

PAT056029_SL
SEQUENCE LISTING

<110> TRAUGER, JOHN
VOZNESENSKY, ANDREI IGOREVICH

<120> ANGIOPOIETIN-LIKE 4 ANTIBODIES AND METHODS OF USE

<130> PAT056029-US-NP

<140> 14/819,680

<141> 2015-08-06

<150> 62/034,409

<151> 2014-08-07

<160> 233

<170> PatentIn version 3.5

<210> 1

<211> 406

<212> PRT

<213> Homo sapiens

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Pro Arg Phe Ala Ser Trp Asp Glu Met Asn Val Leu Ala His Gly Leu
35 40 45

Leu Gln Leu Gly Gln Gly Leu Arg Glu His Ala Glu Arg Thr Arg Ser
50 55 60

Gln Leu Ser Ala Leu Glu Arg Arg Leu Ser Ala Cys Gly Ser Ala Cys
65 70 75 80

Gln Gly Thr Glu Gly Ser Thr Asp Leu Pro Leu Ala Pro Glu Ser Arg
85 90 95

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

Asn Ser Arg Ile Gln Gln Leu Phe His Lys Val Ala Gln Gln Gln Arg
115 120 125

His Leu Glu Lys Gln His Leu Arg Ile Gln His Leu Gln Ser Gln Phe
130 135 140

Gly Leu Leu Asp His Lys His Leu Asp His Glu Val Ala Lys Pro Ala
145 150 155 160

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Arg Arg Lys Arg Leu₁₆₅ Pro Glu Met Ala Gln₁₇₀ Pro Val Asp Pro Ala₁₇₅ His

Asn Val Ser Arg₁₈₀ Leu His Arg Leu Pro₁₈₅ Arg Asp Cys Gln Glu₁₉₀ Leu Phe

Gln Val Gly₁₉₅ Glu Arg Gln Ser Gly₂₀₀ Leu Phe Glu Ile Gln₂₀₅ Pro Gln Gly

Ser Pro₂₁₀ Pro Phe Leu Val Asn₂₁₅ Cys Lys Met Thr Ser₂₂₀ Asp Gly Gly Trp

Thr Val₂₂₅ Ile Gln Arg Arg₂₃₀ His Asp Gly Ser Val₂₃₅ Asp Phe Asn Arg Pro₂₄₀

Trp Glu Ala Tyr Lys₂₄₅ Ala Gly Phe Gly Asp₂₅₀ Pro His Gly Glu Phe₂₅₅ Trp

Leu Gly Leu Glu₂₆₀ Lys Val His Ser Ile₂₆₅ Thr Gly Asp Arg Asn₂₇₀ Ser Arg

Leu Ala Val₂₇₅ Gln Leu Arg Asp Trp₂₈₀ Asp Gly Asn Ala Glu₂₈₅ Leu Leu Gln

Phe Ser₂₉₀ Val His Leu Gly Gly₂₉₅ Glu Asp Thr Ala Tyr₃₀₀ Ser Leu Gln Leu

Thr Ala₃₀₅ Pro Val Ala Gly₃₁₀ Gln Leu Gly Ala Thr₃₁₅ Thr Val Pro Pro Ser₃₂₀

Gly Leu Ser Val₃₂₅ Pro Phe Ser Thr Trp Asp₃₃₀ Gln Asp His Asp Leu₃₃₅ Arg

Arg Asp Lys Asn₃₄₀ Cys Ala Lys Ser Leu₃₄₅ Ser Gly Gly Trp Trp₃₅₀ Phe Gly

Thr Cys Ser₃₅₅ His Ser Asn Leu Asn₃₆₀ Gly Gln Tyr Phe Arg₃₆₅ Ser Ile Pro

Gln Gln₃₇₀ Arg Gln Lys Leu Lys₃₇₅ Lys Gly Ile Phe Trp₃₈₀ Lys Thr Trp Arg

Gly Arg Tyr Tyr Pro Leu₃₉₀ Gln Ala Thr Thr Met₃₉₅ Leu Ile Gln Pro Met₄₀₀

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 <212> DNA
 <213> Homo sapiens

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 <212> PRT
 <213> Macaca fascicularis

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Thr Ala Val Leu Leu Arg Ala Gln Gly Gly Pro Val Gln Ser Lys Ser

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Pro Arg Phe Ala Ser Trp Asp Glu Met Asn Val Leu Ala His Gly Leu
 35 40 45
 Leu Gln Leu Gly Gln Gly Leu Arg Glu His Ala Glu Arg Thr Arg Ser
 50 55 60
 Gln Leu Asn Ala Leu Glu Arg Arg Leu Ser Ala Cys Gly Ser Ala Cys
 65 70 75 80
 Gln Gly Thr Glu Gly Ser Thr Ala Leu Pro Leu Ala Pro Glu Ser Arg
 85 90 95
 Val Asp Pro Glu Val Leu His Ser Leu Gln Thr Gln Leu Lys Ala Gln
 100 105 110
 Asn Ser Arg Ile Gln Gln Leu Phe His Lys Val Ala Gln Gln Gln Arg
 115 120 125
 His Leu Glu Lys Gln His Leu Arg Ile Gln Arg Leu Gln Ser Gln Val
 130 135 140
 Gly Leu Leu Asp Pro Lys His Leu Asp His Glu Val Ala Lys Pro Ala
 145 150 155 160
 Arg Arg Lys Arg Arg Pro Glu Met Ala Gln Pro Val Asp Ser Ala His
 165 170 175
 Asn Ala Ser Arg Leu His Arg Leu Pro Arg Asp Cys Gln Glu Leu Phe
 180 185 190
 Glu Asp Gly Glu Arg Gln Ser Gly Leu Phe Glu Ile Gln Pro Gln Gly
 195 200 205
 Ser Pro Pro Phe Leu Val Asn Cys Lys Met Thr Ser Asp Gly Gly Trp
 210 215 220
 Thr Val Ile Gln Arg Arg His Asp Gly Ser Val Asp Phe Asn Arg Pro
 225 230 235 240
 Trp Glu Ala Tyr Lys Ala Gly Phe Gly Asp Pro Gln Gly Glu Phe Trp
 245 250 255
 Leu Gly Leu Glu Lys Val His Ser Ile Thr Gly Asp Arg Asn Ser Arg
 260 265 270

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

Phe Ser Val His Leu Gly Gly Glu Asp Thr Ala Tyr Ser Leu Gln Leu
290 295 300

Thr Glu Pro Val Ala Ser Gln Leu Gly Ala Thr Thr Val Pro Pro Ser
305 310 315 320

Gly Leu Ser Val Pro Phe Ser Thr Trp Asp Gln Asp His Asp Leu Arg
325 330 335

Arg Asp Lys Asn Cys Ala Lys Ser Leu Ser Gly Gly Trp Trp Phe Gly
340 345 350

Thr Cys Ser His Ser Asn Leu Asn Gly Gln Tyr Phe Arg Ser Ile Pro
355 360 365

Gln Gln Arg Gln Glu Leu Lys Lys Gly Ile Phe Trp Lys Thr Trp Arg
370 375 380

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385 390 395 400

Ala Ala Glu Ala Ala Ser
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<211> 1221

<212> DNA

<213> Macaca fascicularis

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cgcacccgca gtcagctgaa cgcgctggag cggcgcctca gcgcttgagg gtctgcctgc	240
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cgaagaaaga ggcggcccga gatggcccag ccagttgact cggctcaca tgccagccgc	540
ctgcaccggc tgccagggga ttgccaggag ctgtttgaag atggggagag gcagagtgga	600
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 <213> Homo sapiens

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Pro Lys Ser Arg Phe Ala Met Leu Asp Asp Val Lys Ile Leu Ala Asn
 35 40 45

Gly Leu Leu Gln Leu Gly His Gly Leu Lys Asp Phe Val His Lys Thr
 50 55 60

Lys Gly Gln Ile Asn Asp Ile Phe Gln Lys Leu Asn Ile Phe Asp Gln
 65 70 75 80

Ser Phe Tyr Asp Leu Ser Leu Gln Thr Ser Glu Ile Lys Glu Glu Glu
 85 90 95

Lys Glu Leu Arg Arg Thr Thr Tyr Lys Leu Gln Val Lys Asn Glu Glu
 100 105 110

Val Lys Asn Met Ser Leu Glu Leu Asn Ser Lys Leu Glu Ser Leu Leu
 115 120 125

Glu Glu Lys Ile Leu Leu Gln Gln Lys Val Lys Tyr Leu Glu Glu Gln
 130 135 140

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Leu Thr Asn Leu Ile Gln Asn Gln Pro Glu Thr Pro Glu His Pro Glu
 145 150 155 160
 Val Thr Ser Leu Lys Thr Phe Val Glu Lys Gln Asp Asn Ser Ile Lys
 165 170 175
 Asp Leu Leu Gln Thr Val Glu Asp Gln Tyr Lys Gln Leu Asn Gln Gln
 180 185 190
 His Ser Gln Ile Lys Glu Ile Glu Asn Gln Leu Arg Arg Thr Ser Ile
 195 200 205
 Gln Glu Pro Thr Glu Ile Ser Leu Ser Ser Lys Pro Arg Ala Pro Arg
 210 215 220
 Thr Thr Pro Phe Leu Gln Leu Asn Glu Ile Arg Asn Val Lys His Asp
 225 230 235 240
 Gly Ile Pro Ala Glu Cys Thr Thr Ile Tyr Asn Arg Gly Glu His Thr
 245 250 255
 Ser Gly Met Tyr Ala Ile Arg Pro Ser Asn Ser Gln Val Phe His Val
 260 265 270
 Tyr Cys Asp Val Ile Ser Gly Ser Pro Trp Thr Leu Ile Gln His Arg
 275 280 285
 Ile Asp Gly Ser Gln Asn Phe Asn Glu Thr Trp Glu Asn Tyr Lys Tyr
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 Gly Phe Gly Arg Leu Asp Gly Glu Phe Trp Leu Gly Leu Glu Lys Ile
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 Tyr Ser Ile Val Lys Gln Ser Asn Tyr Val Leu Arg Ile Glu Leu Glu
 325 330 335
 Asp Trp Lys Asp Asn Lys His Tyr Ile Glu Tyr Ser Phe Tyr Leu Gly
 340 345 350
 Asn His Glu Thr Asn Tyr Thr Leu His Leu Val Ala Ile Thr Gly Asn
 355 360 365
 Val Pro Asn Ala Ile Pro Glu Asn Lys Asp Leu Val Phe Ser Thr Trp
 370 375 380
 Asp His Lys Ala Lys Gly His Phe Asn Cys Pro Glu Gly Tyr Ser Gly
 385 390 395 400

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Gly Trp Trp Trp His Asp Glu Cys Gly Glu Asn Asn Leu Asn Gly Lys
405 410 415

Tyr Asn Lys Pro Arg Ala Lys Ser Lys Pro Glu Arg Arg Arg Gly Leu
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Ser Trp Lys Ser Gln Asn Gly Arg Leu Tyr Ser Ile Lys Ser Thr Lys
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<212> DNA
<213> Homo sapiens

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gacgatgtaa aaatttttagc caatggcctc cttcagttgg gacatgggtct taaagacttt 180
gtccataaga cgaagggcca aattaatgac atattttcaaa aactcaacat atttgatcag 240
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agaactacat ataaactaca agtcaaaaat gaagaggtaa agaatatgtc acttgaactc 360
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accgtggaag accaatataa acaattaaac caacagcata gtcaaataaa agaaatagaa 600
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agagcaaaat ctaagccaga gaggagaaga ggattatctt ggaagtctca aaatggaagg	1320
ttatactcta taaaatcaac caaaatgttg atccatccaa cagattcaga aagctttgaa	1380

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

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

<400> 7
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<210> 8
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 <212> PRT
 <213> Artificial Sequence

<220>
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 Glu Ile Asp Pro Ser Asp Asn Tyr Ala Asn Tyr Asn Gln Lys Phe Gln
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Gly

<210> 9
 <211> 10
 <212> PRT
 <213> Artificial Sequence

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

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 Gly Ser Tyr Phe Ser Asn Phe Phe Asp Tyr
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<210> 10
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 <212> PRT
 <213> Artificial Sequence

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

<400> 10
Ala Tyr Thr Phe Thr Ser Ser
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<210> 11
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<212> PRT
<213> Artificial Sequence

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

<400> 11
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<210> 12
<211> 10
<212> PRT
<213> Artificial Sequence

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

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<210> 13
<211> 119
<212> PRT
<213> Artificial Sequence

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

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Trp Met Gln Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45

Gly Glu Ile Asp Pro Ser Asp Asn Tyr Ala Asn Tyr Asn Gln Lys Phe
50 55 60

Gln Gly Arg Val Thr Leu Thr Val Asp Thr Ser Thr Ser Thr Ala Tyr
65 70 75 80

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

Ala Ser Gly Ser Tyr Phe Ser Asn Phe Phe Asp Tyr Trp Gly Gln Gly
 100 105 110

Thr Leu Val Thr Val Ser Ser
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<210> 14
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<220>
 <223> Description of Artificial Sequence: Synthetic polynucleotide

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 aaccagaaat tccagggcag agtgaccctg accgtggaca ccagcacctc caccgcctac 240
 atggaactga gcagcctgcg gagcgaggac accgccgtgt actattgtgc cagcggcagc 300
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<210> 15
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 <212> PRT
 <213> Artificial Sequence

<220>
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Ser Val Lys Val Ser Cys Lys Ala Ser Ala Tyr Thr Phe Thr Ser Ser
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Trp Met Gln Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
 35 40 45

Gly Glu Ile Asp Pro Ser Asp Asn Tyr Ala Asn Tyr Asn Gln Lys Phe
 50 55 60

Gln Gly Arg Val Thr Leu Thr Val Asp Thr Ser Thr Ser Thr Ala Tyr
 65 70 75 80

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Met Glu Leu Ser Ser₈₅ Leu Arg Ser Glu Asp₉₀ Thr Ala Val Tyr Tyr₉₅ Cys

