SEQUENCE LISTING

<110> FRED HUTCHINSON CANCER RESEARCH CENTER

<120> LIPOCALIN FUSION PARTNERS

<130> 44189-701.602

<140> PCT/US13/74215
<141> 2013/12/10

<150> 61/794,685
<151> 2013-03-15

<150> 61/735,516
<151> 2012-12-10

<160> 158

<170> PatentIn version 3.5

<210> 1
<211> 721
<212> DNA
<213> Artificial Sequence

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

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tctgggttcc aggttccact ggtgactaca aggacgagca tcaccatcat caccatggtg 120

gaagccagga ctccacctca gacctgatcc cagccccacc tctgagcaag gtccctctgc 180

agcagaactt ccaggacaac caattccagg ggaagtggta tgtggtaggc ctggcaggga 240

atgcaattct cagagaagac aaagacccgc aaaagatgta tgccaccatc tatgagctga 300

aagaagacaa gagctacaat gtcacctccg tcctgtttag gaaaaagaag tgtgactact 360

ggatcaggac ttttgttcca ggttgccagc ccggcgagtt cacgctgggc aacattaaga 420

gttaccctgg attaacgagt tacctcgtcc gagtggtgag caccaactac aaccagcatg 480

ctatggtgtt cttcaagaaa gtttctcaaa acagggagta cttcaagatc accctctacg 540

ggagaaccaa ggagctgact tcggaactaa aggagaactt catccgcttc tccaaatctc 600

tgggcctccc tgaaaaccac atcgtcttcc ctgtcccaat cgaccagtgt atcgacggcg 660

gaggtagcga aaacctgtat tttcagggag gcggccgcta aggatcccgg accgcctctc 720

c 721

<210> 2
<211> 903
<212> DNA
<213> Artificial Sequence

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

<400> 2
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tctgggttcc aggttccact ggtgactaca aggacgagca tcaccatcat caccatggtg 120

gaagccagga ctccacctca gacctgatcc cagccccacc tctgagcaag gtccctctgc 180

agcagaactt ccaggacaac caattccagg ggaagtggta tgtggtaggc ctggcaggga 240

atgcaattct cagagaagac aaagacccgc aaaagatgta tgccaccatc tatgagctga 300

aagaagacaa gagctacaat gtcacctccg tcctgtttag gaaaaagaag tgtgactact 360

ggatcaggac ttttgttcca ggttgccagc ccggcgagtt cacgctgggc aacattaaga 420

gttaccctgg attaacgagt tacctcgtcc gagtggtgag caccaactac aaccagcatg 480

ctatggtgtt cttcaagaaa gtttctcaaa acagggagta cttcaagatc accctctacg 540

ggagaaccaa ggagctgact tcggaactaa aggagaactt catccgcttc tccaaatctc 600

tgggcctccc tgaaaaccac atcgtcttcc ctgtcccaat cgaccagtgt atcgacggcg 660

gaggtagcga aaacctgtat tttcagggag gcgatacctg cggcagcggc tataatgtgg 720

atcagcgtcg taccaatagc ggctgcaaag cgggcaatgg cgatcgtcat ttttgcggct 780

gcgatcgtac cggcgtggtg gaatgcaaag gcggcaaatg gaccgaagtg caggattgcg 840

gcagcagcag ctgcaaaggc accagcaatg gcggcgcgac ctgctaatgc taaggatccc 900

gga 903

<210> 3
<211> 861
<212> DNA
<213> Artificial Sequence

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

<220>
<221> CDS
<222> (1)..(861)

<400> 3
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Met Glu Thr Asp Thr Leu Leu Leu Trp Val Leu Leu Leu Trp Val Pro
1 5 10 15

ggt tcc act ggt gac tac aag gac gag cat cac cat cat cac cat ggt 96
Gly Ser Thr Gly Asp Tyr Lys Asp Glu His His His His His His Gly
20 25 30

gga agc cag gac tcc acc tca gac ctg atc cca gcc cca cct ctg agc 144
Gly Ser Gln Asp Ser Thr Ser Asp Leu Ile Pro Ala Pro Pro Leu Ser
35 40 45

aag gtc cct ctg cag cag aac ttc cag gac aac caa ttc cag ggg aag 192
Lys Val Pro Leu Gln Gln Asn Phe Gln Asp Asn Gln Phe Gln Gly Lys
50 55 60

tgg tat gtg gta ggc ctg gca ggg aat gca att ctc aga gaa gac aaa 240
Trp Tyr Val Val Gly Leu Ala Gly Asn Ala Ile Leu Arg Glu Asp Lys
65 70 75 80

gac ccg caa aag atg tat gcc acc atc tat gag ctg aaa gaa gac aag 288
Asp Pro Gln Lys Met Tyr Ala Thr Ile Tyr Glu Leu Lys Glu Asp Lys
85 90 95

agc tac aat gtc acc tcc gtc ctg ttt agg aaa aag aag tgt gac tac 336
Ser Tyr Asn Val Thr Ser Val Leu Phe Arg Lys Lys Lys Cys Asp Tyr
100 105 110

tgg atc agg act ttt gtt cca ggt tgc cag ccc ggc gag ttc acg ctg 384
Trp Ile Arg Thr Phe Val Pro Gly Cys Gln Pro Gly Glu Phe Thr Leu
115 120 125

ggc aac att aag agt tac cct gga tta acg agt tac ctc gtc cga gtg 432
Gly Asn Ile Lys Ser Tyr Pro Gly Leu Thr Ser Tyr Leu Val Arg Val
130 135 140

gtg agc acc aac tac aac cag cat gct atg gtg ttc ttc aag aaa gtt 480
Val Ser Thr Asn Tyr Asn Gln His Ala Met Val Phe Phe Lys Lys Val
145 150 155 160

tct caa aac agg gag tac ttc aag atc acc ctc tac ggg aga acc aag 528
Ser Gln Asn Arg Glu Tyr Phe Lys Ile Thr Leu Tyr Gly Arg Thr Lys
165 170 175

gag ctg act tcg gaa cta aag gag aac ttc atc cgc ttc tcc aaa tct 576
Glu Leu Thr Ser Glu Leu Lys Glu Asn Phe Ile Arg Phe Ser Lys Ser
180 185 190

ctg ggc ctc cct gaa aac cac atc gtc ttc cct gtc cca atc gac cag 624
Leu Gly Leu Pro Glu Asn His Ile Val Phe Pro Val Pro Ile Asp Gln
195 200 205

tgt atc gac ggc gga ggt agc gaa aac ctg tat ttt cag gga ggc gat 672
Cys Ile Asp Gly Gly Gly Ser Glu Asn Leu Tyr Phe Gln Gly Gly Asp
210 215 220

acc tgc ggc agc ggc tat aat gtg gat cag cgt cgt acc aat agc ggc 720
Thr Cys Gly Ser Gly Tyr Asn Val Asp Gln Arg Arg Thr Asn Ser Gly
225 230 235 240

tgc aaa gcg ggc aat ggc gat cgt cat ttt gtc ggc tgc gat cgt acc 768
Cys Lys Ala Gly Asn Gly Asp Arg His Phe Cys Gly Cys Asp Arg Thr
245 250 255

ggc gtg gtg gaa tgc aaa ggc ggc aaa tgg acc gaa gtg cag gat tgc 816

Gly Val Val Glu Cys Lys Gly Gly Lys Trp Thr Glu Val Gln Asp Cys
260 265 270

ggc agc agc agc tgc aaa ggc acc agc aat ggc ggc gcg acc tgc 861
Gly Ser Ser Ser Cys Lys Gly Thr Ser Asn Gly Gly Ala Thr Cys
275 280 285

<210> 4
<211> 885
<212> DNA
<213> Artificial Sequence

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

<400> 4
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tctgggttcc aggttccact ggtgactaca aggacgagca tcaccatcat caccatggtg 120

gaagccagga ctccacctca gacctgatcc cagccccacc tctgagcaag gtccctctgc 180

agcagaactt ccaggacaac caattccagg ggaagtggta tgtggtaggc ctggcaggga 240

atgcaattct cagagaagac aaagacccgc aaaagatgta tgccaccatc tatgagctga 300

aagaagacaa gagctacaat gtcacctccg tcctgtttag gaaaaagaag tgtgactact 360

ggatcaggac ttttgttcca ggttgccagc ccggcgagtt cacgctgggc aacattaaga 420

gttaccctgg attaacgagt tacctcgtcc gagtggtgag caccaactac aaccagcatg 480

ctatggtgtt cttcaagaaa gtttctcaaa acagggagta cttcaagatc accctctacg 540

ggagaaccaa ggagctgact tcggaactaa aggagaactt catccgcttc tccaaatctc 600

tgggcctccc tgaaaaccac atcgtcttcc ctgtcccaat cgaccagtgt atcgacggcg 660

gaggtagcga aaacctgtat tttcagggag gcgatcagaa ttgcgatatt ggcaatatta 720

ccagccagtg ccagatgcag cataaaaatt gcgaagatgc gaatggctgc gataccatta 780

ttgaagaatg caaaaccagc atggtggaac gttgccagaa tcaggaattt gaaagcgcgg 840

cgggcagcac caccctgggc ccgcagtaat gctaaggatc ccgga 885

<210> 5
<211> 843
<212> DNA
<213> Artificial Sequence

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

<220>
<221> CDS
<222> (1)..(843)

<400> 5
atg gag aca gac aca ctc ctg cta tgg gta ctg ctg ctc tgg gtt cca 48
Met Glu Thr Asp Thr Leu Leu Leu Trp Val Leu Leu Leu Trp Val Pro
1 5 10 15

ggt tcc act ggt gac tac aag gac gag cat cac cat cat cac cat ggt 96
Gly Ser Thr Gly Asp Tyr Lys Asp Glu His His His His His His Gly
20 25 30

gga agc cag gac tcc acc tca gac ctg atc cca gcc cca cct ctg agc 144
Gly Ser Gln Asp Ser Thr Ser Asp Leu Ile Pro Ala Pro Pro Leu Ser
35 40 45

aag gtc cct ctg cag cag aac ttc cag gac aac caa ttc cag ggg aag 192
Lys Val Pro Leu Gln Gln Asn Phe Gln Asp Asn Gln Phe Gln Gly Lys
50 55 60

tgg tat gtg gta ggc ctg gca ggg aat gca att ctc aga gaa gac aaa 240
Trp Tyr Val Val Gly Leu Ala Gly Asn Ala Ile Leu Arg Glu Asp Lys
65 70 75 80

gac ccg caa aag atg tat gcc acc atc tat gag ctg aaa gaa gac aag 288
Asp Pro Gln Lys Met Tyr Ala Thr Ile Tyr Glu Leu Lys Glu Asp Lys
85 90 95

agc tac aat gtc acc tcc gtc ctg ttt agg aaa aag aag tgt gac tac 336
Ser Tyr Asn Val Thr Ser Val Leu Phe Arg Lys Lys Lys Cys Asp Tyr

100 105 110

tgg atc agg act ttt gtt cca ggt tgc cag ccc ggc gag ttc acg ctg 384
Trp Ile Arg Thr Phe Val Pro Gly Cys Gln Pro Gly Glu Phe Thr Leu
115 120 125

ggc aac att aag agt tac cct gga tta acg agt tac ctc gtc cga gtg 432
Gly Asn Ile Lys Ser Tyr Pro Gly Leu Thr Ser Tyr Leu Val Arg Val
130 135 140

gtg agc acc aac tac aac cag cat gct atg gtg ttc ttc aag aaa gtt 480
Val Ser Thr Asn Tyr Asn Gln His Ala Met Val Phe Phe Lys Lys Val
145 150 155 160

tct caa aac agg gag tac ttc aag atc acc ctc tac ggg aga acc aag 528
Ser Gln Asn Arg Glu Tyr Phe Lys Ile Thr Leu Tyr Gly Arg Thr Lys
165 170 175

gag ctg act tcg gaa cta aag gag aac ttc atc cgc ttc tcc aaa tct 576
Glu Leu Thr Ser Glu Leu Lys Glu Asn Phe Ile Arg Phe Ser Lys Ser
180 185 190

ctg ggc ctc cct gaa aac cac atc gtc ttc cct gtc cca atc gac cag 624
Leu Gly Leu Pro Glu Asn His Ile Val Phe Pro Val Pro Ile Asp Gln
195 200 205

tgt atc gac ggc gga ggt agc gaa aac ctg tat ttt cag gga ggc gat 672
Cys Ile Asp Gly Gly Gly Ser Glu Asn Leu Tyr Phe Gln Gly Gly Asp
210 215 220

cag aat tgc gat att ggc aat att acc agc cag tgc cag atg cag cat 720
Gln Asn Cys Asp Ile Gly Asn Ile Thr Ser Gln Cys Gln Met Gln His
225 230 235 240

aaa aat tgc gaa gat gcg aat ggc tgc gat acc att att gaa gaa tgc 768
Lys Asn Cys Glu Asp Ala Asn Gly Cys Asp Thr Ile Ile Glu Glu Cys
245 250 255

aaa acc agc atg gtg gaa cgt tgc cag aat cag gaa ttt gaa agc gcg 816
Lys Thr Ser Met Val Glu Arg Cys Gln Asn Gln Glu Phe Glu Ser Ala
260 265 270

gcg ggc agc acc acc ctg ggc ccg cag 843
Ala Gly Ser Thr Thr Leu Gly Pro Gln
275 280

<210> 6
<211> 782
<212> DNA
<213> Artificial Sequence

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

<400> 6
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tctgggttcc aggttccact ggtgactaca aggacgagca tcaccatcat caccatggtg 120

gaagccagga ctccacctca gacctgatcc cagccccacc tctgagcaag gtccctctgc 180

agcagaactt ccaggacaac caattccagg ggaagtggta tgtggtaggc ctggcaggga 240

atgcaattct cagagaagac aaagacccgc aaaagatgta tgccaccatc tatgagctga 300

aagaagacaa gagctacaat gtcacctccg tcctgtttag gaaaaagaag tgtgactact 360

ggatcaggac ttttgttcca ggttgccagc ccggcgagtt cacgctgggc aacattaaga 420

gttaccctgg attaacgagt tacctcgtcc gagtggtgag caccaactac aaccagcatg 480

ctatggtgtt cttcaagaaa gtttctcaaa acagggagta cttcaagatc accctctacg 540

ggagaaccaa ggagctgact tcggaactaa aggagaactt catccgcttc tccaaatctc 600

tgggcctccc tgaaaaccac atcgtcttcc ctgtcccaat cgaccagtgt atcgacggcg 660

gaggtagcga aaacctgtat tttcagggag gcggccatgc gtgctatcgt aattgctggc 720

gtgaaggcaa tgatgaagaa acctgcaaag aacgttgcta atgctaagga tcccggaccg 780

cc 782

<210> 7
<211> 735
<212> DNA
<213> Artificial Sequence

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

<220>
<221> CDS
<222> (1)..(735)

<400> 7
atg gag aca gac aca ctc ctg cta tgg gta ctg ctg ctc tgg gtt cca 48
Met Glu Thr Asp Thr Leu Leu Leu Trp Val Leu Leu Leu Trp Val Pro
1 5 10 15

ggt tcc act ggt gac tac aag gac gag cat cac cat cat cac cat ggt 96
Gly Ser Thr Gly Asp Tyr Lys Asp Glu His His His His His His Gly
20 25 30

gga agc cag gac tcc acc tca gac ctg atc cca gcc cca cct ctg agc 144
Gly Ser Gln Asp Ser Thr Ser Asp Leu Ile Pro Ala Pro Pro Leu Ser
35 40 45

aag gtc cct ctg cag cag aac ttc cag gac aac caa ttc cag ggg aag 192
Lys Val Pro Leu Gln Gln Asn Phe Gln Asp Asn Gln Phe Gln Gly Lys
50 55 60

tgg tat gtg gta ggc ctg gca ggg aat gca att ctc aga gaa gac aaa 240
Trp Tyr Val Val Gly Leu Ala Gly Asn Ala Ile Leu Arg Glu Asp Lys
65 70 75 80

gac ccg caa aag atg tat gcc acc atc tat gag ctg aaa gaa gac aag 288
Asp Pro Gln Lys Met Tyr Ala Thr Ile Tyr Glu Leu Lys Glu Asp Lys
85 90 95

agc tac aat gtc acc tcc gtc ctg ttt agg aaa aag aag tgt gac tac 336
Ser Tyr Asn Val Thr Ser Val Leu Phe Arg Lys Lys Lys Cys Asp Tyr
100 105 110

tgg atc agg act ttt gtt cca ggt tgc cag ccc ggc gag ttc acg ctg 384
Trp Ile Arg Thr Phe Val Pro Gly Cys Gln Pro Gly Glu Phe Thr Leu
115 120 125

ggc aac att aag agt tac cct gga tta acg agt tac ctc gtc cga gtg 432
Gly Asn Ile Lys Ser Tyr Pro Gly Leu Thr Ser Tyr Leu Val Arg Val
130 135 140

gtg agc acc aac tac aac cag cat gct atg gtg ttc ttc aag aaa gtt 480
Val Ser Thr Asn Tyr Asn Gln His Ala Met Val Phe Phe Lys Lys Val
145 150 155 160

tct caa aac agg gag tac ttc aag atc acc ctc tac ggg aga acc aag 528
Ser Gln Asn Arg Glu Tyr Phe Lys Ile Thr Leu Tyr Gly Arg Thr Lys
165 170 175

gag ctg act tcg gaa cta aag gag aac ttc atc cgc ttc tcc aaa tct 576
Glu Leu Thr Ser Glu Leu Lys Glu Asn Phe Ile Arg Phe Ser Lys Ser
180 185 190

ctg ggc ctc cct gaa aac cac atc gtc ttc cct gtc cca atc gac cag 624
Leu Gly Leu Pro Glu Asn His Ile Val Phe Pro Val Pro Ile Asp Gln
195 200 205

tgt atc gac ggc gga ggt agc gaa aac ctg tat ttt cag gga ggc ggc 672
Cys Ile Asp Gly Gly Gly Ser Glu Asn Leu Tyr Phe Gln Gly Gly Gly
210 215 220

cat gcg tgc tat cgt aat tgc tgg cgt gaa ggc aat gat gaa gaa acc 720
His Ala Cys Tyr Arg Asn Cys Trp Arg Glu Gly Asn Asp Glu Glu Thr
225 230 235 240

tgc aaa gaa cgt tgc 735
Cys Lys Glu Arg Cys
245

<210> 8
<211> 816
<212> DNA
<213> Artificial Sequence

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

<400> 8
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tctgggttcc aggttccact ggtgactaca aggacgagca tcaccatcat caccatggtg 120

gaagccagga ctccacctca gacctgatcc cagccccacc tctgagcaag gtccctctgc 180

agcagaactt ccaggacaac caattccagg ggaagtggta tgtggtaggc ctggcaggga 240

atgcaattct cagagaagac aaagacccgc aaaagatgta tgccaccatc tatgagctga 300

aagaagacaa gagctacaat gtcacctccg tcctgtttag gaaaaagaag tgtgactact 360

ggatcaggac ttttgttcca ggttgccagc ccggcgagtt cacgctgggc aacattaaga 420

gttaccctgg attaacgagt tacctcgtcc gagtggtgag caccaactac aaccagcatg 480

ctatggtgtt cttcaagaaa gtttctcaaa acagggagta cttcaagatc accctctacg 540

ggagaaccaa ggagctgact tcggaactaa aggagaactt catccgcttc tccaaatctc 600

tgggcctccc tgaaaaccac atcgtcttcc ctgtcccaat cgaccagtgt atcgacggcg 660

gaggtagcga aaacctgtat tttcagggag gcgaatgccg ttatctgttt ggcggctgca 720

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gggattttac ctttagctaa tgctaaggat cccgga 816

<210> 9
<211> 774
<212> DNA
<213> Artificial Sequence

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

<220>
<221> CDS
<222> (1)..(774)

<400> 9
atg gag aca gac aca ctc ctg cta tgg gta ctg ctg ctc tgg gtt cca 48
Met Glu Thr Asp Thr Leu Leu Leu Trp Val Leu Leu Leu Trp Val Pro
1 5 10 15

ggt tcc act ggt gac tac aag gac gag cat cac cat cat cac cat ggt 96
Gly Ser Thr Gly Asp Tyr Lys Asp Glu His His His His His His Gly

20 25 30

gga agc cag gac tcc acc tca gac ctg atc cca gcc cca cct ctg agc 144
Gly Ser Gln Asp Ser Thr Ser Asp Leu Ile Pro Ala Pro Pro Leu Ser
35 40 45

aag gtc cct ctg cag cag aac ttc cag gac aac caa ttc cag ggg aag 192
Lys Val Pro Leu Gln Gln Asn Phe Gln Asp Asn Gln Phe Gln Gly Lys
50 55 60

tgg tat gtg gta ggc ctg gca ggg aat gca att ctc aga gaa gac aaa 240
Trp Tyr Val Val Gly Leu Ala Gly Asn Ala Ile Leu Arg Glu Asp Lys
65 70 75 80

gac ccg caa aag atg tat gcc acc atc tat gag ctg aaa gaa gac aag 288
Asp Pro Gln Lys Met Tyr Ala Thr Ile Tyr Glu Leu Lys Glu Asp Lys
85 90 95

agc tac aat gtc acc tcc gtc ctg ttt agg aaa aag aag tgt gac tac 336
Ser Tyr Asn Val Thr Ser Val Leu Phe Arg Lys Lys Lys Cys Asp Tyr
100 105 110

tgg atc agg act ttt gtt cca ggt tgc cag ccc ggc gag ttc acg ctg 384
Trp Ile Arg Thr Phe Val Pro Gly Cys Gln Pro Gly Glu Phe Thr Leu
115 120 125

ggc aac att aag agt tac cct gga tta acg agt tac ctc gtc cga gtg 432
Gly Asn Ile Lys Ser Tyr Pro Gly Leu Thr Ser Tyr Leu Val Arg Val
130 135 140

gtg agc acc aac tac aac cag cat gct atg gtg ttc ttc aag aaa gtt 480
Val Ser Thr Asn Tyr Asn Gln His Ala Met Val Phe Phe Lys Lys Val
145 150 155 160

tct caa aac agg gag tac ttc aag atc acc ctc tac ggg aga acc aag 528
Ser Gln Asn Arg Glu Tyr Phe Lys Ile Thr Leu Tyr Gly Arg Thr Lys
165 170 175

gag ctg act tcg gaa cta aag gag aac ttc atc cgc ttc tcc aaa tct 576
Glu Leu Thr Ser Glu Leu Lys Glu Asn Phe Ile Arg Phe Ser Lys Ser
180 185 190

ctg ggc ctc cct gaa aac cac atc gtc ttc cct gtc cca atc gac cag 624
Leu Gly Leu Pro Glu Asn His Ile Val Phe Pro Val Pro Ile Asp Gln
195 200 205

tgt atc gac ggc gga ggt agc gaa aac ctg tat ttt cag gga ggc gaa 672
Cys Ile Asp Gly Gly Gly Ser Glu Asn Leu Tyr Phe Gln Gly Gly Glu
210 215 220

tgc cgt tat ctg ttt ggc ggc tgc aaa acc acc agc gat tgc tgc aaa 720
Cys Arg Tyr Leu Phe Gly Gly Cys Lys Thr Thr Ser Asp Cys Cys Lys
225 230 235 240

cat ctg ggc tgc aaa ttt cgt gat aaa tat tgc gcg tgg gat ttt acc 768
His Leu Gly Cys Lys Phe Arg Asp Lys Tyr Cys Ala Trp Asp Phe Thr
245 250 255

ttt agc 774
Phe Ser

<210> 10
<211> 819
<212> DNA
<213> Artificial Sequence

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

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tctgggttcc aggttccact ggtgactaca aggacgagca tcaccatcat caccatggtg 120

gaagccagga ctccacctca gacctgatcc cagccccacc tctgagcaag gtccctctgc 180

agcagaactt ccaggacaac caattccagg ggaagtggta tgtggtaggc ctggcaggga 240

atgcaattct cagagaagac aaagacccgc aaaagatgta tgccaccatc tatgagctga 300

aagaagacaa gagctacaat gtcacctccg tcctgtttag gaaaaagaag tgtgactact 360

ggatcaggac ttttgttcca ggttgccagc ccggcgagtt cacgctgggc aacattaaga 420

gttaccctgg attaacgagt tacctcgtcc gagtggtgag caccaactac aaccagcatg 480

ctatggtgtt cttcaagaaa gtttctcaaa acagggagta cttcaagatc accctctacg 540

ggagaaccaa ggagctgact tcggaactaa aggagaactt catccgcttc tccaaatctc 600

tgggcctccc tgaaaaccac atcgtcttcc ctgtcccaat cgaccagtgt atcgacggcg 660

gaggtagcga aaacctgtat tttcagggag gcgaaattag ctgcgaaccg ggcaaaacct 720

ttaaagataa atgcaatacc tgccgttgcg gcgcggatgg caaaagcgcg gcgtgcaccc 780

tgaaagcgtg cccgaatcag taatgctaag gatcccgga 819

<210> 11
<211> 777
<212> DNA
<213> Artificial Sequence

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

<220>
<221> CDS
<222> (1)..(777)

<400> 11
atg gag aca gac aca ctc ctg cta tgg gta ctg ctg ctc tgg gtt cca 48
Met Glu Thr Asp Thr Leu Leu Leu Trp Val Leu Leu Leu Trp Val Pro
1 5 10 15

ggt tcc act ggt gac tac aag gac gag cat cac cat cat cac cat ggt 96
Gly Ser Thr Gly Asp Tyr Lys Asp Glu His His His His His His Gly
20 25 30

gga agc cag gac tcc acc tca gac ctg atc cca gcc cca cct ctg agc 144
Gly Ser Gln Asp Ser Thr Ser Asp Leu Ile Pro Ala Pro Pro Leu Ser
35 40 45

aag gtc cct ctg cag cag aac ttc cag gac aac caa ttc cag ggg aag 192
Lys Val Pro Leu Gln Gln Asn Phe Gln Asp Asn Gln Phe Gln Gly Lys
50 55 60

tgg tat gtg gta ggc ctg gca ggg aat gca att ctc aga gaa gac aaa 240
Trp Tyr Val Val Gly Leu Ala Gly Asn Ala Ile Leu Arg Glu Asp Lys
65 70 75 80

gac ccg caa aag atg tat gcc acc atc tat gag ctg aaa gaa gac aag 288
Asp Pro Gln Lys Met Tyr Ala Thr Ile Tyr Glu Leu Lys Glu Asp Lys
85 90 95

agc tac aat gtc acc tcc gtc ctg ttt agg aaa aag aag tgt gac tac 336
Ser Tyr Asn Val Thr Ser Val Leu Phe Arg Lys Lys Lys Cys Asp Tyr
100 105 110

tgg atc agg act ttt gtt cca ggt tgc cag ccc ggc gag ttc acg ctg 384
Trp Ile Arg Thr Phe Val Pro Gly Cys Gln Pro Gly Glu Phe Thr Leu
115 120 125

ggc aac att aag agt tac cct gga tta acg agt tac ctc gtc cga gtg 432
Gly Asn Ile Lys Ser Tyr Pro Gly Leu Thr Ser Tyr Leu Val Arg Val
130 135 140

gtg agc acc aac tac aac cag cat gct atg gtg ttc ttc aag aaa gtt 480
Val Ser Thr Asn Tyr Asn Gln His Ala Met Val Phe Phe Lys Lys Val
145 150 155 160

tct caa aac agg gag tac ttc aag atc acc ctc tac ggg aga acc aag 528
Ser Gln Asn Arg Glu Tyr Phe Lys Ile Thr Leu Tyr Gly Arg Thr Lys
165 170 175

gag ctg act tcg gaa cta aag gag aac ttc atc cgc ttc tcc aaa tct 576
Glu Leu Thr Ser Glu Leu Lys Glu Asn Phe Ile Arg Phe Ser Lys Ser
180 185 190

ctg ggc ctc cct gaa aac cac atc gtc ttc cct gtc cca atc gac cag 624
Leu Gly Leu Pro Glu Asn His Ile Val Phe Pro Val Pro Ile Asp Gln
195 200 205

tgt atc gac ggc gga ggt agc gaa aac ctg tat ttt cag gga ggc gaa 672
Cys Ile Asp Gly Gly Gly Ser Glu Asn Leu Tyr Phe Gln Gly Gly Glu
210 215 220

att agc tgc gaa ccg ggc aaa acc ttt aaa gat aaa tgc aat acc tgc 720
Ile Ser Cys Glu Pro Gly Lys Thr Phe Lys Asp Lys Cys Asn Thr Cys
225 230 235 240

cgt tgc ggc gcg gat ggc aaa agc gcg gcg tgc acc ctg aaa gcg tgc 768
Arg Cys Gly Ala Asp Gly Lys Ser Ala Ala Cys Thr Leu Lys Ala Cys
245 250 255

ccg aat cag 777

Pro Asn Gln

<210> 12
<211> 822
<212> DNA
<213> Artificial Sequence

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

<400> 12
gactgagtcg cccgctcgag accatggaga cagacacact cctgctatgg gtactgctgc 60

tctgggttcc aggttccact ggtgactaca aggacgagca tcaccatcat caccatggtg 120

gaagccagga ctccacctca gacctgatcc cagccccacc tctgagcaag gtccctctgc 180

agcagaactt ccaggacaac caattccagg ggaagtggta tgtggtaggc ctggcaggga 240

atgcaattct cagagaagac aaagacccgc aaaagatgta tgccaccatc tatgagctga 300

aagaagacaa gagctacaat gtcacctccg tcctgtttag gaaaaagaag tgtgactact 360

ggatcaggac ttttgttcca ggttgccagc ccggcgagtt cacgctgggc aacattaaga 420

gttaccctgg attaacgagt tacctcgtcc gagtggtgag caccaactac aaccagcatg 480

ctatggtgtt cttcaagaaa gtttctcaaa acagggagta cttcaagatc accctctacg 540

ggagaaccaa ggagctgact tcggaactaa aggagaactt catccgcttc tccaaatctc 600

tgggcctccc tgaaaaccac atcgtcttcc ctgtcccaat cgaccagtgt atcgacggcg 660

gaggtagcga aaacctgtat tttcagggag gcgtgtgccg tgattggttt aaagaaaccg 720

cgtgccgtca tgcgaaaagc ctgggcaatt gccgtaccag ccagaaatat cgtgcgaatt 780

gcgcgaaaac ctgcgaactg tgctaatgct aaggatcccg ga 822

<210> 13
<211> 780

<212> DNA
<213> Artificial Sequence

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

<220>
<221> CDS
<222> (1)..(780)

<400> 13
atg gag aca gac aca ctc ctg cta tgg gta ctg ctg ctc tgg gtt cca 48
Met Glu Thr Asp Thr Leu Leu Leu Trp Val Leu Leu Leu Trp Val Pro
1 5 10 15

ggt tcc act ggt gac tac aag gac gag cat cac cat cat cac cat ggt 96
Gly Ser Thr Gly Asp Tyr Lys Asp Glu His His His His His His Gly
20 25 30

gga agc cag gac tcc acc tca gac ctg atc cca gcc cca cct ctg agc 144
Gly Ser Gln Asp Ser Thr Ser Asp Leu Ile Pro Ala Pro Pro Leu Ser
35 40 45

aag gtc cct ctg cag cag aac ttc cag gac aac caa ttc cag ggg aag 192
Lys Val Pro Leu Gln Gln Asn Phe Gln Asp Asn Gln Phe Gln Gly Lys
50 55 60

tgg tat gtg gta ggc ctg gca ggg aat gca att ctc aga gaa gac aaa 240
Trp Tyr Val Val Gly Leu Ala Gly Asn Ala Ile Leu Arg Glu Asp Lys
65 70 75 80

gac ccg caa aag atg tat gcc acc atc tat gag ctg aaa gaa gac aag 288
Asp Pro Gln Lys Met Tyr Ala Thr Ile Tyr Glu Leu Lys Glu Asp Lys
85 90 95

agc tac aat gtc acc tcc gtc ctg ttt agg aaa aag aag tgt gac tac 336
Ser Tyr Asn Val Thr Ser Val Leu Phe Arg Lys Lys Lys Cys Asp Tyr
100 105 110

tgg atc agg act ttt gtt cca ggt tgc cag ccc ggc gag ttc acg ctg 384
Trp Ile Arg Thr Phe Val Pro Gly Cys Gln Pro Gly Glu Phe Thr Leu
115 120 125

ggc aac att aag agt tac cct gga tta acg agt tac ctc gtc cga gtg 432
Gly Asn Ile Lys Ser Tyr Pro Gly Leu Thr Ser Tyr Leu Val Arg Val
130 135 140

gtg agc acc aac tac aac cag cat gct atg gtg ttc ttc aag aaa gtt 480
Val Ser Thr Asn Tyr Asn Gln His Ala Met Val Phe Phe Lys Lys Val
145 150 155 160

tct caa aac agg gag tac ttc aag atc acc ctc tac ggg aga acc aag 528
Ser Gln Asn Arg Glu Tyr Phe Lys Ile Thr Leu Tyr Gly Arg Thr Lys
165 170 175

gag ctg act tcg gaa cta aag gag aac ttc atc cgc ttc tcc aaa tct 576
Glu Leu Thr Ser Glu Leu Lys Glu Asn Phe Ile Arg Phe Ser Lys Ser
180 185 190

ctg ggc ctc cct gaa aac cac atc gtc ttc cct gtc cca atc gac cag 624
Leu Gly Leu Pro Glu Asn His Ile Val Phe Pro Val Pro Ile Asp Gln
195 200 205

tgt atc gac ggc gga ggt agc gaa aac ctg tat ttt cag gga ggc gtg 672
Cys Ile Asp Gly Gly Gly Ser Glu Asn Leu Tyr Phe Gln Gly Gly Val
210 215 220

tgc cgt gat tgg ttt aaa gaa acc gcg tgc cgt cat gcg aaa agc ctg 720
Cys Arg Asp Trp Phe Lys Glu Thr Ala Cys Arg His Ala Lys Ser Leu
225 230 235 240

ggc aat tgc cgt acc agc cag aaa tat cgt gcg aat tgc gcg aaa acc 768
Gly Asn Cys Arg Thr Ser Gln Lys Tyr Arg Ala Asn Cys Ala Lys Thr
245 250 255

tgc gaa ctg tgc 780
Cys Glu Leu Cys
260

<210> 14
<211> 849
<212> DNA
<213> Artificial Sequence

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

<400> 14
gactgagtcg cccgctcgag accatggaga cagacacact cctgctatgg gtactgctgc 60

tctgggttcc aggttccact ggtgactaca aggacgagca tcaccatcat caccatggtg 120

gaagccagga ctccacctca gacctgatcc cagccccacc tctgagcaag gtccctctgc 180

agcagaactt ccaggacaac caattccagg ggaagtggta tgtggtaggc ctggcaggga 240

atgcaattct cagagaagac aaagacccgc aaaagatgta tgccaccatc tatgagctga 300

aagaagacaa gagctacaat gtcacctccg tcctgtttag gaaaaagaag tgtgactact 360

ggatcaggac ttttgttcca ggttgccagc ccggcgagtt cacgctgggc aacattaaga 420

gttaccctgg attaacgagt tacctcgtcc gagtggtgag caccaactac aaccagcatg 480

ctatggtgtt cttcaagaaa gtttctcaaa acagggagta cttcaagatc accctctacg 540

ggagaaccaa ggagctgact tcggaactaa aggagaactt catccgcttc tccaaatctc 600

tgggcctccc tgaaaaccac atcgtcttcc ctgtcccaat cgaccagtgt atcgacggcg 660

gaggtagcga aaacctgtat tttcagggag gcgtgagcat taccaaatgc agcagcgata 720

tgaatggcta ttgcctgcat ggccagtgca tttatctggt ggatatgagc cagaattatt 780

gccgttgcga agtgggctat accggcgtgc gttgcgaaca ttttttttctg taatgctaag 840

gatcccgga 849

<210> 15
<211> 807
<212> DNA
<213> Artificial Sequence

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

<220>
<221> CDS

<222> (1)..(807)

