asn Ser Thr Lys Ala
    450                 455                 460

Gly Val Asp Val Val Asp Glu Leu Cys Ala Asn Tyr Asn Val Ser Arg
465                 470                 475                 480

Asn Ser Lys Arg Trp Pro Met Thr Leu Phe Tyr Gly Val Leu Asn Met
                485                 490                 495

Ala Ala Ile Asn Ala Cys Ile Ile Tyr Arg Thr Asn Lys Asn Val Thr
            500                 505                 510

Ile Lys Arg Thr Glu Phe Ile Arg Ser Leu Gly Leu Ser Met Ile Tyr
        515                 520                 525

Glu His Leu His Ser Arg Asn Lys Lys Lys Asn Ile Pro Thr Tyr Leu
    530                 535                 540

Arg Gln Arg Ile Glu Lys Gln Leu Gly Glu Pro Ser Pro Arg His Val
545                 550                 555                 560

Asn Val Pro Gly Arg Tyr Val Arg Cys Gln Asp Cys Pro Tyr Lys Lys
                565                 570                 575

Asp Arg Lys Thr Lys Arg Ser Cys Asn Ala Cys Ala Lys Pro Ile Cys
```

580 585 590

Met Glu His Ala Lys Phe Leu Cys Glu Asn Cys Ala Glu Leu Asp Ser
595 600 605

Ser Leu
610

<210> 1097
<211> 610
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1097

Met Asp Ile Glu Arg Gln Glu Glu Arg Ile Arg Ala Met Leu Glu Glu
1 5 10 15

Glu Leu Ser Asp Tyr Ser Asp Glu Ser Ser Ser Glu Asp Glu Thr Asp
20 25 30

His Cys Ser Glu His Glu Val Asn Tyr Asp Thr Glu Glu Glu Arg Ile
35 40 45

Asp Ser Val Asp Val Pro Ser Asn Ser Arg Gln Glu Glu Ala Asn Ala
50 55 60

Ile Ile Ala Asn Glu Ser Asp Ser Asp Pro Asp Asp Asp Leu Pro Leu
65 70 75 80

Ser Leu Val Arg Gln Arg Ala Ser Ala Ser Arg Gln Val Ser Gly Pro
85 90 95

Phe Tyr Thr Ser Lys Asp Gly Thr Lys Trp Tyr Lys Asn Cys Gln Arg
100 105 110

Pro Asn Val Arg Leu Arg Ser Glu Asn Ile Val Thr Glu Gln Ala Gln

```
        115                 120                 125

Val Lys Asn Ile Ala Arg Asp Ala Ser Thr Glu Tyr Glu Cys Trp Asn
    130                 135                 140

Ile Phe Val Thr Ser Asp Met Leu Gln Glu Ile Leu Thr His Thr Asn
145                 150                 155                 160

Ser Ser Ile Arg His Arg Gln Thr Lys Thr Ala Ala Glu Asn Ser Ser
                165                 170                 175

Ala Glu Thr Ser Phe Tyr Met Gln Glu Thr Thr Leu Cys Glu Leu Lys
            180                 185                 190

Ala Leu Ile Ala Leu Leu Tyr Leu Ala Gly Leu Ile Lys Ser Asn Arg
        195                 200                 205

Gln Ser Ala Lys Asp Leu Trp Arg Thr Asp Gly Thr Gly Val Asp Ile
    210                 215                 220

Phe Arg Thr Thr Met Ser Leu Gln Arg Phe Tyr Phe Leu Gln Asn Asn
225                 230                 235                 240

Ile Arg Phe Asp Asp Lys Ser Thr Arg Asp Glu Arg Lys Gln Thr Asp
                245                 250                 255

Asn Met Ala Ala Phe Arg Ser Ile Phe Asp Gln Phe Val Gln Cys Cys
            260                 265                 270

Gln Asn Ala Tyr Ser Pro Ser Glu Phe Leu Thr Ile Asp Glu Met Leu
        275                 280                 285

Leu Ser Phe Arg Gly Arg Cys Leu Phe Arg Val Tyr Ile Pro Asn Lys
    290                 295                 300

Pro Ala Lys Tyr Gly Ile Lys Ile Leu Ala Leu Val Asp Ala Lys Asn
305                 310                 315                 320
```

```
Phe Tyr Val Lys Asn Leu Glu Val Tyr Ala Gly Lys Gln Pro Ser Gly
               325                 330                 335

Pro Tyr Ala Val Ser Asn Arg Pro Phe Glu Val Val Glu Arg Leu Ile
            340                 345                 350

Gln Pro Val Ala Arg Ser His Arg Asn Val Thr Phe Asp Asn Trp Phe
        355                 360                 365

Thr Gly Tyr Glu Leu Met Leu His Leu Leu Asn Glu Tyr Arg Leu Thr
    370                 375                 380

Ser Val Gly Thr Val Arg Lys Asn Lys Arg Gln Ile Pro Glu Ser Phe
385                 390                 395                 400

Ile Arg Thr Asp Arg Gln Pro Asn Ser Ser Val Phe Gly Phe Gln Lys
               405                 410                 415

Asp Ile Thr Leu Val Ser Tyr Ala Pro Lys Lys Asn Lys Val Val Val
            420                 425                 430

Val Met Ser Thr Met His His Asp Asn Ser Ile Asp Glu Ser Thr Gly
        435                 440                 445

Glu Lys Gln Lys Pro Glu Met Ile Thr Phe Tyr Asn Ser Thr Lys Ala
    450                 455                 460

Gly Val Asp Val Val Asp Glu Leu Cys Ala Asn Tyr Asn Val Ser Arg
465                 470                 475                 480

Asn Ser Lys Arg Trp Pro Met Thr Leu Phe Tyr Gly Val Leu Asn Met
               485                 490                 495

Ala Ala Ile Asn Ala Cys Ile Ile Tyr Arg Thr Asn Lys Asn Val Thr
            500                 505                 510

Ile Lys Arg Thr Glu Phe Ile Arg Ser Leu Gly Leu Ser Met Ile Tyr
```

```
        515                 520                 525

Glu His Leu His Ser Arg Asn Lys Lys Lys Asn Ile Pro Thr Tyr Leu
    530                 535                 540

Arg Gln Arg Ile Glu Lys Gln Leu Gly Glu Pro Ser Pro Arg His Val
545                 550                 555                 560

Asn Val Pro Gly Arg Tyr Val Arg Cys Gln Asp Cys Pro Tyr Lys Lys
                565                 570                 575

Asp Arg Lys Thr Lys Arg Ser Cys Asn Ala Cys Ala Lys Pro Ile Cys
            580                 585                 590

Met Glu His Ala Lys Phe Leu Cys Glu Asn Cys Ala Glu Leu Asp Ser
        595                 600                 605

Ser Leu
    610
```

<210> 1098
<211> 610
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1098

```
Met Asp Ile Glu Arg Gln Glu Glu Arg Ile Arg Ala Met Leu Glu Glu
1               5                   10                  15

Glu Leu Ser Asp Tyr Ser Asp Glu Ser Ser Ser Glu Asp Glu Thr Asp
            20                  25                  30

His Cys Ser Glu His Glu Val Asn Tyr Asp Thr Glu Glu Glu Arg Ile
        35                  40                  45

Asp Ser Val Asp Val Pro Ser Asn Ser Arg Gln Glu Glu Ala Asn Ala
```

```
    50                  55                  60

Ile Ile Ala Asn Glu Ser Asp Ser Asp Pro Asp Asp Asp Leu Pro Leu
65                  70                  75                  80

Ser Leu Val Arg Gln Arg Ala Ser Ala Ser Arg Gln Val Ser Gly Pro
                85                  90                  95

Phe Tyr Thr Ser Lys Asp Gly Thr Lys Trp Tyr Lys Asn Cys Gln Arg
            100                 105                 110

Pro Asn Val Arg Leu Arg Ser Glu Asn Ile Val Thr Glu Gln Ala Gln
        115                 120                 125

Val Lys Asn Ile Ala Arg Asp Ala Ser Thr Glu Tyr Glu Cys Trp Asn
    130                 135                 140

Ile Phe Val Thr Ser Asp Met Leu Gln Glu Ile Leu Thr His Thr Asn
145                 150                 155                 160

Ser Ser Ile Arg His Arg Gln Thr Lys Thr Ala Ala Glu Asn Ser Ser
                165                 170                 175

Ala Glu Thr Ser Phe Tyr Met Gln Glu Thr Thr Leu Pro Glu Leu Lys
            180                 185                 190

Ala Leu Ile Ala Leu Leu Tyr Leu Ala Gly Leu Ile Lys Ser Asn Arg
        195                 200                 205

Gln Ser Leu Lys Asp Leu Trp Arg Thr Asp Gly Thr Gly Val Asp Val
    210                 215                 220

Phe Arg Thr Thr Met Ser Leu Gln Arg Phe Gln Phe Leu Gln Asn Asn
225                 230                 235                 240

Ile Arg Phe Asp Asp Lys Ser Thr Arg Asp Glu Arg Lys Gln Thr Asp
                245                 250                 255
```

```
Asn Met Ala Ala Phe Arg Ser Ile Phe Asp Gln Phe Val Gln Cys Cys
            260                 265                 270

Gln Asn Ala Tyr Ser Pro Ser Glu Phe Leu Thr Ile Asp Glu Met Leu
        275                 280                 285

Leu Ser Phe Arg Gly Arg Cys Leu Phe Arg Val Tyr Ile Pro Asn Lys
    290                 295                 300

Pro Ala Lys Tyr Gly Ile Lys Ile Leu Ala Leu Val Asp Ala Lys Asn
305                 310                 315                 320

Phe Tyr Val Val Asn Leu Glu Val Tyr Val Gly Lys Gln Pro Ser Gly
                325                 330                 335

Pro Tyr Ala Val Ser Asn Arg Pro Phe Glu Val Val Glu Arg Leu Ile
            340                 345                 350

Gln Pro Val Ala Arg Ser His Arg Asn Val Thr Phe Asp Asn Trp Phe
        355                 360                 365

Thr Gly Tyr Glu Leu Met Leu His Leu Leu Asn Glu Tyr Arg Leu Thr
    370                 375                 380

Ser Val Gly Thr Val Arg Lys Asn Lys Arg Gln Ile Pro Glu Ser Phe
385                 390                 395                 400

Ile Arg Thr Asp Arg Gln Pro Asn Ser Ser Val Phe Gly Phe Gln Lys
                405                 410                 415

Asp Ile Thr Leu Val Ser Tyr Ala Pro Lys Lys Asn Lys Val Val Val
            420                 425                 430

Val Met Ser Thr Met His His Asp Asn Ser Ile Asp Glu Ser Thr Gly
        435                 440                 445

Glu Lys Gln Lys Pro Glu Met Ile Thr Phe Tyr Asn Ser Thr Lys Ala
```

```
    450                 455                 460

Gly Val Asp Val Val Asp Glu Leu Cys Ala Asn Tyr Asn Val Ser Arg
465                 470                 475                 480

Asn Ser Lys Arg Trp Pro Met Thr Leu Phe Tyr Gly Val Leu Asn Met
                485                 490                 495

Ala Ala Ile Asn Ala Cys Ile Ile Tyr Arg Thr Asn Lys Asn Val Thr
            500                 505                 510

Ile Lys Arg Thr Glu Phe Ile Arg Ser Leu Gly Leu Ser Met Ile Tyr
        515                 520                 525

Glu His Leu His Ser Arg Asn Lys Lys Lys Asn Ile Pro Thr Tyr Leu
    530                 535                 540

Arg Gln Arg Ile Glu Lys Gln Leu Gly Glu Pro Ser Pro Arg His Val
545                 550                 555                 560

Asn Val Pro Gly Arg Tyr Val Arg Cys Gln Asp Cys Pro Tyr Lys Lys
                565                 570                 575

Asp Arg Lys Thr Lys Arg Ser Cys Asn Ala Cys Ala Lys Pro Ile Cys
            580                 585                 590

Met Glu His Ala Lys Phe Leu Cys Glu Asn Cys Ala Glu Leu Asp Ser
        595                 600                 605

Ser Leu
    610
```

<210> 1099
<211> 610
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1099

```
Met Asp Ile Glu Arg Gln Glu Glu Arg Ile Arg Ala Met Leu Glu Glu
1               5                  10                  15


Glu Leu Ser Asp Tyr Ser Asp Glu Ser Ser Ser Glu Asp Glu Thr Asp
            20                  25                  30


His Cys Ser Glu His Glu Val Asn Tyr Asp Thr Glu Glu Glu Arg Ile
        35                  40                  45


Asp Ser Val Asp Val Pro Ser Asn Ser Arg Gln Glu Glu Ala Asn Ala
    50                  55                  60


Ile Ile Ala Asn Glu Ser Asp Ser Asp Pro Asp Asp Asp Leu Pro Leu
65                  70                  75                  80


Ser Leu Val Arg Gln Arg Ala Ser Ala Ser Arg Gln Val Ser Gly Pro
                85                  90                  95


Phe Tyr Thr Ser Lys Asp Gly Thr Lys Trp Tyr Lys Asn Cys Gln Arg
            100                 105                 110


Pro Asn Val Arg Leu Arg Ser Glu Asn Ile Val Thr Glu Gln Ala Gln
        115                 120                 125


Val Lys Asn Ile Ala Arg Asp Ala Ser Thr Glu Tyr Glu Cys Trp Asn
    130                 135                 140


Ile Phe Val Thr Ser Asp Met Leu Gln Glu Ile Leu Thr His Thr Asn
145                 150                 155                 160


Ser Ser Ile Arg Glu Arg Gln Thr Lys Thr Ala Ala Glu Asn Ser Ser
                165                 170                 175


Ala Glu Thr Ser Phe Tyr Met Gln Glu Thr Thr Leu Cys Glu Leu Lys
            180                 185                 190
```