Ala Ser Gly Ser₁₀₀ Tyr Phe Ser Asn Phe₁₀₅ Phe Asp Tyr Trp Gly₁₁₀ Gln Gly

Thr Leu Val₁₁₅ Thr Val Ser Ser Ala₁₂₀ Ser Thr Lys Gly Pro₁₂₅ Ser Val Phe

Pro Leu Ala Pro Ser Ser Lys₁₃₅ Ser Thr Ser Gly Gly₁₄₀ Thr Ala Ala Leu

Gly₁₄₅ Cys Leu Val Lys Asp₁₅₀ Tyr Phe Pro Glu Pro₁₅₅ Val Thr Val Ser Trp₁₆₀

Asn Ser Gly Ala Leu₁₆₅ Thr Ser Gly Val His₁₇₀ Thr Phe Pro Ala Val₁₇₅ Leu

Gln Ser Ser Gly₁₈₀ Leu Tyr Ser Leu Ser₁₈₅ Ser Val Val Thr Val₁₉₀ Pro Ser

Ser Ser Leu₁₉₅ Gly Thr Gln Thr Tyr₂₀₀ Ile Cys Asn Val Asn₂₀₅ His Lys Pro

Ser Asn Thr Lys Val Asp Lys₂₁₅ Arg Val Glu Pro Lys₂₂₀ Ser Cys Asp Lys

Thr His Thr Cys Pro Pro₂₃₀ Cys Pro Ala Pro Glu₂₃₅ Leu Leu Gly Gly Pro₂₄₀

Ser Val Phe Leu Phe₂₄₅ Pro Pro Lys Pro Lys₂₅₀ Asp Thr Leu Met Ile₂₅₅ Ser

Arg Thr Pro Glu₂₆₀ Val Thr Cys Val Val₂₆₅ Val Asp Val Ser His₂₇₀ Glu Asp

Pro Glu Val₂₇₅ Lys Phe Asn Trp Tyr₂₈₀ Val Asp Gly Val Glu₂₈₅ Val His Asn

Ala Lys Thr Lys Pro Arg Glu₂₉₅ Glu Gln Tyr Asn Ser₃₀₀ Thr Tyr Arg Val

Val₃₀₅ Ser Val Leu Thr Val₃₁₀ Leu His Gln Asp Trp₃₁₅ Leu Asn Gly Lys Glu₃₂₀

Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys

325

335

Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr
340 345 350
Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr
355 360 365
Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu
370 375 380
Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu
385 390 395 400
Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys
405 410 415
Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu
420 425 430
Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly
435 440 445

Lys

<210> 16
<211> 1347
<212> DNA
<213> Artificial Sequence

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

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

<220>
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<210> 18
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<220>
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<400> 18
 Ala Val Ser Asn Arg Gly Pro
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<210> 19
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 <213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 19

Leu Gln Tyr Ala Ser Ser Pro Trp Thr
1 5

<210> 20

<211> 7

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 20

Ser Gln Asp Ile Gly Ser Asn
1 5

<210> 21

<211> 3

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 21

Ala Val Ser
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<210> 22

<211> 6

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 22

Tyr Ala Ser Ser Pro Trp
1 5

<210> 23

<211> 107

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 23

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

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

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

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

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

Glu Asp Phe Ala Val Tyr Tyr Cys Leu Gln Tyr Ala Ser Ser Pro Trp
85 90 95

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

<210> 24
<211> 321
<212> DNA
<213> Artificial Sequence

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

<400> 24	
gagatcgtga tgacacagag ccccgccacc ctgtccgtgt ctccaggcga aagagccacc	60
ctgagctgca aagccagcca ggacatcggc agcaacctga actggctgca gcagaaacca	120
ggccaggccc ccagaaggct gatctacgct gtttccaacc gtggctcctgg catccccgcc	180
agattttccg gcagcagatc cggcagcgag tacaccctga ccatcagcag cctgcagagc	240
gaggacttcg ccgtgtacta ctgcctgcag tacgccagca gcccctggac atttggccag	300
ggcaccaagg tggaaatcaa g	321

<210> 25
<211> 214
<212> PRT
<213> Artificial Sequence

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

<400> 25	
Glu Ile Val Met Thr Gln Ser Pro Ala Thr Leu Ser Val Ser Pro Gly	
1 5 10 15	

Glu Arg Ala Thr Leu Ser Cys Lys Ala Ser Gln Asp Ile Gly Ser Asn
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20

25

30

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

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

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

Glu Asp Phe Ala Val Tyr Tyr Cys Leu Gln Tyr Ala Ser Ser Pro Trp
 85 90 95

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

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

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

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

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

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

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

Phe Asn Arg Gly Glu Cys
 210

<210> 26

<211> 642

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 26

gagatcgtga tgacacagag ccccgccacc ctgtccgtgt ctccaggcga aagagccacc

60

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ctgagctgca	aagccagcca	ggacatcggc	agcaacctga	actggctgca	gcagaaacca	120
ggccaggccc	ccagaaggct	gatctacgct	gtttccaacc	gtggctctg	catccccgcc	180
agattttccg	gcagcagatc	cggcagcgag	tacaccctga	ccatcagcag	cctgcagagc	240
gaggacttctg	ccgtgtacta	ctgcctgcag	tacgccagca	gcccctggac	atttggccag	300
ggcaccaagg	tggaaatcaa	gcgtacggtg	gccgctccca	gcgtgttcat	cttccccccc	360
agcgacgagc	agctgaagag	cggcaccgcc	agcgtggtgt	gcctgctgaa	caacttctac	420
ccccgggagg	ccaagggtgca	gtggaagggtg	gacaacgccc	tgcagagcgg	caacagccag	480
gagagcgtca	ccgagcagga	cagcaaggac	tccacctaca	gcctgagcag	caccctgacc	540
ctgagcaagg	ccgactacga	gaagcataag	gtgtacgcct	gcgaggtgac	ccaccagggc	600
ctgtccagcc	ccgtgaccaa	gaqcttcaac	aggggcgaqt	gc		642

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<210> 27
<211> 357
<212> DNA
<213> Artificial Sequence
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<220>
<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 27							
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agctgtaaag	ctagtgcccta	caccttcacc	tctagctgga	tgcagtggggt	cagacaggcc		120
ccagggtcagg	gcctggagtg	gatgggcgag	atcgacccta	gcgataacta	cgctaactat		180
aatcagaagt	ttcagggttag	agtcaccctg	accgtggaca	ctagcactag	caccgcctat		240
atggaactgt	ctagcctgag	atcagaggac	accgccgtct	actactgcmc	tagtggttagc		300
tactttctcta	actttcttcga	ctactgqqgt	cagggcaccc	tggtcaccgt	gtctagc		357

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<210> 28
<211> 449
<212> PRT
<213> Artificial Sequence
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<220>
<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 28
Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Ala Tyr Thr Phe Thr Ser Ser

Trp Met Gln Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met

35 40 45
 Gly Glu Ile Asp Pro Ser Asp Asn Tyr Ala Asn Tyr Asn Gln Lys Phe
 50 55 60
 Gln Gly Arg Val Thr Leu Thr Val Asp Thr Ser Thr Ser Thr Ala Tyr
 65 70 75 80
 Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
 85 90 95
 Ala Ser Gly Ser Tyr Phe Ser Asn Phe Phe Asp Tyr Trp Gly Gln Gly
 100 105 110
 Thr Leu Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe
 115 120 125
 Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu
 130 135 140
 Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp
 145 150 155 160
 Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu
 165 170 175
 Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser
 180 185 190
 Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro
 195 200 205
 Ser Asn Thr Lys Val Asp Lys Arg Val Glu Pro Lys Ser Cys Asp Lys
 210 215 220
 Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Ala Ala Gly Gly Pro
 225 230 235 240
 Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser
 245 250 255
 Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp
 260 265 270
 Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn
 275 280 285

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

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

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

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

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

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

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

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

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

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

Lys

<210> 29

<211> 1347

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 29

caggtgcagc tgggtgcagtc aggcgccgaa gtgaagaaac ccggcgctag tgtgaaagtc	60
agctgtaaaag ctagtgccta caccttcacc tctagctgga tgcagtgggt cagacaggcc	120
ccaggtcagg gcctggagtg gatgggagc atcgacccta gcgataacta cgctaactat	180
aatcagaagt ttcagggtag agtcaccctg accgtggaca ctagcactag caccgcctat	240
atggaactgt ctagcctgag atcagaggac accgccgtct actactgcgc tagtggtagc	300

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tactttctcta actttcttcga ctactgggggt caggggcaccc tggtcaccgt gtctagcgct	360
agcactaagg gccctccgt gttccctctg gcccttcca gcaagtctac ctccggcggc	420
acagctgctc tgggctgcct ggtcaaggac tacttccctg agcctgtgac agtgtcctgg	480
aactctggcg ccctgacctc tggcgtgcac accttccctg ccgtgctgca gtcctccggc	540
ctgtactccc tgtcctccgt ggtcacagtg ccttcaagca gcctgggcac ccagacctat	600
atctgcaacg tgaaccacaa gccttccaac accaagggtg acaagcgggt ggagcctaag	660
tcctgcgaca agaccacac ctgtcctccc tgccctgctc ctgaagctgc tggcggccct	720
tctgtgttcc tgttccctcc aaagcccaag gacaccctga tgatctcccg gacccctgaa	780
gtgacctgcy tgggtggtgga cgtgtcccac gaggatcctg aagtgaagtt caattggtac	840
gtggacggcg tggaggtgca caacgccaag accaagcctc gggaggaaca gtacaactcc	900
acctaccggg tgggtgtccgt gctgaccgtg ctgcaccagg actggctgaa cggcaaagag	960
tacaagtgca aagtctccaa caaggccctg cctgccccta tcgaaaagac aatctccaag	1020
gccaagggcc agcctagga accccagggtg tacaccctgc caccagccg ggaggaaatg	1080
accaagaacc aggtgtccct gacctgtctg gtcaagggtt tctacccttc cgatatcgcc	1140
gtggagtggg agtctaacgg ccagcctgag aacaactaca agaccacccc tcctgtgctg	1200
gactccgacg gctccttctt cctgtactcc aaactgaccg tggacaagtc ccggtggcag	1260
cagggcaacg tgttctcctg ctccgtgatg cacgaggccc tgcacaacca ctacaccag	1320
aagtcctgtt ccctgtctcc cggcaag	1347

<210> 30
 <211> 321
 <212> DNA
 <213> Artificial Sequence

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

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ctgagctgta aagcctctca ggatatcggc tctaacctga actggctgca gcagaagccc	120
ggtcaggccc ctagacggct gatctacgcc gtgtctaata gaggccccgg aatccccgct	180
aggttttagcg gctctaggtc aggttcagag tacaccctga ctatctctag cctgcagtca	240
gaggacttcg ccgtctacta ctgcctgcag tacgcctcta gcccctggac cttcggtcag	300
ggcactaagg tcgagattaa g	321

<210> 31
 <211> 642

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 31

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gagatcgtga tgactcagtc acccgctacc ctgagcgtca gccctggcga gcgggctaca      60
ctgagctgta aagcctctca ggatatcggc tctaacctga actggctgca gcagaagccc      120
ggtcaggccc ctagacggct gatctacgcc gtgtctaata gaggccccgg aatccccgct      180
aggttttagcg gctctaggtc aggttcagag tacaccctga ctatctctag cctgcagtca      240
gaggacttcg ccgtctacta ctgcctgcag tacgcctcta gccctgggac cttcggtcag      300
ggcactaagg tcgagattaa gcgtacggtg gccgctccca gcgtgttcat cttccccccc      360
agcgacgagc agctgaagag cggcaccgcc agcgtgggtgt gcctgctgaa caacttctac      420
ccccgggagg ccaagggtgca gtggaagggtg gacaacgccc tgcagagcgg caacagccag      480
gagagcgtca ccgagcagga cagcaaggac tccacctaca gcctgagcag caccctgacc      540
ctgagcaagg ccgactacga gaagcataag gtgtacgcct gcgaggtgac ccaccagggc      600
ctgtccagcc ccgtgaccaa gagcttcaac aggggcgagt gc                        642

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<210> 32

<211> 5

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 32

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Ser Ser Trp Met Gln
1           5

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<210> 33

<211> 17

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 33

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Glu Ile Asp Pro Ser Asp Asn Tyr Ala Asn Tyr Asn Gln Lys Phe Gln
1           5           10           15

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Gly

<210> 34
 <211> 10
 <212> PRT
 <213> Artificial Sequence

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

<400> 34
 Gly Ser Tyr Phe Ser Asn Phe Phe Asp Tyr
 1 5 10

<210> 35
 <211> 7
 <212> PRT
 <213> Artificial Sequence

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

<400> 35
 Ala Tyr Thr Phe Thr Ser Ser
 1 5

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

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

<400> 36
 Asp Pro Ser Asp Asn Tyr
 1 5

<210> 37
 <211> 10
 <212> PRT
 <213> Artificial Sequence

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

<400> 37
 Gly Ser Tyr Phe Ser Asn Phe Phe Asp Tyr
 1 5 10

<210> 38
 <211> 119
 <212> PRT
 <213> Artificial Sequence

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

polypeptide

<400> 38

Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
 1 5 10 15

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

Trp Met Gln Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
 35 40 45

Gly Glu Ile Asp Pro Ser Asp Asn Tyr Ala Asn Tyr Asn Gln Lys Phe
 50 55 60

Gln Gly Arg Val Thr Leu Thr Val Asp Thr Ser Thr Ser Thr Ala Tyr
 65 70 75 80

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

Ala Ser Gly Ser Tyr Phe Ser Asn Phe Phe Asp Tyr Trp Gly Gln Gly
 100 105 110

Thr Leu Val Thr Val Ser Ser
 115

<210> 39

<211> 357

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 39

caggtgcagc tgggtgcagtc tggcgccgaa gtgaagaaac caggcgccag cgtgaagggtg	60
tcctgcaagg ccagcgccta cacctttacc agcagctgga tgcagtgggt gcgccaggct	120
cctggacagg gcctggaatg gatgggagc atcgaccca gcgacaacta cgccaactac	180
aaccagaaat tccagggcag agtgaccctg accgtggaca ccagcacctc caccgcctac	240
atggaactga gcagcctgcg gagcgaggac accgccgtgt actattgtgc cagcggcagc	300
tacttcagca acttcttcga ctactggggc cagggcaccc tcgtgaccgt gtcattct	357

<210> 40

<211> 449

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 40

Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
 1 5 10 15

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

Trp Met Gln Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
 35 40 45

Gly Glu Ile Asp Pro Ser Asp Asn Tyr Ala Asn Tyr Asn Gln Lys Phe
 50 55 60

Gln Gly Arg Val Thr Leu Thr Val Asp Thr Ser Thr Ser Thr Ala Tyr
 65 70 75 80

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

Ala Ser Gly Ser Tyr Phe Ser Asn Phe Phe Asp Tyr Trp Gly Gln Gly
 100 105 110

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

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

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

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

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

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

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

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

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Ser Val Phe Leu Phe₂₄₅ Pro Pro Lys Pro Lys₂₅₀ Asp Thr Leu Met Ile₂₅₅ Ser