<400> 15

atg gag aca gac aca ctc ctg cta tgg gta ctg ctg ctc tgg gtt cca 48
Met Glu Thr Asp Thr Leu Leu Leu Trp Val Leu Leu Leu Trp Val Pro
1 5 10 15

ggt tcc act ggt gac tac aag gac gag cat cac cat cat cac cat ggt 96
Gly Ser Thr Gly Asp Tyr Lys Asp Glu His His His His His His Gly
20 25 30

gga agc cag gac tcc acc tca gac ctg atc cca gcc cca cct ctg agc 144
Gly Ser Gln Asp Ser Thr Ser Asp Leu Ile Pro Ala Pro Pro Leu Ser
35 40 45

aag gtc cct ctg cag cag aac ttc cag gac aac caa ttc cag ggg aag 192
Lys Val Pro Leu Gln Gln Asn Phe Gln Asp Asn Gln Phe Gln Gly Lys
50 55 60

tgg tat gtg gta ggc ctg gca ggg aat gca att ctc aga gaa gac aaa 240
Trp Tyr Val Val Gly Leu Ala Gly Asn Ala Ile Leu Arg Glu Asp Lys
65 70 75 80

gac ccg caa aag atg tat gcc acc atc tat gag ctg aaa gaa gac aag 288
Asp Pro Gln Lys Met Tyr Ala Thr Ile Tyr Glu Leu Lys Glu Asp Lys
85 90 95

agc tac aat gtc acc tcc gtc ctg ttt agg aaa aag aag tgt gac tac 336
Ser Tyr Asn Val Thr Ser Val Leu Phe Arg Lys Lys Lys Cys Asp Tyr
100 105 110

tgg atc agg act ttt gtt cca ggt tgc cag ccc ggc gag ttc acg ctg 384
Trp Ile Arg Thr Phe Val Pro Gly Cys Gln Pro Gly Glu Phe Thr Leu
115 120 125

ggc aac att aag agt tac cct gga tta acg agt tac ctc gtc cga gtg 432
Gly Asn Ile Lys Ser Tyr Pro Gly Leu Thr Ser Tyr Leu Val Arg Val
130 135 140

gtg agc acc aac tac aac cag cat gct atg gtg ttc ttc aag aaa gtt 480
Val Ser Thr Asn Tyr Asn Gln His Ala Met Val Phe Phe Lys Lys Val
145 150 155 160

tct caa aac agg gag tac ttc aag atc acc ctc tac ggg aga acc aag 528
Ser Gln Asn Arg Glu Tyr Phe Lys Ile Thr Leu Tyr Gly Arg Thr Lys
165 170 175

gag ctg act tcg gaa cta aag gag aac ttc atc cgc ttc tcc aaa tct 576
Glu Leu Thr Ser Glu Leu Lys Glu Asn Phe Ile Arg Phe Ser Lys Ser
180 185 190

ctg ggc ctc cct gaa aac cac atc gtc ttc cct gtc cca atc gac cag 624
Leu Gly Leu Pro Glu Asn His Ile Val Phe Pro Val Pro Ile Asp Gln
195 200 205

tgt atc gac ggc gga ggt agc gaa aac ctg tat ttt cag gga ggc gtg 672
Cys Ile Asp Gly Gly Gly Ser Glu Asn Leu Tyr Phe Gln Gly Gly Val
210 215 220

agc att acc aaa tgc agc agc gat atg aat ggc tat tgc ctg cat ggc 720
Ser Ile Thr Lys Cys Ser Ser Asp Met Asn Gly Tyr Cys Leu His Gly
225 230 235 240

cag tgc att tat ctg gtg gat atg agc cag aat tat tgc cgt tgc gaa 768
Gln Cys Ile Tyr Leu Val Asp Met Ser Gln Asn Tyr Cys Arg Cys Glu
245 250 255

gtg ggc tat acc ggc gtg cgt tgc gaa cat ttt ttt ctg 807
Val Gly Tyr Thr Gly Val Arg Cys Glu His Phe Phe Leu
260 265

<210> 16
<211> 801
<212> DNA
<213> Artificial Sequence

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

<400> 16
gactgagtcg cccgctcgag accatggaga cagacacact cctgctatgg gtactgctgc 60

tctgggttcc aggttccact ggtgactaca aggacgagca tcaccatcat caccatggtg 120

gaagccagga ctccacctca gacctgatcc cagccccacc tctgagcaag gtccctctgc 180

agcagaactt ccaggacaac caattccagg ggaagtggta tgtggtaggc ctggcaggga 240

atgcaattct cagagaagac aaagacccgc aaaagatgta tgccaccatc tatgagctga 300

aagaagacaa gagctacaat gtcacctccg tcctgtttag gaaaaagaag tgtgactact 360

ggatcaggac ttttgttcca ggttgccagc ccggcgagtt cacgctgggc aacattaaga 420

gttaccctgg attaacgagt tacctcgtcc gagtggtgag caccaactac aaccagcatg 480

ctatggtgtt cttcaagaaa gtttctcaaa acagggagta cttcaagatc accctctacg 540

ggagaaccaa ggagctgact tcggaactaa aggagaactt catccgcttc tccaaatctc 600

tgggcctccc tgaaaaccac atcgtcttcc ctgtcccaat cgaccagtgt atcgacggcg 660

gaggtagcga aaacctgtat tttcagggag gcggcattcc gtgcggcgaa agctgcgtgt 720

ggattccgtg cattagcgcg gcgctgggct gcagctgcaa aaataaagtg tgctatcgta 780

attaatgcta aggatcccgg a 801

<210> 17
<211> 759
<212> DNA
<213> Artificial Sequence

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

<220>
<221> CDS
<222> (1)..(759)

<400> 17
atg gag aca gac aca ctc ctg cta tgg gta ctg ctg ctc tgg gtt cca 48
Met Glu Thr Asp Thr Leu Leu Leu Trp Val Leu Leu Leu Trp Val Pro
1 5 10 15

ggt tcc act ggt gac tac aag gac gag cat cac cat cat cac cat ggt 96
Gly Ser Thr Gly Asp Tyr Lys Asp Glu His His His His His His Gly
20 25 30

gga agc cag gac tcc acc tca gac ctg atc cca gcc cca cct ctg agc 144
Gly Ser Gln Asp Ser Thr Ser Asp Leu Ile Pro Ala Pro Pro Leu Ser

35 40 45

aag gtc cct ctg cag cag aac ttc cag gac aac caa ttc cag ggg aag 192
Lys Val Pro Leu Gln Gln Asn Phe Gln Asp Asn Gln Phe Gln Gly Lys
50 55 60

tgg tat gtg gta ggc ctg gca ggg aat gca att ctc aga gaa gac aaa 240
Trp Tyr Val Val Gly Leu Ala Gly Asn Ala Ile Leu Arg Glu Asp Lys
65 70 75 80

gac ccg caa aag atg tat gcc acc atc tat gag ctg aaa gaa gac aag 288
Asp Pro Gln Lys Met Tyr Ala Thr Ile Tyr Glu Leu Lys Glu Asp Lys
85 90 95

agc tac aat gtc acc tcc gtc ctg ttt agg aaa aag aag tgt gac tac 336
Ser Tyr Asn Val Thr Ser Val Leu Phe Arg Lys Lys Lys Cys Asp Tyr
100 105 110

tgg atc agg act ttt gtt cca ggt tgc cag ccc ggc gag ttc acg ctg 384
Trp Ile Arg Thr Phe Val Pro Gly Cys Gln Pro Gly Glu Phe Thr Leu
115 120 125

ggc aac att aag agt tac cct gga tta acg agt tac ctc gtc cga gtg 432
Gly Asn Ile Lys Ser Tyr Pro Gly Leu Thr Ser Tyr Leu Val Arg Val
130 135 140

gtg agc acc aac tac aac cag cat gct atg gtg ttc ttc aag aaa gtt 480
Val Ser Thr Asn Tyr Asn Gln His Ala Met Val Phe Phe Lys Lys Val
145 150 155 160

tct caa aac agg gag tac ttc aag atc acc ctc tac ggg aga acc aag 528
Ser Gln Asn Arg Glu Tyr Phe Lys Ile Thr Leu Tyr Gly Arg Thr Lys
165 170 175

gag ctg act tcg gaa cta aag gag aac ttc atc cgc ttc tcc aaa tct 576
Glu Leu Thr Ser Glu Leu Lys Glu Asn Phe Ile Arg Phe Ser Lys Ser
180 185 190

ctg ggc ctc cct gaa aac cac atc gtc ttc cct gtc cca atc gac cag 624
Leu Gly Leu Pro Glu Asn His Ile Val Phe Pro Val Pro Ile Asp Gln
195 200 205

tgt atc gac ggc gga ggt agc gaa aac ctg tat ttt cag gga ggc ggc 672
Cys Ile Asp Gly Gly Gly Ser Glu Asn Leu Tyr Phe Gln Gly Gly Gly
210 215 220

att ccg tgc ggc gaa agc tgc gtg tgg att ccg tgc att agc gcg gcg 720
Ile Pro Cys Gly Glu Ser Cys Val Trp Ile Pro Cys Ile Ser Ala Ala
225 230 235 240

ctg ggc tgc agc tgc aaa aat aaa gtg tgc tat cgt aat 759
Leu Gly Cys Ser Cys Lys Asn Lys Val Cys Tyr Arg Asn
245 250

<210> 18
<211> 873
<212> DNA
<213> Artificial Sequence

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

<400> 18
gactgagtcg cccgctcgag accatggaga cagacacact cctgctatgg gtactgctgc 60

tctgggttcc aggttccact ggtgactaca aggacgagca tcaccatcat caccatggtg 120

gaagccagga ctccacctca gacctgatcc cagccccacc tctgagcaag gtccctctgc 180

agcagaactt ccaggacaac caattccagg ggaagtggta tgtggtaggc ctggcaggga 240

atgcaattct cagagaagac aaagacccgc aaaagatgta tgccaccatc tatgagctga 300

aagaagacaa gagctacaat gtcacctccg tcctgtttag gaaaaagaag tgtgactact 360

ggatcaggac ttttgttcca ggttgccagc ccggcgagtt cacgctgggc aacattaaga 420

gttaccctgg attaacgagt tacctcgtcc gagtggtgag caccaactac aaccagcatg 480

ctatggtgtt cttcaagaaa gtttctcaaa acagggagta cttcaagatc accctctacg 540

ggagaaccaa ggagctgact tcggaactaa aggagaactt catccgcttc tccaaatctc 600

tgggcctccc tgaaaaccac atcgtcttcc ctgtcccaat cgaccagtgt atcgacggcg 660

gaggtagcga aaacctgtat tttcagggag gccaggataa atgcaaaaaa gtgtatgaaa 720

attatccggt gagcaaatgc cagctggcga atcagtgcaa ttatgattgc aaactggata 780

aacatgcgcg tagcggcgaa tgcttttatg atgaaaaacg taatctgcag tgcatttgcg 840

attattgcga atattaatgc taaggatccc gga 873

<210> 19
<211> 831
<212> DNA
<213> Artificial Sequence

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

<220>
<221> CDS
<222> (1)..(831)

<400> 19
atg gag aca gac aca ctc ctg cta tgg gta ctg ctg ctc tgg gtt cca 48
Met Glu Thr Asp Thr Leu Leu Leu Trp Val Leu Leu Leu Trp Val Pro
1 5 10 15

ggt tcc act ggt gac tac aag gac gag cat cac cat cat cac cat ggt 96
Gly Ser Thr Gly Asp Tyr Lys Asp Glu His His His His His His Gly
20 25 30

gga agc cag gac tcc acc tca gac ctg atc cca gcc cca cct ctg agc 144
Gly Ser Gln Asp Ser Thr Ser Asp Leu Ile Pro Ala Pro Pro Leu Ser
35 40 45

aag gtc cct ctg cag cag aac ttc cag gac aac caa ttc cag ggg aag 192
Lys Val Pro Leu Gln Gln Asn Phe Gln Asp Asn Gln Phe Gln Gly Lys
50 55 60

tgg tat gtg gta ggc ctg gca ggg aat gca att ctc aga gaa gac aaa 240
Trp Tyr Val Val Gly Leu Ala Gly Asn Ala Ile Leu Arg Glu Asp Lys
65 70 75 80

gac ccg caa aag atg tat gcc acc atc tat gag ctg aaa gaa gac aag 288
Asp Pro Gln Lys Met Tyr Ala Thr Ile Tyr Glu Leu Lys Glu Asp Lys
85 90 95

agc tac aat gtc acc tcc gtc ctg ttt agg aaa aag aag tgt gac tac 336

Ser Tyr Asn Val Thr Ser Val Leu Phe Arg Lys Lys Lys Cys Asp Tyr
100 105 110

tgg atc agg act ttt gtt cca ggt tgc cag ccc ggc gag ttc acg ctg 384
Trp Ile Arg Thr Phe Val Pro Gly Cys Gln Pro Gly Glu Phe Thr Leu
115 120 125

ggc aac att aag agt tac cct gga tta acg agt tac ctc gtc cga gtg 432
Gly Asn Ile Lys Ser Tyr Pro Gly Leu Thr Ser Tyr Leu Val Arg Val
130 135 140

gtg agc acc aac tac aac cag cat gct atg gtg ttc ttc aag aaa gtt 480
Val Ser Thr Asn Tyr Asn Gln His Ala Met Val Phe Phe Lys Lys Val
145 150 155 160

tct caa aac agg gag tac ttc aag atc acc ctc tac ggg aga acc aag 528
Ser Gln Asn Arg Glu Tyr Phe Lys Ile Thr Leu Tyr Gly Arg Thr Lys
165 170 175

gag ctg act tcg gaa cta aag gag aac ttc atc cgc ttc tcc aaa tct 576
Glu Leu Thr Ser Glu Leu Lys Glu Asn Phe Ile Arg Phe Ser Lys Ser
180 185 190

ctg ggc ctc cct gaa aac cac atc gtc ttc cct gtc cca atc gac cag 624
Leu Gly Leu Pro Glu Asn His Ile Val Phe Pro Val Pro Ile Asp Gln
195 200 205

tgt atc gac ggc gga ggt agc gaa aac ctg tat ttt cag gga ggc cag 672
Cys Ile Asp Gly Gly Gly Ser Glu Asn Leu Tyr Phe Gln Gly Gly Gln
210 215 220

gat aaa tgc aaa aaa gtg tat gaa aat tat ccg gtg agc aaa tgc cag 720
Asp Lys Cys Lys Lys Val Tyr Glu Asn Tyr Pro Val Ser Lys Cys Gln
225 230 235 240

ctg gcg aat cag tgc aat tat gat tgc aaa ctg gat aaa cat gcg cgt 768
Leu Ala Asn Gln Cys Asn Tyr Asp Cys Lys Leu Asp Lys His Ala Arg
245 250 255

agc ggc gaa tgc ttt tat gat gaa aaa cgt aat ctg cag tgc att tgc 816
Ser Gly Glu Cys Phe Tyr Asp Glu Lys Arg Asn Leu Gln Cys Ile Cys
260 265 270

gat tat tgc gaa tat 831
Asp Tyr Cys Glu Tyr
275

<210> 20
<211> 777
<212> DNA
<213> Artificial Sequence

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

<220>
<221> CDS
<222> (1)..(777)

<400> 20
atg gag aca gac aca ctc ctg cta tgg gta ctg ctg ctc tgg gtt cca 48
Met Glu Thr Asp Thr Leu Leu Leu Trp Val Leu Leu Leu Trp Val Pro
1 5 10 15

ggt tcc act ggt gac tac aag gac gag cat cac cat cat cac cat ggt 96
Gly Ser Thr Gly Asp Tyr Lys Asp Glu His His His His His His Gly
20 25 30

gga agc cag gac tcc acc tca gac ctg atc cca gcc cca cct ctg agc 144
Gly Ser Gln Asp Ser Thr Ser Asp Leu Ile Pro Ala Pro Pro Leu Ser
35 40 45

aag gtc cct ctg cag cag aac ttc cag gac aac caa ttc cag ggg aag 192
Lys Val Pro Leu Gln Gln Asn Phe Gln Asp Asn Gln Phe Gln Gly Lys
50 55 60

tgg tat gtg gta ggc ctg gca ggg aat gca att ctc aga gaa gac aaa 240
Trp Tyr Val Val Gly Leu Ala Gly Asn Ala Ile Leu Arg Glu Asp Lys
65 70 75 80

gac ccg caa aag atg tat gcc acc atc tat gag ctg aaa gaa gac aag 288
Asp Pro Gln Lys Met Tyr Ala Thr Ile Tyr Glu Leu Lys Glu Asp Lys
85 90 95

agc tac aat gtc acc tcc gtc ctg ttt agg aaa aag aag tgt gac tac 336
Ser Tyr Asn Val Thr Ser Val Leu Phe Arg Lys Lys Lys Cys Asp Tyr
100 105 110

tgg atc agg act ttt gtt cca ggt tgc cag ccc ggc gag ttc acg ctg 384
Trp Ile Arg Thr Phe Val Pro Gly Cys Gln Pro Gly Glu Phe Thr Leu
115 120 125

ggc aac att aag agt tac cct gga tta acg agt tac ctc gtc cga gtg 432
Gly Asn Ile Lys Ser Tyr Pro Gly Leu Thr Ser Tyr Leu Val Arg Val
130 135 140

gtg agc acc aac tac aac cag cat gct atg gtg ttc ttc aag aaa gtt 480
Val Ser Thr Asn Tyr Asn Gln His Ala Met Val Phe Phe Lys Lys Val
145 150 155 160

tct caa aac agg gag tac ttc aag atc acc ctc tac ggg aga acc aag 528
Ser Gln Asn Arg Glu Tyr Phe Lys Ile Thr Leu Tyr Gly Arg Thr Lys
165 170 175

gag ctg act tcg gaa cta aag gag aac ttc atc cgc ttc tcc aaa tct 576
Glu Leu Thr Ser Glu Leu Lys Glu Asn Phe Ile Arg Phe Ser Lys Ser
180 185 190

ctg ggc ctc cct gaa aac cac atc gtc ttc cct gtc cca atc gac cag 624
Leu Gly Leu Pro Glu Asn His Ile Val Phe Pro Val Pro Ile Asp Gln
195 200 205

tgt atc gac ggc gga ggt agc gaa aac ctg tat ttt cag gga ggc atg 672
Cys Ile Asp Gly Gly Gly Ser Glu Asn Leu Tyr Phe Gln Gly Gly Met
210 215 220

tgc atg ccg tgc ttt acc acc gat cat cag atg gcg cgt aaa tgc gat 720
Cys Met Pro Cys Phe Thr Thr Asp His Gln Met Ala Arg Lys Cys Asp
225 230 235 240

gat tgc tgc ggc ggc aaa ggc cgt ggc aaa tgc tat ggc ccg cag tgc 768
Asp Cys Cys Gly Gly Lys Gly Arg Gly Lys Cys Tyr Gly Pro Gln Cys
245 250 255

ctg tgc cgt 777
Leu Cys Arg

<210> 21
<211> 734
<212> DNA
<213> Artificial Sequence

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

<400> 21
gactgagtcg cccgctcgag accatggaga cagacacact cctgctatgg gtactgctgc 60

tctgggttcc aggttccact ggtgactaca aggacgagca tcaccatcat caccatggtg 120

gaagccagga ctccacctca gacctgatcc cagccccacc tctgagcaag gtccctctgc 180

agcagaactt ccaggacaac caattccagg ggaagtggta tgtggtaggc ctggcaggga 240

atgcaattct cagagaagac aaagacccgc aaaagatgta tgccaccatc tatgagctga 300

aagaagacaa gagctacaat gtcacctccg tcctgtttag gaaaaagaag tgtgactact 360

ggatcaggac tttgttcca ggttgccagc ccggcgagtt cacgctgggc aacattaaga 420

gttaccctgg attaacgagt tacctcgtcc gagtggtgag caccaactac aaccagcatg 480

ctatggtgtt cttcaagaaa gtttctcaaa acagggagta cttcaagatc accctctacg 540

ggagaaccaa ggagctgact tcggaactaa aggagaactt catccgcttc tccaaatctc 600

tgggcctccc tgaaaaccac atcgtcttcc ctgtcccaat cgaccagtgt atcgacggcg 660

gaggtagcga aaacctgtat tttcagggat cctaatgttg gccatgatgt taggcggccg 720

ctaaggatcc cgga 734

<210> 22
<211> 734
<212> DNA
<213> Artificial Sequence

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

<400> 22
gactgagtcg cccgctcgag accatggaga cagacacact cctgctatgg gtactgctgc 60

tctgggttcc aggttccact ggtgactaca aggacgagca tcaccatcat caccatggtg 120

gaagccagga ctccacctca gacctgatcc cagccccacc tctgagcaag gtccctctgc 180

agcagaactt ccaggacaac caattccagg ggaagtggta tgtggtaggc ctggcaggga 240

atgcaattct cagagaagac aaagacccgc aaaagatgta tgccaccatc tatgagctga 300

aagaagacaa gagctacaat gtcacctccg tcctgtttag gaaaaagaag tgtgactact 360

ggatcaggac ttttgttcca ggttgccagc ccggcgagtt cacgctgggc aacattaaga 420

gttaccctgg attaacgagt tacctcgtcc gagtggtgag caccaactac aaccagcatg 480

ctatggtgtt cttcaagaaa gtttctcaaa acagggagta cttcaagatc accctctacg 540

ggagaaccaa ggagctgact tcggaactaa aggagaactt catccgcttc tccaaatctc 600

tgggcctccc tgaaaaccac atcgtcttcc ctgtcccaat cgaccagtgt atcgacggcg 660

gaggtagccg cgcgcgctat aaacgcggat cctaatgttg gccatgatgt taggcggccg 720

ctaaggatcc cgga 734

<210> 23
<211> 848
<212> DNA
<213> Artificial Sequence

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

<400> 23
gactgagtcg cccgctcgag accatggaga cagacacact cctgctatgg gtactgctgc 60

tctgggttcc aggttccact ggtgactaca aggacgagca tcaccatcat caccatggtg 120

gaagccagga ctccacctca gacctgatcc cagccccacc tctgagcaag gtccctctgc 180

agcagaactt ccaggacaac caattccagg ggaagtggta tgtggtaggc ctggcaggga 240

atgcaattct cagagaagac aaagacccgc aaaagatgta tgccaccatc tatgagctga 300

aagaagacaa gagctacaat gtcacctccg tcctgtttag gaaaaagaag tgtgactact 360

ggatcaggac ttttgttcca ggttgccagc ccggcgagtt cacgctgggc aacattaaga 420

gttaccctgg attaacgagt tacctcgtcc gagtggtgag caccaactac aaccagcatg 480

ctatggtgtt cttcaagaaa gtttctcaaa acagggagta cttcaagatc accctctacg 540

ggagaaccaa ggagctgact tcggaactaa aggagaactt catccgcttc tccaaatctc 600

tgggcctccc tgaaaaccac atcgtcttcc ctgtcccaat cgaccagtgt atcgacggcg 660

gaggtagcga aaacctgtat tttcagagcg attgcaaata taaatttgaa aactggggcg 720

cgtgcgatgg cggcaccggc accaaagtgc gccagggcac cctgaaaaaa gcgcgctata 780

acgcgcagtg ccaggaaacc attcgcgtga ccaaaccgtg ctaatgctgg atcccggacc 840

gcctctcc 848

<210> 24
<211> 798
<212> DNA .
<213> Artificial Sequence

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

<220>
<221> CDS
<222> (1)..(798)

<400> 24
atg gag aca gac aca ctc ctg cta tgg gta ctg ctg ctc tgg gtt cca 48
Met Glu Thr Asp Thr Leu Leu Leu Trp Val Leu Leu Leu Trp Val Pro
1 5 10 15

ggt tcc act ggt gac tac aag gac gag cat cac cat cat cac cat ggt 96
Gly Ser Thr Gly Asp Tyr Lys Asp Glu His His His His His His Gly
20 25 30

gga agc cag gac tcc acc tca gac ctg atc cca gcc cca cct ctg agc 144

Gly Ser Gln Asp Ser Thr Ser Asp Leu Ile Pro Ala Pro Pro Leu Ser
35 40 45

aag gtc cct ctg cag cag aac ttc cag gac aac caa ttc cag ggg aag 192
Lys Val Pro Leu Gln Gln Asn Phe Gln Asp Asn Gln Phe Gln Gly Lys
50 55 60

tgg tat gtg gta ggc ctg gca ggg aat gca att ctc aga gaa gac aaa 240
Trp Tyr Val Val Gly Leu Ala Gly Asn Ala Ile Leu Arg Glu Asp Lys
65 70 75 80

gac ccg caa aag atg tat gcc acc atc tat gag ctg aaa gaa gac aag 288
Asp Pro Gln Lys Met Tyr Ala Thr Ile Tyr Glu Leu Lys Glu Asp Lys
85 90 95

agc tac aat gtc acc tcc gtc ctg ttt agg aaa aag aag tgt gac tac 336
Ser Tyr Asn Val Thr Ser Val Leu Phe Arg Lys Lys Lys Cys Asp Tyr
100 105 110

tgg atc agg act ttt gtt cca ggt tgc cag ccc ggc gag ttc acg ctg 384
Trp Ile Arg Thr Phe Val Pro Gly Cys Gln Pro Gly Glu Phe Thr Leu
115 120 125

ggc aac att aag agt tac cct gga tta acg agt tac ctc gtc cga gtg 432
Gly Asn Ile Lys Ser Tyr Pro Gly Leu Thr Ser Tyr Leu Val Arg Val
130 135 140

gtg agc acc aac tac aac cag cat gct atg gtg ttc ttc aag aaa gtt 480
Val Ser Thr Asn Tyr Asn Gln His Ala Met Val Phe Phe Lys Lys Val
145 150 155 160

tct caa aac agg gag tac ttc aag atc acc ctc tac ggg aga acc aag 528
Ser Gln Asn Arg Glu Tyr Phe Lys Ile Thr Leu Tyr Gly Arg Thr Lys
165 170 175

gag ctg act tcg gaa cta aag gag aac ttc atc cgc ttc tcc aaa tct 576
Glu Leu Thr Ser Glu Leu Lys Glu Asn Phe Ile Arg Phe Ser Lys Ser
180 185 190

ctg ggc ctc cct gaa aac cac atc gtc ttc cct gtc cca atc gac cag 624
Leu Gly Leu Pro Glu Asn His Ile Val Phe Pro Val Pro Ile Asp Gln
195 200 205

tgt atc gac ggc gga ggt agc gaa aac ctg tat ttt cag agc gat tgc 672
Cys Ile Asp Gly Gly Gly Ser Glu Asn Leu Tyr Phe Gln Ser Asp Cys
210 215 220

aaa tat aaa ttt gaa aac tgg ggc gcg tgc gat ggc ggc acc ggc acc 720
Lys Tyr Lys Phe Glu Asn Trp Gly Ala Cys Asp Gly Gly Thr Gly Thr
225 230 235 240

aaa gtg cgc cag ggc acc ctg aaa aaa gcg cgc tat aac gcg cag tgc 768
Lys Val Arg Gln Gly Thr Leu Lys Lys Ala Arg Tyr Asn Ala Gln Cys
245 250 255

cag gaa acc att cgc gtg acc aaa ccg tgc 798
Gln Glu Thr Ile Arg Val Thr Lys Pro Cys
260 265

<210> 25
<211> 796
<212> DNA
<213> Artificial Sequence

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

<400> 25
gactgagtcg cccgctcgag accatggaga cagacacact cctgctatgg gtactgctgc 60

tctgggttcc aggttccact ggtgactaca aggacgagca tcaccatcat caccatggtg 120

gaagccagga ctccacctca gacctgatcc cagccccacc tctgagcaag gtccctctgc 180

agcagaactt ccaggacaac caattccagg ggaagtggta tgtggtaggc ctggcaggga 240

atgcaattct cagagaagac aaagacccgc aaaagatgta tgccaccatc tatgagctga 300

aagaagacaa gagctacaat gtcacctccg tcctgtttag gaaaaagaag tgtgactact 360

ggatcaggac ttttgttcca ggttgccagc ccggcgagtt cacgctgggc aacattaaga 420

gttaccctgg attaacgagt tacctcgtcc gagtggtgag caccaactac aaccagcatg 480

ctatggtgtt cttcaagaaa gtttctcaaa acagggagta cttcaagatc accctctacg 540

ggagaaccaa ggagctgact tcggaactaa aggagaactt catccgcttc tccaaatctc 600

tgggcctccc tgaaaaccac atcgtcttcc ctgtcccaat cgaccagtgt atcgacggcg 660

gaggtagcga aaacctgtat tttcagggag gcagcgccat cagctgcggc gagacctgct 720

tcaagttcaa gtgctacacc cccagatgca gctgcagcta ccccgtgtgc aagtaagcta 780

aggatcccgg accgcc 796

<210> 26
<211> 750
<212> DNA
<213> Artificial Sequence

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

<220>
<221> CDS
<222> (1)..(750)

<400> 26
atg gag aca gac aca ctc ctg cta tgg gta ctg ctg ctc tgg gtt cca 48
Met Glu Thr Asp Thr Leu Leu Leu Trp Val Leu Leu Leu Trp Val Pro
1 5 10 15

ggt tcc act ggt gac tac aag gac gag cat cac cat cat cac cat ggt 96
Gly Ser Thr Gly Asp Tyr Lys Asp Glu His His His His His His Gly
20 25 30

gga agc cag gac tcc acc tca gac ctg atc cca gcc cca cct ctg agc 144
Gly Ser Gln Asp Ser Thr Ser Asp Leu Ile Pro Ala Pro Pro Leu Ser
35 40 45

aag gtc cct ctg cag cag aac ttc cag gac aac caa ttc cag ggg aag 192
Lys Val Pro Leu Gln Gln Asn Phe Gln Asp Asn Gln Phe Gln Gly Lys
50 55 60

tgg tat gtg gta ggc ctg gca ggg aat gca att ctc aga gaa gac aaa 240
Trp Tyr Val Val Gly Leu Ala Gly Asn Ala Ile Leu Arg Glu Asp Lys
65 70 75 80

gac ccg caa aag atg tat gcc acc atc tat gag ctg aaa gaa gac aag 288
Asp Pro Gln Lys Met Tyr Ala Thr Ile Tyr Glu Leu Lys Glu Asp Lys