```
Ala Leu Ile Ala Leu Leu Tyr Leu Ala Gly Leu Ile Lys Ser Asn Arg
        195                 200                 205

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

Phe Arg Thr Thr Met Ser Leu Gln Arg Phe Gln Phe Leu Gln Asn Asn
225                 230                 235                 240

Ile Arg Phe Asp Asp Lys Ser Thr Arg Asp Glu Arg Lys Gln Thr Asp
                245                 250                 255

Asn Met Ala Ala Phe Arg Ser Ile Phe Asp Gln Phe Val Gln Cys Cys
            260                 265                 270

Gln Asn Ala Tyr Ser Pro Ser Glu Phe Leu Thr Ile Asp Glu Met Leu
        275                 280                 285

Leu Ser Phe Arg Gly Arg Cys Leu Phe Arg Val Tyr Ile Pro Asn Lys
    290                 295                 300

Pro Ala Lys Tyr Gly Ile Lys Ile Leu Ala Leu Val Asp Ala Lys Asn
305                 310                 315                 320

Phe Tyr Val Lys Asn Leu Glu Val Tyr Val Gly Lys Gln Pro Ser Gly
                325                 330                 335

Pro Tyr Ala Val Ser Asn Arg Pro Phe Glu Val Val Glu Arg Leu Ile
            340                 345                 350

Gln Pro Val Ala Arg Ser His Arg Asn Val Thr Phe Asp Asn Trp Phe
        355                 360                 365

Thr Gly Tyr Glu Leu Met Leu His Leu Leu Asn Glu Tyr Arg Leu Thr
    370                 375                 380

Ser Val Gly Thr Val Arg Lys Asn Lys Arg Gln Ile Pro Glu Ser Phe
```

385 390 395 400

Ile Arg Thr Asp Arg Gln Pro Asn Ser Ser Val Phe Gly Phe Gln Lys
405 410 415

Asp Ile Thr Leu Val Ser Tyr Ala Pro Lys Lys Asn Lys Val Val Val
420 425 430

Val Met Ser Thr Met His His Asp Asn Ser Ile Asp Glu Ser Thr Gly
435 440 445

Glu Lys Gln Lys Pro Glu Met Ile Thr Phe Tyr Asn Ser Thr Lys Ala
450 455 460

Gly Val Asp Val Val Asp Glu Leu Cys Ala Asn Tyr Asn Val Ser Arg
465 470 475 480

Asn Ser Lys Arg Trp Pro Met Thr Leu Phe Tyr Gly Val Leu Asn Met
485 490 495

Ala Ala Ile Asn Ala Cys Ile Ile Tyr Arg Thr Asn Lys Asn Val Thr
500 505 510

Ile Lys Arg Thr Glu Phe Ile Arg Ser Leu Gly Leu Ser Met Ile Tyr
515 520 525

Glu His Leu His Ser Arg Asn Lys Lys Lys Asn Ile Pro Thr Tyr Leu
530 535 540

Arg Gln Arg Ile Glu Lys Gln Leu Gly Glu Pro Ser Pro Arg His Val
545 550 555 560

Asn Val Pro Gly Arg Tyr Val Arg Cys Gln Asp Cys Pro Tyr Lys Lys
565 570 575

Asp Arg Lys Thr Lys Arg Ser Cys Asn Ala Cys Ala Lys Pro Ile Cys
580 585 590

Met Glu His Ala Lys Phe Leu Cys Glu Asn Cys Ala Glu Leu Asp Ser
595 600 605

Ser Leu
610

<210> 1100
<211> 610
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1100

Met Asp Ile Glu Arg Gln Glu Glu Arg Ile Arg Ala Met Leu Glu Glu
1 5 10 15

Glu Leu Ser Asp Tyr Ser Asp Glu Ser Ser Ser Glu Asp Glu Thr Asp
20 25 30

His Cys Ser Glu His Glu Val Asn Tyr Asp Thr Glu Glu Glu Arg Ile
35 40 45

Asp Ser Val Asp Val Pro Ser Asn Ser Arg Gln Glu Glu Ala Asn Ala
50 55 60

Ile Ile Ala Asn Glu Ser Asp Ser Asp Pro Asp Asp Asp Leu Pro Leu
65 70 75 80

Ser Leu Val Arg Gln Arg Ala Ser Ala Ser Arg Gln Val Ser Gly Pro
85 90 95

Phe Tyr Thr Ser Lys Asp Gly Thr Lys Trp Tyr Lys Asn Cys Gln Arg
100 105 110

Pro Asn Val Arg Leu Arg Ser Glu Asn Ile Val Thr Glu Gln Ala Gln
115 120 125

```
Val Lys Asn Ile Ala Arg Asp Ala Ser Thr Glu Tyr Glu Cys Trp Asn
    130                 135                 140

Ile Phe Val Thr Ser Asp Met Leu Gln Glu Ile Leu Thr His Thr Asn
145                 150                 155                 160

Ser Ser Ile Arg His Arg Gln Thr Lys Thr Ala Ala Glu Asn Ser Ser
                165                 170                 175

Ala Glu Thr Ser Phe Tyr Met Gln Glu Thr Thr Leu Cys Glu Leu Lys
            180                 185                 190

Ala Leu Ile Ala Leu Leu Tyr Leu Ala Gly Leu Ile Lys Ser Asn Arg
        195                 200                 205

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

Phe Arg Thr Thr Met Ser Leu Gln Arg Phe Gln Phe Leu Gln Asn Asn
225                 230                 235                 240

Ile Arg Phe Asp Asp Ile Ser Thr Arg Asp Glu Arg Lys Gln Thr Asp
                245                 250                 255

Asn Met Ala Ala Phe Arg Ser Ile Phe Asp Gln Phe Val Gln Cys Cys
            260                 265                 270

Gln Asn Ala Tyr Ser Pro Ser Glu Phe Leu Thr Ile Asp Glu Met Leu
        275                 280                 285

Leu Ser Phe Arg Gly Arg Cys Leu Phe Arg Val Tyr Ile Pro Asn Lys
    290                 295                 300

Pro Ala Lys Tyr Gly Ile Lys Ile Leu Ala Leu Val Asp Ala Lys Asn
305                 310                 315                 320

Asp Tyr Val Val Asn Leu Glu Val Tyr Ala Gly Lys Gln Pro Ser Gly
```

```
                325                 330                 335

Pro Tyr Ala Val Ser Asn Arg Pro Phe Glu Val Val Glu Arg Leu Ile
            340                 345                 350

Gln Pro Val Ala Arg Ser His Arg Asn Val Thr Phe Asp Asn Trp Phe
        355                 360                 365

Thr Gly Tyr Glu Leu Met Leu His Leu Leu Asn Glu Tyr Arg Leu Thr
    370                 375                 380

Ser Val Gly Thr Val Arg Lys Asn Lys Arg Gln Ile Pro Glu Ser Phe
385                 390                 395                 400

Ile Arg Thr Asp Arg Gln Pro Asn Ser Ser Val Phe Gly Phe Gln Lys
                405                 410                 415

Asp Ile Thr Leu Val Ser Tyr Ala Pro Lys Lys Asn Lys Val Val Val
            420                 425                 430

Val Met Ser Thr Met His His Asp Asn Ser Ile Asp Glu Ser Thr Gly
        435                 440                 445

Glu Lys Gln Lys Pro Glu Met Ile Thr Phe Tyr Asn Ser Thr Lys Ala
    450                 455                 460

Gly Val Asp Val Val Asp Glu Leu Cys Ala Asn Tyr Asn Val Ser Arg
465                 470                 475                 480

Asn Ser Lys Arg Trp Pro Met Thr Leu Phe Tyr Gly Val Leu Asn Met
                485                 490                 495

Ala Ala Ile Asn Ala Cys Ile Ile Tyr Arg Thr Asn Lys Asn Val Thr
            500                 505                 510

Ile Lys Arg Thr Glu Phe Ile Arg Ser Leu Gly Leu Ser Met Ile Tyr
        515                 520                 525
```

```
Glu His Leu His Ser Arg Asn Lys Lys Lys Asn Ile Pro Thr Tyr Leu
    530                 535                 540

Arg Gln Arg Ile Glu Lys Gln Leu Gly Glu Pro Ser Pro Arg His Val
545                 550                 555                 560

Asn Tyr Pro Gly Arg Tyr Val Arg Cys Gln Asp Cys Pro Tyr Lys Lys
                565                 570                 575

Asp Arg Lys Thr Lys Arg Ser Cys Asn Ala Cys Ala Lys Pro Ile Cys
            580                 585                 590

Met Glu His Ala Lys Phe Leu Cys Glu Asn Cys Ala Glu Leu Asp Ser
        595                 600                 605

Ser Leu
    610
```

<210> 1101
<211> 610
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1101

```
Met Asp Ile Glu Arg Gln Glu Glu Arg Ile Arg Ala Met Leu Glu Glu
1               5                   10                  15

Glu Leu Ser Asp Tyr Ser Asp Glu Ser Ser Ser Glu Asp Glu Thr Asp
            20                  25                  30

His Cys Ser Glu His Glu Val Asn Tyr Asp Thr Glu Glu Glu Arg Ile
        35                  40                  45

Asp Ser Val Asp Val Pro Ser Asn Ser Arg Gln Glu Glu Ala Asn Ala
    50                  55                  60
```

```
Ile Ile Ala Asn Glu Ser Asp Ser Asp Pro Asp Asp Asp Leu Pro Leu
65                  70                  75                  80

Ser Leu Val Arg Gln Arg Ala Ser Ala Ser Arg Gln Val Ser Gly Pro
                85                  90                  95

Phe Tyr Thr Ser Lys Asp Gly Thr Lys Trp Tyr Lys Asn Cys Gln Arg
            100                 105                 110

Pro Asn Val Arg Leu Arg Ser Glu Asn Ile Val Thr Glu Gln Ala Gln
        115                 120                 125

Val Lys Asn Ile Ala Arg Asp Ala Ser Thr Glu Tyr Glu Cys Trp Asn
    130                 135                 140

Ile Phe Val Thr Ser Asp Met Leu Gln Glu Ile Leu Thr His Thr Asn
145                 150                 155                 160

Ser Ser Ile Arg His Arg Gln Thr Lys Thr Ala Ala Glu Asn Ser Ser
                165                 170                 175

Ala Glu Thr Ser Phe Tyr Met Gln Glu Thr Thr Leu Cys Glu Leu Lys
            180                 185                 190

Ala Leu Ile Gly Leu Leu Tyr Leu Ala Gly Leu Ile Lys Ser Asn Arg
        195                 200                 205

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

Phe Arg Thr Thr Met Ser Leu Gln Arg Phe Gly Phe Leu Gln Asn Asn
225                 230                 235                 240

Ile Arg Phe Asp Asp Lys Ser Thr Arg Asp Glu Arg Lys Gln Thr Asp
                245                 250                 255

Asn Met Ala Ala Phe Arg Ser Ile Phe Asp Gln Phe Val Gln Cys Cys
```

```
            260                 265                 270

Gln Asn Ala Tyr Ser Pro Ser Glu Phe Leu Thr Ile Asp Glu Met Leu
        275                 280                 285

Leu Ser Phe Arg Gly Arg Cys Leu Phe Arg Val Tyr Ile Pro Asn Lys
    290                 295                 300

Pro Ala Lys Tyr Gly Ile Lys Ile Leu Ala Leu Val Asp Ala Lys Asn
305                 310                 315                 320

Phe Tyr Val Val Asn Leu Glu Val Tyr Ala Gly Lys Gln Pro Ser Gly
                325                 330                 335

Pro Tyr Ala Val Ser Asn Arg Pro Phe Glu Val Val Glu Arg Leu Ile
            340                 345                 350

Gln Pro Val Ala Arg Ser His Arg Asn Val Thr Phe Asp Asn Trp Phe
        355                 360                 365

Thr Gly Tyr Glu Leu Met Leu His Leu Leu Asn Glu Tyr Arg Leu Thr
    370                 375                 380

Ser Val Gly Thr Val Arg Lys Asn Lys Arg Gln Ile Pro Glu Ser Phe
385                 390                 395                 400

Ile Arg Thr Asp Arg Gln Pro Asn Ser Ser Val Phe Gly Phe Gln Lys
                405                 410                 415

Asp Ile Thr Leu Val Ser Tyr Ala Pro Lys Lys Asn Lys Val Val Val
            420                 425                 430

Val Met Ser Thr Met His His Asp Asn Ser Ile Asp Glu Ser Thr Gly
        435                 440                 445

Glu Lys Gln Lys Pro Glu Met Ile Thr Phe Tyr Asn Ser Thr Lys Ala
    450                 455                 460
```

```
Gly Val Asp Val Val Asp Glu Leu Cys Ala Asn Tyr Asn Val Ser Arg
465                 470                 475                 480


Asn Ser Lys Arg Trp Pro Met Thr Leu Phe Tyr Gly Val Leu Asn Met
                485                 490                 495


Ala Ala Ile Asn Ala Cys Ile Ile Tyr Arg Thr Asn Lys Asn Val Thr
            500                 505                 510


Ile Lys Arg Thr Glu Phe Ile Arg Ser Leu Gly Leu Ser Met Ile Tyr
        515                 520                 525


Glu His Leu His Ser Arg Asn Lys Lys Lys Asn Ile Pro Thr Tyr Leu
    530                 535                 540


Arg Gln Arg Ile Glu Lys Gln Leu Gly Glu Pro Ser Pro Arg His Val
545                 550                 555                 560


Asn Val Pro Gly Arg Tyr Val Arg Cys Gln Asp Cys Pro Tyr Lys Lys
                565                 570                 575


Asp Arg Lys Thr Lys Arg Ser Cys Asn Ala Cys Ala Lys Pro Ile Cys
            580                 585                 590