Arg Thr Pro Glu₂₆₀ Val Thr Cys Val₂₆₅ Val Asp Val Ser His₂₇₀ Glu Asp

Pro Glu Val₂₇₅ Lys Phe Asn Trp Tyr₂₈₀ Val Asp Gly Val₂₈₅ Glu Val His Asn

Ala Lys₂₉₀ Thr Lys Pro Arg Glu₂₉₅ Glu Gln Tyr Asn Ser₃₀₀ Thr Tyr Arg Val

Val₃₀₅ Ser Val Leu Thr Val₃₁₀ Leu His Gln Asp Trp₃₁₅ Leu Asn Gly Lys Glu₃₂₀

Tyr Lys Cys Lys Val₃₂₅ Ser Asn Lys Ala Leu₃₃₀ Pro Ala Pro Ile Glu₃₃₅ Lys

Thr Ile Ser Lys₃₄₀ Ala Lys Gly Gln Pro₃₄₅ Arg Glu Pro Gln Val₃₅₀ Tyr Thr

Leu Pro Pro₃₅₅ Ser Arg Glu Glu Met₃₆₀ Thr Lys Asn Gln Val₃₆₅ Ser Leu Thr

Cys Leu Val₃₇₀ Lys Gly Phe Tyr₃₇₅ Pro Ser Asp Ile Ala₃₈₀ Val Glu Trp Glu

Ser Asn Gly Gln Pro Glu₃₉₀ Asn Asn Tyr Lys Thr₃₉₅ Thr Pro Pro Val Leu₄₀₀

Asp Ser Asp Gly Ser₄₀₅ Phe Phe Leu Tyr Ser₄₁₀ Lys Leu Thr Val₄₁₅ Asp Lys

Ser Arg Trp Gln₄₂₀ Gln Gly Asn Val Phe₄₂₅ Ser Cys Ser Val₄₃₀ Met His Glu

Ala Leu His₄₃₅ Asn His Tyr Thr Gln₄₄₀ Lys Ser Leu Ser Leu₄₄₅ Ser Pro Gly

Lys

<210> 41

<211> 1347

<212> DNA

<213> Artificial Sequence

PAT056029_SL

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 41

caggtgcagc tggcgcagtc tggcgccgaa gtgaagaaac caggcgccag cgtgaagggtg	60
tcctgcaagg ccagcgccta cacctttacc agcagctgga tgcagtgggt gcgccaggct	120
cctggacagg gcctggaatg gatgggagcag atcgacccca gcgacaacta cgccaactac	180
aaccagaaat tccagggcag agtgaccctg accgtggaca ccagcacctc caccgcctac	240
atggaactga gcagcctgcg gagcgaggac accgccgtgt actattgtgc cagcggcagc	300
tacttcagca acttcttcga ctactggggc cagggcaccc tcgtgaccgt gtcacatctgct	360
agcaccaagg gccccagcgt gttccccctg gccccagca gcaagagcac cagcggcggc	420
acagccgccc tgggctgcct ggtgaaggac tacttccccg agcccgtgac cgtgtcctgg	480
aacagcggag ccctgacctc cggcgtgcac accttccccg ccgtgctgca gagcagcggc	540
ctgtacagcc tgtccagcgt ggtgacagtg cccagcagca gcctgggcac ccagacctac	600
atctgcaacg tgaaccacaa gcccagcaac accaagggtg acaagagagt ggagcccaag	660
agctgcgaca agaccacac ctgccccccc tgcccagccc cagagctgct gggcggaccc	720
tccgtgttcc tgttcccccc caagcccaag gacaccctga tgatcagcag gacccccgag	780
gtgacctgcg tgggtggtgga cgtgagccac gaggacccag aggtgaagtt caactggtac	840
gtggacggcg tggaggtgca caacgccaaag accaagccca gagaggagca gtacaacagc	900
acctacaggg tgggtgtccgt gctgaccgtg ctgcaccagg actggctgaa cggcaaggaa	960
tacaagtgca aggtctccaa caaggccctg ccagcccca tcgaaaagac catcagcaag	1020
gccaaaggcc agccacggga gccccagggtg tacaccctgc cccctccccg ggaggagatg	1080
accaagaacc aggtgtccct gacctgtctg gtgaagggtt tctaccccag cgacatcgcc	1140
gtggagtggg agagcaacgg ccagcccagag aacaactaca agaccacccc cccagtgtg	1200
gacagcgacg gcagcttctt cctgtacagc aagctgaccg tggacaagtc caggtggcag	1260
cagggcaacg tgttcagctg cagcgtgatg cacgaggccc tgcacaacca ctacacccag	1320
aagagcctga gcctgtcccc cggcaag	1347

<210> 42

<211> 11

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 42

Lys Ala Ser Gln Asp Ile Gly Ser Asn Leu Asn

1

5

<210> 43
<211> 7
<212> PRT
<213> Artificial Sequence

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

<400> 43
Ala Ala Ser Val Arg Glu Pro
1 5

<210> 44
<211> 9
<212> PRT
<213> Artificial Sequence

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

<400> 44
Leu Gln Tyr Ala Ser Ser Pro Trp Thr
1 5

<210> 45
<211> 7
<212> PRT
<213> Artificial Sequence

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

<400> 45
Ser Gln Asp Ile Gly Ser Asn
1 5

<210> 46
<211> 3
<212> PRT
<213> Artificial Sequence

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

<400> 46
Ala Ala Ser
1

<210> 47
<211> 6
<212> PRT
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 47

Tyr Ala Ser Ser Pro Trp
1 5

<210> 48

<211> 107

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 48

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

<210> 49

<211> 321

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 49

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ctgagctgca aagccagcca ggacatcggc agcaacctga actggctgca gcagaaacca 120

ggccaggccc ccagaaggct gatctacgct gcttccgtcc gtgagcctgg catccccgcc 180

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agattttccg gcagcagatc cggcagcgag tacaccctga ccatcagcag cctgcagagc 240
gaggacttcg ccgtgtacta ctgcctgcag tacgccagca gcccctggac atttggccag 300
ggcaccaagg tggaaatcaa g 321

<210> 50
<211> 214
<212> PRT
<213> Artificial Sequence

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

<400> 50
Glu Ile Val Met Thr Gln Ser Pro Ala Thr Leu Ser Val Ser Pro Gly
1 5 10 15

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

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

Tyr Ala Ala Ser Val Arg Glu Pro Gly Ile Pro Ala Arg Phe Ser Gly
50 55 60

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

Glu Asp Phe Ala Val Tyr Tyr Cys Leu Gln Tyr Ala Ser Ser Pro Trp
85 90 95

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

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

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

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

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

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

185

190

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

Phe Asn Arg Gly Glu Cys
 210

<210> 51
 <211> 642
 <212> DNA
 <213> Artificial Sequence

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

<400> 51
 gagatcgtga tgacacagag ccccgccacc ctgtccgtgt ctccaggcga aagagccacc 60
 ctgagctgca aagccagcca ggacatcggc agcaacctga actggctgca gcagaaacca 120
 ggccaggccc ccagaaggct gatctacgct gcttccgtcc gtgagcctgg catccccgcc 180
 agattttccg gcagcagatc cggcagcgag tacaccctga ccatcagcag cctgcagagc 240
 gaggacttcg ccgtgtacta ctgcctgcag tacgccagca gcccctggac atttggccag 300
 ggcaccaagg tggaaatcaa gcgtacggtg gccgctcca gcgtgttcat cttccccccc 360
 agcgacgagc agctgaagag cggcaccgcc agcgtgggtg gcctgctgaa caacttctac 420
 ccccgggagg ccaagggtgca gtggaagggtg gacaacgccc tgcagagcgg caacagccag 480
 gagagcgtca ccgagcagga cagcaaggac tccacctaca gcctgagcag caccctgacc 540
 ctgagcaagg ccgactacga gaagcataag gtgtacgcct gcgaggtgac ccaccagggc 600
 ctgtccagcc ccgtgaccaa gagcttcaac aggggcgagt gc 642

<210> 52
 <211> 5
 <212> PRT
 <213> Artificial Sequence

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

<400> 52
 Ser Tyr Thr Met His
 1 5

<210> 53
 <211> 17
 <212> PRT
 <213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 53

Tyr	Ile	Asn	Pro	Ser	Ser	Gly	Tyr	Thr	Lys	Tyr	Asn	Gln	Lys	Phe	Gln
1				5					10					15	

Gly

<210> 54

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 54

Gly	Trp	Leu	Leu	Leu	Ala	Met	Asp	Tyr
1				5				

<210> 55

<211> 7

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 55

Gly	Tyr	Thr	Phe	Thr	Ser	Tyr
1				5		

<210> 56

<211> 6

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 56

Asn	Pro	Ser	Ser	Gly	Tyr
1				5	

<210> 57

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 57

Gly Trp Leu Leu Leu Ala Met Asp Tyr
1 5

<210> 58

<211> 118

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
polypeptide

<400> 58

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

<210> 59

<211> 354

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
polynucleotide

<400> 59

cagggtgcagc tgggtgcagtc tggcgccgaa gtgaagaaac caggcgccag cgtgaagggtg 60

tcctgcaagg ccagcggcta cacctttacc agctacacca tgcactgggt gcgccaggct 120

ccaggccagg gactggaatg gatgggctac atcaacccca gcagcggcta taccaagtac 180

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aaccagaaat tccagggccg cgtgaccatg accgccgaca agagcacaag caccgcctac	240
atggaactga gcagcctgcg gagcgaggac accgccgtgt actattgtgc cgagggctgg	300
ctgctgctgg ccatggatta ttggggccag ggcaccctcg tgaccgtgtc tagt	354

<210> 60

<211> 448

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 60

Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala	
1 5 10 15	

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

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

Gly Tyr Ile Asn Pro Ser Ser Gly Tyr Thr Lys Tyr Asn Gln Lys Phe	
50 55 60	

Gln Gly Arg Val Thr Met Thr Ala Asp Lys Ser Thr Ser Thr Ala Tyr	
65 70 75 80	

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

Ala Glu Gly Trp Leu Leu Leu Ala Met Asp Tyr Trp Gly Gln Gly Thr	
100 105 110	

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

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

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

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

Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser	
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180 185 190
 Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro Ser
 195 200 205
 Asn Thr Lys Val Asp Lys Arg Val Glu Pro Lys Ser Cys Asp Lys Thr
 210 215 220
 His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser
 225 230 235 240
 Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg
 245 250 255
 Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro
 260 265 270
 Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala
 275 280 285
 Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val
 290 295 300
 Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr
 305 310 315 320
 Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr
 325 330 335
 Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu
 340 345 350
 Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys
 355 360 365
 Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser
 370 375 380
 Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp
 385 390 395 400
 Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser
 405 410 415
 Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala
 420 425 430

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

<210> 61
 <211> 1344
 <212> DNA
 <213> Artificial Sequence

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

<400> 61
 cagggtgcagc tgggtgcagtc tggcgccgaa gtgaagaaac caggcgccag cgtgaagggtg 60
 tcctgcaagg ccagcggcta cacctttacc agctacacca tgcactgggt gcgccaggct 120
 ccaggccagg gactggaatg gatgggctac atcaacccca gcagcggcta taccaagtac 180
 aaccagaaat tccagggccg cgtgaccatg accgccgaca agagcacaag caccgcctac 240
 atggaactga gcagcctgcg gagcgaggac accgccgtgt actattgtgc cgagggctgg 300
 ctgctgctgg ccatggatta ttggggccag ggcaccctcg tgaccgtgtc tagtgctagc 360
 accaagggcc ccagcgtgtt cccctggcc cccagcagca agagcaccag cggcggcaca 420
 gccgccctgg gctgcctggg gaaggactac ttccccgagc ccgtgaccgt gtcctggaac 480
 agcggagccc tgacctccgg cgtgcacacc ttccccgccg tgctgcagag cagcggcctg 540
 tacagcctgt ccagcgtggg gacagtgtccc agcagcagcc tgggcaccca gacctacatc 600
 tgcaacgtga accacaagcc cagcaacacc aagggtggaca agagagtggg gcccaagagc 660
 tgcgacaaga cccacacctg cccccctgc ccagccccag agctgctggg cggaccctcc 720
 gtgttcctgt tcccccccaa gcccaaggac accctgatga tcagcaggac ccccgagggtg 780
 acctgcgtgg tgggtggacgt gagccacgag gaccagagg tgaagttcaa ctggtacgtg 840
 gacggcgtgg aggtgcacaa cgccaagacc aagcccagag aggagcagta caacagcacc 900
 tacaggggtg tgtccgtgct gaccgtgctg caccaggact ggctgaacgg caaggaatac 960
 aagtgcgaagg tctccaacaa ggccctgcc gccccatcg aaaagaccat cagcaaggcc 1020
 aagggccagc cacgggagcc ccagggtgtac accctgcccc cctcccggga ggagatgacc 1080
 aagaaccagg tgtccctgac ctgtctgggtg aagggttctt accccagcga catcgccgtg 1140
 gagtgggaga gcaacggcca gcccgagaac aactacaaga ccaccccccc agtgctggac 1200
 agcgacggca gcttcttcct gtacagcaag ctgaccgtgg acaagtccag gtggcagcag 1260
 ggcaacgtgt tcagctgcag cgtgatgcac gagggccctgc acaaccacta caccagaag 1320
 agcctgagcc tgtcccccg caag 1344

<210> 62
 <211> 14

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 62

Arg Ser Ser Thr Gly Ala Val Thr Thr Ser Asn Tyr Ala Ile
1 5 10

<210> 63

<211> 7

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 63

Gly Thr Asn Asn Arg Ala Pro
1 5

<210> 64

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 64

Ala Leu Trp Tyr Ser Asp His Trp Val
1 5

<210> 65

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 65

Ser Thr Gly Ala Val Thr Thr Ser Asn Tyr
1 5 10

<210> 66

<211> 3

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 66
Gly Thr Asn
1

<210> 67
<211> 6
<212> PRT
<213> Artificial Sequence

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

<400> 67
Trp Tyr Ser Asp His Trp
1 5

<210> 68
<211> 110
<212> PRT
<213> Artificial Sequence

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

<400> 68
Glu Ala Val Val Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly
1 5 10 15

Glu Arg Ala Thr Leu Ser Cys Arg Ser Ser Thr Gly Ala Val Thr Thr
20 25 30

Ser Asn Tyr Ala Ile Trp Val Gln Glu Lys Pro Gly Gln Ala Pro Arg
35 40 45

Gly Leu Ile Gly Gly Thr Asn Asn Arg Ala Pro Gly Ile Pro Ala Arg
50 55 60

Phe Ser Gly Ser Leu Ser Gly Asp Asp Ala Thr Leu Thr Ile Ser Ser
65 70 75 80

Leu Gln Pro Glu Asp Phe Ala Val Tyr Phe Cys Ala Leu Trp Tyr Ser
85 90 95

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

<210> 69
<211> 330
<212> DNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 69
gaagccgtcg tgacacagag ccctgccacc ctgtcactga gccctggcga aagagccacc 60
ctgagctgca gatctagcac cggcgctgtg accaccagca actacgccat ctgggtgcag 120
gaaaagccccg gccaggctcc cagaggactg atcggcggca ccaacaatag agccccctggc 180
atccccgcca gattcagcgg atctctgtct ggcgacgacg ccacactgac catcagcagc 240
ctgcagccccg aggacttcgc cgtgtacttc tgcgccctgt ggtacagcga ccactgggtg 300
ttcggccagg gcaccaaggt ggaaatcaag 330

<210> 70

<211> 217

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 70

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

Glu Arg Ala Thr Leu Ser Cys Arg Ser Ser Thr Gly Ala Val Thr Thr
20 25 30

Ser Asn Tyr Ala Ile Trp Val Gln Glu Lys Pro Gly Gln Ala Pro Arg
35 40 45

Gly Leu Ile Gly Gly Thr Asn Asn Arg Ala Pro Gly Ile Pro Ala Arg
50 55 60

Phe Ser Gly Ser Leu Ser Gly Asp Asp Ala Thr Leu Thr Ile Ser Ser
65 70 75 80

Leu Gln Pro Glu Asp Phe Ala Val Tyr Phe Cys Ala Leu Trp Tyr Ser
85 90 95

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

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

Lys Ser Gly Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe Tyr Pro
130 135 140