85 90 95

agc tac aat gtc acc tcc gtc ctg ttt agg aaa aag aag tgt gac tac 336
Ser Tyr Asn Val Thr Ser Val Leu Phe Arg Lys Lys Lys Cys Asp Tyr
100 105 110

tgg atc agg act ttt gtt cca ggt tgc cag ccc ggc gag ttc acg ctg 384
Trp Ile Arg Thr Phe Val Pro Gly Cys Gln Pro Gly Glu Phe Thr Leu
115 120 125

ggc aac att aag agt tac cct gga tta acg agt tac ctc gtc cga gtg 432
Gly Asn Ile Lys Ser Tyr Pro Gly Leu Thr Ser Tyr Leu Val Arg Val
130 135 140

gtg agc acc aac tac aac cag cat gct atg gtg ttc ttc aag aaa gtt 480
Val Ser Thr Asn Tyr Asn Gln His Ala Met Val Phe Phe Lys Lys Val
145 150 155 160

tct caa aac agg gag tac ttc aag atc acc ctc tac ggg aga acc aag 528
Ser Gln Asn Arg Glu Tyr Phe Lys Ile Thr Leu Tyr Gly Arg Thr Lys
165 170 175

gag ctg act tcg gaa cta aag gag aac ttc atc cgc ttc tcc aaa tct 576
Glu Leu Thr Ser Glu Leu Lys Glu Asn Phe Ile Arg Phe Ser Lys Ser
180 185 190

ctg ggc ctc cct gaa aac cac atc gtc ttc cct gtc cca atc gac cag 624
Leu Gly Leu Pro Glu Asn His Ile Val Phe Pro Val Pro Ile Asp Gln
195 200 205

tgt atc gac ggc gga ggt agc gaa aac ctg tat ttt cag gga ggc agc 672
Cys Ile Asp Gly Gly Gly Ser Glu Asn Leu Tyr Phe Gln Gly Gly Ser
210 215 220

gcc atc agc tgc ggc gag acc tgc ttc aag ttc aag tgc tac acc ccc 720
Ala Ile Ser Cys Gly Glu Thr Cys Phe Lys Phe Lys Cys Tyr Thr Pro
225 230 235 240

aga tgc agc tgc agc tac ccc gtg tgc aag 750
Arg Cys Ser Cys Ser Tyr Pro Val Cys Lys
245 250

<210> 27
<211> 745
<212> DNA

<213> Artificial Sequence

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

<400> 27
gactgagtcg cccgctcgag accatggaga cagacacact cctgctatgg gtactgctgc 60

tctgggttcc aggttccact ggtgactaca aggacgagca tcaccatcat caccatggtg 120

gaagccagga ctccacctca gacctgatcc cagccccacc tctgagcaag gtccctctgc 180

agcagaactt ccaggacaac caattccagg ggaagtggta tgtggtaggc ctggcaggga 240

atgcaattct cagagaagac aaagacccgc aaaagatgta tgccaccatc tatgagctga 300

aagaagacaa gagctacaat gtcacctccg tcctgtttag gaaaaagaag tgtgactact 360

ggatcaggac ttttgttcca ggttgccagc ccggcgagtt cacgctgggc aacattaaga 420

gttaccctgg attaacgagt tacctcgtcc gagtggtgag caccaactac aaccagcatg 480

ctatggtgtt cttcaagaaa gtttctcaaa acagggagta cttcaagatc accctctacg 540

ggagaaccaa ggagctgact tcggaactaa aggagaactt catccgcttc tccaaatctc 600

tgggcctccc tgaaaaccac atcgtcttcc ctgtcccaat cgaccagtgt atcgacggcg 660

gaggtagcga aaacctgtat tttcagggag gcgtgtgctg cggctacaag ctgtgccacc 720

cctgctaagc taaggatccc ggacc 745

<210> 28
<211> 702
<212> DNA
<213> Artificial Sequence

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

<220>
<221> CDS
<222> (1)..(702)

<400> 28
atg gag aca gac aca ctc ctg cta tgg gta ctg ctg ctc tgg gtt cca 48
Met Glu Thr Asp Thr Leu Leu Leu Trp Val Leu Leu Leu Trp Val Pro
1 5 10 15

ggt tcc act ggt gac tac aag gac gag cat cac cat cat cac cat ggt 96
Gly Ser Thr Gly Asp Tyr Lys Asp Glu His His His His His His Gly
20 25 30

gga agc cag gac tcc acc tca gac ctg atc cca gcc cca cct ctg agc 144
Gly Ser Gln Asp Ser Thr Ser Asp Leu Ile Pro Ala Pro Pro Leu Ser
35 40 45

aag gtc cct ctg cag cag aac ttc cag gac aac caa ttc cag ggg aag 192
Lys Val Pro Leu Gln Gln Asn Phe Gln Asp Asn Gln Phe Gln Gly Lys
50 55 60

tgg tat gtg gta ggc ctg gca ggg aat gca att ctc aga gaa gac aaa 240
Trp Tyr Val Val Gly Leu Ala Gly Asn Ala Ile Leu Arg Glu Asp Lys
65 70 75 80

gac ccg caa aag atg tat gcc acc atc tat gag ctg aaa gaa gac aag 288
Asp Pro Gln Lys Met Tyr Ala Thr Ile Tyr Glu Leu Lys Glu Asp Lys
85 90 95

agc tac aat gtc acc tcc gtc ctg ttt agg aaa aag aag tgt gac tac 336
Ser Tyr Asn Val Thr Ser Val Leu Phe Arg Lys Lys Lys Cys Asp Tyr
100 105 110

tgg atc agg act ttt gtt cca ggt tgc cag ccc ggc gag ttc acg ctg 384
Trp Ile Arg Thr Phe Val Pro Gly Cys Gln Pro Gly Glu Phe Thr Leu
115 120 125

ggc aac att aag agt tac cct gga tta acg agt tac ctc gtc cga gtg 432
Gly Asn Ile Lys Ser Tyr Pro Gly Leu Thr Ser Tyr Leu Val Arg Val
130 135 140

gtg agc acc aac tac aac cag cat gct atg gtg ttc ttc aag aaa gtt 480
Val Ser Thr Asn Tyr Asn Gln His Ala Met Val Phe Phe Lys Lys Val
145 150 155 160

tct caa aac agg gag tac ttc aag atc acc ctc tac ggg aga acc aag 528

Ser Gln Asn Arg Glu Tyr Phe Lys Ile Thr Leu Tyr Gly Arg Thr Lys
165 170 175

gag ctg act tcg gaa cta aag gag aac ttc atc cgc ttc tcc aaa tct 576
Glu Leu Thr Ser Glu Leu Lys Glu Asn Phe Ile Arg Phe Ser Lys Ser
180 185 190

ctg ggc ctc cct gaa aac cac atc gtc ttc cct gtc cca atc gac cag 624
Leu Gly Leu Pro Glu Asn His Ile Val Phe Pro Val Pro Ile Asp Gln
195 200 205

tgt atc gac ggc gga ggt agc gaa aac ctg tat ttt cag gga ggc gtg 672
Cys Ile Asp Gly Gly Gly Ser Glu Asn Leu Tyr Phe Gln Gly Gly Val
210 215 220

tgc tgc ggc tac aag ctg tgc cac ccc tgc 702
Cys Cys Gly Tyr Lys Leu Cys His Pro Cys
225 230

<210> 29
<211> 751
<212> DNA
<213> Artificial Sequence

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

<400> 29
gactgagtcg cccgctcgag accatggaga cagacacact cctgctatgg gtactgctgc 60

tctgggttcc aggttccact ggtgactaca aggacgagca tcaccatcat caccatggtg 120

gaagccagga ctccacctca gacctgatcc cagccccacc tctgagcaag gtccctctgc 180

agcagaactt ccaggacaac caattccagg ggaagtggta tgtggtaggc ctggcaggga 240

atgcaattct cagagaagac aaagacccgc aaaagatgta tgccaccatc tatgagctga 300

aagaagacaa gagctacaat gtcacctccg tcctgtttag gaaaaagaag tgtgactact 360

ggatcaggac ttttgttcca ggttgccagc ccggcgagtt cacgctgggc aacattaaga 420

gttaccctgg attaacgagt tacctcgtcc gagtggtgag caccaactac aaccagcatg 480

ctatggtgtt cttcaagaaa gtttctcaaa acagggagta cttcaagatc accctctacg 540

ggagaaccaa ggagctgact tcggaactaa aggagaactt catccgcttc tccaaatctc 600

tgggcctccc tgaaaaccac atcgtcttcc ctgtcccaat cgaccagtgt atcgacggcg 660

gaggtagcga aaacctgtat tttcagggag gcaacggcgt gtgctgcggc tacaagctgt 720

gccacccctg ctaagctaag gatcccggac c 751

<210> 30
<211> 708
<212> DNA
<213> Artificial Sequence

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

<220>
<221> CDS
<222> (1)..(708)

<400> 30
atg gag aca gac aca ctc ctg cta tgg gta ctg ctg ctc tgg gtt cca 48
Met Glu Thr Asp Thr Leu Leu Leu Trp Val Leu Leu Leu Trp Val Pro
1 5 10 15

ggt tcc act ggt gac tac aag gac gag cat cac cat cat cac cat ggt 96
Gly Ser Thr Gly Asp Tyr Lys Asp Glu His His His His His His Gly
20 25 30

gga agc cag gac tcc acc tca gac ctg atc cca gcc cca cct ctg agc 144
Gly Ser Gln Asp Ser Thr Ser Asp Leu Ile Pro Ala Pro Pro Leu Ser
35 40 45

aag gtc cct ctg cag cag aac ttc cag gac aac caa ttc cag ggg aag 192
Lys Val Pro Leu Gln Gln Asn Phe Gln Asp Asn Gln Phe Gln Gly Lys
50 55 60

tgg tat gtg gta ggc ctg gca ggg aat gca att ctc aga gaa gac aaa 240
Trp Tyr Val Val Gly Leu Ala Gly Asn Ala Ile Leu Arg Glu Asp Lys

65 70 75 80

gac ccg caa aag atg tat gcc acc atc tat gag ctg aaa gaa gac aag 288
Asp Pro Gln Lys Met Tyr Ala Thr Ile Tyr Glu Leu Lys Glu Asp Lys
85 90 95

agc tac aat gtc acc tcc gtc ctg ttt agg aaa aag aag tgt gac tac 336
Ser Tyr Asn Val Thr Ser Val Leu Phe Arg Lys Lys Lys Cys Asp Tyr
100 105 110

tgg atc agg act ttt gtt cca ggt tgc cag ccc ggc gag ttc acg ctg 384
Trp Ile Arg Thr Phe Val Pro Gly Cys Gln Pro Gly Glu Phe Thr Leu
115 120 125

ggc aac att aag agt tac cct gga tta acg agt tac ctc gtc cga gtg 432
Gly Asn Ile Lys Ser Tyr Pro Gly Leu Thr Ser Tyr Leu Val Arg Val
130 135 140

gtg agc acc aac tac aac cag cat gct atg gtg ttc ttc aag aaa gtt 480
Val Ser Thr Asn Tyr Asn Gln His Ala Met Val Phe Phe Lys Lys Val
145 150 155 160

tct caa aac agg gag tac ttc aag atc acc ctc tac ggg aga acc aag 528
Ser Gln Asn Arg Glu Tyr Phe Lys Ile Thr Leu Tyr Gly Arg Thr Lys
165 170 175

gag ctg act tcg gaa cta aag gag aac ttc atc cgc ttc tcc aaa tct 576
Glu Leu Thr Ser Glu Leu Lys Glu Asn Phe Ile Arg Phe Ser Lys Ser
180 185 190

ctg ggc ctc cct gaa aac cac atc gtc ttc cct gtc cca atc gac cag 624
Leu Gly Leu Pro Glu Asn His Ile Val Phe Pro Val Pro Ile Asp Gln
195 200 205

tgt atc gac ggc gga ggt agc gaa aac ctg tat ttt cag gga ggc aac 672
Cys Ile Asp Gly Gly Gly Ser Glu Asn Leu Tyr Phe Gln Gly Gly Asn
210 215 220

ggc gtg tgc tgc ggc tac aag ctg tgc cac ccc tgc 708
Gly Val Cys Cys Gly Tyr Lys Leu Cys His Pro Cys
225 230 235

<210> 31
<211> 831
<212> DNA

<213> Artificial Sequence

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

<400> 31
gactgagtcg cccgctcgag accatggaga cagacacact cctgctatgg gtactgctgc 60

tctgggttcc aggttccact ggtgactaca aggacgagca tcaccatcat caccatggtg 120

gaagccagga ctccacctca gacctgatcc cagccccacc tctgagcaag gtccctctgc 180

agcagaactt ccaggacaac caattccagg ggaagtggta tgtggtaggc ctggcaggga 240

atgcaattct cagagaagac aaagacccgc aaaagatgta tgccaccatc tatgagctga 300

aagaagacaa gagctacaat gtcacctccg tcctgtttag gaaaaagaag tgtgactact 360

ggatcaggac ttttgttcca ggttgccagc ccggcgagtt cacgctgggc aacattaaga 420

gttaccctgg attaacgagt tacctcgtcc gagtggtgag caccaactac aaccagcatg 480

ctatggtgtt cttcaagaaa gtttctcaaa acagggagta cttcaagatc accctctacg 540

ggagaaccaa ggagctgact tcggaactaa aggagaactt catccgcttc tccaaatctc 600

tgggcctccc tgaaaaccac atcgtcttcc ctgtcccaat cgaccagtgt atcgacggcg 660

gaggtagcga aaacctgtat tttcagggag gccagcagca tgcggatccg atttgcaaca 720

aaccgtgcaa aacccatgat gattgcagcg gcgcgtggtt ttgccaggcg tgctggaaca 780

gcgcgcgcac ctgcggcccg tatgtgggct aatgctaagg atcccggacc g 831

<210> 32
<211> 789
<212> DNA
<213> Artificial Sequence

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

<220>
<221> CDS
<222> (1)..(786)

<400> 32
atg gag aca gac aca ctc ctg cta tgg gta ctg ctg ctc tgg gtt cca 48
Met Glu Thr Asp Thr Leu Leu Leu Trp Val Leu Leu Leu Trp Val Pro
1 5 10 15

ggt tcc act ggt gac tac aag gac gag cat cac cat cat cac cat ggt 96
Gly Ser Thr Gly Asp Tyr Lys Asp Glu His His His His His His Gly
20 25 30

gga agc cag gac tcc acc tca gac ctg atc cca gcc cca cct ctg agc 144
Gly Ser Gln Asp Ser Thr Ser Asp Leu Ile Pro Ala Pro Pro Leu Ser
35 40 45

aag gtc cct ctg cag cag aac ttc cag gac aac caa ttc cag ggg aag 192
Lys Val Pro Leu Gln Gln Asn Phe Gln Asp Asn Gln Phe Gln Gly Lys
50 55 60

tgg tat gtg gta ggc ctg gca ggg aat gca att ctc aga gaa gac aaa 240
Trp Tyr Val Val Gly Leu Ala Gly Asn Ala Ile Leu Arg Glu Asp Lys
65 70 75 80

gac ccg caa aag atg tat gcc acc atc tat gag ctg aaa gaa gac aag 288
Asp Pro Gln Lys Met Tyr Ala Thr Ile Tyr Glu Leu Lys Glu Asp Lys
85 90 95

agc tac aat gtc acc tcc gtc ctg ttt agg aaa aag aag tgt gac tac 336
Ser Tyr Asn Val Thr Ser Val Leu Phe Arg Lys Lys Lys Cys Asp Tyr
100 105 110

tgg atc agg act ttt gtt cca ggt tgc cag ccc ggc gag ttc acg ctg 384
Trp Ile Arg Thr Phe Val Pro Gly Cys Gln Pro Gly Glu Phe Thr Leu
115 120 125

ggc aac att aag agt tac cct gga tta acg agt tac ctc gtc cga gtg 432
Gly Asn Ile Lys Ser Tyr Pro Gly Leu Thr Ser Tyr Leu Val Arg Val
130 135 140

gtg agc acc aac tac aac cag cat gct atg gtg ttc ttc aag aaa gtt 480
Val Ser Thr Asn Tyr Asn Gln His Ala Met Val Phe Phe Lys Lys Val
145 150 155 160

tct caa aac agg gag tac ttc aag atc acc ctc tac ggg aga acc aag 528
Ser Gln Asn Arg Glu Tyr Phe Lys Ile Thr Leu Tyr Gly Arg Thr Lys
165 170 175

gag ctg act tcg gaa cta aag gag aac ttc atc cgc ttc tcc aaa tct 576
Glu Leu Thr Ser Glu Leu Lys Glu Asn Phe Ile Arg Phe Ser Lys Ser
180 185 190

ctg ggc ctc cct gaa aac cac atc gtc ttc cct gtc cca atc gac cag 624
Leu Gly Leu Pro Glu Asn His Ile Val Phe Pro Val Pro Ile Asp Gln
195 200 205

tgt atc gac ggc gga ggt agc gaa aac ctg tat ttt cag gga ggc cag 672
Cys Ile Asp Gly Gly Gly Ser Glu Asn Leu Tyr Phe Gln Gly Gly Gln
210 215 220

cag cat gcg gat ccg att tgc aac aaa ccg tgc aaa acc cat gat gat 720
Gln His Ala Asp Pro Ile Cys Asn Lys Pro Cys Lys Thr His Asp Asp
225 230 235 240

tgc agc ggc gcg tgg ttt tgc cag gcg tgc tgg aac agc gcg cgc acc 768
Cys Ser Gly Ala Trp Phe Cys Gln Ala Cys Trp Asn Ser Ala Arg Thr
245 250 255

tgc ggc ccg tat gtg ggc taa 789
Cys Gly Pro Tyr Val Gly
260

<210> 33
<211> 269
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
polypeptide

<400> 33
Gly Ser Asp Ile Lys Leu Gln Gln Ser Gly Ala Glu Leu Ala Arg Pro
1 5 10 15

Gly Ala Ser Val Lys Met Ser Cys Lys Thr Ser Gly Tyr Thr Phe Thr
20 25 30

Arg Tyr Thr Met His Trp Val Lys Gln Arg Pro Gly Gln Gly Leu Glu
35 40 45

Trp Ile Gly Tyr Ile Asn Pro Ser Arg Gly Tyr Thr Asn Tyr Asn Gln
50 55 60

Lys Phe Lys Asp Lys Ala Thr Leu Thr Thr Asp Lys Ser Ser Ser Thr
65 70 75 80

Ala Tyr Met Gln Leu Ser Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr
85 90 95

Tyr Cys Ala Arg Tyr Tyr Asp Asp His Tyr Cys Leu Asp Tyr Trp Gly
100 105 110

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

Ser Gly Gly Ser Gly Gly Ser Gly Gly Val Asp Asp Ile Gln Leu Thr
130 135 140

Gln Ser Pro Ala Ile Met Ser Ala Ser Pro Gly Glu Lys Val Thr Met
145 150 155 160

Thr Cys Arg Ala Ser Ser Ser Val Ser Tyr Met Asn Trp Tyr Gln Gln
165 170 175

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

Ala Ser Gly Val Pro Tyr Arg Phe Ser Gly Ser Gly Ser Gly Thr Ser
195 200 205

Tyr Ser Leu Thr Ile Ser Ser Met Glu Ala Glu Asp Ala Ala Thr Tyr
210 215 220

Tyr Cys Gln Gln Trp Ser Ser Asn Pro Leu Thr Phe Gly Ala Gly Thr
225 230 235 240

Lys Leu Glu Leu Lys Gly Gly Gly Gly Ser Asn Ser Ser Asn Tyr Cys
245 250 255

Cys Glu Leu Cys Cys Asn Pro Ala Cys Thr Gly Cys Tyr
260 265

<210> 34
<211> 848
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 34
acctgtattt tcagggatcc gatattaaac tgcagcagag cggcgcggaa ctggcgcgcc 60

cgggcgcgag cgtgaaaatg agctgcaaaa ccagcggcta tacctttacc cgctatacca 120

tgcattgggt gaaacagcgc ccgggccagg gcctggaatg gattggctat attaacccga 180

gccgcggcta taccaactat aaccagaaat ttaaagataa agcgaccctg accaccgata 240

aaagcagcag caccgcgtat atgcagctga gcagcctgac cagcgaagat agcgcggtgt 300

attattgcgc gcgctattat gatgatcatt attgcctgga ttattggggc cagggcacca 360

ccctgaccgt gagcagcgtg gaaggcggca gcggcggcag cggcggcagc ggcggcagcg 420

gcggcgtgga tgatattcag ctgacccaga gcccggcgat tatgagcgcg agcccgggcg 480

aaaaagtgac catgacctgc cgcgcgagca gcagcgtgag ctatatgaac tggtatcagc 540

agaaaagcgg caccagcccg aaacgctgga tttatgatac cagcaaagtg gcgagcggcg 600

tgccgtatcg ctttagcggc agcggcagcg gcaccagcta tagcctgacc attagcagca 660

tggaagcgga agatgcggcg acctattatt gccagcagtg gagcagcaac ccgctgacct 720

ttggcgcggg caccaaactg gaactgaaag gcggcggcgg cagcaacagc agcaactatt 780

gctgcgaact gtgctgcaac ccggcgtgca ccggctgcta ttaatgcggc cgctcatcac 840

cattaatc 848

<210> 35
<211> 684
<212> DNA
<213> Artificial Sequence

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

<400> 35
ctcgagacca tggagacaga cacactcctg ctatgggtac tgctgctctg ggttccaggt 60

tccactggtg actacaagga cgagcatcac catcatcacc atggtggaag ccaggactcc 120

acctcagacc tgatcccagc cccacctctg agcaaggtcc ctctgcagca gaacttccag 180

gacaaccaat tccaggggaa gtggtatgtg gtaggcctgg cagggaatgc aattctcaga 240

gaagacaaag acccgcaaaa gatgtatgcc accatctatg agctgaaaga agacaagagc 300

tacaatgtca cctccgtcct gtttaggaaa aagaagtgtg actactggat caggactttt 360

gttccaggtt gccagcccgg cgagttcacg ctgggcaaca ttaagagtta ccctggatta 420

acgagttacc tcgtccgagt ggtgagcacc aactacaacc agcatgctat ggtgttcttc 480

aagaaagttt ctcaaaacag ggagtacttc aagatcaccc tctacgggag aaccaaggag 540

ctgacttcgg aactaaagga gaacttcatc cgcttctcca aatctctggg cctccctgaa 600

aaccacatcg tcttccctgt cccaatcgac cagtgtatcg acggcggagg tagcgaaaac 660

ctgtattttc agggaggcgg ccgc 684

<210> 36
<211> 1402
<212> DNA
<213> Artificial Sequence

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

<400> 36
ctcgagacca tggagacaga cacactcctg ctatgggtac tgctgctctg ggttccaggt 60

tccactggtg actacaagga cgagcatcac catcatcacc atggtggaag ccaggactcc 120

acctcagacc tgatcccagc cccacctctg agcaaggtcc ctctgcagca gaacttccag 180

gacaaccaat tccaggggaa gtggtatgtg gtaggcctgg cagggaatgc aattctcaga 240

gaagacaaag acccgcaaaa gatgtatgcc accatctatg agctgaaaga agacaagagc 300

tacaatgtca cctccgtcct gtttaggaaa aagaagtgtg actactggat caggactttt 360

gttccaggtt cccagcccgg cgagttcacg ctgggcaaca ttaagagtta ccctggatta 420

acgagttacc tcgtccgagt ggtgagcacc aactacaacc agcatgctat ggtgttcttc 480

aagaaagttt ctcaaaacag ggagtacttc aagatcaccc tctacgggag aaccaaggag 540

ctgacttcgg aactaaagga gaacttcatc cgcttctcca aatctctggg cctccctgaa 600

aaccacatcg tcttccctgt cccaatcgac cagtgtatcg acggcggagg tagcgaaaac 660

ctgtattttc agggatccat gtacggtctt aagggacccg acatttacaa aggagtttac 720

caatttaagt cagtggagtt tgatatgtca catctgaacc tgaccatgcc caacgcatgt 780

tcagccaaca actcccacca ttacatcagt atggggactt ctggactaga attgaccttc 840

accaatgatt ccatcatcag tcacaacttt tgcaatctga cctctgcctt caacaaaaag 900

acctttgacc acacactcat gagtatagtt tcgagcctac acctcagtat cagagggaac 960

tccaactata aggcagtatc ctgcgacttc aacaatggca taaccatcca atacaacttg 1020

acattctcag atcgacaaag tgctcagagc cagtgtagaa ccttcagagg tagagtccta 1080

gatatgttta gaactgcctt cgggggggaaa tacatgagga gtggctgggg ctggacaggc 1140

tcagatggca agaccacctg gtgtagccag acgagttacc aatacctgat tatacaaaat 1200

agaacctggg aaaaccactg cacatatgca ggtccttttg ggatgtccag gattctcctt 1260

tcccaagaga agactaagtt cttcactagg agactggtgc ccaggggcag cggcctgaac 1320

gacatcttcg aggcccagaa gatcgagtgg cacgagtaat gcggccgctc atcaccatta 1380

atcatcacca ttaatcggac cg 1402

<210> 37
<211> 1299
<212> DNA
<213> Artificial Sequence

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

<400> 37
ctcgagacca tggatttcca ggtgcagatt tttagctttc tgctgatttc cgcttccgtg 60

attatgagcc gaggcgacat tgtgatgacc caggcagctc ctagcgtgcc agtcacccca 120

ggagagtcag tgagcatctc ctgcagaagt actaagtcac tgctgcacag caacggcaat 180

acctacctgt attggttcct gcagagacct gggcagtccc cacagaggct gatctactat 240

atgagtaacc tggcatcagg agtgcctgac aggttcagcg gacgaggcag cggcactgat 300

tttaccctgc ggatttctag agtggaggca gaagacgccg gcgtctacta ttgcatgcag 360

agtctggagt acccttatac tttcggcggg ggaaccaaac tggaaatcaa gagggccgat 420

gccgctccaa ccgtgtccat ttttccccct agctccgagc agctgacatc tggcggggct 480

agtgtggtct gtttcctgaa caatttttac ccaaaggaca tcaacgtgaa atggaagatt 540

gatggaagtg aaaggcagaa cggcgtcctg aattcatgga cagaccagga tagcaaagac 600

tccacttatt ctatgtctag taccctgaca ctgactaagg atgagtacga acgccacaat 660

tcttatacat gcgaggcaac tcataaaacc tctacaagtc ccatcgtgaa gagctttaac 720

cgaaatgaat gcggccgcgg aggctccgga ggctcccagg actcaacaag cgatctgatt 780

ccagccccac ccctgagcaa agtgcccctg cagcagaact tccaggacaa tcagtttcag 840

ggcaagtggt acgtggtcgg gctggctgga aacgcaatcc tgcgggagga caaagatccc 900

cagaagatgt acgccactat ctacgagctg aaagaagaca agtcatacaa tgtgaccagc 960

gtcctgttcc gcaagaaaaa gtgtgattat tggatcagaa cattcgtgcc cggctcccag 1020

cctggggagt ttactctggg gaatattaag tcctaccctg gactgacctc ttatctggtg 1080

cgagtggtct ctacaaacta caatcagcat gctatggtgt tctttaaaaa ggtcagccag 1140

aaccgggagt actttaaaat caccctgtat ggcagaacca aagaactgac aagcgagctg 1200

aaggaaaatt tcattcgctt ttccaagtct ctggggctgc cagagaatca tattgtgttc 1260

ccagtcccca ttgaccagtg tattgacggg tgaggatcc 1299

<210> 38
<211> 606
<212> DNA
<213> Artificial Sequence

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

<400> 38
ctcgagatgc ccctgggcct gctgtggctg ggcctggccc tgctgggcgc cctgcacgcc 60

caggcccagg actccacctc agacctgtgt ccagccccac ctctgagcaa ggtccctctg 120

cagcagaact tccaggacaa ccaattccag gggaagtggt atgtggtagg cctggcaggg 180

tgtgcaattc tcagagaaga caaagacccg caaaagatgt atgccaccat ctatgagctg 240

aaagaagaca agagctacaa tgtcacctcc gtcctgttta ggaaaaagaa gtgtgactac 300

tggatcagga cttttgttcc aggttcccag ccgggcgagt tcacgctggg caacattaag 360

agttaccctg gattaacgag ttacctcgtc cgagtggtga gcaccaacta caaccagcat 420

gctatggtgt tcttcaagaa agtttctcaa aacagggagt acttcaagat caccctctac 480

gggagaacca aggagctgac ttcggaacta aaggagaact tcatccgctt ctccaaatct 540

ctgggcctcc ctgaaaacca catcgtcttc cctgtcccaa tcgaccagtg tatcgacggc 600

ggatcc 606

<210> 39
<211> 178
<212> PRT
<213> Homo sapiens

<400> 39
Gln Asp Ser Thr Ser Asp Leu Ile Pro Ala Pro Pro Leu Ser Lys Val
1 5 10 15

Pro Leu Gln Gln Asn Phe Gln Asp Asn Gln Phe Gln Gly Lys Trp Tyr
20 25 30

Val Val Gly Leu Ala Gly Asn Ala Ile Leu Arg Glu Asp Lys Asp Pro
35 40 45

Gln Lys Met Tyr Ala Thr Ile Tyr Glu Leu Lys Glu Asp Lys Ser Tyr
50 55 60

Asn Val Thr Ser Val Leu Phe Arg Lys Lys Lys Cys Asp Tyr Trp Ile
65 70 75 80

Arg Thr Phe Val Pro Gly Cys Gln Pro Gly Glu Phe Thr Leu Gly Asn
85 90 95

Ile Lys Ser Tyr Pro Gly Leu Thr Ser Tyr Leu Val Arg Val Val Ser
100 105 110

Thr Asn Tyr Asn Gln His Ala Met Val Phe Phe Lys Lys Val Ser Gln
115 120 125

Asn Arg Glu Tyr Phe Lys Ile Thr Leu Tyr Gly Arg Thr Lys Glu Leu
130 135 140

Thr Ser Glu Leu Lys Glu Asn Phe Ile Arg Phe Ser Lys Ser Leu Gly
145 150 155 160

Leu Pro Glu Asn His Ile Val Phe Pro Val Pro Ile Asp Gln Cys Ile
165 170 175

Asp Gly

<210> 40
<211> 178
<212> PRT
<213> Pan troglodytes

<400> 40
Gln Asp Ser Thr Ser Asp Leu Ile Pro Ala Pro Pro Leu Ser Lys Val
1 5 10 15

Pro Leu Gln Gln Asn Phe Gln Asp Asn Gln Phe Gln Gly Lys Trp Tyr
20 25 30

Val Val Gly Leu Ala Gly Asn Ala Ile Leu Arg Glu Asp Lys Asp Pro
35 40 45

Gln Lys Met Tyr Ala Thr Ile Tyr Glu Leu Lys Glu Asp Lys Ser Tyr
50 55 60

Asn Val Thr Ser Val Leu Phe Arg Lys Lys Lys Cys Asp Tyr Trp Ile
65 70 75 80

Arg Thr Phe Val Pro Gly Arg Gln Pro Gly Glu Phe Thr Leu Gly Asn
85 90 95

Ile Lys Ser Tyr Pro Gly Leu Thr Ser Tyr Leu Val Arg Val Val Ser
100 105 110

Thr Asn Tyr Asn Gln His Ala Met Val Phe Phe Lys Lys Val Ser Gln
115 120 125

Asn Arg Glu Tyr Phe Lys Ile Thr Leu Tyr Gly Arg Thr Lys Glu Leu
130 135 140

Thr Ser Glu Leu Gln Glu Asn Phe Ile Arg Phe Ser Lys Ser Leu Gly
145 150 155 160

Leu Pro Glu Asn His Ile Val Phe Pro Val Pro Ile Asp Gln Cys Ile
165 170 175

Asp Gly

<210> 41
<211> 178
<212> PRT
<213> Canis familiaris

<400> 41
Gln Asp Ser Thr Pro Ser Leu Ile Pro Ala Pro Pro Pro Leu Lys Val
1 5 10 15

Pro Leu Gln Pro Asp Phe Gln His Asp Gln Phe Gln Gly Lys Trp Tyr
20 25 30

Val Ile Gly Ile Ala Gly Asn Ile Leu Lys Lys Glu Gly His Gly Gln
35 40 45

Leu Lys Met Tyr Thr Thr Thr Tyr Glu Leu Lys Asp Asp Gln Ser Tyr
50 55 60

Asn Val Thr Ser Thr Leu Leu Arg Asn Glu Arg Cys Asp Tyr Trp Asn
65 70 75 80

Arg Asp Phe Val Pro Ser Phe Gln Pro Gly Gln Phe Ser Leu Gly Asp
85 90 95

Ile Gln Leu Tyr Pro Gly Val Gln Ser Tyr Leu Val Gln Val Val Ala
100 105 110

Thr Asn Tyr Asn Gln Tyr Ala Leu Val Tyr Phe Arg Lys Val Tyr Lys
115 120 125

Ser Gln Glu Tyr Phe Lys Ile Thr Leu Tyr Gly Arg Thr Lys Glu Leu
130 135 140

Pro Leu Glu Leu Lys Lys Glu Phe Ile Arg Phe Ala Lys Ser Ile Gly
145 150 155 160

Leu Thr Glu Asp His Ile Ile Phe Pro Val Pro Ile Asp Gln Cys Ile
165 170 175

Asp Glu

<210> 42
<211> 179
<212> PRT
<213> Bos taurus

<400> 42
Arg Ser Ser Ser Ser Arg Leu Leu Arg Ala Pro Pro Leu Ser Arg Ile
1 5 10 15

Pro Leu Gln Pro Asn Phe Gln Ala Asp Gln Phe Gln Gly Lys Trp Tyr
20 25 30

Thr Val Gly Val Ala Gly Asn Ala Ile Lys Lys Glu Glu Gln Asp Pro
35 40 45

Leu Lys Met Tyr Ser Ser Asn Tyr Glu Leu Lys Glu Asp Gly Ser Tyr
50 55 60

Asn Val Thr Ser Ile Leu Leu Lys Asp Asp Leu Cys Asp Tyr Trp Ile
65 70 75 80

Arg Thr Phe Val Pro Ser Ser Gln Pro Gly Gln Phe Thr Leu Gly Asn
85 90 95

Ile Lys Ser Tyr Arg Gly Ile Arg Ser Tyr Thr Val Arg Val Val Asn
100 105 110

Thr Asp Tyr Asn Gln Phe Ala Ile Val Tyr Phe Lys Lys Val Gln Arg
115 120 125

Lys Lys Thr Tyr Phe Lys Ile Thr Leu Tyr Gly Arg Thr Lys Glu Leu
130 135 140

Thr Pro Glu Val Arg Glu Asn Phe Ile Asn Phe Ala Lys Ser Leu Gly
145 150 155 160

Leu Thr Asp Asp His Ile Val Phe Thr Val Pro Ile Asp Arg Cys Ile
165 170 175

Asp Asp Gln

<210> 43

<211> 180
<212> PRT
<213> Mus musculus

<400> 43
Gln Asp Ser Thr Gln Asn Leu Ile Pro Ala Pro Ser Leu Leu Thr Val
1 5 10 15