Met Glu His Ala Lys Phe Leu Cys Glu Asn Cys Ala Glu Leu Asp Ser
        595                 600                 605


Ser Leu
    610
```

<210> 1102
<211> 610
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1102

```
Met Asp Ile Glu Arg Gln Glu Glu Arg Ile Arg Ala Met Leu Glu Glu
1               5                  10                  15

Glu Leu Ser Asp Tyr Ser Asp Glu Ser Ser Ser Glu Asp Glu Thr Asp
            20                  25                  30

His Cys Ser Glu His Glu Val Asn Tyr Asp Thr Glu Glu Glu Arg Ile
        35                  40                  45

Asp Ser Val Asp Val Pro Ser Asn Ser Arg Gln Glu Glu Ala Asn Ala
    50                  55                  60

Ile Ile Ala Asn Glu Ser Asp Ser Asp Pro Asp Asp Asp Leu Pro Leu
65                  70                  75                  80

Ser Leu Val Arg Gln Arg Ala Ser Ala Ser Arg Gln Val Ser Gly Pro
                85                  90                  95

Phe Tyr Thr Ser Lys Asp Gly Thr Lys Trp Tyr Lys Asn Cys Gln Arg
            100                 105                 110

Pro Asn Val Arg Leu Arg Ser Glu Asn Ile Val Thr Glu Gln Ala Gln
        115                 120                 125

Val Lys Asn Ile Ala Arg Asp Ala Ser Thr Glu Tyr Glu Cys Trp Asn
    130                 135                 140

Ile Phe Val Thr Ser Asp Met Leu Gln Glu Ile Leu Thr His Thr Asn
145                 150                 155                 160

Ser Ser Ile Arg His Arg Gln Thr Lys Thr Ala Ala Glu Asn Ser Ser
                165                 170                 175

Ala Glu Thr Ser Phe Tyr Met Gln Glu Thr Thr Leu Cys Glu Leu Lys
            180                 185                 190

Ala Leu Ile Gly Leu Leu Tyr Leu Ala Gly Leu Ile Lys Ser Asn Arg
```

```
        195                 200                 205

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

Phe Arg Thr Thr Met Ser Leu Gln Arg Phe Gln Phe Leu Gln Asn Asn
225                 230                 235                 240

Ile Arg Phe Asp Asp Lys Ser Thr Arg Asp Glu Arg Lys Gln Thr Asp
                245                 250                 255

Asn Met Ala Ala Phe Arg Ser Ile Phe Asp Gln Phe Val Gln Cys Cys
            260                 265                 270

Gln Asn Ala Tyr Ser Pro Ser Glu Phe Leu Thr Ile Asp Glu Met Leu
        275                 280                 285

Leu Ser Phe Arg Gly Arg Cys Leu Phe Arg Val Tyr Ile Pro Asn Lys
    290                 295                 300

Pro Ala Lys Tyr Gly Ile Lys Ile Leu Ala Leu Val Asp Ala Lys Asn
305                 310                 315                 320

Phe Tyr Val Val Asn Leu Glu Val Tyr Ala Gly Lys Gln Pro Ser Gly
                325                 330                 335

Pro Tyr Ala Val Ser Asn Arg Pro Phe Glu Val Val Glu Arg Leu Ile
            340                 345                 350

Gln Pro Val Ala Arg Ser His Arg Asn Val Thr Phe Asp Asn Trp Phe
        355                 360                 365

Thr Gly Tyr Glu Leu Met Leu His Leu Leu Asn Glu Tyr Arg Leu Thr
    370                 375                 380

Ser Val Gly Thr Val Arg Lys Asn Lys Arg Gln Ile Pro Glu Ser Phe
385                 390                 395                 400
```

```
Ile Arg Thr Asp Arg Gln Pro Asn Ser Ser Val Phe Gly Phe Gln Lys
                405                 410                 415

Asp Ile Thr Leu Val Ser Tyr Ala Pro Lys Lys Asn Lys Val Val Val
            420                 425                 430

Val Met Ser Thr Met His His Asp Asn Ser Ile Asp Glu Ser Thr Gly
        435                 440                 445

Glu Lys Gln Lys Pro Glu Met Ile Thr Phe Tyr Asn Ser Thr Lys Ala
    450                 455                 460

Gly Val Asp Val Val Asp Glu Leu Cys Ala Asn Tyr Asn Val Ser Arg
465                 470                 475                 480

Asn Ser Lys Arg Trp Pro Met Thr Leu Phe Tyr Gly Val Leu Asn Met
                485                 490                 495

Ala Ala Ile Asn Ala Cys Ile Ile Tyr Arg Thr Asn Lys Asn Val Thr
            500                 505                 510

Ile Lys Arg Thr Glu Phe Ile Arg Ser Leu Gly Leu Ser Met Ile Tyr
        515                 520                 525

Glu His Leu His Ser Arg Asn Lys Lys Lys Asn Ile Pro Thr Ile Leu
    530                 535                 540

Arg Gln Arg Ile Glu Lys Gln Leu Gly Glu Pro Ser Pro Arg His Val
545                 550                 555                 560

Asn Val Pro Gly Arg Tyr Val Arg Cys Gln Asp Cys Pro Tyr Lys Lys
                565                 570                 575

Asp Arg Lys Thr Lys Arg Ser Cys Asn Ala Cys Ala Lys Pro Ile Cys
            580                 585                 590

Met Glu His Ala Lys Phe Leu Cys Val Asn Cys Ala Glu Leu Asp Ser
```

595 600 605

Ser Leu
610

<210> 1103
<211> 610
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1103

Met Asp Ile Glu Arg Gln Glu Glu Arg Ile Arg Ala Met Leu Glu Glu
1 5 10 15

Glu Leu Ser Asp Tyr Ser Asp Glu Ser Ser Ser Glu Asp Glu Thr Asp
20 25 30

His Cys Ser Glu His Glu Val Asn Tyr Asp Thr Glu Glu Glu Arg Ile
35 40 45

Asp Ser Val Asp Val Pro Ser Asn Ser Arg Gln Glu Glu Ala Asn Ala
50 55 60

Ile Ile Ala Asn Glu Ser Asp Ser Asp Pro Asp Asp Asp Leu Pro Leu
65 70 75 80

Ser Leu Val Arg Gln Arg Ala Ser Ala Ser Arg Gln Val Ser Gly Pro
85 90 95

Phe Tyr Thr Ser Lys Asp Gly Thr Lys Trp Tyr Lys Asn Cys Gln Arg
100 105 110

Pro Asn Val Arg Leu Arg Ser Glu Asn Ile Val Thr Glu Gln Ala Gln
115 120 125

Val Lys Asn Ile Ala Arg Asp Ala Ser Thr Glu Tyr Glu Cys Trp Asn

```
    130                 135                 140

Ile Phe Val Thr Ser Asp Met Leu Gln Glu Ile Leu Thr His Thr Asn
145                 150                 155                 160

Ser Ser Ile Arg His Arg Gln Thr Lys Thr Ala Ala Glu Asn Ser Ser
                165                 170                 175

Ala Glu Thr Ser Phe Tyr Met Gln Glu Thr Thr Leu Cys Glu Leu Lys
            180                 185                 190

Ala Leu Ile Gly Leu Leu Tyr Leu Ala Gly Leu Ile Lys Ser Asn Arg
        195                 200                 205

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

Phe Arg Thr Thr Met Ser Leu Gln Arg Phe Gln Phe Leu Gln Asn Asn
225                 230                 235                 240

Ile Arg Phe Asp Asp Lys Ser Thr Arg Asp Glu Arg Lys Gln Thr Asp
                245                 250                 255

Asn Met Ala Ala Phe Arg Ser Ile Phe Asp Gln Phe Val Gln Ser Cys
            260                 265                 270

Gln Asn Ala Tyr Ser Pro Ser Glu Phe Leu Thr Ile Asp Glu Met Leu
        275                 280                 285

Leu Ser Phe Arg Gly Arg Cys Leu Phe Arg Val Tyr Ile Pro Asn Lys
    290                 295                 300

Pro Ala Lys Tyr Gly Ile Lys Ile Leu Ala Leu Val Asp Ala Lys Asn
305                 310                 315                 320

Phe Tyr Val Val Asn Leu Glu Val Tyr Ala Gly Lys Gln Pro Ser Gly
                325                 330                 335
```

```
Pro Tyr Ala Val Ser Asn Arg Pro Phe Glu Val Val Glu Arg Leu Ile
            340                 345                 350

Gln Pro Val Ala Arg Ser His Arg Asn Val Thr Phe Asp Asn Trp Phe
        355                 360                 365

Thr Gly Tyr Glu Leu Met Leu His Leu Leu Asn Glu Tyr Arg Leu Thr
    370                 375                 380

Ser Val Gly Thr Val Arg Lys Asn Lys Arg Gln Ile Pro Glu Ser Phe
385                 390                 395                 400

Ile Arg Thr Asp Arg Gln Pro Asn Ser Ser Val Phe Gly Phe Gln Lys
                405                 410                 415

Asp Ile Thr Leu Val Ser Tyr Ala Pro Lys Lys Asn Lys Val Val Val
            420                 425                 430

Val Met Ser Thr Met His His Asp Asn Ser Ile Asp Glu Ser Thr Gly
        435                 440                 445

Glu Lys Gln Lys Pro Glu Met Ile Thr Phe Tyr Asn Ser Thr Lys Ala
    450                 455                 460

Gly Val Asp Val Val Asp Glu Leu Cys Ala Asn Tyr Asn Val Ser Arg
465                 470                 475                 480

Asn Ser Lys Arg Trp Pro Met Thr Leu Phe Tyr Gly Val Leu Asn Met
                485                 490                 495

Ala Ala Ile Asn Ala Cys Ile Ile Tyr Arg Thr Asn Lys Asn Val Thr
            500                 505                 510

Ile Lys Arg Thr Glu Phe Ile Arg Ser Leu Gly Leu Ser Met Ile Tyr
        515                 520                 525

Glu His Leu His Ser Arg Asn Lys Lys Lys Asn Ile Pro Thr Tyr Leu
```

530 535 540

Arg Gln Arg Ile Glu Lys Gln Leu Gly Glu Pro Ser Pro Arg His Val
545 550 555 560

Asn Tyr Pro Gly Arg Tyr Val Arg Cys Gln Asp Cys Pro Tyr Lys Lys
565 570 575

Asp Arg Lys Thr Lys Arg Ser Cys Asn Ala Cys Ala Lys Pro Ile Cys
580 585 590

Met Glu His Ala Lys Phe Leu Cys Glu Asn Cys Ala Glu Leu Asp Ser
595 600 605

Ser Leu
610

<210> 1104
<211> 610
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1104

Met Asp Ile Glu Arg Gln Glu Glu Arg Ile Arg Ala Met Leu Glu Glu
1 5 10 15

Glu Leu Ser Asp Tyr Ser Asp Glu Ser Ser Ser Glu Asp Glu Thr Asp
20 25 30

His Cys Ser Glu His Glu Val Asn Tyr Asp Thr Glu Glu Glu Arg Ile
35 40 45

Asp Ser Val Asp Val Pro Ser Asn Ser Arg Gln Glu Glu Ala Asn Ala
50 55 60

Ile Ile Ala Asn Glu Ser Asp Ser Asp Pro Asp Asp Asp Leu Pro Leu

```
65                  70                  75                  80

Ser Leu Val Arg Gln Arg Ala Ser Ala Ser Arg Gln Val Ser Gly Pro
                85                  90                  95

Phe Tyr Thr Ser Lys Asp Gly Thr Lys Trp Tyr Lys Asn Cys Gln Arg
            100                 105                 110

Pro Asn Val Arg Leu Arg Ser Glu Asn Ile Val Thr Glu Gln Ala Gln
        115                 120                 125

Val Lys Asn Ile Ala Arg Asp Ala Ser Thr Glu Tyr Glu Cys Trp Asn
    130                 135                 140

Ile Phe Val Thr Ser Asp Met Leu Gln Glu Ile Leu Thr His Thr Asn
145                 150                 155                 160

Ser Ser Ile Arg His Arg Gln Thr Lys Thr Ala Ala Glu Asn Ser Ser
                165                 170                 175

Ala Glu Thr Ser Phe Tyr Met Gln Glu Thr Thr Leu Cys Glu Leu Lys
            180                 185                 190

Ala Leu Ile Ala Leu Leu Tyr Leu Ala Gly Leu Ile Lys Ser Asn Arg
        195                 200                 205

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

Phe Arg Thr Thr Met Ser Leu Gln Arg Phe Gln Phe Leu Gln Asn Asn
225                 230                 235                 240

Ile Arg Phe Asp Asp Lys Ser Thr Arg Asp Glu Arg Lys Gln Thr Asp
                245                 250                 255

Asn Met Ala Ala Phe Arg Ser Ile Phe Asp Gln Phe Val Gln Cys Cys
            260                 265                 270
```

```
Gln Asn Ala Tyr Ser Pro Ser Glu Phe Leu Thr Ile Asp Glu Met Leu
        275                 280                 285

Leu Ser Phe Arg Gly Arg Cys Leu Phe Arg Val Tyr Ile Pro Asn Lys
    290                 295                 300

Pro Ala Lys Tyr Gly Ile Lys Ile Leu Ala Leu Val Asp Ala Lys Asn
305                 310                 315                 320

Phe Tyr Val Val Asn Leu Glu Val Tyr Ala Gly Lys Gln Pro Ser Gly
                325                 330                 335

Pro Tyr Ala Val Ser Asn Arg Pro Phe Glu Val Val Glu Arg Leu Ile
            340                 345                 350

Gln Pro Val Ala Arg Ser His Arg Asn Val Thr Phe Asp Asn Trp Phe
        355                 360                 365

Thr Gly Tyr Glu Cys Met Leu His Leu Leu Asn Glu Tyr Arg Leu Thr
    370                 375                 380