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

Asn Ser Gln Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr Tyr
165 170 175

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

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

Thr Lys Ser Phe Asn Arg Gly Glu Cys
210 215

<210> 71
<211> 651
<212> DNA
<213> Artificial Sequence

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

<400> 71
gaagccgtcg tgacacagag ccctgccacc ctgtcactga gccctggcga aagagccacc 60
ctgagctgca gatctagcac cggcgctgtg accaccagca actacgccat ctgggtgcag 120
gaaaagcccg gccaggctcc cagaggactg atcggcgcca ccaacaatag agcccctggc 180
atccccgcca gattcagcgg atctctgtct ggcgacgacg ccacactgac catcagcagc 240
ctgcagcccg aggacttcgc cgtgtacttc tgcgccctgt ggtacagcga cactgggtg 300
ttcggccagg gcaccaaggt ggaaatcaag cgtacggtgg ccgctcccag cgtgttcac 360
ttcccccca gcgacgagca gctgaagagc ggaccgcca gcgtggtgtg cctgctgaac 420
aacttctacc cccgggaggc caaggtgcag tggaaggtgg acaacgccct gcagagcggc 480
aacagccagg agagcgtcac cgagcaggac agcaaggact ccacctacag cctgagcagc 540
accctgaccc tgagcaaggc cgactacgag aagcataagg tgtacgcctg cgaggtgacc 600
caccagggcc tgtccagccc cgtgaccaag agcttcaaca ggggcgagtg c 651

<210> 72
<211> 5
<212> PRT
<213> Artificial Sequence

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

<400> 72

Asn Tyr Trp Ile Thr
1 5

<210> 73
<211> 17
<212> PRT
<213> Artificial Sequence

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

<400> 73
Asp Phe Tyr Pro Gly Gly Gly Ser Thr Asn Tyr Asn Ala Lys Leu Gln
1 5 10 15

Gly

<210> 74
<211> 10
<212> PRT
<213> Artificial Sequence

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

<400> 74
Ser Pro Pro Gln Val Ala Pro Phe Asp Tyr
1 5 10

<210> 75
<211> 7
<212> PRT
<213> Artificial Sequence

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

<400> 75
Gly Tyr Thr Phe Asn Asn Tyr
1 5

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

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

<400> 76
Tyr Pro Gly Gly Gly Ser
1 5

<210> 77
 <211> 10
 <212> PRT
 <213> Artificial Sequence

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

<400> 77
 Ser Pro Pro Gln Val Ala Pro Phe Asp Tyr
 1 5 10

<210> 78
 <211> 119
 <212> PRT
 <213> Artificial Sequence

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

<400> 78
 Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
 1 5 10 15

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

Trp Ile Thr Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
 35 40 45

Gly Asp Phe Tyr Pro Gly Gly Gly Ser Thr Asn Tyr Asn Ala Lys Leu
 50 55 60

Gln Gly Arg Val Thr Leu Thr Val Asp Thr Ser Thr Ser Thr Ala Tyr
 65 70 75 80

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

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

Thr Leu Val Thr Val Ser Ser
 115

<210> 79
 <211> 357
 <212> DNA
 <213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 79
 caggtgcagc tgggtgcagtc tggcgccgaa gtgaagaaac caggcgccag cgtgaagggtg 60
 tcctgcaagg ccagcggcta cacctttaac aactactgga tcacctgggt gcgccaggcc 120
 cctggacagg gactggaatg gatgggacgac ttctaccctg gcggcggcag caccaactac 180
 aacgccaagc tgcagggcag agtgaccctg accgtggaca ccagcacctc caccgcctac 240
 atggaactgc ggagcctgag aagcgacgac accgccgtgt attactgcgc tagaagccct 300
 cctcaggtgg ccccttcga ttattggggc cagggcacac tcgtgaccgt gtcctct 357

<210> 80

<211> 449

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 80

Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala 15
 1 5 10

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

Trp Ile Thr Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met 45
 35 40 45

Gly Asp Phe Tyr Pro Gly Gly Gly Ser Thr Asn Tyr Asn Ala Lys Leu 60
 50 55 60

Gln Gly Arg Val Thr Leu Thr Val Asp Thr Ser Thr Ser Thr Ala Tyr 80
 65 70 75 80

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Lys

<210> 81

<211> 1347

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 81

caggtgcagc tgggtgcagtc tggcgccgaa gtgaagaaac caggcgccag cgtgaagggtg	60
tcctgcaagg ccagcggcta cacctttaac aactactgga tcacctgggt gcgccaggcc	120
cctggacagg gactggaatg gatgggcgac ttctaccctg gcggcggcag caccaactac	180
aacgccaagc tgcagggcag agtgaccctg accgtggaca ccagcacctc caccgcctac	240
atggaactgc ggagcctgag aagcgacgac accgccgtgt attactgcgc tagaagccct	300
cctcaggtgg ccccttcga ttattggggc cagggcacac tcgtgaccgt gtcctctgct	360
agcaccaagg gcccagcgt gttccccctg gcccagca gcaagagcac cagcggcggc	420
acagccgccc tgggctgcct ggtgaaggac tacttccccg agcccgtgac cgtgtcctgg	480
aacagcggag ccctgacctc cggcgtgcac accttccccg ccgtgctgca gagcagcggc	540
ctgtacagcc tgtccagcgt ggtgacagt cccagcagca gcctgggcac ccagacctac	600
atctgcaacg tgaaccacaa gcccagcaac accaagggtg acaagagagt ggagcccaag	660
agctgcgaca agaccacac ctgccccccc tgcccagccc cagagctgct gggcggaccc	720
tccgtgttcc tgttcccccc caagcccaag gacaccctga tgatcagcag gacccccgag	780
gtgacctgcg tgggtggtgga cgtgagccac gaggacccag aggtgaagtt caactggtac	840
gtggacggcg tggaggtgca caacgccaag accaagccca gagaggagca gtacaacagc	900
acctacaggg tgggtgtccgt gctgaccgtg ctgcaccagg actggctgaa cggcaaggaa	960
tacaagtgca aggtctccaa caaggccctg ccagccccca tcgaaaagac catcagcaag	1020
gccaagggcc agccacggga gcccaggtg tacaccctgc cccctccccg ggaggagatg	1080

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accaagaacc aggtgtccct gacctgtctg gtgaagggct tctaccccag cgacatcgcc	1140
gtggagtggg agagcaacgg ccagcccag aacaactaca agaccacccc cccagtgtctg	1200
gacagcgacg gcagcttctt cctgtacagc aagctgaccg tggacaagtc caggtggcag	1260
cagggcaacg tgttcagctg cagcgtgatg cacgaggccc tgcacaacca ctacaccag	1320
aagagcctga gcctgtcccc cggcaag	1347

<210> 82
 <211> 11
 <212> PRT
 <213> Artificial Sequence

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

<400> 82
 Gln Ala Ser Asp Tyr Ile Tyr His Trp Leu Gly
 1 5 10

<210> 83
 <211> 7
 <212> PRT
 <213> Artificial Sequence

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

<400> 83
 Gly Ala Ser Gly Leu Glu Thr
 1 5

<210> 84
 <211> 9
 <212> PRT
 <213> Artificial Sequence

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

<400> 84
 Gln Gln Tyr Trp Ser Thr Pro Trp Thr
 1 5

<210> 85
 <211> 7
 <212> PRT
 <213> Artificial Sequence

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

<400> 85

Ser Asp Tyr Ile Tyr His Trp
1 5

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

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

<400> 86
Gly Ala Ser
1

<210> 87
<211> 6
<212> PRT
<213> Artificial Sequence

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

<400> 87
Tyr Trp Ser Thr Pro Trp
1 5

<210> 88
<211> 107
<212> PRT
<213> Artificial Sequence

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

<400> 88
Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
1 5 10 15

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

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

Ser Gly Ala Ser Gly Leu Glu Thr Gly Val Pro Ser Arg Phe Ser Gly
50 55 60

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

Glu Asp Ile Ala Thr Tyr Tyr Cys Gln Gln Tyr Trp Ser Thr Pro Trp
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Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
100 105

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

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

<400> 89
gacatccaga tgacccagag ccccagcagc ctgtctgccg gcgtgggcca caggggtgacc 60
atcacctgtc aggccagcga ctacatctac cactggctgg gctgggtatca gcagaagccc 120
ggcaaggccc ccaagctgct gattagcgga gcctccggtc tggaaaccgg cgtgccaaagc 180
agattttccg gcagcggctc cggcaaggac tacaccttca ccatcagctc cctgcagccc 240
gaggatatcg ccacctacta ctgccagcag tactgggtcca cccctggac ctttggccag 300
ggcaccaagc tggaaatcaa g 321

<210> 90
<211> 214
<212> PRT
<213> Artificial Sequence

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

<400> 90
Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
1 5 10 15

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

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

Ser Gly Ala Ser Gly Leu Glu Thr Gly Val Pro Ser Arg Phe Ser Gly
50 55 60

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

Glu Asp Ile Ala Thr Tyr Tyr Cys Gln Gln Tyr Trp Ser Thr Pro Trp
85 90 95

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

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

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

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

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

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

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

Phe Asn Arg Gly Glu Cys
210

<210> 91
<211> 642
<212> DNA
<213> Artificial Sequence

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

<400> 91
gacatccaga tgacccagag cccagcagc ctgtctgcca gcgtgggcga cagggtgacc 60
atcacctgtc aggccagcga ctacatctac cactggctgg gctggtatca gcagaagccc 120
ggcaaggccc ccaagctgct gattagcgga gcctccggtc tggaaaccgg cgtgccaaagc 180
agattttccg gcagcggctc cggcaaggac tacaccttca ccatcagctc cctgcagccc 240
gaggatatcg ccacctacta ctgccagcag tactggtcca cccctggac ctttggccag 300
ggcaccaagc tggaaatcaa gcgtacggtg gccgctccca gcgtgttcat cttccccccc 360
agcgacgagc agctgaagag cggcaccgcc agcgtggtgt gcctgctgaa caacttctac 420
ccccgggagg ccaaggtgca gtggaaggtg gacaacgcc tgcagagcgg caacagccag 480
gagagcgtca ccgagcagga cagcaaggac tccacctaca gcctgagcag caccctgacc 540
ctgagcaagg ccgactacga gaagcataag gtgtacgcct gcgaggtgac ccaccagggc 600

ctgtccagcc ccgtgaccaa gagcttcaac aggggcgagt gc

642

<210> 92
 <211> 5
 <212> PRT
 <213> Artificial Sequence

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

<400> 92
 Asn Tyr Trp Ile Thr
 1 5

<210> 93
 <211> 17
 <212> PRT
 <213> Artificial Sequence

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

<400> 93
 Asp Phe Tyr Pro Gly Gly Gly Asn Thr Asn Tyr Asn Ala Lys Leu Gln
 1 5 10 15

Gly

<210> 94
 <211> 10
 <212> PRT
 <213> Artificial Sequence

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

<400> 94
 Ser Pro Pro Gln Val Ala Pro Phe Asp Tyr
 1 5 10

<210> 95
 <211> 7
 <212> PRT
 <213> Artificial Sequence

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

<400> 95
 Gly Tyr Thr Phe Thr Asn Tyr
 1 5

<210> 96
 <211> 6
 <212> PRT
 <213> Artificial Sequence

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

<400> 96
 Tyr Pro Gly Gly Gly Asn
 1 5

<210> 97
 <211> 10
 <212> PRT
 <213> Artificial Sequence

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

<400> 97
 Ser Pro Pro Gln Val Ala Pro Phe Asp Tyr
 1 5 10

<210> 98
 <211> 119
 <212> PRT
 <213> Artificial Sequence

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

<400> 98
 Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
 1 5 10 15

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

Trp Ile Thr Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
 35 40 45

Gly Asp Phe Tyr Pro Gly Gly Gly Asn Thr Asn Tyr Asn Ala Lys Leu
 50 55 60

Gln Gly Arg Val Thr Leu Thr Val Asp Thr Ser Thr Ser Thr Ala Tyr
 65 70 75 80

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

Ala Arg Ser Pro Pro Gln Val Ala Pro Phe Asp Tyr Trp Gly Gln Gly
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100

105

110

Thr Leu Val Thr Val Ser Ser
115

<210> 99
<211> 357
<212> DNA
<213> Artificial Sequence

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

<400> 99
cagggtgcagc tgggtgcagtc tggcgccgaa gtgaagaaac caggcgccag cgtgaagggtg 60
tcctgcaagg ccagcggcta cacctttacc aactactgga tcacctgggt gcgccaggcc 120
cctggacagg gactggaatg gatgggacgac ttctaccctg gcggcggcaa caccaactac 180
aacgccaagc tgcagggcag agtgaccctg accgtggaca ccagcacctc caccgcctac 240
atggaactgc ggagcctgag aagcgacgac accgccgtgt attactgcgc tagaagccct 300
cctcagggtg ccccttcga ttattggggc cagggcacac tcgtgaccgt gtcctct 357

<210> 100
<211> 449
<212> PRT
<213> Artificial Sequence

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

<400> 100
Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
1 5 10 15

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

Trp Ile Thr Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45

Gly Asp Phe Tyr Pro Gly Gly Gly Asn Thr Asn Tyr Asn Ala Lys Leu
50 55 60

Gln Gly Arg Val Thr Leu Thr Val Asp Thr Ser Thr Ser Thr Ala Tyr
65 70 75 80

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Lys

<210> 101

<211> 1347

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 101

cagggtgcagc tgggtgcagtc tggcgccgaa gtgaagaaac caggcgccag cgtgaagggtg	60
tcctgcaagg ccagcggcta cacctttacc aactactgga tcacctgggt gcgccaggcc	120
cctggacagg gactggaatg gatgggacgac ttctaccctg gcggcggcaa caccaactac	180
aacgccaagc tgcagggcag agtgaccctg accgtggaca ccagcacctc caccgcctac	240
atggaactgc ggagcctgag aagcgacgac accgccgtgt attactgcgc tagaagccct	300
cctcaggtgg ccccttcga ttattggggc cagggcacac tcgtgaccgt gtcctctgct	360
agcaccaagg gccccagcgt gttccccctg gccccagca gcaagagcac cagcggcggc	420
acagccgcc tgggctgcct ggtgaaggac tacttccccg agcccgtgac cgtgtcctgg	480
aacagcggag ccctgacctc cggcgtgcac accttccccg ccgtgctgca gagcagcggc	540
ctgtacagcc tgtccagcgt ggtgacagtg cccagcagca gcctgggcac ccagacctac	600
atctgcaacg tgaaccacaa gccagcaac accaagggtg acaagagagt ggagccaag	660
agctgcgaca agaccacac ctgccccccc tgcccagccc cagagctgct gggcggaccc	720