Pro Leu Gln Pro Asp Phe Arg Ser Asp Gln Phe Arg Gly Arg Trp Tyr
20 25 30

Val Val Gly Leu Ala Gly Asn Ala Val Gln Lys Lys Thr Glu Gly Ser
35 40 45

Phe Thr Met Tyr Ser Thr Ile Tyr Glu Leu Gln Glu Asn Asn Ser Tyr
50 55 60

Asn Val Thr Ser Ile Leu Val Arg Asp Gln Asp Gln Gly Cys Arg Tyr
65 70 75 80

Trp Ile Arg Thr Phe Val Pro Ser Ser Arg Ala Gly Gln Phe Thr Leu
85 90 95

Gly Asn Met His Arg Tyr Pro Gln Val Gln Ser Tyr Asn Val Gln Val
100 105 110

Ala Thr Thr Asp Tyr Asn Gln Phe Ala Met Val Phe Phe Arg Lys Thr
115 120 125

Ser Glu Asn Lys Gln Tyr Phe Lys Ile Thr Leu Tyr Gly Arg Thr Lys
130 135 140

Glu Leu Ser Pro Glu Leu Lys Glu Arg Phe Thr Arg Phe Ala Lys Ser
145 150 155 160

Leu Gly Leu Lys Asp Asp Asn Ile Ile Phe Ser Val Pro Thr Asp Gln

165 170 175

Cys Ile Asp Asn
180

<210> 44
<211> 178
<212> PRT
<213> Rattus norvegicus

<400> 44
Gln Asp Ser Thr Gln Asn Leu Ile Pro Ala Pro Pro Leu Ile Ser Val
1 5 10 15

Pro Leu Gln Pro Gly Phe Trp Thr Glu Arg Phe Gln Gly Arg Trp Phe
20 25 30

Val Val Gly Leu Ala Ala Asn Ala Val Gln Lys Glu Arg Gln Ser Arg
35 40 45

Phe Thr Met Tyr Ser Thr Ile Tyr Glu Leu Gln Glu Asp Asn Ser Tyr
50 55 60

Asn Val Thr Ser Ile Leu Val Arg Gly Gln Gly Cys Arg Tyr Trp Ile
65 70 75 80

Arg Thr Phe Val Pro Ser Ser Arg Pro Gly Gln Phe Thr Leu Gly Asn
85 90 95

Ile His Ser Tyr Pro Gln Ile Gln Ser Tyr Asp Val Gln Val Ala Asp
100 105 110

Thr Asp Tyr Asp Gln Phe Ala Met Val Phe Phe Gln Lys Thr Ser Glu
115 120 125

Asn Lys Gln Tyr Phe Lys Val Thr Leu Tyr Gly Arg Thr Lys Gly Leu

130 135 140

Ser Asp Glu Leu Lys Glu Arg Phe Val Ser Phe Ala Lys Ser Leu Gly
145 150 155 160

Leu Lys Asp Asn Asn Ile Val Phe Ser Val Pro Thr Asp Gln Cys Ile
165 170 175

Asp Asn

<210> 45
<211> 178
<212> PRT
<213> Macaca mulatta

<400> 45
Gln Asp Ser Ser Ser Asp Leu Ile Pro Ala Pro Pro Leu Ser Lys Val
1 5 10 15

Pro Leu Gln Gln Asn Phe Gln Asp Asn Gln Phe Gln Gly Lys Trp Tyr
20 25 30

Val Val Gly Leu Ser Gly Asn Ala Val Gly Arg Lys Asp Glu Ala Pro
35 40 45

Leu Lys Met Tyr Ala Thr Ile Tyr Glu Leu Lys Glu Asp Lys Ser Tyr
50 55 60

Asn Val Thr Ser Ile Leu Phe Arg Lys Glu Lys Cys Asp Tyr Trp Ile
65 70 75 80

Arg Thr Phe Val Pro Gly Ser Gln Pro Gly Glu Phe Thr Leu Gly Asn
85 90 95

Ile Gln Asn His Pro Gly Leu Thr Ser Tyr Val Val Arg Val Val Ser

100 105 110

Thr Asn Tyr Lys Gln Tyr Ala Met Val Phe Phe Lys Lys Val Ser Gln
115 120 125

Asn Lys Glu Tyr Phe Lys Ile Thr Leu Tyr Gly Arg Thr Lys Glu Leu
130 135 140

Thr Ser Glu Leu Lys Glu Asn Phe Ile Arg Phe Ser Lys Ser Leu Gly
145 150 155 160

Leu Pro Glu Asn His Ile Val Phe Ser Val Pro Ile Asp Gln Cys Ile
165 170 175

Asn Gly

<210> 46
<211> 181
<212> PRT
<213> Tursiops truncatus

<400> 46
Gln Asp Ser Thr Pro Asn Leu Ile Pro Ala Pro Pro Leu Phe Arg Val
1 5 10 15

Pro Leu Gln Pro Asn Phe Gln Pro Asp Gln Phe Gln Gly Lys Trp Tyr
20 25 30

Ile Val Gly Leu Ala Gly Asn Ala Phe Lys Lys Glu Lys Gln Gly Gln
35 40 45

Phe Lys Met Tyr Ala Thr Thr Tyr Glu Leu Lys Glu Asp Arg Ser Tyr
50 55 60

Asn Val Thr Ser Ala Leu Leu Arg Gly Lys Thr Gln Arg Cys Asp His

65 70 75 80

Trp Ile Arg Thr Phe Val Pro Ser Ser Arg Pro Gly Gln Phe Thr Leu
85 90 95

Gly Asn Ile Lys Gly Phe Pro Gly Val Gln Ser Tyr Thr Val Arg Val
100 105 110

Ala Thr Thr Asn Tyr Asn Gln Phe Ala Ile Val Tyr Phe Lys Lys Val
115 120 125

Tyr Lys Asn Gln Glu Tyr Phe Lys Thr Thr Leu Tyr Gly Arg Thr Lys
130 135 140

Glu Leu Thr Pro Gln Leu Lys Glu Asn Phe Ile His Phe Ala Lys Ser
145 150 155 160

Leu Gly Leu Thr Asp Glu Tyr Ile Leu Phe Pro Val Pro Ile Asp Lys
165 170 175

Cys Ile Asp Asp Gln
180

<210> 47
<211> 180
<212> PRT
<213> Gorilla gorilla

<400> 47
Gln Asp Ser Thr Ser Asp Leu Ile Pro Ala Pro Pro Leu Ser Lys Val
1 5 10 15

Pro Leu Gln Gln Asn Phe Gln Asp Asn Gln Phe Gln Gly Lys Trp Tyr
20 25 30

Val Val Gly Leu Ala Gly Asn Ala Ile Leu Arg Glu Asp Lys Asp Pro

35 40 45

Gln Lys Met Tyr Ala Thr Ile Tyr Glu Leu Lys Glu Asp Lys Ser Tyr
50 55 60

Asn Val Thr Ser Val Leu Phe Arg Glu Lys Ala Gln Lys Cys Asp Tyr
65 70 75 80

Trp Ile Arg Thr Phe Val Pro Gly Ser Gln Pro Gly Glu Phe Thr Leu
85 90 95

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

Val Ser Thr Asn Tyr Asn Gln His Ala Met Val Phe Phe Lys Lys Val
115 120 125

Ser Gln Asn Arg Glu Tyr Phe Lys Ile Thr Leu Tyr Gly Arg Thr Lys
130 135 140

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

Leu Gly Leu Pro Glu Asn His Ile Val Phe Pro Val Pro Ile Asp Gln
165 170 175

Cys Ile Asp Gly
180

<210> 48
<211> 179
<212> PRT
<213> Procavia capensis

<400> 48
Gln Glu Pro Thr Pro Thr Leu Ile Pro Ala Pro Pro Leu Ser Ser Ile

1 5 10 15

Pro Leu Lys Pro Asn Phe His Asn Asp Lys Phe Gln Gly Lys Trp Tyr
20 25 30

Val Val Gly Val Ala Gly Asn Ala Ile Thr Lys Glu Lys Asp Pro Ser
35 40 45

Leu Met Tyr Thr Thr Thr Tyr Glu Leu Arg Asp Asp Gly Ser Tyr Asn
50 55 60

Val Thr Ser Thr Gln Phe Arg Glu Lys Ile Asn Cys Thr His Trp Thr
65 70 75 80

Arg Thr Phe Val Pro Thr Ser Gln Pro Gly Gln Phe Ser Leu Gly Asn
85 90 95

Ile Asp Lys Tyr Pro His Leu Ser Ser Tyr Thr Val Arg Val Thr Ala
100 105 110

Thr Asn Tyr Asn Tyr Phe Ala Ile Val Tyr Phe Lys Lys Val Ser Lys
115 120 125

Asn Gln Glu Tyr Phe Lys Thr Thr Leu Tyr Lys Arg Ile Lys Lys Leu
130 135 140

Thr His Gly Leu Lys Lys His Phe Ile Gln Phe Ala Lys Ser Leu Gly
145 150 155 160

Leu Pro Asp Asn His Ile Thr Phe Leu Val Pro Thr Asp Arg Cys Ile
165 170 175

Asp Asp Ala

<210> 49
<211> 179
<212> PRT
<213> Callithrix jacchus

<400> 49
Gln Asp Ser Pro Ser Pro Leu Ile Pro Ala Pro Pro Leu Ser Lys Val
1 5 10 15

Pro Leu Gln Gln Asn Phe Gln Asp Asn Gln Phe Gln Gly Lys Trp Tyr
20 25 30

Val Val Gly Leu Ala Gly Asn Ala Ile Arg Arg Glu Asp Gln Asp Ser
35 40 45

Leu Lys Met Tyr Ala Thr Ile Tyr Glu Leu Lys Glu Asp Lys Ser Tyr
50 55 60

Asn Val Thr Ser Val Leu Phe Arg Lys Ala Gln Lys Cys Asp Tyr Trp
65 70 75 80

Ile Arg Thr Phe Val Pro Ser Ser Arg Pro Gly Glu Phe Lys Leu Gly
85 90 95

Asn Ile Glu Ser His Pro Gly Leu Thr Ser Tyr Ile Val Arg Val Val
100 105 110

Asn Thr Asp Tyr Lys Gln His Ala Met Val Phe Phe Met Lys Ala Ser
115 120 125

His Asn Arg Lys Tyr Phe Lys Val Thr Leu Tyr Gly Arg Thr Lys Glu
130 135 140

Leu Thr Ser Asp Leu Lys Glu Asn Phe Thr Ser Phe Ser Lys Ser Leu
145 150 155 160

Gly Leu Thr Glu Asn His Ile Ile Phe Pro Val Pro Ile Asp Gln Cys
165 170 175

Ile Asp Gly

<210> 50
<211> 178
<212> PRT
<213> Microcebus murinus

<400> 50
Gln Asp Ser Lys Glu Lys Leu Ile Pro Ala Pro Pro Leu Leu Arg Val
1 5 10 15

Pro Leu Gln Pro Asp Phe Gln Asp Asp Gln Phe Arg Glu Thr Ser Trp
20 25 30

Pro Arg Gly Ser Lys Met Lys Glu Thr Pro Ala Gly Ser Arg Asp Ala
35 40 45

Gly Thr Gly Trp Ala Thr Thr Tyr Glu Leu Lys Asp His Ser Tyr Asn
50 55 60

Val Thr Ser Thr Leu Leu Arg Gln Asn Gly Lys Cys Asp Tyr Trp Ile
65 70 75 80

Arg Thr Phe Val Leu Thr Ser Gln Pro Gly Gln Phe Ala Leu Gly Asn
85 90 95

Ile Asn Arg Tyr Pro Gly Ile Gln Ser Tyr Thr Val Arg Val Val Thr
100 105 110

Thr Asn Tyr Asn Gln Phe Ala Ile Val Phe Phe Lys Lys Val Ser Glu
115 120 125

Asn Lys Glu Tyr Phe Lys Thr Thr Leu Tyr Gly Arg Thr Lys Glu Leu
130 135 140

Pro Pro Glu Leu Lys Glu Asn Phe Ile Arg Phe Ala Lys Ser Leu Gly
145 150 155 160

Leu Thr Glu Asp His Ile Ile Tyr Pro Val Pro Ile Asp Gln Cys Ile
165 170 175

Asp Asp

<210> 51
<211> 178
<212> PRT
<213> Pongo pygmaeus

<400> 51
Gln Asp Ser Thr Ser Asp Leu Ile Pro Ala Pro Pro Leu Ser Lys Val
1 5 10 15

Pro Leu Gln Gln Asn Phe Gln Asp Asn Gln Phe Gln Gly Lys Trp Tyr
20 25 30

Val Val Gly Leu Ala Gly Asn Ala Ile Arg Arg Glu Asp Lys Asp Ser
35 40 45

Gln Lys Met Tyr Ala Thr Ile Tyr Glu Leu Lys Glu Asp Lys Ser Tyr
50 55 60

Asn Val Thr Ser Val Leu Phe Arg Lys Lys Lys Cys Asp Tyr Trp Ile
65 70 75 80

Arg Thr Phe Val Pro Gly Ser Gln Pro Gly Glu Phe Thr Leu Gly Asn
85 90 95

Thr Lys Gly Tyr Pro Gly Leu Thr Ser Tyr Leu Val Arg Val Val Ser
100 105 110

Thr Asn Tyr Asn Gln Tyr Ala Met Val Phe Phe Lys Lys Val Ser Gln
115 120 125

Asn Arg Glu Tyr Phe Lys Ile Thr Leu Tyr Gly Arg Thr Lys Glu Leu
130 135 140

Thr Ser Glu Leu Lys Glu Asn Phe Ile Arg Phe Ser Lys Ser Leu Gly
145 150 155 160

Leu Pro Glu Asn His Ile Val Phe Pro Ala Pro Ile Asp Gln Cys Ile
165 170 175

Asp Gly

<210> 52
<211> 181
<212> PRT
<213> Ochotona princeps

<400> 52
Gln Glu Leu Thr Thr Asp Leu Ile Pro Val Pro Ser Leu Arg Lys Ile
1 5 10 15

His Val Gln Lys Asn Phe Gln Ser Asp Gln Phe Gln Gly Lys Trp Tyr
20 25 30

Val Val Gly Leu Ala Gly Asn Asn Ile His Asn Ser Asp Gln Glu His
35 40 45

Gln Gln Met Tyr Ser Thr Thr Tyr Glu Leu Lys Glu Asp Gly Ser Tyr
50 55 60

Asn Val Thr Ser Thr Leu Leu Arg Gln Arg Asn Gln Gln Cys Asp His
65 70 75 80

Trp Ile Arg Thr Phe Val Pro Gly Ser Lys Leu Gly His Phe Asn Leu
85 90 95

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

Val Thr Thr Asp Tyr Asn Gln Phe Ala Ile Val Phe Phe Arg Lys Val
115 120 125

Tyr Lys Asn Asn Lys Lys Phe Phe Lys Ile Val Leu Tyr Gly Arg Thr
130 135 140

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

Thr Leu Gly Leu Thr Asp Asn His Ile Val Phe Pro Ala Pro Ile Gly
165 170 175

Gln Cys Ile Asp Asp
180

<210> 53
<211> 178
<212> PRT
<213> Loxodonta africana

<400> 53
Gln Thr His Ser Pro Thr Leu Ile Pro Ala Pro Pro Leu Leu Arg Val
1 5 10 15

Pro Leu Gln Pro Asp Phe Gln Asp Asp Lys Phe Gln Gly Lys Trp Tyr
20 25 30

Val Ile Gly Leu Ala Gly Asn Ala Val Glu Lys Lys Glu Gln Gly Gln
35 40 45

Phe Lys Met Tyr Thr Thr Thr Tyr Glu Leu Lys Glu Asp Gly Ser Tyr
50 55 60

Asn Val Thr Ser Thr Leu Leu Gln Glu Asp Gly Lys Cys Ser Tyr Trp
65 70 75 80

Ile Arg Thr Phe Val Pro Ser Phe Gln Pro Gly Gln Phe Asn Leu Gly
85 90 95

Asn Ile Lys Asn Phe Pro Gly Leu Gln Ser Tyr Thr Val Arg Val Thr
100 105 110

Ala Thr Asn Tyr Asn Gln Phe Ala Ile Val Phe Phe Lys Lys Val Ser
115 120 125

Lys Asn Gly Glu Tyr Phe Lys Thr Thr Leu Tyr Gly Arg Thr Lys Glu
130 135 140

Leu Thr Pro Glu Leu Lys Glu Arg Phe Ile Arg Phe Ala Lys Ser Leu
145 150 155 160

Gly Leu Ser Asp His Ile Ile Phe Pro Val Pro Ile Asp Arg Cys Ile
165 170 175

Asp Asp

<210> 54
<211> 178
<212> PRT
<213> Oryctolagus cuniculus

<400> 54

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

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

Val Val Gly Leu Ala Gly Asn Ala Val Gln Lys Arg Glu Glu Gly Gln
35 40 45

Glu Pro Met Tyr Ser Thr Thr Tyr Glu Leu Asn Glu Asp Arg Ser Phe
50 55 60

Asn Val Thr Ser Thr Leu Leu Arg Asp Gln Arg Cys Asp His Trp Ile
65 70 75 80

Arg Thr Phe Val Pro Thr Ser Arg Pro Gly Gln Tyr Asn Leu Gly Asn
85 90 95

Ile Lys Ser Tyr Pro Gly Val Lys Asn Tyr Ile Val Arg Val Val Ala
100 105 110

Thr Asp Tyr Ser Gln Tyr Ala Met Met Phe Phe Arg Lys Gly Ser Arg
115 120 125

Asn Lys Gln Phe Phe Lys Thr Thr Leu Tyr Gly Arg Thr Lys Glu Leu
130 135 140

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

Leu Pro Asp Asp Arg Ile Val Phe Pro Thr Pro Ile Asp Gln Cys Ile
165 170 175

Asp Asp

<210> 55
<211> 997
<212> DNA
<213> Artificial Sequence

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

<400> 55
ctcgagacca tggagaccga cacgctcttg ttgtgggttc tcttgttgtg ggtgcctggg 60

tctacaggcg accaccacca tcatcaccac ctcgttccta gaggcagcca ggatagtacc 120

cagaatctta tcccagcacc atctttgctc acagtaccat tgcaacccga ctttcggtct 180

gatcaatttc ggggacgctg gtacgtggtt ggactggccg gcaatgctgt acagaaaaaa 240

acagagggca gtttcaccat gtactcaaca atctatgagc tccaagagaa taatagttac 300

aacgttacct ccatcttggt gagggaccag gatcagggat gtcgctactg gattcggaca 360

ttcgtaccaa gttctcgggc cggtcagttt actctgggca acatgcacag gtatccccaa 420

gttcaatctt acaacgtgca ggtggcgact accgactaca accaattcgc tatggtgttc 480

ttccgcaaaa caagcgagaa caagcagtat tttaaaatca ctctgtacgg tagaactaag 540

gagctgagcc ctgaacttaa ggagcggttc accagattcg ctaagtccct gggactgaag 600

gatgataata taatcttttc cgtccccacc gatcagtgta tcgataattc agcttggtca 660

catccccagt tcgagaaagg aggcggtgga tccatgcatg gcgacactcc gaccctgcac 720

gaatacatgc tggacctgca gcccgaaacc actgacctgt attgttacga gcaactcaac 780

gattctagcg aggaggagga cgagatcgat ggaccggcag gccaggccga accagaccgc 840

gcacattata acattgttac cttctgttgc aaatgtgatt caactcttag actttgtgtc 900

cagagtacac acgtggacat ccgcaccctg gaagatctgc tgatgggaac tctgggtatc 960

gtgtgtccta tatgtagcca gaaaccctga cggaccg 997

<210> 56
<211> 326
<212> PRT
<213> Artificial Sequence

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

<400> 56
Met Glu Thr Asp Thr Leu Leu Leu Trp Val Leu Leu Leu Trp Val Pro
1 5 10 15