Ser Val Gly Thr Val Arg Lys Asn Lys Arg Gln Ile Pro Glu Ser Phe
385                 390                 395                 400

Ile Arg Thr Asp Arg Gln Pro Asn Ser Ser Val Phe Gly Phe Gln Lys
                405                 410                 415

Asp Ile Thr Leu Val Ser Tyr Ala Pro Lys Lys Asn Lys Val Val Val
            420                 425                 430

Val Met Ser Thr Met His His Asp Asn Ser Ile Asp Glu Ser Thr Gly
        435                 440                 445

Glu Lys Gln Lys Pro Glu Met Ile Thr Phe Tyr Asn Ser Thr Lys Ala
    450                 455                 460

Gly Val Asp Val Val Asp Glu Leu Cys Ala Asn Tyr Asn Val Ser Arg
```

```
465                 470                 475                 480

Asn Ser Lys Arg Trp Pro Met Thr Leu Phe Tyr Gly Val Leu Asn Met
                485                 490                 495

Ala Ala Ile Asn Ala Cys Ile Ile Tyr Arg Thr Asn Lys Asn Val Thr
            500                 505                 510

Ile Lys Arg Thr Glu Phe Ile Arg Ser Leu Gly Leu Ser Met Ile Tyr
        515                 520                 525

Glu His Leu His Ser Arg Asn Lys Lys Lys Asn Ile Pro Thr Tyr Leu
    530                 535                 540

Arg Gln Arg Ile Glu Met Gln Leu Gly Glu Pro Ser Pro Arg His Val
545                 550                 555                 560

Asn Val Pro Gly Arg Tyr Val Arg Cys Gln Asp Cys Pro Tyr Lys Lys
                565                 570                 575

Asp Arg Lys Thr Lys Arg Ser Cys Asn Ala Cys Ala Lys Pro Ile Cys
            580                 585                 590

Met Glu His Ala Lys Phe Leu Cys Glu Asn Cys Ala Glu Leu Lys Ser
        595                 600                 605

Ser Leu
    610
```

<210> 1105
<211> 588
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1105

```
Met Ala Arg Gly Leu Thr Asp Leu Glu Ile Asn Gln Ile Leu Glu Leu
```

```
1               5                   10                  15

Glu Asp Val Glu Asn Asp Val Ile Phe Asp Glu Ser Gly Asp Glu Ser
            20                  25                  30

Asp His Val Ser Ile Arg Val Glu Ser Asp Thr Glu Glu Val Glu Ile
        35                  40                  45

Pro Thr Leu Glu Pro Gln Gln Gly Ser Ser Asp Ser Glu Asn Asp Gln
    50                  55                  60

Pro Leu Ser Asn Leu Ala Arg Arg Ser Phe Tyr Lys Gly Lys Asp Asn
65                  70                  75                  80

Thr Ile Trp Asn Arg Ala Pro Pro Asn Pro Arg Val Arg Thr Arg Ser
                85                  90                  95

Glu Asn Ile Val Thr Gly Thr Pro Gly Val Lys Arg Gln Ala Lys Asn
            100                 105                 110

Ala Leu Leu Glu Leu Asp Cys Phe His Leu Phe Val Asn Glu Ser Ile
        115                 120                 125

Leu Ser Val Ile Leu Glu His Thr Asn His Lys Ile Arg Ser Glu Arg
    130                 135                 140

Gln Gly Lys Asn Thr Ser Asn Glu Tyr Ala Tyr Ser Glu Thr Thr Leu
145                 150                 155                 160

Thr Glu Leu Arg Ala Val Ile Gly Leu Leu Tyr Leu Ala Gly Leu Phe
                165                 170                 175

Lys Ser Gly Arg Gln Asn Leu Gln Asp Leu Trp Ala Ser Asp Gly Thr
            180                 185                 190

Gly Ile Glu Ile Phe Pro Met Thr Met Ser Leu Arg Arg Phe Ala Phe
        195                 200                 205
```

```
Ile Val Asn Cys Leu Arg Phe Asp Asp Ser Asp Thr Arg Glu Glu Arg
    210                 215                 220

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

Val Lys Asn Cys Lys Asp Val Tyr Thr Pro Tyr Glu Asn Leu Thr Ile
                245                 250                 255

Asp Glu Glu Leu Val Ala Phe Arg Gly Arg Cys Lys Phe Arg Gln Tyr
            260                 265                 270

Leu Pro Asn Lys Pro Ala Lys Tyr Gly Ile Lys Ile Ile Ala Leu Val
        275                 280                 285

Asp Ala Tyr Thr Tyr Tyr Ser Leu Asn Met Glu Ile Tyr Ala Gly Asp
    290                 295                 300

Gln Pro Asp Gly Pro Tyr Lys Val Ser Asn Lys Pro His Asp Val Val
305                 310                 315                 320

Asp Arg Ile Val Gln Pro Ile Ser Gln Thr Gly Arg Asn Val Thr Met
                325                 330                 335

Asp Asn Trp Phe Thr Ser Tyr Pro Thr Tyr Ala His Leu Leu Lys Asn
            340                 345                 350

His Lys Leu Thr Ala Val Gly Thr Met Lys Ser Asn Lys Thr Cys Ile
        355                 360                 365

Pro Pro Lys Phe Arg Glu Arg Arg Glu Ile Asn Thr Ser Leu Phe Gly
    370                 375                 380

Phe Gln Asp Asp Phe Thr Ile Val Ser Tyr Ile Pro Lys Arg Asn Lys
385                 390                 395                 400

Asn Val Phe Met Leu Ser Ser Leu His His Asp Ser Glu Ile Asp Ser
```

405 410 415

Glu Thr Gly Glu Gln Gln Lys Pro Ser Ile Ile Thr Phe Tyr Asn Lys
420 425 430

Thr Lys Ser Gly Val Asp Asn Val Asp Lys Leu Ile Arg Thr Tyr Asp
435 440 445

Val Ser Arg Asn Ser Arg Arg Trp Pro Leu Thr Ile Phe Phe Trp Ile
450 455 460

Leu Asn Thr Ala Gly Ile Asn Ala Lys Ile Val Gln Met Leu Asn Ser
465 470 475 480

Ser Asp Asn Thr Pro Thr Arg Arg Ala Phe Ile Lys Lys Leu Gly Met
485 490 495

Ser Leu Ile Ala Pro His Gln Ala Glu Arg Lys Thr Asn Ser Lys Ile
500 505 510

Pro Val Ser Leu Arg Lys Arg Ile Gly Ser His Leu Gly Glu Ser Ser
515 520 525

Ala Ser Pro Ala Lys Ile Pro Asn Val Gly Val Lys Lys Arg Cys Tyr
530 535 540

Ile Cys Pro Val Lys Lys Asp Arg Lys Ser Lys Tyr Ile Cys Ile Ser
545 550 555 560

Cys Thr Ser His Ile Cys Leu Glu His Ala Asn Phe Val Cys Glu Asn
565 570 575

Cys Arg Arg Asn Glu Glu Glu Asn Ser Asp Ser Ser
580 585

<210> 1106
<211> 613
<212> PRT

<213> Artificial sequence

<220>
<223> Synthetic

<400> 1106

```
Met Glu Pro Ser Thr Ser Ser Gly Arg Lys Arg Ser Ile Gly Asn Val
1               5                  10                  15


His Asn Gln Arg Ala Ala Lys Asn Arg Arg Ala Val Val Pro Gly Thr
            20                  25                  30


Arg Asp Phe Gly Thr Thr Leu Thr Ser Trp Leu Asp Asn Glu Asp Ser
        35                  40                  45


Ser Gly Ser Glu Val Glu Asp Ile Gly Asp Asn Phe Thr Pro Glu Arg
    50                  55                  60


His Glu Ile Glu Ser Asp Thr Ile Ser Gln Ser Glu Ser Glu Glu Gln
65                  70                  75                  80


Val Ala Asp His Val Thr Glu Glu His Asn Met Ser Ser Asp Asp Asp
                85                  90                  95


Ala Pro Leu Ser Thr Arg Arg Ser Phe Tyr Gly Lys Asn Arg Tyr Lys
            100                 105                 110


Trp Ala Cys Gln Pro Leu Ser Arg Ala Val Arg Val Pro Gln His Asn
        115                 120                 125


Ile Ile Gln Arg Thr Asn Val Ser Asn Leu Thr Glu Asp Asp Pro Lys
    130                 135                 140


Asp Pro Phe Ser Ile Trp Asn Lys Leu Met Asp Asp Glu Ile Leu Gln
145                 150                 155                 160


Glu Thr Leu Lys Trp Thr Asn Glu Lys Ile Ile Gln Tyr Arg Ser Lys
                165                 170                 175
```

```
Phe Ser Asp Lys Asp Arg Pro Glu Leu Arg Asn Leu Asp Met Val Glu
            180                 185                 190

Leu His Ala Phe Ile Gly Leu Leu Leu Phe Thr Ala Val Phe Lys Ser
        195                 200                 205

Asn His Glu Asn Val Asn Tyr Leu Phe Ala Thr Asp Gly Thr Gly Arg
    210                 215                 220

Glu Ile Phe Arg Cys Val Met Ser Lys Asn Arg Phe Leu Val Ile Leu
225                 230                 235                 240

His Cys Leu Arg Phe Asp Asn Pro Asp Asp Arg Glu Glu Arg Arg Glu
                245                 250                 255

Ser Asp Lys Ile Ala Ala Ile Ser Tyr Ile Phe Thr Lys Phe Val Gly
            260                 265                 270

Asn Cys Gln Lys Ile Tyr Asn Val Cys Glu Tyr Ala Thr Val Asp Glu
        275                 280                 285

Met Leu Val Pro Phe Arg Gly Arg Thr His Leu Met Ile Tyr Met Pro
    290                 295                 300

Met Lys Pro Ala Lys Tyr Gly Leu Lys Leu Met Cys Leu Cys Asp Ala
305                 310                 315                 320

Asn Asn Gly Tyr Phe Tyr Asn Cys Tyr Ile Tyr Thr Gly Arg Gly Ser
                325                 330                 335

Asp Gly Ala Gly Leu Thr Glu Glu Glu Lys Lys Phe Met Val Pro Thr
            340                 345                 350

Gln Ser Val Ile His Leu Ala Lys Pro Leu Phe Gly Ser Asn Arg Asn
        355                 360                 365

Ile Thr Cys Asp Asn Trp Phe Thr Ser Ile Glu Leu Ile Glu Tyr Leu
```

```
    370                 375                 380

Lys Lys Lys Gly Leu Thr Cys Val Gly Thr Met Lys Lys Asn Lys Arg
385                 390                 395                 400

Glu Ile Pro Lys Glu Phe Leu Pro Ser Lys Gln Arg Asp Val Gly Ser
                405                 410                 415

Ser Leu Tyr Gly Tyr Ala Gly Gln Asn Thr Ile Leu Ser His Val Pro
            420                 425                 430

Lys Lys Asn Lys Ala Val Ile Leu Leu Ser Ser Met His His Ala Glu
        435                 440                 445

Ala Val Asp Glu Thr Thr Gly Lys Pro Glu Ile Ile Gly Phe Tyr Asn
    450                 455                 460

Lys Thr Lys Gly Gly Val Asp Glu Ile Asp Lys Lys Cys Ala Ile Tyr
465                 470                 475                 480

Thr Ser Ser Arg Arg Thr Arg Arg Trp Pro Met Val Val Phe Tyr Arg
                485                 490                 495

Met Leu Asp Ile Ser Thr Val Asn Ser His Leu Ile Tyr Asp Ile His
            500                 505                 510

His Asp Lys Thr Thr Glu Arg Gly Met Phe Leu Lys Gln Leu Ala Arg
        515                 520                 525

Thr Leu Val Leu Pro Gln Met Lys Arg Arg Ala Leu Asn Glu Arg Leu
    530                 535                 540

Pro Arg Glu Leu Arg Leu Ser Leu Ala Arg Val Leu Gly Pro Asp Met
545                 550                 555                 560

Pro Val Pro Asp Pro Gln Glu Val Asp Glu Thr Phe Lys Thr Arg Arg
                565                 570                 575
```

Arg Cys His Thr Cys Pro Leu Lys Leu Gln Arg Lys Ser Thr His Thr
580 585 590

Cys Tyr Thr Cys Lys Lys His Val Cys Leu Gln Cys Ala Lys Gln Val
595 600 605

Cys Ala Asp Cys Val
610

<210> 1107
<211> 579
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1107

Met Ser Ser Arg Arg Phe Thr Ala Glu Glu Ala Leu Leu Leu Phe Phe
1 5 10 15

Asp Ser Asp Ala Glu Glu Glu Ile Ser Glu Ile Glu Asp Leu Ser Asp
20 25 30

Ala Glu Asp Asn Asp Ile Asp Asp Pro Asp Phe Gln Phe Ser Asp Asp
35 40 45

Glu Glu Asp Ser Glu Asp Glu Ser Ala Val Val Ser Pro Ser Asp Glu
50 55 60

Asn Leu Gly Met Glu Gln Ser Ser Ser Thr Glu Gly Thr Trp Ala Ser
65 70 75 80

Lys Asp Gly Asn Ile Lys Trp Ser Thr Ser Pro His Gln Ser Arg Gly
85 90 95

Arg Leu Ser Ser Ser Asn Ile Ile Lys Met Thr Pro Gly Pro Thr Arg
100 105 110

```
Phe Ala Val Thr Arg Val Asp Asp Ile Gln Ser Ala Phe Gln Leu Phe
        115                 120                 125

Ile Ser Gln Pro Ile Glu Arg Ile Ile Leu Asp Met Thr Asn Leu Glu
    130                 135                 140

Gly Arg Arg Val Phe Gln Glu Lys Trp Lys Ser Leu Asp Gln Thr Asp
145                 150                 155                 160