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tccgtgttcc tgttcccccc caagcccaag gacaccctga tgatcagcag gacccccgag	780
gtgacctgcg tgggtggtgga cgtgagccac gaggacccag aggtgaagtt caactggtac	840
gtggacggcg tggaggtgca caacgccaag accaagccca gagaggagca gtacaacagc	900
acctacaggg tgggtgtccgt gctgaccgtg ctgcaccagg actggctgaa cggcaaggaa	960
tacaagtgca aggtctccaa caaggccctg ccagccccca tcgaaaagac catcagcaag	1020
gccaagggcc agccacggga gccccagggtg tacaccctgc cccctcccg ggaggagatg	1080
accaagaacc aggtgtccct gacctgtctg gtgaagggt tctaccccag cgacatcgcc	1140
gtggagtggg agagcaacgg ccagccccgag aacaactaca agaccacccc cccagtgtg	1200
gacagcgacg gcagcttctt cctgtacagc aagctgaccg tggacaagtc caggtggcag	1260
cagggcaacg tgttcagctg cagcgtgatg cacgaggccc tgcacaacca ctacaccag	1320
aagagcctga gcctgtcccc cggcaag	1347

<210> 102
 <211> 11
 <212> PRT
 <213> Artificial Sequence

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

<400> 102
 Gln Ala Ser Glu Tyr Ile Tyr Asn Trp Leu Gly
 1 5 10

<210> 103
 <211> 7
 <212> PRT
 <213> Artificial Sequence

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

<400> 103
 Gly Ala Ser Gly Leu Glu Thr
 1 5

<210> 104
 <211> 9
 <212> PRT
 <213> Artificial Sequence

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

<400> 104
 Gln Gln Tyr Trp Ser Thr Pro Trp Thr

1

5

<210> 105

<211> 7

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 105

Ser Glu Tyr Ile Tyr Asn Trp
1 5

<210> 106

<211> 3

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 106

Gly Ala Ser
1

<210> 107

<211> 6

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 107

Tyr Trp Ser Thr Pro Trp
1 5

<210> 108

<211> 107

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 108

Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
1 5 10 15Asp Arg Val Thr Ile Thr Cys Gln Ala Ser Glu Tyr Ile Tyr Asn Trp
20 25 30

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

Ser Gly Ala Ser Gly Leu Glu Thr Gly Val Pro Ser Arg Phe Ser Gly
50 55 60

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

Glu Asp Ile Ala Thr Tyr Tyr Cys Gln Gln Tyr Trp Ser Thr Pro Trp
85 90 95

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

<210> 109
<211> 321
<212> DNA
<213> Artificial Sequence

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

<400> 109
gacatccaga tgacccagag ccccagcagc ctgtctgcca gcgtgggcga cagggtgacc 60
atcacctgtc aggccagcga atacatctac aactggctgg gctggatatca gcagaagccc 120
ggcaaggccc ccaagctgct gattagcggg gcctccggtc tggaaaccgg cgtgccaagc 180
agattttccg gcagcggctc cggcaaggac tacaccttca ccatcagctc cctgcagccc 240
gaggatatcg ccacctacta ctgccagcag tactgggtcca cccctggac ctttggccag 300
ggcaccaagc tggaaatcaa g 321

<210> 110
<211> 214
<212> PRT
<213> Artificial Sequence

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

<400> 110
Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
1 5 10 15

Asp Arg Val Thr Ile Thr Cys Gln Ala Ser Glu Tyr Ile Tyr Asn Trp
20 25 30

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

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Ser Gly Ala Ser Gly Leu Glu Thr Gly Val Pro Ser Arg Phe Ser Gly
50 55 60

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

Glu Asp Ile Ala Thr Tyr Tyr Cys Gln Gln Tyr Trp Ser Thr Pro Trp
85 90 95

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

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

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

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

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

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

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

Phe Asn Arg Gly Glu Cys
210

<210> 111

<211> 642

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 111

gacatccaga tgacccagag ccccagcagc ctgtctgccg gcgtgggcca cagggtgacc 60

atcacctgtc aggccagcga atacatctac aactggctgg gctggtatca gcagaagccc 120

ggcaaggccc ccaagctgct gattagcgga gcctccggc tggaaaccgg cgtgccaagc 180

agattttccg gcagcggctc cggcaaggac tacaccttca ccatcagctc cctgcagccc 240

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gaggatatcg ccacctacta ctgccagcag tactgggtcca cccctggac ctttgccag	300
ggcaccaagc tggaaatcaa gcgtacggtg gccgctccca gcgtgttcat cttccccccc	360
agcgacgagc agctgaagag cggcaccgcc agcgtggtgt gcctgctgaa caacttctac	420
ccccgggagg ccaaggtgca gtggaagggtg gacaacgcc tgacagcgg caacagccag	480
gagagcgtca ccgagcagga cagcaaggac tccacctaca gcctgagcag caccctgacc	540
ctgagcaagg ccgactacga gaagcataag gtgtacgcct gcgaggtgac ccaccagggc	600
ctgtccagcc ccgtgaccaa gagcttcaac aggggcgagt gc	642

<210> 112
 <211> 5
 <212> PRT
 <213> Artificial Sequence

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

<400> 112
 Ser Phe Trp Ile Thr
 1 5

<210> 113
 <211> 17
 <212> PRT
 <213> Artificial Sequence

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

<400> 113
 Asp Ile Tyr Pro Gly Gly Ala Thr Thr Asn Tyr Asn Glu Lys Leu Gln
 1 5 10 15

Gly

<210> 114
 <211> 10
 <212> PRT
 <213> Artificial Sequence

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

<400> 114
 Ser Pro Pro Gln Val Gly Pro Phe Asp Tyr
 1 5 10

<210> 115

<211> 7

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 115

Gly Tyr Thr Phe Thr Ser Phe
1 5

<210> 116

<211> 6

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 116

Tyr Pro Gly Gly Ala Thr
1 5

<210> 117

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 117

Ser Pro Pro Gln Val Gly Pro Phe Asp Tyr
1 5 10

<210> 118

<211> 119

<212> PRT

<213> Artificial Sequence

<220>

<223> description of Artificial Sequence: Synthetic polypeptide

<400> 118

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

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Gly Asp Ile Tyr Pro Gly Gly Ala Thr Thr Asn Tyr Asn Glu Lys Leu
50 55 60

Gln Gly Arg Val Thr Leu Thr Val Asp Thr Ser Thr Ser Thr Ala Tyr
65 70 75 80

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

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

Thr Leu Val Thr Val Ser Ser
115

<210> 119
<211> 357
<212> DNA
<213> Artificial Sequence

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

<400> 119	
caggtgcagc tgggtgcagtc tggcgccgaa gtgaagaaac caggcgccag cgtgaagggtg	60
tcctgcaagg ccagcggcta taccttcacc agctttttgga tcacctgggt gcgccaggcc	120
cctggacagg gactggaatg gatgggacgac atctaccctg gcggcgccac caccaactac	180
aacgagaagc tgcagggcag agtgaccctg accgtggaca ccagcacctc caccgcctac	240
atggaaactgc ggagcctgag aagcgacgac accgccgtgt actactgcgc tagaagccct	300
cctcaggtgg gccccttcga ttattggggc cagggcacac tcgtgaccgt gtcctct	357

<210> 120
<211> 449
<212> PRT
<213> Artificial Sequence

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

<400> 120
Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
1 5 10 15

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

Trp Ile Thr Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45

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Gly Asp Ile Tyr Pro Gly Gly Ala Thr Thr Asn Tyr Asn Glu Lys Leu
50 55 60

Gln Gly Arg Val Thr Leu Thr Val Asp Thr Ser Thr Ser Thr Ala Tyr
65 70 75 80

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

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

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

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

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

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

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

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

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

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

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

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

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

Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val

290

295

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

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

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

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

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

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

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

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

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

Lys

<210> 121

<211> 1347

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 121

caggtgcagc tgggtgcagtc tggcgccgaa gtgaagaaac caggcgccag cgtgaaggtg 60

tcctgcaagg ccagcggcta taccttcacc agcttttggga tcacctgggt gcgccaggcc 120

cctggacagg gactggaatg gatgggcgac atctaccctg gcggcgccac caccaactac 180

aacgagaagc tgcagggcag agtgaccctg accgtggaca ccagcacctc caccgcctac 240

atggaactgc ggagcctgag aagcgacgac accgccgtgt actactgcgc tagaagccct 300

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cctcaggtgg gccccttcga ttattggggc cagggcacac tcgtgaccgt gtcctctgct	360
agcaccaagg gccccagcgt gttccccctg gccccagca gcaagagcac cagcggcggc	420
acagccgccc tgggctgcct ggtgaaggac tacttccccg agcccgtgac cgtgtcctgg	480
aacagcggag ccctgacctc cggcgtgcac accttccccg ccgtgctgca gagcagcggc	540
ctgtacagcc tgtccagcgt ggtgacagtg cccagcagca gcctgggcac ccagacctac	600
atctgcaacg tgaaccacaa gccagcaac accaaggtgg acaagagagt ggagcccaag	660
agctgcgaca agaccacac ctgccccccc tgcccagccc cagagctgct gggcggaccc	720
tccgtgttcc tgttcccccc caagcccaag gacaccctga tgatcagcag gacccccgag	780
gtgacctgcg tgggtgtgga cgtgagccac gaggaccag aggtgaagtt caactggtac	840
gtggacggcg tggaggtgca caacgccaa accaagccca gagaggagca gtacaacagc	900
acctacaggg tgggtgtccgt gctgaccgtg ctgcaccagg actggctgaa cggcaaggaa	960
tacaagtgca aggtctccaa caaggccctg ccagccccca tcgaaaagac catcagcaag	1020
gccaagggcc agccacggga gccccaggtg tacaccctgc ccccctcccg ggaggagatg	1080
accaagaacc aggtgtccct gacctgtctg gtgaagggct tctaccccag cgacatcgcc	1140
gtggagtggg agagcaacgg ccagcccag aacaactaca agaccacccc cccagtgtg	1200
gacagcgacg gcagcttctt cctgtacagc aagctgaccg tggacaagtc caggtggcag	1260
cagggcaacg tgttcagctg cagcgtgatg cacgaggccc tgcacaacca ctacaccag	1320
aagagcctga gcctgtcccc cggcaag	1347

<210> 122
 <211> 11
 <212> PRT
 <213> Artificial Sequence

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

<400> 122
 Gln Ala Ser Asp Tyr Ile Tyr His Trp Leu Ala
 1 5 10

<210> 123
 <211> 7
 <212> PRT
 <213> Artificial Sequence

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

<400> 123
 Gly Ala Ser Ser Leu Glu Thr
 1 5

<210> 124
 <211> 9
 <212> PRT
 <213> Artificial Sequence

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

<400> 124
 Gln Gln Tyr Trp Ser Ile Pro Trp Thr
 1 5

<210> 125
 <211> 7
 <212> PRT
 <213> Artificial Sequence

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

<400> 125
 Ser Asp Tyr Ile Tyr His Trp
 1 5

<210> 126
 <211> 3
 <212> PRT
 <213> Artificial Sequence

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

<400> 126
 Gly Ala Ser
 1

<210> 127
 <211> 6
 <212> PRT
 <213> Artificial Sequence

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

<400> 127
 Tyr Trp Ser Ile Pro Trp
 1 5

<210> 128
 <211> 107
 <212> PRT
 <213> Artificial Sequence

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<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 128

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

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

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

Ser Gly Ala Ser Ser Leu Glu Thr Gly Val Pro Ser Arg Phe Ser Gly
50 55 60

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

Glu Asp Ile Ala Thr Tyr Tyr Cys Gln Gln Tyr Trp Ser Ile Pro Trp
85 90 95

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

<210> 129

<211> 321

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 129

gacatccaga tgacccagag ccccagcagc ctgtctgccg gcgtgggcca cagagtgacc	60
atcacctgtc aggccagcga ctacatctac cactggctgg cctggatatca gcagaagccc	120
ggcaaggccc ccaagctgct gattagcgga gcctccagtc tggaaaccgg cgtgccaagc	180
agattttccg gcagcggctc cggcaaggac tacaccttca ccatcagctc cctgcagccc	240
gaggatatcg ccacctacta ctgccagcag tactggtcca tcccctggac ctttggccag	300
ggcaccaagc tggaaatcaa g	321

<210> 130

<211> 214

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic

polypeptide

<400> 130

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

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

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

Ser Gly Ala Ser Ser Leu Glu Thr Gly Val Pro Ser Arg Phe Ser Gly
 50 55 60

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

Glu Asp Ile Ala Thr Tyr Tyr Cys Gln Gln Tyr Trp Ser Ile Pro Trp
 85 90 95

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

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

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

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

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

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

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

Phe Asn Arg Gly Glu Cys
 210

<210> 131

<211> 642

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 131

gacatccaga tgacccagag ccccagcagc ctgtctgccg gcgtgggcga cagagtgacc	60
atcacctgtc aggccagcga ctacatctac cactggctgg cctgggtatca gcagaagccc	120
ggcaaggccc ccaagctgct gattagcggg gcctccagtc tggaaaccgg cgtgccaaagc	180
agatthttccg gcagcggctc cggcaaggac tacaccttca ccatcagctc cctgcagccc	240
gaggatatcg ccacctacta ctgccagcag tactgggtcca tcccctggac ctttggccag	300
ggcaccaagc tggaaatcaa gcgtacggtg gccgctccca gcgtgttcat cttccccccc	360
agcgacgagc agctgaagag cggcaccgcc agcgtggtgt gcctgctgaa caacttctac	420
ccccgggagg ccaaggtgca gtggaagggtg gacaacgccc tgcagagcgg caacagccag	480
gagagcgtca ccgagcagga cagcaaggac tccacctaca gcctgagcag caccctgacc	540
ctgagcaagg ccgactacga gaagcataag gtgtacgcct gcgaggtgac ccaccagggc	600
ctgtccagcc ccgtgaccaa gagcttcaac aggggcgagt gc	642

<210> 132

<211> 5

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 132

Ser	Phe	Trp	Ile	Thr
1				5

<210> 133

<211> 17

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 133

Asp	Ile	Tyr	Pro	Gly	Gly	Ala	Asn	Thr	Asn	Tyr	Asn	Glu	Lys	Leu	Gln
1				5				10						15	

Gly

<210> 134

<211> 10

<212> PRT
 <213> Artificial Sequence

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

<400> 134
 Ser Pro Pro Gln Val Gly Pro Phe Asp Tyr
 1 5 10

<210> 135
 <211> 7
 <212> PRT
 <213> Artificial Sequence

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

<400> 135
 Gly Tyr Thr Phe Thr Ser Phe
 1 5

<210> 136
 <211> 6
 <212> PRT
 <213> Artificial Sequence

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

<400> 136
 Tyr Pro Gly Gly Ala Asn
 1 5

<210> 137
 <211> 10
 <212> PRT
 <213> Artificial Sequence

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

<400> 137
 Ser Pro Pro Gln Val Gly Pro Phe Asp Tyr
 1 5 10

<210> 138
 <211> 119
 <212> PRT
 <213> Artificial Sequence

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

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<400> 138

Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
1 5 10 15

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

Trp Ile Thr Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45

Gly Asp Ile Tyr Pro Gly Gly Ala Asn Thr Asn Tyr Asn Glu Lys Leu
50 55 60

Gln Gly Arg Val Thr Leu Thr Val Asp Thr Ser Thr Ser Thr Ala Tyr
65 70 75 80

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

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

Thr Leu Val Thr Val Ser Ser
115

<210> 139

<211> 357

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 139

cagggtgcagc tgggtgcagtc tggcgccgaa gtgaagaaac caggcgccag cgtgaagggtg	60
tcctgcaagg ccagcggcta taccttcacc agcttttggga tcacctgggt gcgccaggcc	120
cctggacagg gactggaatg gatgggacgac atctaccctg gcggcgccaa caccaactac	180
aacgagaagc tgcagggcag agtgaccctg accgtggaca ccagcacctc caccgcctac	240
atggaactgc ggagcctgag aagcgacgac accgccgtgt actactgcgc tagaagccct	300
cctcaggtgg gccccttcga ttattggggc cagggcacac tcgtgaccgt gtcctct	357