Gly Ser Thr Gly Asp His His His His His His Leu Val Pro Arg Gly
20 25 30

Ser Gln Asp Ser Thr Gln Asn Leu Ile Pro Ala Pro Ser Leu Leu Thr
35 40 45

Val Pro Leu Gln Pro Asp Phe Arg Ser Asp Gln Phe Arg Gly Arg Trp
50 55 60

Tyr Val Val Gly Leu Ala Gly Asn Ala Val Gln Lys Lys Thr Glu Gly
65 70 75 80

Ser Phe Thr Met Tyr Ser Thr Ile Tyr Glu Leu Gln Glu Asn Asn Ser
85 90 95

Tyr Asn Val Thr Ser Ile Leu Val Arg Asp Gln Asp Gln Gly Cys Arg
100 105 110

Tyr Trp Ile Arg Thr Phe Val Pro Ser Ser Arg Ala Gly Gln Phe Thr
115 120 125

Leu Gly Asn Met His Arg Tyr Pro Gln Val Gln Ser Tyr Asn Val Gln
130 135 140

Val Ala Thr Thr Asp Tyr Asn Gln Phe Ala Met Val Phe Phe Arg Lys
145 150 155 160

Thr Ser Glu Asn Lys Gln Tyr Phe Lys Ile Thr Leu Tyr Gly Arg Thr
165 170 175

Lys Glu Leu Ser Pro Glu Leu Lys Glu Arg Phe Thr Arg Phe Ala Lys
180 185 190

Ser Leu Gly Leu Lys Asp Asp Asn Ile Ile Phe Ser Val Pro Thr Asp
195 200 205

Gln Cys Ile Asp Asn Ser Ala Trp Ser His Pro Gln Phe Glu Lys Gly
210 215 220

Gly Gly Gly Ser Met His Gly Asp Thr Pro Thr Leu His Glu Tyr Met
225 230 235 240

Leu Asp Leu Gln Pro Glu Thr Thr Asp Leu Tyr Cys Tyr Glu Gln Leu
245 250 255

Asn Asp Ser Ser Glu Glu Glu Asp Glu Ile Asp Gly Pro Ala Gly Gln
260 265 270

Ala Glu Pro Asp Arg Ala His Tyr Asn Ile Val Thr Phe Cys Cys Lys
275 280 285

Cys Asp Ser Thr Leu Arg Leu Cys Val Gln Ser Thr His Val Asp Ile
290 295 300

Arg Thr Leu Glu Asp Leu Leu Met Gly Thr Leu Gly Ile Val Cys Pro
305 310 315 320

Ile Cys Ser Gln Lys Pro
325

<210> 57
<211> 1189
<212> DNA
<213> Artificial Sequence

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

<400> 57
ctcgagacca tggagaccga cacgctcttg ttgtgggttc tcttgttgtg ggtgcctggg 60

tctacaggcg accaccacca tcatcaccac ctcgttccta gaggcagcca ggatagtacc 120

cagaatctta tcccagcacc atctttgctc acagtaccat tgcaacccga ctttcggtct 180

gatcaatttc ggggacgctg gtacgtggtt ggactggccg gcaatgctgt acagaaaaaa 240

acagagggca gtttcaccat gtactcaaca atctatgagc tccaagagaa taatagttac 300

aacgttacct ccatcttggt gagggaccag gatcagggat gtcgctactg gattcggaca 360

ttcgtaccaa gttctcgggc cggtcagttt actctgggca acatgcacag gtatccccaa 420

gttcaatctt acaacgtgca ggtggcgact accgactaca accaattcgc tatggtgttc 480

ttccgcaaaa caagcgagaa caagcagtat tttaaaatca ctctgtacgg tagaactaag 540

gagctgagcc ctgaacttaa ggagcggttc accagattcg ctaagtccct gggactgaag 600

gatgataata taatcttttc cgtccccacc gatcagtgta tcgataattc agcttggtca 660

catccccagt tcgagaaagg aggcggtgga tccatgcacc agaagagaac cgccatgttc 720

caggacccac aagagcggcc ccggaaactg ccccaactgt gcactgaatt gcagaccacc 780

atccacgaca tcattttgga atgtgtctac tgtaagcagc agctcctcag gcgagaggtg 840

tatgacttcg ccttccggga tttgtgtatt gtctacaggg atggtaatcc ctatgccgtt 900

tgtgataagt gcctgaaatt ttatagcaag atcagcgagt accgacatta ctgttacagc 960

gtttatggaa caacattgga gcagcagtac aacaaacctc tttgcgacct cctgattcgc 1020

tgcatcaact gccagaagcc cctgtgcccc gaagagaaac aaaggcattt ggataagaag 1080

cagaggttcc acaacatccg cggtcgctgg acggggcgct gcatgagttg ctgcaggagt 1140

tcccgcactc ggcgcgagac ccaactctga cggaccgcct ctccctccc 1189

<210> 58
<211> 1189
<212> DNA
<213> Artificial Sequence

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

<400> 58
ctcgagacca tggagaccga cacgctcttg ttgtgggttc tcttgttgtg ggtgcctggg 60

tctacaggcg accaccacca tcatcaccac ctcgttccta gaggcagcca ggatagtacc 120

cagaatctta tcccagcacc atctttgctc acagtaccat tgcaacccga ctttcggtct 180

gatcaatttc ggggacgctg gtacgtggtt ggactggccg gcaatgctgt acagaaaaaa 240

acagagggca gtttcaccat gtactcaaca atctatgagc tccaagagaa taatagttac 300

aacgttacct ccatcttggt gagggaccag gatcagggat gtcgctactg gattcggaca 360

ttcgtaccaa gttctcgggc cggtcagttt actctgggca acatgcacag gtatccccaa 420

gttcaatctt acaacgtgca ggtggcgact accgactaca accaattcgc tatggtgttc 480

ttccgcaaaa caagcgagaa caagcagtat tttaaaatca ctctgtacgg tagaactaag 540

gagctgagcc ctgaacttaa ggagcggttc accagattcg ctaagtccct gggactgaag 600

gatgataata taatcttttc cgtccccacc gatcagtgta tcgataattc agcttggtca 660

catccccagt tcgagaaagg aggcggtgga tccatggcca gatttgaaga ccccacaagg 720

cgcccctata aactgccgga tctttgcacc gaactgaata ctagcctgca agatattgag 780

attacctgcg tgtactgtaa aacggtgctc gaattgaccg aggtttttga gttcgcattc 840

aaggacctgt ttgttgtata tcgcgattcc atcccgcacg cagcttgcca taaatgcatt 900

gacttttact cccggatacg cgagctgcga cactatagtg atagcgtgta cggcgataca 960

cttgagaagc ttaccaacac cggtctgtac aatcttctga ttcggtgttt gaggtgccag 1020

aagccgctca acccagctga gaaactgcgg catctgaacg aaaaaagaag attccacaac 1080

attgctggcc actacagggg ccagtgccat tcttgttgta atagagcaag gcaggagcgg 1140

ctgcaacggc ggcgcgagac ccaggtatga cggaccgcct ctccctccc 1189

<210> 59
<211> 1030
<212> DNA
<213> Artificial Sequence

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

<400> 59
ctcgagacca tggagaccga cacgctcttg ttgtgggttc tcttgttgtg ggtgcctggg 60

tctacaggcg accaccacca tcatcaccac ctcgttccta gaggcagcca ggatagtacc 120

cagaatctta tcccagcacc atctttgctc acagtaccat tgcaacccga ctttcggtct 180

gatcaatttc ggggacgctg gtacgtggtt ggactggccg gcaatgctgt acagaaaaaa 240

acagagggca gtttcaccat gtactcaaca atctatgagc tccaagagaa taatagttac 300

aacgttacct ccatcttggt gagggaccag gatcagggat gtcgctactg gattcggaca 360

ttcgtaccaa gttctcgggc cggtcagttt actctgggca acatgcacag gtatccccaa 420

gttcaatctt acaacgtgca ggtggcgact accgactaca accaattcgc tatggtgttc 480

ttccgcaaaa caagcgagaa caagcagtat tttaaaatca ctctgtacgg tagaactaag 540

gagctgagcc ctgaacttaa ggagcggttc accagattcg ctaagtccct gggactgaag 600

gatgataata taatcttttc cgtccccacc gatcagtgta tcgataattc agcttggtca 660

catccccagt tcgagaaagg aggcggtgga tccatgcacg gacctaaagc aacactccag 720

gacatcgtcc tgcatttgga accacaaaac gaaatacccg tggacctttt gtgtcacgaa 780

cagctttcag attctgagga agagaatgat gaaatcgacg gtgtcaacca ccagcatctc 840

cccgctaggc gggcagaacc ccagcgccac acaatgctgt gcatgtgttg caaatgcgaa 900

gctcgaattg aactcgtggt tgagtcctcc gcggacgact tgagggcatt ccagcaactg 960

ttcctcaaca cactgagctt tgtctgtcct tggtgcgcta gtcagcagtg acggaccgcc 1020

tctccctccc 1030

<210> 60
<211> 1162
<212> DNA
<213> Artificial Sequence

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

<400> 60
ctcgagacca tggagaccga cacgctcttg ttgtgggttc tcttgttgtg ggtgcctggg 60

tctacaggcg accaccacca tcatcaccac ctcgttccta gaggcagcca ggatagtacc 120

cagaatctta tcccagcacc atctttgctc acagtaccat tgcaacccga ctttcggtct 180

gatcaatttc ggggacgctg gtacgtggtt ggactggccg gcaatgctgt acagaaaaaa 240

acagagggca gtttcaccat gtactcaaca atctatgagc tccaagagaa taatagttac 300

aacgttacct ccatcttggt gagggaccag gatcagggat gtcgctactg gattcggaca 360

ttcgtaccaa gttctcgggc cggtcagttt actctgggca acatgcacag gtatccccaa 420

gttcaatctt acaacgtgca ggtggcgact accgactaca accaattcgc tatggtgttc 480

ttccgcaaaa caagcgagaa caagcagtat tttaaaatca ctctgtacgg tagaactaag 540

gagctgagcc ctgaacttaa ggagcggttc accagattcg ctaagtccct gggactgaag 600

gatgataata taatcttttc cgtccccacc gatcagtgta tcgataattc agcttggtca 660

catccccagt tcgagaaagg aggcggtgga tccatgttcc aagacactga ggagaagcca 720

cgcacgctgc acgatctgtg ccaggccctt gagactacca tccataacat cgagctccag 780

tgtgtcgaat gcaggaatcc tcttcagcgg agcgaggtgt acgattttgc cttcgcggac 840

ctgacggtgg tctaccggga aggtaaccca ttcgggattt gcaagctgtg tctcagattt 900

cttagtaaga taagtgaata ccggcactac aactattcag tttacggtca cactctggaa 960

cagaccgtga acaaacccct gaacgagatc ctcattcgat gtatcatctg tcagagacct 1020

ctctgtccgc gcgaaaagaa gaggcacgtc gacctgaata agcgatttca taatatctct 1080

ggacggtggg cggggcgctg tgcagcctgt tggagatccc ggagacggga aacagctctt 1140

tgacggaccg cctctccctc cc 1162

<210> 61
<211> 1007
<212> DNA
<213> Artificial Sequence

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

<400> 61
ctcgagacca tggagaccga cacgctcttg ttgtgggttc tcttgttgtg ggtgcctggg 60

tctacaggcg accaccacca tcatcaccac ctcgttccta gaggcagcca ggatagtacc 120

cagaatctta tcccagcacc atctttgctc acagtaccat tgcaacccga ctttcggtct 180

gatcaatttc ggggacgctg gtacgtggtt ggactggccg gcaatgctgt acagaaaaaa 240

acagagggca gtttcaccat gtactcaaca atctatgagc tccaagagaa taatagttac 300

aacgttacct ccatcttggt gagggaccag gatcagggat gtcgctactg gattcggaca 360

ttcgtaccaa gttctcgggc cggtcagttt actctgggca acatgcacag gtatccccaa 420

gttcaatctt acaacgtgca ggtggcgact accgactaca accaattcgc tatggtgttc 480

ttccgcaaaa caagcgagaa caagcagtat tttaaaatca ctctgtacgg tagaactaag 540

gagctgagcc ctgaacttaa ggagcggttc accagattcg ctaagtccct gggactgaag 600

gatgataata taatcttttc cgtccccacc gatcagtgta tcgataattc agcttggtca 660

catccccagt tcgagaaagg aggcggtgga tccatgcggg gacatgaacc tactctgaag 720

gagtacgtcc tggaccttta cccggagccg acagatcttt actgttacga gcaattgtct 780

gactccagcg acgaggatga gggccttgac agacctgatg gccaggctca gccagctact 840

gccgattatt atatcgttac gtgttgtcac acctgcaaca caaccgtaag gttgtgtgtg 900

aactccaccg ccagtgactt gagaacgata caacaactcc tcatgggcac tgtcaatatc 960

gtctgtccta catgtgctca gctgctgacg gaccgcctct ccctccc 1007

<210> 62
<211> 1189
<212> DNA
<213> Artificial Sequence

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

<400> 62
ctcgagacca tggagaccga cacgctcttg ttgtgggttc tcttgttgtg ggtgcctggg 60

tctacaggcg accaccacca tcatcaccac ctcgttccta gaggcagcca ggatagtacc 120

cagaatctta tcccagcacc atctttgctc acagtaccat tgcaacccga ctttcggtct 180

gatcaatttc ggggacgctg gtacgtggtt ggactggccg gcaatgctgt acagaaaaaa 240

acagagggca gtttcaccat gtactcaaca atctatgagc tccaagagaa taatagttac 300

aacgttacct ccatcttggt gagggaccag gatcagggat gtcgctactg gattcggaca 360

ttcgtaccaa gttctcgggc cggtcagttt actctgggca acatgcacag gtatccccaa 420

gttcaatctt acaacgtgca ggtggcgact accgactaca accaattcgc tatggtgttc 480

ttccgcaaaa caagcgagaa caagcagtat tttaaaatca ctctgtacgg tagaactaag 540

gagctgagcc ctgaacttaa ggagcggttc accagattcg ctaagtccct gggactgaag 600

gatgataata taatcttttc cgtccccacc gatcagtgta tcgataattc agcttggtca 660

catccccagt tcgagaaagg aggcggtgga tccatggcca ggttcgatga tcccacccag 720

cgaccctata agttgcccga tctctgcaca gaacttaaca ctagcttgca ggacgtaagc 780

attgcatgtg tttactgtaa agctacgctg gagcgaaccg aggtgtacca attcgccttc 840

aaagacttgt tcatcgtgta tagagactgt atcgcttatg ccgcctgcca caaatgcata 900

gacttttaca gcaggatcag ggaattgagg tactattcca actcagtcta tggagaaacg 960

ctggagaaga taactaacac tgagctttat aacctcctga ttcgctgcct ccggtgtcag 1020

aagccactga atcctgccga aaagagacgc catctgaagg acaagcggcg ctttcatagc 1080

attgcaggac agtacagagg ccaatgtaat acttgctgtg accaagcacg ccaagaaagg 1140

ctcaggagaa ggagagagac acaggtgtga cggaccgcct ctccctccc 1189

<210> 63
<211> 1033
<212> DNA
<213> Artificial Sequence

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

<400> 63
ctcgagacca tggagaccga cacgctcttg ttgtgggttc tcttgttgtg ggtgcctggg 60

tctacaggcg accaccacca tcatcaccac ctcgttccta gaggcagcca ggatagtacc 120

cagaatctta tcccagcacc atctttgctc acagtaccat tgcaacccga ctttcggtct 180

gatcaatttc ggggacgctg gtacgtggtt ggactggccg gcaatgctgt acagaaaaaa 240

acagagggca gtttcaccat gtactcaaca atctatgagc tccaagagaa taatagttac 300

aacgttacct ccatcttggt gagggaccag gatcagggat gtcgctactg gattcggaca 360

ttcgtaccaa gttctcgggc cggtcagttt actctgggca acatgcacag gtatccccaa 420

gttcaatctt acaacgtgca ggtggcgact accgactaca accaattcgc tatggtgttc 480

ttccgcaaaa caagcgagaa caagcagtat tttaaaatca ctctgtacgg tagaactaag 540

gagctgagcc ctgaacttaa ggagcggttc accagattcg ctaagtccct gggactgaag 600

gatgataata taatcttttc cgtccccacc gatcagtgta tcgataattc agcttggtca 660

catccccagt tcgagaaagg aggcggtgga tccatgcacg gcccacaggc aaccctgcaa 720

gagatcgtgc tgcatctcga accacagaat gaattggacc ctgtggatct gctgtgttac 780

gagcagctct ctgaaagcga agaggagaat gacgaggccg acggcgtgtc tcatgcacag 840

ctgcctgctc gccgggccga acctcagcga cacaaaattc tgtgcgtgtg ctgcaaatgc 900

gacggccgca tagagctgac ggtagaatca tcagccgacg atctgcgaac tcttcaacaa 960

ctcttcctga gcacgctcag cttcgtgtgt ccttggtgtg ctacaaatca gtgacggacc 1020

gcctctccct ccc 1033

<210> 64
<211> 1162
<212> DNA
<213> Artificial Sequence

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

<400> 64
ctcgagacca tggagaccga cacgctcttg ttgtgggttc tcttgttgtg ggtgcctggg 60

tctacaggcg accaccacca tcatcaccac ctcgttccta gaggcagcca ggatagtacc 120

cagaatctta tcccagcacc atctttgctc acagtaccat tgcaacccga ctttcggtct 180

gatcaatttc ggggacgctg gtacgtggtt ggactggccg gcaatgctgt acagaaaaaa 240

acagagggca gtttcaccat gtactcaaca atctatgagc tccaagagaa taatagttac 300

aacgttacct ccatcttggt gagggaccag gatcagggat gtcgctactg gattcggaca 360

ttcgtaccaa gttctcgggc cggtcagttt actctgggca acatgcacag gtatccccaa 420

gttcaatctt acaacgtgca ggtggcgact accgactaca accaattcgc tatggtgttc 480

ttccgcaaaa caagcgagaa caagcagtat tttaaaatca ctctgtacgg tagaactaag 540

gagctgagcc ctgaacttaa ggagcggttc accagattcg ctaagtccct gggactgaag 600

gatgataata taatcttttc cgtccccacc gatcagtgta tcgataattc agcttggtca 660

catccccagt tcgagaaagg aggcggtgga tccatgttca aaaacccggc tgagagaccg 720

cggaagttgc acgagctctc atccgcgctg gaaatacctt atgatgagct tcgcttgaat 780

tgtgtgtact gcaaaggcca gctcactgag accgaagtac ttgattttgc ctttactgac 840

ctgacaatcg tctatagaga cgacactcca cacggggtct gtacaaaatg tctgcggttt 900

tatagtaaag tgagcgaatt ccggtggtat cgctattcag tgtatggaac cacattggag 960

aaactcacta acaaaggtat ctgtgacctg ctgatcaggt gcataacttg tcagaggccg 1020

ctctgccccg aggagaagca gcgccacctg gataagaaga agagattcca caacattgga 1080

ggcagatgga caggccggtg cattgcttgt tggcgcaggc caagaaccga gacccaagtt 1140

tgacggaccg cctctccctc cc 1162

<210> 65
<211> 1009
<212> DNA
<213> Artificial Sequence

<220>

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

<400> 65
ctcgagacca tggagaccga cacgctcttg ttgtgggttc tcttgttgtg ggtgcctggg 60

tctacaggcg accaccacca tcatcaccac ctcgttccta gaggcagcca ggatagtacc 120

cagaatctta tcccagcacc atctttgctc acagtaccat tgcaacccga ctttcggtct 180

gatcaatttc ggggacgctg gtacgtggtt ggactggccg gcaatgctgt acagaaaaaa 240

acagagggca gtttcaccat gtactcaaca atctatgagc tccaagagaa taatagttac 300

aacgttacct ccatcttggt gagggaccag gatcagggat gtcgctactg gattcggaca 360

ttcgtaccaa gttctcgggc cggtcagttt actctgggca acatgcacag gtatccccaa 420

gttcaatctt acaacgtgca ggtggcgact accgactaca accaattcgc tatggtgttc 480

ttccgcaaaa caagcgagaa caagcagtat tttaaaatca ctctgtacgg tagaactaag 540

gagctgagcc ctgaacttaa ggagcggttc accagattcg ctaagtccct gggactgaag 600

gatgataata taatcttttc cgtccccacc gatcagtgta tcgataattc agcttggtca 660

catccccagt tcgagaaagg aggcggtgga tccatgcggg gtgagacacc aactcttcag 720

gattatgttc tggatctgca gccagaggcc acagatctgc actgttacga gcaattgcct 780

gattccagcg acgaggagga tgtcatcgat agccctgctg ggcaggccaa gccagacact 840

tcaaattaca acattgtaac gttttgttgt cagtgcgaat ccaccctcag gctttgcgtc 900

cagagcactc aggttgacat tcgaatactc caggagctgt tgatggggag ctttggaatc 960

gtgtgcccaa attgtagtac acgactgtga cggaccgcct ctccctccc 1009

<210> 66
<211> 1162
<212> DNA
<213> Artificial Sequence

<220>

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

<400> 66
ctcgagacca tggagaccga cacgctcttg ttgtgggttc tcttgttgtg ggtgcctggg 60

tctacaggcg accaccacca tcatcaccac ctcgttccta gaggcagcca ggatagtacc 120

cagaatctta tcccagcacc atctttgctc acagtaccat tgcaacccga ctttcggtct 180

gatcaatttc ggggacgctg gtacgtggtt ggactggccg gcaatgctgt acagaaaaaa 240

acagagggca gtttcaccat gtactcaaca atctatgagc tccaagagaa taatagttac 300

aacgttacct ccatcttggt gagggaccag gatcagggat gtcgctactg gattcggaca 360

ttcgtaccaa gttctcgggc cggtcagttt actctgggca acatgcacag gtatccccaa 420

gttcaatctt acaacgtgca ggtggcgact accgactaca accaattcgc tatggtgttc 480

ttccgcaaaa caagcgagaa caagcagtat tttaaaatca ctctgtacgg tagaactaag 540

gagctgagcc ctgaacttaa ggagcggttc accagattcg ctaagtccct gggactgaag 600

gatgataata taatcttttc cgtccccacc gatcagtgta tcgataattc agcttggtca 660

catccccagt tcgagaaagg aggcggtgga tccatgtttc aggacgctga ggagaagccc 720

agaactctgc acgatctgtg tcaggccttg gagacgtctg tgcataaaat tgagcttaaa 780

tgtgtcgaat gtaagaagac actccagcgc agcgaagttt atgacttcgt gttcgcggat 840

ctgagaatcg tgtatcggga cggcaaccct tttgctgttt gcaaggtttg ccttaggctc 900

ctgtccaaaa ttagcgagta ccgccactat aactactctc tctacggtga tactctcgag 960

caaacactga agaagtgctt gaacgagatc ctgattagat gcatcatttg tcaaaggcca 1020

ctttgtccac aggagaagaa gaggcacgtg gacctgaata agcgctttca taacatctct 1080

ggcagatgga caggccgatg cgctgtatgt tggcgcccac ggagaaggca aacccaggtg 1140

tgacggaccg cctctccctc cc 1162

<210> 67
<211> 1009
<212> DNA
<213> Artificial Sequence

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

<400> 67
ctcgagacca tggagaccga cacgctcttg ttgtgggttc tcttgttgtg ggtgcctggg 60

tctacaggcg accaccacca tcatcaccac ctcgttccta gaggcagcca ggatagtacc 120

cagaatctta tcccagcacc atctttgctc acagtaccat tgcaacccga ctttcggtct 180

gatcaatttc ggggacgctg gtacgtggtt ggactggccg gcaatgctgt acagaaaaaa 240

acagagggca gtttcaccat gtactcaaca atctatgagc tccaagagaa taatagttac 300

aacgttacct ccatcttggt gagggaccag gatcagggat gtcgctactg gattcggaca 360

ttcgtaccaa gttctcgggc cggtcagttt actctgggca acatgcacag gtatccccaa 420

gttcaatctt acaacgtgca ggtggcgact accgactaca accaattcgc tatggtgttc 480

ttccgcaaaa caagcgagaa caagcagtat tttaaaatca ctctgtacgg tagaactaag 540

gagctgagcc ctgaacttaa ggagcggttc accagattcg ctaagtccct gggactgaag 600

gatgataata taatcttttc cgtccccacc gatcagtgta tcgataattc agcttggtca 660

catccccagt tcgagaaagg aggcggtgga tccatgcggg ggaataaccc caccctgcgc 720

gagtacattc ttgacctgca cccagagcct acggatctgt tttgttacga acaactgtgc 780

gactcctccg acgaggatga gatcgggctg gatggcccag acgggcaggc acagcctgct 840

acagctaact actatattgt gacatgttgc tacacatgcg gaacgacggt cagactgtgc 900

attaatagca ctgccacaga cgtgcggacc ctgcagcaac tgctcatggg gacctgcact 960

attgtgtgtc cttcatgtgc gcagcaatga cggaccgcct ctccctccc 1009

<210> 68
<211> 319
<212> PRT
<213> Artificial Sequence

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

<400> 68
Met Glu Thr Asp Thr Leu Leu Leu Trp Val Leu Leu Leu Trp Val Pro
1 5 10 15

Gly Ser Thr Gly Asp Tyr Lys Asp Glu His His His His His His Gly
20 25 30

Gly Ser Gln Asp Ser Thr Ser Asp Leu Ile Pro Ala Pro Pro Leu Ser
35 40 45

Lys Val Pro Leu Gln Gln Asn Phe Gln Asp Asn Gln Phe Gln Gly Lys
50 55 60

Trp Tyr Val Val Gly Leu Ala Gly Asn Ala Ile Leu Arg Glu Asp Lys
65 70 75 80

Asp Pro Gln Lys Met Tyr Ala Thr Ile Tyr Glu Leu Lys Glu Asp Lys
85 90 95

Ser Tyr Asn Val Thr Ser Val Leu Phe Arg Lys Lys Lys Cys Asp Tyr
100 105 110

Trp Ile Arg Thr Phe Val Pro Gly Ser Gln Pro Gly Glu Phe Thr Leu
115 120 125

Gly Asn Ile Lys Ser Tyr Pro Gly Leu Thr Ser Tyr Leu Val Arg Val
130 135 140

Val Ser Thr Asn Tyr Asn Gln His Ala Met Val Phe Phe Lys Lys Val
145 150 155 160

Ser Gln Asn Arg Glu Tyr Phe Lys Ile Thr Leu Tyr Gly Arg Thr Lys
165 170 175

Glu Leu Thr Ser Glu Leu Lys Glu Asn Phe Ile Arg Phe Ser Lys Ser
180 185 190

Leu Gly Leu Pro Glu Asn His Ile Val Phe Pro Val Pro Ile Asp Gln
195 200 205

Cys Ile Asp Gly Gly Gly Ser Glu Asn Leu Tyr Phe Gln Gly Gly Ala
210 215 220

Lys Lys Val Glu Phe Lys Glu Pro Ala Cys Asn Val Thr Phe Lys Ser
225 230 235 240

Glu Ala Asn Glu Cys Thr Thr Leu Ile Lys Cys Thr Thr Glu His Glu
245 250 255

Lys Leu Ile Ile Arg His Lys Asp Lys Ile Gly Lys Tyr Ala Val Tyr
260 265 270

Ala Ile Trp Gln Pro Gly Asp Thr Asn Asp Tyr Asn Val Thr Val Phe
275 280 285

Gln Gly Glu Asn Arg Lys Thr Phe Met Tyr Lys Phe Pro Phe Tyr Glu
290 295 300

Met Cys Asp Ile Thr Met Tyr Met Ser Lys Gln Tyr Lys Leu Trp
305 310 315

<210> 69

<211> 704
<212> PRT
<213> Artificial Sequence

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

<400> 69
Met Glu Thr Asp Thr Leu Leu Leu Trp Val Leu Leu Leu Trp Val Pro
1 5 10 15

Gly Ser Thr Gly Asp Tyr Lys Asp Glu His His His His His His Gly
20 25 30

Gly Ser Gln Asp Ser Thr Ser Asp Leu Ile Pro Ala Pro Pro Leu Ser
35 40 45

Lys Val Pro Leu Gln Gln Asn Phe Gln Asp Asn Gln Phe Gln Gly Lys
50 55 60

Trp Tyr Val Val Gly Leu Ala Gly Asn Ala Ile Leu Arg Glu Asp Lys
65 70 75 80

Asp Pro Gln Lys Met Tyr Ala Thr Ile Tyr Glu Leu Lys Glu Asp Lys
85 90 95

Ser Tyr Asn Val Thr Ser Val Leu Phe Arg Lys Lys Lys Cys Asp Tyr
100 105 110

Trp Ile Arg Thr Phe Val Pro Gly Ser Gln Pro Gly Glu Phe Thr Leu
115 120 125

Gly Asn Ile Lys Ser Tyr Pro Gly Leu Thr Ser Tyr Leu Val Arg Val
130 135 140

Val Ser Thr Asn Tyr Asn Gln His Ala Met Val Phe Phe Lys Lys Val
145 150 155 160

Ser Gln Asn Arg Glu Tyr Phe Lys Ile Thr Leu Tyr Gly Arg Thr Lys
165 170 175

Glu Leu Thr Ser Glu Leu Lys Glu Asn Phe Ile Arg Phe Ser Lys Ser
180 185 190

Leu Gly Leu Pro Glu Asn His Ile Val Phe Pro Val Pro Ile Asp Gln
195 200 205

Cys Ile Asp Gly Gly Gly Ser Glu Asn Leu Tyr Phe Gln Gly Gly Trp
210 215 220

Val Thr Val Tyr Tyr Gly Val Pro Val Trp Lys Glu Ala Thr Thr Thr
225 230 235 240

Leu Phe Cys Ala Ser Asp Ala Lys Ala Tyr Asp Thr Glu Val His Asn
245 250 255

Val Trp Ala Thr His Ala Cys Val Pro Thr Asp Pro Asn Pro Gln Glu
260 265 270

Ile Val Leu Glu Asn Val Thr Glu Asn Phe Asn Met Trp Lys Asn Asn
275 280 285

Met Val Glu Gln Met His Glu Asp Ile Ile Ser Leu Trp Asp Gln Ser
290 295 300

Leu Lys Pro Cys Val Lys Leu Thr Pro Leu Cys Val Thr Leu His Cys
305 310 315 320

Thr Asn Leu Lys Asn Ala Thr Asn Thr Lys Ser Ser Asn Trp Lys Glu
325 330 335

Met Asp Arg Gly Glu Ile Lys Asn Cys Ser Phe Lys Val Thr Thr Ser
340 345 350

Ile Arg Asn Lys Met Gln Lys Glu Tyr Ala Leu Phe Tyr Lys Leu Asp
355 360 365

Val Val Pro Ile Asp Asn Asp Asn Thr Ser Tyr Lys Leu Ile Asn Cys
370 375 380

Asn Thr Ser Val Ile Thr Gln Ala Cys Pro Lys Val Ser Phe Glu Pro
385 390 395 400

Ile Pro Ile His Tyr Cys Ala Pro Ala Gly Phe Ala Ile Leu Lys Cys
405 410 415

Asn Asp Lys Lys Phe Asn Gly Ser Gly Pro Cys Thr Asn Val Ser Thr
420 425 430

Val Gln Cys Thr His Gly Ile Arg Pro Val Val Ser Thr Gln Leu Leu
435 440 445

Leu Asn Gly Ser Leu Ala Glu Glu Gly Val Val Ile Arg Ser Glu Asn
450 455 460

Phe Thr Asp Asn Ala Lys Thr Ile Ile Val Gln Leu Lys Glu Ser Val
465 470 475 480

Glu Ile Asn Cys Thr Arg Pro Asn Asn Asn Thr Arg Lys Ser Ile Thr
485 490 495

Ile Gly Pro Gly Arg Ala Phe Tyr Ala Thr Gly Asp Ile Ile Gly Asp
500 505 510

Ile Arg Gln Ala His Cys Asn Ile Ser Gly Glu Lys Trp Asn Asn Thr
515 520 525

Leu Lys Gln Ile Val Thr Lys Leu Gln Ala Gln Phe Gly Asn Lys Thr
530 535 540

Ile Val Phe Lys Gln Ser Ser Gly Gly Asp Pro Glu Ile Val Met His
545 550 555 560

Ser Phe Asn Cys Gly Gly Glu Phe Phe Tyr Cys Asn Ser Thr Gln Leu
565 570 575

Phe Asn Ser Thr Trp Asn Asn Thr Ile Gly Pro Asn Asn Thr Asn Gly
580 585 590

Thr Ile Thr Leu Pro Cys Arg Ile Lys Gln Ile Ile Asn Arg Trp Gln
595 600 605

Glu Val Gly Lys Ala Met Tyr Ala Pro Pro Ile Arg Gly Gln Ile Arg
610 615 620

Cys Ser Ser Asn Ile Thr Gly Leu Leu Leu Thr Arg Asp Gly Gly Lys
625 630 635 640

Glu Ile Ser Asn Thr Thr Glu Ile Phe Arg Pro Gly Gly Gly Asp Met
645 650 655

Arg Asp Asn Trp Arg Ser Glu Leu Tyr Lys Tyr Lys Val Val Lys Ile
660 665 670

Glu Pro Leu Gly Val Ala Pro Thr Lys Ala Lys Arg Arg Val Val Gln
675 680 685

Gln Gly Leu Asn Asp Ile Phe Glu Ala Gln Lys Ile Glu Trp His Glu
690 695 700

<210> 70
<211> 723
<212> PRT
<213> Artificial Sequence

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

<400> 70
Met Glu Thr Asp Thr Leu Leu Leu Trp Val Leu Leu Leu Trp Val Pro
1 5 10 15

Gly Ser Thr Gly Asp Tyr Lys Asp Glu His His His His His His Gly
20 25 30

Gly Ser Gln Asp Ser Thr Ser Asp Leu Ile Pro Ala Pro Pro Leu Ser
35 40 45

Lys Val Pro Leu Gln Gln Asn Phe Gln Asp Asn Gln Phe Gln Gly Lys
50 55 60

Trp Tyr Val Val Gly Leu Ala Gly Asn Ala Ile Leu Arg Glu Asp Lys
65 70 75 80

Asp Pro Gln Lys Met Tyr Ala Thr Ile Tyr Glu Leu Lys Glu Asp Lys
85 90 95

Ser Tyr Asn Val Thr Ser Val Leu Phe Arg Lys Lys Lys Cys Asp Tyr
100 105 110

Trp Ile Arg Thr Phe Val Pro Gly Ser Gln Pro Gly Glu Phe Thr Leu
115 120 125

Gly Asn Ile Lys Ser Tyr Pro Gly Leu Thr Ser Tyr Leu Val Arg Val

130 135 140

Val Ser Thr Asn Tyr Asn Gln His Ala Met Val Phe Phe Lys Lys Val
145 150 155 160

Ser Gln Asn Arg Glu Tyr Phe Lys Ile Thr Leu Tyr Gly Arg Thr Lys
165 170 175

Glu Leu Thr Ser Glu Leu Lys Glu Asn Phe Ile Arg Phe Ser Lys Ser
180 185 190

Leu Gly Leu Pro Glu Asn His Ile Val Phe Pro Val Pro Ile Asp Gln
195 200 205

Cys Ile Asp Gly Gly Gly Ser Glu Asn Leu Tyr Phe Gln Gly Gly Trp
210 215 220

Val Thr Val Tyr Tyr Gly Val Pro Val Trp Lys Glu Ala Thr Thr Thr
225 230 235 240

Leu Phe Cys Ala Ser Asp Ala Lys Ala Tyr Glu Thr Glu Lys His Asn
245 250 255

Val Trp Ala Thr His Ala Cys Val Pro Thr Asp Pro Asn Pro Gln Glu
260 265 270

Val Val Leu Gly Asn Val Thr Glu Asn Phe Asn Met Trp Lys Asn Asn
275 280 285

Met Val Glu Gln Met His Glu Asp Ile Ile Ser Leu Trp Asp Glu Ser
290 295 300

Leu Lys Pro Cys Val Lys Leu Thr Pro Leu Cys Val Thr Leu Asn Cys
305 310 315 320

Thr Asp Glu Val Lys Thr Ser Tyr Ala Asn Lys Thr Ser Asn Glu Thr
325 330 335

Tyr Lys Thr Ser Asn Glu Thr Phe Gly Glu Ile Lys Asn Cys Ser Phe
340 345 350

Ser Val Pro Thr Gly Ile Lys Asp Lys Val Gln Asn Val Tyr Ala Leu
355 360 365

Phe Tyr Lys Leu Asp Val Ile Pro Ile Asp Asp Asn Asn Asn Ser Ser
370 375 380

Lys Asn Asn Asn Gly Ser Tyr Ser Ser Tyr Arg Leu Ile Asn Cys Asn
385 390 395 400

Thr Ser Val Ile Thr Gln Ala Cys Pro Lys Val Ser Phe Glu Pro Ile
405 410 415

Pro Ile His Tyr Cys Ala Pro Ala Gly Phe Ala Ile Leu Lys Cys Asn
420 425 430

Asn Lys Thr Phe Asn Gly Thr Gly Pro Cys Thr Asn Val Ser Thr Val
435 440 445

Gln Cys Thr His Gly Ile Arg Pro Val Val Ser Thr Gln Leu Leu Leu
450 455 460

Asn Gly Ser Leu Ala Glu Glu Glu Val Val Ile Arg Ser Glu Asn Phe
465 470 475 480

Thr Asn Asn Ala Lys Thr Ile Ile Val His Leu Lys Lys Ser Val Glu
485 490 495

Ile Asn Cys Thr Arg Pro Gly Asn Asn Thr Arg Lys Ser Ile His Ile

500 505 510

Gly Pro Gly Arg Ala Phe Tyr Ala Thr Gly Asp Ile Ile Gly Asp Ile
515 520 525

Arg Gln Ala His Cys Asn Leu Ser Ser Val Gln Trp Asn Asp Thr Leu
530 535 540

Lys Gln Ile Val Ile Lys Leu Gly Glu Gln Phe Gly Thr Asn Lys Thr
545 550 555 560

Ile Ala Phe Asn Gln Ser Ser Gly Gly Asp Pro Glu Ile Val Met His
565 570 575

Ser Phe Asn Cys Gly Gly Glu Phe Phe Tyr Cys Asn Thr Thr Gln Leu
580 585 590

Phe Asn Ser Thr Trp Glu Phe His Gly Asn Trp Thr Arg Ser Asn Phe
595 600 605

Thr Glu Ser Asn Ser Thr Thr Ile Thr Leu Pro Cys Arg Ile Lys Gln
610 615 620

Ile Val Asn Met Trp Gln Glu Val Gly Lys Ala Met Tyr Ala Pro Pro
625 630 635 640

Ile Arg Gly Gln Ile Arg Cys Ser Ser Asn Ile Thr Gly Leu Leu Leu
645 650 655

Thr Arg Asp Gly Gly Val Asn Gly Thr Arg Glu Thr Phe Arg Pro Gly
660 665 670

Gly Gly Asp Met Arg Asp Asn Trp Arg Ser Glu Leu Tyr Lys Tyr Lys
675 680 685

Val Val Lys Ile Glu Pro Leu Gly Val Ala Pro Thr Lys Ala Lys Arg
690 695 700

Arg Val Val Gln Gly Leu Asn Asp Ile Phe Glu Ala Gln Lys Ile Glu
705 710 715 720

Trp His Glu

<210> 71
<211> 259
<212> PRT
<213> Artificial Sequence

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

<400> 71
Met Glu Thr Asp Thr Leu Leu Leu Trp Val Leu Leu Leu Trp Val Pro
1 5 10 15

Gly Ser Thr Gly Asp Tyr Lys Asp Glu His His His His His His Gly
20 25 30

Gly Ser Gln Asp Ser Thr Ser Asp Leu Ile Pro Ala Pro Pro Leu Ser
35 40 45

Lys Val Pro Leu Gln Gln Asn Phe Gln Asp Asn Gln Phe Gln Gly Lys
50 55 60

Trp Tyr Val Val Gly Leu Ala Gly Asn Ala Ile Leu Arg Glu Asp Lys
65 70 75 80

Asp Pro Gln Lys Met Tyr Ala Thr Ile Tyr Glu Leu Lys Glu Asp Lys
85 90 95

Ser Tyr Asn Val Thr Ser Val Leu Phe Arg Lys Lys Lys Cys Asp Tyr
100 105 110

Trp Ile Arg Thr Phe Val Pro Gly Ser Gln Pro Gly Glu Phe Thr Leu
115 120 125

Gly Asn Ile Lys Ser Tyr Pro Gly Leu Thr Ser Tyr Leu Val Arg Val
130 135 140

Val Ser Thr Asn Tyr Asn Gln His Ala Met Val Phe Phe Lys Lys Val
145 150 155 160

Ser Gln Asn Arg Glu Tyr Phe Lys Ile Thr Leu Tyr Gly Arg Thr Lys
165 170 175

Glu Leu Thr Ser Glu Leu Lys Glu Asn Phe Ile Arg Phe Ser Lys Ser
180 185 190

Leu Gly Leu Pro Glu Asn His Ile Val Phe Pro Val Pro Ile Asp Gln
195 200 205

Cys Ile Asp Gly Gly Gly Ser Glu Asn Leu Tyr Phe Gln Gly Gly Ser
210 215 220

Lys Cys Arg Val Phe Asn Thr Thr Glu Arg Asp Glu Gln Gly Ser Lys
225 230 235 240

Val Asn Asp Phe Phe Gln Gln Thr Glu Asp Leu Tyr Asn Glu Met Lys
245 250 255

Trp Gln Lys

<210> 72
<211> 259
<212> PRT
<213> Artificial Sequence

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

<400> 72
Met Glu Thr Asp Thr Leu Leu Leu Trp Val Leu Leu Leu Trp Val Pro
1 5 10 15

Gly Ser Thr Gly Asp Tyr Lys Asp Glu His His His His His His Gly
20 25 30

Gly Ser Gln Asp Ser Thr Ser Asp Leu Ile Pro Ala Pro Pro Leu Ser
35 40 45

Lys Val Pro Leu Gln Gln Asn Phe Gln Asp Asn Gln Phe Gln Gly Lys
50 55 60

Trp Tyr Val Val Gly Leu Ala Gly Asn Ala Ile Leu Arg Glu Asp Lys
65 70 75 80

Asp Pro Gln Lys Met Tyr Ala Thr Ile Tyr Glu Leu Lys Glu Asp Lys
85 90 95

Ser Tyr Asn Val Thr Ser Val Leu Phe Arg Lys Lys Lys Cys Asp Tyr
100 105 110

Trp Ile Arg Thr Phe Val Pro Gly Ser Gln Pro Gly Glu Phe Thr Leu
115 120 125

Gly Asn Ile Lys Ser Tyr Pro Gly Leu Thr Ser Tyr Leu Val Arg Val
130 135 140

Val Ser Thr Asn Tyr Asn Gln His Ala Met Val Phe Phe Lys Lys Val
145 150 155 160

Ser Gln Asn Arg Glu Tyr Phe Lys Ile Thr Leu Tyr Gly Arg Thr Lys
165 170 175

Glu Leu Thr Ser Glu Leu Lys Glu Asn Phe Ile Arg Phe Ser Lys Ser
180 185 190

Leu Gly Leu Pro Glu Asn His Ile Val Phe Pro Val Pro Ile Asp Gln
195 200 205

Cys Ile Asp Gly Gly Gly Ser Glu Asn Leu Tyr Phe Gln Gly Gly Pro
210 215 220

Pro His Glu Leu Thr Glu Glu Glu Lys Gln Gln Ile Leu His Ser Glu
225 230 235 240

Glu Phe Leu Ser Phe Phe Asp His Ser Thr Arg Ile Val Glu Arg Ala
245 250 255

Leu Ser Glu

<210> 73
<211> 259
<212> PRT
<213> Artificial Sequence

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

<400> 73
Met Glu Thr Asp Thr Leu Leu Leu Trp Val Leu Leu Leu Trp Val Pro
1 5 10 15

Gly Ser Thr Gly Asp Tyr Lys Asp Glu His His His His His His Gly
20 25 30

Gly Ser Gln Asp Ser Thr Ser Asp Leu Ile Pro Ala Pro Pro Leu Ser
35 40 45

Lys Val Pro Leu Gln Gln Asn Phe Gln Asp Asn Gln Phe Gln Gly Lys
50 55 60

Trp Tyr Val Val Gly Leu Ala Gly Asn Ala Ile Leu Arg Glu Asp Lys
65 70 75 80

Asp Pro Gln Lys Met Tyr Ala Thr Ile Tyr Glu Leu Lys Glu Asp Lys
85 90 95

Ser Tyr Asn Val Thr Ser Val Leu Phe Arg Lys Lys Lys Cys Asp Tyr
100 105 110

Trp Ile Arg Thr Phe Val Pro Gly Ser Gln Pro Gly Glu Phe Thr Leu
115 120 125

Gly Asn Ile Lys Ser Tyr Pro Gly Leu Thr Ser Tyr Leu Val Arg Val
130 135 140

Val Ser Thr Asn Tyr Asn Gln His Ala Met Val Phe Phe Lys Lys Val
145 150 155 160

Ser Gln Asn Arg Glu Tyr Phe Lys Ile Thr Leu Tyr Gly Arg Thr Lys
165 170 175

Glu Leu Thr Ser Glu Leu Lys Glu Asn Phe Ile Arg Phe Ser Lys Ser
180 185 190

Leu Gly Leu Pro Glu Asn His Ile Val Phe Pro Val Pro Ile Asp Gln
195 200 205

Cys Ile Asp Gly Gly Gly Ser Glu Asn Leu Tyr Phe Gln Gly Gly Pro
210 215 220

Pro Pro Arg Cys Ile Ser Thr Asn Lys Cys Thr Ala Pro Glu Val Glu
225 230 235 240

Asn Ala Ile Arg Val Pro Gly Asn Arg Ser Phe Phe Ser Leu Thr Glu
245 250 255

Ile Val Arg

<210> 74
<211> 259
<212> PRT
<213> Artificial Sequence

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

<400> 74
Met Glu Thr Asp Thr Leu Leu Leu Trp Val Leu Leu Leu Trp Val Pro
1 5 10 15