Leu Asn Ala Tyr Ile Gly Ile Leu Ile Leu Ala Gly Val Tyr Arg Ser
                165                 170                 175

Lys Gly Glu Ala Thr Ser Ser Leu Trp Asn Glu Glu Asn Gly Arg Pro
            180                 185                 190

Ile Phe Arg Ala Thr Met Ser Leu Glu Thr Phe His Met Ile Ser Arg
        195                 200                 205

Val Ile Arg Phe Asp Asn Arg Asp Thr Arg Val Gly Arg Arg Glu Ser
    210                 215                 220

Asp Lys Leu Ala Ala Ile Arg Asp Val Trp Asp Lys Trp Val Glu Ile
225                 230                 235                 240

Leu Pro Leu Leu Tyr Asn Pro Gly Pro His Val Thr Val Asp Glu Arg
                245                 250                 255

Leu Val Pro Phe Arg Gly Arg Cys Pro Phe Arg Gln Tyr Met Pro Asn
            260                 265                 270

Lys Pro Ala Lys Tyr Gly Ile Lys Ile Trp Ala Ala Cys Asp Ala Lys
        275                 280                 285

Ser Ser Tyr Ala Trp Lys Met Gln Val Tyr Thr Gly Lys Ser Pro Gly
    290                 295                 300

Gly Ala Pro Glu Lys Asn Gln Gly Met Arg Val Val Leu Glu Met Ser
```

305 310 315 320

Glu Gly Leu Gln Gly His Asn Ile Thr Cys Asp Asn Phe Phe Thr Ser
325 330 335

Tyr Arg Leu Gly Glu Glu Leu Gln Lys Arg Lys Leu Thr Met Leu Gly
340 345 350

Thr Val Arg Arg Asn Lys Pro Glu Leu Pro Ser Glu Ile Leu Lys Ile
355 360 365

Gln Gly Arg Pro Met His Ser Ser Ile Phe Ala Phe Thr Glu Lys Ala
370 375 380

Thr Val Val Ser Tyr Cys Pro Lys Arg Asn Lys Asn Val Leu Val Met
385 390 395 400

Ser Thr Met His Thr Asp Ala Ser Leu Ser Thr Arg Asp Asp Met Lys
405 410 415

Pro Gln Met Ile Leu Asp Tyr Asn Ser Thr Lys Gly Gly Val Asp Asn
420 425 430

Leu Asp Lys Val Thr Ala Thr Tyr Ser Cys Gln Arg Lys Thr Ala Arg
435 440 445

Trp Pro Met Ala Ile Phe Phe Asn Ile Val Asp Val Ser Ala Tyr Asn
450 455 460

Ala Tyr Val Leu Trp Ser Glu Ile Asn Gln Glu Trp Asn Ala Gly Lys
465 470 475 480

Leu Tyr Arg Arg Arg Leu Phe Leu Glu Glu Leu Gly Lys Ala Leu Ile
485 490 495

Thr Pro Lys Ile Gln Arg Arg Ala Arg Pro Ala Arg Ser Pro Ala Ala
500 505 510

```
Ala Ala Val Ile Glu Lys Ile Lys Phe Arg Thr Ser Asn Gln Phe Ala
        515                 520                 525


Met Asp Pro Val Asp Thr Asp Val Lys Lys Arg Lys Arg Cys Gln Val
    530                 535                 540


Cys Pro Ser Arg Asp Asp Ser Lys Thr Ser Thr Ser Cys Val Lys Cys
545                 550                 555                 560


Lys Asn Phe Ile Cys Arg Lys His Thr Val Thr Phe Cys Pro Ser Cys
                565                 570                 575


Gly Glu His
```

<210> 1108
<211> 598
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1108

```
Met Glu Ser Arg Gln Arg Leu Asn Gln Asp Glu Ile Ala Thr Ile Leu
1               5                   10                  15


Glu Asn Asp Asp Asp Tyr Ser Pro Leu Asp Ser Asp Ser Glu Ala Glu
            20                  25                  30


Asp Arg Val Val Glu Asp Asp Val Trp Ser Asp Asn Glu Asp Ala Met
        35                  40                  45


Ile Asp Tyr Val Glu Asp Thr Ser Arg Gln Glu Asp Pro Asp Asn Asn
    50                  55                  60


Ile Ala Ser Gln Glu Ser Ala Asn Leu Glu Val Thr Ser Leu Thr Ser
65                  70                  75                  80
```

```
His Arg Ile Ile Ser Leu Pro Gln Arg Ser Ile Cys Gly Lys Asn Asn
                85                  90                  95

His Val Trp Ser Thr Thr Lys Gly Arg Thr Thr Gly Arg Thr Ser Ala
            100                 105                 110

Ile Asn Ile Ile Arg Thr Asn Arg Gly Pro Thr Arg Met Cys Arg Asn
        115                 120                 125

Ile Val Asp Pro Leu Leu Cys Phe Gln Leu Phe Ile Thr Asp Glu Ile
    130                 135                 140

Ile His Glu Ile Val Lys Trp Thr Asn Val Glu Met Ile Val Lys Arg
145                 150                 155                 160

Gln Asn Leu Ile Asp Ile Ser Ala Ser Tyr Arg Asp Thr Asn Thr Met
                165                 170                 175

Glu Met Trp Ala Leu Val Gly Ile Leu Thr Leu Thr Ala Val Met Lys
            180                 185                 190

Asp Asn His Leu Ser Thr Asp Glu Leu Phe Asp Ala Thr Phe Ser Gly
        195                 200                 205

Thr Arg Tyr Val Ser Val Met Ser Arg Glu Arg Phe Glu Phe Leu Ile
    210                 215                 220

Arg Cys Met Arg Met Asp Asp Lys Thr Leu Arg Pro Thr Leu Arg Ser
225                 230                 235                 240

Asp Asp Ala Phe Ile Pro Val Arg Lys Leu Trp Glu Ile Phe Ile Asn
                245                 250                 255

Gln Cys Arg Leu Asn Tyr Val Pro Gly Gly Asn Leu Thr Val Asp Glu
            260                 265                 270

Gln Leu Leu Gly Phe Arg Gly Arg Cys Pro Phe Arg Met Tyr Ile Pro
```

```
        275                 280                 285

Asn Lys Pro Asp Lys Tyr Gly Ile Arg Phe Pro Met Met Cys Asp Ala
    290                 295                 300

Ala Thr Lys Tyr Met Ile Asp Ala Ile Pro Tyr Leu Gly Lys Ser Thr
305                 310                 315                 320

Lys Thr Asn Gly Leu Pro Leu Gly Glu Phe Tyr Val Lys Glu Leu Thr
                325                 330                 335

Lys Thr Val His Gly Thr Asn Arg Asn Val Thr Cys Asp Asn Trp Phe
            340                 345                 350

Thr Ser Ile Pro Leu Ala Lys Asn Met Leu Gln Ala Pro Tyr Asn Leu
        355                 360                 365

Thr Ile Val Gly Thr Ile Arg Ser Asn Lys Arg Glu Ile Pro Glu Glu
    370                 375                 380

Ile Lys Asn Ser Arg Ser Arg Pro Val Gly Ser Ser Met Phe Cys Phe
385                 390                 395                 400

Asp Gly Pro Leu Thr Leu Val Ser Tyr Lys Pro Lys Pro Ser Arg Met
                405                 410                 415

Val Phe Leu Leu Ser Ser Cys Asp Glu Asn Ala Val Ile Asn Glu Ser
            420                 425                 430

Asn Gly Lys Pro Asp Met Ile Leu Phe Tyr Asn Gln Thr Lys Gly Gly
        435                 440                 445

Val Asp Ser Phe Asp Gln Met Cys Lys Ser Met Ser Ala Asn Arg Lys
    450                 455                 460

Thr Asn Arg Trp Pro Met Ala Val Phe Tyr Gly Met Leu Asn Met Ala
465                 470                 475                 480
```

```
Phe Val Asn Ser Tyr Ile Ile Tyr Cys His Asn Lys Ile Asn Lys Gln
                485                 490                 495


Lys Lys Pro Ile Asn Arg Lys Glu Phe Met Lys Asn Leu Ser Thr Asp
            500                 505                 510


Leu Thr Thr Pro Trp Met Gln Glu Arg Leu Lys Ala Pro Thr Leu Lys
        515                 520                 525


Arg Thr Leu Arg Asp Asn Ile Thr Asn Val Leu Lys Asn Val Val Pro
    530                 535                 540


Pro Ser Pro Ala Asn Asn Ser Glu Glu Pro Gly Pro Lys Lys Arg Ser
545                 550                 555                 560


Tyr Cys Gly Phe Cys Ser Tyr Lys Lys Arg Arg Met Thr Lys Thr Gln
                565                 570                 575


Phe Tyr Lys Cys Lys Lys Ala Ile Cys Gly Glu His Asn Ile Asp Val
            580                 585                 590


Cys Gln Asp Cys Val Gly
        595


<210>  1109
<211>  598
<212>  PRT
<213>  Artificial sequence

<220>
<223>  Synthetic

<400>  1109

Met Ala Ser Arg Gln Arg Leu Asn His Asp Glu Ile Ala Thr Ile Leu
1               5                   10                  15


Glu Asn Asp Asp Asp Tyr Ser Pro Leu Asp Ser Glu Ser Glu Lys Glu
            20                  25                  30
```

```
Asp Cys Val Val Glu Asp Asp Val Trp Ser Asp Asn Glu Asp Ala Ile
        35                  40                  45

Val Asp Phe Val Glu Asp Thr Ser Ala Gln Glu Asp Pro Asp Asn Asn
    50                  55                  60

Ile Ala Ser Arg Glu Ser Pro Asn Leu Glu Val Thr Ser Leu Thr Ser
65                  70                  75                  80

His Arg Ile Ile Thr Leu Pro Gln Arg Ser Ile Arg Gly Lys Asn Asn
                85                  90                  95

His Val Trp Ser Thr Thr Lys Gly Arg Thr Thr Gly Arg Thr Ser Ala
            100                 105                 110

Ile Asn Ile Ile Arg Thr Asn Arg Gly Pro Thr Arg Met Cys Arg Asn
        115                 120                 125

Ile Val Asp Pro Leu Leu Cys Phe Gln Leu Phe Ile Thr Asp Glu Ile
    130                 135                 140

Ile His Glu Ile Val Lys Trp Thr Asn Val Glu Ile Ile Val Lys Arg
145                 150                 155                 160

Gln Asn Leu Lys Asp Ile Ser Ala Ser Tyr Arg Asp Thr Asn Thr Met
                165                 170                 175

Glu Ile Trp Ala Leu Val Gly Ile Leu Thr Leu Thr Ala Val Met Lys
            180                 185                 190

Asp Asn His Leu Ser Thr Asp Glu Leu Phe Asp Ala Thr Phe Ser Gly
        195                 200                 205

Thr Arg Tyr Val Ser Val Met Ser Arg Glu Arg Phe Glu Phe Leu Ile
    210                 215                 220

Arg Cys Ile Arg Met Asp Asp Lys Thr Leu Arg Pro Thr Leu Arg Ser
```

```
225                 230                 235                 240

Asp Asp Ala Phe Leu Pro Val Arg Lys Ile Trp Glu Ile Phe Ile Asn
                245                 250                 255

Gln Cys Arg Gln Asn His Val Pro Gly Ser Asn Leu Thr Val Asp Glu
            260                 265                 270

Gln Leu Leu Gly Phe Arg Gly Arg Cys Pro Phe Arg Met Tyr Ile Pro
        275                 280                 285

Asn Lys Pro Asp Lys Tyr Gly Ile Lys Phe Pro Met Met Cys Ala Ala
    290                 295                 300

Ala Thr Lys Tyr Met Ile Asp Ala Ile Pro Tyr Leu Gly Lys Ser Thr
305                 310                 315                 320

Lys Thr Asn Gly Leu Pro Leu Gly Glu Phe Tyr Val Lys Asp Leu Thr
                325                 330                 335

Lys Thr Val His Gly Thr Asn Arg Asn Ile Thr Cys Asp Asn Trp Phe
            340                 345                 350

Thr Ser Ile Pro Leu Ala Lys Asn Met Leu Gln Ala Pro Tyr Asn Leu
        355                 360                 365

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

Ile Lys Asn Ser Arg Ser Arg Pro Val Gly Ser Ser Met Phe Cys Phe
385                 390                 395                 400

Asp Gly Pro Leu Thr Leu Val Ser Tyr Lys Pro Lys Pro Ser Lys Met
                405                 410                 415

Val Phe Leu Leu Ser Ser Cys Asp Glu Asn Ala Val Ile Asn Glu Ser
            420                 425                 430
```

```
Asn Gly Lys Pro Asp Met Ile Leu Phe Tyr Asn Gln Thr Lys Gly Gly
        435                 440                 445

Val Asp Ser Phe Asp Gln Met Cys Lys Ser Met Ser Ala Asn Arg Lys
    450                 455                 460

Thr Asn Arg Trp Pro Met Ala Val Phe Tyr Gly Met Leu Asn Met Ala
465                 470                 475                 480

Phe Val Asn Ser Tyr Ile Ile Tyr Cys His Asn Lys Ile Asn Lys Gln
                485                 490                 495

Glu Lys Pro Ile Ser Arg Lys Glu Phe Met Lys Lys Leu Ser Ile Gln
            500                 505                 510

Leu Thr Thr Pro Trp Met Gln Glu Arg Leu Gln Ala Pro Thr Leu Lys
        515                 520                 525

Arg Thr Leu Arg Asp Asn Ile Thr Asn Val Leu Lys Asn Val Val Pro
    530                 535                 540

Ala Ser Ser Glu Asn Ile Ser Asn Glu Pro Glu Pro Lys Lys Arg Arg
545                 550                 555                 560

Tyr Cys Gly Val Cys Ser Tyr Lys Lys Arg Arg Met Thr Lys Ala Gln
                565                 570                 575