<210> 140

<211> 449

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic

polypeptide

<400> 140

Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
 1 5 10 15

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

Trp Ile Thr Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
 35 40 45

Gly Asp Ile Tyr Pro Gly Gly Ala Asn Thr Asn Tyr Asn Glu Lys Leu
 50 55 60

Gln Gly Arg Val Thr Leu Thr Val Asp Thr Ser Thr Ser Thr Ala Tyr
 65 70 75 80

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Lys

<210> 141

<211> 1347

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic

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polynucleotide

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<400> 141
caggtgcagc tgggtgcagtc tggcgccgaa gtgaagaaac caggcgccag cgtgaagggtg      60
tcctgcaagg ccagcggcta taccttcacc agcttttggg tcacctgggt gcgccaggcc      120
cctggacagg gactggaatg gatgggagac atctaccctg gcggcgccaa caccaactac      180
aacgagaagc tgcagggcag agtgaccctg accgtggaca ccagcacctc caccgcctac      240
atggaactgc ggagcctgag aagcgacgac accgccgtgt actactgcgc tagaagccct      300
cctcagggtg gccccttcga ttattggggc cagggcacac tcgtgaccgt gtcctctgct      360
agcaccaagg gcccagcgt gttccccctg gcccagca gcaagagcac cagcggcggc      420
acagccgccc tgggctgcct ggtgaaggac tacttccccg agcccgtgac cgtgtcctgg      480
aacagcggag ccctgacctc cggcgtgcac accttccccg ccgtgctgca gagcagcggc      540
ctgtacagcc tgtccagcgt ggtgacagtg cccagcagca gcctgggcac ccagacctac      600
atctgcaacg tgaaccacaa gcccagcaac accaagggtg acaagagagt ggagcccaag      660
agctgcgaca agaccacac ctgccccccc tgcccagccc cagagctgct gggcggaccc      720
tccgtgttcc tgttcccccc caagcccaag gacaccctga tgatcagcag gacccccgag      780
gtgacctgcg tgggtggtgga cgtgagccac gaggacccag aggtgaagtt caactggtac      840
gtggacggcg tggaggtgca caacgccaag accaagccca gagaggagca gtacaacagc      900
acctacaggg tgggtgtccgt gctgaccgtg ctgcaccagg actggctgaa cggcaaggaa      960
tacaagtgca aggtctccaa caaggccctg ccagccccca tcgaaaagac catcagcaag     1020
gccaagggcc agccacggga gcccaggtg tacaccctgc cccctcccg ggaggagatg     1080
accaagaacc aggtgtccct gacctgtctg gtgaagggtg tctaccccag cgacatcgcc     1140
gtggagtggg agagcaacgg ccagcccagag aacaactaca agaccacccc cccagtgtctg     1200
gacagcgacg gcagcttctt cctgtacagc aagctgaccg tggacaagtc caggtggcag     1260
cagggcaacg tgttcagctg cagcgtgatg cacgaggccc tgcacaacca ctacaccag     1320
aagagcctga gcctgtcccc cggcaag                                           1347

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<210> 142

<211> 11

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 142

Gln Ala Ser Glu Tyr Ile Ile Asn Trp Leu Ala
 1 5 10

<210> 143
 <211> 7
 <212> PRT
 <213> Artificial Sequence

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

<400> 143
 Gly Ala Thr Gly Leu Glu Thr
 1 5

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

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

<400> 144
 Gln Gln Tyr Trp Ser Ile Pro Trp Thr
 1 5

<210> 145
 <211> 7
 <212> PRT
 <213> Artificial Sequence

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

<400> 145
 Ser Glu Tyr Ile Ile Asn Trp
 1 5

<210> 146
 <211> 3
 <212> PRT
 <213> Artificial Sequence

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

<400> 146
 Gly Ala Thr
 1

<210> 147
 <211> 6
 <212> PRT
 <213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 147

Tyr Trp Ser Ile Pro Trp
1 5

<210> 148

<211> 107

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 148

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

Asp Arg Val Thr Ile Thr Cys Gln Ala Ser Glu Tyr Ile Ile Asn Trp
20 25 30

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

Ser Gly Ala Thr Gly Leu Glu Thr Gly Val Pro Ser Arg Phe Ser Gly
50 55 60

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

Glu Asp Ile Ala Thr Tyr Tyr Cys Gln Gln Tyr Trp Ser Ile Pro Trp
85 90 95

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

<210> 149

<211> 321

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 149

gacatccaga tgacccagag ccccagcagc ctgtctgccg gcgtggggcga cagagtgacc 60

atcacctgtc aggccagcga atacatcata aactggctgg cctgggtatca gcagaagccc 120

ggcaaggccc ccaagctgct gattagcgga gccaccggtc tggaaaccgg cgtgccaagc 180

agattttccg gcagcggctc cggcaaggac tacaccttca ccatcagctc cctgcagccc 240

gaggatatcg ccacctacta ctgccagcag tactgggtcca tcccctggac ctttggccag 300
 ggcaccaagc tggaaatcaa g 321

<210> 150
 <211> 214
 <212> PRT
 <213> Artificial Sequence

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

<400> 150
 Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
 1 5 10 15

Asp Arg Val Thr Ile Thr Cys Gln Ala Ser Glu Tyr Ile Ile Asn Trp
 20 25 30

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

Ser Gly Ala Thr Gly Leu Glu Thr Gly Val Pro Ser Arg Phe Ser Gly
 50 55 60

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

Glu Asp Ile Ala Thr Tyr Tyr Cys Gln Gln Tyr Trp Ser Ile Pro Trp
 85 90 95

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

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

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

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

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

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

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

Phe Asn Arg Gly Glu Cys
210

<210> 151
<211> 642
<212> DNA
<213> Artificial Sequence

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

<400> 151
gacatccaga tgacccagag ccccagcagc ctgtctgcca gcgtgggcga cagagtgacc 60
atcacctgtc aggccagcga atacatcata aactggctgg cctggatatca gcagaagccc 120
ggcaaggccc ccaagctgct gattagcgga gccaccggtc tggaaaccgg cgtgccaaagc 180
agattttccg gcagcggctc cggcaaggac tacaccttca ccatcagctc cctgcagccc 240
gaggatatcg ccacctacta ctgccagcag tactgggtcca tcccctggac ctttggccag 300
ggcaccaagc tggaaatcaa gcgtacggtg gccgctccca gcgtgttcat cttccccccc 360
agcgacgagc agctgaagag cggcaccgcc agcgtggtgt gcctgctgaa caacttctac 420
ccccgggagg ccaaggtgca gtggaagggtg gacaacgccc tgcagagcgg caacagccag 480
gagagcgtca ccgagcagga cagcaaggac tccacctaca gcctgagcag caccctgacc 540
ctgagcaagg ccgactacga gaagcataag gtgtacgcct gcgagggtgac ccaccagggc 600
ctgtccagcc ccgtgaccaa gagcttcaac aggggcgagt gc 642

<210> 152
<211> 24
<212> PRT
<213> Homo sapiens

<400> 152
Met Lys Thr Phe Ile Leu Leu Leu Trp Val Leu Leu Leu Trp Val Ile
1 5 10 15

Phe Leu Leu Pro Gly Ala Thr Ala
20

<210> 153
<211> 9
<212> PRT
<213> Artificial Sequence

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

peptide

<400> 153

Asp Tyr Lys Asp Asp Asp Asp Lys His
1 5

<210> 154

<211> 6

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
6xHis tag

<400> 154

His His His His His His
1 5

<210> 155

<211> 17

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
peptide

<400> 155

Gly Gly Gly Leu Asn Asp Ile Phe Glu Ala Gln Lys Ile Glu Trp His
1 5 10 15

Glu

<210> 156

<211> 438

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
polypeptide

<400> 156

Met Lys Thr Phe Ile Leu Leu Leu Trp Val Leu Leu Leu Trp Val Ile
1 5 10 15Phe Leu Leu Pro Gly Ala Thr Ala Gln Pro Gly Pro Val Gln Ser Lys
20 25 30Ser Pro Arg Phe Ala Ser Trp Asp Glu Met Asn Val Leu Ala His Gly
35 40 45Leu Leu Gln Leu Gly Gln Gly Leu Arg Glu His Ala Glu Arg Thr Arg
50 55 60

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Ser Gln Leu Ser Ala Leu Glu Arg Arg Leu Ser Ala Cys Gly Ser Ala
65 70 75 80

Cys Gln Gly Thr Glu Gly Ser Thr Asp Leu Pro Leu Ala Pro Glu Ser
85 90 95

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

Gln Asn Ser Arg Ile Gln Gln Leu Phe His Lys Val Ala Gln Gln Gln
115 120 125

Arg His Leu Glu Lys Gln His Leu Arg Ile Gln His Leu Gln Ser Gln
130 135 140

Phe Gly Leu Leu Asp His Lys His Leu Asp His Glu Val Ala Lys Pro
145 150 155 160

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

His Asn Val Ser Arg Leu His Arg Leu Pro Arg Asp Cys Gln Glu Leu
180 185 190

Phe Gln Val Gly Glu Arg Gln Ser Gly Leu Phe Glu Ile Gln Pro Gln
195 200 205

Gly Ser Pro Pro Phe Leu Val Asn Cys Lys Met Thr Ser Asp Gly Gly
210 215 220

Trp Thr Val Ile Gln Arg Arg His Asp Gly Ser Val Asp Phe Asn Arg
225 230 235 240

Pro Trp Glu Ala Tyr Lys Ala Gly Phe Gly Asp Pro His Gly Glu Phe
245 250 255

Trp Leu Gly Leu Glu Lys Val His Ser Ile Thr Gly Asp Arg Asn Ser
260 265 270

Arg Leu Ala Val Gln Leu Arg Asp Trp Asp Gly Asn Ala Glu Leu Leu
275 280 285

Gln Phe Ser Val His Leu Gly Gly Glu Asp Thr Ala Tyr Ser Leu Gln
290 295 300

Leu Thr Ala Pro Val Ala Gly Gln Leu Gly Ala Thr Thr Val Pro Pro
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305 310 315 320

Ser Gly Leu Ser Val Pro Phe Ser Thr Trp Asp Gln Asp His Asp Leu
325 330 335

Arg Arg Asp Lys Asn Cys Ala Lys Ser Leu Ser Gly Gly Trp Trp Phe
340 345 350

Gly Thr Cys Ser His Ser Asn Leu Asn Gly Gln Tyr Phe Arg Ser Ile
355 360 365

Pro Gln Gln Arg Gln Lys Leu Lys Lys Gly Ile Phe Trp Lys Thr Trp
370 375 380

Arg Gly Arg Tyr Tyr Pro Leu Gln Ala Thr Thr Met Leu Ile Gln Pro
385 390 395 400

Met Ala Ala Glu Ala Ala Ser Asp Tyr Lys Asp Asp Asp Asp Lys His
405 410 415

His His His His His Gly Gly Gly Leu Asn Asp Ile Phe Glu Ala Gln
420 425 430

Lys Ile Glu Trp His Glu
435

<210> 157

<211> 232

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 157

Met Lys Thr Phe Ile Leu Leu Leu Trp Val Leu Leu Leu Trp Val Ile
1 5 10 15

Phe Leu Leu Pro Gly Ala Thr Ala Gln Pro Gly Pro Val Gln Ser Lys
20 25 30

Ser Pro Arg Phe Ala Ser Trp Asp Glu Met Asn Val Leu Ala His Gly
35 40 45

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

Ser Gln Leu Ser Ala Leu Glu Arg Arg Leu Ser Ala Cys Gly Ser Ala
65 70 75 80

Cys Gln Gly Thr Glu Gly Ser Thr Asp Leu Pro Leu Ala Pro Glu Ser
85 90 95

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

Gln Asn Ser Arg Ile Gln Gln Leu Phe His Lys Val Ala Gln Gln Gln
115 120 125

Arg His Leu Glu Lys Gln His Leu Arg Ile Gln His Leu Gln Ser Gln
130 135 140

Phe Gly Leu Leu Asp His Lys His Leu Asp His Glu Val Ala Lys Pro
145 150 155 160

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

His Asn Val Ser Arg Leu His Arg Leu Pro Arg Asp Tyr Lys Asp Asp
180 185 190

Asp Asp Lys His His His His His His Asp Tyr Lys Asp Asp Asp Asp
195 200 205

Lys His His His His His His Gly Gly Gly Leu Asn Asp Ile Phe Glu
210 215 220

Ala Gln Lys Ile Glu Trp His Glu
225 230

<210> 158

<211> 19

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic primer

<400> 158

atccccgctc ccaggctac

19

<210> 159

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic primer

<400> 159
cagcaaggag tgaagctcca tgcc

24

<210> 160
<211> 438
<212> PRT
<213> Artificial Sequence

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

<400> 160
Met Lys Thr Phe Ile Leu Leu Leu Trp Val Leu Leu Leu Trp Val Ile
1 5 10 15

Phe Leu Leu Pro Gly Ala Thr Ala Gln Pro Gly Pro Val Gln Ser Lys
20 25 30

Ser Pro Arg Phe Ala Ser Trp Asp Glu Met Asn Val Leu Ala His Gly
35 40 45

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

Ser Gln Leu Asn Ala Leu Glu Arg Arg Leu Ser Ala Cys Gly Ser Ala
65 70 75 80

Cys Gln Gly Thr Glu Gly Ser Thr Ala Leu Pro Leu Ala Pro Glu Ser
85 90 95

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

Gln Asn Ser Arg Ile Gln Gln Leu Phe His Lys Val Ala Gln Gln Gln
115 120 125

Arg His Leu Glu Lys Gln His Leu Arg Ile Gln Arg Leu Gln Ser Gln
130 135 140

Val Gly Leu Leu Asp Pro Lys His Leu Asp His Glu Val Ala Lys Pro
145 150 155 160

Ala Arg Arg Lys Arg Arg Pro Glu Met Ala Gln Pro Val Asp Ser Ala
165 170 175

His Asn Ala Ser Arg Leu His Arg Leu Pro Arg Asp Cys Gln Glu Leu
180 185 190

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Phe Glu Asp Gly Glu Arg Gln Ser Gly Leu Phe Glu Ile Gln Pro Gln
 195 200 205