Gly Ser Thr Gly Asp Tyr Lys Asp Glu His His His His His His Gly
20 25 30

Gly Ser Gln Asp Ser Thr Ser Asp Leu Ile Pro Ala Pro Pro Leu Ser
35 40 45

Lys Val Pro Leu Gln Gln Asn Phe Gln Asp Asn Gln Phe Gln Gly Lys
50 55 60

Trp Tyr Val Val Gly Leu Ala Gly Asn Ala Ile Leu Arg Glu Asp Lys
65 70 75 80

Asp Pro Gln Lys Met Tyr Ala Thr Ile Tyr Glu Leu Lys Glu Asp Lys
85 90 95

Ser Tyr Asn Val Thr Ser Val Leu Phe Arg Lys Lys Lys Cys Asp Tyr
100 105 110

Trp Ile Arg Thr Phe Val Pro Gly Ser Gln Pro Gly Glu Phe Thr Leu
115 120 125

Gly Asn Ile Lys Ser Tyr Pro Gly Leu Thr Ser Tyr Leu Val Arg Val
130 135 140

Val Ser Thr Asn Tyr Asn Gln His Ala Met Val Phe Phe Lys Lys Val
145 150 155 160

Ser Gln Asn Arg Glu Tyr Phe Lys Ile Thr Leu Tyr Gly Arg Thr Lys
165 170 175

Glu Leu Thr Ser Glu Leu Lys Glu Asn Phe Ile Arg Phe Ser Lys Ser
180 185 190

Leu Gly Leu Pro Glu Asn His Ile Val Phe Pro Val Pro Ile Asp Gln
195 200 205

Cys Ile Asp Gly Gly Gly Ser Glu Asn Leu Tyr Phe Gln Gly Gly Thr
210 215 220

Glu Arg Asp Glu Gln Gly Ser Lys Ile Asn Asp Phe Phe Leu Arg Ser
225 230 235 240

Glu Asp Leu Phe Asn Glu Met Asn Trp Gln Lys Lys Leu Arg Ala Gln

245 250 255

Pro Val Leu

<210> 75
<211> 259
<212> PRT
<213> Artificial Sequence

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

<400> 75
Met Glu Thr Asp Thr Leu Leu Leu Trp Val Leu Leu Leu Trp Val Pro
1 5 10 15

Gly Ser Thr Gly Asp Tyr Lys Asp Glu His His His His His His Gly
20 25 30

Gly Ser Gln Asp Ser Thr Ser Asp Leu Ile Pro Ala Pro Pro Leu Ser
35 40 45

Lys Val Pro Leu Gln Gln Asn Phe Gln Asp Asn Gln Phe Gln Gly Lys
50 55 60

Trp Tyr Val Val Gly Leu Ala Gly Asn Ala Ile Leu Arg Glu Asp Lys
65 70 75 80

Asp Pro Gln Lys Met Tyr Ala Thr Ile Tyr Glu Leu Lys Glu Asp Lys
85 90 95

Ser Tyr Asn Val Thr Ser Val Leu Phe Arg Lys Lys Lys Cys Asp Tyr
100 105 110

Trp Ile Arg Thr Phe Val Pro Gly Ser Gln Pro Gly Glu Phe Thr Leu
115 120 125

Gly Asn Ile Lys Ser Tyr Pro Gly Leu Thr Ser Tyr Leu Val Arg Val
130 135 140

Val Ser Thr Asn Tyr Asn Gln His Ala Met Val Phe Phe Lys Lys Val
145 150 155 160

Ser Gln Asn Arg Glu Tyr Phe Lys Ile Thr Leu Tyr Gly Arg Thr Lys
165 170 175

Glu Leu Thr Ser Glu Leu Lys Glu Asn Phe Ile Arg Phe Ser Lys Ser
180 185 190

Leu Gly Leu Pro Glu Asn His Ile Val Phe Pro Val Pro Ile Asp Gln
195 200 205

Cys Ile Asp Gly Gly Gly Ser Glu Asn Leu Tyr Phe Gln Gly Gly Leu
210 215 220

Thr Glu Glu Thr Lys His Arg Leu Phe Thr Thr Thr Glu Gln Asp Glu
225 230 235 240

Gln Gly Ser Lys Val Ser Asp Phe Phe Asp Gln Ser Ser Phe Leu His
245 250 255

Asn Glu Met

<210> 76
<211> 259
<212> PRT
<213> Artificial Sequence

<220>

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

<400> 76
Met Glu Thr Asp Thr Leu Leu Leu Trp Val Leu Leu Leu Trp Val Pro
1 5 10 15

Gly Ser Thr Gly Asp Tyr Lys Asp Glu His His His His His His Gly
20 25 30

Gly Ser Gln Asp Ser Thr Ser Asp Leu Ile Pro Ala Pro Pro Leu Ser
35 40 45

Lys Val Pro Leu Gln Gln Asn Phe Gln Asp Asn Gln Phe Gln Gly Lys
50 55 60

Trp Tyr Val Val Gly Leu Ala Gly Asn Ala Ile Leu Arg Glu Asp Lys
65 70 75 80

Asp Pro Gln Lys Met Tyr Ala Thr Ile Tyr Glu Leu Lys Glu Asp Lys
85 90 95

Ser Tyr Asn Val Thr Ser Val Leu Phe Arg Lys Lys Lys Cys Asp Tyr
100 105 110

Trp Ile Arg Thr Phe Val Pro Gly Ser Gln Pro Gly Glu Phe Thr Leu
115 120 125

Gly Asn Ile Lys Ser Tyr Pro Gly Leu Thr Ser Tyr Leu Val Arg Val
130 135 140

Val Ser Thr Asn Tyr Asn Gln His Ala Met Val Phe Phe Lys Lys Val
145 150 155 160

Ser Gln Asn Arg Glu Tyr Phe Lys Ile Thr Leu Tyr Gly Arg Thr Lys

165 170 175

Glu Leu Thr Ser Glu Leu Lys Glu Asn Phe Ile Arg Phe Ser Lys Ser
180 185 190

Leu Gly Leu Pro Glu Asn His Ile Val Phe Pro Val Pro Ile Asp Gln
195 200 205

Cys Ile Asp Gly Gly Gly Ser Glu Asn Leu Tyr Phe Gln Gly Gly Gly
210 215 220

Ala Gln Pro Pro Phe Asp Ala Gln Ser Pro Leu Asp Ser Gln Pro Gln
225 230 235 240

Pro Ser Gly Gln Pro Trp Asn Phe His Ala Ser Thr Ser Trp Tyr Trp
245 250 255

Arg Gln Ser

<210> 77
<211> 488
<212> PRT
<213> Artificial Sequence

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

<400> 77
Met Glu Thr Asp Thr Leu Leu Leu Trp Val Leu Leu Leu Trp Val Pro
1 5 10 15

Gly Ser Thr Gly Asp Tyr Lys Asp Glu His His His His His His Gly
20 25 30

Gly Ser Gln Asp Ser Thr Ser Asp Leu Ile Pro Ala Pro Pro Leu Ser
35 40 45

Lys Val Pro Leu Gln Gln Asn Phe Gln Asp Asn Gln Phe Gln Gly Lys
50 55 60

Trp Tyr Val Val Gly Leu Ala Gly Asn Ala Ile Leu Arg Glu Asp Lys
65 70 75 80

Asp Pro Gln Lys Met Tyr Ala Thr Ile Tyr Glu Leu Lys Glu Asp Lys
85 90 95

Ser Tyr Asn Val Thr Ser Val Leu Phe Arg Lys Lys Lys Cys Asp Tyr
100 105 110

Trp Ile Arg Thr Phe Val Pro Gly Ser Gln Pro Gly Glu Phe Thr Leu
115 120 125

Gly Asn Ile Lys Ser Tyr Pro Gly Leu Thr Ser Tyr Leu Val Arg Val
130 135 140

Val Ser Thr Asn Tyr Asn Gln His Ala Met Val Phe Phe Lys Lys Val
145 150 155 160

Ser Gln Asn Arg Glu Tyr Phe Lys Ile Thr Leu Tyr Gly Arg Thr Lys
165 170 175

Glu Leu Thr Ser Glu Leu Lys Glu Asn Phe Ile Arg Phe Ser Lys Ser
180 185 190

Leu Gly Leu Pro Glu Asn His Ile Val Phe Pro Val Pro Ile Asp Gln
195 200 205

Cys Ile Asp Gly Gly Gly Ser Glu Asn Leu Tyr Phe Gln Gly Gly Met
210 215 220

Glu Arg Pro Gln Pro Asp Ser Met Pro Gln Asp Leu Ser Glu Ala Leu
225 230 235 240

Lys Glu Ala Thr Lys Glu Val His Thr Gln Ala Glu Asn Ala Glu Phe
245 250 255

Met Arg Asn Phe Gln Lys Gly Gln Val Thr Arg Asp Gly Phe Lys Leu
260 265 270

Val Met Ala Ser Leu Tyr His Ile Tyr Val Ala Leu Glu Glu Glu Ile
275 280 285

Glu Arg Asn Lys Glu Ser Pro Val Phe Ala Pro Val Tyr Phe Pro Glu
290 295 300

Glu Leu His Arg Lys Ala Ala Leu Glu Gln Asp Leu Ala Phe Trp Tyr
305 310 315 320

Gly Pro Arg Trp Gln Glu Val Ile Pro Tyr Thr Pro Ala Met Gln Arg
325 330 335

Tyr Val Lys Arg Leu His Glu Val Gly Arg Thr Glu Pro Glu Leu Leu
340 345 350

Val Ala His Ala Tyr Thr Arg Tyr Leu Gly Asp Leu Ser Gly Gly Gln
355 360 365

Val Leu Lys Lys Ile Ala Gln Lys Ala Leu Asp Leu Pro Ser Ser Gly
370 375 380

Glu Gly Leu Ala Phe Phe Thr Phe Pro Asn Ile Ala Ser Ala Thr Lys
385 390 395 400

Phe Lys Gln Leu Tyr Arg Ser Arg Met Asn Ser Leu Glu Met Thr Pro
405 410 415

Ala Val Arg Gln Arg Val Ile Glu Glu Ala Lys Thr Ala Phe Leu Leu
420 425 430

Asn Ile Gln Leu Phe Glu Glu Leu Gln Glu Leu Leu Thr His Asp Thr
435 440 445

Lys Asp Gln Ser Pro Ser Arg Ala Pro Gly Leu Arg Gln Arg Ala Ser
450 455 460

Asn Lys Val Gln Asp Ser Ala Pro Val Glu Thr Pro Arg Gly Lys Pro
465 470 475 480

Pro Leu Asn Thr Arg Ser Gln Ala
485

<210> 78
<211> 488
<212> PRT
<213> Artificial Sequence

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

<400> 78
Met Glu Thr Asp Thr Leu Leu Leu Trp Val Leu Leu Leu Trp Val Pro
1 5 10 15

Gly Ser Thr Gly Asp Tyr Lys Asp Glu His His His His His His Gly
20 25 30

Gly Ser Gln Asp Ser Thr Ser Asp Leu Ile Pro Ala Pro Pro Leu Ser
35 40 45

Lys Val Pro Leu Gln Gln Asn Phe Gln Asp Asn Gln Phe Gln Gly Lys
50 55 60

Trp Tyr Val Val Gly Leu Ala Gly Asn Ala Ile Leu Arg Glu Asp Lys
65 70 75 80

Asp Pro Gln Lys Met Tyr Ala Thr Ile Tyr Glu Leu Lys Glu Asp Lys
85 90 95

Ser Tyr Asn Val Thr Ser Val Leu Phe Arg Lys Lys Lys Cys Asp Tyr
100 105 110

Trp Ile Arg Thr Phe Val Pro Gly Ser Gln Pro Gly Glu Phe Thr Leu
115 120 125

Gly Asn Ile Lys Ser Tyr Pro Gly Leu Thr Ser Tyr Leu Val Arg Val
130 135 140

Val Ser Thr Asn Tyr Asn Gln His Ala Met Val Phe Phe Lys Lys Val
145 150 155 160

Ser Gln Asn Arg Glu Tyr Phe Lys Ile Thr Leu Tyr Gly Arg Thr Lys
165 170 175

Glu Leu Thr Ser Glu Leu Lys Glu Asn Phe Ile Arg Phe Ser Lys Ser
180 185 190

Leu Gly Leu Pro Glu Asn His Ile Val Phe Pro Val Pro Ile Asp Gln
195 200 205

Cys Ile Asp Gly Gly Gly Ser Glu Asn Leu Tyr Phe Gln Gly Gly Met
210 215 220

Glu Arg Pro Gln Pro Asp Ser Met Pro Gln Asp Leu Ser Glu Ala Leu

225 230 235 240

Lys Glu Ala Thr Lys Glu Val His Ile Gln Ala Glu Asn Ala Glu Phe
245 250 255

Met Lys Asn Phe Gln Lys Gly Gln Val Ser Arg Glu Gly Phe Lys Leu
260 265 270

Val Met Ala Ser Leu Tyr His Ile Tyr Thr Ala Leu Glu Glu Glu Ile
275 280 285

Glu Arg Asn Lys Gln Asn Pro Val Tyr Ala Pro Leu Tyr Phe Pro Glu
290 295 300

Glu Leu His Arg Arg Ala Ala Leu Glu Gln Asp Met Ala Phe Trp Tyr
305 310 315 320

Gly Pro His Trp Gln Glu Ile Ile Pro Cys Thr Pro Ala Thr Gln His
325 330 335

Tyr Val Lys Arg Leu His Glu Val Gly Arg Thr His Pro Glu Leu Leu
340 345 350

Val Ala His Ala Tyr Thr Arg Tyr Leu Gly Asp Leu Ser Gly Gly Gln
355 360 365

Val Leu Lys Lys Ile Ala Gln Lys Ala Met Ala Leu Pro Ser Ser Gly
370 375 380

Glu Gly Leu Ala Phe Phe Thr Phe Pro Asn Ile Asp Ser Pro Thr Lys
385 390 395 400

Phe Lys Gln Leu Tyr Arg Ala Arg Met Asn Thr Leu Glu Met Thr Pro
405 410 415

Glu Val Lys His Arg Val Thr Glu Glu Ala Lys Thr Ala Phe Leu Leu
420 425 430

Asn Ile Glu Leu Phe Glu Glu Leu Gln Val Met Leu Thr Glu Glu His
435 440 445

Lys Asp Gln Ser Pro Ser Gln Met Ala Ser Leu Arg Gln Arg Pro Ala
450 455 460

Ser Leu Val Gln Asp Thr Ala Pro Ala Glu Thr Pro Arg Gly Lys Pro
465 470 475 480

Gln Ile Ser Thr Ser Ser Ser Gln
485

<210> 79
<211> 489
<212> PRT
<213> Artificial Sequence

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

<400> 79
Met Pro Leu Gly Leu Leu Trp Leu Gly Leu Ala Leu Leu Gly Ala Leu
1 5 10 15

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

Leu Ser Lys Val Pro Leu Gln Gln Asn Phe Gln Asp Asn Gln Phe Gln
35 40 45

Gly Lys Trp Tyr Val Val Gly Leu Ala Gly Asn Ala Ile Leu Arg Glu
50 55 60

Asp Lys Asp Pro Gln Lys Met Tyr Ala Thr Ile Tyr Glu Leu Lys Glu
65 70 75 80

Asp Lys Ser Tyr Asn Val Thr Ser Val Leu Phe Arg Lys Lys Lys Cys
85 90 95

Asp Tyr Trp Ile Arg Thr Phe Val Pro Gly Ser Gln Pro Gly Glu Phe
100 105 110

Thr Leu Gly Asn Ile Lys Ser Tyr Pro Gly Leu Thr Ser Tyr Leu Val
115 120 125

Arg Val Val Ser Thr Asn Tyr Asn Gln His Ala Met Val Phe Phe Lys
130 135 140

Lys Val Ser Gln Asn Arg Glu Tyr Phe Lys Ile Thr Leu Tyr Gly Arg
145 150 155 160

Thr Lys Glu Leu Thr Ser Glu Leu Lys Glu Asn Phe Ile Arg Phe Ser
165 170 175

Lys Ser Leu Gly Leu Pro Glu Asn His Ile Val Phe Pro Val Pro Ile
180 185 190

Asp Gln Cys Ile Asp Gly Gly Gly Ser Glu Asn Leu Tyr Phe Gln Gly
195 200 205

Gly Gly Met Glu Arg Pro Gln Pro Asp Ser Met Pro Gln Asp Leu Ser
210 215 220

Glu Ala Leu Lys Glu Ala Thr Lys Glu Val His Thr Gln Ala Glu Asn
225 230 235 240

Ala Glu Phe Met Arg Asn Phe Gln Lys Gly Gln Val Thr Arg Asp Gly
245 250 255

Phe Lys Leu Val Met Ala Ser Leu Tyr His Ile Tyr Val Ala Leu Glu
260 265 270

Glu Glu Ile Glu Arg Asn Lys Glu Ser Pro Val Phe Ala Pro Val Tyr
275 280 285

Phe Pro Glu Glu Leu His Arg Lys Ala Ala Leu Glu Gln Asp Leu Ala
290 295 300

Phe Trp Tyr Gly Pro Arg Trp Gln Glu Val Ile Pro Tyr Thr Pro Ala
305 310 315 320

Met Gln Arg Tyr Val Lys Arg Leu His Glu Val Gly Arg Thr Glu Pro
325 330 335

Glu Leu Leu Val Ala His Ala Tyr Thr Arg Tyr Leu Gly Asp Leu Ser
340 345 350

Gly Gly Gln Val Leu Lys Lys Ile Ala Gln Lys Ala Leu Asp Leu Pro
355 360 365

Ser Ser Gly Glu Gly Leu Ala Phe Phe Thr Phe Pro Asn Ile Ala Ser
370 375 380

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

Met Thr Pro Ala Val Arg Gln Arg Val Ile Glu Glu Ala Lys Thr Ala
405 410 415

Phe Leu Leu Asn Ile Gln Leu Phe Glu Glu Leu Gln Glu Leu Leu Thr
420 425 430

His Asp Thr Lys Asp Gln Ser Pro Ser Arg Ala Pro Gly Leu Arg Gln
435 440 445

Arg Ala Ser Asn Lys Val Gln Asp Ser Ala Pro Val Glu Thr Pro Arg
450 455 460

Gly Lys Pro Pro Leu Asn Thr Arg Ser Gln Ala Gly Gly Leu Val Pro
465 470 475 480

Arg Gly Ser His His His His His His
485

<210> 80
<211> 387
<212> PRT
<213> Artificial Sequence

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

<400> 80
Met Pro Leu Gly Leu Leu Trp Leu Gly Leu Ala Leu Leu Gly Ala Leu
1 5 10 15

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

Leu Ser Lys Val Pro Leu Gln Gln Asn Phe Gln Asp Asn Gln Phe Gln
35 40 45

Gly Lys Trp Tyr Val Val Gly Leu Ala Gly Asn Ala Ile Leu Arg Glu
50 55 60

Asp Lys Asp Pro Gln Lys Met Tyr Ala Thr Ile Tyr Glu Leu Lys Glu

65 70 75 80

Asp Lys Ser Tyr Asn Val Thr Ser Val Leu Phe Arg Lys Lys Lys Cys
85 90 95

Asp Tyr Trp Ile Arg Thr Phe Val Pro Gly Ser Gln Pro Gly Glu Phe
100 105 110

Thr Leu Gly Asn Ile Lys Ser Tyr Pro Gly Leu Thr Ser Tyr Leu Val
115 120 125

Arg Val Val Ser Thr Asn Tyr Asn Gln His Ala Met Val Phe Phe Lys
130 135 140

Lys Val Ser Gln Asn Arg Glu Tyr Phe Lys Ile Thr Leu Tyr Gly Arg
145 150 155 160

Thr Lys Glu Leu Thr Ser Glu Leu Lys Glu Asn Phe Ile Arg Phe Ser
165 170 175

Lys Ser Leu Gly Leu Pro Glu Asn His Ile Val Phe Pro Val Pro Ile
180 185 190

Asp Gln Cys Ile Asp Gly Gly Gly Ser Glu Asn Leu Tyr Phe Gln Gly
195 200 205

Gly Gly Pro Pro Lys Met Asn Pro Val Val Glu Pro Leu Ser Trp Met
210 215 220

Leu Gly Thr Trp Leu Ser Asp Pro Pro Gly Ala Gly Thr Tyr Pro Thr
225 230 235 240

Leu Gln Pro Phe Gln Tyr Leu Glu Glu Val His Ile Ser His Val Gly
245 250 255

Gln Pro Met Leu Asn Phe Ser Phe Asn Ser Phe His Pro Asp Thr Arg
260 265 270

Lys Pro Met His Arg Glu Cys Gly Phe Ile Arg Leu Lys Pro Asp Thr
275 280 285

Asn Lys Val Ala Phe Val Ser Ala Gln Asn Thr Gly Val Val Glu Val
290 295 300

Glu Glu Gly Glu Val Asn Gly Gln Glu Leu Cys Ile Ala Ser His Ser
305 310 315 320

Ile Ala Arg Ile Ser Phe Ala Lys Glu Pro His Val Glu Gln Ile Thr
325 330 335

Arg Lys Phe Arg Leu Asn Ser Glu Gly Lys Leu Glu Gln Thr Val Ser
340 345 350

Met Ala Thr Thr Thr Gln Pro Met Thr Gln His Leu His Val Thr Tyr
355 360 365

Lys Lys Val Thr Pro Gly Gly Leu Val Pro Arg Gly Ser His His His
370 375 380

His His His
385

<210> 81
<211> 295
<212> PRT
<213> Artificial Sequence

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

<400> 81
Met Glu Thr Asp Thr Leu Leu Leu Trp Val Leu Leu Leu Trp Val Pro
1 5 10 15

Gly Ser Thr Gly Asp Tyr Lys Asp Glu His His His His His His Gly
20 25 30

Gly Ser Gln Asp Ser Thr Ser Asp Leu Ile Pro Ala Pro Pro Leu Ser
35 40 45

Lys Val Pro Leu Gln Gln Asn Phe Gln Asp Asn Gln Phe Gln Gly Lys
50 55 60

Trp Tyr Val Val Gly Leu Ala Gly Asn Ala Ile Leu Arg Glu Asp Lys
65 70 75 80

Asp Pro Gln Lys Met Tyr Ala Thr Ile Tyr Glu Leu Lys Glu Asp Lys
85 90 95

Ser Tyr Asn Val Thr Ser Val Leu Phe Arg Lys Lys Lys Cys Asp Tyr
100 105 110

Trp Ile Arg Thr Phe Val Pro Gly Ser Gln Pro Gly Glu Phe Thr Leu
115 120 125

Gly Asn Ile Lys Ser Tyr Pro Gly Leu Thr Ser Tyr Leu Val Arg Val
130 135 140

Val Ser Thr Asn Tyr Asn Gln His Ala Met Val Phe Phe Lys Lys Val
145 150 155 160

Ser Gln Asn Arg Glu Tyr Phe Lys Ile Thr Leu Tyr Gly Arg Thr Lys
165 170 175

Glu Leu Thr Ser Glu Leu Lys Glu Asn Phe Ile Arg Phe Ser Lys Ser
180 185 190

Leu Gly Leu Pro Glu Asn His Ile Val Phe Pro Val Pro Ile Asp Gln
195 200 205

Cys Ile Asp Gly Gly Gly Ser Glu Asn Leu Tyr Phe Gln Gly Gly Gly
210 215 220

Arg Ser Ala Gly Ala His Ala Gly Trp Glu Thr Pro Glu Gly Cys Glu
225 230 235 240

Gln Val Leu Thr Gly Lys Arg Leu Met Gln Cys Leu Pro Asn Pro Glu
245 250 255

Asp Val Lys Met Ala Leu Glu Val Tyr Lys Leu Ser Leu Glu Ile Glu
260 265 270

Gln Leu Glu Leu Gln Arg Asp Ser Ala Arg Gln Ser Thr Leu Asp Lys
275 280 285

Glu Leu Val Pro Arg Gly Ser
290 295

<210> 82
<211> 522
<212> PRT
<213> Artificial Sequence

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

<220>
<221> MOD_RES
<222> (490)..(490)

<223> Any amino acid

<400> 82

Met Glu Thr Asp Thr Leu Leu Leu Trp Val Leu Leu Leu Trp Val Pro
1 5 10 15

Gly Ser Thr Gly Asp Tyr Lys Asp Glu His His His His His His Gly
20 25 30

Gly Ser Gln Asp Ser Thr Ser Asp Leu Ile Pro Ala Pro Pro Leu Ser
35 40 45

Lys Val Pro Leu Gln Gln Asn Phe Gln Asp Asn Gln Phe Gln Gly Lys
50 55 60

Trp Tyr Val Val Gly Leu Ala Gly Asn Ala Ile Leu Arg Glu Asp Lys
65 70 75 80

Asp Pro Gln Lys Met Tyr Ala Thr Ile Tyr Glu Leu Lys Glu Asp Lys
85 90 95

Ser Tyr Asn Val Thr Ser Val Leu Phe Arg Lys Lys Lys Cys Asp Tyr
100 105 110

Trp Ile Arg Thr Phe Val Pro Gly Ser Gln Pro Gly Glu Phe Thr Leu
115 120 125

Gly Asn Ile Lys Ser Tyr Pro Gly Leu Thr Ser Tyr Leu Val Arg Val
130 135 140

Val Ser Thr Asn Tyr Asn Gln His Ala Met Val Phe Phe Lys Lys Val
145 150 155 160

Ser Gln Asn Arg Glu Tyr Phe Lys Ile Thr Leu Tyr Gly Arg Thr Lys
165 170 175

Glu Leu Thr Ser Glu Leu Lys Glu Asn Phe Ile Arg Phe Ser Lys Ser
180 185 190

Leu Gly Leu Pro Glu Asn His Ile Val Phe Pro Val Pro Ile Asp Gln
195 200 205

Cys Ile Asp Gly Gly Gly Ser Glu Asn Leu Tyr Phe Gln Gly Gly Gly
210 215 220

Ile Ile Gln Val Asn Lys Thr Val Lys Glu Val Ala Val Leu Ser Cys
225 230 235 240

Asp Tyr Asn Ile Ser Thr Thr Glu Leu Met Lys Val Arg Ile Tyr Trp
245 250 255

Gln Lys Asp Asp Glu Val Val Leu Ala Val Thr Ser Gly Gln Thr Lys
260 265 270

Val Trp Ser Lys Tyr Glu Asn Arg Thr Phe Ala Asp Phe Thr Asn Asn
275 280 285

Leu Ser Ile Val Ile Met Ala Leu Arg Leu Ser Asp Asn Gly Lys Tyr
290 295 300

Thr Cys Ile Val Gln Lys Thr Glu Lys Arg Ser Tyr Lys Val Lys His
305 310 315 320

Met Thr Ser Val Met Leu Leu Val Arg Ala Asp Phe Pro Val Pro Ser
325 330 335

Ile Thr Asp Leu Gly Asn Pro Ser His Asp Ile Lys Arg Ile Met Cys
340 345 350

Ser Thr Ser Gly Gly Phe Pro Lys Pro His Leu Ser Trp Trp Glu Asn

355 360 365

Glu Glu Glu Leu Asn Ala Ala Asn Thr Thr Val Ser Gln Asp Pro Asp
370 375 380

Thr Glu Leu Tyr Thr Ile Ser Ser Glu Leu Asp Phe Asn Ile Thr Ser
385 390 395 400

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

Gln Ile Phe Asn Trp Gln Lys Ser Val Glu Pro His Pro Pro Asn Asn
420 425 430

Ser Ala Trp Ser His Pro Gln Phe Glu Lys Gly Gly Ser Leu Val Pro
435 440 445

Arg Gly Ser Gly Ser Ala Gly Ala His Ala Gly Trp Glu Thr Pro Glu
450 455 460

Gly Cys Glu Gln Val Leu Thr Gly Lys Arg Leu Met Gln Cys Leu Pro
465 470 475 480

Asn Pro Glu Asp Val Lys Met Ala Leu Xaa Val Tyr Lys Leu Ser Leu
485 490 495

Glu Ile Glu Gln Leu Glu Leu Gln Arg Asp Ser Ala Arg Gln Ser Thr
500 505 510

Leu Asp Lys Glu Leu Val Pro Arg Gly Ser
515 520

<210> 83
<211> 279
<212> PRT

<213> Artificial Sequence

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

<400> 83
Met Glu Thr Asp Thr Leu Leu Leu Trp Val Leu Leu Leu Trp Val Pro
1 5 10 15

Gly Ser Thr Gly Asp Tyr Lys Asp Glu His His His His His His Gly
20 25 30

Gly Ser Gln Asp Ser Thr Ser Asp Leu Ile Pro Ala Pro Pro Leu Ser
35 40 45

Lys Val Pro Leu Gln Gln Asn Phe Gln Asp Asn Gln Phe Gln Gly Lys
50 55 60

Trp Tyr Val Val Gly Leu Ala Gly Asn Ala Ile Leu Arg Glu Asp Lys
65 70 75 80

Asp Pro Gln Lys Met Tyr Ala Thr Ile Tyr Glu Leu Lys Glu Asp Lys
85 90 95

Ser Tyr Asn Val Thr Ser Val Leu Phe Arg Lys Lys Lys Cys Asp Tyr
100 105 110

Trp Ile Arg Thr Phe Val Pro Gly Ser Gln Pro Gly Glu Phe Thr Leu
115 120 125

Gly Asn Ile Lys Ser Tyr Pro Gly Leu Thr Ser Tyr Leu Val Arg Val
130 135 140

Val Ser Thr Asn Tyr Asn Gln His Ala Met Val Phe Phe Lys Lys Val
145 150 155 160

Ser Gln Asn Arg Glu Tyr Phe Lys Ile Thr Leu Tyr Gly Arg Thr Lys
165 170 175

Glu Leu Thr Ser Glu Leu Lys Glu Asn Phe Ile Arg Phe Ser Lys Ser
180 185 190

Leu Gly Leu Pro Glu Asn His Ile Val Phe Pro Val Pro Ile Asp Gln
195 200 205

Cys Ile Asp Gly Gly Gly Ser Glu Asn Leu Tyr Phe Gln Gly Gly Gly
210 215 220

Arg Asn Leu Val Thr Ala Phe Ser Asn Met Asp Asp Met Leu Gln Lys
225 230 235 240

Ala His Leu Val Ile Glu Gly Thr Phe Ile Tyr Leu Arg Asp Ser Thr
245 250 255

Glu Phe Phe Ile Arg Val Arg Asp Gly Trp Lys Lys Leu Gln Leu Gly
260 265 270

Glu Leu Ile Pro Ile Pro Ala
275

<210> 84
<211> 506
<212> PRT
<213> Artificial Sequence

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

<400> 84
Met Glu Thr Asp Thr Leu Leu Leu Trp Val Leu Leu Leu Trp Val Pro

1 5 10 15

Gly Ser Thr Gly Asp Tyr Lys Asp Glu His His His His His His Gly
20 25 30

Gly Ser Gln Asp Ser Thr Ser Asp Leu Ile Pro Ala Pro Pro Leu Ser
35 40 45

Lys Val Pro Leu Gln Gln Asn Phe Gln Asp Asn Gln Phe Gln Gly Lys
50 55 60

Trp Tyr Val Val Gly Leu Ala Gly Asn Ala Ile Leu Arg Glu Asp Lys
65 70 75 80

Asp Pro Gln Lys Met Tyr Ala Thr Ile Tyr Glu Leu Lys Glu Asp Lys
85 90 95

Ser Tyr Asn Val Thr Ser Val Leu Phe Arg Lys Lys Lys Cys Asp Tyr
100 105 110

Trp Ile Arg Thr Phe Val Pro Gly Ser Gln Pro Gly Glu Phe Thr Leu
115 120 125

Gly Asn Ile Lys Ser Tyr Pro Gly Leu Thr Ser Tyr Leu Val Arg Val
130 135 140

Val Ser Thr Asn Tyr Asn Gln His Ala Met Val Phe Phe Lys Lys Val
145 150 155 160

Ser Gln Asn Arg Glu Tyr Phe Lys Ile Thr Leu Tyr Gly Arg Thr Lys
165 170 175

Glu Leu Thr Ser Glu Leu Lys Glu Asn Phe Ile Arg Phe Ser Lys Ser
180 185 190

Leu Gly Leu Pro Glu Asn His Ile Val Phe Pro Val Pro Ile Asp Gln
195 200 205

Cys Ile Asp Gly Gly Gly Ser Glu Asn Leu Tyr Phe Gln Gly Gly Gly
210 215 220

Ile Ile Gln Val Asn Lys Thr Val Lys Glu Val Ala Val Leu Ser Cys
225 230 235 240

Asp Tyr Asn Ile Ser Thr Thr Glu Leu Met Lys Val Arg Ile Tyr Trp
245 250 255

Gln Lys Asp Asp Glu Val Val Leu Ala Val Thr Ser Gly Gln Thr Lys
260 265 270

Val Trp Ser Lys Tyr Glu Asn Arg Thr Phe Ala Asp Phe Thr Asn Asn
275 280 285

Leu Ser Ile Val Ile Met Ala Leu Arg Leu Ser Asp Asn Gly Lys Tyr
290 295 300

Thr Cys Ile Val Gln Lys Thr Glu Lys Arg Ser Tyr Lys Val Lys His
305 310 315 320

Met Thr Ser Val Met Leu Leu Val Arg Ala Asp Phe Pro Val Pro Ser
325 330 335

Ile Thr Asp Leu Gly Asn Pro Ser His Asp Ile Lys Arg Ile Met Cys
340 345 350

Ser Thr Ser Gly Gly Phe Pro Lys Pro His Leu Ser Trp Trp Glu Asn
355 360 365

Glu Glu Glu Leu Asn Ala Ala Asn Thr Thr Val Ser Gln Asp Pro Asp

370 375 380

Thr Glu Leu Tyr Thr Ile Ser Ser Glu Leu Asp Phe Asn Ile Thr Ser
385 390 395 400

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

Gln Ile Phe Asn Trp Gln Lys Ser Val Glu Pro His Pro Pro Asn Asn
420 425 430

Ser Ala Trp Ser His Pro Gln Phe Glu Lys Gly Gly Ser Leu Val Pro
435 440 445

Arg Gly Ser Gly Asn Leu Val Thr Ala Phe Ser Asn Met Asp Asp Met
450 455 460

Leu Gln Lys Ala His Leu Val Ile Glu Gly Thr Phe Ile Tyr Leu Arg
465 470 475 480

Asp Ser Thr Glu Phe Phe Ile Arg Val Arg Asp Gly Trp Lys Lys Leu
485 490 495

Gln Leu Gly Glu Leu Ile Pro Ile Pro Ala
500 505

<210> 85
<211> 278
<212> PRT
<213> Artificial Sequence

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

<400> 85

Met Glu Thr Asp Thr Leu Leu Leu Trp Val Leu Leu Leu Trp Val Pro
1 5 10 15

Gly Ser Thr Gly Asp Tyr Lys Asp Glu His His His His His His Gly
20 25 30

Gly Ser Gln Asp Ser Thr Ser Asp Leu Ile Pro Ala Pro Pro Leu Ser
35 40 45

Lys Val Pro Leu Gln Gln Asn Phe Gln Asp Asn Gln Phe Gln Gly Lys
50 55 60

Trp Tyr Val Val Gly Leu Ala Gly Asn Ala Ile Leu Arg Glu Asp Lys
65 70 75 80

Asp Pro Gln Lys Met Tyr Ala Thr Ile Tyr Glu Leu Lys Glu Asp Lys
85 90 95

Ser Tyr Asn Val Thr Ser Val Leu Phe Arg Lys Lys Lys Cys Asp Tyr
100 105 110

Trp Ile Arg Thr Phe Val Pro Gly Ser Gln Pro Gly Glu Phe Thr Leu
115 120 125

Gly Asn Ile Lys Ser Tyr Pro Gly Leu Thr Ser Tyr Leu Val Arg Val
130 135 140

Val Ser Thr Asn Tyr Asn Gln His Ala Met Val Phe Phe Lys Lys Val
145 150 155 160

Ser Gln Asn Arg Glu Tyr Phe Lys Ile Thr Leu Tyr Gly Arg Thr Lys
165 170 175

Glu Leu Thr Ser Glu Leu Lys Glu Asn Phe Ile Arg Phe Ser Lys Ser
180 185 190

Leu Gly Leu Pro Glu Asn His Ile Val Phe Pro Val Pro Ile Asp Gln
195 200 205

Cys Ile Asp Gly Gly Gly Ser Glu Asn Leu Tyr Phe Gln Gly Gly Gly
210 215 220

Arg Ser Ser Asn Ala Lys Trp Asp Gln Trp Ser Ser Asp Trp Gln Thr
225 230 235 240

Trp Asn Ala Lys Trp Asp Gln Trp Ser Asn Asp Trp Asn Ala Trp Arg
245 250 255

Ser Asp Trp Gln Ala Trp Lys Asp Asp Trp Ala Arg Trp Asn Gln Arg
260 265 270

Trp Asp Asn Trp Ala Thr
275

<210> 86
<211> 302
<212> PRT
<213> Artificial Sequence

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

<400> 86
Met Glu Thr Asp Thr Leu Leu Leu Trp Val Leu Leu Leu Trp Val Pro
1 5 10 15