Cys Cys Lys Cys Lys Lys Ala Ile Cys Gly Glu His Asn Ile Asp Val
            580                 585                 590

Cys Gln Asp Cys Ile Gly
        595
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<210> 1110
<211> 328
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1110
cagtgttctt caacctgtgt tccgcggaac cctagggttc cacccaaagg ctttcggggt 60

tccgcgagtc attgcttcaa ttcgagagac gtcggccgcg ccgctcttca gaatgcacat 120

gcgtcaatcg gagtttcatg ttgaaacatg ttatccattc gcatagttga cttacactgc 180

acttaacctt aattttcaaa aatatgtaac tgtacttgtg gtcgtagttt tgttgttgtt 240

ttaggtttag acaagcaaag gtaagttaac ttacagtttt aaaataaatt gtattttgtt 300

tgatcctaac ctagaatcgt tcagaaat   328

<210> 1111
<211> 145
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1111
ccaaagcacg ggctcacctt gttcgtaaca agtcaacgca gctgtcccta aaatctcatc 60

tgggtgtatt actaaatgaa gggttccata aaaaaaaata tctcgacaaa gggttccgcc 120

ggatggcaaa ggttgaagaa cactg   145

<210> 1112
<211> 16
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1112
cagtgttctt caacct   16

<210> 1113
<211> 16
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1113
aggttgaaga acactg 16

<210> 1114
<211> 636
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1114

Met Met Leu Asn Trp Leu Lys Ser Gly Lys Leu Glu Ser Gln Ser Gln
1 5 10 15

Glu Gln Ser Ser Cys Tyr Leu Glu Asn Ser Asn Cys Leu Pro Pro Thr
            20 25 30

Leu Asp Ser Thr Asp Ile Ile Gly Glu Glu Asn Lys Ala Gly Thr Thr
        35 40 45

Ser Arg Lys Lys Arg Lys Tyr Asp Glu Asp Tyr Leu Asn Phe Gly Phe
    50 55 60

Thr Trp Thr Gly Asp Lys Asp Glu Pro Asn Gly Leu Cys Val Ile Cys
65 70 75 80

Glu Gln Val Val Asn Asn Ser Ser Leu Asn Pro Ala Lys Leu Lys Arg
                85 90 95

His Leu Asp Thr Lys His Pro Thr Leu Lys Gly Lys Ser Glu Tyr Phe
            100 105 110

Lys Arg Lys Cys Asn Glu Leu Asn Gln Lys Lys His Thr Phe Glu Arg
        115 120 125

Tyr Val Arg Asp Asp Asn Lys Asn Leu Leu Lys Ala Ser Tyr Leu Val

```
    130                 135                 140

Ser Leu Arg Ile Ala Lys Gln Gly Glu Ala Tyr Thr Ile Ala Glu Lys
145                 150                 155                 160

Leu Ile Lys Pro Cys Thr Lys Asp Leu Thr Thr Cys Val Phe Gly Glu
                165                 170                 175

Lys Phe Ala Ser Lys Val Asp Leu Val Pro Leu Ser Asp Thr Thr Ile
            180                 185                 190

Ser Arg Arg Ile Glu Asp Met Ser Tyr Phe Cys Glu Ala Val Leu Val
        195                 200                 205

Asn Arg Leu Lys Asn Ala Lys Cys Gly Phe Thr Leu Gln Met Asp Glu
    210                 215                 220

Ser Thr Asp Val Ala Gly Leu Ala Ile Leu Leu Val Phe Val Arg Tyr
225                 230                 235                 240

Ile His Glu Ser Ser Phe Glu Glu Asp Met Leu Phe Cys Lys Ala Leu
                245                 250                 255

Pro Thr Gln Thr Thr Gly Glu Glu Ile Phe Asn Leu Leu Asn Ala Tyr
            260                 265                 270

Phe Glu Lys His Ser Ile Pro Trp Asn Leu Cys Tyr His Ile Cys Thr
        275                 280                 285

Asp Gly Ala Lys Ala Met Val Gly Val Ile Lys Gly Val Ile Ala Arg
    290                 295                 300

Ile Lys Lys Leu Val Pro Asp Ile Lys Ala Ser His Cys Cys Leu His
305                 310                 315                 320

Arg His Ala Leu Ala Val Lys Arg Ile Pro Asn Ala Leu His Glu Val
                325                 330                 335
```

```
Leu Asn Asp Ala Val Lys Met Ile Asn Phe Ile Lys Ser Arg Pro Leu
            340                 345                 350

Asn Ala Arg Val Phe Ala Leu Leu Cys Asp Asp Leu Gly Ser Leu His
        355                 360                 365

Lys Asn Leu Leu Leu His Thr Glu Val Arg Trp Leu Ser Arg Gly Lys
    370                 375                 380

Val Leu Thr Arg Phe Trp Glu Leu Arg Asp Glu Ile Arg Ile Phe Phe
385                 390                 395                 400

Asn Glu Arg Glu Phe Ala Gly Lys Leu Asn Asp Thr Ser Trp Leu Gln
                405                 410                 415

Asn Leu Ala Tyr Ile Ala Asp Ile Phe Ser Tyr Leu Asn Glu Val Asn
            420                 425                 430

Leu Ser Leu Gln Gly Pro Asn Ser Thr Ile Phe Lys Val Asn Ser Arg
        435                 440                 445

Ile Asn Ser Ile Lys Ser Lys Leu Lys Leu Trp Glu Glu Cys Ile Thr
    450                 455                 460

Lys Asn Asn Thr Glu Cys Phe Ala Asn Leu Asn Asp Phe Leu Glu Thr
465                 470                 475                 480

Ser Asn Thr Ala Leu Asp Pro Asn Leu Lys Ser Asn Ile Leu Glu His
                485                 490                 495

Leu Asn Gly Leu Lys Asn Thr Phe Leu Glu Tyr Phe Pro Pro Thr Cys
            500                 505                 510

Asn Asn Ile Ser Trp Val Glu Asn Pro Phe Asn Glu Cys Gly Asn Val
        515                 520                 525

Asp Thr Leu Pro Ile Lys Glu Arg Glu Gln Leu Ile Asp Ile Arg Thr
```

530 535 540

Asp Thr Thr Leu Lys Ser Ser Phe Val Pro Asp Gly Ile Gly Pro Phe
545 550 555 560

Trp Ile Lys Leu Met Asp Glu Phe Pro Glu Ile Ser Lys Arg Ala Val
565 570 575

Lys Glu Leu Met Pro Phe Val Thr Thr Tyr Leu Cys Glu Lys Ser Phe
580 585 590

Ser Val Tyr Val Ala Thr Lys Thr Lys Tyr Arg Asn Arg Leu Asp Ala
595 600 605

Glu Asp Asp Met Arg Leu Gln Leu Thr Thr Ile His Pro Asp Ile Asp
610 615 620

Asn Leu Cys Asn Asn Lys Gln Ala Gln Lys Ser His
625 630 635

<210> 1115
<211> 181
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1115
gggtctctct ggttagacca gatctgagcc tgggagctct ctggctaact agggaaccca 60

ctgcttaagc ctcaataaag cttgccttga gtgcttcaag tagtgtgtgc ccgtctgttg 120

tgtgactctg gtaactagag atccctcaga ccctttttagt cagtgtggaa aatctctagc 180

a 181

<210> 1116
<211> 181
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1116
gagtctctct ggttagacca gatctgagcc tgggagctct ctggctaact agggaaccca 60

ctgcttaagc ctcaataaag cttgccttga gtgcttcaag tagtgtgtgc ccgtctgttg 120

tgtgactctg gtaactagag atccctcaga ccctttttagt cagtgtggaa aatctctagc 180

a 181

<210> 1117
<211> 145
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1117
ttggccactc cctctctgcg cgctcgctcg ctcactgagg ccgggcgacc aaaggtcgcc 60

cgacgcccgg gctttgcccg ggcggcctca gtgagcgagc gagcgcgcag agagggagtg 120

gccaactcca tcactagggg ttcct 145

<210> 1118
<211> 145
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1118
ttggccactc cctctctgcg cgctcgctcg ctcactgagg ccgcccgggc aaagcccggg 60

cgtcgggcga cctttggtcg cccggcctca gtgagcgagc gagcgcgcag agagggagtg 120

gccaactcca tcactagggg ttcct 145

<210> 1119
<211> 168
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1119
gcgcgctcgc tcgctcactg aggccgcccg ggcaaagccc gggcgtcggg cgacctttgg 60

tcgcccggcc tcagtgagcg agcgagcgcg cagagaggga gtggccaact ccatcactag 120

gggttccttg tagttaatga ttaacccgcc atgctactta tctacgta 168

<210> 1120
<211> 185
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1120
ttggccactc cctctctgcg cgctcgctcg ctcactgagg ccgcccgggc aaagcccggg 60

cgtcgggcga cctttggtcg cccggcctca gtgagcgagc gagcgcgcag agagggagtg 120

gccaactcca tcactagggg ttccttgtag ttaatgatta acccgccatg ctacttatct 180

acgta 185

<210> 1121
<211> 128
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1121
gcgcgctcgc tcgctcactg aggccgcccg ggcaaagccc gggcgtcggg cgacctttgg 60

tcgcccggcc tcagtgagcg agcgagcgcg cagagaggga gtggccaact ccatcactag 120

gggttcct 128

<210> 1122
<211> 145
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1122
ttgcccactc cctctatgcg cgctcgctcg ctcggtgggg cctgcggacc aaaggtccgc 60

agacggcaga gctctgctct gccggcccca ccgagcgagc gagcgcgcat agagggagtg 120

ggcaactcca tcactagggg tattc 145

<210> 1123
<211> 104
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1123
gcgcgctcgc tcgctcactg aggccgcccg ggcaaagccc gggcgtcggg cgacctttgg 60

tcgcccggcc tcagtgagcg agcgagcgcg cagagaggga gtgg 104

<210> 1124
<211> 21
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1124

Phe Leu Phe Val Leu Leu Gly Val Gly Ser Met Gly Val Ala Ala Ile
1 5 10 15

Val Trp Gly Ala Trp
            20

<210> 1125
<211> 21
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1125

Phe Trp Leu Pro Ile Gly Cys Ala Ala Phe Val Val Val Cys Ile Leu
1 5 10 15

Gly Cys Ile Leu Ile
20

<210> 1126
<211> 21
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1126

Ile Leu Val Ile Phe Ser Gly Met Phe Leu Val Phe Thr Leu Ala Gly
1 5 10 15

Ala Leu Phe Leu His
20

<210> 1127
<211> 21
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1127

Gly Gly Thr Val Leu Leu Leu Leu Phe Val Ile Ser Ile Thr Thr Ile
1 5 10 15

Ile Val Ile Phe Leu
20

<210> 1128
<211> 21
<212> PRT

<213> Artificial sequence

<220>
<223> Synthetic

<400> 1128

Trp Ala Val Tyr Ala Gly Leu Leu Gly Gly Val Ile Met Ile Leu Ile
1 5 10 15

Met Val Val Ile Leu
20

<210> 1129
<211> 21
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1129

Ile Tyr Ala Gly Val Cys Ile Ser Val Leu Val Leu Leu Ala Leu Leu
1 5 10 15

Gly Val Ile Ile Ala
20

<210> 1130
<211> 21
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1130

Ile Trp Leu Ile Val Gly Ile Cys Ile Ala Leu Phe Ala Leu Pro Phe
1 5 10 15

Val Ile Tyr Ala Ala
20

<210> 1131
<211> 21
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1131

Ile Gly Gly Ile Ile Thr Val Phe Leu Ile Ala Leu Val Leu Thr Ser
1   5   10   15

Thr Ile Val Thr Leu
            20

<210> 1132
<211> 21
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1132

Val Ala Ala Ile Leu Gly Leu Gly Leu Val Leu Gly Leu Leu Gly Pro
1   5   10   15

Leu Ala Ile Leu Leu
            20

<210> 1133
<211> 22
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1133

Ala Leu Val Val Ile Pro Ile Ile Phe Gly Ile Leu Phe Ala Ile Leu
1   5   10   15

Leu Val Leu Val Phe Ile
            20

<210> 1134
<211> 27
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1134

Ile Ile Ser Phe Phe Leu Ala Leu Thr Ser Thr Ala Leu Leu Phe Leu
1   5   10   15

Leu Phe Phe Leu Thr Leu Arg Phe Ser Val Val
            20   25

<210> 1135
<211> 21
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1135

Gly Leu Ile Ile Leu Leu Leu Phe Ala Ser Val Ala Leu Val Ala Ala
1   5   10   15

Ile Ile Phe Gly Val
            20

<210> 1136
<211> 21
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1136

Thr Leu Gly Leu Cys Leu Cys Ala Val Leu Cys Cys Phe Leu Val Ala
1   5   10   15

Val Ala Cys Phe Leu
            20

<210> 1137
<211> 21
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1137

Phe Gly Ala Pro Ala Leu Leu Gly Leu Ala Leu Val Leu Ala Leu Val
1   5   10   15

Leu Val Gly Leu Val
            20

<210> 1138
<211> 21
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1138

Trp Trp Phe Leu Ser Gly Ser Leu Val Ile Val Ile Val Cys Ser Thr
1   5   10   15

Val Gly Leu Ile Ile
            20

<210> 1139
<211> 23
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1139

Ile Leu Trp Thr Cys Leu Gly Leu Ser Leu Ile Ile Ser Leu Ala Val
1   5   10   15

Phe Val Leu Met Phe Leu Leu
            20

<210> 1140
<211> 21
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1140

Leu Gly Trp Leu Thr Val Val Leu Leu Ala Val Ala Ala Cys Val Leu
1   5   10   15

Leu Leu Thr Ser Ala
            20

<210> 1141
<211> 21
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1141

Phe Leu Leu Trp Ile Leu Ala Ala Val Ser Ser Gly Leu Phe Phe Tyr
1   5   10   15

Ser Phe Leu Leu Thr
            20

<210> 1142

<211> 23
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1142

Ile Ala Ala Ile Val Gly Gly Thr Val Ala Gly Ile Val Leu Ile Gly
1 5 10 15

Ile Leu Leu Leu Val Ile Trp
20

<210> 1143
<211> 17
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1143

Leu Gly Trp Leu Cys Leu Leu Leu Leu Pro Ile Pro Leu Ile Val Trp
1 5 10 15

Val

<210> 1144
<211> 28
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1144

Pro Val Leu Asp Ala Gly Pro Val Leu Phe Trp Val Ile Leu Val Leu
1 5 10 15

Val Val Val Val Gly Ser Ser Ala Phe Leu Leu Cys

20 25

<210> 1145
<211> 23
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1145

Ile Trp Val Ile Leu Val Val Thr Leu Val Val Pro Leu Leu Leu Val
1 5 10 15

Ala Val Leu Ile Val Cys Cys
20

<210> 1146
<211> 21
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1146

Leu Ser Gly Ile Ile Ile Gly Val Thr Val Ala Ala Val Val Leu Ile
1 5 10 15

Val Ala Val Phe Val
20

<210> 1147
<211> 21
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1147

Ala Ala Val Ile Cys Ser Ala Leu Ala Thr Val Leu Leu Ala Leu Leu

1 5 10 15

Ile Leu Cys Val Ile
20

<210> 1148
<211> 21
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1148

Leu Pro Trp Met Ile Val Leu Phe Leu Leu Leu Val Leu Val Val Ile
1 5 10 15

Val Val Cys Ser Ile
20

<210> 1149
<211> 21
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1149

Met Phe Trp Val Gln Val Leu Leu Ala Gly Leu Val Val Pro Leu Leu
1 5 10 15

Leu Gly Ala Thr Leu
20

<210> 1150
<211> 20
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1150

Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly Val Leu Leu Leu Ser
1 5 10 15