Gly Ser Pro Pro Phe Leu Val Asn Cys Lys Met Thr Ser Asp Gly Gly
 210 215 220

Trp Thr Val Ile Gln Arg Arg His Asp Gly Ser Val Asp Phe Asn Arg
 225 230 235 240

Pro Trp Glu Ala Tyr Lys Ala Gly Phe Gly Asp Pro Gln Gly Glu Phe
 245 250 255

Trp Leu Gly Leu Glu Lys Val His Ser Ile Thr Gly Asp Arg Asn Ser
 260 265 270

Arg Leu Ala Val Gln Leu Gln Asp Trp Asp Gly Asn Ala Glu Ser Leu
 275 280 285

Gln Phe Ser Val His Leu Gly Gly Glu Asp Thr Ala Tyr Ser Leu Gln
 290 295 300

Leu Thr Glu Pro Val Ala Ser Gln Leu Gly Ala Thr Thr Val Pro Pro
 305 310 315 320

Ser Gly Leu Ser Val Pro Phe Ser Thr Trp Asp Gln Asp His Asp Leu
 325 330 335

Arg Arg Asp Lys Asn Cys Ala Lys Ser Leu Ser Gly Gly Trp Trp Phe
 340 345 350

Gly Thr Cys Ser His Ser Asn Leu Asn Gly Gln Tyr Phe Arg Ser Ile
 355 360 365

Pro Gln Gln Arg Gln Glu Leu Lys Lys Gly Ile Phe Trp Lys Thr Trp
 370 375 380

Arg Gly Arg Tyr Tyr Pro Leu Gln Ala Thr Thr Met Leu Ile Gln Pro
 385 390 395 400

Thr Ala Ala Glu Ala Ala Ser Asp Tyr Lys Asp Asp Asp Asp Lys His
 405 410 415

His His His His His Gly Gly Gly Leu Asn Asp Ile Phe Glu Ala Gln
 420 425 430

Lys Ile Glu Trp His Glu
 435

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<210> 161
 <211> 218
 <212> PRT
 <213> Artificial Sequence

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

<400> 161
 Met Lys Thr Phe Ile Leu Leu Leu Trp Val Leu Leu Leu Trp Val Ile
 1 5 10 15
 Phe Leu Leu Pro Gly Ala Thr Ala Gln Pro Gly Pro Val Gln Ser Lys
 20 25 30
 Ser Pro Arg Phe Ala Ser Trp Asp Glu Met Asn Val Leu Ala His Gly
 35 40 45
 Leu Leu Gln Leu Gly Gln Gly Leu Arg Glu His Ala Glu Arg Thr Arg
 50 55 60
 Ser Gln Leu Asn Ala Leu Glu Arg Arg Leu Ser Ala Cys Gly Ser Ala
 65 70 75 80
 Cys Gln Gly Thr Glu Gly Ser Thr Ala Leu Pro Leu Ala Pro Glu Ser
 85 90 95
 Arg Val Asp Pro Glu Val Leu His Ser Leu Gln Thr Gln Leu Lys Ala
 100 105 110
 Gln Asn Ser Arg Ile Gln Gln Leu Phe His Lys Val Ala Gln Gln Gln
 115 120 125
 Arg His Leu Glu Lys Gln His Leu Arg Ile Gln Arg Leu Gln Ser Gln
 130 135 140
 Val Gly Leu Leu Asp Pro Lys His Leu Asp His Glu Val Ala Lys Pro
 145 150 155 160
 Ala Arg Arg Lys Arg Arg Pro Glu Met Ala Gln Pro Val Asp Ser Ala
 165 170 175
 His Asn Ala Ser Arg Leu His Arg Leu Pro Arg Asp Tyr Lys Asp Asp
 180 185 190
 Asp Asp Lys His His His His His His Gly Gly Gly Leu Asn Asp Ile
 195 200 205

Phe Glu Ala Gln Lys Ile Glu Trp His Glu
 210 215

<210> 162

<211> 442

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 162

Met Lys Thr Phe Ile Leu Leu Leu Trp Val Leu Leu Leu Trp Val Ile
 1 5 10 15

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

Pro Pro Arg Phe Ala Ser Trp Asp Glu Met Asn Leu Leu Ala His Gly
 35 40 45

Leu Leu Gln Leu Gly His Gly Leu Arg Glu His Val Glu Arg Thr Arg
 50 55 60

Gly Gln Leu Gly Ala Leu Glu Arg Arg Met Ala Ala Cys Gly Asn Ala
 65 70 75 80

Cys Gln Gly Pro Lys Gly Lys Asp Ala Pro Phe Lys Asp Ser Glu Asp
 85 90 95

Arg Val Pro Glu Gly Gln Thr Pro Glu Thr Leu Gln Ser Leu Gln Thr
 100 105 110

Gln Leu Lys Ala Gln Asn Ser Lys Ile Gln Gln Leu Phe Gln Lys Val
 115 120 125

Ala Gln Gln Gln Arg Tyr Leu Ser Lys Gln Asn Leu Arg Ile Gln Asn
 130 135 140

Leu Gln Ser Gln Ile Asp Leu Leu Ala Pro Thr His Leu Asp Asn Gly
 145 150 155 160

Val Asp Lys Thr Ser Arg Gly Lys Arg Leu Pro Lys Met Thr Gln Leu
 165 170 175

Ile Gly Leu Thr Pro Asn Ala Thr His Leu His Arg Pro Pro Arg Asp
 180 185 190

Cys Gln Glu Leu Phe Gln Glu Gly Glu Arg His Ser Gly Leu Phe Gln

195 200 205
 Ile Gln Pro Leu Gly Ser Pro Pro Phe Leu Val Asn Cys Glu Met Thr
 210 215 220
 Ser Asp Gly Gly Trp Thr Val Ile Gln Arg Arg Leu Asn Gly Ser Val
 225 230 235 240
 Asp Phe Asn Gln Ser Trp Glu Ala Tyr Lys Asp Gly Phe Gly Asp Pro
 245 250 255
 Gln Gly Glu Phe Trp Leu Gly Leu Glu Lys Met His Ser Ile Thr Gly
 260 265 270
 Asn Arg Gly Ser Gln Leu Ala Val Gln Leu Gln Asp Trp Asp Gly Asn
 275 280 285
 Ala Lys Leu Leu Gln Phe Pro Ile His Leu Gly Gly Glu Asp Thr Ala
 290 295 300
 Tyr Ser Leu Gln Leu Thr Glu Pro Thr Ala Asn Glu Leu Gly Ala Thr
 305 310 315 320
 Asn Val Ser Pro Asn Gly Leu Ser Leu Pro Phe Ser Thr Trp Asp Gln
 325 330 335
 Asp His Asp Leu Arg Gly Asp Leu Asn Cys Ala Lys Ser Leu Ser Gly
 340 345 350
 Gly Trp Trp Phe Gly Thr Cys Ser His Ser Asn Leu Asn Gly Gln Tyr
 355 360 365
 Phe His Ser Ile Pro Arg Gln Arg Gln Glu Arg Lys Lys Gly Ile Phe
 370 375 380
 Trp Lys Thr Trp Lys Gly Arg Tyr Tyr Pro Leu Gln Ala Thr Thr Leu
 385 390 395 400
 Leu Ile Gln Pro Met Glu Ala Thr Ala Ala Ser Asp Tyr Lys Asp Asp
 405 410 415
 Asp Asp Lys His His His His His His Gly Gly Gly Leu Asn Asp Ile
 420 425 430
 Phe Glu Ala Gln Lys Ile Glu Trp His Glu
 435 440

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<210> 163

<211> 440

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 163

Met Lys Thr Phe Ile Leu Leu Leu Trp Val Leu Leu Leu Trp Val Ile
1 5 10 15

Phe Leu Leu Pro Gly Ala Thr Ala Gln Pro Gln Gly Arg Pro Ala Gln
20 25 30

Pro Glu Pro Pro Arg Phe Ala Ser Trp Asp Glu Met Asn Leu Leu Ala
35 40 45

His Gly Leu Leu Gln Leu Gly His Gly Leu Arg Glu His Val Glu Arg
50 55 60

Thr Arg Gly Gln Leu Gly Ala Leu Glu Arg Arg Met Ala Ala Cys Gly
65 70 75 80

Asn Ala Cys Gln Gly Pro Lys Gly Thr Asp Pro Lys Asp Arg Val Pro
85 90 95

Glu Gly Gln Ala Pro Glu Thr Leu Gln Ser Leu Gln Thr Gln Leu Lys
100 105 110

Ala Gln Asn Ser Lys Ile Gln Gln Leu Phe Gln Lys Val Ala Gln Gln
115 120 125

Gln Arg Tyr Leu Ser Lys Gln Asn Leu Arg Ile Gln Asn Leu Gln Ser
130 135 140

Gln Ile Asp Leu Leu Thr Pro Thr His Leu Asp Asn Gly Val Asp Lys
145 150 155 160

Thr Ser Arg Gly Lys Arg Leu Pro Lys Met Ala Gln Leu Ile Gly Leu
165 170 175

Thr Pro Asn Ala Thr Arg Leu His Arg Pro Pro Arg Asp Cys Gln Glu
180 185 190

Leu Phe Gln Glu Gly Glu Arg His Ser Gly Leu Phe Gln Ile Gln Pro
195 200 205

Leu Gly Ser Pro Pro Phe Leu Val Asn Cys Glu Met Thr Ser Asp Gly
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210

215

Gly Trp Thr Val Ile Gln Arg Arg Leu Asn Gly Ser Val Asp Phe Asn
225 230 235 240

Gln Ser Trp Glu Ala Tyr Lys Asp Gly Phe Gly Asp Pro Gln Gly Glu
245 250 255

Phe Trp Leu Gly Leu Glu Lys Met His Ser Ile Thr Gly Asp Arg Gly
260 265 270

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

Leu Gln Phe Pro Ile His Leu Gly Gly Glu Asp Thr Ala Tyr Ser Leu
290 295 300

Gln Leu Thr Glu Pro Thr Ala Asn Glu Leu Gly Ala Thr Asn Val Ser
305 310 315 320

Pro Asn Gly Leu Ser Leu Pro Phe Ser Thr Trp Asp Gln Asp His Asp
325 330 335

Leu Arg Gly Asp Leu Asn Cys Ala Lys Ser Leu Ser Gly Gly Trp Trp
340 345 350

Phe Gly Thr Cys Ser His Ser Asn Leu Asn Gly Gln Tyr Phe His Ser
355 360 365

Ile Pro Arg Gln Arg Gln Gln Arg Lys Lys Gly Ile Phe Trp Lys Thr
370 375 380

Trp Lys Gly Arg Tyr Tyr Pro Leu Gln Ala Thr Thr Leu Leu Ile Gln
385 390 395 400

Pro Met Glu Ala Thr Ala Ala Ser Asp Tyr Lys Asp Asp Asp Asp Lys
405 410 415

His His His His His His Gly Gly Gly Leu Asn Asp Ile Phe Glu Ala
420 425 430

Gln Lys Ile Glu Trp His Glu Thr
435 440

<210> 164
<211> 501
<212> PRT
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 164

Met Lys Thr Phe Ile Leu Leu Leu Trp Val Leu Leu Leu Trp Val Ile
1 5 10 15Phe Leu Leu Pro Gly Ala Thr Ala Gln Pro Ser Arg Ile Asp Gln Asp
20 25 30Asn Ser Ser Phe Asp Ser Leu Ser Pro Glu Pro Lys Ser Arg Phe Ala
35 40 45Met Leu Asp Asp Val Lys Ile Leu Ala Asn Gly Leu Leu Gln Leu Gly
50 55 60His Gly Leu Lys Asp Phe Val His Lys Thr Lys Gly Gln Ile Asn Asp
65 70 75 80Ile Phe Gln Lys Leu Asn Ile Phe Asp Gln Ser Phe Tyr Asp Leu Ser
85 90 95Leu Gln Thr Ser Glu Ile Lys Glu Glu Glu Lys Glu Leu Arg Arg Thr
100 105 110Thr Tyr Lys Leu Gln Val Lys Asn Glu Glu Val Lys Asn Met Ser Leu
115 120 125Glu Leu Asn Ser Lys Leu Glu Ser Leu Leu Glu Glu Lys Ile Leu Leu
130 135 140Gln Gln Lys Val Lys Tyr Leu Glu Glu Gln Leu Thr Asn Leu Ile Gln
145 150 155 160Asn Gln Pro Glu Thr Pro Glu His Pro Glu Val Thr Ser Leu Lys Thr
165 170 175Phe Val Glu Lys Gln Asp Asn Ser Ile Lys Asp Leu Leu Gln Thr Val
180 185 190Glu Asp Gln Tyr Lys Gln Leu Asn Gln Gln His Ser Gln Ile Lys Glu
195 200 205Ile Glu Asn Gln Leu Arg Arg Thr Ser Ile Gln Glu Pro Thr Glu Ile
210 215 220Ser Leu Ser Ser Lys Pro Arg Ala Pro Arg Thr Thr Pro Phe Leu Gln
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225		230		235		240
Leu	Asn	Glu	Ile	Arg 245	Asn	Val
					Lys	His
				Asp 250	Gly	Ile
					Pro	Ala
						Glu
						Cys
Thr	Thr	Ile	Tyr 260	Asn	Arg	Gly
						Glu
					His 265	Thr
					Ser	Gly
					Met	Tyr
						Ala
						Ile
Arg	Pro	Ser 275	Asn	Ser	Gln	Val
						Phe
						His
					Val	Tyr
					Cys	Asp
						Val
						Ile
						Ser
Gly	Ser 290	Pro	Trp	Thr	Leu	Ile 295
						Gln
						His
					Arg	Ile
					Asp 300	Gly
						Ser
						Gln
						Asn
Phe	Asn	Glu	Thr	Trp	Glu 310	Asn
305						Tyr
						Lys
						Tyr
					Gly 315	Phe
						Gly
						Arg
						Leu
						Asp
						320
Gly	Glu	Phe	Trp	Leu 325	Gly	Leu
					Glu	Lys
						Ile 330
						Tyr
						Ser
						Ile
						Val
						Lys
						Gln
						335
Ser	Asn	Tyr	Val 340	Leu	Arg	Ile
						Glu
						Leu
						Glu
						Asp
						Trp
						Lys
						Asp
						Asn
						Lys
						350
His	Tyr	Ile 355	Glu	Tyr	Ser	Phe
						Tyr
						Leu
						Gly
						Asn
						His
						Glu
						Thr
						Asn
						Tyr
						365
Thr	Leu 370	His	Leu	Val	Ala	Ile 375
						Thr
						Gly
						Asn
						Val
						Pro
						Asn
						Ala
						Ile
						Pro
						380
Glu	Asn	Lys	Asp	Leu	Val 390	Phe
385						Ser
						Thr
						Trp
						Asp
						His
						Lys
						Ala
						Lys
						Gly
						400
His	Phe	Asn	Cys	Pro 405	Glu	Gly
						Tyr
						Ser
						Gly
						Gly
						Trp
						Trp
						Trp
						His
						Asp
						415
Glu	Cys	Gly	Glu 420	Asn	Asn	Leu
						Asn
						Gly
						Lys
						Tyr
						Asn
						Lys
						Pro
						Arg
						Ala
						430
Lys	Ser	Lys 435	Pro	Glu	Arg	Arg
						Arg
						Gly
						Leu
						Ser
						Trp
						Lys
						Ser
						Gln
						Asn
						445
Gly	Arg	Leu	Tyr	Ser	Ile	Lys 455
450						Ser
						Thr
						Lys
						Met
						Leu
						Ile
						His
						Pro
						Thr
						460
Asp	Ser	Glu	Ser	Phe	Glu 470	Asp
465						Tyr
						Lys
						Asp
						Asp
						Asp
						Lys
						His
						His
						480