Gly Ser Thr Gly Asp Tyr Lys Asp Glu His His His His His His Gly
20 25 30

Gly Ser Gln Asp Ser Thr Ser Asp Leu Ile Pro Ala Pro Pro Leu Ser

35 40 45

Lys Val Pro Leu Gln Gln Asn Phe Gln Asp Asn Gln Phe Gln Gly Lys
50 55 60

Trp Tyr Val Val Gly Leu Ala Gly Asn Ala Ile Leu Arg Glu Asp Lys
65 70 75 80

Asp Pro Gln Lys Met Tyr Ala Thr Ile Tyr Glu Leu Lys Glu Asp Lys
85 90 95

Ser Tyr Asn Val Thr Ser Val Leu Phe Arg Lys Lys Lys Cys Asp Tyr
100 105 110

Trp Ile Arg Thr Phe Val Pro Gly Ser Gln Pro Gly Glu Phe Thr Leu
115 120 125

Gly Asn Ile Lys Ser Tyr Pro Gly Leu Thr Ser Tyr Leu Val Arg Val
130 135 140

Val Ser Thr Asn Tyr Asn Gln His Ala Met Val Phe Phe Lys Lys Val
145 150 155 160

Ser Gln Asn Arg Glu Tyr Phe Lys Ile Thr Leu Tyr Gly Arg Thr Lys
165 170 175

Glu Leu Thr Ser Glu Leu Lys Glu Asn Phe Ile Arg Phe Ser Lys Ser
180 185 190

Leu Gly Leu Pro Glu Asn His Ile Val Phe Pro Val Pro Ile Asp Gln
195 200 205

Cys Ile Asp Gly Gly Gly Ser Glu Asn Leu Tyr Phe Gln Gly Gly Cys
210 215 220

Tyr Asn Ser Thr Gly Val Asp Tyr Arg Gly Thr Val Ser Val Thr Lys
225 230 235 240

Ser Gly Arg Gln Cys Gln Pro Trp Asn Ser Gln Tyr Pro His Thr His
245 250 255

Thr Phe Thr Ala Leu Arg Phe Pro Glu Leu Asn Gly Gly His Ser Tyr
260 265 270

Cys Arg Asn Pro Gly Asn Gln Lys Glu Ala Pro Trp Cys Phe Thr Leu
275 280 285

Asp Glu Asn Phe Lys Ser Asp Leu Cys Asp Ile Pro Ala Cys
290 295 300

<210> 87
<211> 343
<212> PRT
<213> Artificial Sequence

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

<400> 87
Met Glu Thr Asp Thr Leu Leu Leu Trp Val Leu Leu Leu Trp Val Pro
1 5 10 15

Gly Ser Thr Gly Asp Tyr Lys Asp Glu His His His His His His Gly
20 25 30

Gly Ser Gln Asp Ser Thr Ser Asp Leu Ile Pro Ala Pro Pro Leu Ser
35 40 45

Lys Val Pro Leu Gln Gln Asn Phe Gln Asp Asn Gln Phe Gln Gly Lys
50 55 60

Trp Tyr Val Val Gly Leu Ala Gly Asn Ala Ile Leu Arg Glu Asp Lys
65 70 75 80

Asp Pro Gln Lys Met Tyr Ala Thr Ile Tyr Glu Leu Lys Glu Asp Lys
85 90 95

Ser Tyr Asn Val Thr Ser Val Leu Phe Arg Lys Lys Lys Cys Asp Tyr
100 105 110

Trp Ile Arg Thr Phe Val Pro Gly Ser Gln Pro Gly Glu Phe Thr Leu
115 120 125

Gly Asn Ile Lys Ser Tyr Pro Gly Leu Thr Ser Tyr Leu Val Arg Val
130 135 140

Val Ser Thr Asn Tyr Asn Gln His Ala Met Val Phe Phe Lys Lys Val
145 150 155 160

Ser Gln Asn Arg Glu Tyr Phe Lys Ile Thr Leu Tyr Gly Arg Thr Lys
165 170 175

Glu Leu Thr Ser Glu Leu Lys Glu Asn Phe Ile Arg Phe Ser Lys Ser
180 185 190

Leu Gly Leu Pro Glu Asn His Ile Val Phe Pro Val Pro Ile Asp Gln
195 200 205

Cys Ile Asp Gly Gly Gly Ser Glu Asn Leu Tyr Phe Gln Gly Gly Met
210 215 220

His Val Ala Gln Pro Ala Val Val Leu Ala Ser Ser Arg Gly Val Ala
225 230 235 240

Ser Phe Val Cys Glu Tyr Gly Ser Ser Gly Asn Ala Ala Glu Val Arg
245 250 255

Val Thr Val Leu Arg Gln Ala Gly Ser Gln Met Thr Glu Val Cys Ala
260 265 270

Ala Thr Tyr Thr Val Glu Asp Glu Leu Ala Phe Leu Asp Asp Ser Thr
275 280 285

Cys Thr Gly Thr Ser Ser Gly Asn Lys Val Asn Leu Thr Ile Gln Gly
290 295 300

Leu Arg Ala Met Asp Thr Gly Leu Tyr Ile Cys Lys Val Glu Leu Met
305 310 315 320

Tyr Pro Pro Pro Tyr Tyr Val Gly Met Gly Asn Gly Thr Gln Ile Tyr
325 330 335

Val Ile Asp Pro Glu Pro Cys
340

<210> 88
<211> 788
<212> DNA
<213> Artificial Sequence

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

<400> 88
ctcgagacca tggagacaga cacactcctg ctatgggtac tgctgctctg ggttccaggt 60

tccactggtg actacaagga cgagcatcac catcatcacc atggtggaag ccaggactcc 120

acctcagacc tgatcccagc cccacctctg agcaaggtcc ctctgcagca gaacttccag 180

gacaaccaat tccaggggaa gtggtatgtg gtaggcctgg cagggaatgc aattctcaga 240

gaagacaaag acccgcaaaa gatgtatgcc accatctatg agctgaaaga agacaagagc 300

tacaatgtca cctccgtcct gtttaggaaa aagaagtgtg actactggat caggactttt 360

gttccaggtt gccagcccgg cgagttcacg ctgggcaaca ttaagagtta ccctggatta 420

acgagttacc tcgtccgagt ggtgagcacc aactacaacc agcatgctat ggtgttcttc 480

aagaaagttt ctcaaaacag ggagtacttc aagatcaccc tctacgggag aaccaaggag 540

ctgacttcgg aactaaagga gaacttcatc cgcttctcca aatctctggg cctccctgaa 600

aaccacatcg tcttccctgt cccaatcgac cagtgtatcg acggcggagg tagcgaaaac 660

ctgtattttc agggaggcga ctgcctgccc cacctgagga ggtgcagggc cgacaacgac 720

tgctgcggca ggaggtgcag gaggaggggc accaacgccg agaggaggtg caggtaagct 780

aaggatcc 788

<210> 89
<211> 20
<212> PRT
<213> Mus musculus

<400> 89
Met Glu Thr Asp Thr Leu Leu Leu Trp Val Leu Leu Leu Trp Val Pro
1 5 10 15

Gly Ser Thr Gly
20

<210> 90
<211> 60
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 90

atggagacag acacactcct gctatgggta ctgctgctct gggttccagg ttccactggt 60

<210> 91
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 91
Asp Tyr Lys Asp Glu
1 5

<210> 92
<211> 15
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 92
gactacaagg acgag 15

<210> 93
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic 6xHis tag

<400> 93
His His His His His His
1 5

<210> 94
<211> 18

<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 94
catcatcatc atcatcat 18

<210> 95
<211> 6
<212> PRT
<213> Tobacco etch virus

<400> 95
Glu Asn Leu Tyr Phe Gln
1 5

<210> 96
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 96
gagaatttat attttcag 18

<210> 97
<211> 6
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 97
ggatcc 6

<210> 98
<211> 6
<212> PRT
<213> Artificial Sequence

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

<400> 98
Arg Ala Arg Tyr Lys Arg
1 5

<210> 99
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 99
Arg Ala Arg Tyr Lys Arg Gly Ser
1 5

<210> 100
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 100
cgggcccggt ataaacgggg atcc 24

<210> 101
<211> 4
<212> PRT

<213> Artificial Sequence

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

<400> 101
Cys Ile Asp Gly
1

<210> 102
<211> 198
<212> PRT
<213> Artificial Sequence

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

<220>
<221> misc_feature
<222> (96)..(195)
<223> /note="Disulfide bond between residues"

<400> 102
Met Pro Leu Gly Leu Leu Trp Leu Gly Leu Ala Leu Leu Gly Ala Leu
1 5 10 15

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

Leu Ser Lys Val Pro Leu Gln Gln Asn Phe Gln Asp Asn Gln Phe Gln
35 40 45

Gly Lys Trp Tyr Val Val Gly Leu Ala Gly Asn Ala Ile Leu Arg Glu
50 55 60

Asp Lys Asp Pro Gln Lys Met Tyr Ala Thr Ile Tyr Glu Leu Lys Glu

65 70 75 80

Asp Lys Ser Tyr Asn Val Thr Ser Val Leu Phe Arg Lys Lys Lys Cys
85 90 95

Asp Tyr Trp Ile Arg Thr Phe Val Pro Gly Cys Gln Pro Gly Glu Phe
100 105 110

Thr Leu Gly Asn Ile Lys Ser Tyr Pro Gly Leu Thr Ser Tyr Leu Val
115 120 125

Arg Val Val Ser Thr Asn Tyr Asn Gln His Ala Met Val Phe Phe Lys
130 135 140

Lys Val Ser Gln Asn Arg Glu Tyr Phe Lys Ile Thr Leu Tyr Gly Arg
145 150 155 160

Thr Lys Glu Leu Thr Ser Glu Leu Lys Glu Asn Phe Ile Arg Phe Ser
165 170 175

Lys Ser Leu Gly Leu Pro Glu Asn His Ile Val Phe Pro Val Pro Ile
180 185 190

Asp Gln Cys Ile Asp Gly
195

<210> 103
<211> 21
<212> DNA
<213> Artificial Sequence

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

<400> 103

aacctgtatt ttcagggagg c 21

<210> 104
<211> 25
<212> DNA
<213> Artificial Sequence

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

<400> 104
gctaaggatc ccggaccgcc tctcc 25

<210> 105
<211> 287
<212> PRT
<213> Artificial Sequence

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

<400> 105
Met Glu Thr Asp Thr Leu Leu Leu Trp Val Leu Leu Leu Trp Val Pro
1 5 10 15

Gly Ser Thr Gly Asp Tyr Lys Asp Glu His His His His His His Gly
20 25 30

Gly Ser Gln Asp Ser Thr Ser Asp Leu Ile Pro Ala Pro Pro Leu Ser
35 40 45

Lys Val Pro Leu Gln Gln Asn Phe Gln Asp Asn Gln Phe Gln Gly Lys
50 55 60

Trp Tyr Val Val Gly Leu Ala Gly Asn Ala Ile Leu Arg Glu Asp Lys
65 70 75 80

Asp Pro Gln Lys Met Tyr Ala Thr Ile Tyr Glu Leu Lys Glu Asp Lys
85 90 95

Ser Tyr Asn Val Thr Ser Val Leu Phe Arg Lys Lys Lys Cys Asp Tyr
100 105 110

Trp Ile Arg Thr Phe Val Pro Gly Cys Gln Pro Gly Glu Phe Thr Leu
115 120 125

Gly Asn Ile Lys Ser Tyr Pro Gly Leu Thr Ser Tyr Leu Val Arg Val
130 135 140

Val Ser Thr Asn Tyr Asn Gln His Ala Met Val Phe Phe Lys Lys Val
145 150 155 160

Ser Gln Asn Arg Glu Tyr Phe Lys Ile Thr Leu Tyr Gly Arg Thr Lys
165 170 175

Glu Leu Thr Ser Glu Leu Lys Glu Asn Phe Ile Arg Phe Ser Lys Ser
180 185 190

Leu Gly Leu Pro Glu Asn His Ile Val Phe Pro Val Pro Ile Asp Gln
195 200 205

Cys Ile Asp Gly Gly Gly Ser Glu Asn Leu Tyr Phe Gln Gly Gly Asp
210 215 220

Thr Cys Gly Ser Gly Tyr Asn Val Asp Gln Arg Arg Thr Asn Ser Gly
225 230 235 240

Cys Lys Ala Gly Asn Gly Asp Arg His Phe Cys Gly Cys Asp Arg Thr
245 250 255

Gly Val Val Glu Cys Lys Gly Gly Lys Trp Thr Glu Val Gln Asp Cys
260 265 270

Gly Ser Ser Ser Cys Lys Gly Thr Ser Asn Gly Gly Ala Thr Cys
275 280 285

<210> 106
<211> 281
<212> PRT
<213> Artificial Sequence

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

<400> 106
Met Glu Thr Asp Thr Leu Leu Leu Trp Val Leu Leu Leu Trp Val Pro
1 5 10 15

Gly Ser Thr Gly Asp Tyr Lys Asp Glu His His His His His His Gly
20 25 30

Gly Ser Gln Asp Ser Thr Ser Asp Leu Ile Pro Ala Pro Pro Leu Ser
35 40 45

Lys Val Pro Leu Gln Gln Asn Phe Gln Asp Asn Gln Phe Gln Gly Lys
50 55 60

Trp Tyr Val Val Gly Leu Ala Gly Asn Ala Ile Leu Arg Glu Asp Lys
65 70 75 80

Asp Pro Gln Lys Met Tyr Ala Thr Ile Tyr Glu Leu Lys Glu Asp Lys
85 90 95

Ser Tyr Asn Val Thr Ser Val Leu Phe Arg Lys Lys Lys Cys Asp Tyr
100 105 110

Trp Ile Arg Thr Phe Val Pro Gly Cys Gln Pro Gly Glu Phe Thr Leu
115 120 125

Gly Asn Ile Lys Ser Tyr Pro Gly Leu Thr Ser Tyr Leu Val Arg Val
130 135 140

Val Ser Thr Asn Tyr Asn Gln His Ala Met Val Phe Phe Lys Lys Val
145 150 155 160

Ser Gln Asn Arg Glu Tyr Phe Lys Ile Thr Leu Tyr Gly Arg Thr Lys
165 170 175

Glu Leu Thr Ser Glu Leu Lys Glu Asn Phe Ile Arg Phe Ser Lys Ser
180 185 190

Leu Gly Leu Pro Glu Asn His Ile Val Phe Pro Val Pro Ile Asp Gln
195 200 205

Cys Ile Asp Gly Gly Gly Ser Glu Asn Leu Tyr Phe Gln Gly Gly Asp
210 215 220

Gln Asn Cys Asp Ile Gly Asn Ile Thr Ser Gln Cys Gln Met Gln His
225 230 235 240

Lys Asn Cys Glu Asp Ala Asn Gly Cys Asp Thr Ile Ile Glu Glu Cys
245 250 255

Lys Thr Ser Met Val Glu Arg Cys Gln Asn Gln Glu Phe Glu Ser Ala
260 265 270

Ala Gly Ser Thr Thr Leu Gly Pro Gln
275 280

<210> 107

<211> 245
<212> PRT
<213> Artificial Sequence

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

<400> 107
Met Glu Thr Asp Thr Leu Leu Leu Trp Val Leu Leu Leu Trp Val Pro
1 5 10 15

Gly Ser Thr Gly Asp Tyr Lys Asp Glu His His His His His His Gly
20 25 30

Gly Ser Gln Asp Ser Thr Ser Asp Leu Ile Pro Ala Pro Pro Leu Ser
35 40 45

Lys Val Pro Leu Gln Gln Asn Phe Gln Asp Asn Gln Phe Gln Gly Lys
50 55 60

Trp Tyr Val Val Gly Leu Ala Gly Asn Ala Ile Leu Arg Glu Asp Lys
65 70 75 80

Asp Pro Gln Lys Met Tyr Ala Thr Ile Tyr Glu Leu Lys Glu Asp Lys
85 90 95

Ser Tyr Asn Val Thr Ser Val Leu Phe Arg Lys Lys Lys Cys Asp Tyr
100 105 110

Trp Ile Arg Thr Phe Val Pro Gly Cys Gln Pro Gly Glu Phe Thr Leu
115 120 125

Gly Asn Ile Lys Ser Tyr Pro Gly Leu Thr Ser Tyr Leu Val Arg Val
130 135 140

Val Ser Thr Asn Tyr Asn Gln His Ala Met Val Phe Phe Lys Lys Val
145 150 155 160

Ser Gln Asn Arg Glu Tyr Phe Lys Ile Thr Leu Tyr Gly Arg Thr Lys
165 170 175

Glu Leu Thr Ser Glu Leu Lys Glu Asn Phe Ile Arg Phe Ser Lys Ser
180 185 190

Leu Gly Leu Pro Glu Asn His Ile Val Phe Pro Val Pro Ile Asp Gln
195 200 205

Cys Ile Asp Gly Gly Gly Ser Glu Asn Leu Tyr Phe Gln Gly Gly Gly
210 215 220

His Ala Cys Tyr Arg Asn Cys Trp Arg Glu Gly Asn Asp Glu Glu Thr
225 230 235 240

Cys Lys Glu Arg Cys
245

<210> 108
<211> 258
<212> PRT
<213> Artificial Sequence

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

<400> 108
Met Glu Thr Asp Thr Leu Leu Leu Trp Val Leu Leu Leu Trp Val Pro
1 5 10 15

Gly Ser Thr Gly Asp Tyr Lys Asp Glu His His His His His His Gly
20 25 30

Gly Ser Gln Asp Ser Thr Ser Asp Leu Ile Pro Ala Pro Pro Leu Ser
35 40 45

Lys Val Pro Leu Gln Gln Asn Phe Gln Asp Asn Gln Phe Gln Gly Lys
50 55 60

Trp Tyr Val Val Gly Leu Ala Gly Asn Ala Ile Leu Arg Glu Asp Lys
65 70 75 80

Asp Pro Gln Lys Met Tyr Ala Thr Ile Tyr Glu Leu Lys Glu Asp Lys
85 90 95

Ser Tyr Asn Val Thr Ser Val Leu Phe Arg Lys Lys Lys Cys Asp Tyr
100 105 110

Trp Ile Arg Thr Phe Val Pro Gly Cys Gln Pro Gly Glu Phe Thr Leu
115 120 125

Gly Asn Ile Lys Ser Tyr Pro Gly Leu Thr Ser Tyr Leu Val Arg Val
130 135 140

Val Ser Thr Asn Tyr Asn Gln His Ala Met Val Phe Phe Lys Lys Val
145 150 155 160

Ser Gln Asn Arg Glu Tyr Phe Lys Ile Thr Leu Tyr Gly Arg Thr Lys
165 170 175

Glu Leu Thr Ser Glu Leu Lys Glu Asn Phe Ile Arg Phe Ser Lys Ser
180 185 190

Leu Gly Leu Pro Glu Asn His Ile Val Phe Pro Val Pro Ile Asp Gln
195 200 205

Cys Ile Asp Gly Gly Gly Ser Glu Asn Leu Tyr Phe Gln Gly Gly Glu

210 215 220

Cys Arg Tyr Leu Phe Gly Gly Cys Lys Thr Thr Ser Asp Cys Cys Lys
225 230 235 240

His Leu Gly Cys Lys Phe Arg Asp Lys Tyr Cys Ala Trp Asp Phe Thr
245 250 255

Phe Ser

<210> 109
<211> 259
<212> PRT
<213> Artificial Sequence

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

<400> 109
Met Glu Thr Asp Thr Leu Leu Leu Trp Val Leu Leu Leu Trp Val Pro
1 5 10 15

Gly Ser Thr Gly Asp Tyr Lys Asp Glu His His His His His His Gly
20 25 30

Gly Ser Gln Asp Ser Thr Ser Asp Leu Ile Pro Ala Pro Pro Leu Ser
35 40 45

Lys Val Pro Leu Gln Gln Asn Phe Gln Asp Asn Gln Phe Gln Gly Lys
50 55 60

Trp Tyr Val Val Gly Leu Ala Gly Asn Ala Ile Leu Arg Glu Asp Lys
65 70 75 80

Asp Pro Gln Lys Met Tyr Ala Thr Ile Tyr Glu Leu Lys Glu Asp Lys
85 90 95

Ser Tyr Asn Val Thr Ser Val Leu Phe Arg Lys Lys Lys Cys Asp Tyr
100 105 110

Trp Ile Arg Thr Phe Val Pro Gly Cys Gln Pro Gly Glu Phe Thr Leu
115 120 125

Gly Asn Ile Lys Ser Tyr Pro Gly Leu Thr Ser Tyr Leu Val Arg Val
130 135 140

Val Ser Thr Asn Tyr Asn Gln His Ala Met Val Phe Phe Lys Lys Val
145 150 155 160

Ser Gln Asn Arg Glu Tyr Phe Lys Ile Thr Leu Tyr Gly Arg Thr Lys
165 170 175

Glu Leu Thr Ser Glu Leu Lys Glu Asn Phe Ile Arg Phe Ser Lys Ser
180 185 190

Leu Gly Leu Pro Glu Asn His Ile Val Phe Pro Val Pro Ile Asp Gln
195 200 205

Cys Ile Asp Gly Gly Gly Ser Glu Asn Leu Tyr Phe Gln Gly Gly Glu
210 215 220

Ile Ser Cys Glu Pro Gly Lys Thr Phe Lys Asp Lys Cys Asn Thr Cys
225 230 235 240

Arg Cys Gly Ala Asp Gly Lys Ser Ala Ala Cys Thr Leu Lys Ala Cys
245 250 255

Pro Asn Gln

<210> 110
<211> 260
<212> PRT
<213> Artificial Sequence

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

<400> 110
Met Glu Thr Asp Thr Leu Leu Leu Trp Val Leu Leu Leu Trp Val Pro
1 5 10 15

Gly Ser Thr Gly Asp Tyr Lys Asp Glu His His His His His His Gly
20 25 30

Gly Ser Gln Asp Ser Thr Ser Asp Leu Ile Pro Ala Pro Pro Leu Ser
35 40 45

Lys Val Pro Leu Gln Gln Asn Phe Gln Asp Asn Gln Phe Gln Gly Lys
50 55 60

Trp Tyr Val Val Gly Leu Ala Gly Asn Ala Ile Leu Arg Glu Asp Lys
65 70 75 80

Asp Pro Gln Lys Met Tyr Ala Thr Ile Tyr Glu Leu Lys Glu Asp Lys
85 90 95

Ser Tyr Asn Val Thr Ser Val Leu Phe Arg Lys Lys Lys Cys Asp Tyr
100 105 110

Trp Ile Arg Thr Phe Val Pro Gly Cys Gln Pro Gly Glu Phe Thr Leu
115 120 125

Gly Asn Ile Lys Ser Tyr Pro Gly Leu Thr Ser Tyr Leu Val Arg Val

130 135 140

Val Ser Thr Asn Tyr Asn Gln His Ala Met Val Phe Phe Lys Lys Val
145 150 155 160

Ser Gln Asn Arg Glu Tyr Phe Lys Ile Thr Leu Tyr Gly Arg Thr Lys
165 170 175

Glu Leu Thr Ser Glu Leu Lys Glu Asn Phe Ile Arg Phe Ser Lys Ser
180 185 190

Leu Gly Leu Pro Glu Asn His Ile Val Phe Pro Val Pro Ile Asp Gln
195 200 205

Cys Ile Asp Gly Gly Gly Ser Glu Asn Leu Tyr Phe Gln Gly Gly Val
210 215 220

Cys Arg Asp Trp Phe Lys Glu Thr Ala Cys Arg His Ala Lys Ser Leu
225 230 235 240

Gly Asn Cys Arg Thr Ser Gln Lys Tyr Arg Ala Asn Cys Ala Lys Thr
245 250 255

Cys Glu Leu Cys
260

<210> 111
<211> 269
<212> PRT
<213> Artificial Sequence

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

<400> 111

Met Glu Thr Asp Thr Leu Leu Leu Trp Val Leu Leu Leu Trp Val Pro
1 5 10 15

Gly Ser Thr Gly Asp Tyr Lys Asp Glu His His His His His His Gly
20 25 30

Gly Ser Gln Asp Ser Thr Ser Asp Leu Ile Pro Ala Pro Pro Leu Ser
35 40 45

Lys Val Pro Leu Gln Gln Asn Phe Gln Asp Asn Gln Phe Gln Gly Lys
50 55 60

Trp Tyr Val Val Gly Leu Ala Gly Asn Ala Ile Leu Arg Glu Asp Lys
65 70 75 80

Asp Pro Gln Lys Met Tyr Ala Thr Ile Tyr Glu Leu Lys Glu Asp Lys
85 90 95

Ser Tyr Asn Val Thr Ser Val Leu Phe Arg Lys Lys Lys Cys Asp Tyr
100 105 110

Trp Ile Arg Thr Phe Val Pro Gly Cys Gln Pro Gly Glu Phe Thr Leu
115 120 125

Gly Asn Ile Lys Ser Tyr Pro Gly Leu Thr Ser Tyr Leu Val Arg Val
130 135 140

Val Ser Thr Asn Tyr Asn Gln His Ala Met Val Phe Phe Lys Lys Val
145 150 155 160

Ser Gln Asn Arg Glu Tyr Phe Lys Ile Thr Leu Tyr Gly Arg Thr Lys
165 170 175

Glu Leu Thr Ser Glu Leu Lys Glu Asn Phe Ile Arg Phe Ser Lys Ser
180 185 190

Leu Gly Leu Pro Glu Asn His Ile Val Phe Pro Val Pro Ile Asp Gln
195 200 205

Cys Ile Asp Gly Gly Gly Ser Glu Asn Leu Tyr Phe Gln Gly Gly Val
210 215 220

Ser Ile Thr Lys Cys Ser Ser Asp Met Asn Gly Tyr Cys Leu His Gly
225 230 235 240

Gln Cys Ile Tyr Leu Val Asp Met Ser Gln Asn Tyr Cys Arg Cys Glu
245 250 255

Val Gly Tyr Thr Gly Val Arg Cys Glu His Phe Phe Leu
260 265

<210> 112
<211> 253
<212> PRT
<213> Artificial Sequence

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

<400> 112
Met Glu Thr Asp Thr Leu Leu Leu Trp Val Leu Leu Leu Trp Val Pro
1 5 10 15

Gly Ser Thr Gly Asp Tyr Lys Asp Glu His His His His His His Gly
20 25 30

Gly Ser Gln Asp Ser Thr Ser Asp Leu Ile Pro Ala Pro Pro Leu Ser
35 40 45

Lys Val Pro Leu Gln Gln Asn Phe Gln Asp Asn Gln Phe Gln Gly Lys

50 55 60

Trp Tyr Val Val Gly Leu Ala Gly Asn Ala Ile Leu Arg Glu Asp Lys
65 70 75 80

Asp Pro Gln Lys Met Tyr Ala Thr Ile Tyr Glu Leu Lys Glu Asp Lys
85 90 95

Ser Tyr Asn Val Thr Ser Val Leu Phe Arg Lys Lys Lys Cys Asp Tyr
100 105 110

Trp Ile Arg Thr Phe Val Pro Gly Cys Gln Pro Gly Glu Phe Thr Leu
115 120 125

Gly Asn Ile Lys Ser Tyr Pro Gly Leu Thr Ser Tyr Leu Val Arg Val
130 135 140

Val Ser Thr Asn Tyr Asn Gln His Ala Met Val Phe Phe Lys Lys Val
145 150 155 160

Ser Gln Asn Arg Glu Tyr Phe Lys Ile Thr Leu Tyr Gly Arg Thr Lys
165 170 175

Glu Leu Thr Ser Glu Leu Lys Glu Asn Phe Ile Arg Phe Ser Lys Ser
180 185 190

Leu Gly Leu Pro Glu Asn His Ile Val Phe Pro Val Pro Ile Asp Gln
195 200 205

Cys Ile Asp Gly Gly Gly Ser Glu Asn Leu Tyr Phe Gln Gly Gly Gly
210 215 220

Ile Pro Cys Gly Glu Ser Cys Val Trp Ile Pro Cys Ile Ser Ala Ala
225 230 235 240

Leu Gly Cys Ser Cys Lys Asn Lys Val Cys Tyr Arg Asn
245 250

<210> 113
<211> 277
<212> PRT
<213> Artificial Sequence

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

<400> 113
Met Glu Thr Asp Thr Leu Leu Leu Trp Val Leu Leu Leu Trp Val Pro
1 5 10 15

Gly Ser Thr Gly Asp Tyr Lys Asp Glu His His His His His His Gly
20 25 30

Gly Ser Gln Asp Ser Thr Ser Asp Leu Ile Pro Ala Pro Pro Leu Ser
35 40 45

Lys Val Pro Leu Gln Gln Asn Phe Gln Asp Asn Gln Phe Gln Gly Lys
50 55 60

Trp Tyr Val Val Gly Leu Ala Gly Asn Ala Ile Leu Arg Glu Asp Lys
65 70 75 80

Asp Pro Gln Lys Met Tyr Ala Thr Ile Tyr Glu Leu Lys Glu Asp Lys
85 90 95

Ser Tyr Asn Val Thr Ser Val Leu Phe Arg Lys Lys Lys Cys Asp Tyr
100 105 110

Trp Ile Arg Thr Phe Val Pro Gly Cys Gln Pro Gly Glu Phe Thr Leu
115 120 125

Gly Asn Ile Lys Ser Tyr Pro Gly Leu Thr Ser Tyr Leu Val Arg Val
130 135 140

Val Ser Thr Asn Tyr Asn Gln His Ala Met Val Phe Phe Lys Lys Val
145 150 155 160

Ser Gln Asn Arg Glu Tyr Phe Lys Ile Thr Leu Tyr Gly Arg Thr Lys
165 170 175

Glu Leu Thr Ser Glu Leu Lys Glu Asn Phe Ile Arg Phe Ser Lys Ser
180 185 190

Leu Gly Leu Pro Glu Asn His Ile Val Phe Pro Val Pro Ile Asp Gln
195 200 205

Cys Ile Asp Gly Gly Gly Ser Glu Asn Leu Tyr Phe Gln Gly Gly Gln
210 215 220

Asp Lys Cys Lys Lys Val Tyr Glu Asn Tyr Pro Val Ser Lys Cys Gln
225 230 235 240

Leu Ala Asn Gln Cys Asn Tyr Asp Cys Lys Leu Asp Lys His Ala Arg
245 250 255

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

Asp Tyr Cys Glu Tyr
275

<210> 114
<211> 259
<212> PRT
<213> Artificial Sequence

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

<400> 114
Met Glu Thr Asp Thr Leu Leu Leu Trp Val Leu Leu Leu Trp Val Pro
1 5 10 15