Leu Val Ile Thr
20

<210> 1151
<211> 36
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1151

Arg Asp Gln Arg Leu Pro Pro Asp Ala His Lys Pro Pro Gly Gly Gly
1 5 10 15

Ser Phe Arg Thr Pro Ile Gln Glu Glu Gln Ala Asp Ala His Ser Thr
20 25 30

Leu Ala Lys Ile
35

<210> 1152
<211> 62
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1152

Lys Lys Val Ala Lys Lys Pro Thr Asn Lys Ala Pro His Pro Lys Gln
1 5 10 15

Glu Pro Gln Glu Ile Asn Phe Pro Asp Asp Leu Pro Gly Ser Asn Thr
20 25 30

```
Ala Ala Pro Val Gln Glu Thr Leu His Gly Cys Gln Pro Val Thr Gln
        35                  40                  45


Glu Asp Gly Lys Glu Ser Arg Ile Ser Val Gln Glu Arg Gln
    50                  55                  60


<210>  1153
<211>  48
<212>  PRT
<213>  Artificial sequence

<220>
<223>  Synthetic

<400>  1153

Gln Arg Arg Lys Tyr Arg Ser Asn Lys Gly Glu Ser Pro Val Glu Pro
1               5                   10                  15


Ala Glu Pro Cys His 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>  1154
<211>  42
<212>  PRT
<213>  Artificial sequence

<220>
<223>  Synthetic

<400>  1154

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> 1155
<211> 383
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1155

Cys Tyr Arg Lys Lys Gly Lys Ala Leu Thr Ala Asn Leu Trp His Trp
1 5 10 15

Ile Asn Glu Ala Cys Gly Arg Leu Ser Gly Asp Lys Glu Ser Ser Gly
20 25 30

Asp Ser Cys Val Ser Thr His Thr Ala Asn Phe Gly Gln Gln Gly Ala
35 40 45

Cys Glu Gly Val Leu Leu Leu Thr Leu Glu Glu Lys Thr Phe Pro Glu
50 55 60

Asp Met Cys Tyr Pro Asp Gln Gly Gly Val Cys Gln Gly Thr Cys Val
65 70 75 80

Gly Gly Gly Pro Tyr Ala Gln Gly Glu Asp Ala Arg Met Leu Ser Leu
85 90 95

Val Ser Lys Thr Glu Ile Glu Glu Asp Ser Phe Arg Gln Met Pro Thr
100 105 110

Glu Asp Glu Tyr Met Asp Arg Pro Ser Gln Pro Thr Asp Gln Leu Leu
115 120 125

Phe Leu Thr Glu Pro Gly Ser Lys Ser Thr Pro Pro Phe Ser Glu Pro
130 135 140

Leu Glu Val Gly Glu Asn Asp Ser Leu Ser Gln Cys Phe Thr Gly Thr

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145                 150                 155                 160

Gln Ser Thr Val Gly Ser Glu Ser Cys Asn Cys Thr Glu Pro Leu Cys
                165                 170                 175

Arg Thr Asp Trp Thr Pro Met Ser Ser Glu Asn Tyr Leu Gln Lys Glu
            180                 185                 190

Val Asp Ser Gly His Cys Pro His Trp Ala Ala Ser Pro Ser Pro Asn
        195                 200                 205

Trp Ala Asp Val Cys Thr Gly Cys Arg Asn Pro Pro Gly Glu Asp Cys
    210                 215                 220

Glu Pro Leu Val Gly Ser Pro Lys Arg Gly Pro Leu Pro Gln Cys Ala
225                 230                 235                 240

Tyr Gly Met Gly Leu Pro Pro Glu Glu Glu Ala Ser Arg Thr Glu Ala
                245                 250                 255

Arg Asp Gln Pro Glu Asp Gly Ala Asp Gly Arg Leu Pro Ser Ser Ala
            260                 265                 270

Arg Ala Gly Ala Gly Ser Gly Ser Ser Pro Gly Gly Gln Ser Pro Ala
        275                 280                 285

Ser Gly Asn Val Thr Gly Asn Ser Asn Ser Thr Phe Ile Ser Ser Gly
    290                 295                 300

Gln Val Met Asn Phe Lys Gly Asp Ile Ile Val Val Tyr Val Ser Gln
305                 310                 315                 320

Thr Ser Gln Glu Gly Ala Ala Ala Ala Ala Glu Pro Met Gly Arg Pro
                325                 330                 335

Val Gln Glu Glu Thr Leu Ala Arg Arg Asp Ser Phe Ala Gly Asn Gly
            340                 345                 350
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Pro Arg Phe Pro Asp Pro Cys Gly Gly Pro Glu Gly Leu Arg Glu Pro
        355                 360                 365


Glu Lys Ala Ser Arg Pro Val Gln Glu Gln Gly Gly Ala Lys Ala
    370                 375                 380


<210>  1156
<211>  107
<212>  PRT
<213>  Artificial sequence

<220>
<223>  Synthetic

<400>  1156

Lys Lys Arg Gly Asp Pro Cys Ser Cys Gln Pro Arg Ser Arg Pro Arg
1               5                   10                  15


Gln Ser Pro Ala Lys Ser Ser Gln Asp His Ala Met Glu Ala Gly Ser
            20                  25                  30


Pro Val Ser Thr Ser Pro Glu Pro Val Glu Thr Cys Ser Phe Cys Phe
        35                  40                  45


Pro Glu Cys Arg Ala Pro Thr Gln Glu Ser Ala Val Thr Pro Gly Thr
    50                  55                  60


Pro Asp Pro Thr Cys Ala Gly Arg Trp Gly Cys His Thr Arg Thr Thr
65                  70                  75                  80


Val Leu Gln Pro Cys Pro His Ile Pro Asp Ser Gly Leu Gly Ile Val
                85                  90                  95


Cys Val Pro Ala Gln Glu Gly Gly Pro Gly Ala
            100                 105


<210>  1157
<211>  85
<212>  PRT
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<213> Artificial sequence

<220>
<223> Synthetic

<400> 1157

Ser Trp Arg Arg Arg Gln Arg Arg Leu Arg Gly Ala Ser Ser Ala Glu
1 5 10 15

Ala Pro Asp Gly Asp Lys Asp Ala Pro Glu Pro Leu Asp Lys Val Ile
20 25 30

Ile Leu Ser Pro Gly Ile Ser Asp Ala Thr Ala Pro Ala Trp Pro Pro
35 40 45

Pro Gly Glu Asp Pro Gly Thr Thr Pro Pro Gly His Ser Val Pro Val
50 55 60

Pro Ala Thr Glu Leu Gly Ser Thr Glu Leu Val Thr Thr Lys Thr Ala
65 70 75 80

Gly Pro Glu Gln Gln
85

<210> 1158
<211> 60
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1158

Cys Val Lys Arg Arg Lys Pro Arg Gly Asp Val Val Lys Val Ile Val
1 5 10 15

Ser Val Gln Arg Lys Arg Gln Glu Ala Glu Gly Glu Ala Thr Val Ile
20 25 30

Glu Ala Leu Gln Ala Pro Pro Asp Val Thr Thr Val Ala Val Glu Glu

35 40 45

Thr Ile Pro Ser Phe Thr Gly Arg Ser Pro Asn His
50 55 60

<210> 1159
<211> 107
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1159

Arg Lys Ile Asn Ser Glu Pro Leu Lys Asp Glu Phe Lys Asn Thr Gly
1 5 10 15

Ser Gly Leu Leu Gly Met Ala Asn Ile Asp Leu Glu Lys Ser Arg Thr
20 25 30

Gly Asp Glu Ile Ile Leu Pro Arg Gly Leu Glu Tyr Thr Val Glu Glu
35 40 45

Cys Thr Cys Glu Asp Cys Ile Lys Ser Lys Pro Lys Val Asp Ser Asp
50 55 60

His Cys Phe Pro Leu Pro Ala Met Glu Glu Gly Ala Thr Ile Leu Val
65 70 75 80

Thr Thr Lys Thr Asn Asp Tyr Cys Lys Ser Leu Pro Ala Ala Leu Ser
85 90 95

Ala Thr Glu Ile Glu Lys Ser Ile Ser Ala Arg
100 105

<210> 1160
<211> 58
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1160

Gln Leu Gly Leu His Ile Trp Gln Leu Arg Ser Gln Cys Met Trp Pro
1   5   10   15

Arg Glu Thr Gln Leu Leu Leu Glu Val Pro Pro Ser Thr Glu Asp Ala
            20   25   30

Arg Ser Cys Gln Phe Pro Glu Glu Glu Arg Gly Glu Arg Ser Ala Glu
        35   40   45

Glu Lys Gly Arg Leu Gly Asp Leu Trp Val
    50   55

<210> 1161
<211> 41
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1161

Arg Ser Lys Arg Ser Arg Leu Leu His Ser Asp Tyr Met Asn Met Thr
1   5   10   15

Pro Arg Arg Pro Gly Pro Thr Arg Lys His Tyr Gln Pro Tyr Ala Pro
            20   25   30

Pro Arg Asp Phe Ala Ala Tyr Arg Ser
        35   40

<210> 1162
<211> 41
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1162

Arg Ser Lys Arg Ser Arg Leu Leu His Ser Asp Tyr Met Asn Met Pro
1 5 10 15

Pro Arg Arg Pro Gly Pro Thr Arg Lys His Tyr Gln Pro Tyr Ala Pro
20 25 30

Pro Arg Asp Phe Ala Ala Tyr Arg Ser
35 40

<210> 1163
<211> 111
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1163

Phe Trp Gly Arg Arg Ser Cys Gln Gln Arg Asp Ser Gly Asn Ser Pro
1 5 10 15

Gly Asn Ala Phe Tyr Ser Asn Val Leu Tyr Arg Pro Arg Gly Ala Pro
20 25 30

Lys Lys Ser Glu Asp Cys Ser Gly Glu Gly Lys Asp Gln Arg Gly Gln
35 40 45

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

Leu Ala Ser Arg Pro Cys Pro Ser Pro Arg Pro Cys Pro Ser Pro Arg
65 70 75 80

Pro Gly His Pro Val Ser Met Val Arg Val Ser Pro Arg Pro Ser Pro
85 90 95

Thr Gln Gln Pro Arg Pro Lys Gly Phe Pro Lys Val Gly Glu Glu

100 105 110

<210> 1164
<211> 35
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1164

Thr Lys Lys Lys Tyr Ser Ser Ser Val His Asp Pro Asn Gly Glu Tyr
1 5 10 15

Met Phe Met Arg Ala Val Asn Thr Ala Lys Lys Ser Arg Leu Thr Asp
20 25 30

Val Thr Leu
35

<210> 1165
<211> 61
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1165

Asn Arg Arg Arg Arg Arg Glu Arg Arg Asp Leu Phe Thr Glu Ser Trp
1 5 10 15

Asp Thr Gln Lys Ala Pro Asn Asn Tyr Arg Ser Pro Ile Ser Thr Ser
20 25 30

Gln Pro Thr Asn Gln Ser Met Asp Asp Thr Arg Glu Asp Ile Tyr Val
35 40 45

Asn Tyr Pro Thr Phe Ser Arg Arg Pro Lys Thr Arg Val
50 55 60

<210> 1166
<211> 77
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1166

Gln Leu Arg Arg Arg Gly Lys Thr Asn His Tyr Gln Thr Thr Val Glu
1 5 10 15

Lys Lys Ser Leu Thr Ile Tyr Ala Gln Val Gln Lys Pro Gly Pro Leu
20 25 30

Gln Lys Lys Leu Asp Ser Phe Pro Ala Gln Asp Pro Cys Thr Thr Ile
35 40 45

Tyr Val Ala Ala Thr Glu Pro Val Pro Glu Ser Val Gln Glu Thr Asn
50 55 60

Ser Ile Thr Val Tyr Ala Ser Val Thr Leu Pro Glu Ser
65 70 75

<210> 1167
<211> 48
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1167

Lys Lys Tyr Phe Phe Lys Lys Glu Val Gln Gln Leu Ser Val Ser Phe
1 5 10 15

Ser Ser Leu Gln Ile Lys Ala Leu Gln Asn Ala Val Glu Lys Glu Val
20 25 30

Gln Ala Glu Asp Asn Ile Tyr Ile Glu Asn Ser Leu Tyr Ala Thr Asp

35 40 45

<210> 1168
<211> 100
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1168

Lys Val Phe Leu Arg Cys Ile Asn Tyr Val Phe Phe Pro Ser Leu Lys
1 5 10 15

Pro Ser Ser Ser Ile Asp Glu Tyr Phe Ser Glu Gln Pro Leu Lys Asn
20 25 30

Leu Leu Leu Ser Thr Ser Glu Glu Gln Ile Glu Lys Cys Phe Ile Ile
35 40 45

Glu Asn Ile Ser Thr Ile Ala Thr Val Glu Glu Thr Asn Gln Thr Asp
50 55 60

Glu Asp His Lys Lys Tyr Ser Ser Gln Thr Ser Gln Asp Ser Gly Asn
65 70 75 80

Tyr Ser Asn Glu Asp Glu Ser Glu Ser Lys Thr Ser Glu Glu Leu Gln
85 90 95

Gln Asp Phe Val
100

<210> 1169
<211> 251
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1169

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Lys Trp Ile Gly Tyr Ile Cys Leu Arg Asn Ser Leu Pro Lys Val Leu
1               5                  10                  15

Asn Phe His Asn Phe Leu Ala Trp Pro Phe Pro Asn Leu Pro Pro Leu
            20                  25                  30

Glu Ala Met Asp Met Val Glu Val Ile Tyr Ile Asn Arg Lys Lys Lys
        35                  40                  45

Val Trp Asp Tyr Asn Tyr Asp Asp Glu Ser Asp Ser Asp Thr Glu Ala
    50                  55                  60

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

Arg Pro Leu Gly Gln Ala Ser Ala Thr Ser Thr Glu Ser Gln Leu Ile
                85                  90                  95

Asp Pro Glu Ser Glu Glu Glu Pro Asp Leu Pro Glu Val Asp Val Glu
            100                 105                 110

Leu Pro Thr Met Pro Lys Asp Ser Pro Gln Gln Leu Glu Leu Leu Ser
        115                 120                 125

Gly Pro Cys Glu Arg Arg Lys Ser Pro Leu Gln Asp Pro Phe Pro Glu
    130                 135                 140

Glu Asp Tyr Ser Ser Thr Glu Gly Ser Gly Gly Arg Ile Thr Phe Asn
145                 150                 155                 160

Val Asp Leu Asn Ser Val Phe Leu Arg Val Leu Asp Asp Glu Asp Ser
                165                 170                 175

Asp Asp Leu Glu Ala Pro Leu Met Leu Ser Ser His Leu Glu Glu Met
            180                 185                 190

Val Asp Pro Glu Asp Pro Asp Asn Val Gln Ser Asn His Leu Leu Ala
```