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His His His His Gly Gly Gly Leu Asn Asp Ile Phe Glu Ala Gln Lys
 485 490 495

Ile Glu Trp His Glu
 500

<210> 165
 <211> 10
 <212> PRT
 <213> Homo sapiens

<400> 165
 Gly Pro Val Gln Ser Lys Ser Pro Arg Phe
 1 5 10

<210> 166
 <211> 11
 <212> PRT
 <213> Homo sapiens

<400> 166
 Val Gln Ser Lys Ser Pro Arg Phe Ala Ser Trp
 1 5 10

<210> 167
 <211> 8
 <212> PRT
 <213> Homo sapiens

<400> 167
 Asn Val Leu Ala His Gly Leu Leu
 1 5

<210> 168
 <211> 10
 <212> PRT
 <213> Homo sapiens

<400> 168
 Asn Val Leu Ala His Gly Leu Leu Gln Leu
 1 5 10

<210> 169
 <211> 8
 <212> PRT
 <213> Homo sapiens

<400> 169
 Leu Ala His Gly Leu Leu Gln Leu
 1 5

<210> 170
 <211> 13
 <212> PRT
 <213> Homo sapiens

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<400> 170

Asn Val Leu Ala His Gly Leu Leu Gln Leu Gly Gln Gly
1 5 10

<210> 171

<211> 14

<212> PRT

<213> Homo sapiens

<400> 171

Asn Val Leu Ala His Gly Leu Leu Gln Leu Gly Gln Gly Leu
1 5 10

<210> 172

<211> 16

<212> PRT

<213> Homo sapiens

<400> 172

Asn Val Leu Ala His Gly Leu Leu Gln Leu Gly Gln Gly Leu Arg Glu
1 5 10 15

<210> 173

<211> 25

<212> PRT

<213> Homo sapiens

<400> 173

Asn Val Leu Ala His Gly Leu Leu Gln Leu Gly Gln Gly Leu Arg Glu
1 5 10 15

His Ala Glu Arg Thr Arg Ser Gln Leu
20 25

<210> 174

<211> 27

<212> PRT

<213> Homo sapiens

<400> 174

Asn Val Leu Ala His Gly Leu Leu Gln Leu Gly Gln Gly Leu Arg Glu
1 5 10 15

His Ala Glu Arg Thr Arg Ser Gln Leu Ser Ala
20 25

<210> 175

<211> 23

<212> PRT

<213> Homo sapiens

<400> 175

Leu Ala His Gly Leu Leu Gln Leu Gly Gln Gly Leu Arg Glu His Ala
1 5 10 15

Glu Arg Thr Arg Ser Gln Leu
20

<210> 176
<211> 13
<212> PRT
<213> Homo sapiens

<400> 176
Ala His Gly Leu Leu Gln Leu Gly Gln Gly Leu Arg Glu
1 5 10

<210> 177
<211> 22
<212> PRT
<213> Homo sapiens

<400> 177
Ala His Gly Leu Leu Gln Leu Gly Gln Gly Leu Arg Glu His Ala Glu
1 5 10 15

Arg Thr Arg Ser Gln Leu
20

<210> 178
<211> 18
<212> PRT
<213> Homo sapiens

<400> 178
Leu Gln Leu Gly Gln Gly Leu Arg Glu His Ala Glu Arg Thr Arg Ser
1 5 10 15

Gln Leu

<210> 179
<211> 15
<212> PRT
<213> Homo sapiens

<400> 179
Gly Gln Gly Leu Arg Glu His Ala Glu Arg Thr Arg Ser Gln Leu
1 5 10 15

<210> 180
<211> 32
<212> PRT
<213> Homo sapiens

<400> 180
Leu Glu Arg Arg Leu Ser Ala Cys Gly Ser Ala Cys Gln Thr Glu Gly
1 5 10 15

Ser Thr Asp Leu Pro Ala Pro Glu Ser Arg Val Asp Pro Glu Val Leu
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20

25

30

<210> 181
 <211> 25
 <212> PRT
 <213> Homo sapiens

<400> 181
 Cys Gly Ser Ala Cys Gln Thr Glu Gly Ser Thr Asp Leu Pro Ala Pro
 1 5 10 15

Glu Ser Arg Val Asp Pro Glu Val Leu
 20 25

<210> 182
 <211> 16
 <212> PRT
 <213> Homo sapiens

<400> 182
 Ser Thr Asp Leu Pro Ala Pro Glu Ser Arg Val Asp Pro Glu Val Leu
 1 5 10 15

<210> 183
 <211> 7
 <212> PRT
 <213> Homo sapiens

<400> 183
 Arg Val Asp Pro Glu Val Leu
 1 5

<210> 184
 <211> 7
 <212> PRT
 <213> Homo sapiens

<400> 184
 His Ser Leu Gln Thr Gln Leu
 1 5

<210> 185
 <211> 10
 <212> PRT
 <213> Homo sapiens

<400> 185
 Lys Ala Gln Asn Ser Arg Ile Gln Gln Leu
 1 5 10

<210> 186
 <211> 26
 <212> PRT
 <213> Homo sapiens

<400> 186

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Lys Ala Gln Asn Ser Arg Ile Gln Gln Leu Phe His Lys Val Ala Gln
1 5 10 15

Gln Gln Arg His Leu Glu Lys Gln His Leu
20 25

<210> 187
<211> 16
<212> PRT
<213> Homo sapiens

<400> 187
Phe His Lys Val Ala Gln Gln Gln Arg His Leu Glu Lys Gln His Leu
1 5 10 15

<210> 188
<211> 7
<212> PRT
<213> Homo sapiens

<400> 188
Gln Ser Gln Phe Gly Leu Leu
1 5

<210> 189
<211> 12
<212> PRT
<213> Homo sapiens

<400> 189
Phe Gly Leu Leu Asp His Lys His Leu Asp His Glu
1 5 10

<210> 190
<211> 26
<212> PRT
<213> Homo sapiens

<400> 190
Leu Glu Arg Arg Leu Ser Ala Cys Gly Ser Ala Cys Gln Thr Glu Gly
1 5 10 15

Ser Thr Asp Leu Pro Leu Ala Pro Glu Ser
20 25

<210> 191
<211> 15
<212> PRT
<213> Artificial Sequence

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

<400> 191
Gly Pro Val Gln Ser Lys Ser Pro Arg Phe Ala Ser Trp Asp Glu

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<210> 192
 <211> 15
 <212> PRT
 <213> Artificial Sequence

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

 <400> 192
 Gln Ser Lys Ser Pro Arg Phe Ala Ser Trp Asp Glu Met Asn Val
 1 5 10 15

<210> 193
 <211> 15
 <212> PRT
 <213> Artificial Sequence

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

 <400> 193
 Ser Pro Arg Phe Ala Ser Trp Asp Glu Met Asn Val Leu Ala His
 1 5 10 15

<210> 194
 <211> 15
 <212> PRT
 <213> Artificial Sequence

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

 <400> 194
 Phe Ala Ser Trp Asp Glu Met Asn Val Leu Ala His Gly Leu Leu
 1 5 10 15

<210> 195
 <211> 15
 <212> PRT
 <213> Artificial Sequence

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

 <400> 195
 Trp Asp Glu Met Asn Val Leu Ala His Gly Leu Leu Gln Leu Gly
 1 5 10 15

<210> 196
 <211> 15
 <212> PRT
 <213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 196

Met Asn Val Leu Ala His Gly Leu Leu Gln Leu Gly Gln Gly Leu
1 5 10 15

<210> 197

<211> 15

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 197

Leu Ala His Gly Leu Leu Gln Leu Gly Gln Gly Leu Arg Glu His
1 5 10 15

<210> 198

<211> 15

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 198

Gly Leu Leu Gln Leu Gly Gln Gly Leu Arg Glu His Ala Glu Arg
1 5 10 15

<210> 199

<211> 15

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 199

Gln Leu Gly Gln Gly Leu Arg Glu His Ala Glu Arg Thr Arg Ser
1 5 10 15

<210> 200

<211> 15

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 200

Gln Gly Leu Arg Glu His Ala Glu Arg Thr Arg Ser Gln Leu Ser

1	5	PAT056029_SL 10	15
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<210> 201
 <211> 15
 <212> PRT
 <213> Artificial Sequence

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

 <400> 201
 Arg Glu His Ala Glu Arg Thr Arg Ser Gln Leu Ser Ala Leu Glu
 1 5 10 15

<210> 202
 <211> 15
 <212> PRT
 <213> Artificial Sequence

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

 <400> 202
 Ala Glu Arg Thr Arg Ser Gln Leu Ser Ala Leu Glu Arg Arg Leu
 1 5 10 15

<210> 203
 <211> 15
 <212> PRT
 <213> Artificial Sequence

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

 <400> 203
 Thr Arg Ser Gln Leu Ser Ala Leu Glu Arg Arg Leu Ser Ala Ser
 1 5 10 15

<210> 204
 <211> 15
 <212> PRT
 <213> Artificial Sequence

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

 <400> 204
 Gln Leu Ser Ala Leu Glu Arg Arg Leu Ser Ala Ser Gly Ser Ala
 1 5 10 15

<210> 205
 <211> 15
 <212> PRT
 <213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 205

Ala Leu Glu Arg Arg Leu Ser Ala Ser Gly Ser Ala Ser Gln Gly
1 5 10 15

<210> 206

<211> 15

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 206

Arg Arg Leu Ser Ala Ser Gly Ser Ala Ser Gln Gly Thr Glu Gly
1 5 10 15

<210> 207

<211> 15

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 207

Ser Ala Ser Gly Ser Ala Ser Gln Gly Thr Glu Gly Ser Thr Asp
1 5 10 15

<210> 208

<211> 15

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 208

Gly Ser Ala Ser Gln Gly Thr Glu Gly Ser Thr Asp Leu Pro Leu
1 5 10 15

<210> 209

<211> 15

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 209

Ser Gln Gly Thr Glu Gly Ser Thr Asp Leu Pro Leu Ala Pro Glu

1	5	PAT056029_SL 10	15
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<210> 210
 <211> 15
 <212> PRT
 <213> Artificial Sequence

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

<400> 210
 Thr Glu Gly Ser Thr Asp Leu Pro Leu Ala Pro Glu Ser Arg Val
 1 5 10 15

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

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

<400> 211
 Ser Thr Asp Leu Pro Leu Ala Pro Glu Ser Arg Val Asp Pro Glu
 1 5 10 15

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

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

<400> 212
 Leu Pro Leu Ala Pro Glu Ser Arg Val Asp Pro Glu Val Leu His
 1 5 10 15

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

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

<400> 213
 Ala Pro Glu Ser Arg Val Asp Pro Glu Val Leu His Ser Leu Gln
 1 5 10 15

<210> 214
 <211> 15
 <212> PRT
 <213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 214

Ser	Arg	Val	Asp	Pro	Glu	Val	Leu	His	Ser	Leu	Gln	Thr	Gln	Leu
1				5					10					15

<210> 215

<211> 15

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 215

Asp	Pro	Glu	Val	Leu	His	Ser	Leu	Gln	Thr	Gln	Leu	Lys	Ala	Gln
1				5					10					15

<210> 216

<211> 15

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 216

Val	Leu	His	Ser	Leu	Gln	Thr	Gln	Leu	Lys	Ala	Gln	Asn	Ser	Arg
1				5					10					15

<210> 217

<211> 15

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 217

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

<210> 218

<211> 15

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 218

Thr	Gln	Leu	Lys	Ala	Gln	Asn	Ser	Arg	Ile	Gln	Gln	Leu	Phe	His
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

1	5	PAT056029_SL 10	15
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<210> 219
 <211> 15
 <212> PRT
 <213> Artificial Sequence

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

<400> 219
 Lys Ala Gln Asn Ser Arg Ile Gln Gln Leu Phe His Lys Val Ala
 1 5 10 15

<210> 220
 <211> 15
 <212> PRT
 <213> Artificial Sequence

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

<400> 220
 Asn Ser Arg Ile Gln Gln Leu Phe His Lys Val Ala Gln Gln Gln
 1 5 10 15

<210> 221
 <211> 15
 <212> PRT
 <213> Artificial Sequence

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

<400> 221
 Ile Gln Gln Leu Phe His Lys Val Ala Gln Gln Gln Arg His Leu
 1 5 10 15

<210> 222
 <211> 15
 <212> PRT
 <213> Artificial Sequence

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

<400> 222
 Leu Phe His Lys Val Ala Gln Gln Gln Arg His Leu Glu Lys Gln
 1 5 10 15

<210> 223
 <211> 15
 <212> PRT
 <213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 223

Lys	Val	Ala	Gln	Gln	Gln	Arg	His	Leu	Glu	Lys	Gln	His	Leu	Arg
1				5					10					15

<210> 224

<211> 15

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 224

Gln	Gln	Gln	Arg	His	Leu	Glu	Lys	Gln	His	Leu	Arg	Ile	Gln	His
1				5					10					15

<210> 225

<211> 15

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 225

Arg	His	Leu	Glu	Lys	Gln	His	Leu	Arg	Ile	Gln	His	Leu	Gln	Ser
1				5					10					15

<210> 226

<211> 15

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 226

Glu	Lys	Gln	His	Leu	Arg	Ile	Gln	His	Leu	Gln	Ser	Gln	Phe	Gly
1				5					10					15

<210> 227

<211> 15

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 227

His	Leu	Arg	Ile	Gln	His	Leu	Gln	Ser	Gln	Phe	Gly	Leu	Leu	Asp
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

1	5	PAT056029_SL 10	15
---	---	--------------------	----

<210> 228
 <211> 15
 <212> PRT
 <213> Artificial Sequence

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

 <400> 228
 Ile Gln His Leu Gln Ser Gln Phe Gly Leu Leu Asp His Lys His
 1 5 10 15

<210> 229
 <211> 15
 <212> PRT
 <213> Artificial Sequence

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

 <400> 229
 Leu Gln Ser Gln Phe Gly Leu Leu Asp His Lys His Leu Asp His
 1 5 10 15

<210> 230
 <211> 15
 <212> PRT
 <213> Artificial Sequence

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

 <400> 230
 Gln Phe Gly Leu Leu Asp His Lys His Leu Asp His Glu Val Ala
 1 5 10 15

<210> 231
 <211> 15
 <212> PRT
 <213> Artificial Sequence

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

 <400> 231
 Leu Leu Asp His Lys His Leu Asp His Glu Val Ala Lys Pro Ala
 1 5 10 15

<210> 232
 <211> 15
 <212> PRT
 <213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 232

His	Lys	His	Leu	Asp	His	Glu	Val	Ala	Lys	Pro	Ala	Arg	Arg	Lys
1				5					10					15

<210> 233

<211> 15

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 233

Lys	His	Leu	Asp	His	Glu	Val	Ala	Lys	Pro	Ala	Arg	Arg	Lys	Arg
1				5					10					15