Gly Ser Thr Gly Asp Tyr Lys Asp Glu His His His His His His Gly
20 25 30

Gly Ser Gln Asp Ser Thr Ser Asp Leu Ile Pro Ala Pro Pro Leu Ser
35 40 45

Lys Val Pro Leu Gln Gln Asn Phe Gln Asp Asn Gln Phe Gln Gly Lys
50 55 60

Trp Tyr Val Val Gly Leu Ala Gly Asn Ala Ile Leu Arg Glu Asp Lys
65 70 75 80

Asp Pro Gln Lys Met Tyr Ala Thr Ile Tyr Glu Leu Lys Glu Asp Lys
85 90 95

Ser Tyr Asn Val Thr Ser Val Leu Phe Arg Lys Lys Lys Cys Asp Tyr
100 105 110

Trp Ile Arg Thr Phe Val Pro Gly Cys Gln Pro Gly Glu Phe Thr Leu
115 120 125

Gly Asn Ile Lys Ser Tyr Pro Gly Leu Thr Ser Tyr Leu Val Arg Val
130 135 140

Val Ser Thr Asn Tyr Asn Gln His Ala Met Val Phe Phe Lys Lys Val
145 150 155 160

Ser Gln Asn Arg Glu Tyr Phe Lys Ile Thr Leu Tyr Gly Arg Thr Lys
165 170 175

Glu Leu Thr Ser Glu Leu Lys Glu Asn Phe Ile Arg Phe Ser Lys Ser
180 185 190

Leu Gly Leu Pro Glu Asn His Ile Val Phe Pro Val Pro Ile Asp Gln
195 200 205

Cys Ile Asp Gly Gly Gly Ser Glu Asn Leu Tyr Phe Gln Gly Gly Met
210 215 220

Cys Met Pro Cys Phe Thr Thr Asp His Gln Met Ala Arg Lys Cys Asp
225 230 235 240

Asp Cys Cys Gly Gly Lys Gly Arg Gly Lys Cys Tyr Gly Pro Gln Cys
245 250 255

Leu Cys Arg

<210> 115
<211> 7
<212> PRT
<213> Artificial Sequence

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

<400> 115
Arg Ala Arg Tyr Lys Arg Ser
1 5

<210> 116
<211> 266

<212> PRT
<213> Artificial Sequence

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

<400> 116
Met Glu Thr Asp Thr Leu Leu Leu Trp Val Leu Leu Leu Trp Val Pro
1 5 10 15

Gly Ser Thr Gly Asp Tyr Lys Asp Glu His His His His His His Gly
20 25 30

Gly Ser Gln Asp Ser Thr Ser Asp Leu Ile Pro Ala Pro Pro Leu Ser
35 40 45

Lys Val Pro Leu Gln Gln Asn Phe Gln Asp Asn Gln Phe Gln Gly Lys
50 55 60

Trp Tyr Val Val Gly Leu Ala Gly Asn Ala Ile Leu Arg Glu Asp Lys
65 70 75 80

Asp Pro Gln Lys Met Tyr Ala Thr Ile Tyr Glu Leu Lys Glu Asp Lys
85 90 95

Ser Tyr Asn Val Thr Ser Val Leu Phe Arg Lys Lys Lys Cys Asp Tyr
100 105 110

Trp Ile Arg Thr Phe Val Pro Gly Cys Gln Pro Gly Glu Phe Thr Leu
115 120 125

Gly Asn Ile Lys Ser Tyr Pro Gly Leu Thr Ser Tyr Leu Val Arg Val
130 135 140

Val Ser Thr Asn Tyr Asn Gln His Ala Met Val Phe Phe Lys Lys Val

145 150 155 160

Ser Gln Asn Arg Glu Tyr Phe Lys Ile Thr Leu Tyr Gly Arg Thr Lys
165 170 175

Glu Leu Thr Ser Glu Leu Lys Glu Asn Phe Ile Arg Phe Ser Lys Ser
180 185 190

Leu Gly Leu Pro Glu Asn His Ile Val Phe Pro Val Pro Ile Asp Gln
195 200 205

Cys Ile Asp Gly Gly Gly Ser Glu Asn Leu Tyr Phe Gln Ser Asp Cys
210 215 220

Lys Tyr Lys Phe Glu Asn Trp Gly Ala Cys Asp Gly Gly Thr Gly Thr
225 230 235 240

Lys Val Arg Gln Gly Thr Leu Lys Lys Ala Arg Tyr Asn Ala Gln Cys
245 250 255

Gln Glu Thr Ile Arg Val Thr Lys Pro Cys
260 265

<210> 117
<211> 250
<212> PRT
<213> Artificial Sequence

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

<400> 117
Met Glu Thr Asp Thr Leu Leu Leu Trp Val Leu Leu Leu Trp Val Pro
1 5 10 15

Gly Ser Thr Gly Asp Tyr Lys Asp Glu His His His His His His Gly
20 25 30

Gly Ser Gln Asp Ser Thr Ser Asp Leu Ile Pro Ala Pro Pro Leu Ser
35 40 45

Lys Val Pro Leu Gln Gln Asn Phe Gln Asp Asn Gln Phe Gln Gly Lys
50 55 60

Trp Tyr Val Val Gly Leu Ala Gly Asn Ala Ile Leu Arg Glu Asp Lys
65 70 75 80

Asp Pro Gln Lys Met Tyr Ala Thr Ile Tyr Glu Leu Lys Glu Asp Lys
85 90 95

Ser Tyr Asn Val Thr Ser Val Leu Phe Arg Lys Lys Lys Cys Asp Tyr
100 105 110

Trp Ile Arg Thr Phe Val Pro Gly Cys Gln Pro Gly Glu Phe Thr Leu
115 120 125

Gly Asn Ile Lys Ser Tyr Pro Gly Leu Thr Ser Tyr Leu Val Arg Val
130 135 140

Val Ser Thr Asn Tyr Asn Gln His Ala Met Val Phe Phe Lys Lys Val
145 150 155 160

Ser Gln Asn Arg Glu Tyr Phe Lys Ile Thr Leu Tyr Gly Arg Thr Lys
165 170 175

Glu Leu Thr Ser Glu Leu Lys Glu Asn Phe Ile Arg Phe Ser Lys Ser
180 185 190

Leu Gly Leu Pro Glu Asn His Ile Val Phe Pro Val Pro Ile Asp Gln
195 200 205

Cys Ile Asp Gly Gly Gly Ser Glu Asn Leu Tyr Phe Gln Gly Gly Ser
210 215 220

Ala Ile Ser Cys Gly Glu Thr Cys Phe Lys Phe Lys Cys Tyr Thr Pro
225 230 235 240

Arg Cys Ser Cys Ser Tyr Pro Val Cys Lys
245 250

<210> 118
<211> 234
<212> PRT
<213> Artificial Sequence

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

<400> 118
Met Glu Thr Asp Thr Leu Leu Leu Trp Val Leu Leu Leu Trp Val Pro
1 5 10 15

Gly Ser Thr Gly Asp Tyr Lys Asp Glu His His His His His His Gly
20 25 30

Gly Ser Gln Asp Ser Thr Ser Asp Leu Ile Pro Ala Pro Pro Leu Ser
35 40 45

Lys Val Pro Leu Gln Gln Asn Phe Gln Asp Asn Gln Phe Gln Gly Lys
50 55 60

Trp Tyr Val Val Gly Leu Ala Gly Asn Ala Ile Leu Arg Glu Asp Lys
65 70 75 80

Asp Pro Gln Lys Met Tyr Ala Thr Ile Tyr Glu Leu Lys Glu Asp Lys

85 90 95

Ser Tyr Asn Val Thr Ser Val Leu Phe Arg Lys Lys Lys Cys Asp Tyr
100 105 110

Trp Ile Arg Thr Phe Val Pro Gly Cys Gln Pro Gly Glu Phe Thr Leu
115 120 125

Gly Asn Ile Lys Ser Tyr Pro Gly Leu Thr Ser Tyr Leu Val Arg Val
130 135 140

Val Ser Thr Asn Tyr Asn Gln His Ala Met Val Phe Phe Lys Lys Val
145 150 155 160

Ser Gln Asn Arg Glu Tyr Phe Lys Ile Thr Leu Tyr Gly Arg Thr Lys
165 170 175

Glu Leu Thr Ser Glu Leu Lys Glu Asn Phe Ile Arg Phe Ser Lys Ser
180 185 190

Leu Gly Leu Pro Glu Asn His Ile Val Phe Pro Val Pro Ile Asp Gln
195 200 205

Cys Ile Asp Gly Gly Gly Ser Glu Asn Leu Tyr Phe Gln Gly Gly Val
210 215 220

Cys Cys Gly Tyr Lys Leu Cys His Pro Cys
225 230

<210> 119
<211> 236
<212> PRT
<213> Artificial Sequence

<220>
<221> source

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

<400> 119

Met Glu Thr Asp Thr Leu Leu Leu Trp Val Leu Leu Leu Trp Val Pro
1 5 10 15

Gly Ser Thr Gly Asp Tyr Lys Asp Glu His His His His His His Gly
20 25 30

Gly Ser Gln Asp Ser Thr Ser Asp Leu Ile Pro Ala Pro Pro Leu Ser
35 40 45

Lys Val Pro Leu Gln Gln Asn Phe Gln Asp Asn Gln Phe Gln Gly Lys
50 55 60

Trp Tyr Val Val Gly Leu Ala Gly Asn Ala Ile Leu Arg Glu Asp Lys
65 70 75 80

Asp Pro Gln Lys Met Tyr Ala Thr Ile Tyr Glu Leu Lys Glu Asp Lys
85 90 95

Ser Tyr Asn Val Thr Ser Val Leu Phe Arg Lys Lys Lys Cys Asp Tyr
100 105 110

Trp Ile Arg Thr Phe Val Pro Gly Cys Gln Pro Gly Glu Phe Thr Leu
115 120 125

Gly Asn Ile Lys Ser Tyr Pro Gly Leu Thr Ser Tyr Leu Val Arg Val
130 135 140

Val Ser Thr Asn Tyr Asn Gln His Ala Met Val Phe Phe Lys Lys Val
145 150 155 160

Ser Gln Asn Arg Glu Tyr Phe Lys Ile Thr Leu Tyr Gly Arg Thr Lys
165 170 175

Glu Leu Thr Ser Glu Leu Lys Glu Asn Phe Ile Arg Phe Ser Lys Ser
180 185 190

Leu Gly Leu Pro Glu Asn His Ile Val Phe Pro Val Pro Ile Asp Gln
195 200 205

Cys Ile Asp Gly Gly Gly Ser Glu Asn Leu Tyr Phe Gln Gly Gly Asn
210 215 220

Gly Val Cys Cys Gly Tyr Lys Leu Cys His Pro Cys
225 230 235

<210> 120
<211> 262
<212> PRT
<213> Artificial Sequence

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

<400> 120
Met Glu Thr Asp Thr Leu Leu Leu Trp Val Leu Leu Leu Trp Val Pro
1 5 10 15

Gly Ser Thr Gly Asp Tyr Lys Asp Glu His His His His His His Gly
20 25 30

Gly Ser Gln Asp Ser Thr Ser Asp Leu Ile Pro Ala Pro Pro Leu Ser
35 40 45

Lys Val Pro Leu Gln Gln Asn Phe Gln Asp Asn Gln Phe Gln Gly Lys
50 55 60

Trp Tyr Val Val Gly Leu Ala Gly Asn Ala Ile Leu Arg Glu Asp Lys

65 70 75 80

Asp Pro Gln Lys Met Tyr Ala Thr Ile Tyr Glu Leu Lys Glu Asp Lys
85 90 95

Ser Tyr Asn Val Thr Ser Val Leu Phe Arg Lys Lys Lys Cys Asp Tyr
100 105 110

Trp Ile Arg Thr Phe Val Pro Gly Cys Gln Pro Gly Glu Phe Thr Leu
115 120 125

Gly Asn Ile Lys Ser Tyr Pro Gly Leu Thr Ser Tyr Leu Val Arg Val
130 135 140

Val Ser Thr Asn Tyr Asn Gln His Ala Met Val Phe Phe Lys Lys Val
145 150 155 160

Ser Gln Asn Arg Glu Tyr Phe Lys Ile Thr Leu Tyr Gly Arg Thr Lys
165 170 175

Glu Leu Thr Ser Glu Leu Lys Glu Asn Phe Ile Arg Phe Ser Lys Ser
180 185 190

Leu Gly Leu Pro Glu Asn His Ile Val Phe Pro Val Pro Ile Asp Gln
195 200 205

Cys Ile Asp Gly Gly Gly Ser Glu Asn Leu Tyr Phe Gln Gly Gly Gln
210 215 220

Gln His Ala Asp Pro Ile Cys Asn Lys Pro Cys Lys Thr His Asp Asp
225 230 235 240

Cys Ser Gly Ala Trp Phe Cys Gln Ala Cys Trp Asn Ser Ala Arg Thr
245 250 255

Cys Gly Pro Tyr Val Gly
260

<210> 121
<211> 185
<212> DNA
<213> Artificial Sequence

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

<400> 121
cctgatcctg ctagcgggtc tcaaggtgga tccatgtgca tgccgtgctt caccaccgat 60

aacgaaatgg cggcgaactg cgatcgctgc tgcggtggcc gtggccgtgg ccgctgctat 120

ggcccgcagt gcctgtgccg ctaatgcggc cgctagtgag accgcttgca tggctagtac 180

ctacg 185

<210> 122
<211> 185
<212> DNA
<213> Artificial Sequence

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

<400> 122
cctgatcctg ctagcgggtc tcaaggtgga tccatgtgca tgccgtgctt caccaccgat 60

aacgatatgg cggatgaatg cgatcgctgc tgcggtggcc gtggccgtgg ccgctgctat 120

ggcccgcagt gcctgtgccg ctaatgcggc cgctagtgag accgcttgca tggctagtac 180

ctacg 185

<210> 123

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

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

<220>
<221> MOD_RES
<222> (21)..(27)
<223> Any amino acid

<220>
<221> MOD_RES
<222> (29)..(32)
<223> Any amino acid

<220>
<221> MOD_RES
<222> (34)..(34)
<223> Any amino acid

<220>
<221> MOD_RES
<222> (36)..(36)
<223> Any amino acid

<400> 123
Met Cys Met Pro Cys Phe Thr Thr Asp Asn Glu Met Ala Ala Asn Cys
1 5 10 15

Asp Arg Cys Cys Xaa Xaa Xaa Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa
20 25 30

Cys Xaa Cys Xaa
35

<210> 124
<211> 36
<212> PRT

<213> Artificial Sequence

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

<220>
<221> MOD_RES
<222> (21)..(27)
<223> Any amino acid

<220>
<221> MOD_RES
<222> (29)..(32)
<223> Any amino acid

<220>
<221> MOD_RES
<222> (34)..(34)
<223> Any amino acid

<220>
<221> MOD_RES
<222> (36)..(36)
<223> Any amino acid

<400> 124
Met Cys Met Pro Cys Phe Thr Thr Asp Asn Asp Met Ala Asp Glu Cys
1 5 10 15

Asp Arg Cys Cys Xaa Xaa Xaa Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa
20 25 30

Cys Xaa Cys Xaa
35

<210> 125
<211> 112
<212> DNA
<213> Artificial Sequence

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

<400> 125
atgtgcatgc cgtgcttcac caccgataac gaaatggcgg cgaactgcga tcgctgctgc 60

ggtggccgtg gccgtggccg ctgctatggc ccgcagtgcc tgtgccgcta at 112

<210> 126
<211> 36
<212> PRT
<213> Artificial Sequence

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

<220>
<221> MOD_RES
<222> (21)..(27)
<223> Any amino acid

<220>
<221> MOD_RES
<222> (29)..(32)
<223> Any amino acid

<220>
<221> MOD_RES
<222> (34)..(34)
<223> Any amino acid

<400> 126
Met Cys Met Pro Cys Phe Thr Thr Asp Asn Glu Met Ala Ala Asn Cys
1 5 10 15

Asp Arg Cys Cys Xaa Xaa Xaa Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa
20 25 30

Cys Xaa Cys Arg
35

<210> 127
<211> 38
<212> PRT
<213> Artificial Sequence

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

<400> 127
Gly Ser Glu Ile Ser Cys Glu Pro Gly Arg Thr Phe Arg Asp Arg Cys
1 5 10 15

Asn Gln Cys Phe Cys Gly Phe Asp Gly Arg Arg Ala Ala Cys Thr Ile
20 25 30

Arg Ala Cys Pro Asn Gln
35

<210> 128
<211> 38
<212> PRT
<213> Artificial Sequence

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

<400> 128
Gly Ser Glu Ile His Cys Gln Pro Gly Arg Thr Phe Arg Asp Arg Cys
1 5 10 15

Asn Thr Cys Tyr Cys Gly Trp Tyr Gly Arg Ser Ala Ala Cys Thr Leu
20 25 30

Arg Ala Cys Pro Asn Gln
35

<210> 129
<211> 38
<212> PRT
<213> Artificial Sequence

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

<400> 129
Gly Ser Glu Ile Ser Cys Glu Pro Gly Gly Thr Phe Glu Asp Arg Cys
1 5 10 15

Asn Val Cys Arg Cys Gly Ala Asp Gly Arg Ser Ala Gly Cys Thr Leu
20 25 30

Arg Ala Cys Pro Asn Gln
35

<210> 130
<211> 38
<212> PRT
<213> Artificial Sequence

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

<400> 130
Gly Ser Arg Ile Asp Cys Arg Pro Gly Arg Thr Phe Arg Asp Arg Cys
1 5 10 15

Asn Thr Cys Met Cys Gly Trp Thr Gly His Ser Ala Ala Cys Thr Leu
20 25 30

Arg Ala Cys Pro Asn Gln
35

<210> 131
<211> 38
<212> PRT
<213> Artificial Sequence

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

<400> 131
Gly Ser Glu Ile Ser Cys Glu Pro Gly Arg Thr Phe Arg Asp Arg Cys
1 5 10 15

Asn Thr Cys His Cys Trp Ala Asp Gly Arg Gly Ala Ala Cys Thr Glu
20 25 30

Arg Ala Cys Pro Asn Gln
35

<210> 132
<211> 38
<212> PRT
<213> Artificial Sequence

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

<400> 132
Gly Ser Glu Ser Ser Cys Glu Pro Gly Ala Thr Trp Arg Asp Arg Cys
1 5 10 15

Asn Thr Cys Arg Cys Arg Ala Asp Gly Arg Ser Ala Ala Cys Thr Val
20 25 30

Arg Gln Cys Pro Asn Gln
35

<210> 133
<211> 38
<212> PRT
<213> Artificial Sequence

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

<400> 133
Gly Ser Glu Ile Phe Cys Ile Pro Gly Arg Thr Phe Arg Asp Arg Cys
1 5 10 15

Asn Thr Cys Arg Cys Gly Arg Arg Gly Ile Ser Ala Ala Cys Thr Leu
20 25 30

Arg Ala Cys Pro Asn Gln
35

<210> 134
<211> 38
<212> PRT
<213> Artificial Sequence

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

<400> 134
Gly Ser Glu Ile Ser Cys Glu Pro Gly Arg Thr Phe Arg Asp Arg Cys
1 5 10 15

Asn Thr Cys Arg Cys Gly Ala Asp Gly Arg Ser Ala Ala Cys Thr Leu
20 25 30

Phe Asp Cys Ser Leu Gln
35

<210> 135
<211> 38
<212> PRT
<213> Artificial Sequence

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

<400> 135
Gly Ser Glu Ile Ser Cys Glu Pro Gly Arg Thr Ser Arg Asp Arg Cys
1 5 10 15

Asn Thr Cys Arg Cys Gly Ala Asp Gly Arg Ser Ala Ala Cys Thr Leu
20 25 30

Ile Asp Cys Pro Gly Gln
35

<210> 136
<211> 38
<212> PRT
<213> Artificial Sequence

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

<400> 136
Gly Ser Glu Ile Ser Cys Glu Pro Gly Arg Thr Phe Arg Asp Arg Cys
1 5 10 15

Asn Thr Cys Arg Cys Gly Ala Asp Gly Arg Asp Ala Ala Cys Thr Leu
20 25 30

Gly His Cys Phe Phe Tyr
35

<210> 137
<211> 38
<212> PRT
<213> Artificial Sequence

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

<400> 137
Gly Ser Glu Ile Ser Cys Glu Pro Gly Phe Thr Glu Gln Asp Arg Cys
1 5 10 15

Asn Thr Cys Arg Cys Gly Ala Ile Gly Arg Ser Ala Ala Cys Thr Leu
20 25 30

Arg Ala Cys Pro Asn Gln
35

<210> 138
<211> 38
<212> PRT
<213> Artificial Sequence

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

<400> 138
Gly Ser Glu Ile Ser Cys Glu Pro Tyr Ser Thr Phe Arg Asp Arg Cys
1 5 10 15

Asn Thr Cys Ser Cys Gly Ala Asp Gly Arg Gly Ala Ala Cys Thr Met
20 25 30

Arg Ala Cys Pro Asn Gln
35

<210> 139
<211> 38
<212> PRT
<213> Artificial Sequence

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

<400> 139
Gly Ser Glu Ile Ser Cys Glu Pro Gly Arg Thr Phe Arg Asp Arg Cys
1 5 10 15

Asn Thr Cys Arg Cys Gly Ala Asp Gly Arg Ser Ala Ala Cys Thr Leu
20 25 30

Val Ala Cys Leu Ile Thr
35

<210> 140
<211> 38
<212> PRT
<213> Artificial Sequence

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

<400> 140
Gly Ser Glu Ile Phe Cys Ile Pro Gly Val Thr Phe Arg Phe Arg Cys
1 5 10 15

Asn Thr Cys Arg Cys Gly Met Asp Gly Arg Ser Ala Ala Cys Thr Leu
20 25 30

Arg Ala Cys Pro Asn Gln
35

<210> 141
<211> 38
<212> PRT
<213> Artificial Sequence

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

<400> 141
Gly Ser Glu Asn Asp Cys His Pro Gly Thr Thr Phe Arg Asp Arg Cys
1 5 10 15

Asn Thr Cys Arg Cys Gly Gly Glu Gly Arg Ser Ala Ala Cys Thr Leu
20 25 30

Arg Ala Cys Pro Asn Gln
35

<210> 142
<211> 38
<212> PRT
<213> Artificial Sequence

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

<400> 142
Gly Ser Gln Arg Ser Cys Glu Pro Gly Arg Thr Phe Arg Asp Arg Cys
1 5 10 15

Asn Thr Cys Arg Cys Gly Ala Asp Gly Arg Ser Ala Ala Cys Thr Leu
20 25 30

Phe Ile Cys Pro Phe Gln
35

<210> 143
<211> 38
<212> PRT
<213> Artificial Sequence

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

<400> 143
Gly Ser Glu Ile Ser Cys Glu Pro Gly Arg Thr Phe Arg Asp Arg Cys
1 5 10 15

Asn Thr Cys Arg Cys Gly Ala Asp Gly Arg Ser Ala Ala Cys Thr Leu
20 25 30

Phe Leu Cys Gly Phe Ile
35

<210> 144
<211> 38
<212> PRT
<213> Artificial Sequence

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

<400> 144
Gly Ser Glu Ile Ser Cys Glu Pro Asp Ser Thr Thr Arg Asp Arg Cys
1 5 10 15

Asn Ser Cys Arg Cys Gly Asn Asp Gly Arg Ser Ala Ala Cys Thr Leu
20 25 30

Arg Ala Cys Pro Asn Gln
35

<210> 145
<211> 38
<212> PRT
<213> Artificial Sequence

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

<400> 145
Gly Ser Glu Ile Ser Cys Glu Pro Gly Arg Thr Phe Arg Asp Arg Cys
1 5 10 15

Asn Thr Cys Arg Cys Gly Ala Asp Gly Arg Ser Glu Ala Cys Thr Leu
20 25 30

His Asn Cys Arg Glu Gln
35

<210> 146
<211> 38
<212> PRT
<213> Artificial Sequence

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

<400> 146
Gly Ser Asp Ile Ser Cys Glu Pro Gly Ser Thr His Arg Asp Arg Cys
1 5 10 15

Asn Thr Cys Arg Cys Ser Ala Asp Gly Arg Ser Arg Ala Cys Thr Leu
20 25 30

Arg Ala Cys Pro Asn Gln
35

<210> 147
<211> 38
<212> PRT
<213> Artificial Sequence

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

<400> 147
Gly Ser Glu Asp Ser Cys Glu Pro Gly Trp Thr Gln Arg Met Arg Cys
1 5 10 15

Asn Thr Cys Arg Cys Thr Ala Asp Gly Arg Ser Ala Ala Cys Thr Leu
20 25 30

Arg Ala Cys Pro Asn Gln
35

<210> 148
<211> 38
<212> PRT
<213> Artificial Sequence

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

<400> 148
Gly Ser Glu Ile Ser Cys Glu Pro Gly Arg Thr Phe Arg Asp Arg Cys
1 5 10 15

Asn Thr Cys Arg Cys Gly Ala Asp Gly Arg Ser Ala Ala Cys Thr Leu
20 25 30

His His Cys Ile Tyr Trp
35

<210> 149
<211> 38
<212> PRT
<213> Artificial Sequence

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

<400> 149
Gly Ser Glu Val Ser Cys Glu Pro Gly Arg Thr Phe Arg Ser Arg Cys
1 5 10 15

Asn Asp Cys Val Cys Gly Ala Asp Gly Arg His Ala Ala Cys Thr Ile
20 25 30

Arg Ala Cys Pro Asn Gln
35

<210> 150
<211> 38
<212> PRT
<213> Artificial Sequence

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

<400> 150
Gly Ser Glu Ile Ser Cys Glu Pro Gly Arg Thr Phe Arg Asp Arg Cys
1 5 10 15

Asn Thr Cys Arg Cys Gly Ala Asp Gly Arg Ser Ala Ala Cys Thr Leu
20 25 30

Val Phe Cys His Glu Asp
35

<210> 151
<211> 38
<212> PRT
<213> Artificial Sequence

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

<400> 151
Gly Ser Glu Ile Ser Cys Glu Pro Trp Arg Thr Phe Arg Asp Arg Cys
1 5 10 15

Asn Thr Cys Arg Cys Gly Ala Asp Gly Arg Gly Ala Ala Cys Thr Leu
20 25 30

Val Ile Cys Gly Met Gln
35

<210> 152
<211> 38
<212> PRT
<213> Artificial Sequence

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

<400> 152
Gly Ser Glu Ile Ser Cys Glu Pro Gly Arg Thr Phe Arg Asp Arg Cys
1 5 10 15

Asn Met Cys Gly Cys Gly Ala Asp Gly Arg Trp Ala Arg Cys Thr Arg
20 25 30

Arg Ala Cys Pro Asn Gln
35

<210> 153
<211> 38
<212> PRT
<213> Artificial Sequence

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

<400> 153
Gly Ser Glu Ile Ser Cys Glu Pro Gly Arg Thr Phe Arg Asp Arg Cys
1 5 10 15

Asn Thr Cys Arg Cys Gly Ala Asp Gly Arg Ser Ala Ala Cys Thr Leu
20 25 30

Phe Thr Cys Thr Tyr Phe
35

<210> 154
<211> 38
<212> PRT
<213> Artificial Sequence

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

<400> 154
Gly Ser Glu Ile Ser Cys Glu Pro Gly Arg Thr Trp Arg Asp Arg Cys
1 5 10 15

Asn Thr Cys Arg Cys Gly Ala Asp Gly Arg Ser Ala Ala Cys Thr Leu
20 25 30

Asn Gly Cys Leu Leu Gln
35

<210> 155
<211> 38
<212> PRT
<213> Artificial Sequence

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

<400> 155
Gly Ser Glu Ile Ser Cys Glu Pro Gly Arg Thr Phe Arg Asp Arg Cys
1 5 10 15

Asn Thr Cys Arg Cys Gly Ala Asp Gly Arg Ser Ala Ala Cys Thr Leu
20 25 30

Ala Asn Cys Phe Phe Ala
35

<210> 156
<211> 179
<212> PRT
<213> Sus scrofa

<400> 156
Gln Gly Thr Ile Pro Asn Trp Ile Pro Ala Pro Pro Leu Ser Lys Val
1 5 10 15

Pro Leu Gln Pro Asn Phe Gln Ala Asp Gln Phe Gln Gly Lys Trp Tyr
20 25 30

Val Val Gly Leu Ala Gly Asn Ala Val Lys Lys Glu Glu Gln Gly Arg
35 40 45

Phe Lys Met Tyr Thr Thr Thr Tyr Glu Leu Lys Glu Asp Gly Ser Tyr

50 55 60

Asn Val Ile Ser Thr Leu Leu Arg Gly Gln Leu Cys Asp Asn Trp Ile
65 70 75 80

Arg Thr Phe Val Pro Ser Leu Gln Pro Gly Gln Phe Lys Leu Gly Asp
85 90 95

Ile Lys Lys Tyr Ser Gly Leu Gln Ser Tyr Val Val Arg Val Val Ser
100 105 110

Thr Asn Tyr Ser Gln Phe Ala Ile Val Phe Phe Lys Lys Val Ser Asn
115 120 125

Asn Gln Glu Tyr Phe Lys Thr Thr Leu Tyr Gly Arg Thr Lys Val Leu
130 135 140

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

Leu Ser Asp Asp Asn Ile Ile Phe Pro Val Ala Ile Asp Gln Cys Ile
165 170 175

Asp Gly Gln

<210> 157
<211> 179
<212> PRT
<213> Equus caballus

<400> 157
Arg Asp Pro Ala Pro Lys Leu Ile Pro Ala Pro Pro Leu Asp Arg Val
1 5 10 15

Pro Leu Gln Pro Asp Phe Lys Asp Asp Gln Phe Gln Gly Lys Trp Tyr

20 25 30

Val Val Gly Val Ala Gly Asn Ala Phe Lys Lys Glu Glu Gln Gly Gln
35 40 45

Phe Thr Met Tyr Thr Thr Thr Tyr Glu Leu Lys Glu Asp His Ser Tyr
50 55 60

Asn Val Thr Ser Ile Leu Leu Arg Asp Gln Asn Cys Asp His Trp Ile
65 70 75 80

Arg Thr Phe Ile Pro Ser Ser Gln Pro Gly Gln Phe Asn Leu Gly Asp
85 90 95

Ile Lys Arg Tyr Phe Gly Val Gln Ser Tyr Ile Val Arg Val Ala Asp
100 105 110

Thr Asp Tyr Asn Gln Phe Ala Ile Val Phe Phe Arg Lys Val Tyr Lys
115 120 125

Asn Gln Glu Tyr Phe Lys Thr Thr Leu Tyr Arg Arg Thr Lys Glu Leu
130 135 140

Thr Pro Glu Leu Arg Glu Lys Phe Ile Ser Phe Ala Lys Ser Leu Gly
145 150 155 160

Leu Thr Asp Asp His Ile Ile Phe Pro Val Pro Ile Asp Gln Cys Ile
165 170 175

Asp Glu Glu

<210> 158
<211> 430
<212> PRT

<213> Artificial Sequence

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

<400> 158
Met Asp Phe Gln Val Gln Ile Phe Ser Phe Leu Leu Ile Ser Ala Ser
1 5 10 15

Val Ile Met Ser Arg Gly Asp Ile Val Met Thr Gln Ala Ala Pro Ser
20 25 30

Val Pro Val Thr Pro Gly Glu Ser Val Ser Ile Ser Cys Arg Ser Thr
35 40 45

Lys Ser Leu Leu His Ser Asn Gly Asn Thr Tyr Leu Tyr Trp Phe Leu
50 55 60

Gln Arg Pro Gly Gln Ser Pro Gln Arg Leu Ile Tyr Tyr Met Ser Asn
65 70 75 80

Leu Ala Ser Gly Val Pro Asp Arg Phe Ser Gly Arg Gly Ser Gly Thr
85 90 95

Asp Phe Thr Leu Arg Ile Ser Arg Val Glu Ala Glu Asp Ala Gly Val
100 105 110

Tyr Tyr Cys Met Gln Ser Leu Glu Tyr Pro Tyr Thr Phe Gly Gly Gly
115 120 125

Thr Lys Leu Glu Ile Lys Arg Ala Asp Ala Ala Pro Thr Val Ser Ile
130 135 140

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

Cys Phe Leu Asn Asn Phe Tyr Pro Lys Asp Ile Asn Val Lys Trp Lys
165 170 175

Ile Asp Gly Ser Glu Arg Gln Asn Gly Val Leu Asn Ser Trp Thr Asp
180 185 190

Gln Asp Ser Lys Asp Ser Thr Tyr Ser Met Ser Ser Thr Leu Thr Leu
195 200 205

Thr Lys Asp Glu Tyr Glu Arg His Asn Ser Tyr Thr Cys Glu Ala Thr
210 215 220

His Lys Thr Ser Thr Ser Pro Ile Val Lys Ser Phe Asn Arg Asn Glu
225 230 235 240

Cys Gly Arg Gly Gly Ser Gly Gly Ser Gly Gly Ser Gln Asp Ser Thr
245 250 255

Ser Asp Leu Ile Pro Ala Pro Pro Leu Ser Lys Val Pro Leu Gln Gln
260 265 270

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

Ala Gly Asn Ala Ile Leu Arg Glu Asp Lys Asp Pro Gln Lys Met Tyr
290 295 300

Ala Thr Ile Tyr Glu Leu Lys Glu Asp Lys Ser Tyr Asn Val Thr Ser
305 310 315 320

Val Leu Phe Arg Lys Lys Lys Cys Asp Tyr Trp Ile Arg Thr Phe Val
325 330 335

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

Pro Gly Leu Thr Ser Tyr Leu Val Arg Val Val Ser Thr Asn Tyr Asn
355 360 365

Gln His Ala Met Val Phe Phe Lys Lys Val Ser Gln Asn Arg Glu Tyr
370 375 380

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

Lys Glu Asn Phe Ile Arg Phe Ser Lys Ser Leu Gly Leu Pro Glu Asn
405 410 415

His Ile Val Phe Pro Val Pro Ile Asp Gln Cys Ile Asp Gly
420 425 430