195 200 205

Ser Gly Glu Gly Thr Gln Pro Thr Phe Pro Ser Pro Ser Ser Glu Gly
210 215 220

Leu Trp Ser Glu Asp Ala Pro Ser Asp Gln Ser Asp Thr Ser Glu Ser
225 230 235 240

Asp Val Asp Leu Gly Asp Gly Tyr Ile Met Arg
245 250

<210> 1170
<211> 286
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1170

Asn Cys Arg Asn Thr Gly Pro Trp Leu Lys Lys Val Leu Lys Cys Asn
1 5 10 15

Thr Pro Asp Pro Ser Lys Phe Phe Ser Gln Leu Ser Ser Glu His Gly
20 25 30

Gly Asp Val Gln Lys Trp Leu Ser Ser Pro Phe Pro Ser Ser Ser Phe
35 40 45

Ser Pro Gly Gly Leu Ala Pro Glu Ile Ser Pro Leu Glu Val Leu Glu
50 55 60

Arg Asp Lys Val Thr Gln Leu Leu Leu Gln Gln Asp Lys Val Pro Glu
65 70 75 80

Pro Ala Ser Leu Ser Ser Asn His Ser Leu Thr Ser Cys Phe Thr Asn
85 90 95

Gln Gly Tyr Phe Phe Phe His Leu Pro Asp Ala Leu Glu Ile Glu Ala

```
            100                 105                 110

Cys Gln Val Tyr Phe Thr Tyr Asp Pro Tyr Ser Glu Glu Asp Pro Asp
        115                 120                 125

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

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

Asp Leu Leu Leu Phe Ser Pro Ser Leu Leu Gly Gly Pro Ser Pro Pro
                165                 170                 175

Ser Thr Ala Pro Gly Gly Ser Gly Ala Gly Glu Glu Arg Met Pro Pro
            180                 185                 190

Ser Leu Gln Glu Arg Val Pro Arg Asp Trp Asp Pro Gln Pro Leu Gly
        195                 200                 205

Pro Pro Thr Pro Gly Val Pro Asp Leu Val Asp Phe Gln Pro Pro Pro
    210                 215                 220

Glu Leu Val Leu Arg Glu Ala Gly Glu Glu Val Pro Asp Ala Gly Pro
225                 230                 235                 240

Arg Glu Gly Val Ser Phe Pro Trp Ser Arg Pro Pro Gly Gln Gly Glu
                245                 250                 255

Phe Arg Ala Leu Asn Ala Arg Leu Pro Leu Asn Thr Asp Ala Tyr Leu
            260                 265                 270

Ser Leu Gln Glu Leu Gln Gly Gln Asp Pro Thr His Leu Val
        275                 280                 285

<210>  1171
<211>  86
<212>  PRT
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<213> Artificial sequence

<220>
<223> Synthetic

<400> 1171

Glu Arg Thr Met Pro Arg Ile Pro Thr Leu Lys Asn Leu Glu Asp Leu
1 5 10 15

Val Thr Glu Tyr His Gly Asn Phe Ser Ala Trp Ser Gly Val Ser Lys
20 25 30

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

Val Ser Glu Ile Pro Pro Lys Gly Gly Ala Leu Gly Glu Gly Pro Gly
50 55 60

Ala Ser Pro Cys Asn Gln His Ser Pro Tyr Trp Ala Pro Pro Cys Tyr
65 70 75 80

Thr Leu Lys Pro Glu Thr
85

<210> 1172
<211> 111
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1172

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

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

Val Leu Asp Lys Arg Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro

35 40 45

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

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

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

Lys Asp Thr Tyr Asp Ala Leu His Met Gln Ala Leu Pro Pro Arg
100 105 110

<210> 1173
<211> 22
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1173
tttgtctgta aatagttcca gt 22

<210> 1174
<211> 22
<212> DNA
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<220>
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<400> 1174
actggaacta cttacagaca ac 22

<210> 1175
<211> 22
<212> DNA
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<220>
<223> Synthetic

<400> 1175
tttgacaccc tgatgaacct gt 22

<210> 1176
<211> 22
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1176
acaggttcat aagggtgtca ac 22

<210> 1177
<211> 22
<212> DNA
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<220>
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<400> 1177
ataggtaaca ctataatcct tc 22

<210> 1178
<211> 22
<212> DNA
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<220>
<223> Synthetic

<400> 1178
gaaggattat cgtgttacct ac 22

<210> 1179
<211> 681
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1179

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gcaatgtcag cagtgccttt tgtctgtaaa tagttccagt gtgaagccac agatgactgg 120

aactacttac agacaacaag taaggttgac catactctac tctagttata ttctttaggc 180

acgaatgtgt gtttaaaaaa aataaaaact agtggtgata gcaatgtcag cagtgccttt 240

tgacaccctg atgaacctgt gtgaagccac agatgacagg ttcataaggg tgtcaacaag 300

taaggttgac catactctac tctagagttg tgttttaatg tatattaatg ttactaatgt 360

gtttactagt ggtgatagca atgtcagcag tgcctatagg taacactata atccttcgtg 420

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gtcagcagtg ccttttttact tggtgtttat gcagggtgaa gccacagatg cctgcataaa 600

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ttcagtatta ttgataatct t 681

<210> 1180
<211> 2235
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1180
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gtaggcgcca accggctccg ttctttggtg gcccccttcgc gccaccttct actcctcccc 180

tagtcaggaa gttccccccc gccccgcagc tcgcgtcgtg caggacgtga caaatggaag 240

tagcacgact cactagtctc gtgcagatgg acagcaccgc tgagcaatgg aagcgggtag 300

gcctttgggg cagcggccaa tagcagcttt gctccttcgc tttctgagag cagcggccgg 360

gaaggggcgg tgcgggaggc ggggtgtggg gcggtagtgt gggccctgtt cctgcccgcg 420

cggtgttccg cattctgcaa gcctccggag cgcacgtccg tctcaggggc agcttgcttg 480

ttctttttgc agaagctcag aataaacgct caactttggc cgccacccct gtgtcaaaag 540

gggaggaatt gatcaaagag aaccctcatc ctaaactgta ccctgaggga actgtcaaca 600

atcaccactt caaatgcacc tcagagggcg agggaaagcc ctacgaaggg acccagaccc 660

ctcgcattaa ggtggtcgaa ggcggaccac tccctttgc attcgacatc ctggctacct 720

ccttccctta cggatcgcgc acttttatca agtacccgaa ggggatcccg gacttcttca 780

agcaatcctt ccctgaggga ttcacttggg aacgggtcac gacctacgaa gatggaggcg 840

tggtgaccgt gcctcaagac actagcctgg aagatggctg ccttgtctac aacgtgaaga 900

tcagaggtgt gaacttccca tccaatggcc ccgtgcctca gaaaaagact ctggggtggg 960

aagccaatac cgaacctctc tacccagcgg acggaggact cgaaggccgg tctgaccctg 1020

ccctgaagct ggtcggagga ggacatttgt cgtgtagctt tgtgactacg taccggtcga 1080

agaagccggc caaaaacctg aagatgccgg gtatccacgc ggtggaccat agactggaac 1140

gcctggagga gagcgataac gagatgttcg tcgttcagag ggaacacgct gtggcacgat 1200

attgcgatct cccgtcgaag cttggtcaca agctcaatta atgaaaaatc tgatcttctg 1260

aagaaaatat atttcttttt attcatagct cttaactagt ggtgatagca atgtcagcag 1320

tgcctttgag ttacaatgag acagctggtg aagccacaga tgcagctgtc tccttgtaac 1380

tcacaagtaa ggttgaccat actctactct agagttgtgt tttaatgtat attaatgtta 1440

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caaggtgaag ccacagatgc ttgcttttac tggtcagaat caagtaaggt tgaccatact 1560

ctactctagg ttatttttag tatgattctg taaaaatgaa ttaatactaa ctagtggtga 1620

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tgaccagaat tatgggaaca tcatgaagcc ccttgagcat ctagcttctg gctaataaag 1860

gaaatttatt ttcattgcaa tagtgtgttg gaatttttttg tgtctctcac tcggaaggac 1920

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<210> 1181
<211> 3221
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic

<400> 1181
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aaggactcgc ccctgccttg gggaatccca gggaccgtcg ttaaactccc actaacgtag 180

aacccagaga tcgctgcgtt cccgcccccc cacccgcccg ctctcgtcat cactgaggtg 240

gagaatagca tgcgtgaggc tccggtgccc gtcagtgggc agagcgcaca tcgcccacag 300

tccccgagaa gttgggggga ggggtcggca attgaacggg tgcctagaga aggtggcgcg 360

gggtaaactg ggaaagtgat gtcgtgtact ggctccgcct ttttcccgag ggtgggggag 420

aaccgtatat aagtgcagta gtcgccgtga acgttctttt tcgcaacggg tttgccgcca 480

gaacacaggt aagtgccgtg tgtggttccc gcgggcctgg cctctttacg ggttatggcc 540

cttgcgtgcc ttgaattact tccacctggc tccagtacgt gattcttgat cccgagctgg 600

agccaggggc gggccttgcg ctttaggagc cccttcgcct cgtgcttgag ttgaggcctg 660

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agtggttcaa agtttttttc ttccatttca ggtgtcgtga acacgtctca ggggagcttg 1440

cttgttcttt ttgcagaagc tcagaataaa cgctcaactt tggccgccac ccctgtgtca 1500

aaaggggagg aattgatcaa agagaaccct catcctaaac tgtaccctga gggaactgtc 1560

aacaatcacc acttcaaatg cacctcagag ggcgagggaa agccctacga agggacccag 1620

acccctcgca ttaaggtggt cgaaggcgga ccactccctt ttgcattcga catcctggct 1680

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gaacgcctgg aggagagcga taacgagatg ttcgtcgttc agagggaaca cgctgtggca 2160

cgatattgcg atctcccgtc gaagcttggt cacaagctca attaatgaaa aatctgatct 2220

tctgaagaaa atatatttct ttttattcat agctcttaac tagtggtgat agcaatgtca 2280

gcagtgcctt tgagttacaa tgagacagct ggtgaagcca cagatgcagc tgtctccttg 2340

taactcacaa gtaaggttga ccatactcta ctctagagtt gtgttttaat gtatattaat 2400

gttactaatg tgtttactag tggtgatagc aatgtcagca gtgccttatt ctgaccaata 2460

aaagcaaggt gaagccacag atgcttgctt ttactggtca gaatcaagta aggttgacca 2520

tactctactc taggttattt ttagtatgat tctgtaaaaa tgaattaata ctaactagtg 2580

gtgatagcaa tgtcagcagt gccttttttac ctgaagaact agcagcgtga agccacagat 2640

ggctgctagt tattcaggta aacaagtaag gttgaccata ctctactcta gtcagtttta 2700

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